HYDRAULIC FLUID - SERVICING

1. General

A. This section gives procedures to fill with fluid, the components that follow: hydraulic brake system, nose gear shimmy damper, and nose gear strut.

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2. Hydraulic Brake System Servicing

NOTE: The hydraulic brake system uses two brake cylinders found forward of the pilot's rudder pedals. A hydraulic fluid reservoir on the engine side of the firewall supplies fluid to both cylinders. Bleed the brake system when there is a spongy response to brake pedals. Refer to Chapter 32, Wheels and Brakes - Maintenance Practices.

CAUTION: Make sure to release the parking brake before the start of any servicing of the master cylinder. This will release the pressure in the system.

A. Service the Hydraulic Brake Fluid Reservoir.

(1) Open the upper left cowling door. Refer to Chapter 71, Engine Cowling and Nose Cap - Maintenance Practices.

(2) Do a Visual check of the fluid level in the reservoir.

(3) If the reservoir level is at or below the **MIN** fill line, remove the filler cap from the brake fluid reservoir and fill the reservoir with only **MIL-PRF-5606** type specifications hydraulic fluid to within 0.50 inch (12.70 mm) of the **MAX** fill line shown on the reservoir. Refer to Figure 301.

(4) Install the filler cap on the reservoir.

(5) Close the upper left cowling door. Refer to Chapter 71, Engine Cowling and Nose Cap - Maintenance Practices.

END OF TASK

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3. Shimmy Damper Servicing

NOTE: There are two different types of shimmy dampers that have different servicing procedures. The two types of shimmy dampers are Cessna and Lord. The Lord shimmy damper does not have field servicing procedures.

A. Fill the Cessna Shimmy Damper with fluid.

NOTE: The shimmy damper barrel is filled with MIL-PRF-5606 hydraulic fluid that is pressurized. For servicing instructions that include more than filling the shimmy damper with fluid, refer to Shimmy Damper - Maintenance Practices.

(1) Remove the nose gear fairings to get access to the shimmy damper. Refer to Nose Gear Fairing - Maintenance Practices.

(2) Remove the left upper cowling door and the left lower cowl panel to get access to the shimmy damper. Refer to Chapter 71, Engine Cowling and Nose Cap - Maintenance Practices.

(3) Remove the set screw and spring before removing the filler plug on the top of the damper barrel.

(4) Remove the safety wire from the filler plug.

(5) Remove the filler plug from the shimmy damper.

(6) Visually do a check of the position of the piston.

(7) If it is necessary to add fluid to the shimmy damper, then fill the shimmy damper with MIL-PRF-5606 hydraulic fluid.

(8) Install the filler plug in the shimmy damper.

(9) Install the safety wire on the filler plug.

(10) Install the set screw and spring.

(11) Install the left upper cowling door and the left lower cowl panel. Refer to Chapter 71, Engine Cowling and Nose Cap - Maintenance Practices.

(12) Install the nose gear fairings. Refer to Nose Gear Fairing - Maintenance Practices.

B. Service the Lord Shimmy Damper.

(1) The Lord Shimmy Damper is sealed and not serviceable.

END OF TASK

4. Nose Gear Strut Servicing

A. Fill the nose gear strut with MIL-PRF-5606 hydraulic fluid. For servicing instructions, refer to Nose Gear Shock Strut - Servicing.

Figure 301 : Sheet 1 : BRAKE FLUID RESERVOIR