

HYDRAULICS

Purpose

The purpose of this document is to assist in identifying and safely removing contamination from the hydraulic leveling and slide-out system.

Safety

Read and understand all instructions. Adhere to all safety labels. This provides general procedures. Many variables can change the circumstances of the procedure, i.e., the degree of difficulty involved in the service operation and the ability level of the individual performing the operation. This document cannot begin to plot out procedures for every possibility, but will provide the general instructions for effectively servicing the system. In the event the skill level required is too advanced or the procedure too difficult, a certified technician should be consulted before performing the necessary service. Failure to correctly service the system may result in voiding the warranty, inflicting injury or even death.

⚠ WARNING

Hydraulic lines are under high pressure. A fluid leak within a highly pressurized hydraulic system can cause serious skin-penetrating injuries. Wear appropriate Personal Protective Equipment (PPE), such as long sleeves, gloves, protective eyewear or a full face shield, when performing service or maintenance to the unit.

⚠ WARNING

The unit MUST be supported per manufacturer's recommendations before working underneath. Failure to do so may result in death or serious personal injury, severe product and/or property damage.

⚠ CAUTION

Moving parts can pinch, crush or cut. Keep clear and use caution.

Resources Required

- Automatic transmission fluid (ATF)
- Siphon
- Appropriately-sized wrenches
- Fluid collection container
- Rags
- Personal protective equipment (PPE)
- [TI-188 Hydraulic Fluid Recommendation](#)
- [TI-118 Basic Purge Procedure](#)
- [TI-050 Hydraulic Cylinder Test](#)

Preparation

1. Make sure unit is level and on solid ground.
2. If unit is equipped with electric stabilizers, fully retract stabilizer legs before proceeding.

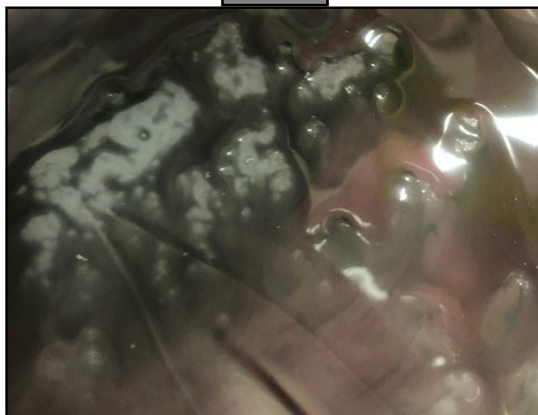
Procedure

1. Determine which components are affected and may need to be flushed.
2. Start with all cylinders in the retracted position.

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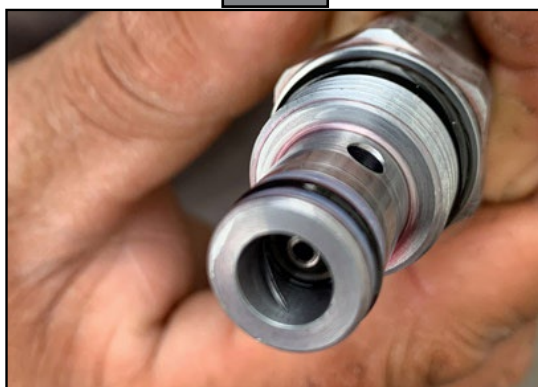
3. Using a siphon, remove all ATF fluid and any contamination (Fig. 1) in the reservoir.
4. Add new ATF fluid (TI-188 for recommended fluids) to the reservoir until it is about 1/4" from the lip of the fill port on vertical pumps or about 1/2" from the top of the reservoir for horizontal pumps.

Fig. 1



5. If any cartridge valves are to be inspected for contamination (Fig. 2), it is important to slightly extend the cylinder(s) controlled by that valve before removing. This will relieve the retract pressure in the system and allow for the safest removal of the valve. Replace valves as necessary.
6. Perform bypass test (TI-050) on any cylinders suspected of being affected by fluid contamination. Replace cylinders as necessary.

Fig. 2



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NOTE: The following procedure should be done one cylinder at a time.

7. Remove a retract hose (Figs 3-6) and plug it. Completely extend cylinder, catching fluid that comes from the cylinder retract port in the collection container.

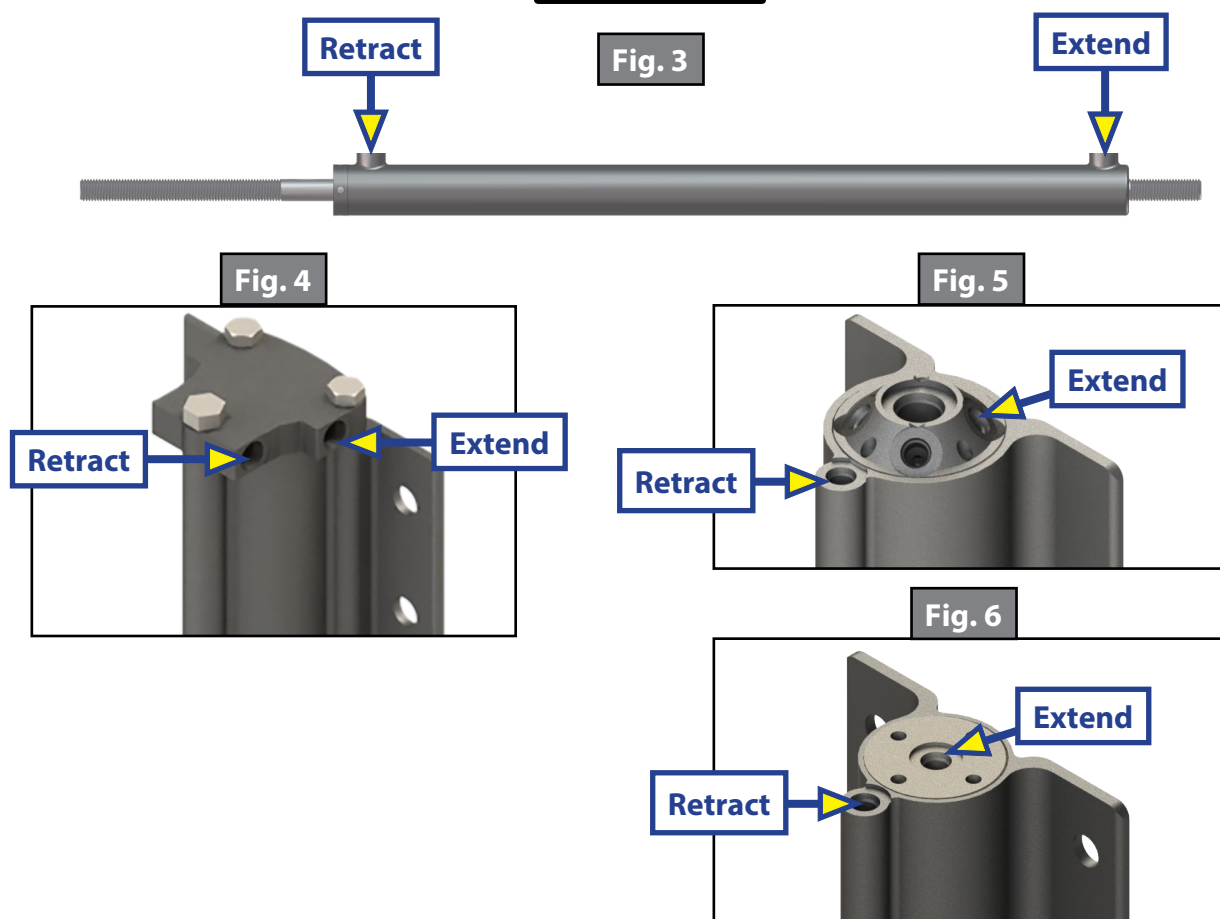


LIPPERT
COMPONENTS

HYDRAULIC SYSTEM FLUSH PROCEDURE

TI-176

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8. Remove the plug in the retract hose and operate system (retract) to expel fluid from the hose. This will flush contamination and fluid out of the retract hose. Run until fluid is clean. Be sure to catch the fluid in the collection container.
9. Reattach retract hose to cylinder, and remove the extend hose for that system and plug it.
10. Fully retract the cylinder, catching fluid that comes from the cylinder extend port in the collection container.
11. When cylinder is fully retracted, remove plug in the extend hose and operate the system (extend) to expel fluid from the hose. This will flush contaminated fluid out of the extend hose. Run until fluid is clean. Be sure to catch the fluid in the collection container.
12. Reattach the extend hose to the cylinder.

NOTE: Be sure to check the fluid in the reservoir and add fluid as necessary to avoid drawing air into the system. If necessary purge the system per TI - 118.

NOTE: Do not reuse flushed fluid.

13. Continue to perform the flush procedure for each cylinder, one at a time.

NOTE: Be sure to let the pump rest a few minutes in between cycles. The pump motor produces heat while in operation, and excessive heat buildup can lead to damage or failure of components.

As a supplier of components to the RV industry, safety, education and customer satisfaction are our primary concerns. Should you have any questions, please do not hesitate to contact us at (574) 537-8900 or by email at customerservice@lci1.com. Self-help tips, technical documents, product videos and a training class schedule are available at lci1.com or by downloading the MyLCI app.



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