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***AIR FORCE MANUAL 24-307***

***6 AUGUST 2001***

***AIR FORCE MATERIEL COMMAND***
***Supplement 1***

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# *PROCEDURES FOR VEHICLE MAINTENANCE MANAGEMENT*

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This AFMAN implements AFPD 24-3*, Operation, Maintenance, and Use of Transportation Vehicles and Equipment* and adds to the instruction in AFI 24-302, *Vehicle Maintenance Management*. AFMAN 24-307 details the common, standard procedures and processes that are established and suggested for the typical vehicle maintenance activity to assure both uniformity and efficiency. It explains how the manager attends to the day-to-day business of taking care of the vehicle fleet, documenting such care, measuring performance and capability, and preparing for contingency operations. Because of diversity in mission, facilities, location, and staffing, detailing too-rigid a set of procedures and processes is not practical; so managers are encouraged to expand or revise these practicesæ*where not prohibited*æwithin the spirit and intent of AFPD 24-3 and AFI 24-302. This AFMAN applies to vehicle maintenance managers at base level and major command (MAJCOM). A better understanding of the requirements of this AFMAN is gained by familiarization with DoD Regulation 4500.36-R, *Management, Acquisition, and Use of Motor Vehicles,* March 1994.

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**(AFMC)** This supplement does not apply to Air National Guard or US Air Force Reserve units or members. It applies to all AFMC organizations that maintain Air Force motor vehicles. Nonappropriated funded vehicles are exempt from this manual. Send comments and suggested improvements on AF Form 847, **Recommendation for Change of Publication,** through transportation channels to HQ AFMC/LGRV, 4375 Chidlaw Road, Suite 6, Wright-Patterson AFB OH 45433-5006.

## *SUMMARY OF REVISIONS*

This revision incorporates Interim Change IC 2001-01. Effective 1 October 2001, this interim change (IC) 01-1, corrects procedural guidance to more accurately reflect Vehicle Out of Commission (VOC) hours and capture Depot rebuild costs in the On-Line Vehicle Interactive Management System (OLVIMS). The VOC begins with the date and time that the operator has completed operator care and signs in at the vehi-

cle maintenance customer service center/shop or transportation personnel receive a request for maintenance support (mobile, wrecker, etc.), whichever occurs first. A bar ( | ) indicates revision from previous edition.

**(AFMC)** This revision aligns AFMC Supplement 1 with the most current Air Force Manual (AFMAN) 24-307. Some paragraphs have been deleted or renumbered for clarification and improved readability. This supplement adds/modifies information on vehicle emission test documentation, oil analysis program, Low Speed Vehicles (LSVs), yard check requirements, vehicle management performance indicators, and operator vehicle inspection frequency. Where applicable in this supplement, the words **Scheduled Maintenance** have been replaced with **Preventive Maintenance & Inspection (PM&I)**, **Indifference Quality Level (IQL)** replaced with **Acceptable Quality Level (AQL)**, **Chief of Transportation or Commander** replaced with **Vehicle Management Flight Chief/Commander**, and **LGTV** replaced with **LGRV**. Several paragraphs referencing VOC hour calculations have been deleted or changed to reflect the new requirements identified in **Attachment 11** of AFMAN 24-307. **Attachment 12 (Added)** of this supplement reflects the new quarterly report identified in paragraph **2.19.** and the previous attachments have been renumbered 13 & 14 respectively. All units should review the entire document.

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# Chapter 1

# THE OBJECTIVE AND RESPONSIBILITIES OF VEHICLE MAINTENANCE MANAGEMENT

## *Section 1A—Vehicle Maintenance Management*

**1.1. Application of this AFMAN.** Vehicle managers at all levels use this AFMAN with AFI 24-302 to ensure they are performing proper and effective vehicle maintenance and they are properly collecting maintenance-related data.

**1.2. Related Publications.** Accomplish management controls, records administration, and forms documentation in accordance with (IAW) directives listed in **Attachment 1**.

1.2.1. Records Disposition. Maintain and dispose of records created as a result of processes prescribed in this publication in accordance with AFMAN 37-139, *Records Disposition Schedule*.

**1.3. Supplements.** Major Commands (MAJCOM) supplement this AFMAN to provide detailed maintenance management instructions. Limit supplements to needs peculiar to the command, and obtain written approval from HQ USAF/ILTV before publication. Implement base-level guidance in the form of maintenance operating instructions (MOI).

**1.4. Changes to this AFMAN.** Improvements to this AFMAN are encouraged. Send proposals to HQ USAF/ILTV through your MAJCOM for approval.

**1.5. Organization of Vehicle Maintenance.** Organize the vehicle maintenance shop IAW AFI 38-101. Responsibilities and relationships of various elements in a standard vehicle maintenance flight are stated in AFI 24-302. All vehicle maintenance functions on a given installation are consolidated under the vehicle maintenance manager (VMM) and the vehicle maintenance superintendent (VMS). HQ USAF/ILTV is the approval authority for requests to deviate from consolidation. ***EXCEPTION:*** Mobile units with organic maintenance capability, having separate vehicle maintenance facilities, sufficient manpower, and an organizational structure, usually including Maintenance Control/Analysis (MCA) and Materiel Control, to maintain their own equipment when in garrison. These units may be consolidated under the installation VMM, but do not require HQ USAF/ILTV approval to operate independently

**1.5. (AFMC)** When maintaining General Services Administration (GSA) leased vehicles, vehicle management will comply with GSA procedures for service, repair, and record keeping. Support agreements (SA) or memorandums of agreements (MOU) should be reviewed annually or when changing conditions or costs may require substantial alterations to the agreement (i.e., estimated reimbursements). A courtesy copy of units' finalized MOU or SA between GSA and the Air Force will be forwarded to HQ AFMC/LGRV. Copies will be used for cross-functional purposes only.

**1.6. Organizational Maintenance.** Vehicle operators will perform at least the following inspections, servicing, and maintenance:

1.6.1. Check all fluid levels IAW applicable technical orders. General-purpose vehicle operators will check/service fuel, engine oil, and the windshield washer reservoir. All other fluid levels, i.e., coolant,

automatic transmission, power steering, brake and batteries are checked by vehicle operators and reported to maintenance for servicing when required. Vehicle maintenance checks manual transmissions and differential fluid levels at scheduled inspection intervals. Additionally, for special purpose vehicles, vehicle operators check and service hydraulic fluid reservoirs on special units or attachments.

1.6.2. Keep vehicles clean at all times to include the interior; operators will not steam clean engines or engine compartments. Wax vehicles often enough to preserve the painted finish, but do not wax vehicles with flat or chemical agent resisting coating (CARC) finishes. Dirty vehicles are not accepted by vehicle maintenance. If excessively dirty vehicles are towed in, the using organization arranges to clean the vehicle.

1.6.3. Change spare tires. Vehicle maintenance may provide technical assistance upon request for outsized vehicles with split rim wheel assemblies, when no spare tire is available.

1.6.3.1. Operators assist tire shop personnel in the removal and installation of tires on vehicles when vehicles are taken to vehicle maintenance for repair work.

1.6.3.1. (AFMC) Vehicle operators will remove all tires requiring repair and turn them in for maintenance with the exception of those tires identified as requiring maintenance on vehicles with open work orders.

1.6.4. Unit vehicle control officer/noncommissioned officer (VCO/VCNCO) ensure adequate spare tires and tools are on-hand to support their requirements.

1.6.5. Keep tires properly inflated.

1.6.6. Maintain the operator's inspection guide and trouble report.

1.6.7. Tighten loose nuts, bolts, and screws, replace light bulbs, and windshield wiper blades.

1.6.8. Special purpose vehicle operators make adjustments to mechanisms affecting operating characteristics of the unit; for example, crane and dozer clutches and brakes, power control units, shoes, deflectors, etc. Inspect and grease vehicles as required by the technical order or manual, and report any problems to maintenance.

**1.7. Mobile Maintenance.** See paragraph 4-10 and AFI 24-302.

**1.8. Intermediate Maintenance.** See paragraph **1.41.** and AFI 24-302. Maintenance managers determine shop capability and decide which source of repair to use. Manpower, total cost, mission requirements, VOC time, shop tools and equipment, and technical capability influence the decision-making.

**1.9. Preventive Maintenance.** A schedule making vehicles available for inspection, lubrication, and repair at predetermined intervals reduces maintenance costs and smoothes maintenance flow. Using organizations will make vehicles available for scheduled maintenance or arrange for a rescheduled time. Using organizations that exhibit a trend of failing to provide vehicles for preventive maintenance at the scheduled time should be reported to the next command level (i.e. Logistics Group Commander, Wing/Base Commander, etc.) for corrective action.

**1.10. Cannibalization Rules.** The VMM and VMS use cannibalization primarily as a means to meet wartime goals. Cannibalization action is documented according to **Chapter 6**, **Section 6K**, and proper cost accounting will be done.

1.10.1. MAJCOM or WR-ALC may direct the repair of critical vehicles pending disposition. Cannibalization of the major components or assemblies of critical vehicles (as identified in TO 36A-1-1301) pending disposition instructions must by approved by the MAJCOM LGTV.

1.10.2. The AFEMS (C001) provides an on-line query, exception management code ID (IIEM), to determine the vehicle criticality. A critical vehicle is identified by the exception management code 'C'.

**1.11. Reclamation Procedures.**

1.11.1. Accomplish reclamation to the extent necessary before or after processing to Defense Reutilization and Marketing Office (DRMO). MCA coordinates with using organizations for removal of organizational equipment prior to transferring a vehicle to DRMO. Document parts removed from these vehicles on AFTO 91, Limited Technical Inspection Motor Vehicles. MAJCOM establishes policy regarding retention of DRMO-bound vehicles for purposes of parts reclamation or for training purposes.

1.11.1. (AFMC) Serviceable parts may be reclaimed from vehicles approved for processing to Defense Reutilization and Marketing Service (DRMS). Since cannibalization is not usually cost effective, there must be an immediate need; e.g. a vehicle deadlined for parts (VDP) or an expected urgent need for the parts within 120 days. If required parts cannot be reclaimed prior to the suspense for DRMS processing, the Registered Equipment Management System (REMS) monitor must place the vehicle in status code “E” as required by AFMAN 23-110, *USAF Supply Manual*, Vol 2, Part 2, Chapter 22. Otherwise, vehicles will be processed to DRMS NLT 45 days after the suspense in the written disposition instructions. Under contracted functions, parts will not be removed from a vehicle being processed to DRMS without prior approval from the Functional Area Chief (FAC) or designated representative.

1.11.2. Withdraw vehicles from DRMO for special projects or authorized need upon written MAJCOM approval. VMM and VMS provide technical assistance in selecting vehicles to be withdrawn. Rules for withdrawing vehicles from DRMO are in AFMAN 23-110, Volume II, Part Two.

1.11.3. Vehicle managers continually monitor the repair and turn-in of vehicle parts to make sure serviceable parts with a foreseeable need are not turned in for disposal, and to reduce the potential for fraud, waste, and abuse. Store serviceable, non-credit turn-in parts for which there is a projected need, as work oreder residue.

1.11.3.1. (Added-AFMC) Recycle any refrigerant from air conditioning systems that is categorized as an ozone depleting substance (ODS). Cancel benchstock/special levels and remove technical orders from file when no other like vehicles are assigned.

**1.12. Maintenance Operating Instructions (MOIs).** Coordinate these instructions with appropriate agencies and review or update as required by the VMM or VMS. All assigned personnel acknowledge in writing (i.e. initials or signature) they understand the MOIs within 30 days of arrival , annually or when any instruction is changed.

1.12.1. (Added-AFMC) Maintenance Operating Instructions (MOIs) will be developed to cover unit unique operations. A master file of the MOIs will be maintained in a central location of the vehicle maintenance element and be readily available to all personnel. As a minimum, establish MOIs for the following:

1.12.1.1. (Added-AFMC) Operation of the battery shop, to include inventory and issue procedures, and use/disposal of acid. Coordination/approval by the base environmental health office, civil engineering environmental office, and safety office is required.

1.12.1.2. (Added-AFMC) Operation of Refueling Maintenance shops to include, but not limited to, confined space entrance, purging of tanks, grounding of vehicles, and when fuel tanks must be drained before working on pumping systems.

1.12.1.3. (Added-AFMC) Seasonal rebuild programs to include start and completion dates. These dates should be consistent with the using organization's requirements.

1.12.1.4. (Added-AFMC) Environmental requirements that pertain to vehicle maintenance, with specific procedures identified to ensure Air Force, federal, state and local compliance.

1.12.1.5. (Added-AFMC) Vehicle accident, abuse, and incident reporting procedures and repair processing.

1.12.1.6. (Added-AFMC) Where and how road tests are performed. All vehicles being road tested by vehicle maintenance will be properly identified.

**1.13. Serviceability Standards.** Vehicles are maintained to meet safe and serviceable standards by using the direction or guidance in governing publications.

1.13.1. The Air Force accepts the idea that as a vehicle ages, it wears and will not be maintained in a like-new condition. A vehicle in its sixth year of use, is not compared with a new vehicle. To be serviceable, a vehicle first and foremost is safe, and then must be able to do its job. Deficiencies affecting safety are not tolerated regardless of whether the vehicle is old or new.

1.13.2. Judge serviceability using the following factors:

1.13.2.1. Age and mileage of the vehicle.

1.13.2.2. Requirement for the type of vehicle and job it's expected to do.

1.13.2.3. Remaining service life.

1.13.2.4. Value of use returned in comparison with the cost of needed repairs.

**1.14. Scheduled Maintenance.** Scheduled maintenance includes inspecting, servicing, adjusting, and lubricating at regular intervals to maintain a safe and serviceable vehicle fleet. TO 36-1-191 prescribes scheduled maintenance intervals, and is used to establish a scheduled maintenance plan.

1.14.1. Consider seasonal needs, labor-hour availability, organizational need, and fair apportionment of the annual requirement when developing a scheduled maintenance plan. All shops may use OLVIMS products or other automated listings to help complete work on time. Scheduled maintenance has priority and is not delayed. Where necessary, resort to a two-shift operation, overtime, or contract to fulfill this need.

1.14.2. Vehicles used as static training aids (not operated on base or public highways or for driver training) at technical training centers are exempt from scheduled maintenance. Also, vehicles such as mobile communication vans positioned in a semi-permanent or permanent site are exempt. Do scheduled maintenance before operating these vehicles over public roads.

1.14.3. (Added-AFMC) Delete the scheduled maintenance "next due" data from the On Line Vehicle Interactive Management System (OLVIMS) when a vehicle is awaiting disposition instructions from HQ AFMC/LGRV. Change the organization code to zero, "0".

1.14.4. (Added-AFMC) Vehicle Maintenance Manager (VMM)/Vehicle Maintenance Superintendent (VMS) will develop a Preventive Maintenance & Inspection (PM&I) policy letter outlining local procedures for reporting vehicles to vehicle maintenance for scheduled services. This letter will be distributed to each using organization's VCO/VCNCO. Use of an appointment system for PM&I service is encouraged.

**1.15. Maintenance Priorities.** Each vehicle maintenance shop applies priorities to support its mission and its customers' needs. The Logistics Group Commander or designee approves these priorities which are set as follows:

1.15.1. Mission essential levels (MEL) for vehicles are developed each year between using organizations and Transportation. The MEL shows the number of vehicles, by type, that can be in the shop at one time and not seriously affect the user's mission.

1.15.2. The VMM, VMS, and Vehicle Operations Officer (VOO) or superintendent (VOS) look at MELs for maintenance priorities and for backfilling primary vehicles which are not available to the user due to maintenance needs. Questions on the proposed levels and any problems in maintaining them are resolved with the using activity before the final publication of the list. The MEL lists are then presented to the Logistics Group Commander for approval. This list then serves as the vehicle maintenance priority list.

1.15.2. (AFMC) A current Mission Essential Level (MEL) list will be located in Maintenance Control & Analysis (MC&A) for reference. MC&A will notify the VMM/VMS when an organization falls below MEL. The automated MEL function in OLVIMS should not be used as the sole determinant for establishing RED priority maintenance for vehicles.

1.15.3. Maintenance assigns a "routine" priority to all vehicles, regardless of type or use, unless one of the conditions in the following paragraph applies.

1.15.4. Use a RED priority when one or more of these conditions exists:

1.15.4.1. Vehicle operations informs vehicle maintenance that a unit is at or below the mission-essential vehicle level, further loss of vehicles will degrade mission support, and the need for them cannot be fulfilled by other base assets.

1.15.4.2. Vehicle operations informs vehicle maintenance that a special project requires more of a certain type of vehicle in service.

1.15.4.3. Severe weather or other natural circumstances create a need for certain types of vehicles.

1.15.5. Vehicle operations ensures that mission-essential vehicle levels and mission needs are met. This may require withdrawing vehicles from activities currently above their MEL. Within mainte-

nance, it may be necessary to consolidate the work force, work overtime, cannibalize parts, delay work, or make temporary repairs to return priority vehicles to service.

1.15.6. Installed emergency warning lights, military radios, or other such accessories do not automatically cause a vehicle to be put in a higher priority.

1.15.7. When a replacement vehicle is temporarily given to a user whose vehicle is being repaired, the prime vehicle receives a routine maintenance priority.

**1.16. Vehicle Out of Commission (VOC) Hours:**

1.16.1. VOC starts at the time the customer signs in at the vehicle maintenance Customer Service Center (CSC)/shop. This date/time is also entered on the Operator's Inspection Guide and Trouble Report as the date/time that the discrepancy is reported to maintenance. The CSC adjusts the start time to account for actual downtime beginning with any preliminary wrecker service or mobile maintenance support. Adjustments should be coordinated with Maintenance Control and Analysis (MC&A) and vehicle operations dispatch to confirm the operator's original request for repair assistance. Upon VMM or VMS request, MC&A provides a VOC report reflecting hours controlled by maintenance (in-house) and repair hours not controlled by maintenance (contract, warranty, etc.). VOC time ends after completion and verification of all maintenance actions.

1.16.2. To support MAJCOM management programs, separate vehicle in-commission (VIC) percentage goals can be established to apply as a metric (management indicator). This may be by major vehicle type or overall fleet.

***NOTE:*** The MAJCOMs may no longer exclude specific time periods for repairing seasonal equipment; for example, snow removal, deicing equipment and lawnmowers during the off-season. Extracting these hours adversely affects the actual VOC hours in OLVIMS. Vehicle down time begins when the vehicle is turned in for maintenance or when a request for maintenance support (wrecker, mobile, etc) was received. Vehicles awaiting accident, abuse and repair decisions/repairs will draw downtime. This includes those awaiting repair decisions by MAJCOM, WR-ALC, OO-ALC, SA-ALC or local.

1.16.3. VDP vehicles are not worked on until all the parts have been received, unless approved by the VMM or VMS. For example, an engine received for a crash fire-fighting vehicle may be installed even though a required converter has not been delivered. After the engine is installed, the status of the vehicle reverts to VDP. The supply priority for the converter is not downgraded for this short period. ***NOTE:*** Vehicles on VDP status should be prime candidates for corrosion control repairs. Remove the vehicle from VDP status in OLVIMS only until the corrosion repairs are completed, then return the vehicle to VDP status until the parts are received.

1.16.4. Use VIC data to support manning, shop equipment, vehicle replacement criteria, new vehicle buy budgets, and reliability and deployability programs.

1.16.4. (AFMC) Vehicle In-Commission (VIC) data may be used in lease determination considerations if there is no inbound Air Force vehicle replacement projected and maintenance and/or operations costs exceed that of a lease asset.

**1.17. The Vehicle Control Program (VCP) in the Using Activity.** Provide vehicle status to the using organization's VCO or designee. As required, fleet management gives MCA a *complete and current list* of these individuals, to include:

1.17.1. Name, grade, and telephone number of the person(s).

1.17.2. Name of the organization, its assigned code, and mailing address.

**1.18. Staff Surveillance.** MAJCOMs provide staff surveillance of the base vehicle maintenance shop. A visit is made when required by the MAJCOM or requested by the senior commander and approved by the MAJCOM

**1.19. Vehicle Redistribution.** Inspect vehicles and equipment destined for shipment to make sure they meet established serviceability standards. Unless directed by the MAJCOM for intracommand shipments, or the item manager for shipments between commands, vehicles are not redistributed when they reach replacement eligibility as outlined in TO 36-1-191. The VMM or VMS certifies on AFTO 91 that the vehicle being shipped meets serviceability standards. When a gaining unit notes substantial damage or defects not caused during shipment, the shipping unit provides funds to pay for repairs when requested by the gaining unit. The shipping unit may take photographs or video of the asset before shipment to verify condition and avoid unnecessary disagreements. MAJCOMs will mediate disagreements that can not be resolved by the shipping and receiving units.

**1.19. (AFMC)** When the vehicle is received it should be checked for shipment damage and operational serviceability according to Technical Order (TO) 36-1-191, *Technical and Managerial Reference for Motor Vehicle Maintenance*. A five-year-old vehicle is not required to be in like-new condition. When vehicles are received in an unserviceable condition, the receiving vehicle maintenance funtion will perform an LTI within five days of receiving the vehicle. If the vehicle was shipped from another AFMC installation, the Vehicle Management Flight Chief's/Commander's of the shipping and receiving organizations resolve the issue. If the vehicle was shipped from outside AFMC, the Vehicle Management Flight Chief/Commander forwards the LTI to HQ AFMC/LGRV with a cover letter requesting assistance and verifying that only those items required to place the vehicle in serviceable condition are listed on the LTI.

1.19.1. (Added-AFMC) When maintenance functions are contracted, the Quality Assurance Evaluator (QAE) will verify LTI entries by signature in the remarks block. The FAC or designated representative will coordinate on all LTIs forwarded outside the functional area.

**1.20. Host-Tenant Relationships.** Each month MCA forwards the ?RAD6C (? = site code) disk to Accounting and Finance, to generate the Motor Vehicle Reimburse/Refunds Billing List, PCN SH069-V12. This list shows all labor and materials expended on each vehicle repaired. The VMM or VMS uses this report to verify reimbursable/refundable expenses to be recouped. As a rule, military labor is not reimbursable. ***NOTE*:** The VMM or VMS acts as a technical advisor when host-tenant agreements are being made.

**1.21. Transient Vehicles and Equipment.** Give maintenance priority to transient vehicles according to their mission or circumstance. This policy applies to both in-house and contracted maintenance activities. ***NOTE*:** The procedures for vehicle operators to have work done on vehicles in-transit are in AFMAN 24-306.

**1.22. Modification Policy.** Process major modification to vehicles and equipment as follows:

1.22.1. Change configuration only when the customer's need cannot be met otherwise. NOTE: As a matter of policy, secondary restraint systems (airbags) will not be disabled unless approved by the National Highway Transportation Safety Administration (NHTSA). Requests for such action will be validated by wing level and MAJCOM safety and transportation directorates prior to submission to the NHTSA.

1.22.2. Adding special equipment or a commercial optional part or accessory to meet a certain operational need is not considered a modification if the vehicle is still used for its original purpose. Hold installation of such items to a minimum. Requesting activities send written change justification to vehicle operations. If recommended for approval, vehicle operations forwards the annotated requested to vehicle maintenance for review. If approved, when workload and resources permit, vehicle maintenance may install these items. These installed items are maintained according to paragraph **1.8.** and paragraph **1.31.** File written authorization to install this equipment in the permanent portion of the vehicle record jacket. Comply with established safety standards when installing these items. Vehicle equivalents can be adjusted to reflect this additional equipment. ***NOTE*:** Using organizations budget for initial and replacement items. They buy such items as air conditioners, camper shells, hydraulic tail gate lifts, cargo covers, bed liners, and special equipment needed to meet special operational requirements. They program necessary funds and contract the installation of these items at the time of purchase. Likewise, the using organization funds for damages from installation of such items if/when the vehicle is identified for rotation/redistribution and the add-on equipment will be retained by the original organization.

1.22.3. See AFI 24-302 for instruction on modifying Air Logistics Center (ALC) controlled vehicles or equipment. Propose such requests to the prime ALC which reviews them for acceptability. The prime ALC assures that the configuration changes to special mounted equipment are documented in appropriate technical data and that necessary adjustments are made to logistics support plans. Permanent local modifications to special mounted equipment is usually not approved unless required to correct isolated problems.

1.22.3. (AFMC) All requests affecting Air Logistics Center controlled vehicles will be routed through HQ AFMC/LGRV for evaluation.

**1.23. For Maintenance Purposes Only Operator Certification.** The VMM or VMS appoints "For Maintenance Purposes Use Only" trainers, by memorandum, who ensure that personnel are qualified to operate vehicles for maintenance purposes before authorizing such use. It is not necessary that maintenance personnel be fully qualified in all operational aspects of the vehicle. Vehicle safety and equipment familiarization training will be documented using AF Form 171, **Request for Driver's Training and Addition to US Government Driver's License**. Complete Section I annotating the specific vehicle types the individual will operate associated with maintenance repair actions in Block 19. Annotate Section II, Training Certification, by striking the word "Contingency" and replacing it with the words "Maintenance Purposes" so the second statement reads, "I certify the above trainee has been provided familiarization training on the vehicle(s)/equipment listed in Item 19 for "Maintenance Purposes Use Only" operation." The trainer will sign the form in Block 22. The AF171 will be signed by the individual (Section III) and by the VMM or VMS as the certifying official (Section IV). ***NOTE:*** The AF171 will be amended to include a choice for certifying training for "Maintenance Purposes Use Only" after which the requirement to alter the choices as described above is rescinded.

1.23.1. This authorization is required for vehicles above 14,000 GVW, or which can transport 15 passenger or more. Otherwise, a valid state drivers license suffices.

1.23.1.1. Personnel requiring formal licensing for operating government owned vehicles and equipment (other than For Maintenance Purposes Only) will comply with the requirements outlined in AFI 24-301, Vehicle Operations.

1.23.2. Maintain a list of approved "Maintenance Purposes Use Only" trainers within the vehicle maintenance flight.

1.23.3. Likewise, maintain the completed AF171s certifying "Maintenance Purposes Use Only" within the vehicle maintenance flight.

1.23.4. Personnel deploying will take a copy of the completed AF 171 certifying training received for Maintenance Purposes Only for reference at the deployed duty location.

**1.24. Deficiency, Warranty, and Unsatisfactory Reporting.** Reporting deficiencies, warranty repairs, and unsatisfactory conditions for vehicles and equipment is mandatory. See TO's 36-1-191 and 00-35D-54 for policy and reporting procedures.

**1.25. Vehicle Improvement Working Group (VIWG).** The VIWG is established to improve the communications between MAJCOMs and the Vehicle System Manager located at WR-ALC. The VIWG meets annually, or as directed, to review deficiency and unsatisfactory reports, and to discuss technical matters. TO 36-1-191 prescribes the responsibilities of the VIWG.

**1.26. Management and Equipment Evaluation Program (MEEP).** (See AFI 24-305.) Commands and field organizations are encouraged to submit project proposals to help solve maintenance problems, improve safety, or to save resources.

1.26.1. Field sites send proposals and supporting information to their MAJCOM transportation office for approval and forwarding to OL-ZC AFMC-LSO/LOTM, MEEP Management Office, 201 Biscayne Road, Ste 2, (Bldg 613), Eglin AFB FL 32542-5303.

1.26.2. Product and procedural evaluations are made under field conditions using this program.

1.26.3. Consolidated status reports for all active MEEP projects are updated periodically. Activities request placement on the MEEP e-mail distribution list. The Consolidate Status Report is also available to all Air Force units, including Guard and Reserve via the HQ USAF/ILT web site.

1.26.4. Two MAJCOMs, AETC and ACC, host fully operational MEEP activities.

**1.27. Technical Publications:** Report deficiencies on AFTO 22, **Technical Order Improvement Report and Reply,** IAW TO 00-5-1. Return excess copies of new vehicle or equipment technical orders promptly to the appropriate ALC as required by TO 00-5-1.

**1.27. (AFMC)** If Mitchell-On-Demand digital technical data is used to support the vehicle maintenance element, the VMM/VMS will ensure there is a process in place to maintain the currency of data provided to the technicians.

**1.28. Vehicle Abuse, Incidents, and Accidents:** Local procedures are established and must be fully supported by all commanders to be totally effective. When possible, these instructions should be published

at wing level. All vehicle maintenance O&M funds expended for vehicle accident and abuse repair costs, including contract cost, should be reimbursed to vehicle maintenance by the owning organization, or the organization responsible for the damage, if not the owner. Whereresponsibility cannot be determined, the owning organization should be responsible for reimbursement. The using organization investigates all damage not attributable to fair wear and tear IAW AFI 23-220. Vehicle maintenance notifies the commander and VCO of the unit involved, along with base legal, finance, and safety offices (usually by form letter). In the event of a GOV accident, include a copy of the accident report for safety office use if available. Vehicle maintenance commences repair within a locally established time frame unless notified by the using organization.

**1.28. (AFMC)** Accident repair work orders will be opened as soon as reported to maintenance and remain open until repairs are complete. Repairs will begin upon receipt of a release for repairs from the unit Vehicle Control Officer (VCO). A verbal release with a written follow-up is authorized for critical vehicles. When a vehicle is not released for repairs within a reasonable time (suggest five working days), Maintenance Control and Analysis (MC&A) must contact the unit VCO and request a release. When accident repairs are accomplished at no expense to the government (operator's insurance), VOC time will be entered into OLVIMS and the records will be annotated "Accident, No Cost to Government."

**1.29. Environmental Responsibilities.** Air Force Policy Directive 32-70 provides overall policy guidance associated with the Air Force's Environmental Quality Program. As stated in this policy directive, "The Air Force is committed to: cleaning up environmental damage resulting from its past activities; meeting all environmental standards applicable to its present operations; planning its future activities to minimize environmental impacts; managing responsibly the irreplaceable natural and cultural resources it holds in public trust; and eliminating pollution from its activities wherever possible." All Air Force functions are required to comply with the Air Force's environmental quality program and as such, vehicle maintenance activities incur certain environmental responsibilities, as follows:

1.29.1. The Clean Air Act (CAA) and Clean Air Act Amendments of 1990 (CAAA'90) deal with atmospheric pollution and are implemented at the federal, state and local level. The major areas of concern for vehicle maintenance under this legislation are vehicle exhaust emissions and ozone depleting chemicals (ODC) such as CFC-12 air conditioning refrigerant.

1.29.1.1. Under the 1990 Clean Air Act Amendments (CAAA), states with nonattainment areas for transportation-related pollutants were required to implement inspection and maintenance (I/M) programs (see 40 CFR Part 51). The purpose of I/M programs is to identify, and assure the repair of, in-use vehicles that are emitting excessive pollutants. Federal fleet vehicles, except for military tactical vehicles, are subject to I/M requirements. A military tactical vehicle is one designed or modified to military specifications to meet direct transportation support of combat, tactical or relief operations, or for training of personnel for such purposes.

1.29.1.1.1. Fleet vehicle managers should cooperate with the state to test federal fleet vehicles and submit applicable reports. Exclude military tactical vehicles and any other vehicles exempted under state law. These may include, for example, emergency vehicles, alternative fueled-vehicles, and certain newer model years.

1.29.1.1.2. At the time of publication of this AFMAN, the Environmental Protection Agency (EPA) is revising the I/M program. Once EPA finalizes its guidance, the Air Force will implement a federal program in place of affected state programs.

1.29.1.2. Title 40, CFR, Part 82 establishes standards and requirements for servicing Motor Vehicle Air Conditioners (MVAC). This rule requires that only certified technicians, using certified equipment which has been registered with the EPA service or maintain MVACs to reduce CFC-12 release into the atmosphere. Obtain technician certification through one of several EPA-approved mechanic testing/certifying programs. Proof of certification must be available on site, at all times. Certification requirements may also be applicable for CFC-12 replacement compounds such as a HFC.

1.29.1.3. Vehicle emission control devices are maintained and inspected according to technical directives, manufacturer's recommendations, and federal, state, local, or host nation laws. All vehicle maintenance activities use a program of regularly scheduled diagnostic tests to make sure that all engines comply with manufacturer's specifications. This test is usually done as part of the annual inspection, or when a major tune-up is accomplished. Inspect emission control devices when a vehicle is in for scheduled maintenance, and see that the necessary work is done to ensure proper operation.

1.29.1.3. (AFMC) Maintain a copy of engine analyzer/emissions tester technical data printout in the vehicle historical record if required by host country, state, or local requirements.

1.29.2. The Resource Conservation and Recovery Act (RCRA), EO 12780*, Federal Recycling and Use of Environmentally Preferable Products*, and EO 13101*, Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition* legislate and implement pollution prevention, recycling of solid and liquid waste and affirmative procurement of environmentally preferable products (manufactured from recycled materials) and services. EO 12873 mandates programs to procure 100 percent of EPA guideline items unless written justification is provided that a product is not available competitively within a reasonable time, does not meet performance standards, or is only available at an unreasonable price. EPA guideline items include recapped tires and re-refined motor oil.

1.29.2.1. Executive Order 13101, Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition, and RCRA Section 6002 also require procurement of re-refined oil and retread or post-consumer content tires during acquisition and routine maintenance of vehicles, to include alternate fueled vehicles. DoD policy dictates that the DLA automatically substitute re-refined oil when activities order certain grades of commercial oil. DoD activities purchasing oil from sources other than DLA must comply with the legal requirements to use re-refined oil, and activities are reminded that the central supply system is the preferred method of purchasing supplies. Do not purchase, or arrange for purchase of, any virgin motor oil when a re-refined alternative is readily available and meets vehicle manufacturer recommended performance standards.

1.29.2.2. Approved re-refined oil which can be used in most Air Force vehicles will meet current API standards, evidenced by the “Starburst” symbol on the container.

1.29.2.3. The DLA will submit the aggregate Air Force volume and cost of re-refined oil for each reporting period. Units not purchasing oils through the DLA will account for quantity purchased and dollar amount expended for locally procured oils.

1.29.2.4. TO 36-1-191 requires maximum use of recapped tires. Contract for recapping tire carcasses, or purchase recap tires when priced cheaper than, or equal to the cost of a new tire.

1.29.3. The Pollution Prevention Act of 1990 established that pollution should be prevented or reduced at the source; that pollution which cannot be prevented should be recycled in an environmentally safe manner; that pollution which cannot be prevented or recycled should be treated in an envi-

ronmentally safe manner; and that disposal or other release to the environment should be employed only as a last resort, and conducted in an environmentally safe manner. Conduct vehicle maintenance operations in keeping with this hierarchy of actions.

1.29.3.1. A good example of compliance with this hierarchy would be an ongoing recycling program for antifreeze. Impurities are removed, chemicals are added to refresh its protective characteristics, and the recycled antifreeze is continued in service without buying new antifreeze.

1.29.3.2. Likewise, oil analysis is an analytical approach to monitoring the contamination of oil. It helps to prevent unnecessary oil changes by providing the user the capability to determine oil changes based on the oil's actual condition, not on the length of time the oil has been used. Recent advances in low cost in-house oil analysis equipment make it possible to perform reliable analysis within the vehicle maintenance shop. Additionally, high-density by-pass filtration is available to extend the oil's useful life. In addition to reducing waste oil generation, collateral benefits may include: reduced acquisition of petroleum based lubricants, reduced labor hours in the management of waste oil, a reduction in risk assessment incurred during storage, pumping, and shipment of waste oil, and an extension of engine life through improved, in use, lubricant. Moving from time and/or mileage to analysis based oil change intervals, along with the use of by-pass filters to extend oil drain intervals, is a demanding and challenging endeavor which could ultimately increase a maintenance function's workload. It should also be noted that installation of by-pass filters is not always cost effective. Normal scheduled maintenance intervals as outlined in TO 36-1-191 are not affected by an oil analysis program (i.e. normal scheduled maintenance actions such as inspections, chassis lubrication, etc. will still be required at the current intervals). MAJCOMs have the authority to implement oil analysis programs for all or specific segments of their assigned vehicle fleets at their discretion. As a minimum, adhere to the requirements identified in **Attachment 8** of this AFMAN. Additionally, any unit desiring to implement an oil analysis program must seek advice and consent from their MAJCOM functional representative prior to obligating funds toward establishing said program.

1.29.3.2. (AFMC) Vehicle maintenance elements will institute an engine oil analysis program based on guidance prescribed in AFMC Manual 24-1. Vehicle maintenance elements unable to implement an oil analysis program must submit a request for waiver, with full justification, to HQ AFMC/LGRV.

1.29.3.3. Use the base hazardous material (HAZMAT) pharmacy to the maximum extent practical as a means to reduce waste of bulk hazardous materials when its shelf life expires. Within the framework of the pharmacy program, shops establish a set amount of hazardous material required to perform their operation and receive measured amounts of this material on an as-required basis. ***NOTE:*** Certain hazardous materials used only by vehicle maintenance may not be practically managed by the HAZMAT pharmacy or the source for certain of this material may be COPARS or local purchase. Regardless of the source of the HAZMAT, vehicle maintenance aligns its procedures for purchasing and handling HAZMATs to the principle of the HAZMAT pharmacy.

1.29.4. Follow local directives and laws when hazardous waste disposal is required. The VMM and VMS establishes an MOI on pollution prevention and on hazardous waste management.

***Section 1B—Vehicle Maintenance Responsibilities***

**1.30. General Information.** Inspection and maintenance responsibility for miscellaneous items of aerospace ground support equipment (AGE) is as specified. This ensures serviceability and safety for non-vehicles, while leading to more effective and economical management of the vehicle fleet. Assignment of responsibility includes the using activity responsible for management and specialized maintenance aid. For example, the aircraft field maintenance shop can provide some machine shop work that vehicle maintenance cannot do. See the "Help Function" of OLVIMS for the scope of the maintenance responsibility on nonregistered vehicles and equipment.

1.30.1. Set local procedures to ensure all requests to locally purchase equipment for which vehicle maintenance has primary or assistance maintenance responsibility are sent through the VMM or VMS. This ensures that maintenance can be performed and parts are obtainable. The VMM and VMS will not accept maintenance responsibility for equipment if the request to purchase the equipment was not properly routed through vehicle maintenance for coordination.

1.30.2. Include maintenance and parts publications in the request to locally purchase equipment to be supported by vehicle maintenance. Send the publications to vehicle maintenance after the equipment is received. The VMM or VMS do not assume maintenance responsibility for locally purchased equipment without the necessary technical data, if, in their opinion, inspection, servicing, adjustment, or repair work cannot be performed properly.

**1.31. Primary Responsibility for Vehicle Maintenance.**

1.31.1. See AFI 24-302. Organizations procuring nonregistered equipment (i.e. ATVs. mowers, etc.) will coordinate with the VMM or VMS to make sure parts, facilities, manpower, funds, etc. are available to support the equipment before it is acquired. Organizations will first consider purchasing a maintenance agreement to support the equipment. To control the workload in vehicle maintenance, requests for MAJCOM purchase of vehicle-like “X” registered equipment are submitted to MAJCOM LGT for approval.

1.31.1. (AFMC) Organizations procuring this type of equipment are also responsible for procurement of technical data, shop and parts manuals, etc. Vehicle maintenance will not accept primary maintenance responsibility on any non-registered equipment, regardless of cost, unless sufficient technical publications are provided.

1.31.2. When vehicle maintenance is responsible for the non-registered item:

1.31.2.1. Master records are loaded into OLVIMS.

1.31.2.2. Vehicle equivalents are added according to the information in the "Help Function" in OLVIMS.

1.31.2.3. Vehicle maintenance schedules all required periodic inspections, to include lubrication, oil changes, and other preventive maintenance.

1.31.2.4. Using organizations bring equipment to the shop for inspections or repair, or arrange for servicing by mobile maintenance. Information on gains or losses is provided to maintenance control by the using organization.

1.31.3. Special tools designed for operator preventive maintenance shipped with a specific piece of equipment are transferred with the equipment to the using organization.

1.31.4. **NOTES:**

1.31.4.1. Where no repair criteria is established by the item manager, the one-time repair limit is 75 percent of the acquisition cost of the asset at the time of purchase, or the amount derived by multiplying the replacement cost by two and dividing this figure by the expended age in years, whichever is less.

1.31.4.2. Attachments that come with a vehicle or piece of equipment, for which vehicle maintenance has prime responsibility, are maintained or replaced by vehicle maintenance. If the using activity purchases additional attachments for this same vehicle or piece of equipment, it is the using organization's responsibility to maintain or replace them unless the VMM or VMS agrees to do so.

1.31.4.3. Maintenance on major specialized systems mounted on standard vehicle chassis is the responsibility of the using organization. Specialized systems include, but are not limited to, communications equipment, munitions maintenance systems, environmental systems, special hoists, and sensitive test equipment. Using organizations arrange for in-house or contract repair of this equipment. Vehicle maintenance is only responsible for maintaining the basic vehicle chassis and power train.

**1.32. Assistance Responsibility for Vehicle Maintenance.** When requested, and when within its capabilities, the vehicle maintenance shop assists organizations owning the vehicles and equipment listed in the "Help Function" of OLVIMS. Maintenance and parts support for this equipment will be on a reimbursable basis if deemed necessary by the VMM or VMS.

1.32.1. **NOTE :** If recurring maintenance is done on any of these vehicles or equipment by vehicle maintenance, they will be loaded into OLVIMS using the management code in the "Help Function" of OLVIMS. Scheduled inspection dates are loaded for all powered equipment.

**1.33. Civil Engineering.** The base civil engineer:

1.33.1. Rewraps or changes the broom, filter bags, skid plates, and deflectors on all sweepers; maintains correct adjustment of brooms, deflectors, and caster wheels on all sweepers; changes the mold board cutting edges and shoes on earth moving and snow removal equipment; sharpens and changes blades and deflectors on grass cutting equipment; conducts weight tests; and replaces steel cables and wire ropes on assigned equipment. The user and base supply ensures these requirements get requisitioning priorities according to the mission being supported. ***NOTE*:** The using organization funds for and buys these items and associated hardware such as nuts and bolts.

1.33.2. Maintains installed equipment related to the normal civil engineering function, such as stoves, refrigerators, heaters, air-conditioners, sanitary facilities, similar civil engineering items mounted in government-owned trailers (including house trailers), and truck cargo compartments.

**1.34. Using Organizations.** Using organizations are responsible for:

1.34.1. Organizational maintenance (operator maintenance) on all assigned vehicles and equipment. Operators' Inspection Guide and Trouble Report forms and operator manuals (technical orders or commercial manuals) are used to ensure each service, inspection, and maintenance repair is done.

1.34.1. (AFMC) TOs on tactical vehicles are written for the Army maintenance concept. This causes some confusion in the area of operator responsibilities. Vehicle operator servicing, inspection and maintenance of Air Force tactical vehicles are the same as for any other type vehicles.

1.34.2. Maintenance of locally procured vehicle-mounted equipment and attachments costing under $10,000. NOTE: See AFI 24-302. Organizations must coordinate with the VMM or VMS to make sure facilities and manpower are available to support any equipment before it is acquired. This topic should be briefed at VCO meetings.

1.34.3. Buying jacks, lug wrenches, wax, highway warning kits, spare tires, wheels, tire chains, fire extinguishers, lubricants, lubrication equipment, starting fluid, windshield washer fluid, special tools, and accessories to meet operating requirements.

1.34.4. **NOTE :** When equipment operators are responsible for lubricating equipment before and during use, vehicle maintenance may advise operators regarding the lubricant to be used, tools needed, and frequency of lubrication. The using organization procures required tools and lubricants.

1.34.5. (Added-AFMC) Scooters/Low Speed Vehicles (LSV) are organizational equipment and maintenance is the responsibility of owning organizations. Vehicle Maintenance facilities and manpower should not be used to maintain these assets.

**1.35. Warner-Robins Air Logistics Center (WR-ALC).** WR-ALC is responsible for the central logistic support of vehicles and vehicular equipment.

**1.36. Major Commands (MAJCOM), Field Operating Agencies (FOA), and Diect Reporting Units (DRU).** MAJCOMs, FOAs, and DRUs give staff and command supervision and guidance, and ensure units are adequately supporting their missions. These responsibilities include:

1.36.1. Assisting in establishing manpower and equipment authorizations, and planning and programming for the facilities required to carry out organizational and intermediate maintenance responsibilities.

1.36.2. Preparing and approving budget and funding requirements to include requesting and justifying resources for the depot-level maintenance support needed to meet command needs.

1.36.3. Sending depot-level repair requirements to the appropriate ALC.

1.36.4. Sending the command policies on vehicle maintenance management to HQ USAF/ILTV.

**1.37. Wing, Center, and Logistics Group Commanders, or their Equivalents.** Each of these commanders:

1.37.1. Recognizes the policy and procedures in this AFMAN.

1.37.2. Is responsible to the MAJCOM for the maintenance management of vehicles and equipment.

1.37.3. Sets target dates for completing repairs on off-season vehicles and equipment to ensure their readiness when seasonal needs require their use.

1.37.4. Directs organizational maintenance according to technical directives.

**1.38. Transportation Squadron Commander (or equivalent).** The Transportation Squadron Commander ensures vehicles and equipment are maintained in a safe, and serviceable condition with the least expenditure of manpower, funds, and material. The commander also ensures that:

1.38.1. Maintenance facilities are adequately programmed to eliminate deficiencies, and for the status of transportation projects in the military construction program.

1.38.2. Material is available to support vehicle maintenance.

1.38.3. Vehicle maintenance quality standards comply with Air Force policy.

1.38.4. Vehicle maintenance budget programs are accurate and sent in on time.

1.38.5. Needed services are given. To do this, the commander makes frequent visits to check the status of training, the condition of facilities and equipment, and helps to solve problems.

1.38.6. Personnel are available, according to mission requirements, to prevent disruption of the shop work flow.

1.38.7. Approves or disapproves all requests to exceed a vehicle's one-time repair limit, and requests for disposition. Any recommendation to process a vehicle identified as "Air Force critical" in TO 36A-1-1301, or on command critical vehicles, for disposal (salvage) is forwarded to the MAJCOM for final disposition. ***NOTE*:** Prior to engaging in extensive refurbishment of a critical asset, request the MAJCOM function manager query the item manager at WR-ALC to determine if there are inherent deficiencies in a specific vehicle, or set of vehicles, that would preclude refurbishment action.

1.38.7. (AFMC) Authority to exceed one-time repair limits may be delegated to the VMM or the QAE for contracted operations. Do not perform major repairs on excess or code 048 vehicles without HQ AFMC/LGRV approval. Do not retain vehicles longer than 45 days after it has been determined the vehicle is going to DRMS. For all AFMC bases/centers where there is a Vehicle Management Flight/Function, process vehicles for disposition IAW TO 36-1-191 Chapter 5. The Vehicle Management Flight Chief/Commander at bases/centers has the authority to approve vehicles for transfer to DRMS for non-critical assets listed in the *Vehicle Management Index File* {found at **https://sevpgm.robins.af.mil/vehicle/vmif**} under the following conditions: vehicles must be in replacement codes A-J or repairs exceed the one-time repair allowance. For those AFMC units that are tenants on other MAJCOM bases and where there is no AFMC Vehicle Management Flight/Function, LTIs and disposition requests will continue to be forwarded to HQ AFMC/LGRV for approval. For Brooks City-Base, responsibilities of the Vehicle Management Flight Chief/Commander will be performed by the Vehicle and Mobility Manager.

1.38.7.1. (Added-AFMC) The approving authority for repairs which exceed the one-time-repair limit, for vehicles assigned to the 46th Test Group at Holloman AFB and Phillips Lab at Kirtland AFB, is the respective unit commander. For Brooks City-Base, the approving authority is the Vehicle and Mobility Manager.

1.38.8. The rotation of 2T3XX personnel outside the vehicle maintenance flight is limited to a period not longer than 18 months.

**1.39. Vehicle Maintenance Management.** The VMM and VMS are responsible for overall vehicle maintenance management. Their responsibilities are divided as required to meet local conditions. Responsibilities are as follows:

1.39.1. Establish a layout for work centers, considering such factors as work flow, equipment, tools and supplies. ***NOTE:*** Provide a separate facility for vehicles and equipment that transport or dispense combustible materials such as fuel, oil, water-alcohol vehicles, hose carts, filter and separator units, and so forth.

1.39.2. Make sure maintenance facilities and programs for deficiency elimination are adequate.

1.39.3. Develop a tool kit list for each AFSC or work center.

1.39.3. (AFMC) The VMM/VMS will ensure all tools in individual tool kits (ITK) or composite tool kits (CTK) are etched with applicable ITK or CTK numbers. Additionally, to enhance tool control, it's recommended that all hand tools in ITKs or CTKs be inlaid in foam. Contracted bases and mobility toolboxes are exempt from this requirement.

1.39.3.1. Ensure tool kits, shop tools, and equipment are safe and serviceable and used for their intended purposes.

1.39.3.2. Choose the type of toolkit to be used, either an individual toolkit (ITK) or composite toolkit (CTK). Make frequently used special tools available in the work centers.

1.39.3.3. See that shop equipment is serviced according to TO 34-1-3.

1.39.4. Ensure personnel are available to meet workload needs; check the productivity of persons assigned to the work centers.

1.39.5. See that local maintenance procedures comply with Air Force and MAJCOM maintenance policy.

1.39.6. Coordinate with the base chief of supply to make sure required supplies are available.

1.39.7. Take the responsibilities of the Functional Area Chief (FAC) for the contract operated parts store (COPARS) contract, as prescribed by AFMAN 64-108.

1.39.8. Assign responsibilities and give authority to supervisors to make sure all functions within the vehicle maintenance shop operate effectively.

1.39.9. Assign responsibility for the technical publications library to the section that can maintain it the most effectively.

1.39.10. Request formal training. Check training progress and needs by: personal observation and coordination with supervisors; using MCA analysis of workload output; reviewing recurring maintenance reports; evaluating skill levels; and by assessing training status reports. Assure on-the-job training is conducted according to AFI 36-2201 and choose a qualified person to set up and administer this program. See that an AF1284, **Training Quality Report (TQR)** is submitted when technical graduates do not meet the training proficiency level of the approved Specialty Training Standard (STS). Submit AF1284 also when deficiencies are identified in Career Development Courses (CDCs). Refer to AFI 36-2201 for specific instructions.

1.39.11. Look at inspections and quality assurance findings with supervisors and take corrective action when it's indicated. Identify specific vehicles, vehicle types, or users that require inordinate amount of maintenance effort. Determine the cause and take corrective action.

1.39.12. Resolve technical problems or ask for technical aid, as necessary, to solve problems that involve maintenance beyond local capabilities.

1.39.13. Provide VCO/VCNCO orientation.

1.39.14. Control the vehicle maintenance contract maintenance program.

1.39.15. Make and submit an annual vehicle maintenance budget; control expenditures during the budget year and act as cost center manager.

1.39.16. Analyze reports received from MCA (manpower, VIC, cost, and so forth) to find weak or deficient areas, and set up corrective policies and procedures.

1.39.17. Review workloads, schedule work assignments, leave schedules, and alert rosters.

1.39.18. Ensure limited technical inspections are prepared promptly and accurately.

1.39.18. (AFMC) The VMM/VMS will thoroughly review and certify the LTI for accuracy and completeness when completed for repair/disposition decisions and shipping purposes. At bases where the vehicle maintenance function is under contract, the QAE will verify entries and the FAC or designated representative will coordinate on LTIs forwarded off base. At Brooks City-Base, the Vehicle and Mobility Manager will coordinate on LTI's forwarded off base.

1.39.19. Ensure that full advantage of vehicle warranties is taken as outlined in TO 36-1-191.

1.39.20. Approve VDP requisitions.

1.39.20. (AFMC) The VMM/VMS may delegate Vehicle Deadlined for Parts (VDP) requisition approval authority to section supervisors.

1.39.21. Approve or disapprove all cannibalization requests, or delegate authority to do so.

1.39.22. Maintain liaison with and visit using activities; be aware of their mission and operation, and provide technical assistance for organizational maintenance.

1.39.23. Be familiar with the vehicle priority buy program and know when new vehicles will be received. When such information is available, the VMM or VMS should immediately identify replacement-coded vehicles that will be disposed of when the replacement vehicles are received.

1.39.24. Ensure procurement of special tools, test equipment, and training for newly received vehicles. NOTE: The latest MEEP evaluations on new tools and equipment can be accessed on the AF/ILT homepage.

1.39.25. Conduct shop meetings with section supervisors to identify and solve maintenance problems.

1.39.26. Authorize persons to draw and receipt for parts from the COPARS store. Keep authorizations to a minimum consistent with effective management and control.

1.39.27. Check the COPARS billing package each month and certify that the sales slips and vendor's invoices are correct; send both the package and certification to contracting for verification. Accounting and Finance notifies the VMM or VMS of any billing adjustments made as a result of prompt payment discounts or other reasons.

1.39.28. Authorize minimum essential repairs to uneconomically repairable vehicles. Develop a maintenance operating instruction (MOI) prescribing what essential repairs can be accomplished without written approval. Define the repair authority by vehicle components or dollar value, and do not exceed the one-time allowance.

1.39.28. (AFMC) Contracted bases will use the over-and-above labor rate on LTIs when determining costs that exceed the one-time-repair limit.

1.39.29. Ensure proper documentation of accidents and vehicle abuse repairs.

1.39.30. Nominate a quality assurance evaluator (QAE) for the COPARS contract as prescribed by AFMAN 64-108.

1.39.31. Ensure that vehicle deficiency reports are processed according to TO's 00-35D-54 and 36-1-191. Act as certifying official for the accuracy and release of deficiency reports.

1.39.32. Ensure that MCA retains workload data for at least 12 months, either hard copy or electronic storage is authorized.

1.39.33. Perform organizational quality control for AFTO22.

1.39.34. Perform duties of IDEA (Suggestion) program OPR for suggestions (see AFI 38-401).

1.39.35. Ensure that tire and battery issues and inventory controls are implemented to identify fraud, waste, and abuse.

1.39.36. Develop continuity folders to keep track of major problems, construction programs, long range plans approved waivers, unique operating requirements, and past maintenance practices.

1.39.36. (AFMC) Continuity books will contain all written approvals to deviate from prescribed regulatory requirements.

1.39.37. Coordinate on all correspondence above unit-level dealing with vehicle maintenance issues.

1.39.38. Ensure vehicles are in TO 36-1-191 condition before shipment and personally inspect all vehicles prior to shipment.

1.39.39. Ensure vehicles requiring acceptance into the fleet, shipping, disposition action and repair decisions meet the processing time limits.

1.39.40. Authorize the use of the International Merchant Purchase Authorization Card (IMPAC) and ensure its use conforms to prescribed directives.

1.39.41. Stay on top of all environmental matters associated with the vehicle business, paying particular attention to information and direction in preceding paragraphs **1.29.** through **1.29.3.**

1.39.42. Promote safety, occupational health, and fire prevention. As a minimum:

1.39.42.1. Refer to AFI 91-202, *The USAF Mishap Prevention Program*, for vehicle maintenance safety standards, practices, and procedures.

1.39.42.2. Maintain an Air Force Form 55, **Employee Safety and Health Record**, for all assigned personnel as required by AFI 91-302, *Air Force Occupational Safety, Fire Prevention and Health Program*.

1.39.42.3. Schedule meetings to discuss safety and hazards.

1.39.42.4. Ensure surveys of shop noise levels, lighting, fume, and exhaust extraction systems are performed by the Base Bioenvironmental Engineering Section at least annually as required by regulation, or whenever a major change in shop operations occurs that creates a hazardous condition.

1.39.42.5. Ensure at least two persons are in the work center when repairing vehicles. When repairs are required after duty hours, a qualified operator for the type of vehicle being repaired satisfies the two-person requirement when the mechanic is a five skill-level or higher.

1.39.43. (Added-AFMC) Vehicle Maintenance Managers will ensure a copy of the Automotive Engine Oil Analysis Program, AFMC Manual 24-1, is available for reference. Contact HQ AFMC/LGRV if assistance is needed in obtaining this reference.

**1.40. Administration Section.** The administration section performs administrative functions as directed by the VMM or VMS.

**1.41. Training Monitor.** The training monitor sets up and administers a training program as outlined in **Chapter 5** and AFI 36-2201.

**1.42. Maintenance Control and Analysis (MCA).** MCA is the focal point for determining repairs and authorizing the expenditure of manpower and material through the work center. It is also the focal point for the movement of vehicles and equipment to and from the work centers and for commercial contract repair activities. Specific responsibilities are outlined in **Chapter 2**.

**1.43. Customer Service Center (CSC).** CSC is the interface between the vehicle user and vehicle maintenance. CSC technicians debrief vehicle operators and perform incoming inspections on vehicles for the purpose of determining maintenance requirements.

1.43.1. As a rule, general purpose vehicles are routed through CSC to determine malfunctions and repairs needed. Perform enough after-repair inspections to ensure that repairs have been done correctly.

1.43.2. The VMM or VMS determines (in an MOI) the extent of completed work to be inspected, what types of repairs and services are inspected, and by whom. The skill level of personnel, the vehicle complexity, and critical mission support are determining factors. Generally, all completed annual inspections, scheduled inspections and brake repairs receive an outgoing inspection.

**1.44. Work Center Supervisor.** This supervisor is responsible for:

1.44.1. Coordinating with MCA to ensure priorities are met and maintenance tasks are completed on time.

1.44.2. Assigning work to personnel commensurate with their skills.

1.44.3. Ensuring that proper tools and equipment are readily available and serviceable, and that subordinate personnel are properly trained in their use. The supervisor reports shortages and deficient equipment to the VMM or VMS.

1.44.4. Ensuring technicians comply with safety procedures and technical data. ***NOTE*:** Complying with technical data does not mean an open book reference for each repair task. It does require the technician to be familiar with the procedures for each job. Complex repair tasks, performance specifications, torque ratings, special tolerance adjustments, and so forth, do require reference to technical data, and, in some cases, repeated reference at the job location. Technical data for vehicles or vehicular equipment, including nuclear certified assets, must be current. In addition to the current technical order or commercial manual, printed or in digital form, any of the following data sources are acceptable: technical orders, printed material, microfilm, or software provided by or procured from the asset manufacturer, commercially procured after-market parts and repair manuals, such as Mitchell Manuals, Chilton Manuals, or digitized technical data such as Mitchell On-Demand.

1.44.5. Inspecting incoming vehicles and equipment not processed through CSC. The supervisor coordinates with MCA if additional repairs not covered by the AF1823 are required, and revises the estimated time in commission (ETIC) as needed.

1.44.6. Determining to what degree, and by whom, repaired vehicles and equipment are inspected to ensure all work specified on AF1823s has been completed.

1.44.7. Briefing newly assigned personnel.

1.44.8. Assigning personnel to duty positions to ensure full use and progression opportunities.

1.44.9. Determining the most efficient and economical means of returning vehicles to service. The supervisor carefully considers the repair or replacement of individual assemblies or subassemblies and components to make effective use of resources, to adhere to any safety and serviceability standard, and to avoid "overly-maintaining" the vehicle.

1.44.10. Informing MCA of the requirement for more work so that maximum productivity may be obtained from assigned personnel.

1.44.11. Checking with materiel control on parts requirements and availability.

1.44.12. Accounting for labor hours according to **Chapter 6**.

1.44.13. Setting up training needs, sending training requirements to the VMM/VMS, and assisting in on-the-job training.

1.44.14. Making sure parts received for vehicles during the work phase are properly protected and not improperly stored on the vehicle's seat or other soft trim.

1.44.15. Ensuring vehicles are properly prepared for storage when placed in VDP status

(see TO 36-1-191).

1.44.15. (AFMC) All deadlined vehicles will be preserved at storage level "C" as prescribed in TO 36-1-191. The only exception will be vehicles deadlined for less than five duty days that are kept inside the maintenance facility. Vehicles stored outside awaiting parts, will be preserved in accordance with the above reference and inspected for condition every 30 days. The VMM/VMS is authorized to deviate from the TO 36-1-191 requirement to remove, tag, and store vehicle batteries while the vehicle is down for parts. Battery ground cables will be disconnected at the battery on vehicles VDP longer than five days. All disassembled components are to be tagged and stored in such a manner as to prevent deterioration. A locally fabricated placard will be readily displayed on, or in, deadlined vehicles. The placard will contain at the minimum; vehicle registration numbers, date VDP, work order number, reason for VDP, and date next inspection is due.

**1.45. Contract-Operated Base (Support Services).** Commands supplement this AFMAN, as needed, or vehicle maintenance flights establish MOIs to set up procedures for contract-operated vehicle maintenance activities.

**1.45. (AFMC)** Contractor operated functions have the same responsibility to maintain OLVIMS reporting integrity as do in-house operations. This includes, but is not limited to, the accurate documentation of labor hours, labor costs, parts costs, VOC reporting, delayed backlog hours, and static data for maintaining vehicle replacement coding and scheduled maintenance services. Deviations from procedures affecting OLVIMS reporting will require HQ AFMC/LGRV approval.

1.45.1. (Added-AFMC) Adjustments to any data affecting contract established Acceptable Quality Levels (AQL) will require documentation to show amount of adjustment, period of adjustment, and

reason the adjustment was permitted. The information will be maintained in one central file for the duration of the contract.

1.45.2. (Added-AFMC) Contract modifications, which significantly increase or decrease the scope of the contract, will be forwarded to HQ AFMC/LGRV.

**1.46. Productivity Measurement:** The Office of Secretary of Defense has issued guidance to measure and monitor labor hour productivity within vehicle maintenance/operations activities. (See DoD 4500.36-R.) Labor time accounting is used:

1.46.1. To support vehicle repair decisions and develop budgets at base level.

1.46.2. To determine the number of delayed work-hours attributed to lack of personnel available to work on vehicles when needed.

1.46.3. To identify training needs, job performance evaluations, shop equipment, tools, and facility upgrades.

1.46.4. To determine the maintenance efficiency of individuals, work centers, maintenance activities, and MAJCOMs.

1.46.5. To determine if Air Force vehicle maintenance personnel are being used efficiently.

# Chapter 2

## MAINTENANCE CONTROL AND ANALYSIS (MCA)

**2.1. Introduction to MCA.** MCA plans, schedules, monitors, and analyzes the maintenance requirements on vehicles and equipment and is the focal point for the maintenance portions of the vehicle data collection system, OLVIMS.

2.1.1. MCA uses good judgment and exercises flexibility in scheduling work requirements into the shop. Parts availability, work center manning, and the needs of the maintenance customer are considered when MCA plans, schedules, and adjusts the shop workload.

2.1.2. The MCA work center should be accessible and recognizable to its customers.

2.1.3. In developing a scheduled maintenance plan IAW TO 36-1-191, MCA considers seasonal needs, labor-hour availability, and fair distribution of annual needs.

2.1.3.1. Scheduled maintenance is priority maintenance and is done according to TO 36-1-191.

2.1.3.2. Develop, as necessary, workcards and checklists for certain vehicle types or special inspection and servicing requirements. Bilingual workcards and checklists may be mandatory when local national employees are not required to read and speak English.

2.1.3.2. (AFMC) Use of a local checklist during the performance of annual inspections and PM&Is is mandatory.

**2.2. Specific Responsibilities of MCA.** MCA's specific responsibilities are to:

2.2.1. Provide fast and dependable service to the customer.

2.2.2. Schedule vehicles for needed inspections and service. This may be via an appointment system.

2.2.3. Ensure work is authorized before it is started and notify the VMM or VMS of any estimated repair costs that exceed the one-time repair limit for the vehicle.

2.2.4. Assign work priority (see **Chapter 1**). Tell the VMM or VMS when the total VOC or number of mission-essential vehicles exceed acceptable levels. PCN SB004-008 can be used to aid in this requirement.

2.2.5. Inform the work center supervisor of scheduled work, TCTOs, and other needs.

2.2.6. Initiate and route AF1823 or 1823-1, **Vehicle and Equipment Work Order**, to the work centers. Process using at least 90 days of OLVIMS vehicle historical data.

2.2.7. Monitor workload status and control work flow through the work centers.

2.2.8. Consider maintenance in progress and work awaiting shop when an ETIC is requested. The workload controller and the work center supervisor jointly determine the ETIC to be assigned.

2.2.9. Check the delayed workload, and schedule vehicles for work when the shop capability and needs of the customer permit.

2.2.10. Update the workload control board with vehicle and personnel status as required by the VMM or VMS.

2.2.11. Recommend, in coordination with the work center supervisor, contract repair action when repair work exceeds in-house capabilities or the workload becomes too excessive. Initiate contract documents after approval is received from the VMM or VMS.

2.2.12. Delay work when needed.

2.2.13. Complete the static and variable data entries on data collection forms (see **Chapter 7**). Some data collection forms are computer generated.

2.2.14. Prepare the computer generated AF1828, **Vehicle Historical Record**, when required. Maintain the forms on floppy disk or hard copy (local option). Duplicate copies of the AF1828s may be made and kept in the outlying work centers.

2.2.15. Maintain the master vehicle historical record file according to paragraph **6.6.**

2.2.15.1. Obtain vehicle identification numbers (VINs) from newly assigned vehicles and enter into OLVIMS. Enter the complete number. Note: When the Modernized OLVIMS is released, this responsibility will fall with the Fleet Management Section of Vehicle Operations.

2.2.16. Use the guidance in paragraph **2.1.3.** and TO 36-1-191 to develop and maintain a scheduled maintenance plan.

2.2.17. Initiate and plan depot repair needs (see TO 36-1-191).

2.2.17. (AFMC) Notify HQ AFMC/LGRV, by e-mail, when depot repaired vehicles are returned.

2.2.17.1. Capture vehicle downtime. Retain vehicle record in master file while vehicle is undergoing depot rebuild so that vehicle downtime is accrued (vehicle not available to the user). The downtime begins when the vehicle is removed from service and the shipping LTI is accomplished (this work order remains open). Downtime ends after the vehicle returns from depot, the acceptance LTI is accomplished and the vehicle is available for use. There will be no accounting of vehicle downtime if the vehicle is being shipped to depot and will not return to the shipping base.

2.2.17.2. Capture depot rebuild cost. Process a “JZ” transaction to capture the cost of depot rebuild when the vehicle returns from depot (JZ transaction is generated by the JZ screen that may be seen on the PCN SB004-005, edit list. JZ is used to charge the contract cost and establish contract warranty information). This cost will include transportation and actual depot repair costs. JZ transactions are limited to $99,999 per month/quarter. If depot and shipping costs exceed $80,000, split the cost evenly and capture the remaining cost the following month/quarter. WR-ALC provides depot costs to the MAJCOMs which are forwarded to the base. Contact your local TMO for the shipping cost to depot. Use this same shipping cost for the return cost from depot.

2.2.17.3. Ensure depot rebuild date is captured and properly loaded via the AZ (years and months) in OLVIMS to prevent premature movement into replacement codes A-J, ref: AFCSM 24-1, (AZ transaction used to load/update/delete a vehicle (static data).

2.2.18. Ensure that the warranty program is monitored and used.

2.2.19. Monitor cannibalization and vehicles on VDP.

2.2.20. Monitor contract repair funds and advise the VMM or VMS and cost center manager as appropriate.

2.2.21. Assist work centers in preparing limited technical inspection forms.

2.2.22. Ensure repairs for Time Compliance Technical Orders (TCTO) are scheduled, tracked, accomplished, and recorded. Advise the appropriate MAJCOM for input into CARS via message, letter, or electronic means when completed.

2.2.23. Establish and control transportation labor hour reporting in OLVIMS as prescribed by

AFCSM 24-1.

2.2.24. Monitor all OLVIMS sites loaded on your microcomputer and help resolve any problems encountered while processing OLVIMS data.

2.2.24.1. Capture and input all maintenance historical data in OLVIMS from supported geographically separated units (GSUs).

2.2.25. Process OLVIMS data as prescribed by AFCSM 24-1.

2.2.25.1. Forward Real-time Vehicle Information System (ReVIS) files via file transfer protocol (FTP), or as directed by MAJCOM, each duty day.

2.2.25.2. Process contractor operated parts store (COPARS) transactions through OLVIMS daily. Enter each line item on the sales slip separately. ***Exception.*** Resupply of low-cost bench stock can be processed as a single line item, as can premium freight and communication charges.

2.2.25.3. Transfer Tunner 60K file via SEVFTP batch file, or the data files as e-mail attachments, after completion of monthly processing, but not later than the fifth duty day of the month (if applicable).

2.2.25.4. (Added-AFMC) The following reports will be forwarded to HQ AFMC/LGRV monthly. Reports may be sent using 3 1/2-inch disks via U.S. Mail, by email attachment, or by file transfer protocol (FTP): (Files should be zipped prior to forwarding)

2.2.25.4.1. (Added-AFMC) **Vehicle Master Lists, PCN SB004-023 and PCN SB004-024 (RCS: MTC-LG (M) 7906)..** Submit as of the last day of the month, to arrive by the 15th calendar day of the following month. This reporting is designated emergency status code C3. Continue reporting during emergency conditions, delayed precedence.

2.2.25.4.2. (Added-AFMC) **Vehicle Management Report, PCN SB004-032 (RCS: MTC-LG (M) 7908)..** Submit as of the end of each month, to arrive by the 15th calendar day of the following month. This reporting is designated emergency status code C3. Continue reporting during emergency conditions, delayed precedence.

2.2.26. Process refund and reimbursable costs according to local accounting and finance rules.

2.2.27. After making quarterly corrections to the PCN SB004-56 (Quarterly Corrections Listing), perform an “XN” transaction and forward the file created “[site code]RAQ6T.DA1” file to the MAJCOM electronically. MAJCOMs will provide instructions for forwarding the data from locations without datacomm connectivity.

2.2.27. (AFMC) Submit the Quarterly Vehicle Master Summary file to HQ AFMC/LGRV using 3 1/2-inch disks via U.S. Mail, by email attachment, or by file transfer protocol (FTP):

2.2.27.1. MAJCOMs establish a not-later-than (NLT) date for the disks/file to arrive.

2.2.27.1. (AFMC) Quarterly ARAQ6T Data (RCS: HAF-LGT (Q) 7903). Submit to arrive not later than 15 calendar days after the end of each quarter.

2.2.27.2. The consolidated MAJCOM input must arrive at WR-ALC/LEC not later than the 25th day of the first month following the end of the quarter.

2.2.28. Perform analysis according to paragraph **2.15.**

2.2.29. (Added-AFMC) Air Force vehicles which are centrally procured, but not maintained by a government vehicle maintenance organization (contract or in-house), will be entered into the OLVIMS at the base where the REMS monitor is located. (Ex: Det 8 vehicles located in Palmdale, CA, but loaded in REMS at Robins AFB)

2.2.29.1. (Added-AFMC) Maintenance Control & Analysis (MC&A) will have the following limited responsibilities for these vehicles:

2.2.29.1.1. (Added-AFMC) Enter and remove these vehicles from OLVIMS as indicated by the REMS monitor.

2.2.29.1.2. (Added-AFMC) Provide the using organization a scheduled maintenance listing once each month.

2.2.29.1.3. (Added-AFMC) Update the mileage once each quarter as provided by the using organization.

2.2.29.1.4. (Added-AFMC) Provide information to the using organization on any special maintenance requirements due, such as, service bulletins, TCTOs, and special inspections.

2.2.29.1.5. (Added-AFMC) Input/update OLVIMS with data provided on maintenance accomplished.

2.2.29.2. (Added-AFMC) The organization using these vehicles will assign an individual who will:

2.2.29.2.1. (Added-AFMC) Receive the scheduled maintenance listings, and other special maintenance requirements from maintenance control, and forward them to the vehicle location.

2.2.29.2.2. (Added-AFMC) Be the point of contact for ensuring maintenance actions are accomplished as required and documentation of accomplishment is forwarded to maintenance control.

2.2.29.2.3. (Added-AFMC) Obtain mileage or hour meter readings on these vehicles once each quarter and forward to maintenance control.

2.2.30. (Added-AFMC) Contracted vehicle maintenance functions will prepare and forward a daily vehicle status report to the FAC or designated representative. At a minimum, the report will list the number of vehicles in each repair center and the number of vehicles in VDP status, as of the beginning of the first shift.

2.2.31. (Added-AFMC) As a minimum, a physical yard check will be accomplished at least twice a week on nonconsecutive workdays. Management/QAE will determine report format and local procedures. Contracted functions will provide a copy of the yard check to the QAE.

**2.3. Repetitive Maintenance, Warranty, and Authorized Repairs.** Before sending a AF1823 to the shop, the controller:

2.3.1. Reviews the AF1823, AF1828, and the OLVIMS repetitive maintenance screen for repetitive maintenance.

2.3.2. Estimates repair costs (for major repairs and repairs that may cause the one-time repair limit to be exceeded) and ensures repairs are authorized according to TO 36-1-191.

2.3.3. Decides whether the repair is covered by a new vehicle warranty or a previous contract, COPARS, or other parts warranty.

2.3.4. Assigns a repair priority according to **Chapter 1**.

**2.4. Vehicles in Replacement Codes A Through J.** Maintenance identifies the registration number of vehicles that will be replaced by new vehicle gains. Perform only minimum essential repairs on these vehicles to keep them in service until replacements are received. Process requests for disposition instructions IAW TO 36-1-191. Process requests for repair authority and disposition instructions for vehicles assigned to tenant organizations using the OLVIMS Automated LTI functionto the owning MAJCOM/LGT.

**2.5. Work Order and Vehicle Processing for Outlying Work Centers.** The operator debriefing and incoming inspection is done by the work center. Repair needs are validated. The debriefer gives the information to initiate the AF1823 to the controller and makes sure any scheduled and delayed requirements are known. The work center supervisor (or a designated technician) does final inspections which will be shown on the AF1823.

**2.6. Work Order Control for Delayed Maintenance.**

2.6.1. Delayed maintenance is work that may be put off without damage to the vehicle or equipment, and which does not compromise safety standards. Delayed maintenance codes are in AFCSM 24-1, **Attachment 4**, and on OLVIMS' help screens.

2.6.2. When delayed work is entered on a closed AF1823, OLVIMS generates a delayed maintenance AF1823 for the delayed items, and maintains delayed work by work center.

2.6.3. A copy of the new (delayed) AF1823 and parts requisition local document, if used, is sent to materiel control when parts are required. Another copy of the AF1823 is retained by MCA in a delayed maintenance file.

2.6.4. The controller uses the delayed maintenance report to verify shop backlog, maintain VDP status, make sure parts are installed after receipt, and to catalog identified malfunctions and discrepancies until repaired. Routine delayed maintenance is accomplished during the next scheduled or unscheduled work occurrence, workload permitting. Delayed maintenance can also be done by mobile maintenance.

2.6.5. When the work is scheduled, the controller initiates the AF1823 and sends it to the work center assigned to do the job.

**2.7. Work Order Number Control.** OLVIMS controls and assigns work order numbers to AF1823s. MCA can assign blocks of work order numbers to outlying work centers. The PCN SB004-018 is used to monitor work order number assignment.

**2.8. AF1823, Vehicle and Equipment Work Order, Processing for Vehicles Deadlined for Parts (VDP).** These procedures apply when needed parts are not readily available through materiel control.

2.8.1. The work center supervisor sees that all necessary parts are annotated on the parts requisitioning form or worksheet accompanying the AF1823, **Vehicle and Equipment Work Order**.

2.8.2. Materiel control selects the supply source and processes the parts request. If the parts are not available from normal sources (including work order residue and delayed parts in stock), materiel control, together with the work center supervisor and controller, checks whether parts are available from a vehicle approved to be sent to the Defense Reutilization and Marketing Service (DRMS). If all other attempts to locate parts are unsuccessful, and deadlining the vehicle would seriously affect the user's mission, materiel control and the work center supervisor may consider cannibalization.

2.8.3. When parts are not immediately available, the AF1823 is taken to the VMM/VMS or designee, who reviews each possible VDP condition to make sure all attempts have been made to return the vehicle to service.

2.8.4. Once a VDP condition is approved, the AF1823 is taken to the workload controller who places the vehicle on VDP. The AF1823 is then sent to materiel control and the work center supervisor is advised to prepare the vehicle for VDP storage.

2.8.5. Materiel control obtains parts according to **Chapter 3**.

2.8.6. As soon as the parts are received, materiel control sends the AF1823 to the controller. The controller takes the vehicle off VDP status and schedules it for work.

**2.9. Procedures for Contract Maintenance.**

2.9.1. MCA keeps active and inactive files on contract maintenance correspondence, coordinates with the VMM or VMS and the work center supervisor, plans the workload, monitors the funding status, and keeps files on work specifications.

2.9.2. MCA initiates the AF1823 and contracting documents, i.e., AF9, **Request for Purchase**, Standard Form 44**, Purchase Order - Invoice Voucher (Storage Safeguard Form)** or International Merchant Purchase Authorization Card (IMPAC) for all work done commercially. They include work specifications and other data as needed. The completed documents are sent to the VMM, VMS, or designee for review and signature. ***NOTE*:** All VOC time for contract AF1823s, including awaiting contract action, is vehicle down for maintenance (VDM) time.

2.9.3. After the contracting documents are signed, one copy is retained.

2.9.4. MCA arranges to send the vehicle to the contractor.

2.9.5. MCA monitors the downtime of vehicles in contract repair, and tells the VMM or VMS if corrective action is needed.

2.9.6. When work is completed, the work is inspected for compliance with contract requirements. The VMM, VMS, or designee checks the AF9 and the contractor's invoice for accuracy against the AF1823. Warranty provisions are programmatically entered during “JZ” transaction processing. Additional warranty information may be entered in the remarks area of the closed AF1823.

2.9.6.1. A JZ transaction is accomplished in OLVIMS to input the repair cost. If an actual vendor's invoice is not received with the vehicle, use the price on the contract document.

2.9.6.2. Upon receipt of the vendor's invoice, compare the cost to the contract price and change the OLVIMS if necessary. (Not applicable if using the SF 44, or IMPAC).

2.9.6.3. Accounting and Finance (A&F) develops and certifies SF 1034, **Public Voucher for Purchases and Services other than Personal** (original and three copies) to pay the vendor. A&F reports discounts for prompt payment or other changes to the original invoice cost to MCA for adjustment to the original input to the OLVIMS (not applicable if using the SF 44 or IMPAC).

2.9.6.4. The original invoice is attached to the original voucher for submission by the accounting and finance officer (AFO). A copy of the invoice is attached to the AFO's copy of the voucher and another copy returned to the vendor with the payment. (Not applicable if using the SF 44 or IMPAC).

2.9.6.4. (AFMC) A copy of the contractor's invoice will be retained in the contract maintenance file.

**2.10. Procedures for Processing COPARS Documentation.** The vehicle maintenance flight establishes filing and retention procedures for COPARS documentation.

2.10.1. Materiel control forwards each day's sales slips to MCA in batch sequence, along with an adding machine tape depicting each sales slip total and the grand total for the day.

2.10.2. MCA processes the sales slip cost data by line item (except L9999) into OLVIMS.

2.10.3. MCA verifies the sales slip line items with PCN SB004-005 and makes corrections as necessary. These sales slips are then returned to materiel control for filing.

2.10.4. Input all discounts or charges such as premium communications and transportation, and COPARS overtime, to OLVIMS, as identified by materiel control.

2.10.5. MCA adjusts cost data in OLVIMS, as identified by A&F, for such things as prompt payment discounts or other financial adjustments.

**2.11. Procedures for Processing AF15, United States Air Force Invoice,and Commercial Fleet Service Card:**

2.11.1. Process AF15, **United States Air Force Invoice**, costs into OLVIMS for all vehicle-related services. If A&F notifies MCA of changes to the AF15, such as discounts for prompt payment, MCA processes the change into the OLVIMS.

2.11.2. Process Commercial Fleet Service Card costs after Vehicle Operations Officer (VOO) certification. After MCA enters and validates the data in OLVIMS, (reference AFCSM 24-1) the Commercial Fleet Service Card receipts are returned to vehicle operations. Filing and certification procedures remain the responsibility of the vehicle operations flight.

**2.12. Procedures for OLVIMS Monthly Processing.** MCA completes the following procedures before, during, and after new month processing.

2.12.1. Before submitting a new month parameter transaction (YK) MC&A will:

2.12.1.1. Backup OLVIMS database and print files.

2.12.1.2. Validate the accuracy of the tire recapping percentage.

2.12.2. After the new month parameter transaction is submitted, but before closing out the previous month (Dual Month Status) via the YB transaction MC&A will:

2.12.2.1. Review the Work Order Master File (PCN 18). Ensure all work order numbers marked partially closed are closed completely, verify AF1823s identified as "open excessive time" or "Special Action Required" are accurate, and review AF1823s marked "Awaiting Contract Cost" for accuracy of status.

2.12.2.2. Input indirect employee time for the previous month.

2.12.2.3. Ensure employee master list changes are input.

2.12.2.4. Ensure Geographically Separated Unit AF1823 data is input when applicable.

2.12.2.5. Input minor maintenance actions for the previous month.

2.12.2.6. Run Man-hour Utilization Report for the previous month.

2.12.2.7. Input all previous month parts and fuel charges

2.12.2.8. Contract operated maintenance flights input overhead cost I.A.W. AFSCM 24-1 (VZ Transaction).

2.12.2.9. Review/update mileage inconsistencies and MPG estimators on the Quick Reference Listing (PCN 63).

2.12.2.10. Backup OLVIMS database and print files.

2.12.2.11. Prepare six formatted disk to receive monthly processing files (this number may very depending on fleet size and files produced for your site).

2.12.3. After closing out the previous month (YB) do the following:

2.12.3.1. Print file, or electronically store monthly products/reports.

2.12.3.2. Send AFIS Zip file to the Vehicel Operations Fleet Management Section.

2.12.3.3. Validate data contained in the refundable/reimbursable file.

**2.13. Control of Time Compliance Technical Orders (TCTO).** TCTOs are managed differently than regular technical orders. They must be requisitioned individually and as a series they must be identified for automatic distribution. The TCTO program is managed according to these procedures:

**2.13. (AFMC)** Report Time Compliance Technical Order (TCTO) and Service Bulletin (SB) compliance via E-mail or FAX to HQ AFMC/LGRV (see **Attachment 13 (Added)**). To ensure visibility and prompt completion of TCTOs, SBs and one-time inspections, a master file will be established for tracking purposes. This master TCTO file will consist of a binder separated into active and inactive sections. These sections will be subdivided into three sections: TCTOs, SBs, and one-time inspection letters/messages. The active section will have an index of all active items and will include document number (TCTO number or bulletin number), document title/description, and status. Inactive files may be purged one year after rescission date.

2.13.1. MAJCOMS are notified by WR-ALC/LE concerning newly released TCTOs. MAJCOM/LGTV offices then forward this information to units in their command for action. Upon receiving new TCTO release notification, these units ensure the TO Monitor/TODO places the unit on distribution for the specific TCTO.

2.13.1.1. Units must ensure they are on distribution for each TCTO series. These series are listed in the "-36" index for the type of vehicle they pertain to. The TO monitor should review the "-36" index on receipt and ensure that for each type of vehicle assigned, if there is an applicable TCTO series that it is on distribution. This ensures TCTOs published under that series are sent to the unit. The system is not foolproof, however, as new TCTOs are sometimes issued for which a series has not been established. That is why a manual notification is usually made.

2.13.1.1. (AFMC) MC&A and the shop Technical Order Monitor will ensure a requirement for the TO/TCTO series is established on all assigned vehicles.

2.13.2. MCA should date stamp each TCTO once received; determine TCTO action and/or parts kit requirement by reviewing the TCTO cover page for affected vehicle registration numbers; and notify Materiel Control to order required parts kits after determining and verifying base requirements.

2.13.2.1. WR-ALC/LE requires verification of correct TCTO ordering before kits are released for shipment. Contact the appropriate WR-ALC/LE Item Manager/Equipment Specialist for the affected vehicle type by telephone, fax, or electronic mail; provide vehicle registration numbers, and requisition due-in document numbers obtained from Materiel Control to enable kit release.

2.13.3. Schedule TCTOs according to availability of materials, number of vehicles, and so forth.

2.13.4. Take continuous supply follow-up action until kits are received.

2.13.5. Schedule TCTOs as soon as possible. See the "When work will be done" part of the specific TCTO. A TCTO that is not completed by this date is an "outstanding" TCTO, and places the affected vehicles' serviceability in jeopardy. When directed by the MAJCOM, these vehicles are removed from service until the outstanding TCTO is accomplished.

2.13.6. Record the completion of the TCTO on AF1828, **Vehicle Historical Record** (OLVIMS PCN SB004-828). Advise the appropriate MAJCOM for input into CARS via message, letter, or electronic means when completed.

2.13.7. Maintain an active master TCTO file. A rescinded file may be maintained when needed for special programs and projects. When a rescinded TCTO is needed, it can be obtained by following the procedures in TO 00-5-2.

2.13.8. The VMM or VMS advises the MAJCOM within 24 hours after a TCTO becomes outstanding.

**2.14. Vehicle Abuse Repairs.** MAJCOM or local procedures are established for reporting suspected vehicle abuse. Usually, damage not attributable to fair wear and tear or accidents, is characterized as abuse.

**2.15. Accident Repairs:** When the shop receives a vehicle with accident damage, MCA along with allied trades specialists initiate an AF1823 estimating the cost of repair. When computing estimated cost for repairing accident damage, indirect cost is included only to determine one-time repair limitations.

2.15.1. Document accident repairs separately from normal work.

2.15.2. Prepare an AF20, **Repair Cost and Reparable Value Statement,** when requested by the surveying officer.

**2.16. The Importance of Analysis:**

2.16.1. Managers at all levels use maintenance and operations data to measure the effectiveness of their organizations. OLVIMS provides management reports as the basis for formal analysis. Monitoring and controlling performance indicators (metrics) is usually done by exception when requested by shop management. The following indicators can be monitored monthly:

2.16.1.1. VIC rates.

2.16.1.2. Costs (per mile, per vehicle, and total).

2.16.1.3. Preventive maintenance (scheduled, delayed, and unscheduled).

2.16.1.4. Labor-hours (direct, indirect productive, and indirect non-productive).

2.16.1.5. Miles (by vehicle type, management code, organization, and fleet).

2.16.1.6. Repeat maintenance.

2.16.2. MCA is the focal point for collecting, accumulating, storing, and analyzing vehicle data. MCA performs analysis required by the VMM or VMS and provides the facts needed for vehicle managers to control the vehicle fleet and resources effectively.

**2.17. Using Analysis Products.** The use of analysis helps management project existing capabilities into plans and schedules and institute controls against variation. The results of the review and analysis of collected data are needed in all successful planning phases. To be of benefit, analyses and recommendations are used as soon as possible after completion. Presentations are brief, factual, and easily understood, and must show the picture as it presently exists. Most effective analysis is in response to management requests for special studies.

2.17.1. HQ USAF, MAJCOMs, or individual installations may impose standards or develop goals for performance measurement.

2.17.1.1. Standards or goals developed by a MAJCOM are tempered with considerations such as geographical location, seasonal peculiarities, military and civilian staff mix, fleet age or composition, and parts availability.

2.17.1.2. A large part of resource management is based on comparing a computed average to set standards that allow the significance of a bulk of data to be understood in a single value. An average may be the usual amount, rate, quality, or time.

2.17.2. A goal is a measure taken by general consent to be a basis for comparison. A standard may be based on analyzing past data alone, past data weighed with known values, or on expert opinion. In any event, the criteria for making a valid standard or goal is founded on objectivity, suitability, and reality. Some sources from which realistic goals may be set are: Existing programs, maintenance reports, historical reports and records, and unit plans and needs.

2.17.3. The analysis process addresses two distinct phases that may or may not be used together. They are production analysis and deficiency analysis.

2.17.3.1. Through data gathering and surveillance, production analysis is used to identify problems, highlight areas that need additional study, and identify areas that may represent a standard of excellence.

2.17.3.2. The real troubleshooting is done through deficiency analysisæa key part of the analysis process. Perform deficiency analysis to whatever degree is needed to highlight and bring undesirable performance to an acceptable level.

**2.18. Presentation of the Analysis**

2.18.1. Some general presentation rules are:

2.18.1.1. Understanding that the value of management information lies in its being used while it is still valid and current. Strive for its use by the appropriate personnel.

2.18.1.2. Use flexible rules and techniques. There are circumstances when it may be impossible to show a result properly if forced to conform to a rigid method. When possible, comply with the rules; but deviate if it allows better analysis.

2.18.1.3. Make a briefing which covers the collected data in a professional way. Briefings address such things as "what, where, how, when, and why", and suggest corrective or preventive actions. Briefings are concise, clear, and easily understood by those to whom they are directed.

2.18.1.4. Set up a program to coordinate analysis findings with maintenance or operations managers before the formal presentation to the transportation squadron commander each month or as scheduled.

2.18.2. Show statistical or narrative data in some usable form. Properly tabulate and arrange data for analysis or projection. Data credibility suffers when shown in a confusing or unfamiliar way. Keep it simple and key the presentation to those who will review it. The following aids in making graphic presentations:

2.18.2.1. Plan the construction in advance, keep it simple, honest, and accurate. Do not give the wrong impression.

2.18.2.2. Start scale values at zero or bracket the reference point, and keep the background clear of unnecessary gridlines.

2.18.2.3. Name the presentation fully and accurately; use one subject at a time to keep from crowding the material.

2.18.2.4. Use short but complete notes where necessary; be sure the presentation is informative.

**2.19. Performance Indicators (Metrics).** Standard indicators have been developed to provide a basis for measuring the performance of each level of vehicle maintenance management. The VMM, VMS, squadron commander, or MAJCOMs make use of these, or develop their own indicators to meet their own circumstances. Indicators are analyzed as prescribed by the VMM and VMS, and recommended actions provided if the performance does not meet minimum standards. Standard performance indicators have been automated and can be obtained each month by producing PCN SB004-115, (OLVIMS Automated Analysis).

**2.19. (AFMC)** AFMC vehicle management performance indicators are as follows:

2.19.1. (Added-AFMC) **Vehicle In-Commission Rate (VIC):** Total fleet (including non-registered vehicles) VIC goal is 90% or greater.

2.19.2. (Added-AFMC) **0-24 Hour Turn-Around Rate:** 0-24 hour turn-around goal is 60% or greater.

***NOTE:*** Units with a quarterly average not meeting the established performance indicators shall provide analysis/comments to HQ AFMC/LGRV not later than the 15th of the month following the quarterly reporting period. (See **Attachment 13 (Added)**)

**2.20. Degree of Analysis.** Circumstances will dictate varying degrees of analysis. Management makes the call as to what performance indicator will be analyzed, charted, plotted, or otherwise trended, and sets the frequencies for such analysis. OLVIMS' product control number PCN SB004-115 should satisfy the data display requirements.

2.20.1. The level of performance achieved or the symptomatic condition of the indicator dictates which analysis action to follow.

2.20.1.1. An indicator well within a set standard may not need any more analysis for that reporting period.

2.20.1.2. An indicator just barely within a standard may need some analysis for that reporting period; it may need some analysis to find out why, whether corrective action is needed, or other areas it may affect.

2.20.1.3. An indicator that points to bad performance, worsening trends, or unfavorable effects that may go on if not stopped, calls for in-depth analysis. In-depth analysis is "analysis that shows a performance deficiency or failure to reach a goal, tells why, shows the effect of the deficiency or substandard performance, and outlines action that will help reach the goal."

2.20.2. Analysis of the areas set by Squadron commanders, MAJCOMs, VMM and VMS make up most of the analysis effort by MCA. The analyst must be aware of the savings in manpower and material cost and the greater mission capabilities that may be gained by a more detailed analysis. During an in-depth analysis, certain factors perceived as the primary cause of the problem may not be the root of the problem. The scope of the analysis, then, is expanded, the true cause determined, and corrective action identified.

2.20.3. Independent studies and analysis may not provide a definite conclusion when viewed alone. There are times when a larger base of data will be needed; a sampling may need a longer span of time; a first look shows nothing significant is expected to result; or when the end can be confidently predicted without doing a formal study.

2.20.4. Studies and analyses may take the analyst out of the office. The analyst goes where the data is, or where the process is conducted; this may require reviewing vehicle records jackets and vehicle historical records in maintenance control, material cost data in materiel control, and sometimes working with a supervisor in the work center.

**2.21. Method of Presentation:** For standardization, a way to present each performance indicator is given as part of that indicator. For each of the indicators, the level of performance achieved needs to be graphically displayed in chart form.

2.21.1. If an indicator does not meet the established standard or goal, the VMM or VMS should be informed to determine if an in-depth analysis is needed.

2.21.2. The analysis or study narrative addresses such things as the primary cause of the problem, factors that affect it, recommendations for correcting the deficiency, and anticipated time required for correction. A narrative may be required on all standard indicators each month by the VMM or VMS.

**2.22. Specific Performance Indicators.** Unless otherwise stated, goals or standards for performance measurement are set by MAJCOMs or local managers. MAJCOMs or local managers also set the rules for charting or trending the indicators that can be tracked as either "Fleet" or "Registered Vehicles." See AFCSM 24-1 for explanations and examples of performance charts that are part of the OLVIMS PCN SB004-115, Automated Analysis Report. The remainder of this paragraph covers the standard indicators and MAJCOM or local manager optional indicators.

**2.22. (AFMC)** As a minimum, all indicators identified in paragraph **2.22.** of AFMAN 24-307 will be reviewed by all AFMC bases and analysis performed when standards/goals are not met, or as indicated below (See paragraph **2.22.16.10. (Added)** in this supplement for analysis exemptions for contracted functions). Use the rules identified for each indicator to help perform the required analysis. The following AFMC standards have been established: (where AFMC standards have not been established, local standards will be established using past data)

2.22.1. Cost Analysis. Operations and maintenance analysis are required to ensure that money and manpower are not wasted. The analysis should identify unfavorable cost trends and prime vehicles or groups of vehicles using large amounts of labor or material. Operating and maintenance costs are combined and shown as a single cost.

2.22.2. Average Cost Per Unit is Indicator #1 on PCN SB004-115. See rules 1 through 40, **Table 2.2.** for analysis procedures.

2.22.2. (AFMC) **Average Cost Per Unit.** Analysis is required when the monthly cost per unit exceeds the locally established goal by 20 percent or more.

2.22.3. Average Cost Per Mile (Administrative Fleet) is Indicator #2 on PCN SB004-115. See rules 1 through 40, **Table 2.2.**, for analysis procedures.

2.22.3. (AFMC) **Average Cost Per Mile.** The command goal is not to exceed 30 cents per mile.

2.22.4. VDM Hours to Direct Labor-Hours Percentage. A shop's ability to respond to workload may be measured by use of this indicator. It checks the percentage of direct productive labor-hours in relation to the number of VDM hours on AF1823s. The intent is to keep the spread of these two factors to a minimum.

2.22.4. (AFMC) **VDM Hours to Direct Labor-Hour Ratio.** The command goal is not less than 11.0 percent.

2.22.5. VDM Hours or Direct Labor-Hour Ratio (Closed Work Orders) is Indicator #3 on PCN SB004-115. See rule 42, **Table 2.2.**, for analysis procedures.

2.22.6. Number of Annual Inspections Overdue is Indicator #4 on PCN SB004-115. See rules 81 through 86 of **Table 2.2.** for analysis procedures.

2.22.6. (AFMC) **Annual Inspections Overdue.** The command goal is 0; analysis is required if 4 or more vehicles are overdue for the month.

2.22.7. Number of Scheduled Inspections Overdue is Indicator #5 on PCN SB004-115. See rules 81 through 86 of **Table 2.2.** for analysis procedures.

2.22.7. (AFMC) **Preventive Maintenance & Inspections (PM&I) Overdue.**The command goal is 0; analysis is required if 5 or more vehicles are overdue for the month.

2.22.8. Number of Work Orders Opened is Indicator #6 on PCN SB004-115. See rules 15 through 17 and 41 through 58 of **Table 2.2.** for analysis procedures.

2.22.8. (AFMC) **Number of Work Orders Opened.**Analysis is required when the number of work orders is not within plus or minus 20 percent of the locally established goal.

2.22.9. Number of Hours in Delay Code "C" is Indicator #7 on PCN SB004-115. See rules 74 through 80 for analysis procedures. As a minimum, these shops will manually accumulate the total backlog hours and track, chart, or analyze at least two categories, hours with parts on hand and other delayed hours. Over a 12-month period, these shops should be able to develop an acceptable level of backlog hours which will result in efficient shop management.

2.22.9. (AFMC) **Number of Hours in Delay Code "C."** Analysis is required when the indicator exceeds the established local goal. Seasonal trends must be considered.

2.22.10. Percent Direct Labor is Indicator #8 on PCN SB004-115. See rules 66 through 70 of **Table 2.2.** for analysis procedures.

2.22.10. (AFMC) **Percent of Direct Labor.** The command standard is 52 percent or higher.

2.22.11. Percent Indirect Labor Productive is Indicator #9 on PCN SB004-115. See rules 71 and 72 of **Table 2.2.** for analysis procedures.

2.22.11. (AFMC) **Percent of Indirect Labor, Productive.** The command standard is not to exceed 31 percent.

2.22.12. Percent Indirect Labor Nonproductive is Indicator #10 on PCN SB004-115. See rule 73 of **Table 2.2.** for analysis procedures. MCA personnel may use rules 66 through 73 in **Table 2.2.** and the data in OLVIMS PCNs SB004-028, SB004-029 and SB004-032 to check on labor usage by work center.

2.22.12. (AFMC) **Percent of Indirect Labor, Nonproductive.** The command standard is not to exceed 17 percent.

2.22.13. Percent of Fleet VDM is Indicator #11 on PCN SB004-115. See rules 41 through 58 in **Table 2.2.** for analysis procedures.

2.22.13. (AFMC) **Percent of Fleet VDM.** Goal established locally.

2.22.14. Percent of Fleet VDP is Indicator #12 on PCN SB004-115. See rules 59 through 65 in **Table 2.2.** for analysis procedures.

2.22.14. (AFMC) **Percent of Fleet VDP.** Goal established locally.

2.22.15. Percent of Fleet VOC is Indicator #13 on PCN SB004-115. See rules 41 through 65 in **Table 2.2.** for analysis procedures.

2.22.15. (AFMC) **Percent of Fleet VOC.** The command standard is not to exceed 10 percent.

2.22.16. Percent Hours VOC by Vehicle Group or Category are Indicators #14 through #22 on PCN SB004-115. See rules 41 through 65 in **Table 2.2.** for analysis procedures. When there are enough vehicles in each category, a graph is printed for:

2.22.16. (AFMC) **Percent of Fleet VOC by Vehicle Group or Category.** Goal established locally.

2.22.16.1. General Purpose Vehicles. All whose USAF Registration Number has a "B" or a "K" in it. (Indicator #14).

2.22.16.2. Construction and base maintenance vehicles and equipment. All whose USAF Registration Number has a "D" or "M" in it. (Indicator #15).

2.22.16.3. Registered nonreportable Vehicular Equipment. All whose USAF Registration Number has a "W" in it. (Indicator #16).

2.22.16.4. 463L Materials Handling Equipment. All whose USAF Registration Number has an "E" in it, keying on selected USAF management codes. (Indicator #17).

2.22.16.5. Material Handling Equipment (non-463L). All whose USAF Registration Number has an "E" in it, keying on selected USAF management codes. (Indicator #18).

2.22.16.6. Fire Trucks. All whose USAF Registration Number has a "C" or "L" in it, keying on selected USAF management codes. (Indicator #19).

2.22.16.7. Refueling Vehicles and Equipment. All whose USAF Registration Numbers has a "C" or "L" in it, keying on selected USAF management codes. (Indicator #20).

2.22.16.8. Special Purpose Vehicles and Equipment. All whose USAF Registration Numbers has a "C" or "L" (other than fire trucks and refuelers) in it, keying on selected USAF management codes. (Indicator #21).

2.22.16.9. Nonregistered Vehicles and Equipment. All whose USAF management code begins with a numeric character. (Indicator #22).

2.22.16.9.1. NOTE**:** MCA personnel may use rule 41 through 65 in **Table 2.2.**, and the data in OLVIMS' PCNs SB004-008 or SB004-032 to see which vehicles or groups of vehicles have abnormal VOC rates on a scale other than the groups seen above.

2.22.16.10. (Added-AFMC) Contracted functions are required to perform the analysis as stipulated EXCEPT for the following areas: VDM hours to direct labor-hour ratio, percent of direct labor, and percent of indirect labor (productive and nonproductive) unless otherwise directed by local management. If analysis is deemed not necessary, the indicators will still be charted.

2.22.16.11. (Added-AFMC) Contracted functions may use the contract Acceptable Quality Levels (AQL) in place of command goals, at the discretion of local management. However, if AQL groups in "Percent of fleet VOC by vehicle group or category" are different than stated in paragraph **2.22.**, the groups specified will be separately charted each month as a minimum.

**2.23. Other Indicators.** There is a continuing need to check and measure motor vehicle related statistical and historical data beyond that outlined in this chapter. There is almost no end to the material to be reviewed, just as there is no end to the need to improve customer service and save resources. While some of the following areas may well be used as a part of a major analysis, they also lend themselves to independent tests and analyses. In some way, each of the areas affect the outcome of the total motor vehicle effort. They are not listed in priority order, nor can any one be singled out as being more important than the other. The analyst must weigh each on a basis of what the goal is at a given time. The remainder of this paragraph covers "other indicators" that can be monitored at the direction of the MAJCOMs or local managers, who may set goals to gauge the effectiveness of these indicators.

**2.23. (AFMC)** Local management will direct analysis of other indicators as necessary to resolve deficiencies, decrease costs, and to improve efficiency and customer service. Local standards or goals should be established on repeat maintenance and quality of maintenance.

2.23.1. Repeat Maintenance. This is often found to be one of the main causes of high costs and low VIC. A high occurrence of repeat maintenance may indicate improper scheduling, inadequate quality control, failure to use test equipment to diagnose malfunctions, or the need for training. Use OLVIMS PCN SB004-032, particularly Part 10, to see which vehicles or equipment items are in and out of the shop too often. Also, see rule 17 in **Table 2.2.** for analysis guidance.

2.23.2. Contract Maintenance and Other Government Agency Costs. By analyzing these costs, it may be possible to identify inadequate manning, skill levels, shop layout, tools and equipment, and the extent to which in-house capabilities may be improved. It may be best to check these indicators in major vehicle categories. See OLVIMS PCN SB004-032 for the data to be used in this review. See rules 45 and 46 of **Table 2.2.** for analysis guidance.

**2.24. Areas to Monitor.** The following areas do not need to be charted, but should be checked by MCA:

2.24.1. Vehicle and Equipment Work Order Status. Remove appropriate AF1823s from the Work Order Master File Status Report (PCN SB004-018) on a timely basis. Validate AF1823s on the list 45 days or longer.

2.24.2. Transient Vehicles. Mail, fax, or MODEM the vehicle repair transaction (PCN SB004-025) report and fuel report to the vehicle's home base as soon as they are received.

**2.25. Controlling and Evaluating Problem Areas.** When unfavorable trends or indicators are present, MCA can use **Table 2.2.** to identify problem areas and their causes and effects. **Table 2.2.** also reflects suggested review procedures and preventive measures. When performing analysis, refrain from using inflation as a cause for increased cost-per-mile, the aging fleet for increased VDM rates, or other often used "crutches."

2.25.1. When investigating the cause of poor performance, or when trying to isolate the prime reasons for a bad trend, try all the procedures listed in **Table 2.2.**

2.25.2. All situations are not in **Table 2.2.**; conditions that are command or base related may affect a situation in one case and may not in another.

2.25.3. An index to the situations covered in **Table 2.2.** may be seen in **Table 2.1.**, below.

**Table 2.1. Situation Table Index.**

| Subject Discussed | Condition or Factor | See Rules |
|---|---|---|
| Administrative Cost Per Mile or O&M Cost Too High | High direct labor cost | 1 through 3 |
| | High Indirect Labor Cost | 4 through 7 |
| | High Direct Material Cost | 8 through 24 |
| | High Indirect Material Cost | 25 through 29 |
| | High Direct or Indirect Material Cost | 30 through 40 |

| Subject Discussed | Condition or Factor | See Rules |
|---|---|---|
| Vehicle Out-of -Commission | High Vehicle Down for Maintenance (VDM) Hours | 41 through 58 |
| | High Vehicle Down for Parts (VDP) Hours | 59 through 65 |
| Labor-Hour Utilization | Low Productive Labor-Hours | 66 through 70 |
| | High Indirect Productive Labor-Hours | 71 through 72 |
| | High Indirect Nonproductive Labor-Hours | 73 |
| Delayed Maintenance | High Incidence of Delayed Maintenance | 74 through 78 |
| | Failure To Remove Vehicles from the Delayed File | 79 and 80 |
| Scheduled Maintenance | Failure to Accomplish Scheduled Maintenance on Time | 81 through 86 |

**Table 2.2. Situation Table.**

| RULE | A | B | C | D |
|---|---|---|---|---|
| | **If the problem is or appears to be** | **probable causes or effects are** | **which could result from** | **then the suggested review procedures and preventative measures are** |
| 1 | Administrative vehicle cost per mile too high, or total O&M cost too high | high direct labor cost | low skill levels of shop technicians | look at the shop training program. Determine need for training by reviewing PCN SB004-029 for skill levels of personnel assigned. Ensure labor hours spent in training are properly documented as outlined in Labor Series 5, in **Chapter 7**, section M. |
| 2 | | | "padding" AF1823s to cover overhead or absent time | be sure all personnel are properly documenting labor hours in accordance with **Chapter 6**. |
| 3 | | | poor quality control program | repeat maintenance will result from a poor quality control program. QC can be expanded to inspect incoming work to qualify the operator's assessment on the Inspection Guide and Trouble Report Form. |
| 4 | | high indirect labor cost | high ratio of personnel assigned to overhead functions, or failure to document direct or indirect nonpro-ductive labor appropriately | be sure manning of "overhead" functions is as close to the AFI 38-201 standard as shop layout will allow. Try to confine maintenance and materiel control tasks to those activities, rather than in the individual work centers. Use PCN SB004-028 to evaluate the maintenance activity's position. |
| 5 | | | | look at the quantity of overhead hours to ensure they are appropriate. Use PCN SB004-028 to isolate specific work centers which are primary contributors to this condition. |
| 6 | | | inappropriate use of tire or battery shop blanket AF1823s/1827s | ensure that only labor incidental to tire or battery shop is being documented as J9998. |

| RULE | A | B | C | D |
|---|---|---|---|---|
| | **If the problem is or appears to be** | **probable causes or effects are** | **which could result from** | **then the suggested review procedures and preventative measures are** |
| 7 | | | personnel assigned to overhead functions not appropriately documenting indirect nonproductive labor | review PCN SB004-028, particularly for personnel assigned to maintenance and materiel control, and supervision and management, to pinpoint failures to submit "exception" hours. The tendency to submit unchanged labor hour data by personnel in the 2 series Labor Codes is not unusual. |
| 8 | | high direct material | poor or inadequate control over material cost data input to OLVIMS | review PCN SB004-005 to ensure data validity, even though record status indicator is "IRA". Particularly validate high-cost transactions. Frequently compare latest edit list against previous edit list to ensure the finance charges are not accepted and costed two or more times on subsequent days. (Suspect double entry or costing when the PZ/JZ transaction list reflects unusually high number of transactions, or "older" work order numbers appear prevalent). |
| 9 | | | | review PCN SB004-005 VIMS Transaction Edit List, paying particular attention to "VZ and QZ" transactions to ensure data validity despite record status indicator of "IRA". Place emphasis on high-cost transactions. Frequently compare latest edit list against previous edit lists to ensure they only accept once. (Same characteristic as above.) |
| 10 | | | improper high cost bench stock procedures | review PCN SB004-005 "VZ" transactions to find high cost bench stock material (those NSN-numbered items which appear as "EZ" on the Master Bench Stock Record) requisitioned or issued against individual work order number rather than H8888. If this condition is noted, be alert for a "QZ" (part card) submitted on the same item at time of installation. If unchecked, double costing will result. |

| RULE | A | B | C | D |
|---|---|---|---|---|
| | **If the problem is or appears to be** | **probable causes or effects are** | **which could result from** | **then the suggested review procedures and preventative measures are** |
| 11 | | | | review PCN SB004-005 "VZ" transactions on National Stock Class 2610 (tires). Ensure recap tire cards contain "dash 2" identifier as part of the stock number. When the "dash 2" is reflected, ensure the special price is in the transaction. When few or no "dash 2" transactions are noted, evaluate the recap tire program to determine where serviceable carcasses are going. |
| 12 | | | | review PCN SB004-046, High Cost Master Bench Stock List, at least quarterly (more frequently if possible), paying close attention to the price loaded in OLVIMS. Validate this price with Base Supply Management Data or SNUD price to ensure currency. Change high cost master bench stock record "E" format as appropriate. Obtain and distribute updated "Q" cards and ensure the outdated "Q" cards are destroyed.. |
| 13 | | | failure to explore the benefits of recap tires selectively | determine whether cold process retreading (Bandag or equal) is being accomplished or investigated. This process is probably less costly per mile than the hot process. If not presently being accomplished, you may desire to perform a cost analysis to see if the GSA contract for recapping tires should be revised or changed upon expiration of current contract. Extended use of tires may be realized and some labor savings may result from a lesser need for handling and changing tires. |

| RULE | A | B | C | D |
|---|---|---|---|---|
| | **If the problem is or appears to be** | **probable causes or effects are** | **which could result from** | **then the suggested review procedures and preventative measures are** |
| 14 | | | inappropriate application of "Charge Code"( M-maintenance and N-noncharge) | periodically review COPARS sales invoices and "VZ, QZ, PZ, and JZ" transactions reflected on PCN N310005 to verify appropriateness of the "Charge Code" used. (General rule of thumb is to use Charge Code "N" to non-charge the cost of initial and replacement parts and material if not originally installed by vehicle manufacturer.) JZ, must be "M" Charge Code. |
| 15 | | | "fix-by-guess" or "Trial and Error" concept of maintenance | review AF1828s for indications of repeat maintenance. Then review AF1823s and related COPARS sales invoices (attached) or base supply documents for parts and material installed. Look for instances such as: initial installation of an alternator, and possibly later the same day a new regulator; carburetor replaced and shortly thereafter the fuel pump; spark plugs installed, then the distributor replaced, and finally the coil wire. Frequently, the more costly item is "tried " and then a lesser component, and so on until a fix finally results. |
| 16 | | | | the use of diagnostic test equipment greatly minimizes occurrences of this type and reduces costs. (Directly affects high direct labor costs. See rule 2D.) |

| RULE | A | B | C | D |
|---|---|---|---|---|
| | **If the problem is or appears to be** | **probable causes or effects are** | **which could result from** | **then the suggested review procedures and preventative measures are** |
| 17 | | | unrestrained repetitive maintenance, "saturation servicing", and maintenance for the sake of maintenance | review AF1828s for indications of these conditions. Look for multiple entries of the same "Action Code" under a single or related system code. Look for oil lube and filter servicing at much shorter intervals than directed by Air Force policy. Look for extensive maintenance of vehicles eligible for replacement (codes A thru M), with special emphasis on vehicles earmarked for re-placement by confirmed due-in assets. Look for extensive appearance-related maintenance for these vehicles also. (Directly affects high direct labor costs. See rule 3D.) |
| 18 | | | a weak and ineffective quality control program | usually results in increased cost. Advocate that DQA tasks be expanded to evaluate incoming work, to qualify the operator's assessment on the Operator's Inspection Guide and Trouble Report. Ineffective QC may result in repeat maintenance. |
| 19 | | | failure to exercise warranty provisions | review PCN SB004-032 for expenditure of in-house repair hours and material dollars for vehicles still covered by warranty. Determine why warranty provisions were not exercised. May affect high direct labor cost. |
| 20 | | | | review AF1828s for repeat maintenance where consumption of same parts or material is indicated within period of parts or material warranty. Review AF1823 and COPARS invoices to determine whether warranty period was annotated, and attempt to learn why warranty provisions were not exercised. Look at warranty periods provided from COPARS. Is it 30 days on one sale and 90 days on the next? May be applicable to some parts or material provided by base supply. May affect high direct labor cost. |

| RULE | A | B | C | D |
|---|---|---|---|---|
| | **If the problem is or appears to be** | **probable causes or effects are** | **which could result from** | **then the suggested review procedures and preventative measures are** |
| 21 | | | | warranty is seldom exercised for tires and batteries which prematurely fail as original equipment in new vehicles or replacement equipment in older vehicles; applies to recap tires. |
| 22 | | | too frequent a need to apply "Cost plus Service Charge on material received | isolated instances where base supply levied the added service charge cost to issued material, as a result of the need for supply to obtain parts or material from the local market. Usually results from inadequate bench stocks or no special levels established, unsatisfactory fill rate of these stocks, or levels or abnormal consumption. Review bench stocks and special levels for adequacy as necessary. Attempt to minimize the frequency of instances of local purchase by supply for parts and material. |
| 23 | | | failure to reclaim serviceable, still-in-demand parts and material from salvage vehicles | review AF1823s supporting preparation of vehicles for turn-in to Defense Reutilization and Marketing Service (DRMS). Note instances where mechanics failed to swap out such items as tires and batteries. Look for failure to remove pintle hooks, spotlights, sirens, beacon ray lights, etc. |
| 24 | | | inadequate control over COPARS use of "captive" rather than "common" parts | periodically review COPARS sales slips to identify instances where "captive" parts are supplied when "common" parts are known to be available. Attempt to minimize the purchase of "captive" items from COPARS. |

| RULE | A | B | C | D |
|---|---|---|---|---|
| | **If the problem is or appears to be** | **probable causes or effects are** | **which could result from** | **then the suggested review procedures and preventative measures are** |
| 25 | | high indirect material cost | convenience packaging rather than economy bulk | determine whether economy is lacking because certain bulk material such as antifreeze, grease, yard goods, fluids, etc., are purchased in convenient-to-use unit of issue rather than more economical drums, rolls, etc. (Weigh the economy of bulk packaging against labor for handling the larger quantity though; across the board savings cannot be assumed in every situation.) Compile consumption information, method of dispensing, etc., before reaching a conclusion. |
| 26 | | | application of non-price listed (NPL) cost | to track the total dollars paid the vendor for NPL charge over a period of time to determine the impact on your activity. If the cost or percentage of cost for NPL items appears abnormally high, determine if procurement can assist in amending the contract to call for additional price lists. |
| 27 | | | application of charges for premium commun-icatin/ freight to expedite parts and material receipt | periodically review sales slips or, better yet, track those expenses cumulatively so a value of costs incurred and frequency of use can be ascertained. Determine why item required was not on the shelf, and why a local source was not used. Also determine if, after paying premium freight charges, the material received was installed on time or if normal shipping would nave been sufficient. May affect high VDM or VDP rates. |
| 28 | | | improper use of the Low Cost Work Order Number L9999, for parts and material procurement | review PCN SB004-005 “VZ” transactions where work order number L9999 was used. Look at the total price reflected divided by unit of issue, to ensure the cost per unit of use is less than $60. Spot check NSN’s for valid OLVIMS applicability. Look at charge code usage also to ensure M or N codes are properly applied. |

| RULE | A | B | C | D |
|---|---|---|---|---|
| | **If the problem is or appears to be** | **probable causes or effects are** | **which could result from** | **then the suggested review procedures and preventative measures are** |
| 29 | | | | review COPARS invoices where work order number L9999 was used to procure low cost bench stock material. Look at and perform same checks as above. |
| 30 | | High direct/ indirect material cost | inadequate overall surveillance over the COPARS outlet | look for instances where the vendor insists on a single source of supply, which may be "business family" related |
| 31 | | | | look for inflated pricing. Be sure price lists have been verified or approved by procurement. Quality assurance evaluator (QAE) must perform real surveillance and not merely be filling a square.. |
| 32 | | | | look for improper packaging practices where an inferior or lower priced brand of part or material is handed across the counter as a premium or more expensive item. Particular wariness is appropriate when packages have been opened. Examine the contents, comparing brand name against package trademark. |
| 33 | | | | look for like-item price differences. Isolate instances where items are sold one day at one price and the next day at another price. (Determine if price change sheets were received by the vendor and approved by procurement.) |
| 34 | | | | look for instances where different items may have the same vehicle application. Isolate cases where the higher priced part or material is sold to the AF. Such items as windshield wiper blades, clearance lights, radiator hoses, etc., should be monitored closely. |

| RULE | A | B | C | D |
|---|---|---|---|---|
| | **If the problem is or appears to be** | **probable causes or effects are** | **which could result from** | **then the suggested review procedures and preventative measures are** |
| 35 | | | | review sales slips to determine if the vendor is offering rebuilt parts and components rather than new ones. Re-built are less costly and usually afford the same or longer warranty period as a new item. If appropriate, review contract as relates to vendor's responsibility in this area. |
| 36 | | | expanded maintenance responsibility | maintenance activities are frequently found to be maintaining miscellaneous nonregistered equipment for which primary maintenance responsibility has not been assigned. Frequently, MAJCOM or installation commanders have directed vehicle maintenance to repair this miscellany on a continual basis, or the maintenance activity assumes the repair of this miscellany merely because it has wheels and an engine. Evaluate the position of your activity over a period of time as regards support provided for this effort. Usually, the equivalents assigned these miscellany don't provide a return in increased manning expended in supporting it. If support has been assumed, revalidate and coordinate with the user to establish other means of support such as contract maintenance or another Government agency. If support has been directed, attempt to build the case for discontinuance by proving that continued support of this equipment raises your costs. Point out that support of this equipment is to be provided when requested by the user, and only on an as-required basis. May adversely affect VDM rates. |

| RULE | A | B | C | D |
|---|---|---|---|---|
| | **If the problem is or appears to be** | **probable causes or effects are** | **which could result from** | **then the suggested review procedures and preventative measures are** |
| 37 | | | unjustifiable vehicle configuration changes or vehicle modifications | to make someone "justify" the need for vehicle reconfiguration or modification. In every case of a vehicle change, either labor or material or both will be expended. Whether you install bins or shelves, mud flaps, or a ball towing hitch you are modifying the vehicle; every change will cost something. Weigh change requests carefully to ensure the cost and effort is justified. Keep in mind you will be responsible for follow-on upkeep as well. |
| 38 | | | failure to be selective in requisitioning replacement tires | if the primary operating environment of particular vehicles can be predetermined, it may prove worthwhile to be selective in requisitioning replacement tires. Under certain use conditions, radial tires offer greater economy than bias tires; belted bias tires are more economical to operate than radials under other operating conditions. Is your activity selective? Have you looked at what type and cost of tire is being installed on such off-the-road, light duty miscellaneous equipment such as batwing mowers, light trailers, etc.? |
| 39 | | | failure to explore areas where savings may be netted | air filter element cleaning. At least twice the service can be obtained from dry element-type air cleaners by cleaning rather than replacing them. Cleaning procedures are addressed in most equipment servicing technical data, but little, if any, use is made of this procedure. A commercial concern may be contracted (through procurement) with an open-end contract to clean filter elements. The larger the elements, the greater the savings. |

| RULE | A | B | C | D |
|---|---|---|---|---|
| | **If the problem is or appears to be** | **probable causes or effects are** | **which could result from** | **then the suggested review procedures and preventative measures are** |
| 40 | | | | mirror head reuse. Replacement of the "mirror glass" in mirror heads can be accomplished to save the cost of buying replacement mirror assembles. A commercial glass supply source may be contracted (through procurement) with an open-end contract to replace the mirror glass in mirror heads not otherwise damaged. Mirror glass can be replaced at a fraction of the cost of total mirror assemblies. The larger the mirror assemblies (West Coast type), the greater the savings. To determine potential savings, find what your consumption of mirrors has been over a given period of time. Review sales slips and issue documents or AF1823s for this information. |

| RULE | A | B | C | D |
|---|---|---|---|---|
| | **If the problem is or appears to be** | **probable causes or effects are** | **which could result from** | **then the suggested review procedures and preventative measures are** |
| 41 | Vehicle out-of-commission hours too high | high vehicle down for maintenance hours (VDM) | poor control over work documentation | review PCN SB004-032, for individual vehicles reflecting VDM hours in excess of the reporting period available hours. If this condition exists, it is often found that two or more AF1823s were in "open" status for the same vehicle at the same time. This normally results from failure to ensure "close" of a particular AF1823, and from not reviewing the PCN SB004-018, Work Order Master File Status Report before initiating a new AF1823. (More common when two or more AF1823s were required to satisfy contract maintenance work requirements.) |
| 42 | | | poor control over workflow | review PCN SB004-032 for individual vehicle data reflecting very low ratio of direct labor compared to VDM hours accrued. Often results when maintenance control fails to direct the workload. One prime indicator of this problem is when "Estimated Times In Commission" (ETIC) is constantly slipped. Determine if vehicles are placed in delayed or VDP status in a timely manner. |

| RULE | A | B | C | D |
|---|---|---|---|---|
| | **If the problem is or appears to be** | **probable causes or effects are** | **which could result from** | **then the suggested review procedures and preventative measures are** |
| 43 | | | | Determine the appropriateness of priorities in the workflow and the disruptive effect caused by overreacting to unrealistic application of priorities, such as shifting technicians from one vehicle to another, shuffling vehicles from one location to another for shop space, etc. Evaluate the interpretation of maintenance priorities within your activity. Particularly ensure the term "minimum-essential requirements of each base organization" was considered when priorities were established. (Assignment of high priority to a specific type vehicle or using activity does not have to apply across the board.) |
| 44 | | | | survey the clock times indicating when completed AF1823s were closed. Often, too high a percentage of vehicles only required a half-hour to an hour to complete; but rather than have a technician work a little overtime to "button up" and give compensatory time off later, the vehicle remains in the shop overnight or over the weekend, drawing downtime. |
| 45 | | | | evaluate the adequacy of the physical shop(s) to support the maintenance effort. Is it necessary to constantly shuttle vehicles to accommodate certain maintenance or servicing requirements? Must certain maintenance be stopped due to inclement weather? Are technicians frequently waiting for a tool or piece of diagnostic equipment before continuing repair of a particular vehicle? Have adequate hand tools been issued to each technical? |

| RULE | A | B | C | D |
|---|---|---|---|---|
| | **If the problem is or appears to be** | **probable causes or effects are** | **which could result from** | **then the suggested review procedures and preventative measures are** |
| 46 | | | poor physical facility, inadequate shop equipment or tools, lack of manpower, skills, etc. | evaluate contract maintenance frequency. Remember that contract maintenance for vehicle repairs is usually very costly from the standpoint of VDM accrual. See if certain contractors or procurement or contract maintenance officer will accept "complete by" dates on contract requirements. Do not ignore lengthy periods of VDM simply because the vehicle is at a contractor's site. Coordination normally ensures cooperation. You should "track" the reason for contract maintenance, and seek out corrective measures. Evaluate the capability of another organization on base to support your maintenance requirements. |
| 47 | | | untimely responsiveness to parts or material requirements; inadequate bench stock levels or fill rates; and unrealistic or inadequate special levels | evaluate the delivery clauses of the COPARS contract. Does the contract require a certain percentage of fast-moving parts or materials to be on the shelf, and is the contractor complying? Does base supply deliver parts and material on time? Are changes from VDM to VDP status accomplished on time? |
| 48 | | | | review PCN SB004-005 "VZ" supply transactions for frequencies of ordering bench stock-type parts or materials to satisfy individual AF1823 requirements. Physically survey the bench stock holding area for availability of material before "filling" by supply, and after "filling," to determine their fill rate. Revise bench stock requirements, as necessary, and coordinate unsatisfactory or untimely fill rates with base supply. |

| RULE | A | B | C | D |
|---|---|---|---|---|
| | **If the problem is or appears to be** | **probable causes or effects are** | **which could result from** | **then the suggested review procedures and preventative measures are** |
| 49 | | | | evaluate the adequacy of special levels. Look for instances where lack of parts or material is known to have increased VDM and probably led to VDP, but insufficient consumption disallows it from qualifying as bench stock. |
| 50 | | | repeat maintenance | see rule 17D. |
| 51 | | | weak quality control procedures | review AF1823s for vehicles identified as having had repeat maintenance. Determine what percentage of the "repeats" received quality control inspection before release from the maintenance activity. |
| 52 | | | "Fix By Guess" maintenance | see rule 15D. |
| 53 | | | "Saturation Servicing" maintenance | see rule 17D. |
| 54 | | | maintenance for the sake of maintenance | see Rule 17D. |
| 55 | | | vehicles turned in for maintenance late in the afternoon or on Fridays | survey the clock times vehicles are turned in to have maintenance or servicing performed. If a quantity is found to be accepted within 1 or 1 1/2 hours before the end of normal workday, attempt to isolate prime contributing organizations. Advise them of the problems this practice can cause. Indicate to them that turn-around times for their vehicles may improve if turned in early on duty days. May be necessary to implement a night shift, or strengthen the present one to handle the work load faster. |

| RULE | A | B | C | D |
|---|---|---|---|---|
| | **If the problem is or appears to be** | **probable causes or effects are** | **which could result from** | **then the suggested review procedures and preventative measures are** |
| 56 | | | failure to use Management Code 4000 properly | review PCN SB004-032 each month to identify vehicles known to have had preparation for disposal, or acceptance for service processing. See if VDM, labor, parts, or material was charged or costed against the vehicle's management code. If so, have preventive measures been taken to preclude recurrence and charge to 4000? |
| 57 | | | frequent occurrences of vehicle abuse | review AF1823s initiated on vehicle abuse. Attempt to isolate abuse instances to a specific individual or user. Abuse is a problem that can be controlled with proper emphasis . Isolate prime conditions of abuse such as: broken windows or mirrors, clutch replacement, damage by overloading, engines operated with insufficient oil or coolant, and so on. May affect high direct labor cost. Also see rule 77 and 78. |
| 58 | | | expanded maintenance responsibil-ity, assigned or assumed | maintenance activities are often found to be maintaining miscellaneous nonregistered equipment for which primary maintenance responsibility has not been assigned by Air Force. Maintenance of this miscellany usually detracts from that of primary support vehicle requirements and increases VDM of the normal fleet. Manning is generally not sufficiently increased for this equipment because of insignificant value of equivalents assigned per item. Also, see rule 36D. |

| RULE | A | B | C | D |
|---|---|---|---|---|
| | **If the problem is or appears to be** | **probable causes or effects are** | **which could result from** | **then the suggested review procedures and preventative measures are** |
| 59 | | high vehicle down for parts hours (VDP) | unresponsive delayed maintenance program | review PCN SB004-015 each time a vehicle is placed on VDP to see if parts were originally ordered delayed. Delayed maintenance is used to identify parts needs and hopefully forestall a VDP condition by prepositioning material. Isolate instances where maintenance history (historical records or AF1823s) indicate parts or material was ordered as delayed in what was considered sufficient time to forestall VDP, but not received or delivered on time. Attempt to find out why. As required, document these instances and coordinate with supply, the COPARS contractor, or base procurement. Was cannibalization considered when appropriate? |
| 60 | | | poorly managed or maintained bench stocks | when bench stock-type parts or material is ordered to satisfy a VDP requirement, due to nonavailability in the bench stock or forward supply point (tires and batteries), the bench stock may be inadequate or fill rate may be unsatisfactory. If abnormally rapid consumption is noted, was supply notified before depletion? If so, were they responsive to a request for “fill”? Evaluate the need for adjusting established levels or expanding the number of line items carried. |
| 61 | | | untimely responsiveness to parts and material requisitions | evaluate the delivery time of the COPARS contract: Does it require a given percentage of “fast moving” parts and material on the shelf, and is the contractor complying? Does base supply deliver parts and material they have available on time? |

| RULE | A | B | C | D |
|---|---|---|---|---|
| | **If the problem is or appears to be** | **probable causes or effects are** | **which could result from** | **then the suggested review procedures and preventative measures are** |
| 62 | | | insufficient controls over VDP documentation | determine if maintenance or material control initiates and processes vehicle "Status Cards" in a timely manner. Look for instances where status cards were mislaid, not initiated, misrouted, etc.; and where vehicles were not removed from VDP status properly or on time. |
| 63 | | | | review instances where COPARS or supply has provided unsatisfactory delivery dates. Check for timeliness and sufficiency of supply assistance correspondence and follow-up actions. |
| 64 | | | | determine how well material control applies requisition priority based on FAD, UJC, and UND codes. Evaluate the activity's review of supply's responsiveness in ordering priority requisitions through review of the daily D18 listing. |
| 65 | | | failure to use cannibaliza-tion procedures advanta-geously | continually review VDP requirements, checking to see if "like" vehicles are VDP for dissimilar parts or components. Isolate instances where cannibalization could or may have reduced VDP hours. |
| 66 | Inability to attain productive labor-hour goal | low productive labor hours | too high a ratio of personnel assigned to overhead functions (indirect productive), or too much labor spent in the 2 series Labor Codes | see rules 4 and 7. |

| RULE | A | B | C | D |
|---|---|---|---|---|
| | **If the problem is or appears to be** | **probable causes or effects are** | **which could result from** | **then the suggested review procedures and preventative measures are** |
| 67 | | | too high a percentage of labor documented in paid leave and other duty absence labor codes (4 and 5 series) | although not much control can be exercised over personnel taking leave and becoming sick, determine the effect of a high ratio of hours expended in the maintenance activity. Look for seasonal peaks or lows. Attempt to schedule workload requirements, particularly scheduled maintenance and servicing, against known seasonal fluctuation. |
| 68 | | | | determine the primary reasons for consumption of labor hours in other duty absence Labor Codes (the 5 series). |
| 69 | | | ineffective workload scheduling or poor control over workload scheduling in the shop | evaluate the capability of MCA to maintain a balanced workload in the shop(s) during periods of reduced work-loads by calling in scheduled and delayed maintenance which can be accomplished. |
| 70 | | | | look for unbalanced work distribution, i.e., one work center requires continual expenditure of overtime labor while another is not operating at production capacity, having to "log" other than productive labor due to lack of workload. |
| 71 | | high indirect productive (2 series labor codes) percentage of labor hours | too high a ratio of personnel assigned to overhead (indirect productive) functions, or too much labor calculated in the 2 series labor code. | see rules 4 and 7. Usually tied to too low a ratio of direct labor. |
| 72 | | | Ineffective workload scheduling or poor control over workload flow in the shop(s) | see rules 69 and 70. |

| RULE | A | B | C | D |
|---|---|---|---|---|
| | **If the problem is or appears to be** | **probable causes or effects are** | **which could result from** | **then the suggested review procedures and preventative measures are** |
| 73 | | high indirect nonproductive (4 and 5 series labor codes) percentage of labor hours | too high a percentage of labor documented in paid leave and other absence labor codes (4 and 5 series) | see rules 67 and 68. |
| 74 | delayed maintenance backlog too high | high incidence of delayed maintenance require-ments | untimely responsiveness to parts and material requirements; inadequate establish-ment of bench stock or fill rate and realistic or inadequate special levels. | see rules 47, 48, and 49. Review base supply D18 report to ensure adequate follow-up on parts and material requisitions and to determine if the reported "EDD" is satisfactory. Evaluate COPARS support for COPARS-requisitioned parts and material. Review AF372s for QAE evaluation of the COPARS fill rate. |
| 75 | | | poor physical facility or inadequate shop equipment or tools | evaluate the adequacy of the physical shop(s) to support the maintenance effort. Review PCN SB004-015, to see if a particular vehicle or model is prevalent. Review AF1823s to identify what caused the delay, such as a unique piece of test or diagnostic equipment. See if inadequacies have been corrected. Determine if there is a seasonal effect as relates to the facility. |

| RULE | A | B | C | D |
|---|---|---|---|---|
| | **If the problem is or appears to be** | **probable causes or effects are** | **which could result from** | **then the suggested review procedures and preventative measures are** |
| 76 | | | lack of skills, manpower, etc. | review PCN SB004-015, particularly Maintenance Codes A and G, to determine if a particular vehicle or model is prevalent. Review the AF1823s to isolate the repairs that are beyond the shops' capability, to find the skill not available, such as a machinist or a welder, etc. Attempt to determine if a skill or manpower shortage is expected to be long-term or temporary. Has lateral support from another base organization (possessing the skill) been explored? Determine if skill or manpower problems can be related to season requirements. (Also see rule 46.) |
| 77 | | | frequent occurrences of accidents or abuse cases | review PCN SB004-015 to see if after-investigations release to maintenance is timely; if not, determine prime causes of delay and attempt to rectify. |
| 78 | | | | review PCN SB004-015 to isolate abuse instances to an individual user or users. Determine a ratio of proven negligence, where statement of charges assessed an individual for the damages, to evaluate the effectiveness of the overall base abuse reporting and correction program. |
| 79 | | failure to remove vehicles from the delayed file | poor control over maintenance documentation | review PCN SB004-015 to identify vehicles shipped off base or to disposal but still reflecting active delayed requisitions or man-hour backlogs. Evaluate controls to prevent recurrence, and tighten controls to ensure these types of requirements are canceled. |

| RULE | A | B | C | D |
|---|---|---|---|---|
| | **If the problem is or appears to be** | **probable causes or effects are** | **which could result from** | **then the suggested review procedures and preventative measures are** |
| 80 | | | | review PCN SB004-032 for proof of work performed in maintenance for vehicles in the delayed file (PCN SB004-15). Look for instances where (a) parts are on hand; (b) labor only required; and (c) no other complications would have prevented work accomplishment. Determine if PCN SB004-063 is reviewed before new AF1823 initiation. |
| 81 | Scheduled maintenance actions overdue | failure to accomplish scheduled maintenance actions on time | poor control over work documentation | review PCN SB004-021 to identify vehicles listed as overdue scheduled maintenance. Compare them against PCN SB004-032 to see if they were in the maintenance activity while due or over due. Isolate these instances and determine why the schedule requirements were not satisfied then. Determine if scheduled maintenance is accomplished during unscheduled maintenance, when within specified use or time frame. |
| 82 | | | | review PCN SB004-021 to identify vehicles listed as overdue. Review the vehicle's AF1823s, if in the shop recently, to ensure use of proper system codes. Look for instances where the job description called for the scheduled requirement, but an improper system code was used. Also look for combination-like job descriptions, such as LOF and annual safety, as a single job number using a single system code. |

| RULE | A | B | C | D |
|---|---|---|---|---|
| | **If the problem is or appears to be** | **probable causes or effects are** | **which could result from** | **then the suggested review procedures and preventative measures are** |
| 83 | | | improper static data loaded into Vehicle Static Data Records | request a current Vehicle Static Maintenance Data List, PCN SB004-048, to review the scheduling data. Look for intervals that are more frequent (shorter intervals) than required by AF policy. If found , verify rationale. Determine if shorter intervals were requested of and approved by MAJCOM due to environment or operational requirement, etc., and assess current application. Shorter intervals lead to higher frequencies of scheduled requirements and increase the possibility of these requirements becoming overdue. |
| 84 | | | lack of timeliness in advising using organizations of scheduled requirements. Poor cooperation from unit. | evaluate the performance of MCA and operations branch in providing using organization VCO portions of PCN SB004-022 or computer generated appointment letters, to allow them to plan their workload around the input of their vehicles for scheduled maintenance and services. |
| 85 | | | | evaluate the responsiveness of the VCO in providing scheduled vehicles to the maintenance activity within specified times. If an appointment system is used by vehicle maintenance, determine its effectiveness and the VCO compliance with the appointments. Evaluate the effectiveness of the program used to report organizations refusing to comply with scheduled requirements or continually failing to meet scheduled appointments (abuse reporting, commander briefings, etc.). |

| RULE | A | B | C | D |
|---|---|---|---|---|
| | **If the problem is or appears to be** | **probable causes or effects are** | **which could result from** | **then the suggested review procedures and preventative measures are** |
| 86 | | | poor long-range planning | review PCN SB004-048 periodically and PCN SB004-021 monthly, to determine if the scheduled maintenance program was developed with the following factors being considered: (a) seasonal requirements; (b) man-hour availability; and (c) fair apportionment of the annual requirement. Look for situations where one specific month may reflect too high a percentage of scheduled requirements, as compared to another. |

# Chapter 3

# MATERIEL CONTROL AND CONTRACTOR-OPERATED PARTS STORE (COPARS)

## *Section 3A—General Information*

### 3.1. Description of Materiel Control (MC):

3.1.1. Materiel control is a liaison between vehicle maintenance, and the supply system (base supply), COPARS, or other decentralized purchasing method. MC manages supply transactions for maintenance. Any action to deviate from the procedures and guidance listed in this chapter must first be approved by HQ USAF/ILTV.

3.1.1.1. Decentralized purchasing methods, such as Blanket Purchase Agreements (BPAs), International Merchant Purchase Authorization Card (IMPAC), or an imprest fund, may be more appropriate for some vehicle maintenance activities than COPARS. Base contracting is the source for information and advice on BPAs and IMPAC; the Comptroller is the authority for imprest funds.

3.1.1.2. BPAs for parts purchases are individual contracts with parts suppliers. Authorized items and discounts are negotiated by contracting, who also surveils the BPA. Vehicle maintenance provides funds and manpower to identify, purchase, and document contract activity.

3.1.1.3. IMPAC is a credit card used for parts and services within the parameters of the program. Contracting approves its use, trains the cardholder and surveils the program. Vehicle maintenance provides the cardholder(s) who becomes a purchasing agent(s), and is responsible for identifying and buying only authorized items, negotiating discounts, and documenting IMPAC activities.

3.1.1.4. Imprest funds operate on cash. The Comptroller manages the program and provides a check each month. Vehicle maintenance converts the check to cash and is responsible for identifying and buying only authorized items, negotiating discounts, and documenting imprest fund activities.

3.1.2. Materiel control is not established to be a unit supply function. The VMM or VMS ensures that supply functions unrelated to shop needs are not given to materiel control.

3.1.3. Manpower for materiel control is limited. (See Air Force Manpower Standard (AFMS) 42B1.)

3.1.4. The maintenance personnel who supervise materiel control may not have had much exposure to supply procedures, but they must have a basic understanding of this job to properly supervise the function, evaluate supply support, and make knowledgeable performance ratings. Base supply provides customer training using AFMAN 23-110, Vol II, Part 13, to fulfill part of this requirement. Where this training leaves off, materiel control explains supply terms and complicated procedures in language familiar to the maintenance worker.

3.1.5. The scope of materiel control operations requires additional emphasis on training, because these specialists must maintain proficiency in the supply career field as well as develop a basic understanding of maintenance.

3.1.5.1. The superintendent sees that all materiel control personnel become fully qualified in all aspects of the operation, including the use of base supply, OLVIMS, and COPARS procedures, and all management products.

3.1.5.2. A qualification training program is set up for all newly assigned personnel to make sure they receive proficiency training as soon as possible.

3.1.6. The concepts and procedures outlined here ensure compatibility with AFMAN 23-110, Volume II, Part Two, the standard base supply system (SBSS) and AFCSM 24-1, (OLVIMS). At the ALCs, use AFMAN 23-110, Volume III, Part Two, with this chapter. At bases with a manual supply system, use AFMAN 23-110, Volume II, Part One, with this chapter.

3.1.7. It is vital to all parties that MC personnel gain and maintain their supply skills.

3.1.7.1. Materiel control personnel obtain training as prescribed by the Air Staff Functional Manager for AFSC 2S0X1.

3.1.7.2. Materiel control personnel are reassigned to base supply when they have been assigned to an organization other than base supply for three consecutive years.

3.1.7.3. Transportation and Supply managers will work out mutually agreeable personnel reassignments.

3.1.8. Overseas commands are authorized to establish requirements contracts BPAs for procurement of parts and supplies to support foreign buy vehicles. Overseas MAJCOMs develop procedures for the effective security, control, documentation, and issue of parts purchased through BPAs. Authority to bypass the stock fund is provided in AFMAN 23-110, Volume II, Part Ten.

**3.2. Materiel Control Responsibilities:**

3.2.1. Keep MCA and key personnel informed of the overall supply situation as it affects the shop.

3.2.2. Help the shop equipment custodians get authorizations for equipment.

3.2.3. Manage and operate the tool crib, as designated by the VMM or VMS.

3.2.4. Maintain a current file of all needed catalogs, reports, publications, and management listings.

3.2.5. Initiate, monitor, and follow up (as needed) on parts requests sent to base supply or COPARS.

3.2.6. Check daily, and verify the need and status of parts for all VDP vehicles.

3.2.7. Check, verify, and revalidate all parts requirements on delayed AF1823s, and inform the controller of their status, as needed.

3.2.8. Obtain, temporarily store, and issue all parts and supplies needed for AF1823s. Advise the controller or work center supervisor as to parts availability.

3.2.9. Coordinate the establishment of both high-cost and low-cost bench stock items with the work center and with base supply's stock support element.

3.2.10. Operate and keep centralized bench stocks, and review the bench stock with the work center supervisor and base supply's bench stock representative.

3.2.11. Coordinate procedures with outlying work centers to make sure high-cost bench stock items are charged to the proper AF1823.

3.2.12. Coordinate all repair cycle asset matters with the repair cycle support element of base supply. This includes setting up supply points, turning in serviceable and repairable repair cycle assets, reconciling due in from maintenance (DIFM) material, and doing the supply point inventory in coordination with base supply.

3.2.13. Coordinate with the controller for processing items within the shops, and return DIFM assets to base supply as soon as possible.

3.2.14. Inventory, store, and list work order residue; process turn-ins to base supply or the DRMS, as prescribed by the VMM or VMS.

3.2.15. Together with the work center supervisor, recommend and justify requests for adjusted or "special" levels (AF1996, **Adjusted Stock Level)** to support new and mission essential vehicles. Act as the focal point for the adjusted level review, and make sure changes are made, as needed, to conform to any changes in the mission and vehicles.

3.2.16. Assist with and perform parts research.

3.2.17. Advise the functional area chief (FAC) of COPARS problems.

3.2.18. Keep a daily record of COPARS funds on AF1834, **COPARS Fund Ledger**, and tell the FAC when 85 percent of the cost of the delivery order has been obligated. A computerized spreadsheet may be used in place of the AF1834.

3.2.19. Make sure that the most economical parts are purchased. Order the least expensive part (including rebuilt items) when shop records do not show poor performance, less service life, or reliability problems with rebuilt items.

3.2.20. Ensure new, rebuilt, or after-market parts for all vehicles and equipment meet or exceed original equipment manufacturer (OEM) specifications. NOTE: Individual parts are not specifically nuclear-certified by any manufacturer; however, any part is acceptable for use on certified vehicles and equipment if the part meets or exceeds the OEM specifications.

3.2.21. Verify parts charges on the SBSS D-22 report and ensure all material costs are validated and properly charged in the OLVIMS.

3.2.22. Coordinate with base supply and work center supervisors in updating initial spares support lists (ISSL) and follow-on spares support lists (FOSSL) for new equipment.

3.2.23. Ensure local purchase requests are routed through base supply.

3.2.24. Establish Minimum Reserve Authorizations (MRAs) as needed.

3.2.25. Perform monthly AF1823/backorder validation with MCA.

3.2.26. Use the base hazardous material pharmacy to the maximum extent practical as a means to reduce or eliminate having to dispose of bulk hazardous materials upon expiration of its shelf life.

3.2.27. Follow local directives and laws when hazardous waste disposal is required.

**3.3. Required Publications, Reports, and Listings for Materiel Control:**

3.3.1. Required publications are:

3.3.1.1. AFI 24-302.

3.3.1.2. FEDLOG System Access for cross reference data.

3.3.1.3. Illustrated parts breakdowns (dash-four (-4) technical orders) for assigned equipment. Access to a TO library meets this requirement.

3.3.1.4. Applicable TCTOs. Access to the applicable TCTO file meets this requirement.

3.3.1.5. Applicable Allowance Standards (AS).

3.3.1.6. TO 00-20-14. Access to a copy in a TO library meets this requirement.

3.3.1.7. AFMAN 23-110, Vol 2, *Standard Base Supply Customer's Guide*.

3.3.2. Required reports and listings are:

3.3.2.1. Daily Document D04, under SBSS; and Document Control Register DO33-KVIA for AFMC/ALC bases.

3.3.2.1.1. Priority Monitor Report (D18), parts 1 and 5. Urgency of Need Backorder List (DO33-0EZA and DO33-OEZB) is used for part 1. The MICAP Control Register (DO33-KD1B) is the ALC base counterpart of part 5.

3.3.2.1.2. DIFM Reconciliation Listing (D23). The D23/NGV905 listing is used by Base Supply and maintenance activities to reconcile DIFM assets. The DIFM/DOTM Review Lists (DO33-OJIA) are used at ALC bases.

3.3.2.1.3. Daily OLVIMS Materiel Transaction Listing-Non Fuels (D22). ALC bases use the Audit and Control List (DO50-2TPB).

3.3.2.1.4. Supply Point Listing (Q13), if applicable.

3.3.2.1.5. Organizational Bench Stock Listing (S04). The Bench Stock Authorization Lists (DO33-XXIA and DO33-XXIB) are used at ALC bases.

3.3.2.1.6. Due-out Validation Listing (M30). Urgency of Need Backorder List (DO33-OZIC) is the ALC base counterpart.

3.3.2.1.7. Stock Number Directory (M14). No ALC base counterpart is distributed. A remote terminal within materiel control satisfies this requirement.

3.3.2.1.8. OLVIMS. Delayed Maintenance Report, PCN SB004-015.

3.3.2.1.9. OLVIMS. High Cost Bench Stock Master List, PCN SB004-046.

3.3.2.1.10. COPARS Authorized Working Stock List (manually or computer prepared).

3.3.2.1.11. OLVIMS. Delayed Parts Received, PCN SB004-062.

3.3.2.1.12. Listing of all work order residue within vehicle maintenance.

3.3.2.1.13. PFMR/OCCR Update and Reconciliation CD-11.

**3.4. Optional Publications, Reports, and Listings for Materiel Control:**

3.4.1. Optional publications are:

3.4.1.1. AFCSM 24-1.

3.4.1.2. AFMAN 23-110, Volume I, Part One, *USAF Supply Manual*.

3.4.1.3. AFMAN 23-110, Volume II , Part XIII, *Standard Base Supply Customer's Guide*; AFLCP 67-22, DO35A *Stock Control and Distribution System Customer Training Guide*, for ALC bases.

3.4.1.4. AFMAN 64-108, *Base Level Service Contract Administration*.

3.4.1.5. TACOM publishes a supply newsletter periodically which provides information on items supported by code "AKZ." Contact TACOM/AMSTA-FPC, Warren MI 48379-5000 for distribution.

3.4.1.6. TO 00-20-3, *Maintenance Processing of Repairable Property and the Repair Cycle Asset Control System.*

3.4.2. Optional reports and listings are:

3.4.2.1. Organization Cost Center Report (MO3). ALC bases use the Customer Funds Record (DO33-KV1B).

3.4.2.2. Interchangeable and Substitute Group Listing (RO2). No ALC counterpart is distributed.

3.4.2.3. Due-out Status Listing (R31). No ALC counterpart available.

3.4.2.4. TCTO Reconciliation Listing (see AFMAN 23-110, Volume II, Part Two, Chapter 24).

3.4.2.5. Repair Cycle Data List (Q04). No ALC counterpart available.

3.4.2.6. OLVIMS, Edit List ("PZ" and "VZ" transactions) PCN SB004-005.

3.4.2.7. Master Bench Stock Listing (SO4). This is sometimes a desirable product but is not generally distributed. Special arrangements must be made with base supply to get the list.

3.4.2.8. Vehicle ISSLs or FOSSLs, as applicable.

3.4.2.9. Quick Reference Lists, as applicable.

**3.5. Use of Reports and Listings in Materiel Control.** Various reports and listings are available from the standard base supply system (SBSS) and ALC supply systems for managing supply support for the shop. Some of these reports are sent automatically; others are sent based on local needs. All reports are listed in AFMAN 23-110, Volume II, Part Two, Chapter 24, for SBSS bases. AFMAN 23-110, Volume III, Part Two, Chapter 14, discusses the ALC base counterpart. All reports should be neatly bound in order that they may be easily used. The following paragraphs describe the basic uses of the most significant reports and listings (AFMAN 23-110, Volume II, Part XIII explains most reports.).

3.5.1. The Daily Document Register (DO4) is made in document number sequence, and is a comprehensive review of the previous day's supply transactions. It shows exceptional transactions that may require analysis; answers questions about supply that the shop may have; and points out possible abuses of the supply system. It should be checked daily for issues, due-out releases, and cancellations information.

3.5.2. The Priority Monitor Report (D18) is sent to the shop daily for urgency of need (UND) "A" requirements and weekly for UND "A" and "B" requirements. (The weekly and monthly reports exclude bench stock, equipment, and supply point requirements). It lists outstanding due-outs for each item. It is used to validate all back ordered parts for delayed AF1823s.

3.5.3. The AWP Validation Listing (D19) shows the required information to manage DIFM assets, to maintain a current inventory of DIFM items, and to reconcile DIFM balances.

3.5.4. The Supply Point Listing (Q13) lists all items authorized, on hand, and due-out to the supply point. It also has summary data on shortages, excesses, and identification of buildup items.

3.5.5. The Organization Bench Stock Listing (SO4) lists all bench stock items for each activity that applies. It can be used to find items in the bench stock, to check bench stock authorizations, and to add new bench stock items. This listing is shown in national stock number and item number sequence.

3.5.6. The Due-out Validation (M30) provides data for review of UND "A" and "B" priority due-outs. It is also a managerial tool for validating all UND "C" due-outs monthly (except equipment, which is validated at least quarterly).

3.5.7. The Stock Number Directory (M14) (frequently called SNUD) is a monthly list of all national stock numbers stored in the base supply computer. It tells whether an item has been loaded in the computer as well as data about the item (unit price, unit of issue, source of supply, and so forth). Due to its volume, this directory is not sent automatically, and only a small number of copies are made. Materiel control should tell the management systems branch that it would like a copy of the previous month's list.

**3.6. Supply Discipline.** Supply discipline is essential to good materiel management and applies to both maintenance and supply personnel. Responsibilities are identified in AFI 23-111.

3.6.1. A repairable item is as important as a serviceable item, since the repairable one may be the only source of supply. Repairable assets that have been removed from the end item must be promptly sent through repair channels and controlled throughout the repair cycle. COPARS often requires a repairable item (core) before a serviceable one is sold.

3.6.2. Double ordering from base supply and COPARS wastes funds, reduces credibility, and does not in the long run serve the shop well. Don’t use such practices.

**3.7. Priority System.** There are five main areas that all materiel control personnel should know:

3.7.1. Force Activity Designator (FAD). Each organization is assigned a FAD (1 through 5) by the Joint Chiefs of Staff through the US Air Force Program Document. The organizational FAD indicates the relative priority of a unit. The FAD code is loaded in the base supply computer. Vehicle maintenance, as a support unit, is rarely assigned a FAD as high as many of the vehicles it works on. In these cases (such as flight line vehicles, fire trucks, etc.), the FAD of the mission supported by the vehicle should be used to order the parts needed for maintenance.

3.7.2. Urgency of Need Designator (UND). The UND is a one-character alpha code, used to indicate the urgency of the need. There are three *primary* UNDs: A, B, and C.

3.7.2.1. UND "A" means a lack of the requested item prevents mission accomplishment.

3.7.2.2. UND "B" means lack of the item impairs mission accomplishment.

3.7.2.3. UND "C" is used for routine needs not meeting the criteria for a higher UND.

3.7.2.4. “1” is a fourth UND used to indicate a verified NMCS condition for a MICAP reportable vehicle.

3.7.3. Urgency Justification Code (UJC). The UJC is a two-character code that shows the priority and use of the required part (see AFMAN 23-110, Volume II, Part Two, Chapter 9). The first character of

the UJC is the UND; the second character is an alpha code assigned to the type of equipment being worked on. In the case of vehicles, the assigned code is "F" or "Q." When requesting most parts from base supply, materiel control uses UJC, 1F, AF, BF, BQ, or CQ.

3.7.4. Base Delivery Priority. A local delivery priority is assigned by materiel control for each demand placed on base supply. The delivery priorities are in AFMAN 23-110, Vol II.

3.7.5. Requisition Priority. The requisition priority is assigned by the base supply computer based on a combination of the FAD code of the requesting organization (or the supported vehicle, if FAD override is used) and the UND code. When the property is not available in base supply for immediate issue, this priority tells the source of supply how urgent the need is.

**3.8. Coordination Between Materiel Control and OLVIMS.** Materiel control has a key role in making sure all material costs are properly charged in OLVIMS.

3.8.1. This part of the AFMAN integrates materiel control's procedural responsibilities for OLVIMS with its other responsibilities. AFCSM 24-1 gives further procedures for input and output in OLVIMS (see figure A3.1 for cross reference listing).

3.8.2. Materiel control personnel must know all aspects of the material costing process. MCA is the focal point for OLVIMS and is the main source of information and training for new personnel. It is also the OPR for keeping all personnel informed of system changes. The information in figure A3.1 is provided for a quick reference of OLVIMS formats and listings used by materiel control. All references are from AFCSM 24-1.

**Figure 3.1. Materiel Control and OLVIMS Cross-Reference Listing.**

| | |
|---|---|
| Summary of the OLVIMS System | Section 2 |
| Format for establishing High Cost Bench Stock Master (EZ) | Section 5 |
| Format for High Cost Bench Stock(OLVIMS VZ) Transaction Issue (QZ) | Section 5 |
| Format for OLVIMS Materiel Cost Card | Section 5 |
| OLVIMS Edit List (for VZ, QZ, Transactions) | Section 5 |
| Delayed Maintenance Report | Section 5 |
| High Cost Bench Stock Master List | Section 9 |

3.8.3. Material costs are charged in the OLVIMS after purchases are made from base supply or COPARS. Items are charged in three different waysæto the:

3.8.3.1. Vehicle on which the item is used.

3.8.3.2. "High-Cost Bench Stock" account (work order number H8888), for items of bench stock costing $60 or more. Do not charge these items to a specific vehicle until the parts are installed.

3.8.3.3. "Low Cost Bench Stock" account (work order number L9999), for items with a unit of use cost of less than $60. These costs are charged as overhead against the entire fleet, rather than to a specific vehicle.

3.8.4. Items are further identified by charge codes for maintenance or non chargeable costs (D, M, or N). The requester assigns these codes and materiel control verifies them. For examples of items to be charged to D, M, or N, see AFCSM 24-1.

**3.9. Adjusted Stock Levels.** Adjusted levels provide a means to change base stock levels and are used when usage experience is not the best predictor of future needs. When wisely used, adjusted levels are a valuable tool in supporting the mission. Because Air Force resources are limited, the approval of an adjusted level frequently means that fewer dollars are available to buy items with established consumption rates. Requests for adjusted levels must be carefully considered. Procedures are in AFMAN 23-110, Volume II, Part Two, Chapter 19.

3.9.1. Requests for adjusted levels are sent to the stock control element of base supply on AF1996. This form is used to request a change to base supply levels, not to bench stock minimum reserve levels.

3.9.2. Materiel control initiates the AF1996 in five copies, with help from the requester. The VMM or VMS signs as the approving authority.

3.9.3. One copy of the AF1996 is held in a suspense file, three are sent to stock control, and one is sent to the requester.

3.9.4. If materiel control is not notified within 10 days for items that require base-level approval, or 45 days for items that require item manager approval, it starts follow-up action. When it receives notification, materiel control tells the requester and takes the suspense copy from the file.

3.9.4.1. Approved requests are filed in materiel control to use during adjusted level reviews.

3.9.4.2. Rejected requests are reviewed with the requester, to see whether more action is needed.

***Section 3B—Contractor-Operated Parts Store (COPARS)***

Vehicle Maintenance Managers may elect to use means other than a COPARS to supplement base supply. Innovations in information technology and government procurement reforms have made the use of Blanket Purchase Agreements (BPAs) and the International Merchant Purchase Authorization Card (IMPAC) a viable alternative to COPARS for vehicle parts procurement in some cases. If the VMM/VMS believes a cost savings and/or enhanced service can be realized through alternative parts acquisition, the MAJCOM LGTV staff and base contracting should be consulted on procedures for formal evaluation of alternatives for vehicle parts procurement.

**3.10. Description of COPARS:**

3.10.1. The COPARS is a Department of Defense approved method of supplementing base supply and for getting commercially available automotive parts fast and economically. It greatly reduces research, item identification times, and costs for parts that are not stock listed or cataloged. The base contracting activity is responsible for soliciting proposals, and executing and administering the COPARS contract.

3.10.2. Materiel control plays a key role in the coordination between vehicle maintenance and the COPARS contractor. Ideally located next to COPARS, materiel control personnel have many contacts with the contractor each day. This relationship makes it most important that all materiel control personnel read and know the terms of the CONTRACT, particularly the obligations of the contractor. The Quality Assurance Evaluator (QAE) also looks to materiel control for advice on COPARS problems, especially at contract renewal time.

3.10.3. The following guidance applies to COPARS contracts in general. However, each contract is an individual legal document that establishes its own rights and obligations. These procedures are used with the contract at each base. Material control, the QAE, and the administrative contracting officer (ACO) must arrive at a common understanding of the procedures. Performance evaluation and enforcement of the requirement are based on these procedures. ***NOTE*:** The official COPARS contract is on file in the contracting activity and constitutes the binding agreement between the Air Force and the contractor. If there is a conflict between a referenced publication and the contract, the terms of the contract takes precedence.

**3.11. Key Requirements of COPARS Contracts:**

3.11.1. COPARS contracts are requirements contracts. This means the government promises to purchase from the contractor ALL parts covered by the contract. We must know what support the contractor has agreed to in order to properly evaluate it. Personnel authorized to order or receive parts must know the terms of the contract.

3.11.2. Fast Moving Parts. The contractor shall maintain a stock of fast-moving parts on the shelf available for issue. Any part with an average three units of issue per month, minimum, during the previous six month period is considered a fast-moving part for the next six month period of the contract. Seasonal items with an average three units of issue per month for three consecutive months will be considered fast-moving and will be stocked on the shelf for the duration of the season. Previous season issue data may be used to determine stock requirements. If materiel control finds that an item meets the fast-moving criteria, but the contractor does not have it on the shelf, the contractor should be told to verify that it meets the definition and explain the reason for the lack of stockage.

3.11.3. Slow Moving Parts. A slow moving part is any item that does not meet the minimum criteria of a fast moving part. The contract specifies how many days after these requests the contractor has to provide the item. The COPARS status report should be used to check whether this requirement is being fulfilled.

3.11.4. Rebuilt Parts. A schedule of price lists for rebuilt parts is provided. As a rule, there are cost savings for the Air Force buying rebuilt versus new parts.

3.11.5. Items Excluded From Contract. Each contract specifies certain categories of items that the contractor is not usually allowed to provide.

3.11.6. Price List Support. The contract specifies which price lists the contractor will maintain.

3.11.7. Warranty Requirements. The contractor is required to give the same warranty against defective parts as his or her supplier.

3.11.8. Back-Ordered Parts. The contractor must keep a list of all back-ordered parts, with the status updated as specified in the contract.

3.11.9. Other Requirements. These include, but are not limited to: VDP support, service charges for NPL items, premium communications and transportation charges, sales slips, order limitation, research, and invoicing.

**3.12. COPARS Definitions.** Each contract has a special section for defining terms. The definitions below are not intended to change those but rather to supplement them:

3.12.1. Mandatory Federal Supply Schedules (FSS) Items. Those items listed in various FSSs under "General Instructions" as being mandatory for all DOD components.

3.12.2. Centrally Managed Items. The General Services Agency (GSA), Defense Logistics Agency (DLA), and Army stock listed parts. Most contracts have waivers for some of these parts, which are granted according to the source (DLA or GSA) and specific dollar limits.

3.12.2.1. DLA Stocked Items. Identified by acquisition advice code "D" in the stocklist.

3.12.2.2. DLA Non-Stock-Listed Items. Identified by acquisition code "H" or "J" in the stock lists.

3.12.2.3. Local Purchase Source Code. Identified by acquisition advice code "K" (except bases overseas) or "L" in the stocklist.

3.12.3. TACOM Items. Items managed by the Army Tank and Automotive Command, identified by routine identifier "AKZ."

3.12.4. Emergency Conditions. VDP conditions.

**3.13. Authorization to Request or Sign for COPARS Parts:**

3.13.1. A current, up-to-date listing of those personnel authorized to purchase parts must be posted in the store and a copy kept in the contract file. The list reflects the printed name and sample of the individual's signature by organization (as a minimum, first and last name) and includes personnel from other organizations using COPARS when authorized in writing by the FAC. ***NOTE*:** Requests for such authorizations are approved in writing by the FAC. Changes are given to the COPARS contractor and materiel control as they occur (also see paragraph **3.29.**).

3.13.2. The QAE ensures that all personnel authorized to request and sign for COPARS items know which items are in bench stock, which items are excluded from the contract, the warranty rules, and what data is put on sales slips.

3.13.3. A valid AF1823, AF1823-1, or work order number is required to purchase items from COPARS. Organizations other than transportation will use their appropriate document to purchase parts from COPARS.

**3.14. Premium Communication, Transportation, and Handling.** Under emergency conditions, the COPARS contractor may be authorized to use premium communications, transportation, and special handling beyond those used for normal transactions. The extra cost for those services is paid for by the government. For any premium services, prior written approval must be given by the FAC or QAE. AF1072, **Authorized Long Distance Telephone Calls**, is used to record authorized phone calls. A similar log, with a cross reference to the sales slips on which the items are furnished, is maintained for premium transportation and handling.

**3.15. Guidelines for Using COPARS.**

3.15.1. Mandatory FSS and TACOM item guidelines are as follows:

3.15.1.1. Mandatory FSS items are identified in the FSS as mandatory for DOD. Schedules are reviewed quarterly for those items, and procurements assistance requests. All mandatory FSS items requirements are initially sent to base supply.

3.15.1.2. DOD 4140.26M identifies Federal Supply Classes (FSC) 2610, 2630, and 2649 as being assigned to TACOM for integrated management. All requests for items in these FSCs must be sent to base supply.

3.15.1.3. Depot cancellations for mandatory or other centrally procured items are considered to be waivered (CW-one-time waiver or CP-permanent waiver) and the requirement can then be satisfied through COPARS, IMPAC, or BPA. Tires are procured locally (COPARS, IMPAC, or BPA) upon receipt of a kill action from base supply indicating non-availability for tires resulting in placing the vehicle out of service. Base supply may communicate the kill action by telephone to vehicle maintenance indicating the tire is out of stock. Materiel control records the kill action, date, phone number and name of person providing the kill action on the DD1348-1, **DoD Single Line Item Release/Receipt Document**. If COPARS cannot provide the tires by the required delivery date, base supply will walk an emergency request through to the base contracting office to local purchase the tires. The DD1348-1 showing base supply kill action for the tires is the only documentation required before vehicle maintenance can obtain tires from COPARS, IMPAC, or BPA. Also, the base contracting office will local purchase any item that is not delivered by the firm delivery date should an extension not be granted. A copy of the DD1348-1 is attached to the AF1823 as the authority for purchase and to serve as an audit trail.

3.15.2. COPARS is the normal source of supply for obtaining all parts for commercially designed vehicles for bases with COPARS contracts. Commercial vehicles are those in management codes B, C, D, and E listed in the "Help Function" of OLVIMS. Bases without COPARS obtain parts for commercial vehicles from base supply or as determined locally. Overseas bases with foreign made commercial vehicles may obtain parts support for these vehicles through local purchase. ***NOTE*:** Parts for commercial vehicles (except as outlined in paragraph **3.15.1.3.**) will be purchased from COPARS without researching the source of supply, regardless of cost limitation. Vehicle maintenance provides COPARS with the type of vehicle, make, model, year of manufacture, and line setting ticket where appropriate when ordering parts. If additional information is required, COPARS will request it. Parts research is the responsibility of COPARS. Vehicle maintenance provides copies of all line setting tickets to the COPARS contractor at the beginning of any new contract. It is not necessary to reaccomplish this when an option of the existing contract is exercised. As new vehicles are received with line setting tickets, copies shall be given to the contractor, and as vehicles are removed from the fleet, the COPARS store manager will be notified to remove the vehicle's line setting ticket from his file.

3.15.3. Organizations such as Civil Engineering and Field Maintenance may use COPARS. A separate responsibility center/cost center (RC/CC) is established for each activity serviced by COPARS.

3.15.4. Parts required for military vehicles in management codes K, L, and M which are known to be common with commercial truck chassis (e.g. Kovatch R-9 refueler mounted on a Mack chassis) are ordered through COPARS without researching the source of supply. Also, other military design vehicles which have a commercial engine, transmission (e.g. P -19 fire truck with a Cummins diesel engine), are also obtained from COPARS. Develop a list of specific vehicles meeting this criteria.

COPARS and materiel control keep copies of the list for reference. The list is updated annually and approved by the VMM or VMS. If a listing is not used, all parts needed for military design vehicles must be researched to determine the source of supply prior to ordering.

3.15.4.1. DLA and GSA centrally procured items with a unit price of $100 or less are to be purchased from COPARS. The COPARS contractor may stock and issue waivered items without the central manager's approval.

3.15.4.2. Centrally managed, nonwaivered, DLA, or GSA item requisitions are sent to base supply. If the needed part is not available off the shelf, and emergency VDP exists, and if the part is readily available through COPARS, the part may be purchased from COPARS. If not readily available through COPARS, the part may be purchased through the base contracting officer. If an emergency does not exist, an off-base requisition must be sent to the central source of supply. A "CW" cancellation shows one-time authority to local purchase the item; a "CP" cancellation is permanent authority to local purchase the item. Under a "CP" cancellation, the item concerned can be obtained directly from COPARS after that. ***NOTE*:** In accordance with AFMAN 23-110, Vol II, Part Two, if the VMM or VMS determines that a mandatory FSS item is more expensive to purchase from depot, then a like item can be purchased locally. A local purchase request is then submitted through base supply to the appropriate item manager giving full details and justification.

3.15.4.3. All centrally managed items coded for "local purchase" in the stocklist, and nonstocklist items, are eligible for COPARS support.

3.15.4.4. It may be economically better to add price lists to the COPARS contract for purchases of contractor operated civil engineering sales store (COCESS) material through COPARS when needs dictate it and frequency warrants it.

3.15.5. Used parts may be purchased through COPARS when one of the following conditions exists:

3.15.5.1. A new or rebuilt part is not available from any known source.

3.15.5.2. A new or rebuilt part is available, but the cost and/or delivery date of a serviceable used part is in the best interest of the government.

**3.16. Sales Slip Distribution.** Distribute sales slips as follows:

3.16.1. Copy one is retained by the contractor, attached to the invoice, and sent to contracting, and accounting and finance, in turn.

3.16.2. Copy two is sent to the QAE for verification, and then forwarded to MCA for processing into the OLVIMS and filing.

3.16.3. Copy three is attached to the filed copy of the AF1823.

3.16.4. Other copies are distributed according to documentation needs.

**3.17. Sales Slip Processing:**

3.17.1. Materiel control checks for the following data elements on sales slips each day for obvious errors:

3.17.1.1. Date.

3.17.1.2. Work order number.

3.17.1.3. Nomenclature.

3.17.1.4. Quantity.

3.17.1.5. Charge code ("M," "N," or "D").

3.17.1.6. Category of part (new or rebuilt).

3.17.1.7. No changes have been made on the slip.

3.17.1.8. Vehicle registration number.

3.17.1.9. Part number.

3.17.1.10. Responsibility Center and Cost Center Code.

3.17.1.11. Unit price, discount and total price by line item.

3.17.1.12. Warranty (if applicable)

3.17.1.13. Sales slip is "Z'd" out after the last entry.

3.17.1.14. Bin number when charge code "D" is used

3.17.1.15. Total of sales slips on adding machine tape and attached to sales slip.

3.17.2. Each person authorized to sign for parts is responsible for seeing that the data elements listed above are present on each sales slip before signing for the parts. Upon completion of the sales slip, the recipient signs the sales slip using the same signature as the sample signature on the COPARS authorization list. Materiel control ensures that discounts have been figured accurately and provides them to MCA along with the adding machine tape of the total of all sales slips on a daily basis. Sales slips for the day are numbered consecutively, to include copies of voided slips.

**3.18. Monthly Processing and Certification.**

3.18.1. At the end of each month, the vendor's invoice is verified with the sum of all of the month's daily sales slips totals.

3.18.2. The QAE forwards the vendor's invoice, sales slips, and a statement of certification that charges have been verified to the VMM or VMS.

3.18.3. The documentation above is then forwarded to AFO with a letter certifying that the vendor's invoice has been reviewed and is correct. ***NOTE*:** Transportation and AFO mutually agree upon the date the documentation is due to AFO, the certifying official, and the format of the certification letter.

3.18.4. All sales slips for NPL items are reviewed to ensure they are accompanied by suppliers' invoices and discounts passed on to the government. When NPL items are issued before the suppliers invoice is received, the contractor conspicuously flags the sales slip for materiel control. Materiel control suspenses the NPL sales slip using a locally developed log until the actual price is verified. This review is then annotated on the sales slip.

3.18.5. Review all sales slips for price-listed items totaling $100 or more for correct and appropriate entries. Additionally, random-sample and verify at least 10 percent of all other sales slips. Increase the number of sales slips reviewed under $100 commensurate with the errors noted, and annotate reviews on the sales slips.

3.18.6. After checking all sales slips for the day, materiel control enters data on the AF1834. The QAE is advised when 85 percent of the delivery order has been committed (total of all items received and backordered). The QAE then checks to see if additional funds are needed before the end of the period of the delivery order. If more funds are needed, the QAE requests funds through established channels using an AF9. *Under no circumstances may parts be received or back-ordered above the authorized delivery order dollar schedule*. Each organization having separate accounts with COPARS is responsible for daily monitoring the expenditure of their funds through COPARS. The organization notifies the QAE when they have expended 85 percent of their delivery order. Other base organizations using COPARS also maintain an AF1834 to track expenditure of funds for their cost center codes. This procedure may be automated.

**3.19. Preparing AF9, Request for Purchase:**

3.19.1. Materiel control initiates an AF9 for the FAC or designee to sign, which is then sent through channels to the contracting officer to prepare the delivery order.

3.19.2. When other authorized agencies use COPARS, the officer in charge of the organization sends the funds request (AF9) to vehicle maintenance for the next period's purchase request at least 10 days before the start of the new delivery order. Each using organization controls the funds for their purchases.

3.19.3. Approximately 180 days before the COPARS contract expires, a joint contracting and transportation determination is made to extend the existing contract or resolicit new proposals. If the decision is made to resolicit, vehicle maintenance sends an unfunded request for purchase, AF9. The request contains a cost estimate for each contract bid item, a listing of vehicles to be supported, and all other information required by the contracting officer to support the request.

**3.20. Items Covered by Warranty.** Exercise warranties on new and rebuilt items whenever they apply. When a part costing more than $100 comes with a warranty, MCA records the provisions in OLVIMS on the “PZ” transaction, which can then be monitored using the PCN 49. Specific warranties are noted on the COPARS sales slip. Management determines if warranty tracking is accomplished for parts costing less than $100.

**3.21. Quality Assurance Evaluator (QAE).** The COPARS QAE is appointed to assist the contracting officer in seeing that the contractor complies with the contract requirements. The QAE can discuss problems with the contractor; however, formal actions that relate to the performance is the responsibility of the contracting officer.

3.21.1. The QAE maintains a log listing all discrepancies noted, including those that are corrected after discussions. The log serves as a record of frequency of error, or trends, if formal action is deemed necessary at a later date.

3.21.2. Areas of primary interest to the QAE function include:

3.21.2.1. Quality of parts furnished, including unauthorized brands, repackaged parts (brand in box is different than box), and light duty parts not meeting original equipment manufacturer's quality.

3.21.2.2. Errors or omissions in completing sales slips, including the use of wrong part numbers, prices, discounts, omitting price list page number for price-listed parts, mathematical errors, and required data listed in paragraph **3.17.1.**

3.21.2.3. Failure to meet stock objectives and fast-moving parts delivery schedules.

3.21.2.4. Accuracy of estimated delivery dates and estimated prices.

3.21.2.5. Failure to get required parts from responsive sources.

3.21.2.6. Delinquency in confirming NPL sales on estimated price basis.

3.21.2.7. Obtaining contracting officer's approval before ordering NPL items exceeding the dollar limitation.

3.21.2.8. Price variance between sales slip and price list.

3.21.2.9. The contractor extends the same warranty to the government as received from suppliers.

3.21.2.10. Written warranty coverage documentation on file for parts covered with a blanket type warranty coverage and when the specific warranty is not spelled out for each warranted item on the individual sales slips (e.g. brake shoes, master cylinders warranted for 90 days, etc.).

3.21.2.11. Parts provided in the “highest preferred” category.

3.21.2.12. COPARS stocks only items that are normally sold to authorized customers.

3.21.2.13. Requests for tire purchases accompanied by a DD1348-1.

3.21.2.14. Automotive batteries purchased on an exchange basis.

3.21.2.15. Store operating hours established and posted.

3.21.2.16. Attendance at COPARS contractor progress meeting.

3.21.2.17. Base contracting officer prior approval required for items exceeding the dollar limitation.

3.21.2.18. Contractor conducts parts research.

3.21.2.19. Items sold in the smallest quantities available, as listed in the price list.

3.21.2.20. COPARS contractor maintained consumption data list.

3.21.2.21. Parts furnished within time specified in the contract.

3.21.2.22. Approved price lists.

3.21.2.23. Nationally recognized parts interchange manual on file in COPARS.

3.21.2.24. Core credit items.

3.21.2.25. Housekeeping and safety.

**3.22. COPARS Working Stocks:**

3.22.1. Small quantities of fast-moving items can be stocked in materiel control, the diagnostic or CSC element, outlying work centers, and mobile maintenance units as working stock when approved by the VMM or VMS. Also, a small quantity of automotive batteries can be stocked as COPARS working stock to support emergency requirements IAW paragraph **4.6.7.** Vehicle maintenance activi-

ties supporting missile wings can stock a limited quantity of non-expendable (core-exchange) items such as alternators, starters, etc., in the off-base mobile maintenance units. Written requests for such stockage is sent to the VMM or VMS with the following minimum data:

3.22.1.1. Item description.

3.22.1.2. Quantity.

3.22.1.3. Unit cost.

3.22.1.4. Extended cost per line item.

3.22.1.5. Total dollar value of all line items. A copy of all approved working stocks listings are filed in material control and the working location.

3.22.2. Working stock is limited to a 2-week level (based on past experience or consumption) except for satellite activities, that can maintain a 30-day level. Certain bulk items (such as heater hose, etc.) are cheaper and easier to manage when bought in bulk; working stocks may be authorized for these and for seasonal items, even if their rate of use is low.

3.22.2. (AFMC) All main shops are authorized to maintain a 30-day consumption level of working stock. Working stock level for outlying work centers will be determined by the VMM.

3.22.3. Working stocks are physically separated from base supply bench stocks.

3.22.4. COPARS working stock replenishment is ordered against an L9999 work order number for low cost items (items with a unit cost of less than $60) and an H8888 work order number for high cost items (items with a unit cost of $60 or greater). Low cost working stock items replenished using work order number L9999 are prorated against the entire fleet in the overhead labor rate. These items are not charged against individual AF1823s when consumed. Conversely, high cost working stock items replenished using work order number H8888 are held in a special holding account and are charged against the vehicle being repaired or serviced on an AF1823 or AF1823-1 using a "QZ" transaction. ***NOTE*:** High cost working stock items are not installed on a vehicle using an AF1827, **Minor Maintenance Work Order.** Post an entry showing the date the item was replenished and quantity received to the locally developed computerized COPARS working stock consumption listing or make an entry on the appropriate AF1837 each time an item is replenished.

3.22.5. Check consumption records each quarter to see whether items are being used at the projected rate and make changes accordingly. Delete items not showing use for six months. Return deleted items with stock on-hand to COPARS for credit, if possible. If credit is not given, manage the items as work order residue.

3.22.6. COPARS working stock is essential to ensure certain fast moving items are available at the vehicle maintenance work site to reduce vehicle repair time. Critical parts such as batteries need to be available to maintenance when the COPARS store is closed. However, it is important to remember one of the main purposes of COPARS is to reduce inventory cost to the government. As such, management cautiously weighs the costs against the benefits when approving stockage. A separate COPARS working stock account is established for each outlying work center when approved by the VMM or VMS. Maintain a locally developed working stock consumption computer listing for each separate account or a separate AF1837 for each item to manage COPARS working stock. The listing reflects the following information as a minimum:

3.22.6.1. Part description.

3.22.6.2. Part number.

3.22.6.3. Unit of issue.

3.22.6.4. Unit price.

3.22.6.5. Quantity authorized.

3.22.6.6. Bin location number.

3.22.6.7. Date/quantity replenished.

3.22.7. **NOTE :** Vehicle maintenance circles the line item on the computer listing to indicate which items require replenishment. The VMM or VMS signs the working stock listing used for replenishment of stock before placing an order for working stock. If using the AF1837 to manage the working stock, vehicle maintenance uses an AF465, **Bench Stock Inventory**, to reorder COPARS working stock. A listing showing the bin/line item number and quantity to be reordered is provided to COPARS. When the on-hand quantity of an item is 50 percent or less of the authorized quantity, the replenishment will be of a full authorized quantity. The VMM, VMS or designee signs the AF465 prior to submission to COPARS. The total authorized stock (excluding seasonal spares) in all work centers will not exceed the average monthly COPARS expenditure (the previous fiscal year expenditure divided by 12). Seasonal, bulk, or unit pack items are exempt from quarterly review. However, the VMM or VMS reviews these items prior to reordering.

**3.23. Temporary Procedures for Procuring COPARS Items:**

3.23.1. If COPARS support is interrupted for example, by contractor default, the following alternative procedures may be used:

3.23.1.1. Initiate and process a separate obligation authority (AF616, **Fund Cite Authorization)** according to DFAS-DER 7010-1, to obtain funds to purchase required parts and material for continued support.

3.23.1.2. Materiel control sends requests for items directly to base contracting and receives them directly from the supplier. As funding is done by obligation authority (OA), each request has a fund cite and OA number, but need not be sent to accounting and finance. The request must have an AF9, **Request for Purchase**, DD1348-6**,** DoD Single Line Item Requisition System Document**,** or an AF1823 clearly describing the required items. The request shows the responsibility center or cost center code, work order number, vehicle registration number, or equipment serial number. To maintain continuity, send requests from other bases or tenant organizations in the same way.

3.23.1.3. Use purchase orders, blanket purchase agreements (BPA), and delivery orders against FSSs or other existing contracts for procurement. Because of the limited time, separate long-term contracts should be avoided. BPAs with local sources should be used as much as possible. BPAs must have two copies of the delivery tickets sent to materiel control (see the Federal Acquisition Regulation (FAR). Separate delivery tickets are also required for each call.

3.23.1.4. Base contracting must maintain a cumulative record of calls and costs on the BPAs and blanket delivery orders, according to the FAR (see AFAS-DER 177-102).

3.23.1.5. Materiel control acknowledges acceptance of the items by either the delivery or sales ticket, or by completing DD250, **Material Inspecting and Receiving Report**, or DD1155, **Order**

**for Supplies or Service**. A&F charges the proper activity for the item. Identify the activity by the responsibility or cost center code on the delivery ticket compared with BPAs, blanket delivery orders or purchase and delivery orders. Copies of the delivery or sales tickets and DD1155 or DD250 must be sent to A&F by the first work day after receipt of the items. The receiving activity is responsible for giving A&F all required data.

3.23.1.6. Ensure there are no duplicate obligations, and record nondelivered orders for outstanding obligations at the end of the month.

3.23.1.7. Identify items obtained through these special procedures to the appropriate element of expense and investment code (EEIC), the same as COPARS.

3.23.2. While these procedures are in use, base contracting can physically locate one of their buyers in the vehicle maintenance materiel control section. This provides coordination between base procurement and materiel control. Give all information needed to identify the required items to the buyer. Avoid complete reliance on part numbers.

3.23.3. Implementation of these special procedures requires the utmost cooperation and communication between procurement, A&F, and the using activity.

**3.24. Permanent Closure of COPARS Operation.** If, for any reason, it becomes necessary to permanently terminate a contract or to cease obtaining parts procurement from a COPARS, follow these required minimum actions to ensure continued supply support.

3.24.1. The VMM sends the Chief of Supply a list of the items being stocked that were being obtained from the contractor. Consumption data is provided from records maintained by the contractor, to permit the establishment of adjusted levels until actual demand levels are established in supply. The VMM and Chief of Supply negotiate the adjusted levels.

3.24.2. The Chief of Supply tells the contracting officer which items of the contractor's stock are essential for uninterrupted supply support. The contracting officer can procure the stock from the COPARS contractor, if appropriate. Base supply assumes normal support responsibility on a date agreeable to the contracting officer, the VMM, and the Chief of Supply.

**3.25. COPARS Repair Cycle Items:**

3.25.1. Exchange items issued from COPARS are frequently issued with a "core" charge in the sales price. To get credit for this "core" charge, the reparable asset must be returned. When the core is exchanged at the time the replacement item is issued, the sales slip shows the sale price of each item with a separate line entry for core items. Maintain a COPARS core charge ledger for core items not immediately exchanged at the time the replacement is issued.

3.25.1.1. The ledger contains the following information:

3.25.1.1.1. Original Sales Slip Number.

3.25.1.1.2. Work order number.

3.25.1.1.3. Date purchased.

3.25.1.1.4. Dollar amount of core charge.

3.25.1.2. As a core credit is received, annotate the date and invoice number next to the original entry. When a core item is returned to COPARS for credit after the original sales slip is closed out, an entry will be made on the credit sales slip cross-referencing the original sales slip number and the work order number the item was purchased against. Process this sales slip the same as all others. Charge credits for serviceable items to open or closed AF1823s if they are still listed on the work order master file status report, and does not include the comment “removed from file”. A date within the open and close dates of the AF1823 should be indicated. Processing the charge within 5 processing days after the AF1823 close will increase the opportunity to post the credit against the original AF1823. Make the credit to work order number L9999 if the original AF1823 is closed and removed from file.

3.25.2. To prevent the extra tracking and paper work in the COPARS reparable exchange process, many units insist on having the reparable item ready for turn-in to COPARS when the issue is made. This avoids keeping track of "core" charges, tracking down the reparable for turn-in, and processing the credit for the core when it is returned, and makes sure that the discount is given at once.

3.25.3. Materiel control personnel look at these assets as closely as those DIFM assets from base supply to see that proper asset control and credit is given when due.

**3.26. Quality Assurance Plan for Contractor Operated Parts Store (COPARS).**

3.26.1. This plan is developed to provide surveillance of the COPARS contract and a systematic approach for conducting this surveillance. It is used by all vehicle maintenance activities that have a COPARS contract to ensure that the contract terms are being met. The contract administrator will use this plan and other guidance to ensure the QAE conducts surveillance according to these procedures, and that the contractor is performing according to contract terms.

3.26.2. Assign FAC responsibilities the VMM or VMS who ensure that COPARS contract terms are met.

3.26.3. The Chief QAE is responsible for day-to-day surveillance of COPARS and assures that each part purchased from COPARS meets the contract terms.

**3.27. Functional Area Chief (FAC) Responsibilities:**

3.27.1. COPARS contracts are requirement contracts. The FAC is responsible for the overall performance. This contract represents extensive operations and maintenance (O&M) fund expenditures requiring daily surveillance.

3.27.2. Do not delegate the following FAC responsibilities:

3.27.2.1. Personnel. The FAC sees to it that the chief QAE and any alternate QAEs are nominated and appointed according to AFMAN 64-108. The FAC monitors the performance of QAE personnel. Personnel authorized to order and receive parts from COPARS are familiar with contract terms and the provisions of DoD 5500.7-R. Hold the number of personnel authorized to order or receive parts to a minimum. Such authorization is written, and includes the name and sample signature of each person authorized to order and receive parts from COPARS.

3.27.2.2. Performance. COPARS provides parts to vehicle maintenance in the most timely and economical manner possible. The FAC, through the QAE, sees that delivery schedules are met, store operations meet the needs of maintenance, day-to-day surveillance of the contract is accom-

plished, documentation is done correctly, and necessary data is recorded and maintained to provide an audit trail. The FAC notifies the contract administrator of problem areas in a timely manner.

3.27.2.3. Accuracy. Accuracy is essential and includes identification of warranty parts, proper discounts, and verification of sales slips to the monthly invoice.

3.27.2.4. Funding. The FAC ensures that budget requests are submitted and reports any shortfall of funding to key personnel.

3.27.2.5. Quality. Rebuilt, aftermarket, and NPL parts must meet or exceed the quality criteria of original equipment manufacturer (OEM) parts.

3.27.2.6. Meetings. The FAC ensures that the chief or alternate QAE attends the mandatory scheduled COPARS meeting or any special meeting requested by the base contracting officer.

3.27.2.7. Training. The FAC ensures that the chief QAE is fully trained in all duties and that such training is recorded and retained on file.

**3.28. Quality Assurance Evaluator (QAE) Responsibilities:**

3.28.1. Chief QAE. The chief QAE performs day-to-day surveillance of COPARS. This requires a detailed plan which includes systematic procedures for inspecting and documenting the performance of the contractor. A proven tool to aid the QAE in surveillance duties are the checklist-like surveillance standards in paragraphs **3.37.** through **3.48.**

3.28.2. Personnel. The QAE makes sure that only authorized personnel are permitted to order or receive parts from the contractor, and that they comply with all terms of the contract. The QAE is fully knowledgeable of the provisions in DoD 5500-7-R.

3.28.3. Performance. The QAE approves/disapproves all estimated delivery dates (EDD) for backordered parts and monitors delivery time frames, store operations, and documentation. The FAC and contract administrator is immediately notified of problems in the following areas.

3.28.3.1. Monitor fast-moving parts using the current fast-moving parts list.

3.28.3.2. Monitor back-ordered parts using the daily back order listing.

3.28.3.3. Estimated delivery date is provided within the time requirements of the contract.

3.28.3.4. Verify all parts sold to the government are provided in the highest preferred category.

3.28.3.5. Items sold to the government must be in the smallest quantities available, as listed in the price list.

3.28.3.6. Ensure COPARS conducts required parts research in accordance with the terms of the contract.

3.28.3.7. Ensure COPARS has price lists which are approved by the base contracting officer.

3.28.3.8. Ensure COPARS has a nationally recognized parts interchange manual on file.

3.28.3.9. Check housekeeping/safety/hazardous materials handling to determine if they comply with the terms of the contract, and with local directives and all laws.

3.28.3.10. Ensure the required COPARS consumption data list is provided in accordance with the contract.

3.28.3.11. Check records to see if COPARS is obtaining the base contracting officer's approval before ordering any parts exceeding the dollar limitations.

3.28.3.12. Monitor the COPARS' normal operating hours to see if they comply with the requirements in the contracts.

3.28.4. Accuracy. Verify warranty on all parts with a unit price of $100 or greater and ensure the COPARS sales slips contain specific warranties on all parts sold to the government when appropriate. Sales slips are reviewed for vehicle registration number (bulk working stock purchases will use the work center code), work order number, date, part number, description of part and manufacturer, unit price, discount, total price for each line item on the sales slip, responsibility center cost center code (RC/CC), total price for all items listed, period of warranty (warranty period must be circled on preprinted forms), priority of part, correct price, price list page number for all price listed parts, and date ordered for all backordered parts. Verify the sales slip unit price against the approved price list. Check COPARS sales slips for core credit on any reportable item or item with core value exchanged when the replacement part was issued.

3.28.4. (AFMC) Price list page numbers are not required if an automated price list is used.

3.28.5. Funding. The QAE sees that the purchase request (AF9) is funded and processed to contracting on time.

3.28.6. Quality. Check the quality of parts issued as prescribed by the contract terms (rebuilt, aftermarket, OEM or NPL).

3.28.7. Meetings. Attend all COPARS meetings.

**3.29. Transportation Personnel Authorized To Order or Receive Parts.** The VMM or VMS designates, and the FAC approves Transportation personnel authorized to order or receive parts.

**3.30. Other Store Users.** Personnel from other base activities are identified by name and organization and are approved in writing by the FAC before ordering or receiving parts. These personnel process all orders through vehicle maintenance materiel control using a valid written job order to provide an audit trail for items purchased.

**3.31. Training Personnel Authorized To Order and Receive Parts.** The chief QAE trains all personnel authorized to order or receive parts on their responsibilities under this plan. Revoke the authorization privilege of personnel who do not comply with the standards of this plan.

**3.32. Preparing and Submitting AF801, Quality Assurance Evaluator Schedule:**

3.32.1. By the 25th of each month, the QAE prepares an AF801, **Quality Assurance Evaluator Schedule**, for each week of the coming month. The schedules include the surveillance standards of this plan. Surveillance items required on other than daily frequencies do not appear on the same day from week to week and the weekly schedules are not the same from month to month. The completed forms are treated "FOR OFFICIAL USE ONLY" and are not shown to the contractor so that the surveillance is not compromised. Submit the completed schedule to the contract administrator and the FAC for their review and information.

3.32.2. Make necessary changes to the schedule by annotating the AF801 at least two duty days in advance. The contract administrator and the FAC are notified so their copies of the schedule can be annotated.

3.32.3. Once the schedule is in place, the QAE ensures an audit trail is established between the schedule and the AF372, **Contract Monitoring and Surveillance Report.** Attach all checklists and tally sheets to the report as backup to the documentation.

**3.33. Submitting AF370s, Contract Performance Evaluation Report, and AF372s, Contract Monitoring and Surveillance Report.** Before the 5th of each month, the QAE sends to contracting, through the FAC, all completed AF372s and supporting documentation for the prior month. The QAE also retains a file copy of the AF372s and the backup documentation. If necessary, the QAE submits an AF370, **Contract Performance Evaluation Report**, to contracting through the FAC, when continuous noncompliance of a contract requirement is noted. The QAE retains a copy of all AF370s submitted.

**3.34. Special Interest Items.** Although these actions may not directly relate to actual contract surveillance, they must be inspected and controlled and must be part of the chief QAE's monthly surveillance schedule. These items include checking and controlling sales tickets, parts delivery, and warranty coverage.

**3.35. QAE Appointment and Duties.** The FAC ensures that the chief QAE and all alternate QAEs are nominated and appointed according to AFMAN 64-108. The chief QAE has responsibility for overall surveillance of the contract, who may delegate specific surveillance duties to alternate QAEs within the various sections. The contracting officer trains the chief QAE and all alternate QAEs IAW AFMAN 64-108, after appointment, but before assumption of surveillance duties.

**3.36. Recommended Improvements.** Send recommendations for improvement of this plan to HQ USAF/ILTV after coordination by the MAJCOM LGT/LGC.

**3.37. Fast-Moving Parts Stockage (Chief or Alternate QAE):**

3.37.1. Standard. A maximum 20 percent out of stock condition is acceptable, contract reference_____.

3.37.2. Method of Surveillance. Using the current fast moving parts list, physically inventory stock and check to see that only authorized brands are in stock in the store.

3.37.3. Frequency of Surveillance. Minimum weekly.

3.37.4. AF372 Documentation Sample:

3.37.4.1. In-compliance. Fast-moving parts stock was checked and found to satisfy the requirements of the COPARS contract in accordance with contract reference _____.

3.37.4.2. Noncompliance. Fast-moving parts stock was checked and _____ percent of the parts on the fast-moving list were in stock, which is not in compliance with contract reference _____.

**3.38. Parts Required for Open AF1823s Completion (Chief or Alternate QAE).**

3.38.1. Standard. Parts required to complete repairs on vehicles/equipment with open AF1823s are furnished within five normal operating store hours after requested, if available (in stock) from any supplier within the *local trade area*. Or will be available for issue within ten normal operating store hours after being requested if available from any source within the *regional trade area,* where contracts so establish, in accordance with contract reference _____.

3.38.2. Method of Surveillance. Review contractor backorder listing for expired estimated delivery date (EDD). Also, parts not available within required times are brought to the attention of the QAE by personnel authorized to order parts.

3.38.3. Frequency of Surveillance. Daily.

3.38.4. AF372, Documentation Sample.

3.38.4.1. In-compliance. All requested parts were issued within the established time limits in accordance with contract reference _____.

3.38.4.2. Noncompliance. Part numbers_____ required to complete repairs on vehicle/equipment registration number _____ with an open AF1823 were ordered (date/clock time) but were not received by (date/clock time) in accordance with contract reference _____.

**3.39. Back-Ordered Parts (Chief QAE or Alternate QAE):**

3.39.1. Standard. Parts authorized for purchase from COPARS which cannot be delivered immediately off-the-shelf or not available from the local/regional trade areas for issue within the specified time limits are considered back-ordered. The contractor is required to maintain a back-order listing which contains such information as part number, estimated price, and estimated delivery date. The required information for all back-ordered parts shall be provided within the specified time limits of the contract in accordance with contract reference _____.

3.39.2. Method of surveillance. Check listing to see it is maintained and contains all required information; ensure all EDDs have been approved.

3.39.3. Frequency of Surveillance. Weekly.

3.39.4. AF372, Documentation Sample:

3.39.4.1. In-compliance. The back-order listing was reviewed and all required data/extended EDD approvals for the week of _____ were entered in accordance with contract reference _____.

3.39.4.2. Noncompliance. The back-order listing was reviewed and the

required _____ was not entered in accordance with contract reference _____.

**3.40. Proper Completion of Sales Slips (Chief QAE or Alternate QAE).**

3.40.1. Standard. The contractor must use preprinted sales slips, numbered consecutively for the sale of all parts. Line-out the unused portions with a “Z” before signature. Contractor employees complete the sales slips to include all items required by contract reference _____.

3.40.2. Method of Surveillance. Personnel authorized to order or receive parts check all sales slips and parts before initialing or signing using a checklist. All sales slips for non-price listed (NPL) items and price listed items totaling $100 or more are reviewed for correct and appropriate entries. A random sample verifying at least 10 percent of all sales slips totaling under $100 is made. Increase the number of sales slips reviewed with a total cost under $100 in proportion to the errors noted. Annotate all reviews on the sales slip. Notify the contract administrator when cost discrepancies are found.

3.40.3. Frequency of Surveillance: Daily.

3.40.4. AF372, Documentation Sample:

3.40.4.1. In-compliance. Sales slips #_____ through #_____ were checked for proper completion in accordance with contract reference_____.

3.40.4.2. Noncompliance. Sales slips #_____ through #_____ were checked for proper completion. Sales slips #_____, #_____, and #_____ did not have _____ entries in accordance with contract reference_____.

**3.41. Issues to Authorized Individuals (Chief QAE or Alternate QAE):**

3.41.1. Standard. The contractor sells only to those individuals listed as authorized to order or receive parts. This list is provided to the contractor. Contract reference _____.

3.41.2. Method of Surveillance. Compare the signature of the recipient on each sales slip against the COPARS authorization list and for the proper signature. The signature is supposed to be on the list.

3.41.3. Frequency of Surveillance. Daily.

3.41.4. AF372, Documentation Sample:

3.41.4.1. In-compliance. Sales slips #_____ through #_____ were checked against the COPARS authorization list and for the proper signature. All personnel signing the COPARS sales slips as the recipient were authorized and the signatures were the same as the signature on the authorization list in accordance with contract reference _____.

3.41.4.2. Noncompliance. Sales slips #_____ through #_____ were checked against the COPARS authorization list for the proper signature. The recipient on sales slip #_____ was not authorized to sign for parts. Also, the recipient's signature on sales slip #_____ was not the same as the individual's signature on the COPARS authorization list in accordance with contract reference _____.

**3.42. Authorized Issues (Chief QAE or Alternate QAE).**

3.42.1. Standard. The government will not place nor will the COPARS contractor accept orders under this contract for any item with a unit cost in excess of $1000 for quantities of any single item purchased from a single source when the total exceeds $10,000; or for a group of items to a single source, when the total exceeds $25,000 without prior approval of the contracting officer in accordance with contract reference _____.

3.42.2. Method of Surveillance. Validate if the contracting officer gave prior approval for all purchases with a unit price of $1000 or greater, for quantities of a single item purchased from a single source with a total price over $10,000 or for a group of items to a single source with a total price greater than $25,000.

3.42.3. Frequency of Surveillance. Daily.

3.42.4. AF372, Documentation Sample:

3.42.4.1. In-Compliance. All purchases which exceeded the dollar limitations in the contract were approved by the contracting officer before the parts were ordered in accordance with contract reference _____.

3.42.4.2. Noncompliance. All sales slips which exceeded the cost restrictions in accordance with contract reference _____ were checked. Sales slip #_____ did not have the required prior approval of the contracting officer before the item was ordered.

**3.43. Availability of Store Personnel (Chief QAE or Alternate QAE).**

3.43.1. Standard. The COPARS contractor will have sufficient personnel available in the store at all times to provide uninterrupted across-the-counter sales regardless of other daily work requirements in accordance with contract reference _____.

3.43.2. Method of Surveillance. Visit the store and check to see if personnel are backed up at the counter. Check to see if parts received for backorders are being sold on time.

3.43.3. Frequency of Surveillance. Weekly, or as complaints are received.

3.43.4. AF372, Documentation Sample:

3.43.4.1. In-compliance. Availability of store personnel was checked and timely service was provided in accordance with contract reference _____.

3.43.4.2. Noncompliance. Availability of store personnel was checked. On (date/time), only one COPARS sales person was on duty and there were (____ customers) waiting to be served. Contract reference _____ applies.

**3.44. Housekeeping, Security, Safety, and Fire Standards (Chief QAE or Alter nate QAE).**

3.44.1. Standard. The contractor is required to perform normal housekeeping functions in the facilities provided by the government and to comply with all Air Force/base security regulations. Also, the contractor will comply with all Air Force/base safety and fire prevention regulations.

3.44.2. Method of Surveillance. Visit the store to ensure requirements are being met.

3.44.3. Frequency of Surveillance. Weekly.

3.44.4. AF372, Documentation. Sample:

3.44.4.1. In-compliance. The housekeeping, security, safety, and fire prevention practices were checked and met the requirements in accordance with contract reference _____.

3.44.4.2. Noncompliance. The housekeeping, security, safety, and fire prevention standards were checked. All were found to be in compliance with contract reference _____, (except the trash cans were overflowing and the floors needed sweeping on date/time).

**3.45. Parts Packaging (Chief QAE or Alternate QAE).**

3.45.1. Standard. Rebuilt and aftermarket parts and their packaging will provide identical manufacturer and part number identification.

3.45.2. Method of Surveillance. Random checks of rebuilt and aftermarket parts to verify if the brand name, noun, and part number on the packaging matches its contents.

3.45.3. Frequency of Surveillance. Minimum monthly.

3.45.4. AF372, Documentation Sample:

3.45.4.1. In-compliance. A random sampling of [number] rebuilt and aftermarket parts was conducted and the brand name, noun, and part number on the packaging matched the contents in accordance with contract reference _____.

3.45.4.2. Noncompliance. A random sampling of [number] rebuilt and aftermarket parts was conducted and the [brand name, part number] on two [noun(s)] did not match the brand name and part number identified on the outside of the box in which they were packaged in accordance with contract reference _____.

**3.46. Warranty Coverage (Chief QAE or Alternate QAE).**

3.46.1. Standard. The COPARS contractor will convey to the government the same warranty against defective parts as is provided by the COPARS supplier. The contractor has written warranty documentation on file in COPARS provided by the supplier. Approved parts price lists containing warranty coverage or other written documentation identifying warranty coverage attached to the individual price lists satisfies this requirement. Items replaced under the warranty provisions have the same warranty period as the original. The start date for the warranty replacement is the date of replacement. COPARS sales slips identify specific warranties for all items sold to the government in accordance with contract reference _____.

3.46.2. Method of Surveillance. Check approved price lists to determine if they contain warranty coverage or to see that warranty coverage documentation is attached to the price list.

3.46.3. Frequency of Surveillance. Monthly.

3.46.4. AF372, Documentation Sample:

3.46.4.1. In-compliance. Price lists contained the required warranty coverage documentation and a random sampling of [number] sales slips were checked out of a total of [number] sales slips for [month/year] and were in compliance with contract reference _____.

3.46.4.2. Noncompliance. A random sample of [number] sales slips were checked out of a total [number] for [month/year] and were in-compliance with contract reference _____; however, a [manufacturer's name] price list, [dated], did not contain the required warranty coverage information.

**3.47. Non-Price Listed (NPL) Parts (Chief QAE or Alternate QAE).**

3.47.1. Standard. Non-price listed parts are those which are not included in any published price list incorporated in the contract. The COPARS contractor provides NPL parts from the highest level in the manufacturer's distribution system to which the COPARS contractor has access and provide responsive support at the lowest price obtainable by the COPARS contractor. If an item cannot be obtained from the manufacturer or an authorized dealer, then the contractor must provide, with the NPL approval request, a copy of a competitive abstract reflecting the sources and prices quoted for parts costing over $250.00. Anytime three or more demands are placed within a six month period for

the same part that qualifies as NPL, the contracting officer can require the contractor to submit additional price lists for that product line if it will be advantageous to the government. The only exception to this requirement is when the OEM refuses to provide such price lists to the contractor.

3.47.2. Method of Surveillance. Review each NPL part(s) sales slip to ensure each part is not listed in a price list that is incorporated in the COPARS contract and is provided from the highest level in the manufacturer's distribution system to which COPARS has access. Verify if the COPARS contractor is providing responsive support for NPL parts at the lowest price obtainable by the contractor.

3.47.3. Frequency of Surveillance. Daily.

3.47.4. AF372, Documentation Sample:

3.47.4.1. In-compliance. Non-price listed sales slip(s) #___ _____, #_____, and #_____ were checked and met all requirements in accordance with contract reference _____.

3.47.4.2. Noncompliance. All NPL part sales slips were reviewed and found to meet the requirements in accordance with contract reference _____, except sales slip #_____ _____. The [part noun] was listed in an approved parts list [brand name/date]; therefore it did not qualify as an NPL part in accordance with contract reference _____.

**3.48. COPARS Stock Levels (Chief QAE or Alternate QAE).**

3.48.1. Standard. The COPARS contractor maintains a consumption data record of all sales for the previous six month period in the contract. The quantity/type of COPARS bench stock parts stocked is based on parts consumption for the previous six month period. The contractor provides a consolidated consumption data list in two copies within 15 working days after each six month period of the contract. The contractor identifies parts on the list that are recommended to be stocked in COPARS. The government reviews the list and identifies which items are stocked on the shelf in the on-base COPARS store. The last six month period consumption data list of the outgoing COPARS contractor is used to determine quantity/type parts to be stocked by a new contractor during the first six month period of a new contract.

3.48.2. Method of Surveillance. Compare the COPARS on shelf stock with the required parts stock list.

3.48.3. Frequency of Surveillance. Weekly.

3.48.4. AF372, Documentation Sample:

3.48.4.1. In-compliance. The COPARS on-shelf stock was reviewed. The minimum number of parts identified on the required COPARS stockage list were available for issue in accordance with contract reference _____.

3.48.4.2. Noncompliance. Of the [number] different items required to be stocked on-base in COPARS, [number] different required items were not available. [Percentage number] of the required items were not in-stock and did not meet the minimum 70 percent stockage requirement in accordance with contract reference _____.

**3.49. Instructions for Completing Monthly QAE Schedule, AF801**

3.49.1. Listed Vertically. Along the left-hand side of this form are the days of the week. Each QAE completes one form for each week of the month. Number each block one through seven, starting with Sunday. The QAE enters the date and month in this block.

3.49.2. Listed Horizontally. On the top right-hand side of the form the QAE enters the week of: (The week that the form applies to). Along the top of the form are the key surveillance items or special interest items to be observed. Blanks are provided for the QAE to enter surveillance that are required to be completed daily, weekly, and monthly. Blanks are provided for the totals along the bottom of the form. On each weekly schedule, the total number of surveillance for the week is entered on the top line and the total number of surveillance for the month is entered on the bottom line. Totals from the weekly schedules are posted on the bottom line. Totals from the weekly schedules equal the monthly requirements. Once completed, this form is for "Official Use Only" and will not be shown to the contractor.

**3.50. Ordering and Receiving Parts:**

3.50.1. Check with maintenance control to determine if the defective part is under warranty before ordering a replacement part. If so, tell the store manager and make sure that credit is received.

3.50.2. Individuals ordering parts ensure that the part requested will result in the lowest net price to the government. The following sequence of parts categories (from least to most expensive) usually provides the most economical part: rebuilt, aftermarket, OEM, and NPL. Refer to the appropriate section of the contract to find out which parts the contractor should have in the rebuilt and aftermarket categories. Require the contractor to provide the part which is most economical; however, if doubt exists, ask to see the price lists. The QAE or materiel control personnel must approve the ordering of parts in situations demanding other than the most economically available. Document the approval on the AF1823, and send a copy, cross-referenced to the sales slip, to the contract administrator.

3.50.3. Parts ordered which are not available within the times required by the contract are brought to the attention of the QAE.

3.50.4. Each individual receipting for parts must be fully aware of his or her responsibility to see that the proper part is charged. No parts are accepted without signing for them on a sales slip.

3.50.5. Verify that the brand and part number agree by examine the part and the box.

3.50.6. Verify that the part issued matches the description on the sales slip, i.e., rebuilt, aftermarket, etc.

3.50.7. Verify that the items are being billed in the specified category and are of the quality requested.

3.50.8. Verify proper completion of all sales slip entries required by the contract.

3.50.9. Notify the QAE immediately when discrepancies are suspected.

**3.51. Contractor Deficiencies:**

3.51.1. Provided unmarked batteries.

3.51.2. Alternators and starters being issued with brand names differing from that on the sales slip.

3.51.3. Rebuilt items such as carburetors being provided as new items.

3.51.4. Rebuilt items being packaged in new-product boxes.

3.51.5. Parts provided which are not packaged.

3.51.6. Nonprice listed parts supported by packing slips rather than supplier's invoice.

3.51.7. Alteration of price lists of such items as engines with resultant charges nearing twice that of the manufacturer's price.

3.51.8. Provided parts which differed from those requested. For example, riveted brake shoes invoiced as bonded shoes.

3.51.9. Light duty parts placed in boxes of approved heavier duty brands.

3.51.10. Parts furnished in boxes which closely resemble OEM quality boxes. For example, the words "Motorcraft" changed to read "Motor Car", or "MoPar" changed to read "MOPART."

**3.52. Additional guidance:** Obtain additional guidance from:

3.52.1. AFMAN 23-110, *USAF Supply Manual, Volume I,Part One,Cchapter 8.*

3.52.2. AFAS-DER 177-102, *Commercial Transactions at Base Level.*

3.52.3. Defense Acquisition Regulation and Air Force Supplements.

3.52.4. DoD 5500-7R, *Joint Ethics Regulation*.

**3.53. Use of Contractor/Government-Operated Civil Engineering Supply Store (C/GOCESS).** Maintenance activities are authorized to use the local C/GOCESS for parts support just as other activities are authorized to use COPARS. Send requests to use C/GOCESS to the base civil engineer according to AFI 32-1051.

3.53.1. Use of Contractor-Operated Parts Depot (COPAD). The COPAD contract is administered by DLA's Defense Construction Supply Center (DCSC), Columbus OH. Vehicle maintenance activities are authorized to use COPAD for parts support where no COPARS support is available or where no COPARS contract violation can occur.

***Section 3C—Issue Procedures***

**3.54. General Information.** This section discusses procedures used in obtaining off-the-shelf parts from base supply or COPARS. To be effective, you must know the procedures of the supply system (base supply, COPARS, or Blanket Purchase Agreements for overseas commands) you are dealing with. These procedures supplement supply procedures, and generally apply to requesting parts for VDP and delayed AF1823s. Base supply gives supply system training when help is requested. Also, AFMAN 23-110, Vol 2, part XIII, outlines detailed procedures used in issue requests.

**3.55. Identifying the Requirement:**

3.55.1. This section discusses guidelines for determining the source of supply and describes procedures to use. This is one of the most critical aspects of materiel support for the shop. Attention to detail in this process goes a long way in ensuring that the right part is ordered the first time.

3.55.2. The technician helps materiel control determine the following information about the item:

3.55.2.1. National stock number (NSN) or all part numbers, and associated manufacturer's codes.

3.55.2.2. Nomenclature.

3.55.2.3. Quantity

3.55.2.4. TO, figure, and index.

3.55.2.5. Urgency of Need Designator (UND) See paragraph **3.7.2.**

3.55.2.6. Force Activity Designator (FAD) from the AF1823.

3.55.2.7. Management code.

3.55.2.8. Make and model of vehicle.

3.55.2.9. Source code, when available. Check the format of the TO; if coded local purchase (LP), COPARS may be used.

3.55.3. With this information, materiel control should first find out if the item is on the list of components common to commercially designed vehicles. If it is, it may be ordered through COPARS. If it is not, the FEDLOG system is used to convert any part number to a NSN. If there is more than one NSN listed for a single part number, use the FSC and manufacturer's code as a guide. The item description is also checked before assigning the NSN. See AFMAN 23-110, Volume II, Part Two, Chapter 27, section B, for added guidance on research.

3.55.4. Once an NSN has been found, consult the management data listing (MDL) or stock number directory to find the source of supply. If an item is coded LP (or for CONUS bases, if coded "overseas only") it may be purchased through COPARS without further research. Request items with an assigned central manager (for example, S9C, S9G, and so forth) from base supply, unless waived for that particular base.

3.55.5. If a NSN cannot be found, materiel control prepares a DD1348-6 as outlined in AFMAN 23-110, Volume II, Part Two, Chapter 27. Materiel control gives information to base supply in the preparation of the form, when parts requests are made by telephone.

**3.56. Requests Sent Through Base Supply.**

3.56.1. Document all parts requested through base supply through one of three methods:

3.56.1.1. Initiate AF2005, **Issue/Turn-In Request**, according to AFMAN 23-110, Volume II, Part Two, Chapter 11. Give demand processing in base supply the original and one copy. Hold a copy in suspense until the transaction appears on the DO4 and D22 (with OLVIMS transaction) and the property is received. If the transaction fails to appear on the DO4 on the next computer day, follow-up with demand processing to find out the status of the transaction. or,

3.56.1.2. Log all parts requested on AF2413, **Supply Control Log**. Column G contains the work order number, and the vehicle registration number is entered in the "mark for" column (N). Suspense each entry until it appears on the DO4 and D22, and the property is received. If the transaction fails to appear on the DO4 on the next computer day, follow-up with demand processing to find out the status of the transaction. or,

3.56.1.3. Use the parts ordering form. Procedures for suspensing the parts ordering form are the same as for the AF2005 in the preceding paragraph. If materiel control uses a remote terminal to order parts directly from base supply, use the parts ordering form to document the order until the property is received.

3.56.2. Several actions take place when an item is issued from base supply:

3.56.2.1. The part is delivered along with DD 1348-1, DOD Single Line Item Release/Receipt Document. The part is checked against the suspensed AF2005, supply control log entry, or the parts ordering form to ensure the correct item was received. Clearly annotate the suspense slip, supply control log entry, or parts ordering form to show that the property has been received.

3.56.2.2. The issue transaction appears in the DO4, which is sent the next duty day.

3.56.2.3. The transaction also appears on the D22 which lists all nonfuels issues and turn-ins for the vehicle maintenance activity. Along with the D22, the supply computer prints an OLVIMS materiel costing transaction. Check the OLVIMS transactions daily for the following items:

3.56.2.3.1. Compatibility of charge code and item. (A tire FSC 2610 with a charge code 0 is incorrect.)

3.56.2.3.2. Work order number validity. (Real AF1823 number is B1234 but shows F1234; L9999 or H8888 improperly used.)

3.56.2.3.3. Suspected unit of issue or extended cost errors.

3.56.2.3.4. Verification of the cost on issues of $500 or more and note any errors on the OLVIMS transaction and materiel control copy of the D22 before forwarding to MCA and entry into OLVIMS.

3.56.2.4. To clear the AF2005 issue suspense, supply control log suspense entry, or parts ordering form entry, both the OLVIMS transaction and the item must have been received.

3.56.2.4.1. If an item was received but the OLVIMS transaction was not, materiel control should check the D22 to see whether the transaction processed. If it did, check with the distribution function to see what happened (after the materiel control area has been searched). If the transaction cannot be found, an OLVIMS transaction may be made (see AFCSM 24-1, section 5). If supply has not sent end-of-day reports for the day the transaction was processed, the D22 and OLVIMS transaction would not have been made yet. In this case, hold the suspense slip or line entry until the report and transactions have been received. After verifying all entries and making corrections (if needed), send the OLVIMS transaction to MCA and the suspense slip may be destroyed. If using the supply control log, the suspenses entry should be clearly marked to show the closing action on both the OLVIMS transaction and receipt of the item.

3.56.2.4.2. If the OLVIMS transaction has been received but the item has not (the suspense slip or line entry has not been annotated), check the materiel control in-processing area or shop that may have received the property.

3.56.2.4.3. If an OLVIMS transaction is received for which there is no suspensed issue document, check PCN SB004-005 is to see whether the transaction has already been processed. If it has, destroy the transaction.

3.56.2.5. Other useful data on the D22 listing include:

3.56.2.5.1. Heading "CC". On an issue, an "R" or "N", if present, shows the demand code; on a turn-in, the coded entry indicates the action taken.

3.56.2.5.2. Heading "UJC." This column is blank for off-the-shelf issues; the urgency of need code is shown for all delayed and VDP issues.

3.56.2.5.3. Heading "RVP." This column contains an "R" when a transaction was reversed out of the supply system.

3.56.2.5.4. Heading "FIA." Financial Inventory Accounting Codes beginning with:

-3 - Reimbursable issue.

-5 - Nonreimbursable issue.

3.56.2.6. MCA inputs the “VIM” and “VZ” transaction into OLVIMS. This transaction charges or reverses out the parts costs (see para 3-14b(5)(c) above) for items from or turned in to base supply. All transactions are shown on PCN SB004 - 005. Those that pass all edits (see AFCSM 24-1) reflect an input record accepted (IRA) status on the right hand side of the list under column "RCDS-1." If there are any errors shown by the system, an "IRE" appears in the columns, as well as an asterisk (*) to the right of the field in error and under volume "EF." MCA should be able to correct any error shown for these transactions.

3.56.2.7. MAJCOMs may authorize alternative methods to check on the receipt of OLVIMS material costing transactions and the property.

3.56.2.7. (AFMC) Units are required to validate the D22 data received from the Standard Base Supply System (SBSS). Make the necessary corrections prior to updating OLVIMS. Validate the work order number, registration number, quantity of issue, and the price.

**3.57. Requests Submitted Through COPARS:**

3.57.1. If materiel control finds that COPARS is the source, it requests and draws the item from the store, if available. The user is told immediately of parts availability. It is not necessary to record issue requests from COPARS on AF2005 or AF2413.

3.57.2. Sales slips are sent as noted in paragraph **2.10.** The COPARS counterpart for the OLVIMS transaction from base supply is the sales slip. After the daily screening of the COPARS sales slip, MCA puts the transaction into OLVIMS. A separate "PZ" transaction is shown on PCN SB004-005 for the total of each line item (except L9999 or H8888) on each sales slip.

***Section 3D—Vehicles Deadlined For Parts (VDP) Processing.***

**3.58. General Information.** When a vehicle is out of commission because the required parts are not available from base supply or from COPARS off-the-shelf issues, the vehicle is designated as VDP. AFI 23-106 provides justification and guidance for the use of Standard Reporting Designators (SRD). A VDP condition starts extraordinary supply action by materiel control and either base supply or COPARS. Track VDP-reportable vehicles by the MICAP reporting system and the depot item manager until the need has been met. This section describes the procedures materiel control uses in handling VDP conditions. MICAP-reportable vehicles are found in the SRD list in CAMS/Supply Systems. A quick reference list is provide in **Attachment 9**. Non-MICAP requisitions coded with a VDP (AF) UJC are authorized to include a “777” RDD. The “777” identifies the item for fast transportation (AFMAN 23-110, part 2, chapter 9). Materiel Control personnel will ensure the judicious use of this code. The

VMM and VMS will ensure appropriate emphasis is placed on parts procurement priorities by periodically verifying compliance as necessary to meet mission requirements.

**3.59. VDP Verification Procedures.** Prompt, responsive verification is the key to preventing unwarranted VDP conditions, cannibalizations, priority system abuses, and unnecessary fund abuses.

3.59.1. Send UND "A" and "B" requests to supply on a "fill" or "kill" basis, except awaiting parts (AWP) requests.

3.59.1.1. When assets are not available to fill the request, a "kill" action takes place and the computer prints an Other Assets Management notice (IO23). The IO23 gives information for the verification process. Demand processing (DP) promptly tells materiel control of the "kill" action. It further relays the required information from the IO23 and sends it as outlined in AFMAN 23-110, Volume II, Part Two, Chapter 11.

3.59.1.2. Information on the IO23 includes: DIFM details, supply point details with on-hand balances; substitute NSNs with the requested interchangeable substitute group (ISG) with serviceable balances, present base repair, and whether the item is on a bench stock.

3.59.1.3. The materiel control verifier (see AFMAN 23-110, Volume I, Part One, Chapter 24, paragraph 9) immediately begins to verify the need.

3.59.2. Verification of UND "A" and "B" requirements include the following steps:

3.59.2.1. DP gives the verifier the document number, stock or parts number, and TO figure and index. This information lets materiel control confirm that the correct information was input to the computer. It gives the information needed for the verifier to research the next higher assembly, usable-on-codes, quantity per assembly, and source codes.

3.59.2.2. The verifier next finds out the availability of base supply bench stock assets. If none are available, but a substitute item is, the verifier contacts the requester to find out whether it is suitable. If so, materiel control tells DP to take issue action. If not, the verification process continues.

3.59.2.3. If DIFM assets are available, coordinate with the shop work center to expedite repair and return of the repairable to satisfy the request in time to meet the need. Materiel control does not verify a repair cycle item as NMCS until it is found that an item cannot be fixed locally.

3.59.2.4. Next, the verifier, if applicable, researches the next higher assembly and finds its availability and suitability.

3.59.2.5. Check the delayed parts bins to see whether the needed item is there. Use the PCN SB004-016, “Delayed Parts Received”, as an aid to find whether other vehicles of the same type have delayed parts on hand. If so, complete an AF1832, **Record of Cannibalization (Vehicle Maintenance)** transferring the parts from the delayed AF1823 to a VDP AF1823. Send the AF1832 to MCA where an "SW" transaction is made to charge the material cost from the delayed record to the open VDP AF1823. Materiel control submits the parts request for the delayed part, using the delayed AF1823 number. The delayed AF1823 should be marked accordingly

3.59.2.6. If the above actions have still not met the need, consider locally manufacturing the part within the shop. If there is no internal capability to do this, find out whether the capability exists elsewhere on base. If a base shop is found that can fabricate the part, contact DP and send the request as outlined in AFMAN 23-110, Volume II, Part Two, Chapter 11.

3.59.2.7. If a new part cannot be obtained, a serviceable used part can be purchased under a separate contract on a one-time basis.

3.59.2.8. The verifier tells DP whether the need has been filled by any of the above actions, or learns whether DP has found an asset. For UND "B" requirements, if no part has been found, tell DP to input the "kill" document again to make a backorder.

3.59.2.9. If a part is not available for a UND "A" need, the verifier tells the work center supervisor or controller to verify that a VDP condition exists. At this time, the VMM or VMS decides whether to cannibalize or to confirm an NMCS condition. If the VMM or VMS decides the latter, put the start time on the AF1823. DP must also be told to input the "kill" document again to make a backorder.

**3.60. Mission Incapable for Parts (MICAP) and Vehicle Deadlined for Parts (VDP Tracking Base Supply Source).**

3.60.1. Items backordered for a MICAP or VDP condition (UJC 1F/AF) are shown on the Priority Monitor Report (D18) or the Due-Out Listing (R13) the day after the requirement has been validated. Review the report when received to ensure the supply system is acting on the request. Materiel control looks for the following data, the first time the requirement is shown on the report:

3.60.1.1. Stock number.

3.60.1.2. Quantity.

3.60.1.3. Vehicle registration number.

3.60.1.4. Standard reporting designator (SRD). SRDs that apply to vehicles are in the CAMS and Supply Systems for query. Note: PCN SG054-84S, Standard Reporting Designator Codes, lists all SRDs. An extract from this report of commonly used vehicle and equipment MICAP Reportable SRDs is provided in **Attachment 9**. If the VDP part does not appear or does not have a due-in date the day after the need has been levied, base supply should be contacted to find the cause and correct it.

3.60.2. Six types of status's may be on the D18: cancellations, in transit or shipped, positive supply action, exception, cancellation requests (base-generated), and follow-up (see AFMAN 23-110, Volume II, Part Two, Chapter 17, Section B, for more details). Status should be on the report within a given number of days, based on military standard requisition and issue procedures (MILSTRIP) priority. This status is posted to a status board, or automated equivalent, and updated as changes occur. The VDP status board, or automated equivalent, has the following minimum data and must be readily available in the materiel control work center:

3.60.2.1. Type of vehicle.

3.60.2.2. Vehicle registration number.

3.60.2.3. Stock or part number.

3.60.2.4. Nomenclature.

3.60.2.5. Quantity or unit of issue.

3.60.2.6. Due-out document register.

3.60.2.7. MICAP or VDP date (a color code may be used to differentiate between MICAP or VDP).

3.60.2.8. Current status.

3.60.2.9. Source of supply.

3.60.3. The VMM or VMS makes a policy on which MICAP and VDP conditions they want to be briefed on, and how often. Also set up a general procedure as to what is unsatisfactory status, thus requiring more action. Overseas bases supported by the Commercial Administrative Vehicle Repair Parts Program, under Project Code JZO, JCM, and JZC, look at status policies as outlined in AFMAN 23-110, Volume I, Part One, Chapter 11, Section D, before making this determination. With these procedures, materiel control can keep key management personnel informed on VDP status and provide follow-up supply assistance or supply difficulty action with base supply, as the case dictates. The materiel control supervisor ensures that follow-up management actions are tailored to specific shop needs rather than a system of arbitrary follow-up.

**3.61. Supply Assistance and Difficulty.**

3.61.1. If the supply status from the depot is poor, follow-up, supply assistance, or supply difficulty action can be started. Materiel control never lets ineffective supply support be traced to a lack of aggression on its part.

3.61.2. AFMAN 23-110, Volume II, Part Two, Chapter 9, outlines the procedures for follow-ups to base supply on established due-outs. AFMAN 23-110, Volume I, Part One, Chapter 1, outlines the policy for sending supply difficulty reports.

3.61.3. Materiel control maintains a copy of each request for supply assistance or difficulty with the appropriate MICAP, VDP, or delayed requisitions.

**3.62. VDP Requirements Through COPARS.**

3.62.1. View items in this category similarly to those requested through base supply. Because there is no D18 for items ordered through COPARS, daily coordination with the contractor has to occur to find out the status. The contract usually has a clause stating how much time the contractor has to meet VDP requirements. If the estimated delivery date is not satisfactory and cannot be improved, the contract usually lets the government try other sources. Review the contract before exercising this method of support. Refer supply problems not resolved through these procedures to the Customer Service Unit in base supply.

3.62.2. Annotate MICAP and VDP items ordered through COPARS with the correct data on the MICAP and VDP status board, or automated equivalent, the same as items ordered through base supply.

**3.63. Receipt of VDP Parts.**

3.63.1. The controller is told immediately on receipt of the parts for a VDP vehicle, so it may be scheduled for work. The parts are binned and the AF1823 or parts ordering form marked accordingly. Mark the suspense copy of AF2005 or the line entry in the supply control log (when one of the two methods of suspense are used) is to show that the part is received.

3.63.2. An OLVIMS transaction should be received the day following the due-out release. After verification against the data on the suspense slip or line entry on AF2413, the OLVIMS transaction is sent to MCA, and the AF2005 can be destroyed. The suspensed entry on the control log clearly shows that both the OLVIMS transaction and the part have been received.

***Section 3E— Managing AF1823s Delayed for Parts***

**3.64. Importance of Delayed AF1823s.** When a lack of parts does not cause a VDP condition, delayed-for-parts AF1823s are initiated, and the vehicle is returned to the user. Delayed parts management is the heart of supply support for the preventive maintenance program. The importance of this function grows as vehicles get older. Although delayed parts have a lower priority than VDP, they need special attention by materiel control to ensure that positive action is taken for each request.

**3.65. Delayed Work Order Folders.**

3.65.1. When a AF1823 has been delayed for parts, workload control makes a new AF Form 1823 with all the required information and sends a copy of the AF1823 or parts request to materiel control for processing. Mark the original work order number at the top of the new AF1823, to backorder the parts through base supply or COPARS. All parts backordered through base supply are marked on AF2005 or the supply control log. These same forms may be used to track backorder parts through COPARS, if desired.

3.65.2. Local management determines filing sequence of delayed AF1823 folders.

**3.66. Monitoring Delayed Work Orders.**

3.66.1. For items requested through base supply, the first check comes the day after the backorder requests are processed through the SBSS. The Daily Document Register (DO4) is sent to materiel control for screening. Using the AF2005 suspense file, supply control log, AF1823, or parts ordering request, materiel control sees that all backordered items appear correctly on the DO4. The DO4 also shows all issues, due-out release actions, turn-ins, and cancellations. If cancellation action is noted, either reinstate the due-out or eliminate the suspense.

3.66.2. For items ordered with a UND "A" or "B", the daily priority monitor report (D18) tells the user the latest status of the backorder. Two copies of the report listing the due outs with UND "A" are sent to materiel control each day. At least once a week (more frequently at some bases), two copies of the listing with UND "A" and "B" are sent. These listings are reviewed and processed as outlined in AFMAN 23-110, Volume II, Part Two, Chapter 9. If the status shown in the reports is unsatisfactory, materiel control begins follow-up, supply assistance, or supply difficulty action.

3.66.3. For items ordered through COPARS, the contractor provides status when the order is placed. All contracts specify a periodic (daily or weekly) status report. If the status is not satisfactory, the contractor is notified in accordance with contract specifications.

3.66.4. The delayed maintenance report (PCN SB004-015) also gives information for management to track delayed actions. This report shows all delayed AF1823s with required action by delayed maintenance code.

**3.67. Processing Parts Receipts.**

3.67.1. Take the following steps when receiving parts from base supply or COPARS. First, mark the suspense slip, AF1823, parts ordering form, or supply control log to show the receipt. Hold the parts until the work can be scheduled. Mark the parts with the work order number or registration number and bin them. Parts for the same vehicle may be binned together regardless of work order number. Do not mix bench stock, work order residue, or delayed parts. Second, mark the AF1823 and parts ordering form (materiel control's copy) with the bin location in the space provided. Then forward the information to MCA.

3.67.2. When the OLVIMS transaction is received, verify the data against the suspense copy of the AF2005, parts ordering form or the supply control log, before sending to MCA for input in OLVIMS.

3.67.3. The receipt process for COPARS delayed parts is essentially the same. Mark the AF1823 with the bin location and advise the controller of its receipt. Check sales slips at day's end as outlined in this chapter. These "PZ" transactions will contain a "D" charge code and a bin location number.

**3.68. Work Order and Backorder Validation.**

3.68.1. Screen UND "A" or "B" requirements and validate as outlined in AFMAN 23-110, Volume II, Part Two, Chapter 11. The basic record used to do the validation is the materiel control copy of the delayed AF1823s.

3.68.2. Despite these efforts, the manual records used to track delayed AF1823s often disagree with the true needs of the individual vehicles. Consequently, materiel control, together with the controller, conduct a AF1823-to-backorder reconciliation and validation.

3.68.2.1. Reconcile either monthly or quarterly as specified by the VMM or VMS, in conjunction with the monthly UND "A," "B," and "C" validation outlined in AFMAN 23-110, Volume II, Part Two, Chapter 12.

3.68.2.2. The first step in the validation process is a line item review for each delayed AF1823. Materiel control compares its entire delayed AF1823 file to the controller's file of delayed AF1823s. The delayed maintenance report is used at this time. Update both sets of AF1823s and the delayed maintenance report as needed, to bring all into agreement. Resolve discrepancies before this updating to ensure all records are accurate. If there are large differences between these two AF1823 files, the local procedures for coordination between the two functional units should be evaluated to find the cause.

3.68.2.3. After workload control and materiel control AF1823 records have been reconciled, materiel control sees that all necessary parts have been backordered and reflect positive status through base supply or COPARS. Materiel control cancels the backorder for items no longer needed. To do these actions, use the validated requirements from each AF1823 and compare them against the D18, or make a computer inquiry for base supply items or use the periodic COPARS. Follow up on any item's status which is unsatisfactory or unknown, as previously discussed.

3.68.2.4. For those AF1823s against which items have been received, an inventory is taken to verify bin location and quantity. If, after a complete search, the items are not available, the shortages are recorded. If this is a common occurrence, implement a local procedure to ensure parts are adequately safeguarded.

3.68.2.5. When these actions have been done:

3.68.2.5.1. All records should be in complete agreement.

3.68.2.5.2. All parts AF1823s should be shown on the PCN SB004-015 report with the partial or complete parts indicator.

3.68.2.5.3. All parts should have been backordered with positive status (including follow-up) or be on-hand.

**3.69. Partial or Completed Vehicle and Equipment Work Orders.** Materiel Control sends the completed AF1823 to the controller so that scheduling may be planned. Each time a new AF1823 is opened on a vehicle, all delayed AF1823s are thoroughly screened. Every attempt is made to install received parts, or accomplish maintenance that will complete any job listed in the job description block of the AF1823s or AF1823-1s.

***Section 3F— Bench Stocks***

**3.70. Purpose of Bench Stocks.** Bench stocks are established so that expendable supplies needed to support the shop are always available. Failure to establish the proper line items and levels disrupts the shop. Bench stock responsibilities and procedures for its establishment and operation are in AFMAN 23-110, Volume II, Part Two, Chapter 25, and are not duplicated here.

**3.71. Establishment of Bench Stocks.** Establishment of a bench stock is a coordinated effort between maintenance and supply. When available, a vehicle, ISSL, or FOSSL may be used as a guide in identifying the items and quantities to be stocked. When an ISSL or FOSSL is not available, the shop or work center supervisor makes a list, based on his or her estimate and judgment of the need. The VMM or VMS, approves and sends the request to the Customer Support Branch of base supply according to AFMAN 23-110, Volume II, Part Two, Chapter 25.

**3.72. Shop and Consolidated Bench Stocks.**

3.72.1. Shop bench stocks may be set up within each maintenance shop or its equivalent. Where two or more shops are collocated, a single bench stock for their combined use is set up.

3.72.2. Under certain circumstances, it may be more advantageous (because of location, total number of line items, cost, or pilferage) to close the bench stock and operate it under a staffed environment. When the VMM finds this to be more advantageous, consider consolidating this bench stock with a tool room in the work area. Such a consolidated bench stock usually results in better consumption rates, because stock levels are computed for each authorized shop. On common items, consolidation results in large bench stock levels and less delete actions. In any event, the overriding factor is the need of the shop.

3.72.3. When using consolidated bench stocks, units may want to make a bench stock "shadow board" shown outside the bench stock site, to be readily viewed by maintenance personnel. Old and unserviceable parts for each item authorized in the bench stock can be shown, with the item or bin number under each item as an easy means to show its location. Item descriptions may also be used in some cases.

**3.73. Low Cost Bench Stocks.**

3.73.1. In vehicle maintenance, authorized bench stock items whose unit cost (based on a unit-of-use issue from bench stock to a AF1823) is less than $60, are low-cost bench stock. (For example, if a box of 12 fittings costs $67.50 and they are issued one at a time, the fittings would be shown as low cost).

3.73.1.1. Replenish low-cost bench stock items using work ordernumber L9999. This work order number is limited to "low-cost" items on authorized bench stock.

3.73.1.2. Low-cost parts that do not qualify as bench stock items may be purchased through COPARS using the work order number or the vehicle registration number when AF1827 is used for minor repairs. The purpose of work order number L9999 is to prorate the cost of commonly-used low cost bench stock items against the total cost of maintaining the base fleet.

3.73.2. Low-cost items may be on base supply bench stocks or COPARS working stocks. Replenishment of bench stock items is IAW AFMAN 23-110, Volume II, Part Two, Chapter 25. Working stocks are drawn from COPARS like other items.

3.73.3. Bases are authorized to maintain shop stock. Shop stocks include parts kits consisting of universal type hardware for brake systems, hydraulic systems, electrical systems, etc., which are not normally economically handled as bench stock. VMM or VMS establish procedures for effective control and management of shop stock.

**3.74. High-Cost Bench Stocks.**

3.74.1. Items with a unit cost of $60 or more are defined as "high-cost." Fast-moving high-cost items can be authorized on bench stock when approved by the VMM or VMS. Replenish High-cost bench stock using work order number H8888. Use of H8888 causes the cost of parts being charged to a special "holding" account, rather than against the entire base fleet. Then when the high-cost items are issued to a specific AF1823, they are charged against a vehicle using a “QZ” transaction.

3.74.2. On approval of the VMM, materiel control makes an "EZ" transaction (see AFCSM 24-1) to add the item to the "High-Cost Bench Stock Master List, PCN SB004-046.

3.74.3. For each high-cost bench stock item issued, make a line item entry or attach a preprinted label to the vehicle AF1823.

3.74.4. Materiel control keeps a current copy of the PCN SB004-046 listing. At least quarterly, adjust the prices on the PCN SB004-046 based on the latest M-14 and the current COPARS price list.

3.74.4.1. Delete items no longer on high-cost bench stock with an "ED" transaction. Input of this transaction clears the item from the PCN SB004-046.

3.74.5. Request a new PCN SB004-046 listing when all changes, additions, and deletions have been made.

**3.75. Shelf-Life Items.** Control of shelf-life items is the responsibility of the shop bench stock monitor once the items are placed in the bench stock. Shelf-life items are identified in technical orders, by markings on the package, and on the bench stock label by the shelf-life code. If the shelf-life item is packaged in a unit pack, the unit pack containing a quantity nearest the recommended level is issued as the authorized bench stock quantity. Use the oldest items first to prevent waste.

3.75.1. Do not open shelf-life item containers until needed. If shelf-life items are loose in the bin and the expiration cannot be found, dispose of the items; and take replenishment action.

3.75.2. Shelf-life items containing a hazardous material (HAZMAT) will normally be controlled by the installation HAZMAT pharmacy. These items will only be issued in pre-authorized quantities to those shops requiring the material. Quantities in excess of the amount of HAZMAT needed to perform a current job will be retained in the HAZMAT pharmacy. Return unused, yet serviceable HAZMAT to the pharmacy if no immediate need for its use is seen.

3.75.3. It is intended that no HAZMAT is disposed of as hazardous waste because its shelf life expired before it could be used up. When not controlled by the HAZMAT pharmacy, hazardous materials which have a shelf-life are to be purchased for vehicle maintenance operations only in a quantity that can be used before its shelf-life expires.

**3.76. Semiannual Bench Stock Review.** This is the standard method of adding, changing, or deleting bench stock items. The work center supervisor, materiel control, and the bench stock support element look at each item every six months, using the bench stock review list in AFMAN 23-110, Volume II, Part Two, Chapter 25. When this review is done, the bench stock support section gives materiel control a master list of authorized bench stock for the shop. The list shows location, authorized levels, and total needs. Each bench stock location is given an individual list for retention by the shop or section. 3.76.1. Minimum Reserve Authorizations will be reviewed on a semiannual basis using the same procedures.

***Section 3G—Repair Cycle Asset Management***

**3.77. General Information.** Repair cycle assets are those items with expendability, recoverability, repairability code (ERRC) XD and XF. Examples are tires, some engines, etc. These items are a large cost investment for the Air Force and are stringently controlled and cycled back into the system.

3.77.1. Materiel control reviews these items to see that they are processed according to AFMAN 23-110, Volume II, Part Two, Chapter 13. Materiel control also ensures that all items subject to repair cycle control are managed and controlled according to the DIFM concept.

3.77.2. Use the daily AWP Validation Listing (D19) from base supply to do identification and control checks, and prescribed monitoring procedures and files. Coordination with the repair cycle support section of supply is established to ensure there is absolute control of DIFM items.

3.77.3. DIFM items, whether in repair or in stock, are considered assets in satisfying the stockage needs, and may be the only source of supply.

**3.78. DIFM Issues.** A request for repair cycle assets automatically places the transaction under DIFM control; usually, DIFM issues are for a quantity of one each. For items for which multiple quantities may be needed (such as tires, matched sets, etc.) a multiple DIFM issue can be made. Remember, though, when a multiple DIFM issue occurs, and various actions are taken on returns (for example, condemned and recapped tires), prepare a separate turn in for each “action taken” code. Since the DIFM issue document number is the control element on all DIFM transactions, the duplication of turn-in document numbers could result in difficulty in tracing the transaction audit trail.

**3.79. DIFM Status.** Base supply produces an AWP Validation Listing (D19) each day. The list provides materiel control with current data on each item due in from maintenance. Materiel control updates the DIFM detail record, through the repair cycle support element of base supply, each time an item location or status changes. When standard DIFM delinquency criteria is exceeded, materiel control finds the cause

and eliminates the delinquency. Immediately reconcile any discrepancies noted on the D19 with the repair cycle support section. All daily changes to the D19 report are shown on the next DIFM listing. OLVIMS', PCNs SB004-016 and SB004-062 show delayed parts on hand that are DIFM controlled.

**3.80. Supply Points.** Operate supply points IAW AFMAN 23-110, Volume II, Part Two, Chapter 24. When operationally effective, establish a supply point for vehicle tires IAW TO 36-1-191, unless space is not available in or near the tire shop. The supply points may be established for tires and other parts. Local transportation and supply managers establish manning requirements.

**3.81. DIFM and Supply Point Reconciliation.** Reconcile DIFM and supply point material each quarter IAW AFMAN 23-110, Volume II, Part Two, Chapter 24.

***Section 3H—Other Procedures for Materiel Control***

**3.82. Time Compliance Technical Orders (TCTO):**

3.82.1. The Air Force rules on TCTO kit distribution are in TO 00-5-15 and AFMAN 23-110, Volume II, Part Two, Chapter 24. The vehicle inventory manager at Warner Robins Air Logistics Center makes technical order modifications, including assembly, storage, and distribution of related TCTO kits. Required parts and materials are shown, controlled, and sent according to supply data in the technical order.

3.82.2. Materiel Control orders TCTO kits when needed, using SBSS computer terminal or AF2001, **Notification of TCTO Kit Requirements.**

3.82.2.1. Enter the organization and shop code of the maintenance shop responsible for doing the modification on part one of the form.

3.82.2.2. Initiate AF2001 in three copies, with copies one and two sent to the base supply repair cycle support element (RCSE) and copy three filed in materiel control.

3.82.2.3. Provide base supply's due-in document number to MC&A when it's available, for TCTOs requiring a TCTO kit. MC&A provides the document number(s) and registration number(s) to WR-ALC when requesting kit release.

3.82.3. Materiel control checks the status of TCTO needs using the D18. Each time a TCTO kit asset is received in base supply, make a IO24 management notice showing the total on-hand balance and each existing due out detail record. Send a copy of this notice to materiel control and place it in the TCTO jacket file with the AF2001. A display board (the VDP board or an automated control board may be used) shows the following information for all current and outstanding TCTOs:

3.82.3.1. TCTO number.

3.82.3.2. Document number.

3.82.3.3. Quantity.

3.82.3.4. Date requested.

3.82.3.5. Status.

3.82.3.6. Quantity on hand.

3.82.3.7. Date received.

3.82.3.8. Mandatory compliance date.

3.82.3.9. Remarks.

3.82.4. Materiel control tells the RCSE to force a due-out release of the kit for installation when all items are received and the modification is scheduled.

3.82.5. Base supply produces a monthly TCTO kit reconciliation and status report to keep the shop informed of kit availability, shortages, excesses, due-outs, and due-ins . Materiel control tells the RCSE of excesses, changes, or added requirements identified during the reconciliation.

**3.83. Tool Crib and Tool Issue Procedures.**

3.83.1. Tool Crib Operations:

3.83.1.1. A Tool crib is a storage and issue point for most common and specialized tools shown on one or more allowance standards (AS). Command or local management can designate other tools to be controlled under these procedures. Materiel control manages and controls all tool cribs authorized for the shop complex. Outlying tool cribs can be operated by work center personnel.

3.83.1.2. A neat, clean, well-arranged tool crib is needed to provide tool support. Segregate special tools, if possible, by vehicle types and display them on shadow boards. Assign each item shown on a shadow board is assigned an item location designator. Mark this designator on the tool if practical, and on its storage position on the shadow board. Post item identification and location lists near the issue counter. Store common items and those not suitable for the shadow board in bins.

3.83.1.3. Issue tools by AF1297, **Temporary Issue Receipt**, a chit system, or other approved method. Tools are not generally issued for a longer period of time than the user's shift period without approval of the tool crib custodian. Set up a tool issue suspense system and check it daily to make sure tools are returned on time.

3.83.1.4. Clean all tools before returning them to the tool crib. The tool crib custodian inspects them on return to make sure they are in good condition and free of corrosion. Do not issue tools for personal use. The shop supervisor is told of individuals who fail to return tools within the established suspense time. Advise the VMM or VMS of shops that continually fail to return tools on time.

3.83.1.5. Materiel control keeps a complete list of all tools in the tool crib. A list is made with the stock number, nomenclature, authorized and on-hand quantity and other data as may be needed locally. Do a complete inventory annually or when the tool crib custodian changes. Maintain a record of the accomplishment of this inventory. The record includes, date the inventory was completed, name of individual who conducted the inventory, and a remarks column.

3.83.1.6. Materiel control also makes sure that tools and precision measuring equipment (PME) are scheduled for calibration and certification according to TO 00-20-14. Use a visual display board or computer generated listing to keep the current status of all PME requiring calibration.

3.83.2. Tool Issue Procedures:

3.83.2.1. A primary and alternate tool custodian is designated in writing by the organization commander. Give the names of these persons to the chief of supply, with a request that they be authorized to purchase tools.

3.83.2.2. The tool custodian takes original accountability by obtaining the current tool kit custody receipt listings, and custody receipt folders from the tool issue center for all personnel assigned to the unit.

3.83.2.3. Materiel control sub-receipts individual tool kits (ITK) to the technicians, and composite tool kits (CTK) to the section supervisors. Materiel control uses a typed or computer-generated listing. The VMM or VMS ensures tool needs are complete when making new tool lists to avoid unnecessary work.

3.83.2.4. The VMM or VMS identifies tool requirements for each functional AFSC or work center. If changes are required on existing tool listings, develop a new list of tools to include tool NSN (part number), nomenclature, and quantity authorized. Materiel control enters the technician's name, grade, and tool box number at the bottom of the new list, leaving room for the technician's signature.

3.83.2.5. Materiel control has the persons concerned come in to be updated on the tool kits when the new list is received. The individual receipting for the tool kit and materiel control do a joint inventory. The individual turns in all deleted tools and receipts for the remaining tools in his or her possession. Code shortages "NI", and either purchased from the SBSS or ordered according to AFMAN 23-110, Volume II, Part Two, Chapter 11. The individual completes the certification at the end of the tool lists and acknowledges receipt of the tools. Then destroy the old list.

3.83.2.6. Materiel control advises the work center supervisor when backordered tools are received. The technician then goes to materiel control to pick up the tool and shows receipt by lining through the "NI" and dating and initialing the entry.

3.83.2.7. When personnel are transferred or tool kits are no longer needed, the accountable technician and materiel control do a joint inventory. Tool shortages are accounted for, or AFI 23-220 procedures are initiated.

3.83.2.8. If another technician is to be assigned, the VMM or VMS may choose to keep the kit in storage. Tool kits in storage have two copies of the tool list inside and have shortages on order. The kit is tagged with the kit number and the date turned in.

3.83.2.9. Locally assign control numbers for ITKs and CTKs. Materiel control makes and keeps a listing showing the individual's name, AFSC, and kit control number.

3.83.2.10. Maintain custody receipt folders for each tool kit and CTK and file them in control number sequence.

3.83.2.11. Account for powered hand tools in CTKs, tool rooms, and tool kits.

3.83.2.12. Replace damaged and unserviceable tools on a one-for-one exchange basis through materiel control.

3.83.2.13. Use a separate DRMS holding area for condemned hand tools. Transfer condemned expendable hand tools (by weight) to DRMS as scrap; see AFMAN 23-110, Volume II, Part Two, Chapter 13.

**3.84. Tire and Battery Management:**

3.84.1. Tire management and control procedures are covered in TO 36-1-191, and in AFMAN 23-110, Volume II, Part Two, Chapter 9. Management establishes local procedures to ensure all tires in a supply point are maintained and accounted for on an as-received or issued basis using AFTO70, **Tire Inventory Control Record**, or other local form that can reflect similar data.

3.84.2. Charge recapped tires in the OLVIMS at 75 percent of the stock fund price, based on the OLVIMS transaction from base supply. Recapped tires are identified by a -2 suffix in the stock number.

3.84.3. Forward supply point tires are issued using work order number H8888. Process issue requests (DD1348-1) for tires through base supply on a daily basis to create the OLVIMS transaction to ensure proper tire costing and accountability.

3.84.4. Use work order number H8888 for all vehicle-type batteries ordered for the battery shop. A local procedure between materiel control and the battery shop supervisor assures that when batteries are installed, they are costed properly in OLVIMS. That's done by using the "QZ" material costing transaction. ***NOTE:*** Batteries must be accounted for on an as-received or issued basis for audit purposes.

3.84.5. When the VMM determines local area vendors are more cost effective, or better meet the needs of the customer, the following guidance applies:

3.84.5.1. Consume the tires in the Supply inventory, whether in their warehouse or in the transportation forward supply point. Be sure to advise Base Supply which "stocked" tires you do not want them to re-stock upon consumption.

3.84.5.2. Establish agreements with local sources, for local purchase. Expect best prices/service from vendors that have Indefinite Delivery-Indefinite Quantity (IDIQ) contracts with TACOM and/or GSA.

3.84.5.3. Follow local contracting guidance and Supply procedures, but do not exceed $2,500 per single transaction without a "kill notice" through the SBSS for tires you want Base Supply to continue to stock.

3.84.5.4. Do not enter into any aggregate (long-term, multiple transaction) purchase agreement with local sources having a value of $100,000 or more, unless under TACOM's or GSA's IDIQ contract, without documenting the justification to TACOM since they are the DoD Integrated Materiel Manager (IMM) for tires.

3.84.5.5. Ensure consideration of purchase of recapped tires as outlined in paragraph **1.29.** of this manual.

**3.85. Work Order Residue.** Items left over from maintenance AF1823s are placed in "work order residue" bins, preferably near to normal bench stock. Identify these items as work order residue, along with the stock or part number, if known, and date established as residue. If there is no foreseeable need, materiel control tells all shop supervisors to take a "last look" to see if there is any need. If not, the items are sent to DRMS or base supply. Develop an inventory management system to provide quick reference for all work order residue items. When a part is removed from residue and placed on a vehicle, annotate the action on the AF1823 or parts request form by writing "W/O Residue" in the job description block or

parts form respectively. This action will provide management information concerning the source of the replacement part.

**3.86. Vehicle Redistribution and Transfer.** When vehicles are redistributed or transferred to other Air Force bases or sent to DRMS, the controller advises materiel control. On notification of a vehicle transfer, materiel control finds out whether there are any parts on hand or on order against that vehicle and cancels them if there are. When credit is given turn in the parts; if not, move them to the work order residue area.

# Chapter 4

## BASE - LEVEL MAINTENANCE

**4.1. General Information.** Base-level maintenance is described in AFI 24-302, Chapter 1, Section B.

**4.2. Shop Facilities:**

4.2.1. The Air Force has a large investment in maintenance shops because the majority of intermediate maintenance is done in these fixed facilities. Productivity is increased by using new methods and procedures to get the most out of personnel, tools, and space. For example, to have good workflow, locate MCA and the CSC in places that are easy for customers to reach. Ideally, related work centers are located close together.

4.2.1.1. Use AFI 32-1024 as a guide to compute total space needs to provide adequate facilities, to identify deficiencies in the shop, and as the basis to initiate corrective action.

4.2.1.2. Send requests for real property construction, modification, or changes to the base civil engineer on AF332, **Base Civil Engineer Work Request.**

4.2.1.3. Send requests for maintenance or repair of real property facilities to the base civil engineer.

4.2.2. Activities that do not have standard Air Force shops develop a plan to use the shop areas to gain the most efficiency and productivity. The VMM or VMS consider the following in their plans:

4.2.2.1. Type, size, and number of vehicles to be worked on.

4.2.2.2. Type of work and service to be done.

4.2.2.3. Time needed to do a job.

4.2.2.4. Space required for each type of repair.

4.2.2.5. Locations of water, air, electrical outlets, and exhaust fume ventilators.

4.2.2.6. Location of shop tools, such as hydraulic floor jacks, transmission jacks, portable lubrication equipment, etc.

4.2.2.7. Locations of COPARS, MCA, CSC, and materiel control are as close to each other as possible. Be sure that the CSC section is easy for vehicle users to find.

4.2.2.8. Size of the shop parking area.

4.2.2.9. Location of vehicle publications.

**4.3. Shop Publications.** Necessary technical literature, including technical orders, service books, and lubrication charts will be available at all times. Technical data for vehicles or vehicular equipment, including nuclear certified assets, must be current. In addition to the current technical order or commercial manual, printed or in digital form, any of the following data sources are acceptable: technical orders, printed material, microfilm, or software provided by or procured from the asset manufacturer, commercially procured after-market parts and repair manuals, such as Mitchell Manuals, Chilton Manuals, or digitized technical data such as Mitchell On-Demand. When conflict occurs between technical data sources,

or questions arise about the accuracy of any technical data, repair procedures, or replacement parts, other than AF directed inspection criteria, the final decision authority lies with the representative or dealer for the manufacturer of the vehicle or equipment item in question. Rationale being the manufacturer or their representative should have the latest procedures and parts information available.

4.3.1. Set up a central publication file accessible to all work centers. ***NOTE:*** Geographically separated work centers will have current publications such as AFI 24-302, TO 36-1-191, AFOSH Standards, etc., available to prevent wasted travel time to the central library. The work center supervisor, with VMM or VMS approval, determines which publications are needed in their work center.

4.3.2. Order commercial books or technical orders when new vehicles are received without publications, using the emergency ordering procedures in TO 00-5-2.

**4.4. Work Centers.** Establish work centers as focal points for the labor, parts, and tools needed to do the job. Determine the number of work centers by the type and quantity of vehicles to be serviced (that is, general purpose, special purpose, refueling, and so forth) and the location of shop buildings. The work center supervisor is responsible for all work done in the work center.

**4.5. Customer Service Center (CSC).** This center is the focal point for receiving all work, determining repair requirements by inspecting the vehicle, and debriefing vehicle operators. The technician in charge of this section is well experienced in all aspects of vehicle maintenance. Consider the needs of the using organization avoid unnecessary vehicle downtime. Increase VIC time by providing service within the shortest turn-around time possible. Quality and service is the byword of this section; it must be readily accessible and recognizable to the customer. Management sees that this section provides timely service. When necessary, use personnel from other sections during peak workload periods. Specific responsibilities of CSC include the following:

4.5.1. Provide fast and dependable service to the user.

4.5.2. Debrief vehicle operators.

4.5.3. Verify malfunctions and perform a complete inspection using diagnostic test equipment when required.

4.5.4. Determine if the malfunction is a result of suspected abuse, and if so, take proper action. Waiver only nonessential work. Using the appropriate series Operator's Inspection Guide and Trouble Report as a permanent waiver card is optional at the discretion of the VMM or VMS. Alternatives for tracking waivered items can be established through the use of a computer listing, card file index, etc.

4.5.5. Delay work when necessary, and only when safety defects are not involved and when deficiencies will not cause further damage to, or problems with the vehicle. Complete delayed work as soon as is practical, i.e., parts are now on-hand, and vehicle is in the shop.

4.5.6. Perform minor maintenance as required.

4.5.7. Perform quality inspections as prescribed by the VMM or VMS.

4.5.8. Perform road tests as needed.

4.6. Vehicle and Equipment Work Order and Vehicle Processing (Main Shop). Portable test equipment and a small bench stock enhances the CSC operation. The CSC and outlying work centers use AF Form

1827, **Minor Maintenance Work Order**, for repairs that take less than 2 labor hours, and for the installation of low-cost bench stock parts. The AF1827 will not be used when the total repair time (awaiting maintenance, awaiting parts and actual labor) exceeds 2 hours. A normal work order will be processed to capture downtime exceeding the 2-hour limit. When the vehicle operator reports to the CSC/shop with the vehicle inspection guide, the operator stays with the vehicle until the inspection and debriefing are complete. Operators will perform required operator care, to include interior and exterior cleanliness, before turning the vehicle over to the CSC. Processing steps essentially follow the pattern below (note, the VMM or VMS may adjust procedures for vehicle in-processing as necessary to meet local conditions and mission):

***NOTE:*** The AF1827 will not be used to record multiple jobs on the same vehicle during the same repair timeframe. Each line on the AF1827 is interpreted as a separate work order in OLVIMS.

4.6.1. Using the Operator's Inspection Guide and Trouble Report form, the inspector makes a complete inspection to verify the vehicle's malfunction and validate waived items. CSC personnel use the proper diagnostic and test equipment to identify and isolate the malfunction when required.

4.6.2. The CSC determines if there are any delayed or scheduled maintenance actions due. Install delayed parts that have been received, workload permitting.

4.6.3. If the following criteria are met - use the AF1827.

4.6.3.1. Scheduled/delayed maintenance is not required.

4.6.3.2. Bench stock parts do not exceed the low-cost threshold.

4.6.3.3. Requested repairs, to include "awaiting maintenance/parts" and labor hours combined, do not exceed 2 hours.

4.6.4. If the vehicle requires scheduled maintenance or repairs take more than 2 hours to complete, or require parts other than low cost bench stock, initiate an AF1823 or AF1823-1. The CSC enters the suspected malfunctions, or provides MCA with a list of discrepancies, other work to be performed, all tests that have been performed, and the direct labor-hours spent to perform the inspections and tests.

4.6.5. The CSC sends the AF1823 or list of discrepancies to MCA for additional entries and processing of the vehicle into the main shop.

4.6.6. The "look phase" of scheduled inspections, lubrications, and oil filter changes may best be performed by the CSC section. Enter labor-hours for this work on the AF1823 or AF1823-1.

4.6.7. The VMM or VMS determines which quality inspections will be done.

**4.7. Lubrication:**

4.7.1. Keep lubrication charts for all assigned vehicles on-hand and use them. Charts for commercial vehicles are available in digitized tech data (i.e. Mitchell-On-Demand (MOD)), can be purchased locally, or can be ordered from the General Services Administration (GSA). Order lubrication technical orders and commercial charts as prescribed in TO 00-5-2.

4.7.2. Vehicle maintenance managers adjust lubrication intervals, and engine oil and filter change intervals, when justified by local operational conditions. Changes to intervals in TO 36-1-191 are supported by written justification and approved by the MAJCOM.

4.7.3. Inspect vehicles by the visual and feel method during lubrication. Report deficiencies noted during this inspection to MCA. Assign a qualified technician to the lubrication work center to ensure the quality of inspections during the lubrication process.

**4.8. Tire Repair:**

4.8.1. Repair all vehicle tires.

4.8.2. Maintain all assigned tire repair and servicing equipment in a safe operating condition.

4.8.3. Ensure strict compliance with safety standards.

4.8.4. The vehicle operator has primary responsibility for removing and installing mounted tires; however, vehicle maintenance personnel remove and install mounted tires once the vehicle has been accepted into the shop, unless it has been previously agreed upon that the operator will provide assistance.

4.8.4. (AFMC) Develop local procedures to ensure vehicle operators are aware that split rim tires must be deflated before the lug nuts are loosened.

4.8.5. Use an AF1823 or AF1823-1 to cost new or recapped tires that are put on vehicles (see **Chapter 6** for documentation).

4.8.6. Use an AF1827, work order number J9998, to account for direct labor hours spent in tire repair that cannot be accounted for against a specific vehicle (see **Chapter 6** for documentation).

4.8.7. Personnel assigned to the tire shop will be thoroughly trained in all aspects of tire inspection and repair procedures. Document training certification in appropriate military and civilian training records. Copies of TOs 36-1-191 and

36Y32-1-142, and a current Rim and Tire Association Yearbook, will be available in the tire shop. Personnel are familiar with the instructions outlined in these publications. Exercise extreme caution when working with split-rim wheels. Refer to AFOSH Standard 127-20 for additional guidance.

**4.9. Battery Service:**

4.9.1. Maintain an adequate stock of batteries to give quick service.

4.9.2. Test, fill, and charge all batteries.

4.9.3. Keep all batteries under lock and key to prevent theft.

4.9.4. Keep all assigned equipment, such as battery chargers, tools and safety equipment in good operating condition. Comply with all applicable safety standards.

4.9.5. To collect those direct labor-hours that cannot be identified to a specific vehicle, use the procedures outlined in **4.8.** above. To aid in warranty tracking, use an AF1823 or AF1823-1whenever a new battery is installed.

4.9.6. Refer to AFOSH Standards 91-20, 91-32, and 91-66 for additional guidance.

**4.10. Mobile Maintenance.** The nature of certain vehicle repairs require maintenance support away from the maintenance shop. The maintenance technician should debrief the supervisor in charge or the vehicle operator concerning vehicle deficiencies. Review the Operator's Inspection Guide and Trouble Report for annotated maintenance problems.

4.10.1. Mobile maintenance can be used to perform scheduled services on vehicles not easily brought to or unable to enter the maintenance shop due to size. Advance coordination is essential for proper planning and scheduling. Accomplish a complete inspection of the vehicle or equipment item at the time of the scheduled inspection.

4.10.2. The mobile maintenance truck can be equipped with a tow attachment, a battery booster, and power plant (allowance standard- AS 457). Also, the truck can carry tools (allowance standards-AS 403 and 457) and a bench stock of parts, so that full scheduled and unscheduled work can be done. This truck should also be radio equipped.

4.10.3. The VMM and VMS have the option to expand mobile maintenance to include performing minor maintenance at selected units. It may be desirable to send a mobile maintenance truck to large organizations (CES, SPS, aircraft maintenance, etc.) on a scheduled frequency to perform minor maintenance.

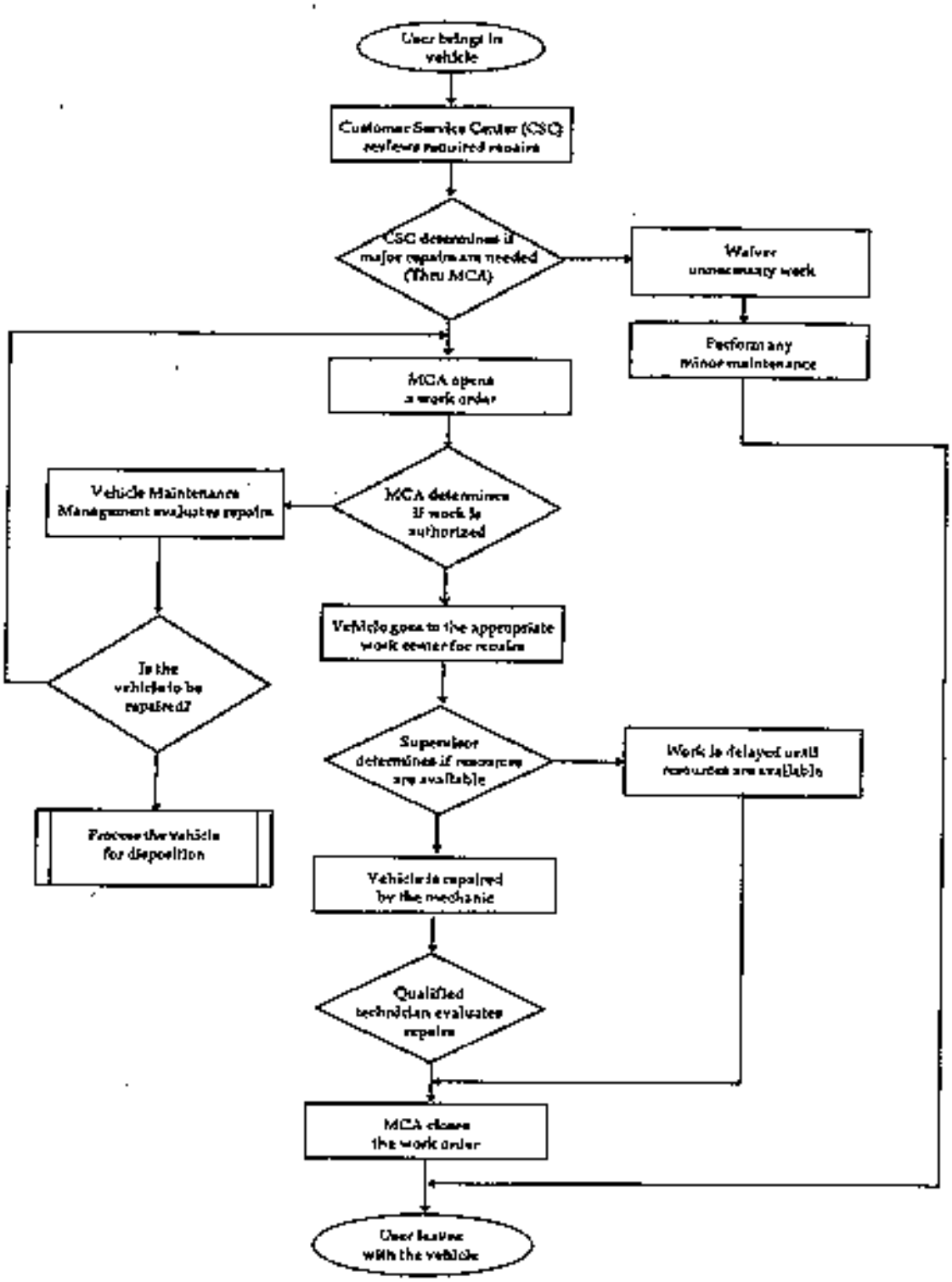
4.10.4. The VMM or VMS determines, and then justifies, the number of mobile maintenance trucks necessary to be assigned.

**4.11. Roadside Repair.** During normal duty hours, refer all calls for roadside or emergency repair to MCA or the section responsible for mobile maintenance, and relay them to mobile maintenance for assistance. If the required repairs are beyond mobile maintenance capabilities, request wrecker assistance from vehicle operations. During other than normal operating hours, vehicle operations delivers the disabled vehicle to the vehicle maintenance parking area. The Operators' Inspection Guide and Trouble Report will reflect the vehicle's problem, and must accompany the vehicle. During the next duty day, someone from the using organization must formally turn the vehicle in to vehicle maintenance.

***NOTE:*** If repairs cannot be completed in 2 hours or less (VOC begins when disabled vehicle is reported to transportation) open a work order to capture all VOC.

**4.12. Wrecker Service.** Vehicle operations normally provides wrecker service.

**Figure 4.1. Vehicle and Work Order Processing (Main Shop).**



# Chapter 5

# TRAINING

**5.1. General Information.** Successful operation of Air Force maintenance shops depends on the knowledge of assigned people and how well they do their jobs. The Career Field Education and Training Plan (CFETP) for Vehicle Maintenance is a comprehensive training program outlining specific training vehicle maintainers should receive as they progress throughout their career. Career field functional managers at all levels participate in developing the CFETP and use it to tune their training programs toward achieving the plans' overall goals.

5.1.1. The VMM or VMS (senior base-level vehicle maintainer) is the functional manager for the vehicle maintenance specialty at their respective location. MAJCOM vehicle maintenance resource managers act as the MAJCOM Functional Mangers (MFM) and also share responsibility in developing the CFETP. The Air Force Career Field Manager is the single point of contact (POC) responsible for overall management of 2T3XX specialties, including policy development, training, skills management and career development.

**5.2. Staff Training:** Base-level management examines, selects, and trains personnel. The training of maintenance personnel is a continuing process.

5.2.1. Varying types of jobs, specially designed vehicles and equipment, emission control systems, electronics, and special tools and test equipment, combined with personnel changes, demand a good, active training program. The plan also includes training qualified mechanics on new or improved troubleshooting techniques, specialized and test equipment, and advanced vehicle systems.

5.2.2. The ever-increasing cost of maintaining vehicles demand that mechanics who have received training must be able to pass on what they have learned to other mechanics. Conduct training as outlined in AFI 36-2201; do not limit training to just upgrading Air Force skill levels.

5.2.3. Rotate mechanic technicians in upgrade training to the 7-skill level through each section of vehicle maintenance. Allow a sufficient amount of time for the trainee to gain a working knowledge of the section. Personnel rotation is considered an essential element of an individual's upgrade training. NOTE: Vehicle maintenance managers will also expand their rotation programs to the maximum extent to include non-supervisory mechanics to prepare them for future responsibilities as supervisors.

5.2.3.1. Upgrade to the 7-skill level requires completion of the 7-level CDC, certification of all core tasks, any mandatory courses, 18 months OJT as an E-5, and completion of the Vehicle Maintenance Craftsman resident course.

**5.3. Training Monitor.** The VMM or VMS manages the training program. They can assign a qualified 2T3XX as a functional area training monitor. The training monitor is primarily responsible for qualification training after initial upgrade training, and the following:

5.3.1. Compliance with AFI 36-2201.

5.3.2. Assisting the VMM or VMS in selection of qualified OJT trainers.

5.3.3. Providing supervisors with assistance in obtaining literature and directives pertinent to their OJT program.

5.3.4. Advising and assisting supervisors in the development and use of training requirements and techniques.

5.3.5. Coordinating with the unit OJT manager in obtaining any needed training from Air Education and Training Command (AETC) and commercial training sources as outlined in AFCAT 36-2223 and AFI 36-2201.

5.3.6. Ensuring a training plan reflects qualification requirements in each task a trainee is required to perform.

5.3.7. Preparing and submitting AETC in-resident training requirements in response to MAJCOM annual screening requests. This should be prepared during the fourth quarter of the current fiscal year for the next fiscal year.

**5.4. Categories of Training.** Training is achieved by systematic instruction from one of the following sources:

5.4.1. On-the-Job Training (OJT).

5.4.1.1. Train personnel to desired skill levels and ability in the classroom, as well as by systematic instruction under actual working conditions in the maintenance shop.

5.4.1.2. The trainee must be working within their primary AFSC (up to 5 level), must receive training in the same, and must be instructed by a qualified trainer.

5.4.1.3. Getting the most from the OJT program demands the availability of modern vehicle maintenance shop equipment. Personnel must be thoroughly trained in the safe use and the operating characteristics and techniques of the equipment. Document this training on the trainee's AF Form 55.

5.4.1.4. The job qualification phase of OJT is a continuous process, starting with the individual's entry into service.

5.4.2. Special Training. The vehicle maintenance training monitor identifies training needs other than OJT to the VMM and VMS. The VMM or VMS requests special training through personnel channels using AF403, **Request for Special Technical Training.**

5.4.2.1. Air Education and Training Command (AETC) special courses are conducted at AETC Technical Training Centers or by an AETC Mobile Training Team (MTT) at the using command's facilities. Personnel selected for this type of training are normally at the 5-skill level or higher. Request this training through the MAJCOM as provided in AFI 36-2201. Use AF403 or DD1556**, Request, Authorization Agreement, Certification of Training and Reimbursement** for the request. Where base level needs, as documented on AF403 justify it, special training can be obtained.

5.4.2.2. Special training by other Department of Defense (DOD) or federal agencies can be arranged by AETC. Requests for this training are also made on AF403 IAW AFI 36-2201.

5.4.3. Commercial Training. Commercial sources provide many excellent training courses, as do manufacturers of equipment and vehicles at factory and regional locations. Some mobile commercial training courses can be scheduled on base. The training monitor and maintenance supervisor seek local sources for this training. MAJCOM vehicle management staffs can often aid in finding commercial sources. Once a commercial training source is located, send a request for special technical train-

ing through command training channels to HQ AETC according to AFI 36-2201. AETC then makes necessary arrangements to procure, schedule, and fund for the training.

5.4.4. General Management Training. All maintenance managers, NCOs, and civilians who are full-time supervisors must attend USAF supervisor's courses. Air Force Professional Military Education (PME) normally fulfills this need.

5.4.5. Air Force Specialty Training. Specialty training courses available for vehicle maintenance personnel are discussed in AFCAT 36-2223. However, since all specialty training courses are not listed in there, the training monitor must be familiar with the Pipeline Management System (PMS), available from the classification and training section of the military personnel flight (MPF). Make requests for this type of training IAW AFCAT 36-2223 through the MAJCOM. These courses are available for all maintenance skills, maintenance control and analysis personnel, and vehicle maintenance managers. Other courses can be offered if AF403, generated at base-level, justifies the need.

5.4.6. EPA Certification Training. Technicians, whose duties include motor vehicle air conditioning (MVAC) maintenance require training and certification. They may also require specific certification if the local implementation of the EPA emissions control I/M program contains provisions for the Air Force to perform this type of work. The EPA and possibly a state or local authority implementing the program dictate and approve courses of instruction and certification methods.

**5.5. On-The-Job (OJT) Advisory Services.** HQ USAF/MPP provides, HQ AETC/TTY arranges advisory services to provide standardized instruction on setting up an OJT program. Refer to AFI 36-2201 for further information.

**5.6. Audiovisual (AV) Training Aids.** AV training programs can be an important phase of OJT. AV programs are available from the Management and Equipment Evaluation Program. Contact HQ AETC/LGTVE, 555 E Street East, Suite 5, Randolph AFB TX 78150-4440, DSN: 487-6875, for a list of available aids. These services are not available to contracted maintenance activities, but are available to AFRES and ANG flights.

**5.7. Formal Training Evaluation.** As part of its training effectiveness evaluation, AETC requests evaluations of recent graduates from field units. This procedure is in AFI 36-2201 to help ensure that needed and quality training is being given. Shop supervisors complete a training evaluation on students completing formal training courses or schools. Complete this evaluation within 90 days for students completing basic courses and within 45 days for those completing follow-on or advanced courses. Provide an information copy of the AF1284, **Training Quality Report** to the MAJCOM.

**5.8. MAJCOM Responsibilities:**

5.8.1. Have qualified personnel perform a detailed functional review of AETC course training standards.

5.8.2. Communicate with AETC/TT or the appropriate school regarding training needs.

5.8.3. Identify training problems and aid base-level personnel in resolving them.

5.8.4. Coordinate MTT requirements with the technical training centers.

5.8.5. Develop OJT documentation requirements following guidelines in AFI 36-2201.

**5.9. Management Training.** The VMM or VMS decides management qualification training needs, and schedules all supervisory personnel in vehicle maintenance and all materiel control personnel for customer training from base supply.

**5.10. Commercial Training Sources.** Managers are encouraged to contact local automobile manufacturer representatives and parts vendors to secure low cost or no cost local area training.

**5.11. Commercial Trade Publications.** Information technology has overcome the need to subscribe to trade publications in many instances. Information relating to maintenance and upkeep of vehicles is readily available on the Internet. Local managers will determine their needs and sources for obtaining this information or publications.

**5.12. Certified Technician Programs** . Certified Technician Programs realign process ownership and responsibility for repair actions with those actually performing the work.. MAJCOMs may establish certified technician programs for use at all subordinate, or specified maintenance activities. As a minimum, MAJCOM guidance will include eligibility criteria, certification-decertification-recertification processes, and details on administering the program at the execution level.

# Chapter 6

# MAINTENANCE DOCUMENTATION AND RECORDS ADMINISTRATION

## *Section 6A— Introduction and Documentation Rules*

**6.1. General Information.** This chapter contains the procedures for maintenance documentation and records administration. Records will be maintained as prescribed herein and disposed of IAW AFMAN 37-139, *Records Disposition Schedule*.

**6.2. General Description and Basic Principles of the Maintenance Data Collection System:**

6.2.1. Collect data by converting maintenance repair work to codes and record those codes in spaces on forms. The codes are computer-processed to make summary reports, which are sent to management for use in analyzing, planning, scheduling, and controlling the maintenance effort. This data is maintained as accurately and timely as possible. A comprehensive backup system is used to allow recovery of this data should a failure occur in the data system.

6.2.2. Labor-hours spent on tire and battery build-up (not identifiable to a specific vehicle) are direct hours. Labor cost for these hours is prorated by OLVIMS against the entire fleet as indirect cost. Indirect productive hours (administrative, supervision, etc.) are automatically computed by OLVIMS using the difference between direct productive and indirect nonproductive hours and the employee available hours.

6.2.3. Labor-hour data is entered on forms in hours and tenths. Minutes are recorded as tenths of hours as follows:

01 through 02 minutes - .0 hour.

03 through 08 minutes - .1 hour.

09 through 14 minutes - .2 hours.

15 through 20 minutes - .3 hours.

21 through 26 minutes - .4 hours.

27 through 33 minutes - .5 hours.

34 through 39 minutes - .6 hours.

40 through 45 minutes - .7 hours.

46 through 51 minutes - .8 hours

52 through 57 minutes - .9 hours

58 through 60 minutes - whole hour.

**6.3. Use of Printed Characters.** Print all entries on records except for signatures and stamped initials of inspectors.

**6.4. Legibility.** Ensure that maintenance records are legible, complete, and correct.

**6.5. Transfer and Disposition:**

6.5.1. MCA ensures all records are complete and given to the vehicle REMS monitor when a vehicle is transferred to another base or to DRMS.

6.5.1.1. Send AF1823s in the historical file at the time of transfer with the records.

6.5.1.2. MCA keeps copies of AF1828s, Static Data A, B, and C transactions, and the last AFTO91, **Limited Technical Inspection**. ***NOTE:*** Retain only the AFTO91 and the document which directed the disposition action for vehicles processed to DRMS.

6.5.2. Use USAF management code 4000 in place of the vehicle's actual management code when processing vehicles for disposal (the final preparation for salvage work order only). Use vehicle operations' RC/CC code and the using organization code of 0O (zero oscar) for management code 4000 AF1823s. Do not use USAF management code 4000 for new vehicles processing in to the base, excess or depot. If a vehicle is shipped to depot, leave the work order open drawing VDM until it returns from depot and is placed in service. There will be no accounting of vehicle downtime if the vehicle is being shipped to depot and will not return to the shipping base.

6.5.3. Vehicle static data records for newly received vehicles may be put into the OLVIMS when the using unit is known by using the proper vehicle management code, organization code, and RC/CC code. The vehicle stays in the OLVIMS until the actual transfer or shipment action in completed. All acceptance inspections are initiated and records loaded within five working days after release of the vehicle from supply to transportation. ***NOTE:*** Vehicles shipped to depot for repair and return are not considered to be transferred.

6.5.4. Process vehicle disposition packages initiated by vehicle maintenance through all base-level OPRs within ten working days.

**6.6. Vehicle and Equipment Records:**

6.6.1. Make a historical records file (jacket) for each vehicle maintained by the shop. This record file has two sections, historical and active. ***NOTE:*** Use **Table 6.1.** as a convenient guide for maintaining and filing records.

6.6.2. MCA initiates a vehicle jacket file when a vehicle is first received by the shop.

6.6.2.1. File historical records in either vehicle registration number sequence or in management code/registration number sequence.

6.6.2.2. File all material in the active (working record) portion of the jacket file in chronological order, and file material in the historical portion of the jacket file by record type, in chronological order.

6.6.3. See **Table 6.1.**, for filing direction for forms, documents, and correspondence, and other related data for vehicle and equipment records.

**Table 6.1. Vehicle and Equipment Records.**

| RULE | A | B | C | D |
|---|---|---|---|---|
| | **If the form document, or correspondence is** | **and pertains to** | **and** | **then** |
| 1. | AF1823, or AF1823-1, Vehicle and Equipment Work Order | routine kinds of repair and inspection actions such as accident, abuse, scheduled and unscheduled work, contract, etc.<br><br>NOTE: Also see Rules 2 and 3 | the routine kinds of repair or inspection is accomplished and entries are input into the computer and verified on the daily edit list as being correct | file in the active record portion of the records jacket.<br><br>NOTE: Where paper copies are not retained, assure electronic copies are available. |
| 2. | | distinctive or less routine kinds of repair and inspection actions such as for special approvals, corrections of DoT directed manufacturer recalls, etc. | the more distinctive kinds of repair or inspection is accomplished and the entries are input to the computer and verified on the daily edit list as being correct | file in the historical record portion of the records jacket, with any supporting or directing paperwork attached. Remains in the records jacket when the vehicle is either transferred or disposed of. |
| 3. | | refundable and/or reimbursable repair | the repair is accomplished and the entries are input into the computer and verified on the daily edit list as being correct | file in the active record jacket portion of the records jacket (see para. **6.47.2.**). |
| | | refundable and/or reimbursable repair | the repair is accomplished and the entries are input into the computer and verified on the daily edit list as being correct | file in the active record jacket portion of the records jacket (see para. **6.47.2.**). |

| RULE | A | B | C | D |
|---|---|---|---|---|
| | **If the form document, or correspondence is** | **and pertains to** | **and** | **then** |
| 4. | AF1828, Vehicle Historical Record | important initial static data and life-to-date summary repair history for in-use vehicles and equipment | initial or continuation records of static data and life-to-date summary repair history are completed and recorded in computer records | file in the historical record portion of the records jacket. This material stays in the records jacket when the vehicle is transferred or disposed of.<br><br>NOTE: Retain duplicate forms or printed electronic record for vehicles which are transferring, other than to disposal. |
| 5. | AF 1828, Vehicle Historical Record | Vehicles or equipment TDY for 30 days or more, and/or vehicles TDY for special weapons movement | the TDY vehicle is being returned to its home base or is being transferred to a subsequent TDY base or location. | forward the updated form or electronic record with the vehicle or equipment item when it departs your base or TDY location.. |
| 6. | Limited Technical Inspections (LTIs) (AFTO 91, Memo/ Msg) | vehicle or equipment acceptance or preparation for storage | the vehicle is accepted for service or is placed in storage | file in active portion of the records jacket. |
| 7. | | request for one-time repair or depot repair decision for reporting beyond base level | approval or disapproval instructions are received and attached to the form and the work is accomplished | file AFTO 91 and attachments in the active portion of the records jacket. |
| 8. | | disposition and/or transfer instructions, or requests for input to programmed depot repair facility | approval or disapproval for depot input or transfer instructions are received/attached to the AFTO 91 and the action is completed | file AFTO 91 and any approval or disapproval attachments in the historical record portion of the vehicle records jacket. |
| 9. | Vehicle Static Data records (A, B &C transactions) | vehicles or equipment items assigned to using activities | vehicle is being transferred or disposed of | file the original the historical portion of the records jacket to be forwarded with the vehicle. |

| RULE | A | B | C | D |
|---|---|---|---|---|
| | **If the form document, or correspondence is** | **and pertains to** | **and** | **then** |
| 10. | Authorization document (Memo or Message) | direction or approval for special inspection, modification, etc. | directs, requests or establishes AF1823 or inspection requirements | file in the historical portion of the records jacket. |
| 11. | | WR-ALC or command special interest items condition | | file in the historical portion of the records jacket (unless otherwise directed). |
| 12. | Line Setting Document | newly received vehicles or equipment items | a copy is given to the maintenance shop to keep with parts catalog for reference | file the original line setting ticket or document in the historical portion of the records jacket. |
| 13. | DD250, Material Inspection and Receiving Report | receipt of new vehicle or equipment item | new vehicle record file (record jacket) is initiated | file in the historical portion of the record jacket. |
| 14. | Contractor Operated Parts Store sales slips | parts and material procured from the COPARS outlet for AF1823s | a copy is attached to the appropriate AF1823 | file with the AF1823 per Rule 1, 2, or 3 above |
| 15. | AF1827, Minor Maintenance Work Order | minor or mobile maintenance accomplished on a vehicle (time awaiting parts, awaiting maintenance, and direct labor hours combined must be less than 2 hours). | form entries have been accomplished and entered in to the computer | for units using chronological file, file in minor maintenance AF1827 folder by month; for units opting for vehicle file, file in temporary portion of vehicle records jacket |

**6.7. Missing Forms.** The receiving unit asks the shipping unit to send missing records, or duplicate copies, when new or used equipment is received without complete records.

**6.8. Maintenance of Forms for Vehicles and Equipment in Extended Storage.** When placing vehicle and equipment in storage as stated in TO 36-1-191 or like directives, record maintenance inspections the same as if they were in an operational status. Maintain records in an active file until the vehicle is disposed of.

**6.9. Processing Vehicles to Maintenance.** MCA schedules and controls vehicle maintenance and inspections. Enter all work on a AF1823, AF1823-1, or AF1827, according to **Chapter 2**.

**6.10. Maintenance of Transient Vehicles:**

6.10.1. Vehicle maintenance inspects and repairs transient vehicles.

6.10.2. Document and process transient vehicle AF1823s as shown in this chapter, except that MCA sends a copy of the AF1823 to the home station to ensure data is included in their historical records.

6.10.3. The base that does the work assigns a management code of 5000 to the AF1823 and a work order number prefix code of F to the AF1823.

6.10.4. It is not necessary to total OLVIMS AF1823 entries, as the system automatically produces a transient vehicle listing that shows total cost. MCA sends the listing to the transient vehicle's home base.

**6.11. Vehicles Assigned Temporary Duty (TDY):**

6.11.1. A copy of the AF1828, Vehicle Historical Record, is sent with each vehicle operating on TDY for 30 days or longer. ***(EXCEPTION:*** A copy of the current AF1828 accompanies each vehicle or equipment item sent TDY for special weapons movement, regardless of the duration of the TDY.) At the transient station, MCA ensures that each service, repair, and inspection is updated on the AF1828, and that the form is returned with the vehicle when the TDY is over. At local option, on return from TDY, the home station MCA can update the original AF1828 with new data from the TDY copy by initializing AF1823s.

6.11.2. When vehicles are sent TDY for more than 30 days, the home station, the transient station, and the TDY vehicle operator or supervisor complies with the procedures below which are necessary to provide cost, repair, and scheduled maintenance data to the home station.

6.11.2.1. The home station MCA attaches a card showing the mailing address of the home station MCA and the scheduled data for that particular vehicle with the copy of the AF1828. When the vehicle arrives at the TDY station, the maintenance activity receiving the copy of the AF1828 and the attachments, immediately notifies the home station of the address of the supporting MCA activity. The operator or TDY team supervisor is responsible for this action if maintenance support is provided by a non-Air Force or commercial source.

6.11.2.2. For vehicles on TDY, MCA at the transient base controls the AF1828 and scheduled maintenance data. It sets up schedules with the TDY personnel for turning the vehicle in for scheduled maintenance. The transient base MCA activity sends the vehicle return listing (PCN SB004-019), to the home station as they are received. Send copies of AF1823s, Operator's Inspection Guide and Trouble Reports, and other appropriate records to the home station when the TDY station no longer needs them for reference.

6.11.2.3. For TDY vehicles supported by another government agency or commercial source, the vehicle operator or TDY team supervisor sends copies of completed AF1823s or invoices (AF15, **United States Air Force Invoice** or Commercial Fleet Service Card) to the home station and transcribes data to the duplicate AF1828.

6.11.3. For vehicles on TDY for 30 days or less, the supporting transient activity or the operator sends the listing and AF1823s or invoices, as indicated above, to the home station. All records generated during the TDY are generally returned to the home station with the vehicle.

6.11.4. If possible, forward technical data with the vehicle to permit the transient maintenance activity to perform scheduled and unscheduled maintenance.

***Section 6B—Operator's Inspection Guide and Trouble Report Forms.***

**6.12. General Information:**

6.12.1. Most of the forms are alike except for the "items to be checked" column. AF1800**, Operator's Inspection Guide and Trouble Report (General Purpose Vehicles)**, is used as an example to describe entry and forms maintenance responsibilities. ***NOTE:*** Check Fire Trucks, Refuelers, and 463L Equipment daily, when they are used. Check all other vehicles on the frequency prescribed by the MAJCOM. Using organizations will maintain Operator's Inspection Guide and and Trouble Report forms for their assigned assets IAW with instrucitons in AFMAN 37-139, *Records Disposition Schedule*.

6.12.1. (AFMC) AFMC bases will check all other vehicles weekly if not used or daily when being used. The appropriate Operator's Inspection Guide and Trouble Report will be used to annotate the check. Bases have the option to increase the frequency of this check.

6.12.2. Other AF form numbers and the equipment that they apply to are listed below:

6.12.2.1. AF1806, **Operator's Inspection Guide and Trouble Report (Aircraft Towing, Base Maintenance, Deicers, High Reach, and Snow Removal).**

6.12.2.2. AF1807, **Operator's Inspection Guide and Trouble Report (Fuel Servicing).** Note: Page one now has three signature blocks to accommodate documenting an operator inspection at each shift change. MAJCOMs may establish policy to standardize documentation of a single daily operator inspection, or an operator inspection at each shift change when used.

6.12.2.3. AF1810, **Operator's Inspection Guide and Trouble Report (463L and Material Handling Equipment)**

6.12.2.4. AF1812, **Operator's Inspection Guide and Trouble Report (All "P"-Series Fire Fighting Vehicles).**

**6.13. Procedures for Recording Discrepancies and Delaying Maintenance.**

6.13.1. Operators record any discrepancies found during weekly or daily inspections which require maintenance in the Vehicle/Equipment Discrepancy and Maintenance Report section of the appropriate series Operator's Inspection Guide and Trouble Report**,** and report them to maintenance. ***NOTE:*** Operators do not make entries in the "Maintenance Control Report" section, except for end-of-month close-out as stated in paragraph **6.15.**

6.13.2. When an operator reports discrepancies in any of the safety-type systems or devices described in AFI 24-302, paragraph 2.16.2, that could adversely affect the safety of personnel or the operation of equipment, that maintenance is not delayed and the vehicle or equipment item will not be continued in service. The VMM, VMS, or a qualified representative resolves any question about the seriousness of a discrepancy, decides whether the discrepancy can be delayed, and, if it can, initials the maintenance control entry on the inspection guide.

6.13.3. **NOTE:** Using organizations make sure that delayed discrepancies do not affect the vehicle's safety or mission.

**6.14. Instructions for the Operator's Inspection Guide and Trouble Report.** The following instructions apply to all the inspection guide forms listed in paragraph **6.12.** The forms are described in three sections.

**6.15. Heading Information.** The using organization enters the heading data (top portion of front, page 1) and issues forms for each vehicle or equipment item on the first duty day of the month. The operator who performs the inspection on that day closes out the previous month's form by carrying forward the required entries according to the following paragraphs. File the old form and issue the new form with the heading information completed and keep it with the vehicle while in use.

**6.16. Inspection Guide and Operator Signature (lower portion of front and backpages 1 and 3).** The items to be checked are listed by number down the left side of the front page. The numbered blank lines can be used for locally added items. This is especially useful when adapting one of the forms to a peculiar equipment item. In this case, only the standard list "items to be checked" which are not needed for the peculiar equipment may be lined out. Items to be added or lined out are usually coordinated between the user and the maintenance shop.

6.16.1. Each "item to be checked" is inspected or service-tested during each inspection. To keep the form neat, the operator doesn't make any entry, such as a check mark or initials, on the lines where items are listed. The operator's signature opposite the day of the month, on the back page, shows that the operation or condition of all items is satisfactory, or that exceptions were entered by "item number" and "date found" on the center page. Conduct pre-operational inspections at least weekly, even for vehicles used on more than one shift, unless a more frequent inspection is prescribed.

6.16.2. Space is provided for an operator's signature corresponding to the numbered day of the month on the back page. An operator's signature consisting of first initial and last name (opposite the appropriate day of the month) shows completion of inspection or servicing for each item.

6.16.2.1. Further, the operator's signature shows the entry of item numbers for which a discrepancy is being reported on the discrepancy and maintenance report or, the signature could show that the operator is aware that the entry is already being carried in a delayed or waiver status. Leave blank or void entire on the operator signature lines opposite the days of the month an inspection was not performed (non-use days).

6.16.2.2. The operator usually certifies completion of the inspection, even though the discrepancies that are found and reported to maintenance may result in placing the vehicle out of commission. If the vehicle is returned to service that same day, the operator has only to make a brief visual check.

**6.17. Discrepancy and Maintenance Report (center, page 2).** Use this section for recording and showing maintenance action and status from operator-reported discrepancies. However, maintenance also uses it to record discrepancies found and not fixed during maintenance.

6.17.1. Before entering a discrepancy, both maintenance personnel and operators must check the discrepancy list and status to avoid duplicate reporting and processing of discrepancies. When a new monthly form is initiated, all open discrepancies (when the date under "Maintenance Control Report" is blank) are transferred to the new form and "C/F" (carried forward) entered in the blank "Date" space of the old form.

6.17.2. Additional instructions for completing this part of the form are as follow:

6.17.2.1. Item No. Enter the "item number" of the inspection guide's "item to be checked" list against which a discrepancy is being reported. Leave blank when the discrepancy is not related to a numbered item.

6.17.2.2. Discrepancy. Enter a brief description of the discrepancy.

6.17.2.3. Date Disc (Discovered). Enter the date the discrepancy is found and entered. Use an alphanumeric combination to indicate the day and month only. Abbreviate the month to three letters; for example, 10 Jan.

6.17.2.4. Date. Enter the date (such as 10 Jan) the discrepancy is reported.

6.17.2.5. Time. Enter the 24-hour clock time (four-digit military time; for example, 1430) that the vehicle/equipment was turned in for maintenance or request for maintenance support (wrecker, mobile, etc.) was received (reflect period that vehicle is not operational).

6.17.2.6. Miles/Hours. Enter the current hour meter or odometer reading. Note: Do not include “tenths.”

6.17.2.7. Operator's Signature. The individual completing the "reported to maintenance" part of this form signs in this space.

6.17.3. MCA personnel, the VMM, VMS, or a representative such as work center or shift supervisor, or mobile maintenance technicians make maintenance control report entries. The VMM or VMS prescribe permanent waiver forms or other locally developed system to track waivered deficiencies. ***NOTE:*** The work center supervisor identifies items on the AF1823 that are permanently waived. MCA transcribes these items to the permanent waiver form or system of record.

6.17.3.1. Work Order Number. Enter the work order number (block 2 of AF1823, AF1823-1, or AF1827) on which the discrepancy is annotated for maintenance action. Enter "none" if the discrepancy has been fixed or waived without a AF1823.

6.17.3.2. Date. Enter the date of the completed AF Form 1823 on which the discrepancy was fixed. If the maintenance action is delayed, enter the status code and leave the date blank. If corrective action is performed without a AF1823, enter the date of the closing action.

6.17.3.3. Status Code. These codes are shown in note 1. The codes are self-explanatory, except that code "W" (Waiver of Repair) is intended to identify items that do not require repair or replacement, and do not adversely affect safety or performance of the equipment. Additional status codes may be adopted locally, according to need, for more detailed status information. Items entered in the discrepancy block not validated by maintenance are dated, a "N" status code entered, and initialed in the maintenance control report section of the Operator's Inspection Guide and Trouble Report form. The entries are made only by maintenance personnel. An optional procedure can be used to keep waived items in the permanent section of the vehicle historical record jacket as a back-up in case the using organization loses or damages the waiver form kept in the vehicle.

6.17.3.3. (AFMC) Appropriately marked Operators Inspection Guide and Trouble Reports or the automated waiver system will be used at AFMC bases. If the AF Form 18XX is used, the words “Permanent Waiver” will be written at the top of both the front and back of the AF Form 18XX to be used. “X” out the AF Form 18XX from opposing corners on the front and back of the form. All markings on the outside of the form are accomplished in red. A permanent waiver annotation on

the applicable form or computer generated waiver list will be made for each vehicle that has waived items. The annotated form (Operator's Inspection Guide and Trouble Report for the vehicle type) will include the vehicle registration number and "WAIVER FORM" marked on the front of the form. The annotated form or the computer-generated waiver listing will be retained with the current Operator's Inspection Guide and Trouble Report. Only appropriately authorized/approved waiver items will be entered on this form. The VMM/VMS will designate personnel authorized to approve waiver items for noncontracted operations. For contracted operations, the FAC and designated QAEs are the approval authority. The approval authorities will print their last name in the operator's signature block of the waiver card and place their initials in the "init" block to show approval of the waiver. The only other information required to be entered in the permanent waiver forms are the discrepancy and date waived. A back-up list of waived items may be kept in maintenance control.

6.17.3.4. Init. (Initial) The person who assigns a status code to a discrepancy initials in this space.

6.17.4. Status code entries should not be made by MCA or a representative until all maintenance processing is performed and the vehicle is being released for use.

6.17.4.1. For delayed status codes, the date is not entered until the completed AF1823 is received, at which time the old status code is lined out or overstamped with a corrected code.

6.17.4.2. Each time MCA or a representative processes an inspection guide form, all discrepancies in a delayed or code C-T (temporary fix) status is checked.

***Section 6C—AF1823 or AF1823-1, Vehicle and Equipment Work Order.***

**6.18. General Information.** The AF1823, or AF1823-1 is used by vehicle maintenance shops supported by OLVIMS. Work order open and close procedures are as follows: MCA will print as many copies of the AF1823-1 as locally required. The shop uses a legible copy to tell the technician what is needed. One copy may be retained in MCA for workload scheduling and monitoring. Close the AF1823 in the computer when the shop's copy has been completed.

**6.19. Special Recording Procedures.** All work performed by maintenance personnel, not recorded on an AF1827, **Minor Maintenance Work Order**, must be entered on an AF1823 or AF1823-1. On the AF1823, contract maintenance, accident repair, other government agency repair, and final quality assurance inspections are shown by placing an "X" in the upper right hand corner of the AF1823. Use of the AF1823 also requires the posting of appropriate entries on AF754, **Work Order Log and Quality Control Record.** On the AF1823-1, the type of work being performed will be displayed in the upper right hand corner. ***NOTE:*** The individual performing the final quality check will sign and either enter an "X" in the block or circle the PASS or FAIL depending on the AF1823 being used.

6.19.1. Make two AF1823s when repairs are performed at the same time by vehicle maintenance and contract maintenance, or when government parts are provided to the contractor.

6.19.1.1. If in-house repair is started and a part is repaired by contract maintenance, open and then close the contract maintenance AF1823 (same date and time) to prevent duplication of vehicle out-of-commission (VOC) time and to expedite the contract repair work.

6.19.1.2. The in-house AF1823 must stay open until all repairs (contract and in-house) are done.

6.19.1.3. The contract maintenance AF1823 stays in the work order master file until the contract repair work (JZ) transaction is processed.

6.19.2. Time Compliance Technical Order (TCTO) AF Form 1823 entries are the same as for other types of maintenance, except that block 21, “Job Description”, shows the technical order data code number. On the AF1823, enter system code 43CZ to indicate “user defined”. Enter a work order number prefix code "T" in block 2. Enter TCTOs, headquarters-directed inspections, modifications, and winterization kits on AF1828 which become a permanent part of the vehicle jacket file. ***NOTE:*** Notify your respective MAJCOM TCTO POC upon TCTO completion. Include the TCTO number, vehicle registration number, work order number, and date completed. MAJCOMs in-turn will update the Consolidated Analysis and Reporting System (CARS).

6.19.3. Accident repair AF1823s contain only the repairs caused by the accident. Put other repairs on a separate AF1823. Accident repair is identified in the upper right hand corner of the AF1823. All labor and material charges for accident AF1823s are costed as "M" (maintenance). An AF1823 or AF1823-1 is made for all accident repairs.

6.19.4. Contract maintenance and other government agency AF1823s are identified as such in the upper right hand corner of the AF1823 or AF1823-1. When the MCA copy is processed, a contract maintenance indicator is displayed to show the contract or other government agency status of the Work Order Master File Status Report, PCN SB004-018. MCA checks all completed contract maintenance documents to ensure that appropriate maintenance data is entered to OLVIMS.

6.19.5. Delayed maintenance AF1823s are identified by putting the appropriate maintenance code in block 19. On an AF1823-1, the delayed code will be put in the ACTION TAKEN block. When a delayed item appears on the shop's copy of a completed AF1823 (as shown by maintenance code), the workload controller immediately makes a new AF1823 for these items only. When closing an AF1823 or AF1823-1 with delayed jobs, the system will automatically print out a delayed AF1823-1 for those jobs only.

6.19.5.1. Leave the work order number and kilometer, miles and hours blocks blank. The work order number from the original AF1823 is entered on the top margin of the new AF1823. On the delayed AF1823, print the delayed work order number in the middle of the AF1823. Print all other information as if this was an actual AF1823, with the exception that the word DELAYED will be printed in the upper right hand corner.

6.19.5.2. The original AF1823 is input in the computer for processing. To update delayed maintenance on the AF1824, see section J. ***NOTE:*** Refer to AFCSM 24-1 for a list of work order number prefix and maintenance delay codes used in AF1823 or AF1823-1 entries.

6.19.6. The AF1823 or AF1823-1 for accident repairs includes the following costs on separate line entries for damaged vehicles in which the government is processing a claim for reimbursement:

6.19.6.1. All direct labor and material costs.

6.19.6.2. Indirect cost.

6.19.6.2.1. Shop indirect cost equals direct-labor hours expended to repair the vehicle times the indirect-hourly rate on the Employee Master List. (These costs are not to be used for assessing report of survey charges).

6.19.6.2.2. Towing costs equals miles towed times wrecker operations and maintenance (O&M) cost per mile plus operator's hourly rate times the number of hours used.

6.19.6.2.3. Storage cost, if identified on an off-base invoice.

6.19.6.2.4. The loss of use cost. This cost is computed by dividing the total service life (months) into the acquisition cost. Then compute use cost per month times number of months out of service. The provisions of this paragraph only apply if a replacement vehicle is required to be leased during the repair process. ***NOTE:*** If any combination of the above was completed by off base contractors, the invoice should be used to compute the loss of use cost if a commercial or GSA vehicle is leased to replace the damaged vehicle in repair. Attach a copy of each invoice used and a copy of the completed AF20 to the AF1823 or AF1823-1.

6.19.7. Document repairs, servicing and upkeep of shop equipment and repair or rebuild of reparable (spares) items on the AF1823 using work order number J9999. For this type of work, if more than 9.9 labor hours are shown on the AF1823, they must be entered into the data system as multiple job entries. Note: AF1827 may also be used to document time charged to work order number J9999.

**6.20. How to fill out an AF1823 (Front):**

6.20.1. Block 1, Replacement Code Change. (one-time repair, age, or mileage). If the repair cost exceeds the one-time repair limit, and it is decided not to repair the vehicle or equipment, and it is returned to the user, check the one-time repair block and enter the new replacement code. MCA makes the necessary changes to update the vehicle master list. The computer will automatically update the code to A, B, C, or D, as applicable. ***NOTE:*** Whenever a vehicle is placed in one of these codes, jobs that were not accomplished will be delayed using code "G."

6.20.2. Block 2, Work Order Number. Always five characters. The first character is always an alpha character that shows the type of work being done. See AFCSM 24-1, Attachment 4 for a list of approved prefixes.

6.20.3. Block 3, Reimbursable Distribution Code. A one position code that shows how costs are distributed (reimbursable/refundable) to a tenant organization or transient vehicle. MCA loads the applicable code in OLVIMS for those vehicles assigned to the base and makes an entry on the AF1823 for applicable transient vehicles. The proper code is obtained from Accounting and Finance. Refer to paragraph **6.47.**

6.20.4. Block 4, Registration Number. Enter the vehicle's registration number, or the locally assigned "X" registration number. The registration number is always eight positions.

6.20.5. Block 5, USAF Management Code. Enter the vehicle's management code.

6.20.6. Block 6, Kilometers, Miles, Hours, or Units. Enter hours, miles, or kilometers as shown on the vehicle's hour meter or odometer. Round the entry to the nearest whole hour, mile, or kilometer. For vehicles that have both hour meters and odometers installed, determine the proper entry from the vehicle master list. For vehicles or equipment managed under utilization code "U" leave this block blank. The incoming inspector validates the odometer or hour meter reading.

6.20.6.1. New odometers or hour meters are set to show the accumulated miles, hours, or kilometers. The cumulative figure may be obtained from the latest quick reference or vehicle master listing. If the new odometer or hour meter cannot be preset, then the past accumulated miles, hours, or kilometers become the "add-on" figure in the OLVIMS using the "AZ" transaction. Once the

"add-on" has been entered into the OLVIMS only the present meter reading need be entered on AF1823s.

6.20.6.2. During the period that odometers or hour meters are inoperative, they show cumulative miles, hours, or kilometers on the quick reference listing, minus any indicated "add-on".

6.20.6.3. For vehicles with inoperative odometers or hour meters, use the accumulated miles or hours on the latest maintenance quick reference list for all service and maintenance documentation, as the miles or hours value is adjusted in the OLVIMS by the mileage estimator.

6.20.7. Block 7, Work Center. Enter the work center code assigned to the maintenance activity where the work is done. See AFCSM 24-1, Attachment 4.

6.20.8. Block 8, Work Order Status (initial or complete). Check the initial block when the AF1823 is opened. When the shop's AF1823 is completed, check the completed block.

6.20.9. Block 9, User Phone. Enter the telephone number of the using activity.

6.20.10. Block 10, Priority. Enter the priority for work to be performed according to **Chapter 2**.

6.20.11. Block 11, Manufacturer. Enter the make of the vehicle or equipment item, such as Dodge, Ford, etc.

6.20.12. Block 12, Model/Type. Enter the model or type of the vehicle or equipment item such as

F-150 pickup, etc.

6.20.13. Block 13, Certified By. The work center supervisor or technician signs the AF1823 to indicate completion of the AF1823 and certification that entries are completed and factual to the best of their knowledge.

6.20.14. Block 14, Received (Date/Time). Enter the date (MMDDYY) the vehicle was turned-in to the shop or when the request for maintenance support (wrecker, mobile, etc.) was received (example 013199 for 31 January 1999). Enter the clock time the vehicle was turned-in using a 24-hour clock. The date and time starts when the vehicle or equipment item is physically turned-in to the maintenance facility or when a request for maintenance support (wrecker, mobile, etc.) was received. Date and time must match the date and time reported to maintenance on the operator's inspection guide and trouble report. Vehicles awaiting accident, abuse and repair decisions/repairs are not available to the user and will draw downtime.

6.20.15. Block 14A, Released (Date/Time). Enter the date and the 24-hour clock time the vehicle was released from maintenance or the maintenance support (mobile, etc) was complete and the vehicle returned to user (reflect period that vehicle is not operational).

6.20.16. Block 15, Repair Estimates. Use blocks 15A through F for estimating costs of accident repairs, and repairs that may cause the one-time repair limit to be exceeded. Do this estimate before work is started to avoid unauthorized repairs.

6.20.16.1. If the repair action places the vehicle in replacement codes A, B, C, or D for maximum one-time repair cost, and the decision is made by the VMM or VMS not to repair the vehicle, check block 1. The VMM or VMS will provide MCA with disposition instructions.

6.20.16.2. Indirect costs are entered in block 15D. The indirect hourly rates can be obtained from the Employee Master List, PCN SB004-029.

6.20.17. Block 16, Job Number. This is a preprinted number that shows the work to be done in block 21. If more than seven jobs are required to repair a vehicle, a continuation AF1823 can be made using the same work order number and changing the job numbers in block 16 to 8 through 14. A new AF1823/work order number is required for any vehicle with over 28 jobs.

6.20.18. Block 17, System Code. The four digit number shows the system, subsystem, and component codes on which work was performed. The OLVIMS "Help File" lists the approved codes.

6.20.19. Block 18, Operations. No entry required.

6.20.20. Block 19, Maintenance Code. Use this code to identify delayed and VDP maintenance conditions. See

AFCSM 24-1 for codes and descriptions. MCA enters these codes on the shop's copy of the AF1823.

6.20.20.1. When a delayed item is shown on the shop's copy of the completed AF1823, the workload controller makes a new AF1823 (in sufficient copies) for the delayed item.

6.20.20.2. Enter the work order number, date, and time from the original AF1823 on the top margin of the new AF1823. Input the data from the original AF1823 in OLVIMS. See **Section 6I** for delayed AF1823 processing procedures.

6.20.21. Block 20, Action Taken. The work center enters or circles the letter-code that best shows the actual maintenance action. Refer to AFCSM 24-1 for a list of the 13 action codes.

6.20.22. Block 21, Job Description. Enter a brief description of the job to be performed. For TCTO accomplishment, enter the technical order and data code number. This entry should be clear and tell the technician the exact malfunction and what has to be done. ***EXAMPLE:*** Replace water pump, and repair shift linkage. The shop supervisor ensures the description identifies the repair or service actually completed. Make a separate entry for each special test done during the scheduled inspection. ***NOTE:*** Add separate entries to reflect actual maintenance actions, i.e., remove broken exhaust manifold stud, free-up rusted brake linkage, etc. Do not take the total repair time against a single job described as "replaced exhaust gasket" or "replaced brake shoes."

6.20.23. Block 22, Estimated Labor Hours. CSC enters the estimated hours to do the job described in block 21. Use the estimated hours for workload planning, scheduling maintenance, and productivity assessments.

6.20.23. (AFMC) Mitchell-on-Demand or other industry accepted estimated labor rate products may be used to estimate required work.

6.20.23.1. If the work performed does not agree with the job described on the AF1823, MCA enters a revised estimated hour for the job actually performed. For example, if the job description called for brake shoe replacement, but an adjustment fixed the problem, then an estimated hour rate for the adjustment must be entered on MCA's copy of the AF1823 also.

6.20.23.2. If the work center supervisor enters additional jobs on the shop's copy of the AF1823, they must also be entered on MCA's copy and the estimated labor hour rate revised. ***NOTE:*** For delayed maintenance AF1823s, update the estimated hour rate by using AF1824, as prescribed in **Section 6H**.

6.20.24. Block 23, Employee ID Number, Labor Hours, and Overtime Indicator. Enter in the upper portion of the block the employee identification number of the technician who did the job. Enter in

the lower portion of the appropriate block the actual labor hours used to do the job. This entry is in hours and tenths. Use an overtime or holiday work code when the actual labor hours were expended during these periods. (AFCSM 24-1 contains these codes.) If actual labor hours are used during both normal duty hours and overtime periods, the technician must make separate entries.

**6.21. How To Fill Out AF1823 (Reverse):**

6.21.1. Block 34, Material Data. Show estimated costs, parts on VDP, and delayed parts. Enter the FAD code. Use the FAD code related to the main mission the vehicle is directly supporting, and enter it in Block 35.

6.21.1.1. Block 34A, Part Number or National Stock Number.

6.21.1.2. Block 34B, Source Code. Enter the source code for the requested parts or material.

6.21.1.3. Block 34C, Manufacturer's Code. Enter the manufacturer's code for the parts or material.

6.21.1.4. Block 34D, Quantity. Enter quantity and unit of issue.

6.21.1.5. Block 34E, TO, Figure, and Index. Enter the technical order, figure, and index for the parts or material. When ordering from a manufacturer's commercial manual, enter identifying data, if available.

6.21.1.6. Block 34F, Nomenclature. Enter a brief nomenclature of the part or material.

6.21.1.7. Block 34G, Urgency of Need Indicator (UND). Enter "A" or "1" if for a VDP, or "B", "C", or "1" as appropriate for a delayed part. No entry is necessary for estimating repairs. The UND "1" is only used for not mission capable supply (NMCS) reportable vehicles.

6.21.1.8. Block 34H, Estimated or Actual Cost. Enter an estimated cost for making a repair estimate. Enter actual cost of parts or material when completing accident repair documentation.

6.21.1.9. Block 34I, Document Number. Enter the document number when assigned by supply.

6.21.1.10. Block 34J, Bin Number. Enter the bin number to show the location of VDP, delayed parts, or material in materiel control.

6.21.2. Block 35, Vehicle Deadlined for Parts (VDP). Use this section to record the date and time a vehicle is placed on VDP and to record the date and time the vehicle is removed from VDP. Materiel control makes this entry to the nearest whole hour. ***NOTE:*** Compute VDP time as the total clock time a vehicle or equipment item is out of service due to a lack of parts or material to do the repair. VDP starts when the VMM, VMS, or designee decides that parts or material are not on hand; it ends when the parts or material are made available and received by maintenance.

**6.22. How To Fill Out AF1823-1:** Instructions and information for this computer generated AF1823 are in AFCSM 24-1.

***Section 6D—AF1827, Minor Maintenance Work Order and Tire and Battery Shop Man-Hour Documentation***

**6.23. General Information** . The AF1827 is used to record minor maintenance repair actions for jobs of 2 labor hours or less on vehicles and equipment items (time awaiting parts, awaiting maintenance, and

direct labor hours combined must be less than 2 hours). Document the vehicle kilometer, miles, or hours data to update the specific vehicle master record. The AF1827 is also used to document labor-hours: in tire and battery shop stock buildup or repair; hazardous/solid waste management, disposal and training; and repair of shop equipment or spares. Use the AF1827 to collect direct labor hours used for these activities.

***NOTE:*** The AF1827 will not be used to record multiple jobs on the same vehicle during the same repair timeframe. Each line on the AF1827 is interpreted as a separate work order in OLVIMS.

**6.24. Procedures for Completing AF1827:**

6.24.1. Minor maintenance documented on AF1827 is limited to minor maintenance repair actions of 2 labor hours or less on vehicles and equipment items (time awaiting parts, awaiting maintenance, and direct labor hours combined must be less than 2 hours), and use only low-cost bench stock parts and material.

6.24.2. Do not use AF1827 for scheduled services, inspections, or transient vehicle repair.

6.24.3. Send AF1827 to MCA weekly, when the form is filled, or as prescribed by the VMM or VMS. Use a new AF1827 for each processing cycle, except for the tire and battery shop. ***NOTE:*** Labor-hours may be entered on the AF1827 for inspection of vehicles and equipment prior to deployment or other contingency exercises, applying the same limitations as in paragraph **6.24.2.** above.

**6.25. How To Fill Out AF1827:**

6.25.1. Block 1, Date. Enter the date on which the vehicle was repaired. For J9998 and J9999 entries, this date tells when the labor-hours were used.

6.25.2. Block 2, Work Order Number:

6.25.2.1. Use "6" as the fifth position to the preprinted J999 for hazardous/solid waste management, disposal, and training.

6.25.2.2. Use "7" as the fifth position to the preprinted J999, for minor and mobile maintenance actions (time awaiting parts, awaiting maintenance, and direct labor hours combined must be less than 2 hours).

***NOTE:*** Tunner 60k aircraft cargo loaders (management code E945) repair actions will not be documented using the AF1827, Minor Maintenance Work Order. All repairs performed on Tunner 60k loaders will be documented on AF1823/1823-1, Vehicle and Equipment Work Order to capture repair actions in precise detail to gauge system/component failures as compared to contractual agreements.

6.25.2.3. Use "8" as the fifth position to the preprinted J999 to record direct labor-hours used in the tire shop to repair or build-up tires for stock. Direct labor-hours and material cost used to install new or recapped tires are charged against the vehicle on an individual AF1823 or 1823-1.

6.25.2.4. Use "8" as the fifth position to the preprinted J999 to record labor-hours used in the battery shop to service or recharge batteries for stock. Direct labor-hours and material cost used to install new batteries are charged against the vehicle on an individual AF1823 or 1823-1.

6.25.2.5. Use “9” as the fifth position to the preprinted J999 to record labor hours used for the repair of spares or shop equipment..

6.25.3. Block 3, USAF Management Code. For J9997 application only, and at the discretion of the VMM or VMS, enter the appropriate vehicle or equipment item management code.

6.25.4. Block 4, Vehicle Registration Number. For J9997 application only, enter the vehicle or equipment item registration number.

6.25.5. Block 5, Kilometers, Miles, or Hours. For J9997 work order number application, enter the current odometer or hour meter reading, as described in paragraph **6.20.6.**

6.25.6. Block 6, Action Taken. For J9997 work order number application, circle or enter the letter that most nearly describes the actual maintenance action: G-repair; L-adjust; R-replace; or S-service.

6.25.7. Block 7, Job Description. Enter a brief description of the job to be performed.

6.25.8. Block 8, Actual Labor Hours. Enter the actual direct labor hours used to do the repair. This entry is in hours and tenths. For J9997 work order numbers, this entry does not exceed 2.0 hours. Use the AF1823/1823-1 if the vehicle downtime exceeds 2.0 hours (awaiting maintenance/parts and direct labor hours combined exceeds 2.0 hours).

6.25.9. Block 9, Overtime Indicator. Enter an overtime or holiday work code when the actual labor hours were spent during overtime or holiday hours. AFCSM 24-1 shows a list of these work codes.

6.25.10. Block 10, Employee ID Number. Enter the employee identification number of the technician who did the repair.

6.25.11. Block 11, Status. Enter an "X" in this block to show completion of the required work. For J9997 application, enter a "/" to indicate this requirement was referred to an individual AF1823 or AF1823-1. Line entries with a "/" in block 11 will not be input to OLVIMS. Account for labor-hours and required work on the subsequent AF1823 or AF1823-1.

***Section 6E—Labor Hour Reporting and AF1831, or AF1831-1 Indirect Labor Time Card and Indirect Labor Time Sheet.***

**6.26. Labor Hour Reporting.** The motor vehicle labor hour reporting system is based on categorizing labor hours into three areas: direct (0 series), indirect productive (20 series), and indirect nonproductive (40 and 50 series). These hours are categorized to show the efficiency of the motor vehicle activity by comparing productive hours with hours used to support that activity, such as clerical, supervisory, material chasing, and so forth. The third category of labor, indirect nonproductive, shows labor hours that were not used in repairing motor vehicles. Labor codes and categories are explained in AFCSM 24 - 1. ***NOTE: Reporting of indirect nonproductive labor hours is mandatory. The VMM or VMS will monitor use of 40 and 50 series labor codes to ensure they are properly recorded and entered in OLVIMS, rather than have these hours default to indirect productive (20 series) labor hours.***

**6.26. (AFMC) Note:** This does not apply to contracted vehicle maintenance functions.

6.26.1. Direct labor hours used by maintenance technicians are entered on the AF1823, AF1823-1, or AF1827. Use work codes to show whether hours were used during normal duty hours or overtime or holiday periods. They are shown in AFCSM 24-1.

6.26.2. Indirect productive (20 series) labor hours are computed by OLVIMS, with the exception of 20 series labor hours used during periods of overtime or during a holiday. Document overtime and holiday indirect productive labor hours on AF1831 or AF1831-1.

6.26.3. Indirect nonproductive (40 and 50 series) labor hours are entered on AF1831 or AF1831-1 by shop personnel.

6.26.4. Summarize and report work center labor hour utilization data on a monthly basis for management. OLVIMS captures productive labor (0 series) hours entered on AF1823s, and overtime and holiday indirect productive labor hours, as well as indirect nonproductive labor hours entered on AF1831 or AF1831-1. These hours are then subtracted from the total hours maintenance personnel were assigned, to calculate the indirect productive labor hours.

6.26.5. Labor hours are collected for each employee by the employee's identification number from both AF1823s and Indirect Labor Hour Time Cards or Indirect Labor Hour Time Sheets. This data is then applied to a name in the Master Personnel File (PCN SB004029) and summarized to a particular work center by the OLVIMS. There is no attempt to reconcile any individual employee's labor hours. As a consequence, this labor hour reporting system is considered ongoing; that is, no close-out of AF1823 labor data is needed for labor hour balancing. A sufficient amount of labor hour data within a work center offsets month-to-month highs and lows in this data.

6.26.6. Through this labor hour reporting system, labor hour distribution and utilization data are readily available for use by vehicle managers at all levels. AFCSM 24-1 describes labor hour reports.

**6.27. AF1831s, and AF1831-1s, Indirect Labor Time Card/ Sheet.** AF1831 has a hard (card stock) and soft (flimsy) copy with a carbon inserted. AF1831-1 is an OLVIMS-generated time sheet. These forms are used to record an individual's overtime and holiday indirect productive or indirect nonproductive labor. It is not necessary that each reportable employee submit one of these labor cards/sheets each reporting period. In the absence of an indirect labor card/sheet for any employee, the data system assumes that all the labor for that employee is divided between direct and indirect productive labor hours. Where no direct labor is put on AF1823s for that employee, the system then assumes all assigned hours were used in the indirect productive (support) category, with no overtime or holiday hours used.

6.27.1. The same AF1831 or AF1831-1 for each employee is used for the whole month. At the end of the month, a copy is sent to MCA for input into the OLVIMS unless otherwise disredcted by the VMM or VMS.

6.27.2. MCA receives the hard copies of AF1831s, or a copy of the AF1831-1 at the end of the month from all work centers for processing. When the labor hour utilization summaries and reports are received, MCA separates and sends each report to the appropriate work center.

6.27.2.1. MCA processes the individual time card or sheet into a "GN" transaction outlined in AFCSM 24-1.

6.27.3. AF1831s are not preprinted for individual employees. All entries on the cards are made manually. Separate cards are used for an individual transferring between work centers to show labor hours in each work center.

6.27.4. AF1831-1s are preprinted with individual employees names and man numbers. All other entries on these forms are made manually. Separate sheets are used for an individual transferring between work centers to show labor hours in each work center.

**6.28. How To Fill Out AF1831s and 1831-1s.**

6.28.1. AF1831 entries:

6.28.1.1. Block 1, Card Code. MCA always enters "G".

6.28.1.2. Block 2, Type Transaction Code (T/T/C). MCA enters "N" for OLVIMS sites.

6.28.1.3. Block 3, Site Code. MCA enters the assigned site code.

6.28.1.4. Block 4, Employee Identification Number. Employee enters his/her identification number.

6.28.1.5. Block 5, Work Center. Employee enter the work center to which he/she is assigned.

6.28.1.6. Block 6, Month. Enter the first three letters of the month, such as JAN for January.

6.28.1.7. Block 7, Last Name and Initial. Employee enters his/her last name and first initial.

6.28.1.8. Block 8, Indirect Man-Hour Data:

6.28.1.8.1. Block 8A, Date. Enter the date the labor hours were expended.

6.28.1.8.2. Block 8B, Labor Code. Enter the single-position labor code which most closely defines the labor hours entered in Block 8D. Indirect productive (2 series) labor codes can only be entered when labor was used for overtime or on holidays.

6.28.1.8.3. Block 8C, Work Code. Enter a work code only when showing use of indirect productive (2 series) labor hours during overtime and holiday periods. Leave blank when documenting the use of indirect nonproductive (4 and 5 series) labor codes.

6.28.1.8.4. Block 8D, Hours and Tenths. Enter the labor hours and tenths reported against the labor code shown in block 8B. Whole hours are entered in the first part of the block and tenths entered in the last part (separated by a broken line).

6.28.2. AF1831-1 Entries:

6.28.2.1. The AF1831-1is preprinted with the work center and employee's name on it. To complete the form, fill in the indirect labor-hours to the right of the respective day of the month and under the labor series for each employee (overtime 20 series, 40 and 50 series).

6.28.2.2. At the end of the month, total the labor hours for each employee and labor series and return the form to MCA.

***Section 6F— AF1828, Vehicle Historical Record***

**6.29. General Information.** AF1828 is used much as a title for an Air Force vehicle, similar to that needed for privately owned vehicles. It is also a record of maintenance to check warranty provisions and control recurring maintenance according to **Chapter 2**. OLVIMS' procedures initiate this form when a new vehicle is received, and it is retained for the life of the vehicle. File printed copies of this form in the vehicle records jacket. Instructions concerning the computer generated historical record are contained in AFCSM 24-1.

**6.30. How to fill out AF1828:** Where OLVIMS is absent, and it's necessary to create a AF1828 manually, use the following guidance:

6.30.1. Block 1, Stock Number. Enter the national stock class (NSC) and the national item identification (NIIN) of the vehicle.

6.30.2. Block 2, Short Nomenclature. Enter the nomenclature to identify the type of vehicle. Reference TO 36A-1-1301 or use the AFEMS on-line query vehicle item data (IVID).

6.30.3. Block 3, Registration Number. Enter the registration number of the vehicle.

6.30.4. Acceptance Date. Enter the date the vehicle was accepted by the Air Force from the manufacturer, as shown on the vehicle data plate (delivery date) or on the vehicle shipping document (DD250).

6.30.5. Block 5, Standard Price. Enter the I&S master stock number price of the vehicle or equipment item. Reference the Stock Number User Directory (SNUD). No entry is required for OLVIMS bases, as this price is on the Vehicle Master List PCN SB004-023.***NOTE:*** This entry is required for all vehicles being transferred off base.

6.30.6. Block 6, USAF Management Code. Enter the USAF Management Code according to TO 36A-1-1301.

6.30.7. Block 7, Vehicle Equivalents. Enter the equivalents for the vehicle as shown in the OLVIMS Help File.

6.30.8. Block 8, Chassis Serial Number. Enter the chassis serial number.

6.30.9. Block 9, Chassis Manufacturer/Model. Enter the chassis manufacturer's name and chassis model number.

6.30.10. Block 10, Body Serial Number. Enter the body serial number if available.

6.30.11. Block 11, Body Manufacturer/Model. Enter the body manufacturer's name and body model number.

6.30.12. Block 12, Engine (Prime Mover). Enter the model, serial number (as applicable), and manufacturer of the engine used for moving the vehicle over the road.

6.30.13. Block 13, Engine (Auxiliary). Enter the model, serial number, and manufacturer of the engine used to provide power for the special mounted equipment on the vehicle. ***NOTE:*** When an engine in the vehicle, prime or auxiliary, is replaced, the previous engine data in block 13 or 14 is lined out and the new engine data put in the appropriate blocks.

6.30.14. Block 14, Record of Transfer. Enter the code that identifies the type of activity getting the vehicle, e.g. “A” for Air Force, “B” for non-Air Force, and “C: for disposal. In the "Base Location" block, enter the name or the location of the base that has the vehicle. “Date Shipped" and the "Date Received" blocks have the exact Julian date of shipment or receipt. Example, for 2 Jan 1995, enter 95002. ***NOTE:*** Also use Block 14 to record the date a vehicle was shipped to or returned from a depot facility.

6.30.15. Block 15, Miscellaneous Information. These entries are mandatory for all vehicles when received, and for in-service vehicles when this information can be identified. The following instructions apply in the individual line entries:

6.30.15.1. Line A, Technical Order or Series. Enter the TO or TO series that applies to the vehicle. If a TO number has not been assigned, enter the manufacturer's commercial manual number.

6.30.15.2. Line B, Ignition Key Code Number. Enter the manufacturer's code for the ignition key.

6.30.15.3. Line C, Body Key Code Number. Enter the manufacturer's code for the body or door key.

6.30.15.4. Line D, Armed Forces or GSA Contract Number. Enter the Armed Forces or GSA contract number. This number may be found on the DD250 or the vehicle data plate.

6.30.16. Blocks 16, 17, 18, 19, and 20, Historical Maintenance Data. Entries in these blocks are made by MCA from data recorded on completed AF1823s, AF1823-1s, or on a commercial invoice such as an AF15 or a Commercial Fleet Service Card receipt. These blocks are used to identify recurring maintenance and to check the warranty program.

6.30.16.1. Block 16, Replacement Code. Bases not using OLVIMS record the vehicle's current replacement code in this block.

6.30.16.2. Block 17, Work Order Number. Enter the number assigned to the AF1823 to repair, service, or inspect the vehicle. To record repairs or services performed on an AF15 or a Commercial Fleet Service Card, enter, in place of the work order number, the type transaction used to buy the repair or services; for example, Commercial Fleet Service Card or AF15.

6.30.16.3. Block 18, Date. Enter the Julian date the work was completed. For example, for 2 Jan 1999, enter 99002.

6.30.16.4. Block 19, Kilometers, Miles, or Hours. Enter the kilometers, miles, or hours shown on the odometer or hour meter at the time the repair was made.

6.30.16.5. Block 20, Codes and System and Component. Enter an action code (or circle the preprinted G, L, R, or S) and the subsystem code (see AFCSM 24-1) in the system or component block that most nearly describes the action taken to do the work. All job entries, except incoming, outgoing, daily inspections, and those inspections recorded on AF1829 and AF1830 must be annotated. ***NOTE:*** Input the following information if it is not loaded in the OLVIMS warranty review screen/file: In remarks, enter the part nomenclature for each R- coded action replacing a warranty part that costs $100 or more; also enter the period of warranty. An entry will be made for all tires, starters, alternators, and batteries regardless of cost. MCA will review the AF1828 each time a tire or battery is installed to determine the frequency of these installations.

6.30.17. Blocks 21, 22, and 23. Entries in these blocks are the same as blocks 6, 3, and 2, and are used with the visible file system as described in **Chapter 2**.

6.30.18. Block 24, Day and Time Due-Out. The controller may use tab identifiers to show the estimated day and time of repair completion (ETIC).

6.30.19. Block 25, TCTO Record and Winterization. An entry is made for all TCTOs, service bulletins, and directed modifications. A short description of the work performed is entered in the remarks block. Also enter inspections that cannot be scheduled in the OLVIMS.

***Section 6G—AF1829, Refueling Equipment Inspection Data Record.***

**6.31. General Information.** This form may be used for recording inspection data for fuel servicing components on mobile fuel servicing vehicles and equipment for which vehicle maintenance has primary responsibility.

**6.31. (AFMC)** Use of AF Form 1829, **Refueling Equipment Inspection Data Record**, is optional. If the form is not used, refueling shops are encouraged to maintain an inspection status board. All inspection items will be entered on work orders and AF Forms 1828, Vehicle Historical Record**.**

6.31.1. The form shows the vehicle's identifying static data; the AF1823 date and work order number for servicing, inspection, or maintenance; interval data; and the next due date.

6.31.2. The data source for AF1829 is the AF1823 on which the work was recorded. File AF823s in the vehicle record jacket for reference purposes. After completing all blocks, a continuation AF1829 is made, and "next due" information and interval data are posted on the continuation form. File completed forms in the vehicle record jacket.

6.31.3. AF1829s may be maintained in the refueling maintenance section, or filed with the AF1828.

**6.32. How To Fill Out AF1829:**

6.32.1. Block 1, USAF Management Code. Enter the USAF Management Code according to TO 36A-1-1301 or the AFEMS on-line query vehicle item data (IVID). Enter the management code at both the top and bottom of the form.

6.32.2. Block 2, Registration Number. Enter the registration number assigned to the specific vehicle at both the top and bottom of the form.

6.32.3. Block 3, Nomenclature (Type). Enter the nomenclature and type of vehicle such as Aircraft Refueler, A/S32R-9. Entries should be made at both the top and bottom of the form.

6.32.4. Block 4, Vehicle and Equipment Work Order Date. Enter the date the inspection, service, or maintenance action was accomplished.

6.32.5. Block 5, Work Order Number. Enter the number of the AF1823 used to do the inspection, service, or maintenance.

6.32.6. Block 6, Interval Data and Component Next Scheduled Requirement:

6.32.6.1. Enter the number of months each listed component is to be inspected, serviced, or maintained at the normal interval, as prescribed in TO 36-1-191. Enter the paragraph and TO number used as a reference for this interval.

6.32.6.2. Enter the next due date each component is to be inspected, serviced, or worked on. Each change in a due date, or the accomplishment of any one of the items on a line of due dates, requires that new due dates be posted to the next line of the AF1829. Those that are not affected by the AF1823 are carried forward.

6.32.6.3. **NOTE:** 'X' out fuel servicing components that do not apply to the specific vehicle.

***Section 6H—AF1830, Refueling Equipment Hose Installation and Hydrostatic Test Data Record.***

**6.33. General Information.** This form may be used to record hydrostatic testing of fuel servicing hoses on those mobile fuel servicing vehicles and equipment for which vehicle maintenance has primary responsibility.

**6.33. (AFMC)** Use of AF Form 1830, **Refueling Equipment Hose Installation and Hydrostatic Test Data Record**, is optional. Hydrostatic hose testing will be accomplished when required according to TOs 36-1-191 and 37A-1-101. Hydrostatic test data will be entered on the work order and AF Form 1828.

6.33.1. The form shows the vehicle's identifying static data, hose identification, and testing interval data, as well as the AF1823 date and the work order number, when the hydrostatic testing was last performed and the date the next hose test is due.

6.33.2. The data source for AF1830 is the individual vehicle's records or the appropriate AF1823s. On completion of all blocks, a continuation AF1830 is made, and "next due" information and interval data are posted on the continuation form. The completed form is filed in the vehicle record jacket.

6.33.3. AF1830s may be maintained in the refueling maintenance facility or filed with the AF1828.

6.33.4. When refueling hoses are changed, hydrostatically tested, or maintenance performed which can affect fuel quality, an entry is made on the AF1807, in blocks 21 through 41. This advises the operator that the hose requires flushing and fuel sampling.

**6.34. How To Fill Out AF1830:**

6.34.1. Block 1, USAF Management Code. Enter the USAF Management Code according to TO 36A-1-1301 or the AFEMS on-line query vehicle item data (IVID), at both the top and bottom of the form.

6.34.2. Block 2, Registration Number. Enter the registration number of the vehicle on which the hose is mounted at both the top and bottom of the form,.

6.34.3. Block 3, Nomenclature (Type). Enter nomenclature and type of vehicle, such as Aircraft Refueler, A/S32R-9, at both the top and bottom of the form.

6.34.4. Block 4, Hose Identification and Interval Data:

6.34.4.1. Block 4A, Hose Installation Date. Enter the date this hose was placed in service.

6.34.4.2. Block 4B, Hose Size. Enter the size of this hose.

6.34.4.3. Block 4C, Hose Identity. Enter the locally assigned identification number of this hose, or identify it as either the left or right hose.

6.34.4.4. Block 4D, Hose Inspection Interval. Enter the number of months (interval) between hydrostatic hose tests, as shown in TO 36-1-191. Enter the paragraph and TO number used as the reference for the interval.

6.34.4.5. Block 4E, Military Specification Number. Enter the military specification number or API number for this hose.

6.34.4.6. Block 4F, National Stock Number. Enter the NSN of the hose.

6.34.5. Block 5, Hose Inspection and Test Data:

6.34.5.1. Block 5A, Work Order Date. Enter the date the hose test was performed.

6.34.5.2. Block 5B, Work Order Number. Enter the Afwork order number for the hose test.

6.34.5.3. Block 5C, Next Hose Test Due Date. Enter the date the next hydrostatic hose test is due, based on the interval date in block 4D. ***NOTE:*** It is intended that inspection, servicing, and maintenance of the fuel servicing vehicles be performed at the same time. That is, as many interval requirements are performed during any single maintenance cycle as may be due. It is best that the due dates of hose tests coincide with the due dates of fueling components, as shown on AF1829s.

***Section 6I—AF1824, Work Order Status.***

**6.35. General Information.** AF1824 may be used by MCA to update information on the Delayed Maintenance Report (PCN SB004-015) via OLVIMS. Vehicles and equipment items are automatically entered on the delayed maintenance report for delayed maintenance repairs as a result of the maintenance code in block 19 of the AF1823. The form is also used to start and stop VDP hours in the OLVIMS, and to add or change bin locations, transfer delayed parts costs, or delete or adjust labor hours.

**6.36. How To Fill Out AF1824:**

6.36.1. When the first part is received against a delayed AF1823, Materiel Control bins the part, and gives MCA an AF1824 showing the bin location so that the delayed maintenance record may be updated. This is accomplished by making the following entries:

6.36.1.1. Block 1, Work Order Number. Enter the work order number from the AF1823.

6.36.1.2. Block 2, Date. Enter the date the form is initiated.

6.36.1.3. Block 3, Bin Location. Enter the bin location and place an "X" beside the "Z" under Type Transaction. A bin location MUST be established prior to assigning any delayed parts or material to a delayed AF1823 in the OLVIMS. Once the bin location has been established, all subsequent part receipts against that delayed AF1823 will also be assigned to that bin. If a new bin location is desired for additional parts, a new AF1824 must be submitted reflecting the new location. The new bin location will only affect future parts as they are received, and will not affect parts already on-hand. Changing bin locations for parts already on-hand is accomplished with an "SW" transaction which is explained in paragraph 6.37.4.

6.36.2. When Materiel Control tells MCA that a change in the status of parts and material has been made for a delayed AF1823, MCA creates an AF1824 to reflect this change by making the following entries:

6.36.2.1. Block 1, Work Order Number.

6.36.2.2. Block 2, Date.

6.36.2.3. Block 4, Parts Status Code. Enter an "X" in the block beside either the letter "P" or "C" as the parts status code. The letter "C" (complete) is entered when all delayed parts and material to do all delayed repairs on a particular AF1823 have been received. The letter "P" (partial) is entered to show only partial receipt of delayed parts or material. The letter "P" is programmatically entered by the OLVIMS when the first part is received and should therefore only be entered when a previously completed delayed action reverts to a partial due to cannibalization.

6.36.3. When all delayed work against a specific maintenance code has been completed, MCA creates an AF1824 to delete that code from the delayed maintenance file by making the following entries:

6.36.3.1. Block 1, Work Order Number.

6.36.3.2. Block 2, Date.

6.36.3.3. Block 8a, Code. Enter the code to be deleted.

6.36.3.4. Block 8b, Labor Hours. Enter a 0. (Zero). ***NOTE:*** If the code deleted is the only one for which the vehicle is currently delayed, the entire AF1823 will be removed from the file. How-

ever, you cannot zero out all delayed hours on any AF1823 for which parts are still being reflected on the Delayed Parts File.

6.36.3.5. Block 8c, Work Center. Enter the last three digits of the work center where the maintenance was delayed.

6.36.4. When it's necessary to adjust delayed labor hours, MCA submits an AF1824 with the following entries:

6.36.4.1. Block 1, Work Order Number.

6.36.4.2. Block 2, Date.

6.36.4.3. Block 8a, Code. Enter the code you wish to adjust.

6.36.4.4. Block 8b, Labor Hours. Enter adjusted labor hours (hours and tenths).

6.36.4.5. Block 8c, Work Center. Enter the last three digits of the work center in which the adjustment took place.

6.36.5. When informed that maintenance delayed for one reason has now changed to another, or that maintenance delayed in one work center has been transferred to another, MCA initiates an AF1824 to change the maintenance code or work center by making the following entries:

6.36.5.1. Block 1, Work Order Number.

6.36.5.2. Block 2, Date.

6.36.5.3. Block 8a, Code. Enter the original code.

6.36.5.4. Block 8b, Labor Hours. Enter 0.

6.36.5.5. Block 8c, Work Center. Enter the last three digits of the original work center.

6.36.5.6. Block 9a, Code. Enter the maintenance code you now want reflected in the delayed file.

6.36.5.7. Block 9b, Labor Hours. Enter the adjusted backlog hours (hours and tenths).

6.36.5.8. Block 9c, Work Center. Enter the last three digits of the new work center where the work is delayed.

6.36.6. When told of a VDP, MCA initiates an AF1824 to update the AF1823 record on both the delayed and AF1823 master files, by making the following entries:

6.36.6.1. Placing a vehicle "ON VDP":

6.36.6.1.1. Block 1, Work Order Number.

6.36.6.1.2. Block 2, Date.

6.36.6.1.3. Block 5, On VDP Date and Time. Enter the date (YYDDD) and military time (24 entered on the AF1823. The control board copy of the AF1823 should also be annotated with the parts required and VDP time.

6.36.6.1.4. Block 6, Labor Hours. Enter the flat rate or estimated hours and tenths that will be required to repair the vehicle when the parts have been received.

6.36.6.2. Taking a vehicle "OFF VDP":

6.36.6.2.1. Block 1, Work Order Number.

6.36.6.2.2. Block 2, Date.

6.36.6.2.3. Block 7, Off VDP Date and Time. Enter the date (YYDDD) and military time (24 hour-clock time) that the vehicle was removed from VDP. This entry must match the date and time entered on the AF1823.

***Section 6J— Bench Stocks***

**6.37. High Cost Bench Stock** . High cost bench stock items cost $60 or more per item unit of use. Record high cost bench stock consumption on the AF1823 when installed on the vehicle or equipment

**6.38. Low Cost Bench Stock.** Low-cost bench stock are those items used from an authorized bench stock that cost less than $60 per unit of use (reference **Chapter 3**). Low-cost bench stock is charged as an overhead indirect expense at the time of bench stock replenishment, using the base supply or COPARS issue document. In all cases, materiel control annotates the issue documents with work order numebr L9999 and sends completed documents to MCA for processing. ***NOTE:*** Except for L9999 purchases, items drawn directly from COPARS or base supply are charged on the AF1823 authorizing the repair, regardless of the item cost.

***Section 6K—AF1832, Record of Cannibalization (Vehicle Maintenance)***

**6.39. General Information.** With the work center supervisor's assistance, materiel control initiates AF1832 when cannibalization action is recommended. Materiel control completes the "action by materiel control" section and forwards the document to MCA. If cannibalization is not needed, no further action is necessary and AF1832 may be destroyed. If cannibalization is needed, workload control makes entries in their part of the form and sends it to the VMM or VMS. The completed AF1832 provides the information needed for management to decide whether approval to cannibalize is justified.

**6.40. Procedures for AF1832**

6.40.1. The AF1832 pertaining to the cannibalized vehicle is attached to the AF1823 on file in materiel control. ***NOTE:*** If the parts are not going to be replaced on the cannibalized vehicle, a copy of AF1832 is filed in the cannibalized vehicle's record jacket.

6.40.2. Total labor costs of the cannibalization (that is, removing the part from the cannibalized vehicle and installing it on the one to be returned to service) are charged to the vehicle on which the part is installed. The labor and material costs of installing replacement items on the cannibalized vehicle are charged to the cannibalized vehicle. ***EXCEPTION:*** If costs for repairs to the cannibalized vehicle are reimbursable, they are not charged to it. All costs are charged to the vehicle receiving the cannibalized parts.

6.40.3. Materiel control sees that replacement parts are ordered for the cannibalized vehicle according to chapter 3, except as noted in paragraph **6.40.1.** above.

6.40.4. The following is entered on AF1832:

6.40.4.1. The date, stock number, description, quantity, and price in the form heading area related to the date the form is initiated, and describing the part or component needed for the current repair requirement.

6.40.4.2. Section 1, Action by Materiel Control. This section describes information provided by materiel control that relates to the vehicle the part or component is to be installed on.

6.40.4.3. Section II, Action by MCA. This section describes information provided by MCA indicating when the part is desired, labor-hours and clock hours required, and identifies the vehicle and status of the vehicle from which the part should be cannibalized.

6.40.4.4. Section III, Authorization. Signature of the VMM or VMS authorizes the cannibalization.

6.40.4.5. Section IV, Action Completed by MCA Section. When annotated with 24-hour clock time, date, and signature of MCA, this section indicates that maintenance documentation has been completed.

6.40.4.6. Section V, Action Completed by Materiel Control Section. When annotated with 24-hour clock time, date, and signature of materiel control person, this section indicates that materiel control documentation has been completed.

6.40.5. NOTE: Document AFTO91 with cannibalization action taken, where applicable.

***Section 6L—Transportation and Maintenance Codes***

**6.41. General Information.** Codes are used for labor hour accounting, for collecting maintenance data, and for preparing cost reports, which give management information to the base and major command vehicle maintenance managers. See AFSCM 24-1 for most codes and descriptions.

**6.42. Work Center Codes.** The first four digits of these work center codes are mandatory and won't be changed. However, the fifth digit may be shredded out to identify specific functions within the activity (see codes 17231 through 17236 below):

| Code | Activity |
|---|---|
| 17001 | Base Transportation Activity |
| 17111 | Vehicle Operations |
| 17220 | Vehicle Maintenance |
| 17221 | Maintenance Control & Analysis |
| 17222 | Customer Service Center |
| 17223 | Materiel Control |
| 17230 | Maintenance Shop |
| 17231 | General Purpose |
| 17232 | Special Purpose |
| 17233 | Base Maintenance |
| 17234 | Refueling Shop |
| 17235 | Allied Trades |
| 17236 | Contract Maintenance |

**6.43. Work Codes.** Work codes (see AFCSM 24-1) are used for those bases using OLVIMS to support labor-hour reporting requirements.

**6.44. Work Order Number Prefix Code.** Work order prefix codes are used to show the type of work the AF1823 was primarily opened for (see AFCSM 24-1).

**6.45. Management Codes.** Management codes for registered vehicles and equipment items are found in TO 36A-1-1301. Management codes for nonregistered vehicles and equipment items are found in the OLVIMS Help File. Management codes which are not pre-loaded in OLVIMS will be rejected, in which case, use the proper "alpha character" and 999, temporarily.

**6.46. Delayed Maintenance Codes.** These delayed maintenance codes are used on the AF1823 and the delayed maintenance report (PCN SB004-015) to show the reason a repair action has been delayed. Find these codes in AFCSM 24-1, Attachment 4, or in the OLVIMS Help File.

**6.47. Reimbursable and Distribution Codes (R&D Codes).** R&D codes denote the organization for which charges are refundable or reimbursable (see AFCSM 24-1, Attachment 4). At the beginning of each fiscal year, and when a change is required, MCA furnishes a list of tenant organizations supported, to accounting and finance (through the budget office). Accounting and finance identifies which organizations are reimbursable (Code 3) or refundable (Code 4) (refer to AFI 65-601, Volume 1, Chapter 7 and Volume 2, Attachment 10). Accounting and finance returns this list to MCA to be used to enter the correct codes into OLVIMS.

**6.47. (AFMC)** A copy of the reimbursable/refundable organization list, provided by accounting and finance, will be kept in file until the next update is received.

6.47.1. All reimbursable cost data must be reconciled monthly with accounting and finance. This data must be verified for accuracy, to include validating that all reimbursable units are loaded properly in OLVIMS.

6.47.2. Vehicle and Equipment work orders for vehicles assigned to reimbursable units will be retained for at least one year after the close out date for reference for Chief Financial Officer (CFO) inquiries.

6.47.3. Resource Center/Cost Center (RC/CC) codes will be validated at least annually.

**6.48. System Codes.** Vehicle system codes define the specific repair on a vehicle. They are used for historical purposes and failure data capture toward improvements in reliability, maintainability, and deployability (RM&D). Find these codes in the OLVIMS Help File.

**6.49. System and Subsystem Descriptions.** Subsystem codes are used to more closely define the actual work performed during the repair, inspection, and service cycle. These subsystem codes are required entries in block 20 of the AF1828. When conscientiously applied, they help detect and control repeat maintenance. Subcodes not assigned a specific description may be developed locally, when required. (Find the codes and their descriptions in the OLVIMS Help File.)

**6.50. (Added-AFMC) Standardized Vehicle Manufacturer and Vehicle Type Codes** . The vehicle manufacturer and vehicle type codes listed in **Attachment 14 (Added)** will be used in OLVIMS. These codes will be input into the make/type field of the AZ record. For example, for a Ford sedan, the field will

be FRD SDN. For manufacturer and type codes that are not listed in **Attachment 14 (Added)**, send an e-mail with the manufacturer and type vehicle to HQ AFMC/LGRV and the codes will be provided.

# Chapter 7

# VEHICLE MAINTENANCE CONTINGENCY OPERATIONS

## *Section 7A—General Information*

**7.1. Introduction.** This chapter establishes general instructions for vehicle managers with a deployment mission, war reserve materiel (WRM) responsibilities, and tasking to support a contingency by preparing vehicles for shipment through command levy taskings. Provisions of this chapter apply to peacetime management, maintenance, and storage of WRM vehicles, and the initial phases of vehicle maintenance support provided at locations within the theater of responsibility.

**7.2. Contingency Terms Explained.** (See **Attachment 1**, **Section 7C**)

**7.3. Exemptions to This Chapter:**

7.3.1. Mobile tactical units with organic maintenance capability.

7.3.2. Organizations without a mobility mission or WRM vehicle responsibility.

## *Section 7B—Policy, Organization, and Responsibilities*

**7.4. Overall Requirements:**

7.4.1. The Air Force will have motor vehicles, manpower, tools, facilities, and shop equipment on hand to support the USAF War and Mobilization Plan (WMP).

7.4.2. Warner-Robins Air Logistics Center (WR-ALC) implements procedures to meet spare parts and technical order (TO) shortfalls through emergency procurement actions to support surge and sustainment phases of contingency operations. This does not relieve unit responsibility for maintaining duplicate, deployable copies of TOs for WRM and mobility vehicles.

7.4.3. MAJCOMs' Primary Responsibilities:

7.4.3.1. Develop supplemental guidance specific to their theater of operation. Develop checklists for vehicle maintenance to support contingency operations. Suggested items are contained in **Attachment 2** and **Attachment 3**.

7.4.3.2. Ensure transportation units are equipped and trained to fulfill wartime vehicle mission requirements.

7.4.3.3. Program for manpower, facilities, shop equipment, technical manuals and tools necessary to support organizational and intermediate maintenance concepts for all vehicles committed to wartime missions.

7.4.3.4. Participate in mobility readiness spares package (MRSP) reviews and validations to ensure sufficient spare parts are available to support contingency operations for a minimum of 30 days. Specifically address spare parts support concept for initial and follow-on parts support to the theater of operations.

7.4.3.5. Manage WRM vehicle assets according to AFI 25-101, as supplemented.

7.4.3.6. Request vehicle repair assistance from WR-ALC/LE according to TO 00-25-15.

7.4.3.7. Assign a single office within the headquarters overall primary responsibility for WRM vehicle management.

7.4.3.8. Establish minimum reporting requirements to identify on hand vehicle assets and ensure shortages, vehicle in-commission rates, and supply support problem areas are identified.

7.4.3.8. (AFMC) Status of Resources and Training System (SORTS) satisfies MAJCOM reporting requirements, unless otherwise directed.

7.4.3.9. MAJCOMs with host base responsibilities are required to provide vehicle maintenance, and spare parts support for tenant forces identified in OPlans.

7.4.3.10. During a contingency, the owning MAJCOM supports significant mission additives due to force structure changes. The owning MAJCOM provides supplemental manpower, Temporary Mission Support Kits (TMSK) and MRSP spares, specialized equipment, and technical data for additive vehicles to the host base.

7.4.3.11. The host base vehicle maintenance organization is responsible for follow-on spare parts support. Where appropriate, tenant MAJCOMs assist the host MAJCOM to source their command's vehicle-specific and peculiar spare parts.

7.4.4. Base level and deploying activities will:

7.4.4.1. Maintain WRM vehicles according to guidelines established in this chapter, related Air Force technical orders, and vehicle maintenance publications as supplemented by the MAJCOM.

7.4.4.2. Comply with the provisions of TO 36-1-191, *Technical and Managerial Reference for Motor Vehicle Maintenance* and other shipping instructions as provided by WR-ALC.

7.4.4.3. Identify problem areas to the MAJCOM which cannot be resolved locally.

7.4.4.4. Develop local guidance for vehicle maintenance wartime concept of operations as directed by the MAJCOM.

7.4.4.5. Determine vehicles best suited for deployment based on parts availability, interchangeability, age, and ease of maintenance.

7.4.4.6. Ensure vehicle maintenance managers are familiar with current Designed Operational Capability (DOC) statement, OPlans, and base support plans.

7.4.4.7. Remain prepared to provide intermediate maintenance capability to support wartime use of vehicular equipment when deployed to collocated operating bases (COBs), forward operating locations (FOLs), aerial port of debarkation/embarkation (APOD/Es), and sea and air interfaces (SAIs).

7.4.4.8. Deploy with sufficient skilled personnel and equipment resources to satisfy contingency wartime requirements at MOBs, COBs, FOLs, APOD/Es, and SAIs. See **Attachment 4** and **Attachment 5** for lists of recommended vehicle maintenance equipment and shop tools for contingency.

7.4.4.9. Document costs to prepare vehicles, spare parts, and tech data for shipment.

7.4.4.10. Maintain sufficient copies of TOs to support WRM and mobility vehicles.

***Section 7C—Vehicle Maintenance Concept of Operations.***

**7.5. General Information.** This section outlines general maintenance concepts required to support deployed vehicles during contingency operations, individual responsibilities, and general documentation and reporting procedures.

**7.6. Organizational Maintenance.** Organizational maintenance is maintenance accomplished by the using organization. During normal operation, the unit VCO ensures organizational maintenance is accomplished as outlined in **Chapter 1**, paragraph **1.6.**

7.6.1. Increased level of operator maintenance is essential during wartime.

7.6.2. The scope of increased operator maintenance and level of maintenance support (parts, tools, etc.), is determined by the using organization's VCO and local maintenance managers.

**7.7. Expanded Mobile Maintenance.** On-scene repair is the goal of this concept. When implemented, the expanded mobile maintenance concept positions vehicle maintenance personnel in key areas throughout the base to provide quicker response to major users as well as dispersed vehicle maintenance assets.

**7.8. Minor and Intermediate Maintenance.**

7.8.1. If a maintenance capability does not exist at deployed locations, a minimum essential maintenance capability is established using the following guidelines:

7.8.1.1. Preventive maintenance and inspections are performed only if the capability exists and operational mission tempo allows.

7.8.1.2. To the maximum extent, unscheduled maintenance is accomplished at dispersed locations at the onset of hostilities.

7.8.2. During contingency situations, repairs not affecting safe operation or operational capabilities may be waived. The senior on-site maintenance technician determines vehicle safety and serviceability.

7.8.3. Immediately after an attack, a post-attack vehicle operability (PAVO) assessment determines triage maintenance priorities. Sortie-generating vehicles assessed to be in a "Level A" triage category are attended to prior to repairing sortie-sustaining "Level A" vehicles.

7.8.4. An expanded cannibalization program keeps critical vehicles operational.

7.8.5. Vehicle Maintenance Priorities. Each vehicle maintenance operation employs a maintenance priority system which considers current battle conditions and requirements. The VMM or VMS, based on instructions from the battle staff, assigns priorities as necessary.

**Table 7.1. Mission Critical Vehicle List.**

**Priority I Vehicles: Sortie Generating**

| VEHICLE TYPE | MODEL OR SIZE | MRSP/TMSK |
|---|---|---|
| Aircraft Refueler: | R-9; R-11 | TMSK |
| Aircraft Towing: | MB-2, MB-4, U-30 Tow Tractors | TMSK |

| | | |
|---|---|---|
| | Tractor, AGE; Bob Tail. | TMSK |
| Munitions Loading/Hauling: | Crane, 7.5T; 10 Ton Trac; 30/40 Ft Semitrailer | TMSK |
| | Forklift assigned to munitions functions | |
| Aircraft Servicing: | Trk, Demin Water A-2; A-23; Trk, Liq Nitrogen | TMSK |
| | Trk, Deicer; Trk, Lav Serv; Trk, Stair | TMSK |
| Aircraft Loading/Unloading: | | |
| | A/C Loaders, 25, 40, 60K, and Wide Body | TMSK |
| | Lower Lobe | TMSK |
| | Forklifts, 10K Standard; and All-Terrain | TMSK |
| | Crane 50T Strd; Strlr, 40Ft Rlrz | TMSK |
| Aircraft Launch Vehicles: | Various general purpose vehicles for crew transport, and aircraft maintenance | TMSK |

**Priority II Vehicles: Sortie Sustaining**

| VEHICLE TYPE | MODEL OR SIZE | MRSP/TMSK |
|---|---|---|
| Firefighting and Crash Rescue: | Crash/Fire Trk | TMSK |
| | Structural Fire Trk | TMSK |
| Medical: | Amb Bus; Amb, Modular | TMSK |
| Materials Handling: | Forklifts, 6K, RT; 22K; Trk, 9T Hi-Lift | TMSK |
| Explosive Ordnance Disposal: | M-113, Trk, Armd Conv | TMSK |
| Fuel Support: | Trk Tnk 1200 gal, Trl, Fuel 600 gal | TMSK |
| Rapid Runway Repair: | Trk, Dump 8CY; Trac Dozer; Ldr, 4CY; Rlr, Vib; T/T 7.5T; Ldr, Scp, 2.5CY; Excavator; T/T 10T; T/T 22 T; Grader; Swpr Vac; Strlr, 60T; Trac, Whld w/broom | TMSK |
| Security Police Vehicles: | HMMWV, APC | TMSK |

***NOTE:***
Keyed to parts availability and local priorities, sortie-generating vehicles receive immediate maintenance attention.

**7.9. Repairs Which Exceed Local Capability:** MAJCOMs develop procedures for reporting vehicle status when repairs exceed local capability (including other military and contract sources).

**7.9. (AFMC)** Request assistance from HQ AFMC/LGRV, by message, e-mail, or FAX, when vehicles critical to sortie generation or the sustainment mission require repairs, which exceed local capability.

**7.10. Vehicle Maintenance Manager and Superintendent.** After the initial phase of all contingencies, the VMM or VMS implements responsibilities outlined in **Chapter 1** at the mobility location. (When the deployed transportation unit does not have a VMM or VMS assigned, the senior noncommissioned officer (NCO), with Air Force Specialty Code (AFSC) 2T3XX assumes those duties.) Here's what the successful VMM or VMS has established for contingency site capability:

7.10.1. Vehicle Repair Shop. Ability to perform intermediate maintenance on all vehicles.

7.10.2. Workload Control. A 2T3X7, or qualified vehicle maintenance technician, responsible for AF1823 preparation and ensuring vehicle repairs are accomplished consistent with priorities established by the maintenance manager. This work center is usually responsible for maintaining all necessary technical orders and publications.

7.10.3. Materiel Control. A supply technician (AFSC 2S0X1) is assigned to vehicle maintenance to perform materiel control functions as specified in **Chapter 3**.

7.10.3.1. Materiel Control personnel should coordinate efforts with the deployed supply and contracting functions to establish internet vehicle parts ordering to supplement existing stocks, local purchases, and the base supply system. Innovations in information technology, worldwide commercial delivery, and government reforms have made internet parts sourcing through commercial vendors with Blanket Purchase Agreements (BPAs) and the International Merchant Purchase Authorization Card (IMPAC) a viable alternative to traditional parts acquisition methods.

7.10.4. Tire and Battery Service. A qualified vehicle maintenance technician ensures timely tire repair and battery service.

7.10.5. Vehicle Recovery. Vehicle operations normally provides this service though it may be performed by vehicle maintenance as locally determined.

7.10.6. Mobile Maintenance. Vehicle(s) can be configured and equipped to provide the capability for jump-starts, tire inflation, and minor repairs. ***NOTE***.Truck, Maintenance 3/4 Ton, 4X4, NSN 2320-00-541-1714, makes a good platform for a mobile maintenance truck. The following specific ordering data enhances the basic vehicle: Diesel engine; transmission oil cooler, superstructure closed body, off-road body mounts, vise bracket, brush guard, towing package (pintle hook), winch electric (front bumper), Type A winterization, air conditioning, dark green paint (color no. 14052), air compressor, welding machine, jump start capability and heavy duty suspension.

**7.11. Documentation and OLVIMS Requirements.** All maintenance performed on vehicles at COBs, FOBs/FOLs, APOD/Es, and SAIs requires documentation IAW procedures established by the theater MAJCOM. OLVIMS is implemented and used as soon as practical. See **Attachment 6** for publications, technical orders, and forms needed to operate at a deployed site.

**7.11. (AFMC)** Vehicle maintenance personnel will maintain hand written records until OLVIMS support is established. Upon implementation of OLVIMS, all data, previously hand written, will be entered into OLVIMS using the applicable dates.

**7.12. Reporting Requirements:**

7.12.1. General Information. Host MAJCOMs and other Air Force agencies require information for decisions necessary to support a deployed unit.

7.12.2. During the deployment phase, report capability weekly. Report by message to the theater CINC/MAJCOM, with information copies to the main operating base and tenant organizations.

7.12.3. During the first 30 days, the following information is required at weekly intervals. It will be provided by message to the theater CINC/MAJCOM, with information copies to the main operating base and tenant organizations.

7.12.3.1. Total priority 1 and 2 vehicles assigned, total vehicle losses, and total deadlined for parts and maintenance.

7.12.3.2. Facility, equipment, and technical data shortfalls.

7.12.3.3. Personnel and skill shortages.

7.12.3.4. For specific supply support difficulties requiring MAJCOM assistance, list vehicle registration number and type, part number, date parts ordered, requisition number, and status.

7.12.4. After the initial 30 day period, further reporting requirements are established by the CINC/MAJCOM.

7.12.5. Reports Control Symbol. MAJCOMs and other Air Force agencies assign a reports control symbol to recurring and one-time reporting requirements.

***Section 7D—Storage of WRM Vehicles***

**7.13. General Information.** WRM vehicles are authorized to bridge the gap between peacetime and wartime requirements. These vehicles are authorized and maintained separately from the active peacetime vehicle fleet and are normally preserved in storage. Manpower required to control, exercise, and maintain these vehicles is determined according to **Section 7H**.

Types and Levels of Storage. MAJCOMs develop specific storage concepts for support of vehicles identified against OPlans to be supported.

Management Policies for WRM Stored Vehicles:

7.13.1. Vehicles are controlled according to AFI 25-101, as supplemented.

7.13.2. For vehicles in active storage (batteries installed, fueled), accomplish lubrication at least annually. An oil and filter change is accomplished every two years.

7.13.3. WRM vehicles are rotated into the active peacetime fleet (where like-vehicle peacetime authorizations exist) to ensure equipment dependability and equalize their use.

7.13.4. In general, do not place vehicles in WRM storage while still under warranty.

**7.14. Exceptions to Storage Policies.** Fuel servicing, fire fighting, A/C loaders, and certain other vehicles are equipped with systems that must be exercised more frequently than other vehicles. To the maximum extent, fully exercise operational systems on these vehicles every 30 days.

**7.15. Parking Areas.**

7.15.1. The MAJCOM ensures a parking plan is developed for each storage location.

7.15.2. Fire extinguishers are positioned in the vehicle storage area.

7.15.3. When inside storage cannot be provided, outside storage areas are well-lighted, have adequate drainage, and are secured by a chain link or equivalent fence.

***Section 7E—Facilities***

**7.16. General Information.** Adequacy of facilities is a major factor in ensuring mission support. Mobile facility authorizations for bare base operations are outlined in Allowance Stanadard (AS) 158 (Harvest Falcon Bare Base Support Program) and AS 159 (Harvest Eagle Support System).

7.16.1. Vehicle Maintenance Facilities. These facilities support scheduled and unscheduled intermediate level maintenance. Functionally separated facilities for refueling trucks is required. Care is taken in planning, to include ample electrical service, wash facilities, exhaust ventilation, compressed air source, and explosion-proof utility systems for refueling vehicle shops. For planning purposes, shop working areas must accommodate approximately 5 percent of the fleet at one time.

7.16.2. Facilities are accessible to the key functions supported, e.g., sortie-generating; consider placement of repair facilities in close proximity to flight line and aerial port operations. It may be necessary to establish dispersed maintenance locations.

7.16.2.1. Where available, consider using existing fixed facilities such as AAFES garages, auto hobby shops, or any other facilities that may be suitable for vehicle maintenance.

7.16.2.2. Facilities at heavily damaged forward operating locations may consist of expandables, tents, or other appropriate mobile units. The HARVEST BARE allowance standard (AS 157) lists appropriate items for the HARVEST BARE vehicle maintenance functions.

7.16.3. Communications. Local vehicle maintenance managers develop plans for an alternate communications network for both vehicle operations and maintenance at field and alternate locations for PAVO operations.

**7.17. CONUS Aggregation.** Plan interim aggregation of vehicles in CONUS until in-theater storage locations become available.

**7.18. CONUS Permanent Storage.** Use existing facilities where possible for CONUS permanent storage.

**7.19. In-Theater Operations.** Facility requirements in-theater are determined by the operating concept for the location, host nation support or restrictions, the environment, and current political atmosphere. Vehicles are stored in one of two categories, active (ready to roll) or inactive (deep stored). MAJCOMs determine the mix of active/inactive stored vehicles. For basic planning, the following guidance applies:

7.19.1. Active stored vehicles: Vehicles stored outdoors, under partial cover, or vehicles required to support initial incoming forces are preserved to Level C as described in TO 36-1-191, or as specified by the MAJCOM.

7.19.2. Inactive stored vehicles: Vehicles will be stored in an enclosed building and preserved to Level A storage as described in TO 36-1-191 or as prescribed by MAJCOM guidance. NOTE: Dense packing vehicles in an enclosed building does not constitute inactive storage.

*Section 7F—Spares and Supply Support*

**7.20. Prepositioned Support.** MAJCOMs identify the types of items and appropriate quantities to develop MRSP. Spares for prepositioned vehicles will be identified, maintained, and accounted for. Normally, MRSP is designed to support 30 days of operation. See **Attachment 7** for recommended TMSK/MRSP spares list.

7.20.1. Ensure MRSP for critical in-place vehicles, or specific vehicles with deployment missions are adequate to support increased wartime usage. Develop MRSP for specific mission critical vehicles identified in **Table 7.1.** at the direction of the MAJCOM.

7.20.2. Unless otherwise required by the MAJCOM, TMSK are packages of common use items developed and purchased by the deploying unit for vehicle sustainment when no MSRP is available for this vehicle type. Although parts lists should be developed in advance, requisition items only after the deployment order has been received, and specific vehicles have been identified for deployment. For several vehicles deploying as a package, assemble one kit for each vehicle make/model/type, for the purpose of sustaining all vehicles of this type for 30 days of operation. **Attachment 7** suggests a range and depth of items to consider in TMSKs.

7.20.3. Units work closely with Supply and COPARs to ensure emergency procedures exist that provide the sourcing of needed parts to assemble the TMSK to meet the vehicle's shipment window.

**7.21. Command-Levied Shipment Taskings.** Units tasked to ship vehicles as part of a command levy action will ship a set of TMSK spares as identified in the vehicle shipment order. Kits for each vehicle are individually assembled, boxed, and shipped within the cab, trunk, or bed of each vehicle. Mark parts kits contents for accountability, identification, and inventory at destination.

7.21.1. Deploying units and MAJCOMs ensure that, if MRSP is authorized and built to support a number of vehicles, each vehicle deploys with its assigned box of MRSP spares and bench stock items in the event vehicles are redistributed .

7.21.2. The MAJCOM specifies how to accomplish follow-on spare parts support to the theater of operations. WR-ALC establishes priority procedures to provide expedient spare parts support to the MAJCOM and deployed units. When local or centralized theater spares support capability does not exist, source spares from CONUS for immediate air transport to the theater via express air service.

7.21.3. MAJCOMs develop methods and procedures to provide the necessary visibility of spare parts requirements and the status of requisitions for their deployed forces. Use facsimile machines or e-mail to provide instant data transfer to and from the theater as needed.

**7.22. Preparation of Vehicles for Shipment.** Units ensure that only their best vehicles are shipped to meet OPlan or command levy shipment taskings. Place all vehicles processed for shipment placed in TO 36-1-191 condition.

7.22.1. Repair or replace components and subassemblies which minimally meet TO 36-1-191 standards. Service vehicle fluid systems and perform other scheduled maintenance due within 90 days prior to the date the vehicle ships.

7.22.2. Units tasked to provide vehicles through command levy assemble a TMSK composed of bench stock items (hoses, belts, tire w/rim, oil, transmission fluid, etc.) and available components

(starters, alternator, etc.). The TMSK is boxed, marked, and shipped with each vehicle IAW paragraph **7.22.2.**

7.22.3. Technical Data. Ship necessary tech data for maintenance and spare parts with each vehicle, unless otherwise planned for, i.e., placement of MOD within the theater of operations. When several vehicles of the same make/model/type are deployed as a package, ship one complete set of technical orders per vehicle make/model/type. If a unit is tasked to deploy a vehicle and has only one tech order for the vehicle, the unit ships that tech order with the vehicle.

7.22.4. Vehicle Historical Data. A copy of pertinent historical data is also required along with a spare set of keys for the vehicle.

7.22.5. WR-ALC provides detailed shipping instructions with all shipment taskings.

7.22.6. Funding. Tasked units fund all costs to place vehicles into TO 36-1-191 condition and build the deployment spare parts kits from their O&M budgets, unless otherwise provided in the shipping instructions. Units document and retain all expense data associated with the preparation of vehicles for shipment for possible reimbursement.

**7.23. MRSP Peacetime Usage.** MRSP items are used whenever a serviceable peacetime operating stock (POS) asset is not readily available. Immediately order replacements for items removed from MRSP will be and pay for them with O&M funds.

***Section 7G—Tools and Equipment***

**7.24. Individual Tool Kits.** Each vehicle mechanic deploys with a complete kit of standard and metric hand tools.

**7.25. Pre-Identification of Requirements.** Vehicle managers at all levels must be aware of their Unit Type Code (UTC) taskings, this information is available at base level Combat Readiness Flight or the MAJCOM Transportation Plans and Programs Division. Managers develop shop tool and equipment kits to supplement individual tool kits to support wartime taskings and base mobility plans.

7.25.1. Deploy tool and equipment kits from host vehicle maintenance shops as necessary to meet wartime taskings. Do not assemble kits prior to tasking. **Attachment 4** and **Attachment 5** provide suggested items. Be careful using the suggested stock numbers since the electrical equipment shown is 110/120 volt alternating current (AC). Most overseas locations for COBs, FOLs, APOD/Es, and SAIs are outfitted with 220 volts, 50 hertz AC. Include portable generators or suitable transformers in the support packages if 110/120 volt equipment is selected.

7.25.2. Kits are required at all locations where vehicles will be deployed or prepositioned. Deliver kits in air transportable cargo bins to facilitate shipping and secured storage at prepositioned and contingency locations when practical.

***Section 7H—Personnel Requirements***

**7.26. General Information.** Manpower additives are required to maintain vehicles and satisfy transportation needs at storage locations as well as operating locations. The MAJCOM concept of operations pro-

vides the basis for determining the number of personnel required. The host command must identify and source personnel.

**7.27. Manpower Determination.** Both transportation and Management Engineering Teams consider the following factors when developing manpower requirements supporting active or level A storage: (Normally, if vehicles are going to be used for exercises, level A storage requires more manpower than inactive storage).

7.27.1. The quantity and complexity of vehicles to be stored (vehicle equivalents).

7.27.2. Frequency of inspection and the average amount of time required for each inspection.

7.27.3. Age of the Fleet. Older vehicles require more maintenance than prepositioned new vehicles.

7.27.4. The degree of involvement of the vehicle fleet in exercises (that is, used to support JCS, intratheater or local exercises).

7.27.5. Rotation. This will affect the number of limited technical inspections (LTIs) required.

7.27.6. If applicable, the amount of time required to place and remove vehicles.

7.27.7. Hours of operational coverage, i.e., 24 hours a day, 7 days a week.

7.27.8. Material handling and surface movement of cargo to, from, and between SAI locations, for surge and sustainment operations, bare base versus fixed facilities.

7.27.9. Fleet size for management and dispersed locations.

**7.28. Contractor Operated Storage.** Evaluate contract storage when it isn't feasible to provide Air Force personnel to maintain vehicles in storage. Transportation and manpower consider manpower ceilings, contractor availability, cost, location, and duration of storage as governing factors. Contract operations are evaluated by qualified (7-level personnel in AFSC 2T3) Air Force vehicle maintenance technicians assigned as QAEs.

***Section 7I—Training***

**7.29. General Information.** Operations in a contingency environment will expose vehicle managers to many situations and problems not encountered in normal peacetime operations.

7.29.1. Contingency situations are difficult to predict, since the variety of operating environments cannot be exactly defined. Deployable personnel are prepared for flexible operation in such situations, and must be especially well-trained in the use of tools, equipment, and facilities, as well as in the operation and maintenance of deployed vehicles.

7.29.2. The fleet to be maintained will likely be diverse in its complexity; it is therefore essential that personnel identified for deployment duties must be both skilled and experienced.

**7.30. Training for the Operational Environment.** Although difficult to predict the actual operating environment at a contingency location, it is possible to exercise personnel in a simulated or practice deployment. Doing so acquaints them with the tools and equipment they will be using in actual deployment situations.

**7.31. Personnel Training.** Personnel selected to fill mobility positions receive training at the unit level. Training is sufficient to cover all equipment, tools, and procedures they will be exposed to in the contingency environment. Ideally, deploying personnel receive annual refresher training to ensure an adequate proficiency level is maintained.

**7.32. Deployed Location.** Qualification training is initiated immediately if needed. The senior 2T3XX ensures personnel are qualified to operate available shop equipment.

**7.33. Forms Prescribed:**

7.33.1. AF754, **Work Order Log and Quality Control Record**

7.33.2. AF1806, **Operator's Inspection Guide and Trouble Report (Aircraft Towing, Base Maintenance, Deicers, High Reach, and Snow Removal**

7.33.3. AF1807, **Operator's Inspection Guide and Trouble Report (Fuel Servicing)**

7.33.4. AF1810, **Operator's Inspection Guide and Trouble Report (463L and Material Handling Equipment)**

7.33.5. AF1812, **Operator's Inspection Guide and Trouble Report (All "P"-Series Fire Fighting Vehicles)**

7.33.6. AF1823, **Vehicle and Equipment Work Order**

7.33.7. AF1823-1, **Vehicle and Equipment Work Order**

7.33.8. AF1824, **Motor Vehicle Work Order Status**

7.33.9. AF1827, **Minor Maintenance Work Order**

7.33.10. AF1828, **Vehicle Historical Record**

7.33.11. AF1829, **Refueling Equipment Inspection Data Record**

7.33.12. AF1830, **Refueling Equipment Hose Installation and Hydrostatic Test Data Record**

7.33.13. AF1831, **Indirect Labor Time Card**

7.33.14. AF1831-1, **Indirect Labor Time Sheet**

7.33.15. AF1832, **Record of Cannibalization. (Vehicle Maintenance)**

7.33.16. AF1834, **COPARS Fund Ledger**

7.33.17. AF1837, **COPARS Working Stock Consumption Record**

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## Attachment 1

## GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

The following references are frequently used for establishing and operating an Air Force vehicle maintenance shop: (Also see reference in AFI 24-302, Attachment 2. Not all are required to be on hand; however, if references are not in the shop file, they must be readily accessible.)

***References***

Air Force Indices, Policy Directives, Instructions, and Manuals:

AFIND2, *Numerical Index of Standard and Recurring Air Force Publications*

AFIND8, *Numerical Index of Specialty Training Standards*

AFIND9, *Numerical Index of Departmental Forms*

AFIND10, *Management Control and Authorization Program for Tables of Allowance and Allowance Source Codes for USAF Activities*

AFIND13, *Civilian Personnel Publications*

AFIND17, *Air Force Occupational Safety and Health (AFOSH) Standards, OccupationalSafety and Health Administration (OSHA) and National Institute for Occupational Safety and Health (NIOSH) Publications*

AFIND18, *Index of Air Force Manpower Standards*

AFMAN 37-139, *Records Disposition Schedule*

AFI 10-210, Status of Resources and Training System

AFI 37-160v7, *Publication Libraries and Sets*

AFPD 21-3, *Air Force Technical Order System*

AFPD 32-70, Environmental Quality

AFI 32-7045, Environmental Compliance Assessment and Program

AFI 37-160v8, *The Air Force Forms Management Program*

AFI 38-101, *Organization Policy and Guidance*

AFI 38-201, Determining Manpower Requirements

AFI 36-2101, *Military Personnel Classification Policy (Officers, Warrant Officers, Airmen)*

AFI 36-2605, *Air Force Military Personnel Testing System*

AFI 36-2403, *Airman Classification and Enlisted Evaluation System*

AFCAT 36-2223, *USAF Formal Schools Catalog (Policy, Responsibilities, General Procedures, and Course Announcements)*

AFI 36-2201, *Special Training and Enlisted Specialty Training*

AFMAN 23-110, *USAF Supply Manual*

AFMAN 23-110, *Standard Base Supply Customer's Guide (Volume 2, Part 13)*

AFI 24-306, *Manual for the Wheeled Vehicle Driver*

AFI 23-106, *Assignment and Use of Standard Reporting Designators (SRD*)

AFI 24-302, *Vehicle Maintenance Management*

AFCSM 24-1, *On-Line Vehicle Interactive Management System (OLVIMS)*

AFI 32-1024, *Standard Facility Requirements*

AFI 91-204, Safety Investigations and Reports (Chp 12, Nuclear Mishap and Safety Deficiency Reporting)

AFI 91-207, *USAF Traffic Safety Program*

AFI 23-201, *Fuels Management*

AFI 23-220, *Reports of Survey for Air Force Property*

AFI 33-110, *Air Force Data Dictionary*

AFI 38-3108, *The Air Force Suggestion Program*

*DODR 4500-36R, Management, Acquisition, and Use of Motor Vehicles*

Allowance Standards

006, *Organizational and Administrative Equipment*

008, *Civil Engineering Equipment*

012, *Vehicles*

457, *Vehicle and Locomotive Maintenance*

Technical Orders

0-4-6-1, *Numerical Cross-Reference Index*

00-5-2, *Technical Order Distribution and Requisition System*

00-110N-16, *Equipment Authorized for Use with Nuclear Weapons*

00-20-1, *Preventive Maintenance Program, General Requirements and Procedures*

00-20-14, *AF Metrology and Calibration Program*

00-20D-1, *Railroad Equipment Maintenance, Inspection and Records Administration*

00-20K-1, *Inspection and Control of USAF Shelf-Life Equipment*

00-25-113, *Conservation, Segregation, and Disposal of Critical Alloys and Precious Metals*

00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding*

00-25-235, *Safety Procedures and Equipment for Confined Space Entry*

00-25-240, *Uniform Repair/Replacement Criteria for Selected USAF Support Equipment*

00-35D-54, Materiel Deficiency Reporting and Investigating System

33K-1-100, *PME Interval, Labor Estimate, Calibration, and Repair Reference Code*

36-1-7, *General Instruction and Preparation Checklist - AF Vehicle and Liquid Cooled Powered Ground Equipment Operation in Cold Weather Areas*

36-1-27, *USAF Vehicles, Materials Handling and Construction Equipment*

36-1-50, *Motor Vehicle Maintenance Guide*

36-1-121, *Standardization of Lunettes and Pintles (Tow Attachments)*

36-1-191, *Technical and Managerial Reference for Motor Vehicle Maintenance*

36A-1-6, *Installation of Seat Belts and Head Restraining Devices in Air Force Vehicles*

36A-1-98, *Towing Procedures - Trucks, Truck Tractors, and Passenger Carrying Vehicles*

36A-1-1301, *Vehicle Management Index File*

36A-1-1331, *Liquid Propane Gas Conversion*

36A-1-1341, *Compressed Natural Gas Conversion*

36A2-1-5, *Installation of Heavy Duty or Special Equipment on Commercial Design Motor Vehicles*

36C-1-4, *Dielectric Testing of Insulated Aerial Manlift Devices*

36Y4-1-171, *Vehicles and Powered Ground Equipment Storage Batteries*

36Y31-1-1, *Removal of Rust and Sediment from Fuel and Oil Servicing Truck and Trailer Tanks and Application of Coating, Interior, Fuel and Oil Resistant*

36Y32-1-142, *Care, Maintenance and Repair of Pneumatic Tires and Inner Tubes*

37A-1-101, *Fuel, Water, and Lubricant Dispensing Equipment*

38-1-5, *Processing and Inspection on Non-mounted, Non- Aircraft, Gasoline and Diesel Engines (Except Gas Turbine and Marine for Storage and Shipment)*

38-1-23, *Inspection and Installation of Exhaust Spark Arrestors and Exhaust Purifiers on Non-Aircraft Engines*

45-1-1, *Painting and Marking of USAF Railroad Equipment*

AFMS 42B1, *Air Force Manpower Standard Vehicle Maintenance*

Air Force Occupational Safety and Health (AFOSH) Standards

48-1, *Respiratory Protection Program*

48-8, Controlling Exposure to Hazardous Materials

91-2, Vehicle-Mounted Elevating and Rotating Work Platforms, *Manually Propelled and Self-Propelled Platforms, and Towers (Scaffolds)*

91-5, *Welding, Cutting, and Brazing*

91-12, *Machinery*

91-17, *Interior Spray Finishing*

91-20, *Vehicle Maintenance Shops*

91-22, Walking Surfaces, Guarding Floor and Wall Openings and Holes, Fixed Industrial Stairs, and *Portable and Fixed Ladders*

91-25, Confined Spaces

91-31, *Personal Protective Equipment*

91-32, *Emergency Shower and Eyewash Units*

91-38, *Hydrocarbon Fuels, General*

91-43, *Flammable and Combustible Liquids*

91-45, Hazardous Energy Control and Mishap P*revention Signs and Tags*

91-46, Materials Handling and Storage Equipment

91-56, *Fire Prevention*

91-66, *General Industrial Operations*

91-68, *Chemical Safety*

161-2, *Industrial Ventilation*

161-17, *Standardized Occupational Health Program*

161-21, *Hazard Communication*

***Abbreviations and Acronyms***

**ACO—**Administrative Contracting Officer

**A&F—**Accounting And Finance

**AWP—**Awaiting Parts

**BPA—**Blanket Purchase Agreement

**CA/CRL—**Custodian Authorization/Custody Receipt Listing

**CAMS—**Consolidated Aircraft Management System

**COCESS—**Contractor Operated Civil Engineer Supply Store

**COPAD—**Contractor Operated Parts Depot

**CRL—**Cross Reference List

**CTK—**Composite Tool Kit

**DIFM—**Due In From Maintenance

**DLA—**Defense Logistics Agency

**DODAAC—**Department of Defense Activity Address Code

**DODAAD—**Department of Defense Activity Address Directory

**DP—**Demand Processing

**ECI—**Extension Course Institute

**EDD—**Estimated Delivery Date

**EEIC—**Element of Expense And Investment Code

**ERRC—**Expendability, Recoverability, Repairability Code

**ETIC—**Estimated Time In Commission

**FAC—**Functional Area Chief

**FAD—**Force Activity Designator

**FAR—**Federal Acquisition Regulation

**FOSSL—**Follow-On Spares Support Listing

**FSS—**Federal Supply Schedule

**GSA—**General Services Administration

**I&S—**Interchangeability And Substitution

**IMPAC—**International Merchant Purchase Authorization Card

**ISSL—**Initial Spares Support List

**ITK—**Individual Tool Kit

**LP—**Local Purchase

**LTI—**Limited Technical Inspection

**MICAP—**Mission Capable

**MILSTRIP—**Military Standard Requisitioning and Issue Procedures

**MOI—**Maintenance Operating Instruction

**MRA—**Minimum Reserve Authorization

**NMC—**Not Mission Capable

**NMCB—**Not Mission Capable—Both (Supply and Maintenance)

**NMCM—**Not Mission Capable—Maintenance

**NMCS—**Not Mission CapableæSupply

**NPL—**Not Price Listed

**NSN—**National Stock Number

**OA—**Obligation Authority

**OGA—**Other Government Agency

**O&M—**Operations and Maintenance

**QAE—**Quality Assurance Evaluator

**RC/CC—**Responsibility Center/Cost Center

**SBSS—**Standard Base Supply System

**SNUD—**Stock Number User Directory

**SRD—**Standard Reporting Designator

**TA—**Table Of Allowance

**TACOM—**Tank-Automotive Command (U.S. Army)

**UJC—**Urgency Justification Code

**UND—**Urgency of Need Designator

**VMS—**Vehicle Maintenance Superintendent

**VOO—**Vehicle Operations Officer

**VOS—**Vehicle Operations Superintendent

***Terms***

**Acceptance Inspection—**An inspection performed on all new and used vehicles and equipment received on base, before placing them in service. This inspection shows the condition of the vehicle. Discrepancies noted on the AFTO91 must be fixed before placing the vehicle in service if use of the vehicle would aggravate the problem or if the discrepancy creates a safety hazard.

**Active Vehicle Storage—**Storage of vehicles in an operational condition which permits their immediate deployment in the event of contingency or war and their use to support exercises.

**Aerial Port of Debarkation or Embarkation (APOD/E)—**A military or joint-use airfield designated, equipped, and staffed for receiving, processing, and dispatching airlifted personnel and cargo.

**Agricultural Equipment—**Equipment designed and used for landscaping, cultivating, or processing agricultural products.

**Air Force Equipment Management System (AFEMS)—**A standard system of equipment management that applies to all Air Force activities. It enables the Air Force to determine, authorize, account for, and report the types and quantities of equipment required to accomplish the Air Force mission. It is a primary basis for organizational equipment budget and buy programs.

**Allied Trades—**A functional element (work center) of vehicle maintenance that provides body repair, painting, radiator repair, and upholstery and machine shop support.

**Allowance Standard (AS)—**An equipment allowance document which prescribes basic allowances of organizational equipment and provides the control to develop, revise, or change equipment authorization inventory data.

**Area Assistance—**A service provided by the geographical Air Logistics Center (ALC) to the requesting activity in resolving operational, maintenance, and technical problems. (Reference TO 00-25-107).

**Average Hourly Labor Rate—**The labor rate is established locally for use with OLVIMS documentation, according to AFCSM 24-1, and used for DoD reporting.

**Blanket Purchase Agreements, Requirements Contracts, and Services Con—*tracts*** Three types of recurring contracts awarded to local vendors which provide for a source of automotive parts at a fixed price.

**Central Procurement—**The procurement of material, supplies, or services by an officially designated

command or agency, with funds specifically provided for such procurement for the benefit and use of the entire component; or in the case of single managers, for the military departments as a whole.

**Collocated Operating Base (COB)—**An active or reserve allied airfield designated for joint or unilateral use by US Air Force wartime augmentation forces, or for wartime relocation of US Air Force in-theater forces. COBs are not US bases.

**Command Levy—**A vehicle shipment tasking validated and assigned to a MAJCOM to effect shipment of a vehicle in support of an operational Air Force requirement. Issued by WR-ALC, the command levy will include: Shipping instructions (destination, mark for addressee, shipment suspense date, routing, and mode of shipment), shipment preparation instructions, tech data needs, and spare parts requirements.

**Corrosion Control—**The treatment required to prevent or correct corrosion on vehicles and equipment. (Reference TO 36-1-191).

**Corrosion Control Treatment Facilities.—**Contract facilities established at ports of embarkation (POE) to treat corrosion on vehicles before shipment overseas.

**Cost Center Code—**A code assigned to a function or unit, used to accumulate and distribute costs.

**Direct Labor Hour—**A unit of time representing the productive effort of one person in one hour against a specific vehicle.

**Direct Materials—**Those materials which can be identified with a specific repair job.

**Due In From Maintenance (DIFM)—**A repair cycle program in which the maintenance activity obtains a controlled item from base supply and returns a similar item in either a serviceable, repairable, or condemned condition.

**Emergency Vehicles—**Vehicles designed and used to respond to situations that have caused or may cause injury or death or damage or destruction to property; for example, ambulances and fire trucks.

**Equipment—**In logistics, all nonexpendable items needed to outfit or equip an individual or organization. See also **assembly; component; part; subassembly; supplies** in Joint Pub 1-02.

**Estimated Repair Time—**The usual number of labor hours needed to complete a specific repair job. Estimated repair time is either locally established or found in commercial flat rate manuals.

**Expanded Mobile Maintenance—**The capability to provide a dispersible mobile repair from mobile maintenance trucks to sortie-generating organizations.

**Fair Wear and Tear—**The deterioration of items attributed to normal usage.

**Force Activity Designator (FAD)—**A term denoting the operational importance of a weapon system, unit, activity, or project; it determines supply priority.

**Forward Operating Base (FOB)—**An airfield generally located closer to the enemy than main or collocated operating bases, used to support air operations without establishing full support facilities. The base may be used for an extended time period. Support by a main operating base will be required to provide backup support for a FOB. Also called forward operating location (FOL). See **forward operations base** in Joint Pub 1-02.

**Gross Vehicle Weight (GVW)—**The weight of a vehicle, including fuel, lubricants, coolant, on-vehicle tools and spares, cargo, and operating personnel.

**High-Cost Bench Stock—**Parts or assemblies priced at $60 or more per unit of use.

**Indicators—**Used to monitor the operation or condition of a management goal.

**Indirect Labor—**Labor which cannot be directly related to the repair of a specific vehicle AF1823 or item of equipment.

**Indirect Materials—**Parts and materials that cannot be identified to a specific vehicle AF1823 or item of equipment.

**Indirect Nonproductive Labor Hours—**Labor hours expended that do not represent a direct productive effort in the vehicle maintenance activity.

**Item Management—**Selecting, acquiring, and maintaining materials, and controlling inventory.

**Joint Use (JU) Vehicle—**A vehicle authorized to support a peacetime mission which has also been determined necessary to support an additive wartime requirement.

**Latent Defect Clause—**A contract clause covering failure of special vehicle components (except commercial design chassis) which result from defective materials or poor quality of work. (Reference TO 36-1-191).

**Level A Storage—**Vehicles stored in nonoperationally ready status. Specific procedures for this level of storage are contained in technical order 36-1-191.

**Local Purchase—**Acquiring a decentralized item of supply from sources outside the DoD.

**Low Cost Bench Stock—**Parts and assemblies priced at $59.99 or less per unit-of-use.

**Main Operating Base (MOB)—**A base on which all essential buildings and facilities exist.

**Major Assembly—**An assembly of component parts essential to the operation of the end item; for example, the engine, rear axle, transmission, and so forth.

**Management and Equipment Evaluation Program (MEEP)—**An Air Force program established to evaluate and study new concepts, procedures, techniques, vehicles, shop tools and equipment. (See AFI 24-305.)

**Materiel or Quality Deficiency Report (MDR—)** A report of material failure, equipment malfunction, design deficiency, or unsafe or otherwise unsatisfactory condition. (See TO 00-35D-54 and TO 36-1-191.)

**Maximum One-Time Repair Allowance—**The maximum amount of money that can be expended at any one time for repairing a vehicle or item of equipment. (Reference TO 36-1-191.)

**Mobility Coded Vehicle.—**Vehicles and vehicular equipment required to be moved with a unit or special activity upon deployment to an emergency or wartime situation.

**Mobility Readiness Spares Package (MRSP)—**An air transportable package of war reserve materiel spares, repair parts, and related maintenance supplies required to support planned wartime or contingency operations of a weapon or support system for a specified period of time pending resupply. MRSP may support aircraft, vehicles, communications systems, and other systems as appropriate. (**Table 7.1.** identifies what assets should be considered for MRSP sparing.)

**Nonproductive Indirect Time—**Time spent by employees in functions not directly related to the primary mission of the maintenance activity, such as squadron duty, leave, and so forth.

**Obsolete Vehicle—**A vehicle declared obsolete by the item manager because of age or design.

**Overhaul—**The restoration of an item to a completely serviceable condition as prescribed by a maintenance serviceability standard.

**Parts Provisioning—**Initial vehicle parts identified for purchase from the manufacturer at the time of vehicle procurement in sufficient quantities to support the expected life of the vehicle. Provisioning also includes additive spares required for contingency support requirements based on MAJCOM requirements at the time of acquisition.

**Post-Attack Vehicle Operability (PAVO)—**A post-attack vehicle assessment of damage to rapidly determine maintenance priorities in the post attack period. Using the triage maintenance concept, vehicles with the highest priority and needing the least amount of repairs are returned to service soonest.

**Prepositioned Vehicle—**A vehicle procured and placed in an overseas location as war readiness materiel (WRM) to reduce critical airlift requirements during contingencies.

**Priority Designator—**A two-digit issue and priority code (01 through 15) placed in military standard requisitioning and issue procedure regulations. The priority designator is based on a combination of factors which relate the mission of the requisitioner and the urgency of need or the end use. It provides a means of assigning relative rankings to the competing demands placed on the DOD supply system.

**Priority Maintenance—**The maintenance effort to expedite a vehicle through the shop when the using organization is at or below its minimum essential level (MEL).

**Qualification Training—**Actual hands-on task performance training designed to qualify an individual in a specific duty position. This portion of the dual channel on-the-job training program occurs both during and after the upgrade training process. It is designed to provide the performance skills required to do the job.

**Quality Assurance—**Those actions taken by the government to assure that services meet the requirements in the statement of work.

**Quick Reaction Maintenance Team (QRMT)—**A team of fully qualified, mobile mechanics equipped to carry our repairs at any contingency location deemed necessary for ongoing mission support.

**Registered Equipment Management System (REMS)—**A system of managing the inventory of Air Force vehicular equipment.

**Registered Vehicle—**A vehicle assigned a USAF registration number.

**Remanufacture—**The rework or replacement of all functional and structural components of an end item so its performance and life expectancy equal a new item.

**Repair—**The restoration of an item to serviceable condition through correction of a specific failure or unserviceable condition. See also **overhaul** in Joint Pub 1-02, and **rebuild.**

**Repair Cycle—**The stages through which a repairable item passes from the time of its removal or replacement until it is reinstalled or placed in stock in a serviceable condition.

**Replacement Code—**A code assigned to a vehicle that designates its eligibility for replacement. (Reference TO 36-1-191.)

**Scheduled Inspection—**A planned inspection accomplished at regular intervals of either calendar time, miles, or hours of operation. (Reference TO 36-1-191.)

**Sea and Air Interface (SAI)—**A military or joint- use airfield designated, equipped, and staffed to load

and dispatch personnel and cargo arriving by sea which requires further movement by intratheater airlift.

**Serviceability Standard—**The standard a vehicle must meet or surpass to be satisfactory for operation. (Reference TO 36-1-191).

**Standard Price—**The unit price of an item listed on the appropriate Air Force stock list. Stock list changes, including the price, are distributed through the Stock Number User Directory (SNUD) system (DO71) to Air Force bases.

**Supply Point—**Any point where supplies are issued in detail.

**Temporary Mission Support Kit (TMSK)—**A predetermined generic list of fly-away spare parts that units with deployment vehicles must requisition, mark, and box to ship with each vehicle prior to its departure. The kit must support the vehicle for a minimum of 30 days. **Table 7.1.** identifies what vehicles require TMSK sparing; **Attachment 7** is a suggested "generic" list of TMSK spares.

**Triage Maintenance—**An immediate, temporary repair of a battle damaged vehicle during post attack recovery operations in order to support the immediate ongoing mission. Vehicle repair requirements are placed in one of three condition levels:

1. **Level A.** Immediately returnable to service with minimal or only minor repair.
2. **Level B.** Repairable, requiring more than 30 minutes of repair work but less than 4 hours.
3. **Level C.** Repairs will take over 4 hours, or vehicle not repairable at all.

**Uneconomically Reparable—**A vehicle or piece of equipment whose one-time repair estimate exceeds the one-time repair allowance or whose age or mileage life expectancy has been attained. (Reference TO 36-1-191.)

**Urgency of Need Designator—**A term accompanied by a capital letter (A through C) which establishes the necessity for the acquisition of a resource. Urgency of need designators are used in conjunction with the assigned force activity designators (FAD) to establish a position resource demand based on mission importance and the pressure of necessity.

**Urgency of need A—**represents a compelling necessity, the lack of which has caused or will cause a mission failure. (Commanding officers must authenticate all urgency of need A demands.)

**Urgency of need B—**denotes a need which has or will cause mission impairment.

**Urgency of need C—**represents those resource requirements needed sooner than routine handling will permit.

**USAF Management Code—**A code assigned to a vehicle for identification purposes.

**Vehicle Applications—**There are four basic applications of vehicles within each design type:

**1. General Purpose Vehicle.** A vehicle designed for moving personnel or material and for towing trailers or semitrailers; a vehicle that satisfies general automotive transport needs.

2. **Special Purpose Vehicle.** A vehicle incorporating a special chassis and designed to meet a specialized requirement. This includes specially designed items such as aircraft towing tractors, rescue trucks, and so forth.

3. **Construction and Base Maintenance Equipment.** A vehicle designed for repair, utility maintenance, and construction operations.

**4. Materials-Handling Equipment.** A self-propelled vehicle designed to handle material. For example, a forklift, warehouse tractor, platform lift truck, powered wheeled warehouse crane, straddle truck, or pallet-type transporter. This does not include hand-powered warehouse platform carts, stock selection carts, or similar hand-powered items.

**Vehicle Control Program (VCP)—**The management control functions established for those base activities with assigned vehicles on recurring dispatch. (Reference AFI 24-301, and AFI 24-308.)

Vehicle Design. Vehicles are of two basic designs:

**1. Commercial Design.** A vehicle designed by the manufacturer as a production model for commercial sale and usage. It is built to the manufacturer's specifications and is purchased by the Air Force without major changes. Examples are sedans, station wagons, pickup trucks, material handling equipment, and so forth. These vehicles are assigned a B, C, D, or E designator in their registration numbers.

**2. Military Design**. A vehicle having military characteristics resulting from military research and development processes, designed primarily for use by forces in the field in direct connection with or support of combat or tactical operations. These vehicles are assigned a K, L, or M designator in their registration numbers.

**Vehicle or Equipment Equivalent—**A unit of measure denoting the maintenance complexity of a vehicle or item of equipment.

**Vehicle In-Commission (VIC)—**The total time a vehicle is available to the customer.

**Vehicle Maintenance Manager (VMM) and Superintendent (VMS)—**Individuals charged with managing the vehicle maintenance activity.

**War Reserve Materiel (WRM) Vehicles—**Those vehicles required in addition to peacetime vehicles which provide support for forces, missions, and activities listed in US Air Force war plans.

**Winterization—**Prepping a vehicle for cold weather operation. (Reference TO 36-1-7).

## Attachment 2

## VEHICLE MAINTENANCE MANAGER'S PRE-CONTINGENCY CHECKLIST

Vehicle maintenance managers and superintendents use this checklist to ensure their deployment planning requirements are addressed. Round out this list to suit your specific or unique needs.

1. Have facilities been designated for vehicle maintenance functions? If so:

Are they adequate for mission accomplishment? Are they readily accessible for support of the mission? Are facilities, manpower, and equipment requirements sufficient to support a 24-hour a day, 7-day a week operation? Have all existing facility options been exhausted?

2. Have steps been taken to obtain necessary shop equipment required to support the vehicles dedicated for use at the COB, APOD/E, FOL or SAI?

3. Have steps been taken to obtain necessary publications and forms (that is, policy directives, instructions, manuals, technical orders, lubrication guides, etc.) required to maintain and manage these vehicles? Are OLVIMS computers and necessary software ready to go?

4. Have procedures been established for requisitioning parts, spares, and supplies? Have BPA requirements for local support been identified? Will the operation require facsimile machine for information transfer? Is the MAJCOM's concept of spare parts support understood? Have BPA requirements for internet parts sourcing and commercial delivery been identified?

5. Have readiness spares kits (RSK) been established for critical vehicles in-place and complete at main operating bases? Do deploying vehicles have TMSK? Is vehicle tech data complete?

6. Has a sufficient mix of skilled vehicle maintenance personnel been designated to support contingency operations?

7. Are WRM vehicles being stored and parked separately in a secure, enclosed area?

8. Are WRM vehicles being exercised according to MAJCOM policy?

9. Has a WRM vehicle rotation plan and schedule been developed and implemented?

10. Have using commands and organizations identified special operating needs (that is, pintle hooks, etc.) required for special mission accomplishment? (These items must be identified for pre-stocking and installation. )

11. Are adequate numbers of serviceable fire extinguishers available?

12. Do mobility airlift estimates reflect data for required mechanic tools and shop equipment?

13. Does planning reflect dispersal of assets, vehicles, and personnel as needed if attacked?

14. Have redeployment operations been planned?

15. Have maintenance priorities been established to support contingency operations?

16. Have RSK requirements for sortie-generating vehicles been established?

17. Have mobile maintenance trucks been authorized and assigned by type and quantity required to meet OPlan requirements?

## Attachment 3

## VEHICLE MAINTENANCE CONTINGENCY BEDDOWN CHECKLIST

Used by deployed maintenance personnel to transition from a deployment to a mission capable status.

1. Get facilities established and operational for vehicle maintenance support to the mission. Are they adequate? Do they allow for a physically separated shop for refueling maintenance?

2. Get inventory control of tools and equipment deployed or their status if still en route. Once on-hand, will they properly enable the shop to accomplish repairs to meet the required level of maintenance?

3. Establish reporting channels to pass information or identify problems to the MAJCOM.

4. Have RSK and TMSK spares been inventoried and organized for use, and is the materiel control function established? Have deployed vehicles had their accompanying spare parts and tech orders inventoried and organized for use?

5. Are MAJCOM procedures established for requisitioning parts, materials, and equipment through base supply? In theater locations? Or back to CONUS? Are BPAs necessary and are they established for immediate use? Have BPAs been established with internet commercial parts sources, as required?

6. Are required publications (policy directives, instructions, manuals, and technical orders) on hand? What about lubrication guides?

7. Are all required forms on hand? Is OLVIMS up and running?

8. Have secure storage areas been established for storing equipment and supplies?

9. Are accountability procedures established for tools, equipment, and supplies?

10. Have alternate communications procedures for PAVO been identified? Are facsimile machine requirements identified?

11. Have vehicle maintenance dispersal locations been identified in the event of attack?

12. Are mobile maintenance vehicles and equipment operational?

13. Are hours of operation and manpower mix to support mission requirements established?

## Attachment 4

## RECOMMENDED VEHICLE MAINTENANCE EQUIPMENT

| NOUN | NSN | QTY |
|---|---|---|
| Tester, electronic ignition | 4330-01-044-07992 | 1 ea |
| Cart, fueling and defueling | 4930-00-104-2942 | 1 ea |
| Kit, hydraulic hose repair | 4940-00-015-2970 | 1 ea |
| Battery charger | 6130-00-669-6659 | 1 ea |
| Bead breaker, tire | 4910-00-959-4206LP | 1 ea |
| Sling, lifting | 4910-00-896-1961 | 1 ea |
| Grinding machine 1/3 HP | 3415-00-541-7241 | 1 ea |
| Timing light | 4910-00-500-2135 | 1 ea |
| Welder | 3431-00-846-9636 | 1 ea |
| Welding and cutting set | 3433-00-935-7964 | 1 ea |
| Floor crane | 3950-00-618-4942 | 1 ea |
| Air compressor* | 4310-00-693-2655 | 1 ea |
| AGE MC2A low pressure unit | 4310-00-547-3741 | 1 ea |
| Jack, transmission | 4910-00-585-3622 | 1 ea |
| Jack stands, 5 ton | 4910-00-287-8313 | 12 ea |
| Jack stands, 10 ton | 4910-00-724-2172 | 10 ea |
| Jack, floor, hydraulic, 10 ton | 4910-00-289-7233 | 2 ea |
| Jack, forklift, air | 4910-00-404-7868LP | 1 ea |
| Porto power, 4 ton | 4910-00-455-3112 | 1 ea |
| Jack, floor, hydraulic, 20 ton | 4910-00-860-6587 | 1 ea |
| Dolly, tire and wheel | 4910-01-009-2449 | 1 ea |
| Tester, starting and charging | 4910-01-012-2876 | 1 ea |
| Plug set, radiator repair | 4910-00-273-3660 | 1 ea |
| Hoist, A-frame, 2 ton | 3900-00-449-7004 | 1 ea |
| Press, arbor, bench mounted | 3444-00-254-2125 | 1 ea |
| Vise (large) | | 2 ea |
| Pressure washer | 4940-00-842-2308 | 2 ea |
| Electronic ignition oscilloscope local purchase | | 1 ea |
| 80 ton press | 3444-00-254-2125 | 1 ea |
| Key duplicating machine | 3419-00-808-0480 | 1 ea |
| 4 ton dolly jack | 4910-00-516-5806 | 1 ea |

| NOUN | NSN | QTY |
|---|---|---|
| Computer systemæOLVIMS, with CD ROM | | 1 ea |
| Facsimile machine | | 1 ea |
| Portable generator | | 1 ea |

*Equipment will require Civil Engineering services (plumbing, electrical, floor mounting, etc.)

## Attachment 5

## RECOMMENDED SHOP TOOLS

| NOUN | NSN | QTY |
|---|---|---|
| Battery tester | 6625-01-032-4344 | 2 ea |
| Drill, electric, 3/8 inch | 5130-00-935-7354 | 2 ea |
| Drill, electric, 1/2 inch | 5130-00-435-5691 | 1 ea |
| Drill set, twist | 5133-00-293-0983 | 2 ea |
| Dresser, wheel, abrasive | 5120-00-223-9952 | 1 ea |
| Gun, soldering | 3439-00-618-6623 | 2 ea |
| Hammer, sledge, 6 lbs | 5120-00-265-7462 | 1 ea |
| Impact tool, sliding handle | 4910-00-788-0591 | 1 ea |
| Kit, battery service | 6140-00-752-2184 | 2 ea |
| Kit, cut and flare, HD | 5180-00-293-2867 | 2 ea |
| Measure, liquid, 2 qt | 7420-00-255-8113 | 2 ea |
| Mirror, inspection | 5120-00-596-1098 | 1 ea |
| Multimeter, PSN 6 or equivalent | 6625-00-724-8582 | 2 ea |
| Puller, axle | 5120-00-567-8079 | 1 ea |
| Puller, kit, bearing | 5120-00-423-1596 | 1 ea |
| Puller kit, wheel hub | 5120-00-926-3605 | 1 ea |
| Puller, steering wheel | 5180-00-973-1944 | 1 ea |
| Set, tap and die | 5236-00-357-7504 | 1 ea |
| Tester, battery, solution | 6630-00-171-5157 | 1 ea |
| Tester, cylinder, compression | 4910-00-250-2423 | 1 ea |
| Tester, crankcase vent | 4910-00-482-2040 | 1 ea |
| Tire iron, 12 inch | 5120-00-585-6493 | 1 ea |
| Tire iron, 18 inch | 5120-00-293-0871 | 1 ea |
| Tool, clutch aligning | 5180-00-449-3785 | 1 ea |
| Tool, flaring | 5120-00-541-6662 | 1 ea |
| Tool, tire valve | 5120-00-516-4220 | 2 ea |
| Wheel bearing wrench set | 5120-00-169-4586 | 1 ea |
| Wrench set, 3/4, 14 sockets, 3 handles | 5120-00-204-1999 | 1 ea |
| Impact wrench, 3/8 inch | 5130-00-935-0704 | 2 ea |
| Impact wrench, 3/4 inch | 5130-00-184-1427 | 2 ea |
| Impact wrench, 1/2 inch | 5130-00-889-2134 | 2 ea |

| NOUN | NSN | QTY |
|---|---|---|
| Wrench, torque, 1/2 inch, 0-250 ft lbs | 5120-00-640-6365 | 2 ea |
| Wrench, spanner | 5120-00-277-9076 | 1 ea |
| Wrench, pipe, 36 inch | 5120-00-270-4309 | 2 ea |
| Wrench, C/B-O, 1&1/16 inch | 5120-00-228-9515 | 1 ea |
| Wrench, O/E 1&1/16 by 1&1/4 inch | 5120-00-187-7134 | 1 ea |
| Wrench, box, 1&1/16 by 1&1/8 inch | 5120-00-228-9521 | 1 ea |
| Wrench, C/B-O 1&1/4 by 1&1/4 inch | 5120-00-228-9517 | 1 ea |
| Wrench, box, 1&5/16 by 1&1/4 inch | 5120-00-184-8676 | 1 ea |
| Wrench, OE/Box, 1&5/16 inch | 5120-00-228-9518 | 1 ea |
| Wrench, 1&5/16 by 1&3/8 inch | 5120-00-184-8563 | 1 ea |
| Wrench, open, 1&7/16 by 1&1/2 inch | 5120-00-184-8564 | 1 ea |
| Wrench, box/OE, 1&1/2 inch | 5120-00-277-8834 | 1 ea |
| Wrench, box/OE, 1&3/4 inch | 5120-00-184-8593 | 1 ea |
| Apron | 8415-00-634-5023 | 4 ea |
| Spray gun, paint | 4940-00-146-1664 | 1 ea |
| Wheel bearing wrenches | 5120-00-335-5390 | 1 ea |
| Cord, extension, light w/protector | 6230-00-146-8898 | 4 ea |
| Cutter, pneumatic, hammer | 5130-00-901-8245 | 1 ea |
| Bolt cutter | 5110-00-188-2524 | 1 ea |
| Tester, antifreeze | 6630-00-247-2968 | 2 ea |
| Rubber gloves | | 4 ea |
| Face goggles | 4240-00-269-7912 | 2 ea |
| Oil filter wrench (strap wrench) | | 2 ea |
| Air hoses | | 6 ea |
| Vacuum gauge and press | 4910-00-056-1005 | 1 ea |
| Torque wrench, 3/4 drive, 0-500 lbs | 5120-00-221-7986 | 1 ea |
| Tap and die set, metric | 5180-00-139-5941 | 1 ea |
| Drill set, metric | 5133-01-047-0258 | 2 ea |
| Funnels | | 4 ea |
| Grease gun, hand | | 2 ea |

## Attachment 6

## RECOMMENDED MINIMUM CONTINGENCY PUBLICATIONS AND FORMS

The following list is considered the minimum publications, technical orders, and forms needed to operate at a deployed site:

| | |
|---|---|
| AFPD 24-3 | Operation, Maintenance, and Use of Transportation Vehicles and Equipment |
| AFI 24-301 | Vehicle Operations |
| AFI 24-302 | Vehicle Maintenance Management |
| AFI 24-303 | Command/Air Force Vehicle Integrated Management System (CAFVIMS) and Consolidated Analysis and Reporting System (CARS) |
| AFI 25-101 | War Reserve Materiel (WRM) Program Guidance and Procedures |
| AFCSM 24-1 | On-Line Vehicle Interactive Management System (OLVIMS) |
| TO 36-1-7 | General Inspection and Preparation Check list - AF Vehicle and Liquid Cooled Powered Ground Equipment Operation in Cold Weather Areas, if applicable |
| TO 36-1-191 | Technical and Managerial Refernece for Motor Vehicel Maintenace |
| TO 36Y4-1-171 | Vehicle and Powered Ground Equipment Storage Batteries |
| TO 36Y32-1-142 | Care, Maintenance, and Repair of Pneumatic Tires and Inner Tubes |
| TO 37A-1-101 | Fuel, Water, and Lubricant Dispensing Equipment |
| Variable | One set of maintenance manuals and parts catalogs (TOs or commercial) for each make, model, year, and type of vehicle assigned |
| AF1800 Series | Operator's Inspection Guides and Trouble Reports |
| AF1823/AF1823-1 | Vehicle and Equipment Work Order |
| AF1827 | Minor Maintenance Work Order, or equivalent computer generated form |
| AF1828 | Vehicle Historical Record, or equivalent computer generated product |
| AF2005 | Issue/Turn-In Request (or AF Form 2413, Supply Control Log) |
| DD1348-6 | Non-NSN Requisition |
| AFTO91 | Limited Technical Inspection - Motor Vehicle |
| AF2009-1 | Manual Supply Accounting Record |
| Optional: NAVSUP Modifier Code 97 | Repair Parts Common Assembly, use for bench stock planning |

## Attachment 7

## TEMPORARY MISSION SUPPORT KIT (TMSK)

*NOTE*: Individual vehicle TMSK is developed and requisitioned for each specific vehicle that is designated to deploy. The following is a recommended generic listing of items to be considered for TMSK. These spares are requisitioned, assembled, and boxed for deploying vehicles when they are designated for shipment. These spares are required to support vehicles for a 30 day period. This list contains both specific and general support items for vehicles.

**Vehicle Specific:**

| Nomenclature | Nomenclature |
|---|---|
| Starter, Solenoid, Relay | Alternator and Voltage Regulator |
| Ignition System (including points, plugs, distributor cap, rotor, ignition wire set, and electronic ignition parts). | Brake System, (including master cylinder, wheel cylinder, caliper, front and rear flexible brake hoses). |
| Filters (2 or 3 changes) (fuel, air, and oil) | Belts |
| Hoses (upper and lower radiator and by-pass hoses) | Water Pump |
| Battery (dry charge) | Wheel Seals and Bearings |
| U-Joints | Extra Keys (1) (switch) (door Locks) |
| Carburetor, Throttle Body Injectors | Injectors (diesel) 1 set |
| Injector Pump Kits (diesel) | Power Steering Pump (if equipped) |
| Spare Tire (mounted) | |

General Support:

NOTE: The host unit is responsible to deploy one kit per location. Variety of::

| Nomenclature | Nomenclature |
|---|---|
| Metal Tubing | Hoses, fuel (hi and low pressure) |
| Heater Hose | Fuses |
| Gasket Material (paper and cork) | RTV Gasket Compound |
| Drum Faucets | Pintle Hooks |
| Wire (electrical, sizes 12, 14, 16, 18, and 20 gauge, 100 feet). | Hose Clamps for Radiator, Heater Hose and Fuel Lines |

Bulbs and Head Lamps
Cotter Pins
Universal Battery Terminal Connectors and Cables
Freeze Plugs (assorted)
Gas Caps
Tape (electrical and antisieze)
Exhaust hangers and clamps
Tire Silicon Spray Repair Kits and Valve Stems
Tubing Fitting Assortment
Assorted Keys, Woodruf and Straight
O-Ring Kits and Splicing Kits
Lubricants (packaged POL)
Gear Oil
Brake Fluid
Antifreeze
WD-40
Gunk
Nuts, Bolts, Screws and Washers (assorted)
Universal Wire Terminals and Connectors
Lug Nuts and Studs, Left and Right Hand Threads
Radiator Caps
Radiator Sealer
Starting Fluid
Flexible Exhaust Pipe
Drain Cocks
Flashers, 12 and 24 Volt
Solder, Acid and Rosin Core
Electrolyte and Neutralizer
Grease, Chassis and Wheel Bearing
Hydraulic Fluid
Automatic Transmission Fluid
Motor Oil (assorted grades)
Liquid Wrench
Mineral Spirits

## Attachment 8

## GUIDELINE FOR QUALITY ASSURANCE EVALUATOR (QAE) DUTIES

**A8.1.** The purpose of this sample position description is to provide technical assistance and guidance for Quality Assurance Evaluator (QAE) inspection duties related to the surveillance of Vehicle Operations and Maintenance Contracts, School Bus Contracts, COPARS, and Railroad Contracts.

**A8.2.** The QAE is responsible for objective evaluation and documentation of contractor performance by performing inspection duties for assigned service contracts in accordance with appropriate Quality Assurance Surveillance Plans (QASP). To ensure proper assessment of contractor performance and adaptations of prescribed guidelines, the QAE must possess technical working knowledge of acceptable trade practices. Notifies ACO and FAC of unsatisfactory contractor performance and prepares proper file documentation.

**A8.3.** The responsibilities and duties of the QAE are governed by Department of Defense and Air Force regulations, prescribed technical standards, (e.g. MILSTD 105D), Performance Work Statement, and the Quality Assurance Surveillance Plan. Primary duties:

A8.3.1. Develops a quality assurance inspection schedule for services. Plans inspection times to interface with the contractor's schedule of work to ensure systematic, consistent inspections. Prepares inspection schedules for random sampling and periodic checks for items to be inspected at specific times. Performs random sampling surveillance at prescheduled times to maintain randomness integrity. Ensures a complete audit trail of all inspections, makes changes to monthly schedule in advance, and completes on a weekly basis. Documents and fully explains all changes. Recommends reduced sampling ACO and FAC when appropriate. When reduced sampling is approved, develops reduced inspection schedule IAW guidance and requirements specified in the QASP.

A8.3.2. Performs inspections using methods specified, such as random sampling, review of management information system reports, surveillance checklists, and validation of customer complaints to ensure a complete, fair, and objective surveillance of contractor performance. Uses the Performance Requirements Summary and Acceptable Quality Levels (AQL) identified therein to determine acceptability of contractor performance. Summarizes results of evaluation of contractor's performance and calculates recommended payment reductions, as required. Reports results and recommendations to the ACO and FAC. When unacceptable performance is observed or customer complaints validated, annotates checklist and advises the contractor representative that corrective action is required. Reviews defective service to determine adequacy of corrective action.

A8.3.3. Provides the ACO a copy of the monthly surveillance schedule, complaint forms, and other checklists. Initiates and submits AF802, **Contract Discrepancy Report** (CDR), to the contracting officer when the contractor's performance is unacceptable.

A8.3.4. Acts as liaison between base commander, FAC, ACO, contractor, contractor's representative, and customers receiving services. Participates in meetings with the contractor, ACO, and key Air Force functional representatives to resolve problem areas, discuss procedures, and review CDRs and contractor responses.

A8.3.5. Serves as technical member of Pre-award Survey Team.

A8.3.6. Makes random sample selections and accepts or rejects contractor performance based on quality assurance surveillance plan instructions and guidelines.

**A8.4.** Special Requirements: Required duties and responsibilities are described in the position description. They are:

A8.4.1. Driver license requirements.

A8.4.2. The work includes walking, standing, stooping, bending, and exposure to inclement weather.

A8.4.3. Work during odd shifts, nights, weekends, or holidays.

A8.4.4. Work may be intermittent and incumbent may have on-call tours of duty.

A8.4.5. Work may be part-time, shift, evenings, nights, early mornings, or split shifts.

A8.4.6. Work may be irregular or unpredictable, such as night emergencies or in support of contingency exercises during other than normal duty hours.

A8.4.7. Work may be accomplished in the presence of dirt, dust, fumes, etc., or with potential contact with foreign matter.

A8.4.8. Work may be outdoors in all kinds of weather. The wear of appropriate safety gear is required when exposed to hazardous conditions.

A8.4.9. Work may include other quality assurance surveillance tasks as assigned by the FAC.

## Attachment 9

## MINIMUM REQUIREMENTS AND CONSIDERATIONS FOR IMPLEMENTING AN OIL ANALYSIS PPROGRAM

**A9.1. Analyzers.** Units performing oil analysis will only use analyzers, or other equipment, recommended for Air Force use by the MEEP and WR-ALC/LE.

A9.1.1. Commercial Oil Analysis. A Commercial Oil Analysis laboratory may be used in lieu of approved analyzers. MAJCOMs will ensure commercial laboratories test oil to the same specifications as approved analyzers.

**A9.2. By-Pass Filters** . By-pass filters are not required to run an oil analysis program. However, there is a considerable body of evidence which proves their use will significantly extend oil drain intervals beyond that achieved with analysis alone for most vehicles. For the purpose of an oil analysis program, the definition of a by-pass oil filtration system is one which provides high-density, slow filtration (one to six quarts per minute at engine operating temperature) of engine oil without affecting the primary OEM filtration system, removes solid contaminants down to three microns (one micron measures 1/39 millionth of an inch), controls moisture content in oil, is compatible with all MIL-SPEC oils, and must specifically claim to extend oil drain intervals. As long as a supplier certifies that their by-pass oil filtration system meets the definition as stated herein, that system is acceptable for Air Force use.

A9.2.1. It may not be feasible to install by-pass filters on some vehicles in a fleet. This is due to the climate in which the vehicle is used, duration of engine run time at operating temperature, and age of the vehicle. In typically warm weather climates (where 15W40 can be used year round) all vehicles benefit from the additional filtration because flow through the filter starts almost immediately. However, in colder climates engines need to run at the manufacturer's normal operating temperature for at least ten minutes to reduce the oil's viscosity to allow flow through the by-pass filter. Longer run times are necessary in extremely cold climates. Managers also need to consider a vehicle's age when determining whether to install a by-pass filter. Vehicles in replacement codes "A" through "J" typically will not remain in service long enough to justify the expense of a by-pass filter.

**A9.3. Instructions** . MAJCOMs, will develop handbooks, pamphlets, or operating instructions (as appropriate, command specific) outlining procedures for implementing an oil analysis program. Unit level vehicle maintenance managers must develop a Maintenance Operating Instruction (MOI) detailing specific operational and procedural measures of their oil analysis program to ensure continuity and standardization.

**A9.4. Oil Analysis Interval** . As a minimum, analysis intervals will be based on the following three criteria; fuel consumption, established scheduled maintenance interval, and/or every six months. Used in concert, these three interval criteria provide the most accurate, least laborious, and safest method of ensuring the oil's contamination does not reach an unsafe level.

A9.4.1. Fuel consumption is the most effective means in determining when to analyze engine oil. This criteria tracks engine use regardless of vehicle use. Data from the HQ PACAF test program indicates oil analysis must be accomplished every 300 gallons of fuel used for diesel and gasoline engines. This single indicator simplifies the tracking process while employing a sufficient margin of safety ensuring both types of engines receive adequate analysis before high levels of contamination accumu-

late in the oil. Accurate fuel accounting by individual vehicle is essential to ensure adequate analysis of each vehicle's engine oil, and as such, an Oil Analysis program to track fuel consumption was included in OLVIMS Update 18. However, the Oil Analysis program can not be accessed from the OLVIMS main menu. It has to be run from the OLVIMS\SYSTEM directory. Once in this directory, type NVQEXE (space) NVQTOL? (? = OLVIMS site code), then follow the screen prompts.

A9.4.2. The scheduled maintenance interval is a convenient backup to the fuel consumption interval. Because the vehicle is already in the shop for maintenance, it is an easy opportunity to ensure the oil is in satisfactory condition.

A9.4.3. The second backup to the fuel consumption interval is the six month interval. If the vehicle's oil has not been analyzed during the previous six months, as a result of fuel consumed or scheduled maintenance, then the oil is analyzed now to ensure it is in satisfactory condition. This becomes especially important in the second and subsequent years of an oil analysis program.

**A9.5. Oil Sampling** . Method, equipment, and personnel used to collect oil samples are critical aspects of the analysis program. Oil temperature, location on the engine where the sample is obtained, cleanliness of sampling equipment, amount taken, the procedure itself, and the weather are major factors in determining the accuracy of the analysis process. Improper sampling techniques will skew analysis results causing unnecessary oil changes. Purity of crankcase oil is an absolute necessity if oil analysis is to be successful. Using only one type of engine oil throughout the fleet (15W40, MIL-SPEC 2104D, meets most vehicle manufacture requirements for lubrication) is an excellent means of ensuring purity of crankcase oil. Generally, there are two methods in obtaining an engine oil sample, either by suction device through an access port (dip stick tube, or replenishment tube) or a petcock attached to an oil pressure port. Unit level MOIs will provide specific guidelines pertaining to the method and procedure to be used to obtain oil samples.

**A9.6. OLVIMS Systems Codes** . The program's data collection and analysis scheduling relies significantly on several OLVIMS systems codes to be effective. Once an oil analysis program is initiated, all engine oil changes must be documented on the AF1823 using system code "01HV." Oil analysis is documented using a new OLVIMS system code "01HX." This is needed for accurate tracking of intervals. By-pass filter installations are documented using OLVIMS system code "01HM" with "01HL" used to record by-pass filter element replacements.

**A9.7. Servicing Engine Oil** . Operator servicing of the engine oil presents the greatest potential for crankcase contamination. Local managers must be aggressive in their efforts to minimize all possibilities of engine oil contamination. Knowledge and motivation of the base population are the best methods in preventing accidental oil contamination. Another excellent method of preventing oil contamination is to use only one type of engine oil throughout the fleet. This can be accomplished by establishing a Requisition Exception Code (REC) in the Standard Base Supply System (SBSS) for each type of engine oil **not used** in the fleet. Another method to help prevent accidental contamination of engine oil is to place warning tags on dipsticks identifying the type of oil to use. Alternative methods are only limited to one's imagination.

**A9.8. Vehicle Warranty** . Failure to change engine oil at manufacture's recommended intervals will not void warranties. Manufacturer's base lubrication warranty obligations on the oil's condition, not length of time used. Parameters established in this program are conservative in nature to ensure the oil is changed

before it degrades (breaks down or becomes contaminated) to the degree it would void a manufacturer's warranty.

## Attachment 10

## COMMONLY USED VEHICLE AND EQUIPMENT MICAP REPORTABLE SRDS

| SRD | Mgt Code | SRD Narrative (Vehicle Type) |
|---|---|---|
| RDA | B141 | BUS, CONVERTIBLE AMBULANCE |
| RF1 | B163 | AMBULANCE, MODULAR, 4X4 |
| RF9 | B180 | TRUCK MULTISTOP, 4X2, DED |
| RWG | B361 | TRUCK TRACTOR, ***RRR VEHICLES ONLY** |
| RWH | B401 | TRAILVR, 40 FOOT, ***RRR VEHICLES ONLY** |
| RWJ | B417 | TRAILER, 50T, LOWBOY ***RRR VEHICLES ONLY** |
| RGG | C116 | TRUCK, WRECKER |
| RGW | C242 | TRUCK 9T HI LIFT 6X4 |
| RWK | C324 | TRUCK, DUMP, 4X2 ***RRR VEHICLES ONLY** |
| REX | C355 | TRACTOR, TOWING, SUPT EQIP |
| RWL | C414 | TRAILER, SEMI, 10T ***RRR VEHICLES ONLY** |
| RDC | C507 | TRUCK RESPONSE CONV ARMOR |
| RF8 | C508 | SEDAN ARMORED |
| RE6 | C515 | CRANE, ENGINE CHANGE, 7 T |
| RDD | D508 | CRANE, SELF PROPELLED |
| RFN | D510 | CRANE, SELF PROPELLED |
| RWM | D539 | TRUCK, DUMP, 6X4 ***RRR VEHICLES ONLY** |
| RWN | D569 | TRACTOR, FULL SIZE T-7***RRR VEHICLES ONLY** |
| RDH | D580 | SNOW REMOVAL UNIT ROTARY |
| RFQ | D580A | SNOW REMOVAL UNIT ROTARY |
| RDJ | D581 | SNOW REMOVAL UNIT ROTARY |
| RDK | D582 | SNOW PLOW 34000/36000G |
| RDL | D583 | SNOW PLOW, 54000G |
| RDY | D594 | CLNR VAC TRK MTD MULTIPURP |
| RWP | D607 | SWEEPER, ROTARY, ***RRR VEHICLES ONLY** |
| RDN | D624 | SWEEPER, SNOW AIR BLAST |
| RDQ | D631 | LOADER, PNEUMATIC TIRE |
| RWQ | D632 | LOADER, SCOOP, ***RRR VEHICLES ONLY** |
| RGP | D633 | LOADER SCOOP PT 4CU YD |
| RDP | D640 | LOADER, TRACKED 2-1/2 CY |

| **SRD** | **Mgt Code** | **SRD Narrative (Vehicle Type)** |
|---|---|---|
| RWR | D652 | GRADER, SIZE 5 ***RRR VEHICLES ONLY** |
| RGQ | D653 | GRADER, ROAD, MOTORIZED, ARTICULATING |
| RDR | D655 | GRADER, ROAD, MOTORIZED, RIGID FRAME |
| RWS | D681 | ROLLVR, VIBRATOR, ***RRR VEHICLES ONLY** |
| RDS | D731 | DIST WTR TRUCK 1500G |
| RWT | D753 | EXCAVATOR, WHEELED, ***RRR VEHICLES ONLY** |
| RFY | E801 | 4K WAREHOUSE TUG |
| R1A | E816 | 4K WAREHOUSE FORKLIFT (DIESEL) |
| RFU | E819 | 6K VARIABLE REACH FORK LIFT |
| RDT | E820 | TRUCK, FORKLIFT DIESEL 6KRT |
| RGT | E822 | TRK FL DED 6200# STD |
| RD2 | E824 | TRK FL 15000 DED STD |
| RFW | E828 | 22K AIS FORKLIFT VEHICLE |
| RDU | E832 | TRUCK LIFT FORK |
| RGS | E934 | TRK LOWER LOBE LOADER |
| RDV | E935 | TRUCK (CONDEC) 25K (463L) |
| RFR | E938 | LOADER AIRCRAFT 40K |
| SRD | Mgt Code | SRD Narrative (Vehicle Type) |
| | | |
| RGV | E945 | 60K CARGO LOADER A/C TRUCK (463L) |
| RDZ | E950 | TRUCK,FORKLIFT,HK,GAS |
| RGZ | E956 | 10 K STD FORKLIFT VEHICLE 463L |
| RD4 | E958 | TRUCK, FL 10000# AT 463L |
| RGU | E959 | TRK F/L AT LGE 13K |
| RGA | E972 | TRUCK ACFT CARG |
| RGN | E979 | 50K CONTAINTER HANDLER |
| RF3 | K194 | TRUCK UTILITY 4X4 |
| RF4 | K195 | M1026 TRUCK ARMORED 4X4 |
| RF5 | K195A | M1038 TRUCK 4X4 |
| RF6 | K195B | M998 TRUCK UTILITY 4X4 |
| RF7 | K196 | TRUCK UTILITY 4X4 |
| RGR | K197 | TRUCK SHELTER CARR TACT 5/4TON 4X4 |
| RD6 | K212 | TRUCK M880 SERIES 1-1/4T |
| RFL | K248 | TRUCK, 21,000-23,999 GVW |
| RG2 | K248A | TRUCK, 21,000-23,999 GVW |

| SRD | Mgt Code | SRD Narrative (Vehicle Type) |
|---|---|---|
| RGB | K251 | TRUCK CARGO 5TON DROPSIDE |
| RGC | K251 | TRUCK CARGO 5TON DROPSIDE W/O WINCH (M923) |
| RD7 | K371 | TRUCK, 21000-23999 GVW |
| RD9 | K371 | TRUCK TRACTOR 6X6 5-TON (M932) |
| RGD | K380 | TRK TRAC W/CRANE M.A.N. |
| RFG | K450 | TRAILER, CARGO, 1/2 TON M4 |
| RFE | K453 | TRAILER CARGO 1 TON M101 |
| RFF | K454 | TRAILER CARGO 1.5T M416 |
| RG9 | K459 | Trailer, M1061 |
| RWU | L114 | TOW AND RECOVERY, FIELD REPAIR, MOBILE C |
| RGE | L115 | TRK WRKR 10T 8X8 M.A.N. |
| RGH | L123 | AERIAL PLATFORM TRUCK A/S32P-21 |
| REA | L125 | 530-53 PUMPER FIRE TRUCK |
| REK | L127 | TRK COMM WTR P-18 |
| RGJ | L128 | 5000GAL WATER TANKER FOR CFR RESUPPL |
| REC | L130 | TRUCK, FIRE PUMPER, P-8 OR P-24 |
| RED | L133 | TRUCK, FIRE PUMPER, P-12 OR P-22 |
| REG | L143 | TRUCK, FIRE CRASH, P-2 OR P-23 |
| RGK | L144 | P27 FIRE TRUCK MINI PUMPER |
| REH | L145 | P-19 TRUCK, FIRE CRASH |
| REL | L149 | TRUCK, FIRE CRASH P10 |
| REM | L151 | TRUCK, FIRE CRASH P13/P20 |
| RF2 | L153 | FIRE TRUCK, MGMT CODE P15 |
| RG4 | L191 | MAINTENANCE TRUCK |
| RFP | L271 | TRK REFUELER HYDRANT |
| RER | L275 | TRUCK, FUEL SERV. 5000 GA |
| RFK | L315 | TRUCK LIQUID NITROGEN |
| RET | L350 | TRAC. ACFT. TOW MB-2 |
| REU | L351 | TRAC. ACFT. TOW MB-4 |
| REV | L353 | TRAC. ACFT TOW, U-18 |
| REW | L354 | TRAC. ACFT TOW. U-30 |
| RE3 | L382 | SEMI-TRAILVR OXIDIZER TRA |
| RE2 | L385 | UDMH,4000G,R17 SEMI-TRAIL |
| RE4 | L389 | SEMI-TRAILVR COMPRESSED GAS |
| RE5 | L390 | TRAILER LO/LN RECHARGER |

| **SRD** | **Mgt Code** | **SRD Narrative (Vehicle Type)** |
|---|---|---|
| SRD | Mgt Code | SRD Narrative (Vehicle Type) |
| | | |
| RE1 | L426 | MOB DOLLY SET M720 |
| RFC | L427 | DOLLY SET LT M832 |
| REY | L42A | M1022 DOLLY SET |
| RFH | L486 | TLR CHS 2 1/2T |
| RFB | L504 | CARRIER, PERSONNEL, ARMOR |
| RG8 | L532 | TRUCK, HMMWV, M1116 |
| RWC | L999 | RESCUE TRUCK FOR HAZ MAT/AIRCRAFT A/S32P |
| GHJ | W203 | LAVATORY SERVICING TRUCK (AS32A8) |

***NOTE***: MICAP Reportable SRDs for these management codes apply only to those assets assigned against Rapid Runway Repair (RRR) package authorizations. Vehicle maintenance activities using these SRDs should be prepared to validate the asset in fact is assigned to a RRR authorization. The vehicle authorization listing (VAL), maintained in the fleet management section of vehicle operations is the primary source document for supporting use of these SRDs.

## Attachment 11

## IC 2001-1 TO AFMAN 24-307, PROCEDURES FOR VEHICLE MAINTENANCE MANAGEMENT

**6 AUGUST 2001**

**SUMMARY OF REVISION**

This revision incorporates Interim Change IC 2001-01. Effective 1 October 2001, this interim change (IC) 01-1, corrects procedural guidance to more accurately reflect Vehicle Out of Commission (VOC) hours and capture Depot rebuild costs in the On-Line Vehicle Interactive Management System (OLVIMS). The VOC begins with the date and time that the operator has completed operator care and signs in at the vehicle maintenance customer service center/shop or transportation personnel receive a request for maintenance support (mobile, wrecker, etc.), whichever occurs first. A bar ( | ) indicates revision from previous edition.

1.16.1. VOC starts at the time the customer signs in at the vehicle maintenance Customer Service Center (CSC)/shop. This date/time is also entered on the Operator's Inspection Guide and Trouble Report as the date/time that the discrepancy is reported to maintenance. The CSC adjusts the start time to account for actual downtime beginning with any preliminary wrecker service or mobile maintenance support. Adjustments should be coordinated with Maintenance Control and Analysis (MC&A) and vehicle operations dispatch to confirm the operator's original request for repair assistance. Upon VMM or VMS request, MC&A provides a VOC report reflecting hours controlled by maintenance (in-house) and repair hours not controlled by maintenance (contract, warranty, etc.). VOC time ends after completion and verification of all maintenance actions.

1.16.2. To support MAJCOM management programs, separate vehicle in-commission (VIC) percentage goals can be established to apply as a metric (management indicator). This may be by major vehicle type or overall fleet.

Following 1.16.2.

(ADDED) Note: The MAJCOMs may no longer exclude specific time periods for repairing seasonal equipment; for example, snow removal, deicing equipment and lawnmowers during the off-season. Extracting these hours adversely affects the actual VOC hours in OLVIMS. Vehicle down time begins when the vehicle is turned in for maintenance or when a request for maintenance support (wrecker, mobile, etc) was received. Vehicles awaiting accident, abuse and repair decisions/repairs will draw downtime. This includes those awaiting repair decisions by MAJCOM, WR-ALC, OO-ALC, SA-ALC or local.

(ADDED) 2.2.17.1. Capture vehicle downtime. Retain vehicle record in master file while vehicle is undergoing depot rebuild so that vehicle downtime is accrued (vehicle not available to the user). The downtime begins when the vehicle is removed from service and the shipping LTI is accomplished (this work order remains open). Downtime ends after the vehicle returns from depot, the acceptance LTI is accomplished and the vehicle is available for use. There will be no accounting of vehicle downtime if the vehicle is being shipped to depot and will not return to the shipping base.

(ADDED) 2.2.17.2. Capture depot rebuild cost. Process a "JZ" transaction to capture the cost of depot rebuild when the vehicle returns from depot (JZ transaction is generated by the JZ screen that may be seen on the PCN SB004-005, edit list. JZ is used to charge the contract cost and establish contract warranty information). This cost will include transportation and actual depot repair costs. JZ transactions are limited to $99,999 per month/quarter. If depot and shipping costs exceed $80,000, split the cost evenly and capture the remaining cost the following month/quarter. WR-ALC provides depot costs to the MAJCOMs which are forwarded to the base. Contact your local TMO for the shipping cost to depot. Use this same shipping cost for the return cost from depot.

(ADDED) 2.2.17.3. Ensure depot rebuild date is captured and properly loaded via the AZ (years and months) in OLVIMS to prevent premature movement into replacement codes A-J, ref: AFCSM 24-1, (AZ transaction used to load/update/delete a vehicle (static data).

4.6. Vehicle and Equipment Work Order and Vehicle Processing (Main Shop). Portable test equipment and a small bench stock enhances the CSC operation. The CSC and outlying work centers use AF Form 1827, **Minor Maintenance Work Order**, for repairs that take less than 2 labor hours, and for the installation of low-cost bench stock parts. The AF1827 will not be used when the total repair time (awaiting maintenance, awaiting parts and actual labor) exceeds 2 hours. A normal work order will be processed to capture downtime exceeding the 2-hour limit. When the vehicle operator reports to the CSC/shop with the vehicle inspection guide, the operator stays with the vehicle until the inspection and debriefing are complete. Operators will perform required operator care, to include interior and exterior cleanliness, before turning the vehicle over to the CSC. Processing steps essentially follow the pattern below (note, the VMM or VMS may adjust procedures for vehicle in-processing as necessary to meet local conditions and mission):

Following 4.6.

(ADDED) Note: The AF1827 will not be used to record multiple jobs on the same vehicle during the same repair timeframe. Each line on the AF1827 is interpreted as a separate work order in OLVIMS.

4.6.3. If the following criteria are met - use the AF1827.

(ADDED) 4.6.3.1. Scheduled/delayed maintenance is not required.

(ADDED) 4.6.3.2. Bench stock parts do not exceed the low-cost threshold.

(ADDED) 4.6.3.3. Requested repairs, to include “awaiting maintenance/parts” and labor hours combined, do not exceed 2 hours.

Following 4.11.

(ADDED) Note: If repairs cannot be completed in 2 hours or less (VOC begins when disabled vehicle is reported to transportation) open a work order to capture all VOC.

6.5.2. Use USAF management code 4000 in place of the vehicle's actual management code when processing vehicles for disposal (the final preparation for salvage work order only). Use vehicle operations' RC/CC code and the using organization code of 0O (zero oscar) for management code 4000 AF1823s. Do not use USAF management code 4000 for new vehicles processing in to the base, excess or depot. If a vehicle is shipped to depot, leave the work order open drawing VDM until it returns from depot and is placed in service. There will be no accounting of vehicle downtime if the vehicle is being shipped to depot and will not return to the shipping base.

Table 6.1. Vehicle and Equipment Records, Rule 15, Column B. minor or mobile maintenance accomplished on a vehicle (time awaiting parts, awaiting maintenance, and direct labor hours combined must be less than 2 hours).

6.17.2.5. Time. Enter the 24-hour clock time (four-digit military time; for example, 1430) that the vehicle/equipment was turned in for maintenance or request for maintenance support (wrecker, mobile, etc.) was received (reflect period that vehicle is not operational).

6.20.14. Block 14, Received (Date/Time). Enter the date (MMDDYY) the vehicle was turned-in to the shop or when the request for maintenance support (wrecker, mobile, etc.) was received (example 013199 for 31 January 1999). Enter the clock time the vehicle was turned-in using a 24-hour clock. The date and time starts when the vehicle or equipment item is physically turned-in to the maintenance facility or when a request for maintenance support (wrecker, mobile, etc.) was received. Date and time must match the date and time reported to maintenance on the operator’s inspection guide and trouble report. Vehicles awaiting accident, abuse and repair decisions/repairs are not available to the user and will draw downtime.

6.20.15. Block 14A, Released (Date/Time). Enter the date and the 24-hour clock time the vehicle was released from maintenance or the maintenance support (mobile, etc) was complete and the vehicle returned to user (reflect period that vehicle is not operational).

6.23. **General Information**. The AF1827 is used to record minor maintenance repair actions for jobs of 2 labor hours or less on vehicles and equipment items (time awaiting parts, awaiting maintenance, and direct labor hours combined must be less than 2 hours). Document the vehicle kilometer, miles, or hours data to update the specific vehicle master record. The AF1827 is also used to document labor-hours: in tire and battery shop stock buildup or repair; hazardous/solid waste management, disposal and training;

and repair of shop equipment or spares. Use the AF1827 to collect direct labor hours used for these activities.

Following 6.23.

(ADDED) Note: The AF1827 will not be used to record multiple jobs on the same vehicle during the same repair timeframe. Each line on the AF1827 is interpreted as a separate work order in OLVIMS.

6.24.1. Minor maintenance documented on AF1827 is limited to minor maintenance repair actions of 2 labor hours or less on vehicles and equipment items (time awaiting parts, awaiting maintenance, and direct labor hours combined must be less than 2 hours), and use only low-cost bench stock parts and material.

6.25.2.2. Use "7" as the fifth position to the preprinted J999, for minor and mobile maintenance actions (time awaiting parts, awaiting maintenance, and direct labor hours combined must be less than 2 hours).

Following 6.25.2.2.

Note: Tunner 60k aircraft cargo loaders (management code E945) repair actions will not be documented using the AF1827, Minor Maintenance Work Order. All repairs performed on Tunner 60k loaders will be documented on AF1823/1823-1, Vehicle and Equipment Work Order to capture repair actions in precise detail to gauge system/component failures as compared to contractual agreements.

6.25.8. Block 8, Actual Labor Hours. Enter the actual direct labor hours used to do the repair. This entry is in hours and tenths. For J9997 work order numbers, this entry does not exceed 2.0 hours. Use the AF1823/1823-1 if the vehicle downtime exceeds 2.0 hours (awaiting maintenance/parts and direct labor hours combined exceeds 2.0 hours).

## Attachment 12 (Added-AFMC)

## QUARTERLY REPORT
## (SAMPLE)

DATE:

MEMORANDUM FOR HQ AFMC/LGRV

FROM: 22 LRS/LGRVM

4375 Chidlaw Rd, Bldg 262

Wright Patterson AFB, OH 45433-5006

SUBJECT: Quarterly Report; Jan to Mar 02

A. Vehicle Equivalents: Jan _____ Feb _____ Mar _____

B. Total Fleet VIC Rate: Jan _____% Feb _____% Mar _____% Qtr Avg _____%

C. 0-24 Hr Turn-Around Rate: Jan _____% Feb _____% Mar _____% Qtr Avg _____%

D. Analysis Comments: (Comment only if the quarterly average did not meet the goal) ("This is an example only") Our 0-24 hour goal was not met due to processing 35 new vehicles this quarter. This raised our rate by 4 percent. We simply had more vehicles to process than available mechanics. This was a one-time mission increase to our base.

**Table A12.1. (Added-AFMC) E. TCTO Compliance Data:**

| TYPE VEH | TCTO # | VEH REG # | W/O # | DATE COMP |
|---|---|---|---|---|
| P-18 | 36A12-23-19-502 | 88L00001 | T0012 | 20 Feb 02 |

**REPORT POC:** SSgt John Doe, at DSN 787-XXXX.

## Attachment 13 (Added-AFMC)

## TIME COMPLIANCE TECHNICAL ORDER (TCTO), SERVICE BULLETIN (SB), MANUFACTURER'S RECALL, AND MAJCOM DIRECTED INSPECTION REQUIREMENT NOTIFICATION, COMPLIANCE REPORTING AND FOLLOW-UP

1. The following procedures are establish for timely notification, compliance reporting, and follow-up on TCTOs, Service Bulletins (SB), Manufacturer's Recalls, and MAJCOM directed One-time Inspections (OTI). Each base will have a single point of contact, preferably in maintenance control, for the purpose of tracking and controlling these compliance requirements.

2. Requirement Notification:

2a. TCTOs. To ensure receipt of routine TCTOs, the vehicle maintenance Technical Order Distribution Office (TODO) must establish a distribution requirement for each TCTO Series applicable to vehicles maintained, in accordance with TO 00-5-2. When Urgent Action TCTOs, Interim TOs, and Interim Message Changes are issued by the Air Logistics Center (ALC) (WR-ALC for most vehicles), and provided to the MAJCOMs for distribution to field units, HQ AFMC/LGRV will forward a copy of the compliance requirement to applicable field units, by the most appropriate method.

2b. Service Bulletins. SBs are normally provided to the MAJCOMS by WR-ALC for distribution to field units, however, the vehicle manufacturer will sometimes issue a SB directly to field units. When notified and provided a copy of the SB, HQ AFMC/LGRV will forward a copy of the SB to applicable field units. When a manufacturer provides a service bulletin directly to your unit, notify HQ AFMC/LGRV by phone or e-mail, so we can ensure all units requiring the SB are notified (the manufacture sometimes sends the information to the wrong units).

2c. Manufacturer's Recalls. Vehicle recalls are typically demanded by DOT's National Highway and Traffic Safety Administration (NHTSA) and is, in most cases, reported by vehicle and equipment manufacturers or directly from GSA to affected customers. When notified and provided copies, HQ AFMC/LGRV will forward recall notices to applicable field units. When a manufacturer provides a recall notice directly to your unit, notify HQ AFMC/LGRV by phone or e-mail, so we can ensure all units requiring the recall are notified.

2d. MAJCOM directed One-time Inspections (OTI). When HQ AFMC/LGRV or WR-ALC identifies a potential safety hazard, a vehicle malfunction that could cause more extensive damage to a vehicle, or a malfunction has occurred and the fleet wide impact is needed to pursue a latent defect issue, an OTI may be issued. HQ AFMC/LGRV will initiate or forward inspection instructions to applicable field units.

3. Compliance Reporting: Field units will notify HQ AFMC/LGRV, by e-mail or FAX, when TCTOs, SB, Manufacturer's Recalls and OTIs, are completed. Provide the following information: identification of the compliance requirement (such as TCTO number, manufacturer's recall number, SB number, etc.), registration number(s), work order number(s), and date completed. As a reminder, vehicle historical records should be annotated properly and the correct work order prefixes used. The work order prefixes should be; "T" for TCTOs, "S" for SB and OTIs, and "Z" (Warranty) for Manufacturer's Recalls. Upon notification of the completion of a compliance requirement, HQ AFMC/LGRV will annotate the compliance on a tracking sheet. Periodically, HQ AFMC/LGRV will update those actions being tracked in the Consolidated Analysis and Reporting System (CARS).

4. Follow-up: HQ AFMC will track all known TCTOs, SB, Manufacturer's Recalls and OTIs, by base, by vehicle, through completion. Periodically, a follow-up on all open compliance actions will be accomplished. The follow-up will consist of a memo to each unit having compliance actions pending. The memo will request that the field unit submit the work order numbers and dates accomplished for those maintenance actions completed or an estimated completion date for those compliance action items still pending.

## Attachment 14 (Added-AFMC)

## VEHICLE MANUFACTURER CODES

**Table A14.1. (Added-AFMC) Manufacturer Codes**

| MANUFACTURER | CODE | MANUFACTURER | CODE |
|---|---|---|---|
| ALLIS CHALMERS | AC | GROVE CRANE INC | GRV |
| ALMONT WELDING | AW | HALVORSEN (FMC) 25K | HAL |
| AMERICAN GENERAL CORP | AGC | HANDY LIFT GATES | HLG |
| AMBULANCE MODULAR | AM | HARNISCHFEGER CORP | HFC |
| AMERICAN MOTORS | AMC | HIGHWAY | HWY |
| BAKER | BKR | HOLLAND LIFT CORP | HLC |
| BROS INC | BRO | HYSTER | HYS |
| BUICK | BUI | IDEAL | IDL |
| CANCASTER ASSY | CCA | INTERCITY | ICY |
| CASE | CSE | INTERNATIONAL | IHC |
| CATERPILLAR | CAT | JETA | JET |
| CAUCHE | CAU | JOHN DEERE | JHD |
| CHANCEY | CNY | JOHNSON | JHN |
| CHECKER CAB | CKR | KAISER | KSR |
| CHEVROLET | CHE | KENTUCKY MFG CO | KMC |
| CHRYSLER | CHR | KOVATCH | KVH |
| CLARK | CLK | LIBBEY | LIB |
| COCHRAN CORP | CCN | LITTLE GIANT | LTG |
| COLEMAN | COL | MACK | MAC |
| CONDEC | CON | MARS IND INC | MII |
| CUSHMAN | CUS | MASSEY FERGUSON | MFR |
| DATSUN | DAT | MILLER | MLR |
| DAVIS | DAV | MINNEAPOLIS MOLINE | MMO |
| DELOREAN | DLN | NORSTAD | NRS |
| DODGE | DOD | NORTHWESTERN | NWN |
| DORSEY | DSY | OLDSMOBILE | OLD |
| DOUGLAS AIRCRAFT CORP | DAC | OSHKOSH | OSH |
| EAGLE BOBTAIL CORP | EBC | P&H CRANE INC | PCI |
| EUCLID | EUC | PARAMOUNT | PAR |
| EWELL-PARKER | ELW | PERKINS | PER |

| MANUFACTURER | CODE | MANUFACTURER | CODE |
|---|---|---|---|
| EZY-GO | EZG | PETTIBONE | PTB |
| FORD | FRD | PEIRCE | PCE |
| FMC CORP | FMC | PLYMOUTH | PLY |
| FRUEHAUF | FRU | POLECAT CORP | PCC |
| FOUR WHEEL DRIVE CORP | FWD | PONTIAC | PON |
| GICHNER | GIC | PRESSED STEEL | PSL |
| GILFILLAN | GIL | PSI | PSI |
| GENERAL MOTORS CORP | GMC | REACH-ALL CORP | RAC |
| REVO SWEEPERS INC | RSI | | |
| ROGERS | ROG | | |
| SCHRECK INDUSTRIES | SCR | | |
| SCOTT AIR COND INC | SCT | | |
| SEAMON | SMN | | |
| SEI (TUNNER) 60K | SEI | | |
| SEMITRAILER TANKS | STT | | |
| SOUTHERN AMBULANCE | SOU | | |
| SPACE CORP | SPC | | |
| SPENCER | SPR | | |
| STERLING | STR | | |
| STEVENS | STV | | |
| STEWART STEVENSON CORP | SSC | | |
| TAYLOR CORP | TAY | | |
| TAYLOR DUNNE | TDN | | |
| TECSTOR | TST | | |
| TEMCO CORP | TMP | | |
| TENNANT | TNT | | |
| TEXTRON | TXT | | |
| THERMO KING CORP | TKC | | |
| TOWMOTOR | TOW | | |
| TOMMY LIFT GATE | TLG | | |
| TRANSPORT | TPT | | |
| UNITED | UNI | | |
| UTILITY | UTL | | |
| VIKING | VKG | | |

| MANUFACTURER | CODE | MANUFACTURER | CODE |
|---|---|---|---|
| VULCAN | VUL | | |
| WARD | WRD | | |
| WARD LAFRANCE | WLF | | |
| WAYNE SWEEPER CORP | WSC | | |
| WESTINGHOUSE | WES | | |
| WHITE | WHI | | |
| WILLHAM CORP | WMC | | |
| WISCONSIN TRAILER CORP | WTC | | |
| YALE | YAL | | |

**Table A14.2. (Added-AFMC) Vehicle Type Codes**

| MGT CODE | TYPE CODE | MGT CODE | TYPE CODE |
|---|---|---|---|
| B102 | SDN | B261 | S/P |
| B103 | SDN | B263 | S/P |
| B106 | SDN | B264 | S/P |
| B118 | BUS | B265 | S/P |
| B121 | BUS | B266 | S/P |
| B130 | BUS | B267 | S/P |
| B139 | BUS | B274 | S/P |
| B141 | BUS | B313 | TRC |
| B150 | S/W | B353 | TRC |
| B162 | AMB | C104 | WRK |
| B163 | AMB | C108 | WRK |
| B168 | PNL | C114 | WRK |
| B170 | JP | C116 | WRK |
| B176 | MLT | C155 | MTN |
| B177 | MLT | C156 | TPM |
| B180 | MLT | C157 | TPM |
| B184 | BUS | C158 | TPM |
| B185 | C/A | C160 | TPM |
| B186 | C/A | C161 | TPM |
| B188 | C/A | C163 | TPM |
| B190 | SBN | C167 | TPM |

| MGT CODE | TYPE CODE | MGT CODE | TYPE CODE |
|---|---|---|---|
| B191 | C/A | C168 | TPM |
| B192 | C/A | C170 | REF |
| B198 | BLZ/EXP/BRC | C181 | REF |
| B199 | BLZ/CHK | C183 | REF |
| B200 | P/U | C195 | MTK |
| B202 | P/U | C198 | TVN |
| B204 | P/U | C200 | TVN |
| B207 | P/U | C203 | TVN |
| B211 | P/U | C205 | TVN |
| B217 | P/U | C207 | TVN |
| B222 | P/U | C211 | TVN |
| B225 | CGO | C218 | TVN |
| B226 | CGO | C219 | TVN |
| B227 | CGO | C238 | HIL |
| B233 | CGO | C240 | HIL |
| B234 | CGO | C241 | HIL |
| B239 | CGO | C242 | HIL |
| B255 | CGO | C243 | HIL |
| C250 | HIR | D569 | DOZ |
| C251 | HIR | D570 | DOZ |
| C253 | HIR | D572 | DOZ |
| C260 | MTN | D576 | SRU |
| C267 | CCS | D577 | SRU |
| C300 | TKF | D578 | SRU |
| C301 | TKF | D580 | SRU |
| C306 | TKT | D581 | SRU |
| C317 | SWR | D582 | SPL |
| C319 | CLN | D583 | SPL |
| C324 | DMP | D586 | SEW |
| C332 | DMP | D588 | CLR |
| C337 | DMP | D594 | SWP |
| C339 | DMP | D624 | SWP |
| C355 | B/T | D625 | SWP |
| C366 | TRL | D626 | BHO |

| MGT CODE | TYPE CODE | MGT CODE | TYPE CODE |
|---|---|---|---|
| C372 | TRL | D631 | LDR |
| C397 | TRL | D632 | LDR |
| C398 | TRL | D633 | LDR |
| C410 | TRL | D640 | LDR |
| C434 | TRL | D645 | LDR |
| C438 | TRL | D652 | GRD |
| C439 | TRL | D653 | GRD |
| C440 | TRL | D654 | GRD |
| C445 | TRL | D655 | GRD |
| C459 | TRL | D667 | SCR |
| C507 | ARM | D670 | SCR |
| C522 | CRN | D676 | RLR |
| D503 | CRN | D680 | RLR |
| D508 | CRN | D681 | RLR |
| D510 | CRN | D682 | RLR |
| D515 | CRN | D705 | MXR |
| D517 | CRN | D720 | DST |
| D522 | CRN | D731 | DST |
| D531 | DMP | D732 | DST |
| D539 | DMP | D738 | WTR |
| D547 | TRA | D741 | TRL |
| D548 | TRA | D753 | EXC |
| D560 | TRA | D754 | EXC |
| D561 | F/T | D763 | DTG |
| D562 | F/T | D765 | DGR |
| D565 | TRA | D768 | TRC |
| D770 | TRC | E936 | 25K |
| D771 | TRC | E940 | 40K |
| D772 | TRC | E945 | 60K |
| D776 | DRL | E948 | F4K |
| D777 | PAV | E949 | F6K |
| D782 | TRM | E956 | F10 |
| D999 | OTH | E958 | F10 |
| E801 | TUG | E959 | F13 |

| MGT CODE | TYPE CODE | MGT CODE | TYPE CODE |
|---|---|---|---|
| E810 | TUG | E970 | WBE |
| E811 | TUG | E972 | WBE |
| E813 | TUG | E975 | CNV |
| E816 | FL4 | F115 | WKR |
| E819 | FL6 | F380 | TRA |
| E820 | FL6 | K194 | M09 |
| E822 | FL6 | K195 | HMV |
| E823 | F10 | K196 | M08 |
| E824 | F15 | K197 | M28 |
| E826 | F20 | K248 | CGO |
| E828 | F22 | K251 | CGO |
| E829 | F15 | K371 | TRA |
| E831 | FL2 | K376 | TRA |
| E832 | FL6 | K450 | TRL |
| E833 | FL6 | K451 | TRL |
| E834 | F10 | K452 | TRL |
| E835 | F15 | K454 | TRL |
| E837 | F25 | L114 | WRK |
| E838 | FE2 | L123 | LDR |
| E839 | FE2 | L127 | P18 |
| E841 | FE4 | L128 | P26 |
| E842 | FE4 | L130 | P-8 |
| E845 | FL4 | L133 | P12 |
| E846 | FL6 | L142 | HMV |
| E849 | FE3 | L143 | P-2 |
| E850 | FE3 | L144 | P27 |
| E851 | FE4 | L145 | P-4 |
| E854 | FE3 | L148 | P28 |
| E855 | FE6 | L149 | P10 |
| E860 | F10 | L152 | P20 |
| E902 | CRN | L153 | P15 |
| E908 | CRN | L190 | TRK |
| E925 | CON | L271 | HYD |
| E935 | 25K | L275 | R-11 |

| MGT CODE | TYPE CODE | MGT CODE | TYPE CODE |
|---|---|---|---|
| L276 | A-2 | | |
| L278 | R8A | | |
| L279 | A24 | | |
| L304 | FTT | | |
| L315 | TLN | | |
| L350 | MB2 | | |
| L351 | MB4 | | |
| L354 | U30 | | |
| L363 | TRL | | |
| L370 | TNA | | |
| L389 | CGS | | |
| L390 | LOX | | |
| L391 | LOX | | |
| L418 | FMR | | |
| L420 | TRL | | |
| L426 | DLY | | |
| L427 | DLY | | |
| L428 | DLY | | |
| L433 | SWR | | |
| L458 | TRL | | |
| L459 | TRL | | |
| L461 | TRL | | |
| L485 | TRL | | |
| L486 | TRL | | |
| L504 | PCA | | |
| L530 | HMV | | |
| L532 | HMV | | |
| W201 | TDI | | |
| W203 | LAV | | |
| W205 | ABS | | |
| W215 | CAL | | |
| W221 | CRT | | |
| W299 | MIS | | |
| W300 | SCR | | |

| MGT CODE | TYPE CODE | MGT CODE | TYPE CODE |
|---|---|---|---|
| W999 | MIS | | |