1. TECHNICAL

1.1 PRELIMINARY MAINTENANCE CONCEPT RECEIVED

The preliminary maintenance concept for Central Data Processor and Controller (CENPAC) has arrived at the Fort Worth Division from Burroughs Corporation.

The document establishes the concepts and principles involved in maintaining CENPAC to a high degree of operational readiness by meeting the required Mean Time to Restore (MTTR).

The maintenance concept states that restoration of CENPAC will be accomplished through "remove and replace" at the field/intermediate level of maintenance rather than repair. It also states that maximum operational availability will be assured through the use of rapid semi-automatic fault detection, diagnosis, and isolation.

In addition to maintenance data, the maintenance concept includes a recommended test equipment list and a recommended tools list.

A copy of the maintenance concept is available for reference in the Engineering Maintainability Group.

1.2 F-111 AC POWER GENERATING SYSTEM PASSES 5000 HOUR TEST

A 5000 hour reliability demonstration test, probably the longest continuous test ever conducted on an aircraft
electric power system, was completed recently on the AC power generating system. The test was five times as long as the normal qualification life test and more than twice the length of previous reliability demonstrations.

As opposed to a specified mean-time-between-failure (MTBF) of 500 hours at 90 percent confidence level, the test results demonstrated a 943 hour MTBF for the system. Both the generator and controls and the constant speed drive demonstrated a 1282 hour MTBF.

The test was conducted on a complete aircraft complement of equipment, i.e., two channels, each consisting of a constant speed drive, an oil-cooled 62.5 KVA brushless AC generator, generator control unit, and current transformer. Generator loads, drive speeds, and oil temperatures were controlled to approximate normal aircraft operation.

Routine maintenance operations were performed during the test, as they would be in aircraft operation, and the generators and drives were overhauled at 1000 hour intervals. (One generator and drive, however, was run 1419 hours to determine the effects of extending the time between overhauls, and no recordable degradation in operation occurred.) Generators and drives were found in good condition at overhaul, which consisted of replacement of bearings, rotating oil seals, and O-rings. Generator seal wear, for example, was so slight that oil leakage averaged less than 0.6 cc per hour over the duration of the test. The specification maximum was 10 cc per hour.

1.3 TIME COMPLIANCE TECHNICAL ORDERS

RECORD TYPE
TCTC 1F-111A-534
9 DECEMBER 1966

REPLACEMENT OF SOLENOID
PART NO. 20791-102 WITH
SOLENOID PART NO. 20791-102-5 - F-111A AIRCRAFT

Provides a record of changes insuring extension of the crew entrance upper step by providing a solenoid with sufficient power for positive actuation.
Effective on F-111A aircraft Nos. 8 through 11.

Equivalent modification will be incorporated during the flight test program or in assembly on F-111A aircraft Nos. 6, 7, 12 and on.

RECORD TYPE
TCTO 1F-111A-538
2 DECEMBER 1966

REPLACE PITCH AND YAW TRIM ACTUATORS WITH MODIFIED ACTUATORS - F-111A AIRCRAFT

Provides a record of changes to prevent possible failure of the pitch and yaw trim actuators by modifying actuators and actuator bellcranks.

Effective on F-111A aircraft Nos. 8 through 10 and 12 through 18.

Equivalent modification will be incorporated in assembly on F-111A aircraft 19 and on.

RECORD TYPE
TCTO 1F-111A-542
2 DECEMBER 1966

REPLACE ENGINE INLET DUCT ACCESS PANEL PART NO. 12P7118-3/4 WITH NEW MACHINED PANEL PART NO. 12P7118-29/30 -- F-111A AIRCRAFT

Provides a record of changes to prevent panel failure in the engine air inlet duct by replacing bonded panels with machined panels.

Effective on F-111A aircraft Nos. 8 through 10.

Equivalent modification will be incorporated during the flight test program or assembly on F-111A aircraft 1 through 7 and 11.

2. GENERAL

2.1 FACTS AND FIGURES
2.1.1 FLIGHT SUMMARIES

For two weeks ending 4 December 1966:

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<th></th>
<th>Total Flts</th>
<th>Total Hrs</th>
<th>S/S Flts</th>
<th>S/S Hrs</th>
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<td>42.5</td>
<td>19</td>
<td>3.7</td>
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<tr>
<td>F-111B:</td>
<td>6</td>
<td>15.1</td>
<td>1</td>
<td>0.1</td>
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<tr>
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Cumulative through 4 December 1966:

<p>| | | | | |</p>
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</table>

2.1.2 AIRCRAFT LOCATIONS

Edwards AFB: TAC 1, 3, 6, 8, and 9

Eglin AFB: TAC 7

Hughes: NAVY 3

Grumman: NAVY 1, 2, 4, and 5

Fort Worth: TAC 2, 4, 5, 10, 12, 14, 15, and 16

11 (Held for Recon DT&E)

13 (Previously Held for Ground Airloads Tests; now in Final Assembly)
2.2 PRELIMINARY PUBLICATIONS APPROVED FOR SUPPORT OF TAC 19

Authorization has been received by the Fort Worth Division from the 111 SPO to provide certain technical publications, in preliminary form, for support of F-111A No. 19.

The publications will be formalized progressively with completion by no later than 1 October 1967.

3. SPECIAL

3.1 F-111 FLIGHT TEST PROGRAM HIGHLIGHTS

SUPersonic FLIGHTS: To date of 4 December 1966: 438
Of this number, 112 at Mach 2.0 or above.

TAC 2 recorded its 64th flight at Mach 2.0 or above on 23 November 1966.

TAC 7 SCORES CLOSE HIT

On 1 December 1966, TAC 7 released an M-117 bomb from the left hand weapon bay with the standard MAU-12B/A bomb rack installed. The weapon was released at 0.70 Mach, 1000 ft. altitude, at a 26 degree wing position. The chase pilot reported a clean separation.

A concurrent level bomb release point accuracy run was accomplished. LCOS Ballistics were set at 162 miles depression and 459 knot true airspeed. Impact was extremely close to the target.

NAVY 1 CHALKS UP 100TH FLIGHT

On 1 December 1966, NAVY 1 accomplished its 100th flight during a low speed angle of attack calibration mission.
TFR RUNS COMPLETED
During the week ending 2 December, manual Terrain Following Radar (TFR) runs were accomplished by TAC 3 at Edwards AFB. Performance of the system was satisfactory and the manual TFR demonstration testing is now complete.

2,000 HOUR MILESTONE PASSED
On 23 November the 2,000th hour of flight was attained in the RDT&E Flight Test Program.

3.2 MAINTENANCE CONCEPT GUIDANCE AND LOGISTIC SUPPORT PLANNING MEETINGS

Representatives from the Air Force, Autonetics, and the Fort Worth Division are currently engaged in a series of meetings to establish source coding guidelines, maintenance concepts and depot logistic support plans for the Mark II, FB-111 systems and FB-111 peculiar items.

The meetings, the first of which took place at Autonetics on 14-22 November 1966, are scheduled to continue through 6 January 1967 for the FB-111 and 3 March 1967 for the F-111A Mark II System.

3.3 HI-VALU REVIEW BOARD MEETING AND WRSK CONFERENCE

Beginning 29 November 1966, representatives from the government, subcontractor technical personnel, and General Dynamics are conducting an F-111A Full Hi-Valu Review Board Meeting and War Reserve Spares Kit (WRSK) conference at the Fort Worth Division.

Scheduled to continue through 24 December 1966, the conference will include discussions on maintenance concepts, design changes, maintenance factors, and production lead times concerning the various F-111A systems.