TSL-44 / TSL-50 TROUBLE SHOOTING

PROBLEM: WILL NOT LIFT LOAD

Possible Solutions:

- Release stem is bent or damaged. Replace if needed
- Release knob is not tight enough. Tighten release knob.
- Check ball is missing from behind the release stem. Install ¼" steel check ball.
- Unit is low on hydraulic fluid. Replenish with **hydraulic oil only**.
- Air pressure is too low. Raise the PSI going to the jack. PSI should range from 90-175 PSI.
- Lifting too much weight. Use a lifting device with a higher lifting capacity.
- Check balls not seating. Remove, clean and re-seat check balls.
- Seals are worn. Replace any worn parts if needed.

PROBLEM: RAM WILL NOT RETRACT

Possible Solutions:

- Main air supply to jack is not attached. These units have an air powered ram retract feature which requires the main air supply to be attached to the jack for lowering.
- Oil reservoir is air bound (air has mixed with the hydraulic fluid). Follow this bleeding procedure:
  - Leave main air supply attached to the jack. Located the oil fill plug next to the main lifting ram on the jack. Slowly open the fill plug allowing any air to escape. If air or oil continues to escape then there is possibly an internal problem which may require rebuilding the unit. If not replenish oil supply with **hydraulic fluid only** and re-install fill plug.

PROBLEM: AIR MOTOR IS STALLING

Possible Solutions:

- Air pressure is too low. Raise the PSI going to the jack. PSI should range from 90 to 175 PSI.
- Air motor piston needs lubricating. Insert a few drops of air tool oil into the airline and cycle jack.
- Seals or parts are worn. Replace if needed.

PROBLEM: JACK IS SLOWLY LEAKING DOWN

Possible Solutions:

- Check balls are not seating. Remove, clean and re-seat check balls.
- Check ball is missing from behind the release stem. Install ¼" steel check ball.
- Release knob is not tight enough. Tighten release knob.

PROBLEM: AIR IS ESCAPING FROM JACK

Possible Solutions:

- If air escapes from the lift pad area, the quad ring needs replaced.
- If air escapes around the ram, the loaded lip seal needs replaced.

GRAY.
Professional Service Equipment

3501 S. Leonard Rd.

P.O. Box 728

St. Joseph, MO U.S.A. 64502

1-800-821-7320

(816) 233-6121

FAX (816) 233-7251

or (816) 387-8157

www.grayusa.com

TSL-44/TSL-50 Hydraulic Fluid Checking/Filling Procedure

Notice:
The oil reservoir in the TSL jacks is sealed and pressurized when in use. When checking the fluid level, **DO NOT** have the jack connected to the air supply.

1. Make sure ram is fully retracted.
2. Disconnect air line.
3. Carefully remove the plastic cover from the oil fill hole located on the top surface of the jack body.
4. Make sure the hole for the oil reservoir plug is clean and dry before removing plug. Water and dirt destroy hydraulic parts.
5. Remove plug using a 3/16 Hex wrench.
6. Check fluid level. **RAM MUST BE FULLY RETRACTED.** The oil should be within ¼ inch of the bottom of the oil fill hole. If fluid is low, add a high-grade hydraulic fluid equivalent to Mobil DTE#11 oil. **Do NOT** use brake or transmission fluid.
7. Reinstall and secure the fill plug, replace the plastic hole cover, and connect to air supply and test for normal operation.

TSL-44/TSL-50 Air Bleeding Procedure

1. Leave air hose hooked up to jack.
2. Open release knob on top of handle as if you were letting the jack down.
3. Slowly open hydraulic fill plug located near lifting ram underneath yellow plastic plug.
4. Allow air to escape and make sure air and/or oil stops bubbling out.
5. If air and/or oil stops bubbling out, close fill plug and continue use.
6. If air and/or oil continues to bubble out, the unit is in need of rebuilding. Contact Gray's Customer Service Department for parts or service.

Field Service Instructions TSL-50

The following are precautionary notes to aide you in the reassembly of your TSL-50 jack. All part numbers referred to are found on the Gray TSL-50 POWER UNIT Parts List (PN 0-670-90208).

Do not remove any permanently installed plugs. There are no serviceable parts under these plugs.

Do not remove hydraulic cylinder, item 8, if it remains tight in the base plate, item 14.

After complete disassembly all parts should be thoroughly cleaned and dried before reassembly. Care should be taken to keep all contaminants out of the units. Be sure you install all seals correctly. An inverted seal or twisted quad ring will cause the unit to leak, operate abnormally, or not operate at all.

When installing the bladder, item 9, and outer barrel, item 10, the bottom sealing surface of the bladder and the groove in the base plate, item 14, must be completely dry. Set the assembly in place so that the outer barrel weldment (item 10) is located as shown. Then lubricate the top sealing surface and the top 1/4" of the inside surface of the bladder with a 50-50 mixture of STP and hydraulic oil. This will allow the jack cap, item 4, to spin onto the bladder without twisting it. If the bladder twists, the reservoir will not hold sufficient oil to get full stroke out of the ram. The outer barrel, item 10, must be held to prevent it from turning when tightening the jack cap, item 4. Be sure you have item 3 positioned correctly before tightening the jack cap. The jack cap should be tightened to 1100 ft-lbs. After the cap is tight, the reservoir should be filled with 32 oz. of Mobil DTE-11 hydraulic oil or equivalent. Consult the owner's manual for proper filling procedures.

When installing the hydraulic block, item 48, to the base plate, item 14, be sure the two mating surfaces are clean. Also make sure the quad ring, item 16, is installed properly. Assemble the parts using capscrews, item 51, and tighten to 35-40 ft-lbs. Install the air motor assembly using capscrews, item 50 and 52, to the hydraulic block. Use thread locking compound on all capscrews and tighten to 35-40 ft-lbs. Do not add lock washers.

During installation of the seal (Item 2, PN 1-390-11092), be sure the lips point downward during assembly. Care should be used to protect the lips from damage during assembly.