



DEPARTMENT OF THE NAVY
CHIEF OF NAVAL AIR TRAINING
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5 Feb 13

CNATRA NOTICE 4790

Subj: T-6B HYDRAULIC POWER PACK RESERVOIR ALTERNATE SERVICING
MEASUREMENT

Encl: (1) Maintenance Procedures
(2) Maintenance Control Procedures
(3) Aircrew Procedures

1. Purpose. To establish alternate servicing and pre-flight inspection methods for the T-6B Hydraulic Power Pack Reservoir.

2. Background. The T-6B has experienced numerous Hydraulic Power Pack Reservoir indicator failures. The self-contained, green plastic indicator cord has broken loose from its mooring and made the normal preflight inspection of fluid level in the reservoir impossible. The design of the indicator is such that the indicator cord is self-contained and cannot contaminate the hydraulic system. Hawker Beechcraft Defense Company (HBDC) has developed an alternate indication method of proper Hydraulic Power Pack Reservoir servicing by measuring the hydraulic piston rod length in the rear of the hydraulic reservoir power pack. This Notice provides the procedure to measure the hydraulic piston rod length so that proper hydraulic servicing can be visually determined by aircrew and maintenance technicians.

3. Action. These alternate procedures are restricted to T-6B aircraft that have been approved through the -107 process. Any additional T-6B aircraft that experience Power Pack Fluid Servicing Level Indicator failure will require submission of a -107 request via the normal request/approval process before the use of these alternate procedures are authorized for that aircraft. These alternate procedures are temporary for the affected T-6B aircraft until either replacement power packs become available, or a repair for the hydraulic power pack reservoir servicing level indicator cord is authorized. All other T-6B aircraft will continue to be inspected using the established Power Pack Reservoir servicing measurement procedures in the T-6A & B Maintenance Manual, NA A1-6AAA-2.

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4. Aircraft covered by this notice shall be restricted to home base and Detachment base flight operations where maintenance crews are readily available for support. These aircraft shall not be assigned to "Out and In" or cross country missions. These aircraft shall only be assigned to aircrews with at least one Instructor Pilot (IP) and shall not be issued for student solo flights.

5. Cancellation Contingency. This Notice shall remain in effect for one year unless cancelled by CNATRA or superseded by a CNATRA Notice on the same subject.

C. HOLLINGSWORTH
Chief of Staff

Distribution:
CNATRA Sharepoint

MAINTENANCE PROCEDURES

Prior to Using These Procedures:

1. Confirm that no fluid is dripping from the sight tube. (A seep is acceptable).

Note: A minor leak in the system will allow hydraulic fluid to get into the sight glass. This failure of the hydraulic system is considered cause for removal of the reservoir.

2. The existing power pack fluid level indicator shall be covered with Pressure Sensitive Preservation and Sealing Tape, MIL-T-22085, of appropriate size to cover the entire indicator. Once installed, write the word "INOP" on the tape with a permanent marker. Check the tape for security on the turnaround inspection. If the tape adhesion starts to loosen, replace it with new tape.

3. Ensure the Power Pack Piston Measurement Tools (Accumulator Discharged (AD), figure 2 and Accumulator Charged (AC) figure 3 below) are locally manufactured and marked exactly as shown in figures 2 and 3 below. Ensure all Power Pack Piston Measurement Tools are locally serialized and logged by serial number, location and the last date each tool's measurement lengths were verified. Verification is accomplished locally at the Organizational (O) Level using a steel rule. Per NAVAIR 17-35MTL-1, NAVSEA OD 45845, dated 01 January 2011, Metrology, Section 2, Rules require no calibration. Entry of the Power Pack Piston Measurement Tools into the METCAL system is not required. These measurement Tools must be entered into and tracked in accordance with the contractor's tool control program.

4. Prior to use, ensure Power Pack Piston Measurement Tools are undamaged. Daily, ensure the tool's measurement lengths have been verified within the last 6 months.

5. **For Inspection PTP Work Cards and AFM Exterior Inspection**

a. If flaps are not already extended to the LANDING position, extend flaps to LANDING by motoring the engine to gain access to power pack piston.

- b. Ensure speed brake is retracted.
- c. Discharge hydraulic accumulator by pulling the dump handle in hydraulic service area.
- d. Using the Power Pack Piston Measurement Tool, (Accumulator Discharged (AD), figure 2 below), measure the extended piston length on power pack (see figure 1 below). When properly serviced, the piston length is 7.9-9.2 inches.

6. **Servicing Hydraulic System with Service Cart:** Follow procedures in T-6 Aircraft Maintenance Instruction Manual (MIMs), Chapter 12-10-00, with the following modifications:

- a. If flaps are not already extended to the LANDING position, extend the flaps to LANDING after applying 3000 psi from the external hydraulic power.

- b. Ensure speed brake is retracted.

- c. Where the T-6 MIMs procedure calls for inspecting the site tube for proper servicing, instead measure the length of the power pack piston (figure 1 below) using the appropriate Power Pack Piston Measurement Tool (figure 2 or 3 below).

- (1) Accumulator Discharged (AD) Measurement Tool (figure 2 below): Full Piston Range: 7.9 - 9.2 inches (Mule disconnected and accumulator fully discharged (AD)).

- (2) Accumulator Charged (AC) Measurement Tool (figure 3 below): Full Piston Range: 5.7-6.3 inches (ensure accumulator is fully charged (AC)).

Enclosure (1)

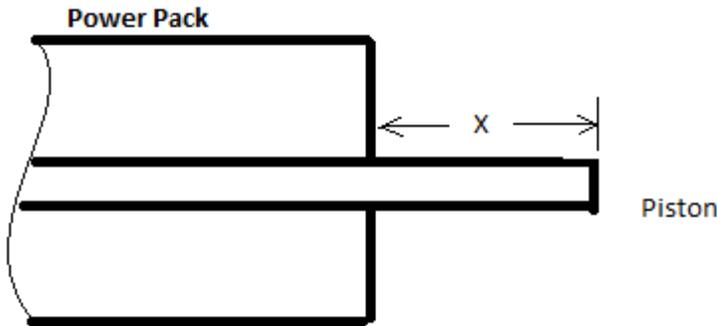


Figure 1.

Note: The Power Pack Piston rod length measurement specifications have been corrected to permit servicing with the flaps in the Landing Position and the numbers will not identically match the Power Pack fluid level indicator (Green String). Ensure measurements are taken with the Flaps at LANDING and speed brake in the UP position.

Power Pack Piston Measurement Tool - Accumulator Discharged (AD) (figure 2): With Flaps at LANDING and the speed brake UP, and the Power Pack Piston Measurement Tool against the power pack, the piston rod length must be in the measurement tool's green band with accumulator discharged. If not in the green band or beyond the green band, the Power Pack Reservoir shall be serviced and rechecked.

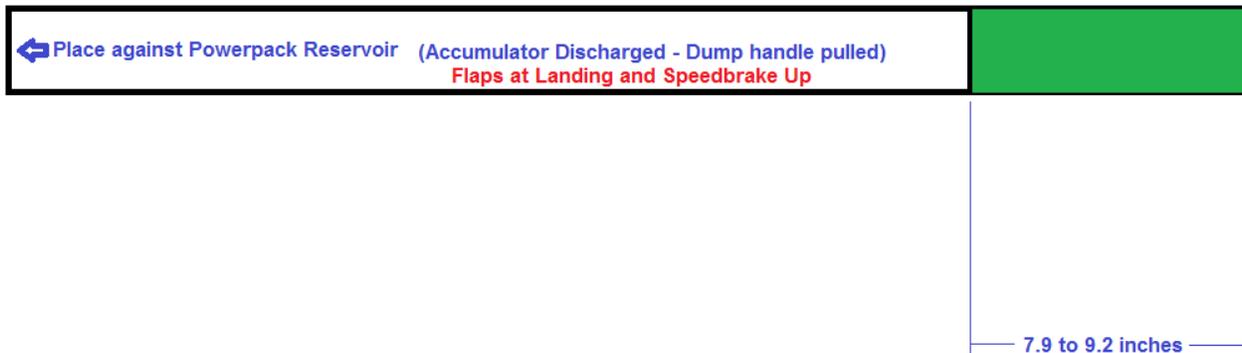


Figure 2. Power Pack Piston Measurement Tool - Accumulator Discharged (AD).

Enclosure (1)

Power Pack Piston Measurement Tool - Accumulator Charged (AC) (figure 3): With the Flaps at LANDING and the speed brake UP, and the Power Pack Piston Measurement Tool against the power pack, the piston rod length must be in the tool's green band with the accumulator charged. If not in the green band or beyond the green band, the Power Pack Reservoir shall be serviced and rechecked.

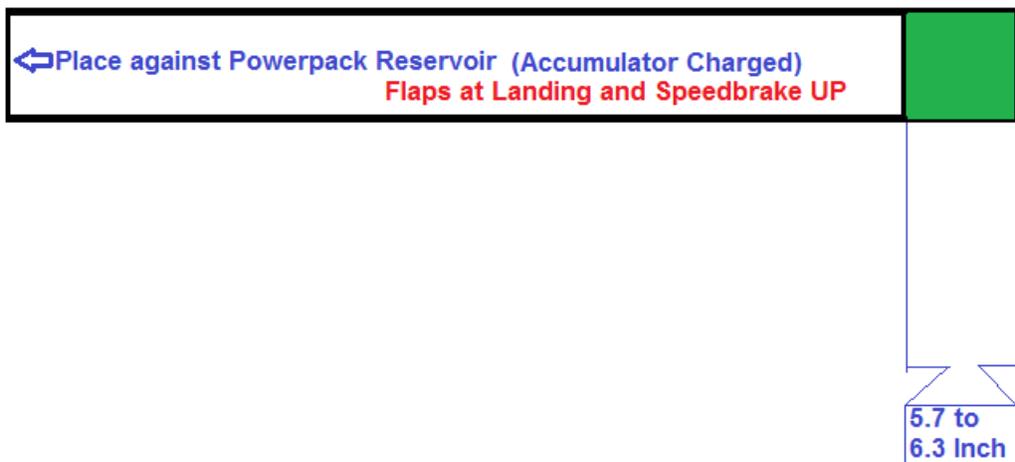


Figure 3. Power Pack Piston Measurement Tool - Accumulator Charged (AC)

MAINTENANCE CONTROL PROCEDURES

1. Ensure all requirements of enclosure 1, paragraph 3 are established, maintained and logged for all Hydraulic Power Pack Reservoir Alternate Servicing Measurement Tools.
2. All T-6Bs approved to use the alternate procedure shall have their Aircraft Discrepancy Books (ADB) conspicuously marked on the outside with the words, "Maintenance and Aircrew Alternate Hydraulic Servicing Procedures Required for this Aircraft." This note will be placed inside the ADB as the first page.
3. Prior to the start of all maintenance, including Daily and Turnaround (DTA) inspections, Maintenance Control shall brief these alternate servicing requirements to all maintenance personnel.
4. Plane captains and maintenance technicians must be properly trained on the proper use of these procedures. This training shall be documented as OJT in the individual's training record. Only properly trained plane captains and maintenance technicians are authorized to perform these alternate hydraulic servicing checks.
5. Maintenance Control shall assign only qualified maintenance personnel to perform the alternate hydraulic fluid level measurement in the presence of the aircrew utilizing the Power Pack Piston Measurement Tool during aircrew preflight inspection.
6. To ensure safety of maintenance and aircrew personnel, to the maximum extent possible, these procedures should be performed with hydraulic system power off and the hydraulic reservoir pressure depleted to zero.
7. In order to properly check the hydraulic power pack piston length, the flaps must be extended to LANDING and the speed brake must be in the UP position.

8. Maintenance Control shall ensure the flaps are in the LANDING position and the speed brake UP prior to issuing these aircraft to aircrew. This is to facilitate aircrew observation of the Power Pack Reservoir Alternate Servicing Level measurement.

9. During pre-flight, a qualified Plane Captain or maintenance technician shall accompany the Aircraft Commander in conducting a joint visual verification of the hydraulic servicing level by using the Power Pack Piston Measurement tool.

10. Upon return to base when the aircraft is in the chocks and prior to shutdown, Plane Captains shall signal Aircrew to extend the flaps to the LANDING position and ensure the speed brake is in the UP position. This is to facilitate the Power Pack Reservoir Alternate Hydraulic Servicing Level Measurement during turnaround and daily inspections.

AIRCREW PROCEDURES

1. T-6B Aircraft Discrepancy Books (ADB) marked with the words, "Maintenance and Aircrew Alternate Hydraulic Servicing Procedures Required for this Aircraft" require special procedures on preflight and prior to engine shutdown.
2. On preflight of the aircraft, the flaps will be in the LANDING position with the flap selector in the UP position. Aircrew and line personnel shall be aware that the flaps will move to the UP position upon starting the engine.
3. Aircraft Commanders shall visually verify the hydraulic servicing measurement performed by a qualified plane captain or maintenance technician to check for proper hydraulic fluid servicing on aircraft pre-flight inspection.
4. Upon return to base when the aircraft is in the chocks and prior to shutdown, Plane Captains shall signal Aircrew to extend the flaps to the LANDING position and ensure the speed brake is in the UP position. This is to facilitate the Power Pack Reservoir Alternate Hydraulic Servicing Level Measurement during turnaround and daily inspections.