

### D6F and D6G Track-Type Tractors Power Train / Troubleshooting

## Troubleshooting

**Sudden movement of the machine or release of oil under pressure can cause injury to persons on or near the machine. To prevent possible injury, perform the procedure that follows before testing and adjusting the power train.**

**Sudden movement of the machine or release of oil under pressure can cause injury to persons on or near the machine. To prevent possible injury, perform the procedure that follows before testing and adjusting the hydraulic system.**

1. Move the machine to a smooth, horizontal location. Move away from working machines and personnel. Lower the implements to the ground.
2. Permit only one operator on the machine. Keep all other personnel away from the machine or in clear view of the operator.
3. Engage the parking brake.
4. Stop the engine.
5. Move the control levers to each position in order to release the pressure in the power train hydraulic system.
6. Carefully loosen the filler cap on the hydraulic tank. This is done in order to relieve the pressure in the tank.
7. Make sure that all hydraulic pressure is released before any of the fittings, hoses, or components are loosened, tightened, removed, or adjusted.

8. Tighten the filler cap on the hydraulic tank.

After the pressure in the system has been released, lines and components can be removed.

## Procedure

When you are defining a problem in the power train hydraulic system, the following procedure should be followed. First, do visual checks. If the visual checks are completed and the problem has not been identified, do operation checks. If you have not completely identified the problem, do the instrument tests. This procedure will help identify problems in the power train hydraulic system. When the problem is defined, go to the troubleshooting section of this manual. There may be more than one cause for a problem. The troubleshooting section will list the probable causes of a known problem. The troubleshooting section may suggest specific inspections or instrument tests be done. These inspections and tests will help identify the most probable causes of the problem.

Use this section as a reference in order to locate problems and correct problems in the power train hydraulic system. If additional checks need to be made, use the **6V-4160** Test Group for transmission hydraulics. Locations of the pressure taps and procedures for testing and adjusting are contained in this manual.

## Visual Checks

A visual inspection of the power train hydraulic system and the power train hydraulic system's components is the first step to diagnosing a problem.

**Personal injury or death can result from improperly checking for a leak.**

**Always use a board or cardboard when checking for a leak. Escaping air or fluid under pressure, even a pin-hole size leak, can penetrate body tissue causing serious injury, and possible death. If fluid is injected into your skin, it must be treated immediately by a doctor familiar with this type of injury.**

1. Check the oil level in the power train, in the flywheel clutch, and in the bevel gear case.
2. Check the oil level in the final drives.

## Caterpillar D6f D6g Track Type Tractors Power Train Troubleshooting

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3. Check all of the oil lines, hoses, and connections for leaks and damage. Look for oil on the ground under the machine.
  
4. Check for damage or adjustment in the control linkages for the transmission. Check for damage or adjustment in the steering clutches and brakes.
  
5. Disengage the flywheel clutch. Turn the universal joint by hand. The universal joint should turn freely. If the oil is cold, the universal joint will be difficult to turn. If the universal joint does not turn, disconnect the universal joint from the flywheel clutch. Turn the universal joint again. This is done in order to make sure that the gears are turning in the transmission.
  
6. Drain the oil from the filter housing.
  
7. Check the screens and filters for foreign material.
  - a. Bronze colored particles are an indication of failure of the clutch.
  
  - b. Shiny steel particles are an indication of a pump failure.
  
  - c. Rubber particles are an indication of a seal failure or a hose failure.
  
  - d. Aluminum particles are an indication of a torque converter failure. If you find metal or rubber particles, all components of the power train oil system must be cleaned out. Always replace damaged parts with new parts.
  
8. Check the adjustment of the track.