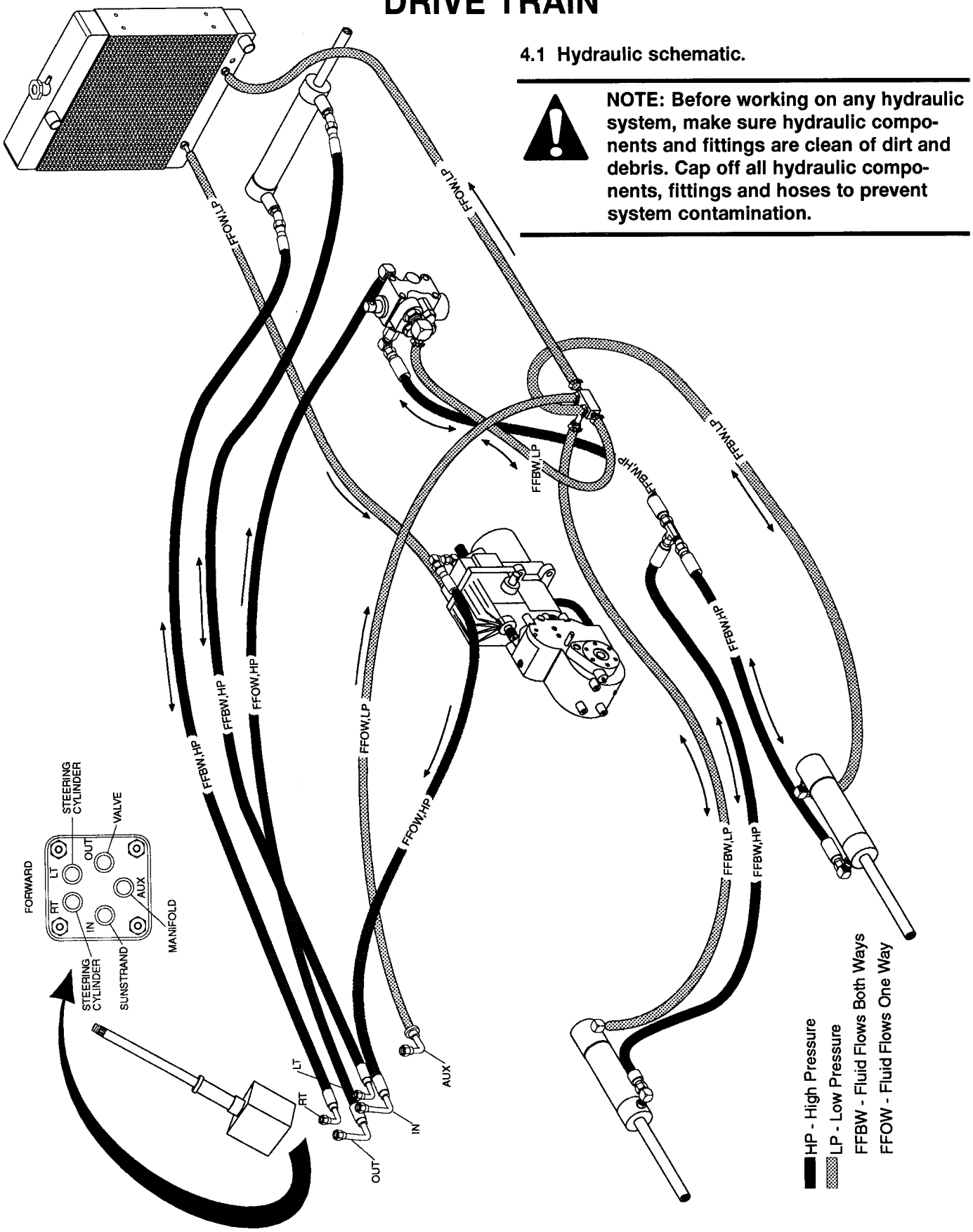
SECTION 4

DRIVE TRAIN

4.1 Hydraulic schematic.

NOTE: Before working on any hydraulic system, make sure hydraulic components and fittings are clean of dirt and debris. Cap off all hydraulic components, fittings and hoses to prevent system contamination.



4.2 Flywheel and PTO drive shaft removal

1. Flywheel drive shaft removal:
   a. To remove flywheel U-joint, remove the two bolts connecting the U-joint to the transmission.
   b. Remove the flywheel adapter plate by moving the eight bolts connecting it to the flywheel. Torque to spec.

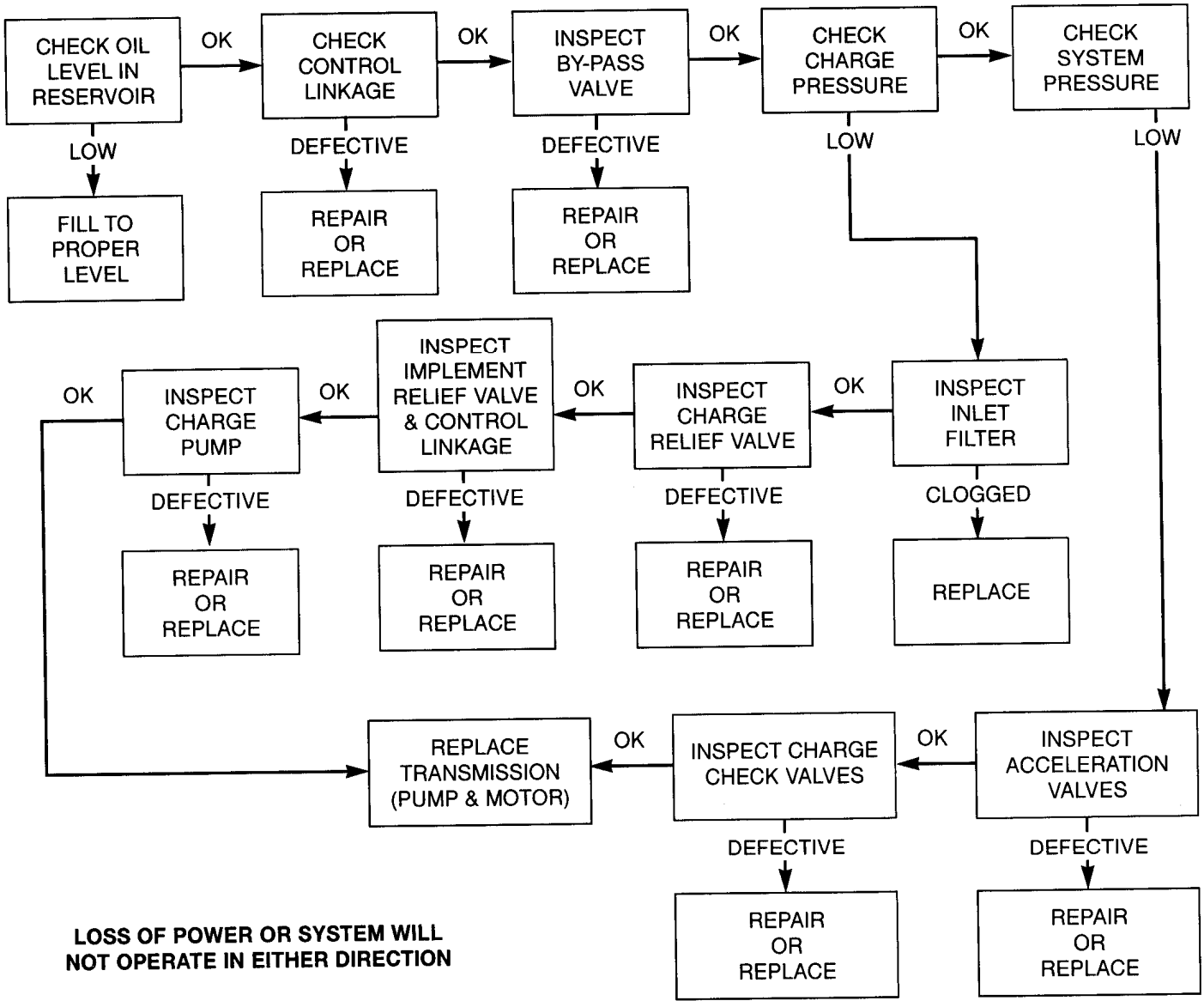
2. Flywheel drive shaft installation:
   a. Connect the flywheel adapter plate by installing the eight bolts with loctite applied.
   b. Apply a film of grease to the flywheel adapter plate shaft splines and install U-joint, attach U-joint to trans mission with the two mounting bolts. Torque to spec.

3. PTO drive shaft removal:
   a. To remove PTO drive shaft, remove the four bolts connecting the drive shaft to the transmission and PTO gearbox.

4. PTO drive shaft installation:
   a. Apply a film of grease to the PTO drive shaft splines and install drive shaft with the four mounting bolts.
   Torque to spec.

4.3 Transmission Trouble Shooting

SUNSTRAND TRANSMISSION TROUBLE SHOOTING PROCEDURES

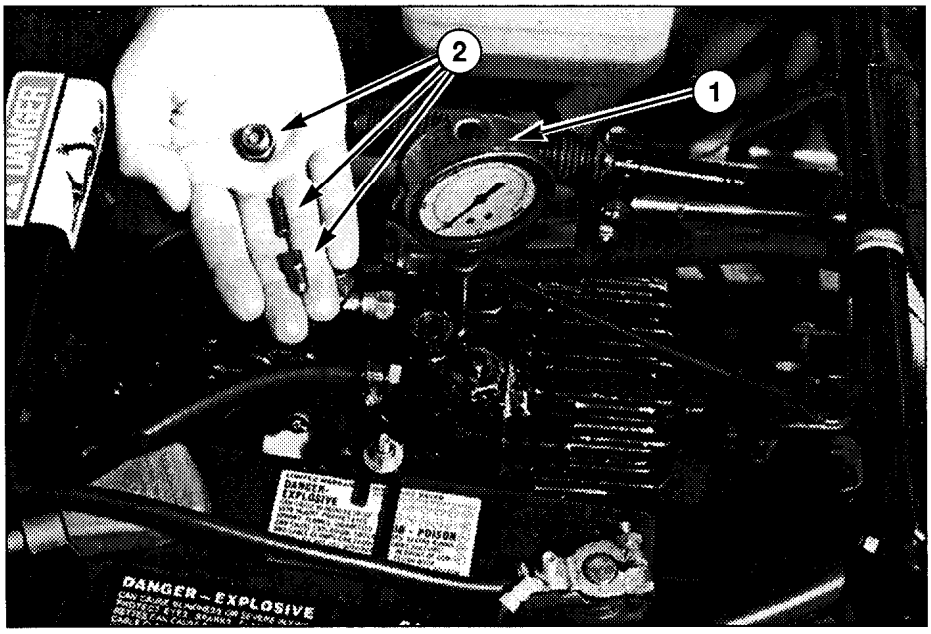


LOSS OF POWER OR SYSTEM WILL NOT OPERATE IN EITHER DIRECTION

4.4 Transmission Implement Pressure Check

NOTE: Make sure the hydraulic system is serviced properly prior to starting a pressure check. Refer to section 2.12.

1. Clean around the pipe plug on the top of the transmission. Remove the pipe plug and install a pressure gauge (1000 PSI minimum) into the charge pressure port. See figure 11.



1. **Pressure Gauge (1500 PSI)**
2. **Charge Port, Spring and Relief Valve Cone**

FIGURE 11

2. Start the unit and run until the hydraulic fluid has reached the running temperature. Cycle the lift lever control slowly to insure that the system is bled and hydraulic hoses are full of fluid.

3. Increase the unit to full RPM and move the lift lever control to the raise position and hold. The implement pressure on the gauge should read 700-800 PSI with a maximum of 1000 PSI.

CAUTION: If shimming is required to reach the proper implement pressure, be sure to shut down the unit prior to removing the charge pressure cap. The hydraulic system is under high pressure and can cause serious injury if the cap is removed with the unit running.

NOTE: If the unit won't hold a steady pressure you will need to trouble shoot the system to find the cause. If the pressure reads lower than the specified pressure needed you will need to shim the charge port by installing shims (shim package part number 031613). The shim package consists of assorted shim thicknesses. Use caution when shimming up the pressure not to exceed 1000 PSI. The thinnest shims (.010") will raise the system approximately 1000 PSI. If multiple shims are needed, try to use a thicker shim as opposed to two or more thin shims.

4. Once the correct pressure has been established, shut down the unit and remove the pressure gauge and install the pipe plug.

4.5 Sunstrand transmission removal

1. Disconnect and remove battery negative terminal first, for access to the right side transmission mounting bolts and spacers.

2. Place a 8 quart (7.6 lit.) drain bucket under the transmission. Disconnect the oil suction hose from the bottom of the transmission and drain.

NOTE: Units equipped with Four-Wheel Drive Assist:

a. Mark and disconnect the two hydraulic hoses from the manifold at the bottom of the transmission. See figure 12.
b. Disconnect the two yellow leads at the reverse override switch. See figure 13.

3. Loosen the flywheel U-joint at the rear of the transmission. See figure 13.

4. Loosen the PTO drive shaft at both ends, at front of transmission. See figure 13.

5. Remove the front two screen bolts and carefully bend screen down far enough for access to the lower transmission mounting bolts and spacers. See figure 12.

6. Disconnect the damper at the transmission pump control arm and swing back out of the way.