



**1 May 1999**

**Maintenance**

**AIRCRAFT AND UNIT PERFORMANCE  
REPORT (RCS: AFR-LGQ(M)7103)**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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(MSgt Ronald E. Desautels)  
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(Col Robert B. Hunter)  
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This instruction establishes procedures for reporting aircraft status and utilization data on all aircraft assigned to the Air Force Reserve Command (AFRC). It applies to all AFRC operational units possessing aircraft. The use of a name of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force.

**SUMMARY OF REVISIONS**

This revision has substantial changes and must be completely reviewed.

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## 1. References:

- 1.1. AFRCI 21-101, *Aircraft Maintenance Guidance and Procedures*.
- 1.2. ACCI 21-118, *Logistics Quality Performance Measures Reporting Procedures*; ACCI 21-165, *Aircraft Flying and Maintenance Scheduling Effectiveness*; ACCI 21-101, *Objective Wing Aircraft Maintenance*, for ACC gained units.
- 1.3. AMCI 21-101, *Maintenance Management Policy*, for AMC gained units, both unit equipped and associates.
- 1.4. AMCPAM 21-102, *Unit Health of the Force Reports and Maintenance Analysis Guide*, for AMC gained units, both unit equipped and associates.
- 1.5. T.O. 00-20-2, *Maintenance Data Collection System (Attachment L – Formulas and Appendix D)*.
- 1.6. T.O. 00-20-3, *Maintenance Processing of Repairable Property and Repair Cycle Asset Control System (Section 6)*.

**2. Aircraft and Unit Performance Report (Part I).** The Logistics Group (LG)/Logistics Support Squadron (LSS) commander is responsible for ensuring Part I of the **AFRC Form 166, Aircraft and Unit Performance Report RCS: AFR-LGQ(M) 7103**, is prepared according to the sample in **Attachment 1** and explanations in **Attachment 2**. The Excel ® version of the form is to be used. HQ AFRC/LGQRI retains the most current Excel ® file for each base and MDS assigned. The LG/LSS commander designates the maintenance systems analysis section as the office of primary responsibility (OPR) to consolidate data submissions from other aircraft maintenance and logistics support functions for inclusion in the report. The LG/LSS commander designates an alternate OPR in the event the maintenance systems analysis section is not adequately manned. Each staff agency submitting data for inclusion in the report is responsible for accuracy of the contents and its timely submission to the analysis section to meet established suspense.

**3. Management Information (Part II).** Part II of RCS: AFR-LGQ(M)7103 contains information for management use. The analysis section prepares Part II (content and format see **Attachment 3** for mandatory algorithms) and the LG or LSS commander approves it. The report may be produced/presented in a printed report, slide presentation, or outlined briefing. A file copy is maintained in the analysis section. Forward Part II to your NAF Analysis representative. Send information copies to other active and Reserve operational units, especially those of similar MDS, and Air Logistics Centers at the discretion of the LG/LSS commander.

**4. Standards.** Air Force Reserve (AFRC) develops standards to provide managers at all levels a basis for assessing the effectiveness of unit performance and mission accomplishment. Headquarters AFRC Directorate of Logistics publishes mission capable (MC), total not mission capable maintenance (TNMCM) and total not mission capable supply (TNMCS) standards annually by message to all AFRC units, NAFs, and gaining commands. Data reported is compared to historical data and cumulative averages.

**5. Method and Frequency of Reporting.** Produce a Part I and a Part II each month for each MDS assigned. Before transmission, route the completed report to the LG/LSS commander or a designated representative for concurrence and signature. Upon completion, all units transmit the report by using electronic mail methods. The subject of the transmitted data is as follows: Subject-Unit-Month of Report, for example, RCS: AFR-LGQ(M) 7103, Part I, 301 FW, Nov 98. An as of date effective at 2400 the last day of the month is assigned to cover activities for the entire month. Transmit the report as soon as possible after the end of the reporting period. Part I: The report must be received at HQ AFRC/LGQRI not later than the 10th calendar day of the following month. Frequency of reporting may be increased as directed by HQ AFRC/LG. Send an information copy to the NAF. Part II: The report must be received at NAF/LG (Analysis representative) not later than the 20th calendar day of the following month.

**6. Explanation of Report Data Fields and Algorithms.** Data field definitions and formulas used for computing rates and performance indicators are included in [Attachment 2](#).

**7. AFRC Form 303.** The purpose of the **AFRC Form 303, Operational and Maintenance Scheduling Report**, is to provide a recap of operational and maintenance activity for the unit's aircraft on a daily basis. The maintenance scheduling section is responsible for completion of AFRC Form 303, Operational and Maintenance Scheduling Report, Excel ® version. A form entry is required for each day of the month. A copy of the completed form is provided to the maintenance systems analysis section, as of the last day of the month, NLT the 5th calendar day. Information copies may be provided to other active and Reserve operational units and Air Logistics Centers at the discretion of the LG/LSS commander. Units may develop their own automated product as long as all information fields are included. The completed product is reviewed by maintenance analysis and problem areas identified to management for review and/or action.

**8. Corrections.** Any required corrections after initial submissions are accomplished by electronic mail or telephone to HQ AFRC/LGQRI, appropriate NAFs, and other addressees. **NOTE:** Units anticipating late submission of their report need to inform HQ AFRC/LGQRI and NAFs by same methods noted above with reason for delay and anticipated date of submission.

**9. Forms Prescribed.** AFRC Form 166 and AFRC Form 303.

JAMES E. SHERRARD III, Maj Gen, USAF  
Commander

## Attachment 1

## SAMPLE AIRCRAFT AND UNIT REPORT

TO: HQ AFRC / LGQRI  
155 2nd St  
Robins AFB GA 31098-1635

Unit: 302 LSS/LGLSA

As of Date  
31-Oct-98

**Part I**

Flying Squadron	731 ALF
MDS	C-130H
Aircraft Assigned	16

Average Possessed Acft	15.6
Hours Possessed	11640.0

Flying Hours Scheduled	460.0
Flying Flown	548.6

HSL Scheduled	104
HSL Flown as Scheduled	72
Total Sorties Flown	189
HSL Flown	87

Flying Hour Utilization	35.1
Sortie Utilization	12.1
Scheduling Effectiveness (10th AF)	

Air Aborts	0
Ground Aborts	3
Code 3 Breaks	2
Code 3 Fixes (10th AF)	
Canns	22

Air Abort Rate	0.0%
Ground Abort Rate	1.6%
Code 3 Break Rate	1.1%
Code 3 Fix Rate (10th AF)	0.0%
Cann Rate	11.6%

<b>Aircraft Status</b>			
FMC Hours	4604.3	Rate	39.6%
PMCB Hours	0.0	Rate	0.0%
PMCM Hours	2406.5	Rate	20.7%
PMCS Hours	1549.9	Rate	13.3%
TPMCM Hours	2406.5	Rate	20.7%
TPMCS Hours	1549.9	Rate	13.3%
Mission Capable Hours	8560.7	Rate	73.5%
<b>NMC FLYABLE</b>			
NMCB Unscheduled Hours	0.0	Rate	0.0%
NMCB Scheduled Hours	0.0	Rate	0.0%
NMCM Unscheduled Hours	0.0	Rate	0.0%
NMCM Scheduled Hours	0.0	Rate	0.0%
NMCS Hours	0.0	Rate	0.0%
<b>NMC NON-FLYABLE</b>			
NMCB Unscheduled Hours	0.0	Rate	0.0%
NMCB Scheduled Hours	1075.0	Rate	9.2%
NMCM Unscheduled Hours	1383.7	Rate	11.9%
NMCM Scheduled Hours	9.0	Rate	0.1%
NMCS Hours	611.6	Rate	5.3%
TNMCM Hours	2467.7	Rate	21.2%
TNMCS Hours	1686.6	Rate	14.5%

AFRC 166, JAN 99 (CG) (EXCEL)

<b>TOP 5 Not Mission Capable Drivers</b>			
<b>NMCB Drivers</b>			
	<b>WUC</b>	<b>Description</b>	<b>Hours</b>
1	03710	Major ISO	678.0
2	03721	#1 Minor ISO	257.0
3			
4			
5			
<b>NMCM Drivers</b>			
	<b>WUC</b>	<b>Description</b>	<b>Hours</b>
1	1431Q	Rudder Corrosion	1002.0
2	TCTO	Inst NVIS Windshields	257.0
3			
4			
5			
<b>NMCS Drivers</b>			
	<b>WUC</b>	<b>Description</b>	<b>Hours</b>
1	1431Q	Sheet Metal	342.0
2	TCTO	Paratroop Door Windows	145.0
3			
4			
5			

**REMARKS:**

**PREPARED BY:** Roger Wolf DSN 834-4519

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MICHAEL T. O'HALLORAN, Col, USAFR  
 Commander, Logistics Group

## Attachment 2

**EXPLANATION OF UNIT REPORT "PART I" DATA FIELDS AND ALGORITHMS**

**NOTE:** There are comment boxes on the Automated Part 1 Spreadsheets with explanations and formulas.

**A2.1. Flying Squadron.** Enter the flying squadron of assigned aircraft. (**Automated Excel Cover Page**)

**A2.2. MDS.** Enter the Mission/Design/Series of assigned aircraft. (**Automated Excel Cover Page**)

**A2.3. Aircraft Assigned.** Enter the number of aircraft assigned to the unit (Primary Assigned Aircraft (PAA) plus Backup Aircraft Inventory (BAI)).

**A2.4. Average Possessed Acft. (Automated Excel Calculation)**

Total Hours Possessed (by MDS) = Average Possessed Acft

(24 hours X (number of days in month))

**A2.5. Hours Possessed. (Automated Excel Calculation)** The reporting month's total possessed hours as of 2400 the last day of the month. Compare this with the total from data source: CAMS TRIC EST or AVS, G081 batch 67025 (status card option) or on-line 9025 status reports.

**A2.6. Flying Hours Scheduled.** Enter monthly flying hours scheduled (include changes from weekly schedules).

**A2.7. Flying Flown.** Enter actual total aircraft hours flown. CAMS TRIC AUR, G081 batch 67035 or 67025 (util card option), on-line 9025B.

**A2.8. Flying Hour Utilization. (Automated Excel Calculation)** Average flying hours per possessed aircraft.

Monthly Hours Flown = Flying Hour Utilization

Average Possessed Acft

**A2.9. Sortie Utilization. (Automated Excel Calculation)** Average sorties per possessed aircraft.

Total Monthly Sorties Flown = Sortie Utilization

Average Possessed Acft

**A2.10. HSL Scheduled.** Home Station Launches (HSL). Total home station launches scheduled. Source: AFRC Form 303 or like product.

**A2.11. HSL Flown As Scheduled.** Total number of home station launches that were flown as scheduled. Source: AFRC Form 303 or like product.

**A2.12. Total Sorties Flown.** Total number of sorties flown for the month. Source: CAMS TRIC AUR or G081 batch 67025B, on-line 9025B.

**A2.13. Scheduling Effectiveness (10AF Units ONLY).** Maintenance scheduling section provides analysis with the completed weekly AFRC Form 303 or automated Operational and Maintenance Scheduling Report weekly. Data from the AFRC Form 303 or automated product is used in the following formula to attain the monthly scheduling effectiveness:

$$\frac{(\text{Total HSL Scheduled} - \text{Total HSL Deviations})}{\text{Total HSL Scheduled}} \times 100 = \text{Scheduling Effectiveness}$$

**NOTE:**

Deviations include: Additions, Early/Late Take-Offs, Cancellations, Ground Aborts.

**A2.14. Air Aborts/Rate.** Quality Assurance verifies air abort information. Source: Cams TRIC DRC or G081 batch 67110 selecting when discovered code "C" Reliability code "6".

Use the following formula: **(Automated Excel Calculation)**

$$\frac{\text{Total Air Aborts}}{\text{Total Sorties Flown}} \times 100 = \text{Air Abort Rate}$$

Total Sorties Flown

**A2.15. Ground Aborts/Rate.** Quality Assurance verifies ground abort information. Source: Cams TRIC DRC or G081 batch 67110 selecting when discovered code "A" Reliability code "6".

Use the following formula: **(Automated Excel Calculation)**

$$\frac{\text{Total Ground Aborts}}{\text{Total Sorties Flown} + \text{Ground Aborts}} \times 100 = \text{Ground Abort Rate}$$

Total Sorties Flown + Ground Aborts

**A2.16. Cannibalizations/Rate.** Total Action Taken code "T" actions. Report the total number of "Aircraft to Aircraft" and "Engine to Aircraft" cannibalizations performed. Source: CAMS TRIC QCH or QKB or G081 batch 67038, on-line 8045, or batch 67110 select card "B" for JCN series "5200-5299" and batch 67126 "ENG" "ON" option to capture engine JCN's in "52XX" range.

Use the following formula: **(Automated Excel Calculation)**

$$\frac{\text{Number of Cannibalizations}}{\text{Total Sorties Flown}} \times 100 = \text{Cannibalization Rate (also referred to as: Canns per 100 Sorties)}$$

Total Sorties Flown

**A2.17. Code 3 Breaks/Rats.** Total code 3 landings (aircraft NMC condition). Source: CAM TRIC FTR or G081 batch 67076, or batch 67110 select card for when disc codes "C, D, and E"

Use the following formula: **(Automated Excel Calculation)**

$$\frac{\text{Number of Code 3 Landings}}{\text{Sorties Flown}} \times 100 = \text{Code 3 Break Rate}$$

Sorties Flown

**A2.18. Code 3 Fixes/Rate (10AF Unit s only).** Total Breaks (aircraft landing code 3) returned to a mission capable status (FMC or PMC) within a specified number of hours. Source: CAMS TRIC FTR or G081 batch 67076.

Use the following formula: **(Automated Excel Calculation)**

Number of \*HR Code 3 Fixes X 100 = Code 3 Fix Rate

Number of Code 3 Landings

\*4, 8, or 12-hour fix (units option – NOTE: specify which was used in your unit report)

**A2.19. All aircraft status data/percen tage.** Data is extracted from the CAMS Transaction Identifier Code (TRIC) EST or AVS, or G081 batch 67025, on-line 9025.

Use the following formulas to get percentages:

**(All Automated Excel Calculations)**

Total Fully Mission Capable (FMC) Hours X 100 = FMC Rate

Total Possessed Hours

Partially Mission Capable Both (PMCB) Hours X 100 = PMCB Rate

Total Possessed Hours

Partially Mission Capable Maintenance (PMCM) Hours X 100 = PMCM Rate

Total Possessed Hours

Partially Mission Capable Supply (PMCS) Hours X 100 = PMCS Rate

Total Possessed Hours

Total of PMCB & PMCS Hours X 100= TPMCS Rate

Total Possessed Hours

Total of PMCB & PMCM Hours X 100 = TPMCM Rate

Total Possessed Hours

Total of FMC, PMCB, PMCS & PMCM Hours X 100 = Mission Capable Rate

Total Possessed Hours

**NOTE:** For Mission Capable (MC) Rate – Do **NOT** add NMC Flyable hours.

Flyable Not Mission Capable Both Unscheduled (NMCBU) Hours X 100 = Flyable NMCBU Rate  
Total Possessed Hours

Flyable Not Mission Capable Both Scheduled (NMCBS) Hours X 100 = Flyable NMCBS Rate  
Total Possessed Hours

Flyable Not Mission Capable Maintenance Unscheduled (NMCMU) Hours X 100 = Flyable NMCMU  
Total Possessed Hours Rate

Flyable Not Mission Capable Maintenance Scheduled (NMCMS) Hours X 100 = Flyable NMCMS Rate  
Total Possessed Hours

Flyable Not Mission Capable Supply (NMCS) Hours X 100 = Flyable NMCS Rate  
Total Possessed Hours

Not Mission Capable Both Unscheduled (NMCBU) Hours X 100 = NMCBU Rate  
Total Possessed Hours

Not Mission Capable Both Scheduled (NMCBS) Hours X 100 = NMCBS Rate  
Total Possessed Hours

Not Mission Capable Maintenance Unscheduled (NMCMU) Hours X 100 = NMCMU Rate  
Total Possessed Hours

Not Mission Capable Maintenance Scheduled (NMCMS) Hours X 100 = NMCMS Rate  
Total Possessed Hours

Not Mission Capable Supply (NMCS) Hours X 100 = NMCS Rate  
Total Possessed Hours

Total NMCB U/S + NMCS + Flyable NMCB U/S + Flyable NMCS Hours X 100 = TNMCS Rate

Total Possessed Hours

Total NMCB U/S + NMCM U/S + Flyable NMCB U/S + Flyable NMCM U/S Hours X 100 = TNMCM

Total Possessed Hours

Rate

**A2.20. Top 5 Not Mission Capable Drivers: (ALWAYS REPORTED)**

NMCB Drivers: Enter up to five WUC (3-digit level) – include scheduled and unscheduled hours.  
(5-digit level WUC also acceptable)

NMCM Drivers: Enter up to five WUC (3-digit level) – include scheduled and unscheduled hours.  
(5-digit level WUC also acceptable)

NMCS Drivers: Enter up to five WUC (5-digit level).

**A2.21. Remarks.** Include information that would explain why your unit did not meet a standard, or comment on any significant data changes you've experienced.

**Attachment 3****EXPLANATION OF UNIT REPORT “PART II” DATA FIELDS AND ALGORITHMS**

**A3.0.** Paragraphs **A3.1.** through **A3.12.** are mandatory algorithms for the Part II. Each unit is encouraged to expand their report and tailor it to best meet their unit’s needs.

**NOTE:**

Some Examples are included for ideas, not to be the standard. They are from different units with different MDS. Tailor your unit’s Part II to be consistent, easy flowing of information for maximum use.

**A3.1. Quick Reference Sheet:** Display for a running twelve-month period key indicators for your unit. Include the following:

HOURS SCHEDULED (Flying Hours).

HOURS FLOWN (Flying Hours).

H.S. SORTIES SCHEDULED (Home Station).

H.S. SORTIES FLOWN (Home Station).

TOTAL SORTIES FLOWN.

MC RATE (Mission Capable).

FMC RATE (Fully Mission Capable).

PMCB RATE (Partial Mission Capable – Both).

PMCM RATE (Partial Mission Capable Maintenance).

PMCS RATE (Partial Mission Capable Supply).

TPMCM RATE (TOTAL Partial Mission Capable Maintenance).

TPMCS RATE (TOTAL Partial Mission Capable Supply).

NMCB RATE (Not Mission Capable - Both).

NMCM RATE (Not Mission Capable Maintenance).

NMCS RATE (Not Mission Capable Supply).

TNMCM RATE (TOTAL Not Mission Capable Maintenance).

TNMCS RATE (TOTAL Not Mission Capable Supply).

BREAK RATE (Code 3 Landings).

FIX RATE (10AF) (Code 3 Landings fixed in “X” Hours).

CANN RATE (Cannibalizations).

TOTAL ABORT RATE (Air and Ground Aborts).

IFE RATE (In-Flight Emergencies).

AIRCRAFT POSSESSED.

FLYING SCHEDULING EFFECTIVENESS (10AF Units).

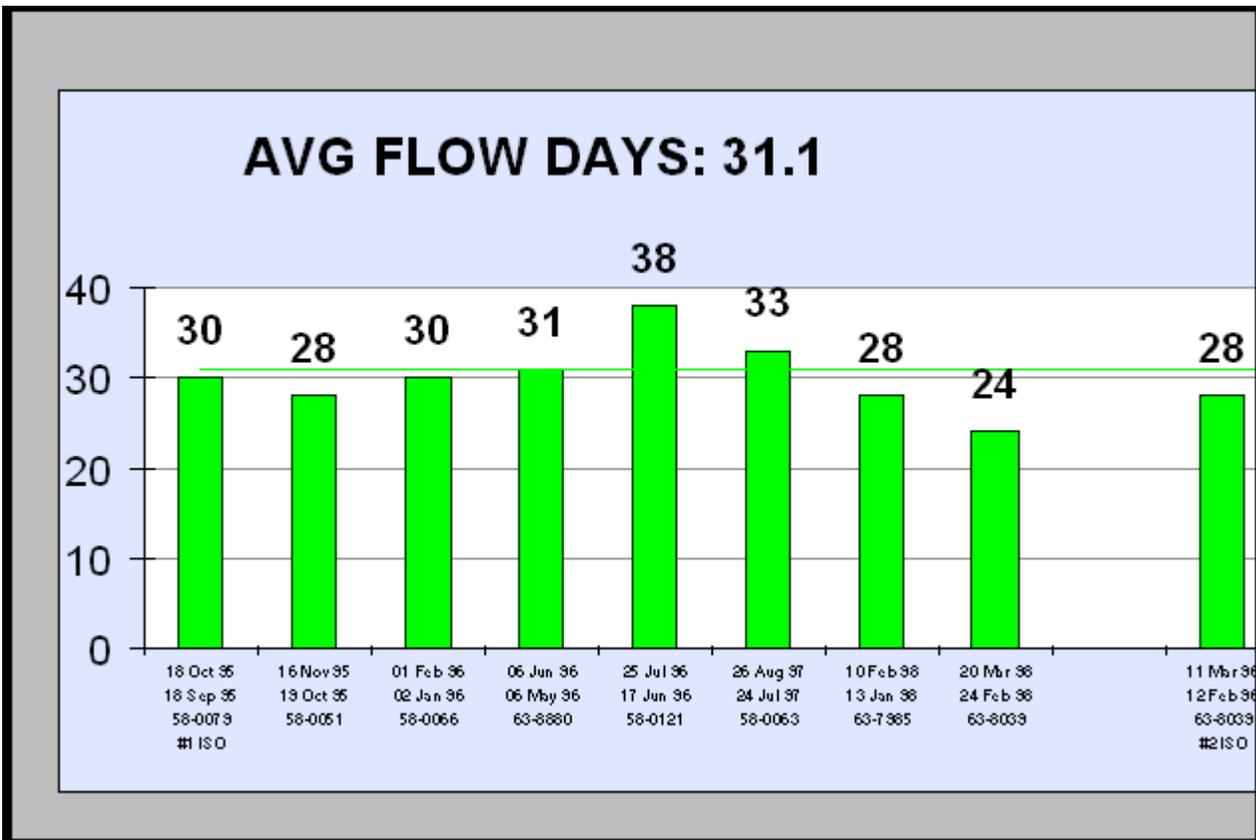
DEPARTURE RELIABILITY (4AF/22AF Units).

**A3.2. Average Flow Time:** Measures average amount of time (in days) computing the difference from the date aircraft entered ISO to the day ISO completed/signed-off. Use twelve months data in this computation.

Use the following formula:

$$\frac{\text{Total Number of Flow Days}}{\text{Total Number of ISO/Phase Inspections Completed}} = \text{Average Flow Days}$$

EXAMPLE: (NOTE: This is a cut-out portion for ISO #1, #2, and #3, cannot compute the average from the portion shown)



EXAMPLE OF TABLE USED TO FIGURE FLOW DAYS AND FLY-TO-FLY DAYS:

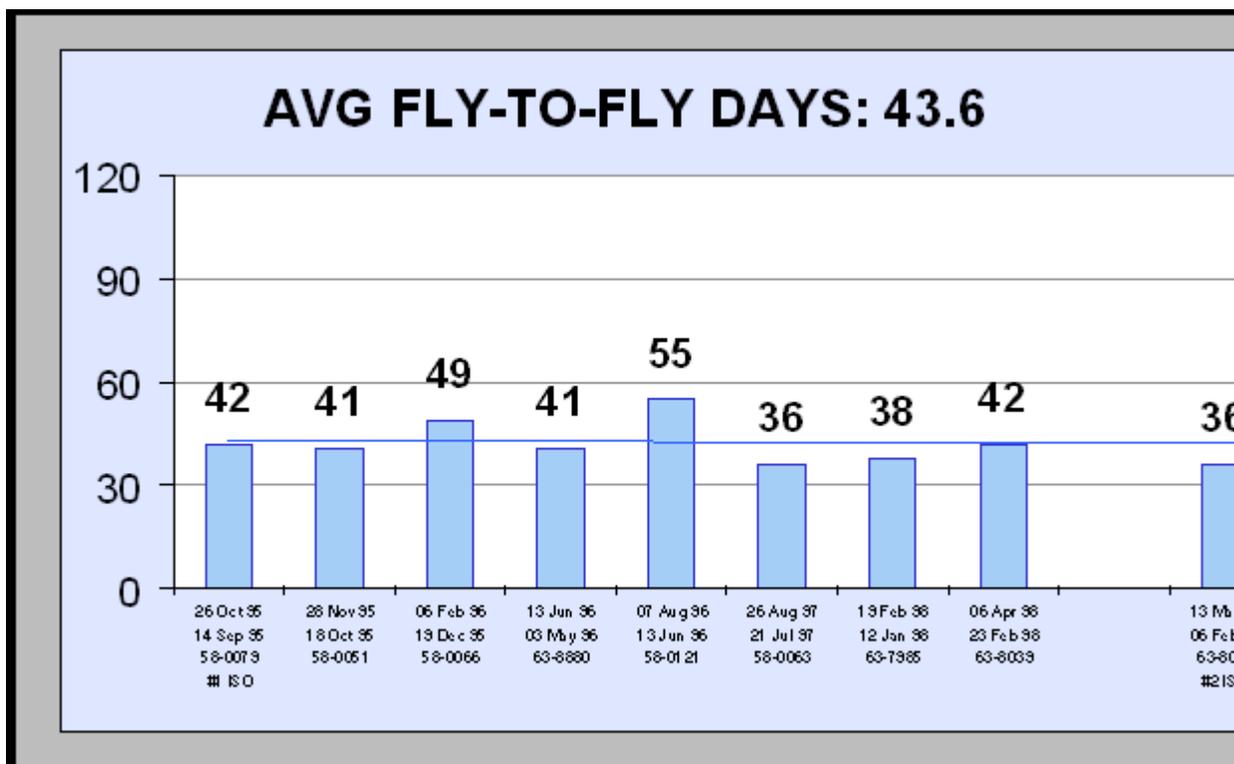
507 ARW KC-135 R ISOCHRONAL INSPECTION FLOW DAY GRAPH VS. FLY-TO-FLY DAY GRAPH AS OF: 31 MAY 98									
TYPE INSPECTION	AIRCRAFT	DATE INSPECTION STARTED	DATE INSPECTION COMPLETED	TOTAL FLOW DAYS	TYPE INSPECTION	AIRCRAFT	LAST FLOWN BEFORE	FIRST FLOWN AFTER	TOTAL F-T-F DAYS
#1 ISO	58-0079	18 Sep 95	18 Oct 95	30	#1 ISO	58-0079	14 Sep 95	26 Oct 95	42
	58-0051	19 Oct 95	16 Nov 95	28		58-0051	18 Oct 95	28 Nov 95	41
	58-0066	02 Jan 96	01 Feb 96	30		58-0066	19 Dec 95	06 Feb 96	49

**A3.3. Average Fly to Fly:** Measures average amount of time (in days) from last flight before ISO to the first flight after ISO. Use twelve months data in this computation.

Use the following formula:

$$\frac{\text{Total Number of Days between flight before and after ISO}}{\text{Total Number of ISO/Phase Inspections Completed}} = \text{Average Fly to Fly}$$

EXAMPLE: (NOTE: This is a cut-out portion for ISO #1, #2, and #3, cannot compute the average from the portion shown)



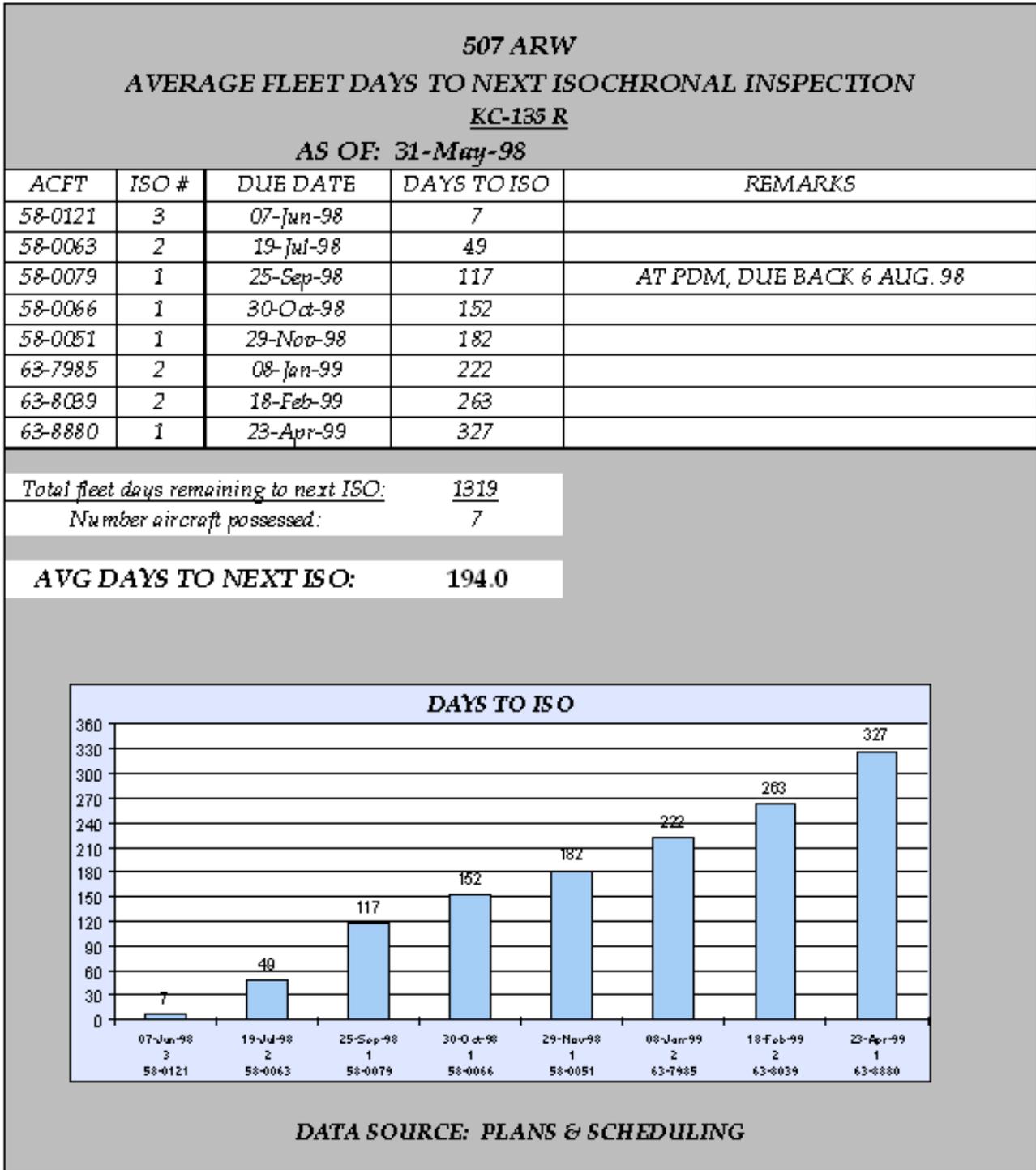
**A3.4. Average Fleet Time:** Measures average amount of time (in days) until the next ISO is due.

Use the following formula:

Total Fleet Time = Average Fleet Time

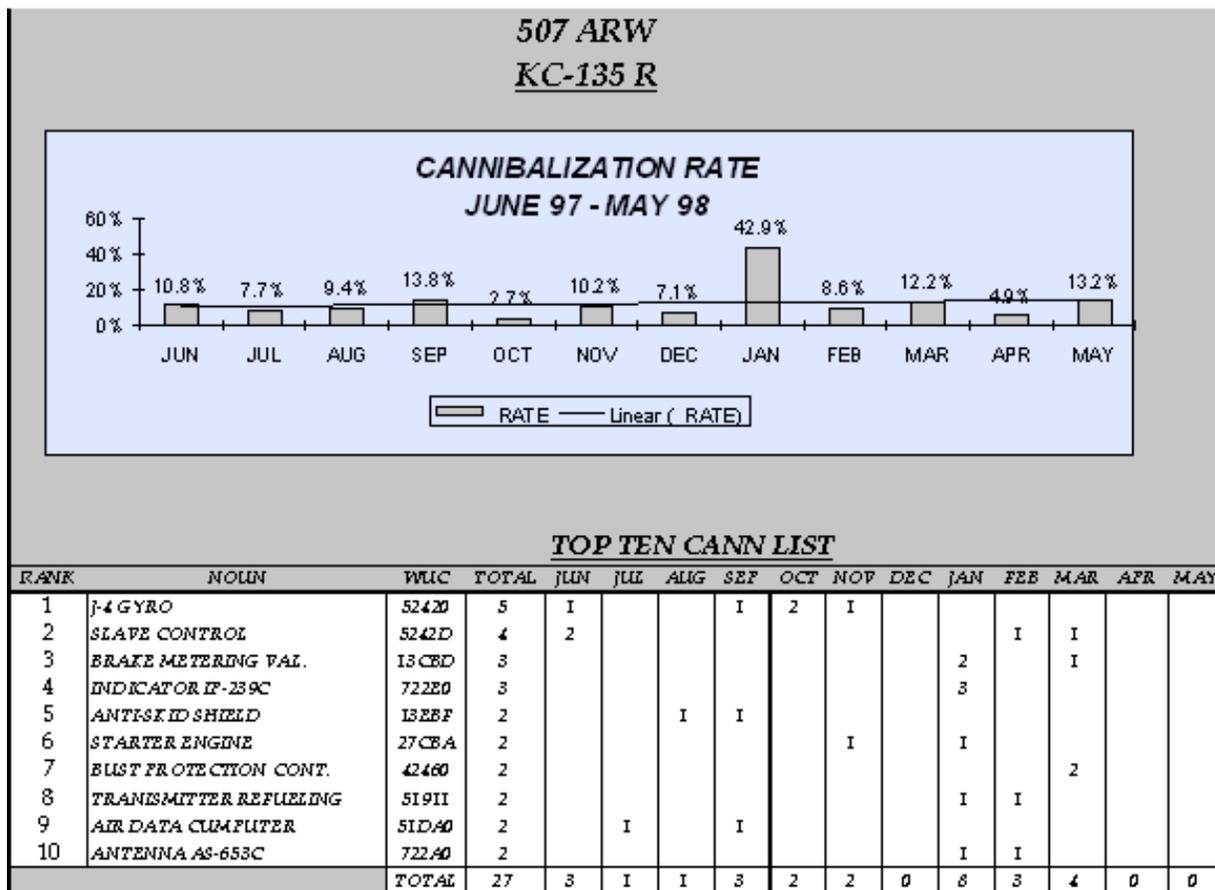
Possessed Aircraft

EXAMPLE:



**A3.5. Cannibalizations by System** . Trend out cannibalization rate over twelve month period. Display cannibalization totals by system by month in a matrix over the same twelve month period.

EXAMPLE:



**A3.6. Repeats / Recurs** Measures the percent of repeat and recur discrepancies of the total debriefed discrepancies. Trend out repeat and recur rates over twelve month period.

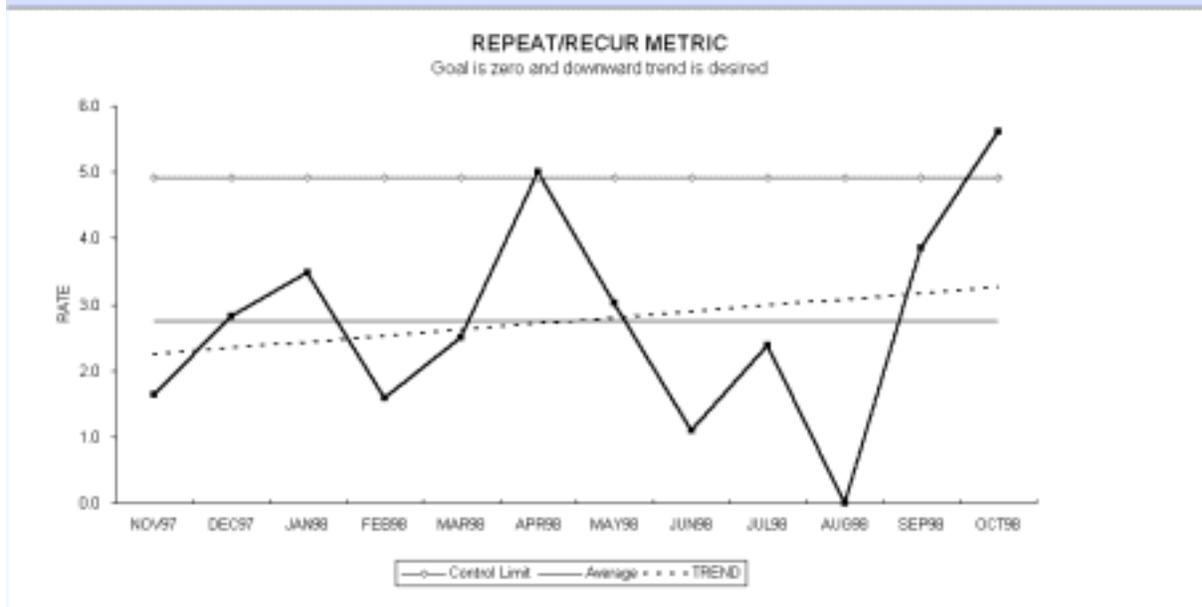
Use the following formula:

$$\frac{\text{Total Repeat and Recur Discrepancies} \times 100}{\text{Total Debrief Discrepancies}} = \text{Repeat/Recur Rate}$$

EXAMPLE:

OCT 1998		302 AW / REPEAT & RECUR DETAIL			C-130H
REPEAT/RECUR	ACFT	WUC	EVENT ID	DISCREPANCY	CORRECTIVE ACTION
REPEAT	A7310	137	2872000	NOSE GEAR SHAKE	R&R NLG WHEEL/TIRE ASSY
REPEAT	A7317	325	2942700	NTS @ -1000IN WITH NO NTS LIGHT	ADJ NTS SWITCH
REPEAT	A7319	429	2942900	#1 BSU LIGHT CAME ON	R&R #1 BSU
RECUR	A7322	413	2923202	ACFT PRESSURIZES ON GROUND IN AUTO	**CND**
REPEAT	A7324	143	2793403	PILOT SIDE RUDDER PEDAL DIFF TO ADJ	ADJ RUD PEDAL ADJ ASSY & HANDLE

TERMS: REPEAT - WHEN SAME MALFUNCTION OCCURS ON NEXT FLIGHT.  
 RECUR - WHEN SAME MALFUNCTION OCCURS WITHIN NEXT THREE FLIGHTS.



	NOV97	DEC97	JAN98	FEB98	MAR98	APR98	MAY98	JUN98	JUL98	AUG98	SEP98	OCT98	AVG
RATE	1.6	2.8	3.5	1.6	2.5	5.0	3.0	1.1	2.4	0.0	3.8	5.6	2.8
REPIREC	2	2	3	1	6	4	3	1	2	0	4	5	
WRITEUPS	122	71	85	63	240	80	99	91	84	82	104	89	

**A3.7. Could Not Duplicate (CND):** Measures percent of debrief discrepancies that were identified as CND write-ups. Trend out CND rate over twelve month period.

Use the following formula:

$$\frac{\text{Total CND Actions}}{\text{Total Debrief Discrepancies}} \times 100 = \text{CND Rate}$$

Total Debrief Discrepancies

Could Not Duplicate: All malfunctions which could not be duplicated to include all action taken H with how malfunction code of 672, 799, 812, or 948. Also recommend reviewing action taken X and how malfunction code 799 actions, and the associated narratives, for possible include into the CND totals.

EXAMPLE:

Return to Menu		302 AW / SYSTEM												C-130H	
COULD NOT DUPLICATE (CND) TREND ANALYSIS															
SYS #	SYSTEM	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	12 Mo. TOTAL	SYSTEM RATE
11	AIRFRAME					1								1	2.1%
12	COCKPIT / FUSELAGE								1					1	3.3%
13	LANDING GEAR		1	1		1		1	2			1		7	17.5%
14	FLIGHT CONTROLS		1			2							1	4	20.0%
22	ENGINE	15	3			2	2	1	4	2	1			30	21.7%
24	AUX POWER													0	
32	PROPELLER	1						1			1	1		4	10.8%
41	AIR CONDITION / PRESS.	2		1	1	1	1			1			2	9	16.7%
42	ELECTRICAL		1			1	1	1	1					5	10.0%
44	LIGHTING						2						1	3	2.5%
45	HYD/PNEU					1								1	7.7%
46	FUEL	1				5								6	12.5%
47	OXYGEN													0	
49	MISC UTILITIES										1			1	9.1%
51	INSTRUMENTS	2			1	1				2		1		7	8.0%
52	AUTOPILOT			1						1				2	6.5%
56	ACCIDENT RECORD SYS													0	
61	HF COMM													0	
62	VHF COMM							1	2	2				5	14.7%
63	LHF COMM	1			2	1		1						5	18.5%
64	INTERPHONE		1					1		1				3	4.6%
65	IFF								1	1	1			3	15.8%
66	EMERGENCY COMM													0	
69	MISC. COMM EQUIP										1			1	16.7%
71	RADIO NAV	1	2	1		3	3	4	4	3	3	3	1	28	21.9%
72	RADAR NAV	2		1		2		1	2	3	2	2		15	13.4%
76	ECM					1								1	9.1%
91	EMERG EQUIPMENT													0	
96	PERSONNEL & MISC						1							1	7.1%
97	EXPLOSIVE DEVICES														
TOTAL OPS CHK/CND'S		25	9	5	4	22	10	12	17	16	10	8	5	143	
TOTAL WRITE-UPS		100	65	72	63	240	80	99	91	84	82	104	89		
RATE		25.0%	13.8%	6.9%	6.3%	9.2%	12.5%	12.1%	18.7%	19.0%	12.2%	7.7%	5.6%		12.2%

MONTHLY RATE IS COMPUTED BY DIVIDING TOTAL OPS CKS & CND'S BY TOTAL WRITE-UPS.  
 SYSTEM RATE COMPUTED BY DIVIDING TOTAL OPS CKS & CND'S FOR YEAR BY TOTAL WRITEUPS AGAINST THAT SYSTEM FOR THE YEAR.

PRIMARY DRIVER(S): Sys 41 - Aircraft pressurizes on Ground in Auto and a C/C re-circulating Fan had loud electrical whine.

**A3.8. Abort/In-Flight Emergency (IFE) Summary .** Trend out Abort and IFE rates over twelve month period.

Use the following formulas:

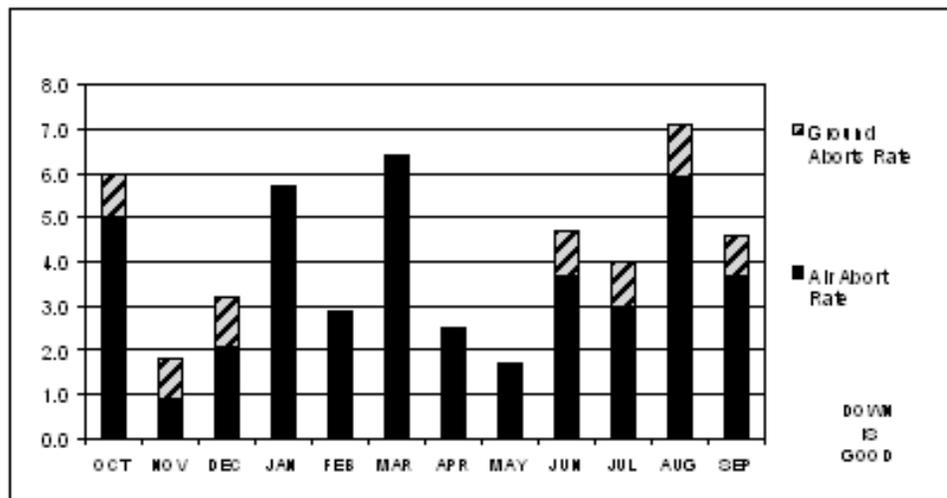
$$\frac{\text{Total Air and Ground Aborts}}{\text{Total Sorties Flown} + \text{Ground Aborts}} \times 100 = \text{Total Abort Rate}$$

(Air Abort Rate and Ground Abort Rate are listed in [Attachment 2](#))

$$\frac{\text{Total IFE}}{\text{Total Sorties Flown}} \times 100 = \text{IFE Rate}$$

EXAMPLE 1:

**Abort Rate**  
Air/Ground  
October 1997  
to  
September  
1998



	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Abort Rate	6.0	1.8	3.2	5.7	2.9	6.4	2.5	1.7	4.7	4.0	7.1	4.6
Air Abort Rate	5.0	0.9	2.1	5.7	2.9	6.4	2.5	1.7	3.7	3.0	5.9	3.7
Ground Aborts Rate	1.0	0.9	1.1	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.2	0.9
Air Aborts	5	1	2	5	5	7	2	2	4	3	5	4
Ground Aborts	1	1	1	0	0	0	0	0	1	1	1	1
Total Sorties Flown	100	110	94	88	171	109	79	119	109	100	85	107
Prev Yr Abort Rate	1.6	3.2	0.0	0.0	0.0	0.0	4.0	0.0	5.4	8.9	3.7	3.7

EXAMPLE 2:

ACFT	DATE	SYS	DISCREPANCY	CORRECTIVE ACTION
<b>GROUND ABORTS</b>				
A0260	02 Jul	61F	CADC LITE WOULD NOT RESET	R2 CADC
A0287	08 Jul	42A	MAIN GENERATOR WOULD NOT COME ON LINE	R2 FUEL OIL HEAT EXCHANGER, ESS TRANSFER RELAYS AND BUS PWR CONTACTORS & STBY GCU
A0410	9 Jul	44A	CENTERLINE TANK WOULD NOT FEED	R2 ESS HIGH STAGE VALVE
A0847	21 Jul	13E	LEFTHAND BRAKE LEAK	REPLACED BANJO AND HYP LINE FITTINGS
A0287	24 Jul	42B	STAND BY GENERATOR FAILED AT EOR	R2 STANDBY GCU
A0287	30 Jul	42B	MAIN GENERATOR WOULD NOT COME ON LINE	R2 STANDBY GCU & CSD
<b>AIR ABORTS</b>				
A0287	04 Jul	120	BIRD STRIKE TO CANOPY	NO DAMAGE NOTED, RETURNED TO SERVICE
A0287	27 Jul	14A	AT LIFTOFF, DUAL FC & FLC FAIL LITES	R2 FLC & LH WOW SWITCH
<b>IFE'S</b>				
A0226	10 Jul	13E	ANTI SKID FAILED ON LANDING (BARRIER ENGAGEMENT) REPAIRED R/H ANTI SKID HARNESS	

**A3.9. Self Sufficiency/Base Repair** Used to track the effectiveness of total repair capability. Trend out Base Repair and Self Sufficiency rates over twelve month period.

Use the following formulas:

$$\frac{\text{Total Units Repaired}}{\text{Total Units Repaired} + \text{Total NRTS}} \times 100 = \text{Base Repair Capability Rate}$$

Total Units Repaired + Total NRTS

$$\frac{\text{Total Units Repaired}}{\text{Total Units Repaired} + \text{Total NRTS Code 2,3,5,6}} \times 100 = \text{Base Self Sufficiency Rate}$$

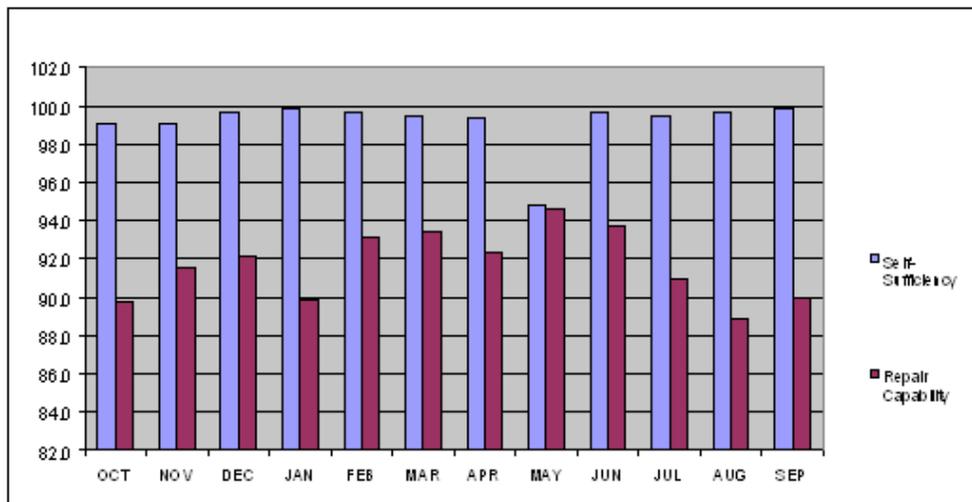
Total Units Repaired + Total NRTS Code 2,3,5,6

Units Repaired: AT=A,F,G,K,L,V

Units NRTS: AT=0,1,2,3,4,5,6,7,8,9

EXAMPLE:

Base  
Self  
Sufficiency  
Repair  
Capability  
October 1997  
to  
September 1998



	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Self-Sufficiency	99.1	99.1	99.7	99.9	99.7	99.5	99.4	94.8	99.7	99.5	99.7	99.9
Repair Capability	89.8	91.5	92.1	89.9	93.1	93.4	92.3	94.6	93.7	91.0	88.9	90.0
Actions:												
A F G K L V Z	2129	1711	2325	2157	1882	2380	2607	2539	3035	2719	1846	1893
Actions:												
A F G K L V Z 2 3 5 6	2148	1729	2333	2158	1887	2391	2622	2678	3044	2733	1851	1895
Total Processed												
AFGKLVZ123456789	2371	1869	2525	2398	2022	2548	2826	2685	3238	2988	2076	2103

**A3.10. NMCM By System .** Trend out NMCM rate over twelve month period. Display NMCM hours by system by month in a matrix over the same twelve month period.

EXAMPLE:

**A3.11. NMCB By System .** Trend out NMCB rate over twelve month period. Display NMCB hours by system by month in a matrix over the same twelve month period.

SEE Paragraph **A3.10.** EXAMPLE.

**A3.12. NMCS By System .** Trend out NMCS rate over twelve month period. Display NMCS hours by system by month in a matrix over the same twelve month period.

SEE Paragraph **A3.10.** EXAMPLE.

**Attachment 4****GLOSSARY OF MAINTENANCE AND AIRCRAFT UTILIZATION TERMS**

**NOTE:** For terms not covered in this regulation, review those instructions for the lead command for your unit's assigned aircraft (i.e. AMC or ACC) referenced in paragraph 1. of this instruction. Otherwise, contact AFRC/LGQRI for clarification.

**A4.1. ADDITIONS.** A sortie/home station launch flown that was not on the printed schedule. Once an added sortie/home station launch is scheduled, it is not subject to any other deviations. Functional Check Flights (FCF) and Operational Check Flights (OCF) whose primary purpose is to perform maintenance checks are not additions. FCF and OCF sorties will be recorded as flown as scheduled.

**A4.2. AIR ABORT.** Termination of flight due to a malfunction that occurred after takeoff and before its primary or alternate mission. Air abort for systems problem(s) is a break (renders aircraft NMC after landing) and should show as such.

**A4.3. BREAK.** System malfunction occurring in-flight that renders aircraft NMC after landing. Air abort for systems problem(s) is a break and should show as such (see A4.2.). **NOTE:** The aircraft break rate does not include ground aborts.

**A4.4. CANCELLATION.** An aircraft or sortie that is removed from the printed schedule for any reason.

**A4.5. DEBRIEF DISCREPANCIES.** Reported and documented malfunctions identified by aircrews.

**A4.6. DEVIATIONS.** A departure from the printed weekly flying schedule. Multiple deviations will NOT be recorded against a single line entry. Deviations include: additions, cancellations, early/late take-offs, ground aborts.

**A4.7. EARLY TAKE-OFF.** Any sortie/launch on the weekly flying schedule that takes off more than 30 minutes before the scheduled takeoff time.

**A4.8. FIX.** Completing maintenance actions on in-flight discrepancies (NMC) rendering the aircraft air-worthy (FMC or PMC).

**A4.9. FLEET TIME.** Number of days remaining until the next ISO/Phase Inspection is due.

**A4.10. FLOW TIME.** Number of days an aircraft spends in ISO/Phase Inspection.

**A4.11. GROUND ABORT. C-5 aircraft:** Termination of a sortie/launch due to a malfunction that occurred during or after engine start and before takeoff. **All other aircraft:** Event after crew show time that prevents a "crew ready" aircraft from becoming airborne.

**A4.12. Home Station Launch (HSL). (Also called Home Station Sortie).** Sorties launched from the home base or deployed locations where parent unit maintenance is provided.

**A4.13. In-Flight Emergency (IFE).** An airborne aircraft that encounters a situation or emergency that results in an IFE being declared by the aircrew. It is NOT considered a deviation, but will be recorded and information provided to Analysis Sections. NOTE: Air abort and IFE are not the same thing. Sometimes a declared IFE leads to termination of a mission where an air abort could be documented. Final determination is made by the aircrew.

**A4.14. LATE TAKE-OFF.** Any sortie/launch on the weekly flying schedule that takes off 15 minutes or more after the scheduled takeoff time.

**A4.15. OFF STATION SORTIES.** Sorties/launches flown away from home base (cross-country) and parent unit maintenance not provided.

**A4.16. RECUR DISCREPANCY.** Malfunction in a system or subsystem that reappears during the third, fourth, or fifth sortie (or attempted sortie) following its first appearance.

**A4.17. REPEAT DISCREPANCY.** Malfunction in a system or subsystem that reappears on the next sortie (or attempted sortie) following its first appearance.

**A4.18. SORTIE.** The forward or vertical movement of an aircraft for takeoff and subsequent full stop landings, aircrew change after landing, or 15 minutes ground time during integrated combat turns. Also referred to as “launch” or “departure”.