

MALABAR

INTERNATIONAL

SUGGESTED AXLE JACK PREVENTATIVE MAINTENANCE PROCEDURES Malabar 50 to 85 Ton Mobile Axle Jacks

- **Jack Data:** **Serial Number :** _____
For Models: 50P9-AR, 60P9, 60P10, 65P9, 65P10,
65P9-AR, 65P10-AR, 85P10-AR, 95P10AR
**Refer to other side for rated capacities & hydraulic
pressure set points.**

- **90 Day Maintenance Procedure:**

- **9 Point Check:**

- 1. Check Hydraulic system (hydraulic lines, hand pumps, cylinder assembly, air operated pump & load gauge) for damage or leaks. Note: Air operated pump & load gauge are optional equipment.

- 2. Check jack frame, casters, ship adapter, jack base & hardware for damage, corrosion or excessive wear.

- 3. Check reservoir fluid level with plungers fully retracted.

- 4. Check Auto-Retract system (accumulator & fluid lines) for damage or leaks. Note: Only "AR" models include this system.

- 5. Operate jack to extend plungers and inspect for corrosion, moisture or foreign material.

- Caution: Do not fully extend inner plunger at elevated pressure!**

- Operate jack partially with air operated pump and partially with hand pumps. Note: Air operated pump is optional equipment.

- 6. If jack is equipped with air operated pump, check air relief valve (must be properly installed) and air pump lubricator for oil (SAE #10 wt. or equiv.) Note: Air pump lubricator is optional equipment.

- 7. Check paint condition and apply touch-up paint as required.

- 8. Operate towbar & verify proper operation. (towbar must raise & lower the jack base)

- 9. Open release valve & verify plungers fully retract automatically. Note: Only "AR" models will retract automatically. Retract plungers manually for all others. Retract screw extension completely & replace rain cover if so equipped.

- **Annual Maintenance Procedure:**

- 1. Remove load gauge, calibrate and reinstall.

- Note: Load gauge is optional equipment.

- 2. Lubricate caster wheels and horn bearings.

- 3. Check jack screw extension for positive stop when fully extended.

- 4. Perform above 9 point check. Skip step #9.

- **Maintenance Records:**

- Date of prior Inspection Record: _____

- Maintenance Inspections:**

- 1st Qtr. Inspection: by/date: _____

- 2nd Qtr. Inspection: by/date: _____

- 3rd Qtr. Inspection: by/date: _____

- Annual Inspection: by/date: _____

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- Annual Inspection: by/date: _____

- **Annual Maintenance Procedure(continued):**

- 5. Apply a thin film of LPS2 or equivalent lubricant to jack plungers and screw extension.

- 6. Check reservoir for fluid contamination (water and/or dirt). Drain and flush if required.

- 7. Install jack cylinder assembly in an approved jack test fixture and check hydraulic relief valve setting.

- Note: If a test fixture is not available, disconnect fluid line to jack cylinder assembly and plug before adjusting hydraulic relief valve.

- Caution: Do not attempt to adjust hydraulic relief valve with inner plunger fully extended!**

- 8. Remove jack from test fixture, retract jack plungers & screw extension completely. Replace rain cover if so equipped.

Rated Capacities & Hydraulic Pressure Set Points:

| Jack Models: | <u>50P9-AR</u> | <u>60P9 60P10</u> | <u>65P9 65P10</u> | <u>65P9-AR 65P10-AR</u> | <u>85P10-AR</u> | <u>95P10-AR</u> |
|----------------------------------|----------------|-----------------------|-----------------------|-----------------------------|-----------------|-----------------|
| Rated Capacity (Tons): | 50 | 60 | 65 | 65 | 85 | 95 |
| Hyd. press. @ rated cap. (PSIG): | 6660 | 6450 | 6960 | 7000 | 7160 | 8000 |
| Load limit set point (Tons): | 52.5 | 63.6 | 68.9 | 68 | 90.1 | 100.7 |
| Hyd. press. @ load limit (PSIG): | 7000 | 6840 | 7380 | 7325 | 7590 | 8480 |

Jack Overhaul or Disassembly: (Refer to Service Manual)

Each time the jack is disassembled, inspect and/or repair as follows:

- Inspect inside diameter of jack cylinder and outer plunger for corrosion, pits, signs of scoring or scratches which may damage seals.
- Inspect upper bearings for excessive wear or scoring.
- Inspect screw extension and plunger outside diameter for excessive wear, damage or corrosion. Refinish or replace as necessary.
- Inspect ship adapter for excessive wear, damage or corrosion.
- Inspect hand pump plungers and inside diameter of pump cylinders for damage, corrosion and scoring. Inspect pump links and pins for excessive wear.
- Inspect and replace as necessary distorted, worn-out or deteriorated seals, gaskets or packings.
- Inspect and clean fluid screens, (air pump and hand pump suction filters) with clean solvent.
- Inspect valve seats in valve block assembly for scratches, dents or corrosion. Repair or replace as required.
- Drain, flush and refill hydraulic reservoir with clean MIL-H-5606 hydraulic fluid or equivalent.
- Prior to reassembly, clean parts (except seals) in clean solvent, blow off parts with clean dry air and assemble immediately. Note: Use filtered hydraulic fluid to lubricate parts and seals during reassembly. Parts and assemblies that cannot be cleaned with solvent should be flushed with clean hydraulic fluid. Particular attention should be focused on the reservoir to remove all sludge and sediment.

General Precautions and Operational Tips:

- **Extreme caution should be exercised when using a high pressure air or nitrogen source to operate the jack air operated pump!** Always make sure the source pressure is **off** before connecting to the jack air inlet and the supply regulator is adjusted. **Do not exceed 120 PSIG regulator outlet pressure.**
- Avoid towing jack over long distances, rough uneven surfaces and at high speeds. Do not exceed 5 MPH. Should regular extended towing over uneven surfaces (airport roads, hangar door rails, speed bumps or wide expansion joints) be necessary due to operational circumstances utilize Malabar Axle Jack Transporter Model 8817. Contact your Malabar Representative for further information.
- Promptly replace any damaged or worn-out parts. Do not allow prolonged contact of jack base to ground while towing. This will cause excessive wear, accelerate parts replacement and may compromise safety.
- Avoid using axle jack as a landing gear "overhaul stand" for prolonged periods without adequate protection. Use a protective covering over jack cylinder and frame during landing gear disassembly, de-greasing, paint stripping, overhaul and/or assembly operations.
- To prevent entrance of contaminants and water into jack cylinder assembly, keep jacks fully retracted with the cylinder rain cover in place. Use of a protective tarp or other method of shelter is highly recommended to prolong service life.
- Always consult the jack service manual for operation and service data. Do not attempt to remove safety devices or modify jack components or use unauthorized parts. Modification of jack may cause damage to other components, failure of jack, injury and/or damage to aircraft. Contact your Malabar Representative for additional information or assistance.