

INSTRUCTION SHEET - OIL REPLACEMENT

REPLACING STANDARD ATF WITH SYNTHETIC ATF

Only use one of the following synthetic fluids to replace the existing ATF in the system.

These fluids are compatible with Dexron ATF or HWH Specialty Hydraulic Oil.

Castrol Heavy Duty Lubricants - TranSynd
BP Lubricants - Autrand Syn 295
Cognis Corporation - Emgard 2805
International Truck and Engine Company - Fleetrite Synthetic ATF
Exxon Mobil Lubricants - Mobil Delvac Synthetic ATF
John Deere & Company - HD SynTran
Volvo Trucks North America - Bulldog Synthetic ATF

Remove oil from the jacks.

1. Remove the jack cylinder from the pivot bracket. Support the cylinder in an upside down position (hose fitting pointing down) such as in a vice.
2. Connect a valve arrangement to the cylinder and a compressed air supply as shown. Make sure both valves are closed.
3. Open ball valve 1. This should extend the cylinder. This is important to get all oil out of the hollow rod.
4. Close ball valve 1 and open ball valve 2. The air in the cylinder should force oil out of the jack.
5. Close ball valve 2 and repeat the procedure several times or until no more oil drains from the cylinder.
6. Replace the cylinder when draining is complete. Repeat this process with the remaining jack cylinders.

IMPORTANT: Before continuing, fully extend all room extensions. Make sure the rooms have dropped down when fully extended. Leave the rooms extended and down. It is important that all rooms are fully extended and down before replacing the oil in the reservoir.

Removing oil from the pump reservoir

1. Remove the breather/filler cap and remove all oil from the pump reservoir.

Use a fluid suction tool to remove the oil from the pump reservoir.

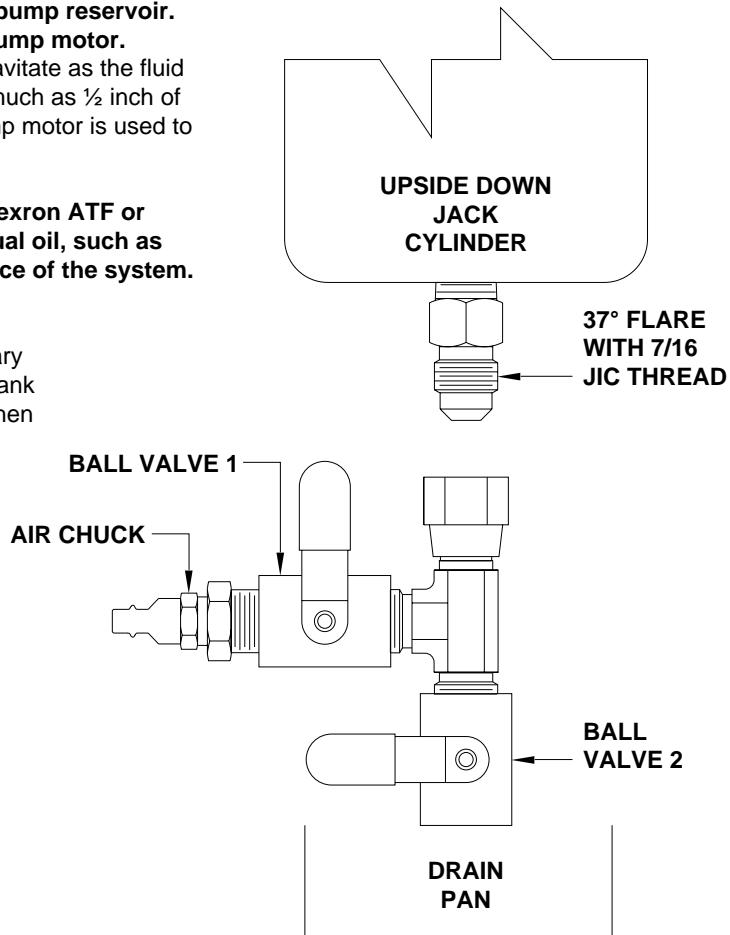
DO NOT pump the oil from the reservoir with the pump motor.

Damage to the pump can occur if the pump starts to cavitate as the fluid level drops to the bottom of the pickup tube. Also as much as ½ inch of oil may remain in the bottom of the reservoir if the pump motor is used to remove the oil.

Note: Because the fluids listed are compatible with Dexron ATF or HWH Specialty Hydraulic Oil a small amount of residual oil, such as oil retained in hoses, should not affect the performance of the system.

7. Fill the reservoir with new synthetic fluid to the proper level, one (1) inch from the top of the tank. If an auxiliary reservoir is to be added to the system, fill the existing tank to the top of the fill hole. Be sure to use Teflon tape when adding a hose fitting to the the tank. Mount and fill the auxiliary tank before proceeding.

8. Manually extend the two front jacks and then the two (2) rear jacks until they lift the vehicle about two (2) inches. Then fully retract all four jacks. Using the "STORE" button is acceptable. Check the fluid level in the reservoir and top off as necessary. Repeat this process two (2) more times. This should fill the jack cylinders with oil and remove most air from the leveling system.



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Purging existing oil from the room extension mechanisms.

These directions are for Universal Level Out room mechanisms. The steps to complete the removal of existing oil from the leveling system, including the reservoir, must be completed before purging the room mechanisms. Make sure ALL rooms are fully extended and in the down position before starting the purging process. **Only work on one room at a time.**

IMPORTANT: Check the fluid level in the reservoir after each time the pump is run to purge oil from the lines. Top off the tank whenever necessary.

Purging oil from the lift sync. cylinder and lines.

1. Use the manual release cams to open the appropriate cylinder retract valve for room that is to be purged. Then open the cylinder extend valve for the room that is to be purged. This will relieve pressure on the lines.
2. Remove both lines D from F and remove both of the G lines from the room lift cylinders. Direct the F and G lines into a drain pan or bucket. Attach an extension to the hoses if necessary. Close the solenoid valves at this time.

Note. It is recommended to put caps on the lift cylinder fittings and plug the ends of the F hoses. This will prevent contamination and air from getting into the system.

3. Press and hold the room control switch to "RETRACT" for approximately 15 seconds. Fluid should flow from the G lines. Little if any fluid will flow from the D lines at this time.
4. Use a steel plug to plug both G lines. Do not reconnect the G lines to the lift sync. cylinder at this time.
5. Again, press the room control switch to "RETRACT". As the pump sounds as if it is loading up, fluid should start to flow from the D lines. Continue to run the pump for approximately 7 to 10 seconds after fluid begins to flow from the D lines.
6. Use the manual release cams to open the cylinder retract, then extend valves for the room. This will relieve pressure on the lines. Reconnect the D and F lines. Reconnect the G lines to the lift sync. cylinder. Close the extend and retract valves.

Purging oil from the main room sync. cylinder and lines.

7. Remove lines C from lines E. Plug lines E to protect from contamination and adding air to the system. Direct lines C into a drain pan or bucket. Use an extension hose if necessary.
8. Press and hold the room control switch to "EXTEND" for approximately 15 seconds. Fluid should flow from the C lines.
9. Reconnect the C lines to the E lines.
10. Retract this room.

IMPORTANT: Only retract the room you are working on. When the room is lifting, it may not lift in a synchronized manner. If necessary, use the manual lift bolts before retracting the room. Be careful that the room does not bind when lifting or when retracting.

REMEMBER TO CHECK THE OIL LEVEL

Second purging of oil from the main room sync. cylinder and lines w/room retracted.

The second purging of oil from the main sync. cylinder is done to purge the old oil from the system that was in the rod side of the main room cylinders. This has to be done with the room retracted.

11. Use the manual release cams to open the cylinder extend then retract valves. This relieves pressure on the lines.
12. Disconnect lines C from lines E. Plug the E lines to protect from contamination and adding air to the system. Close both solenoid valves.

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13. Push the room control switch to the "EXTEND" position for approximately 15 seconds. Oil should flow from the C lines.

14. Reconnect the C lines to the E lines.

15. Extend the room. At this time, the sync. cylinder is out of position because of the purging procedure. This means the room may not extend in a synchronized manner. **Be careful that the room does not bind.** It will be helpful to have several people that can push on the room when needed to help the room extend both ends of the room equally. Fully extend and retract the room several times to make sure the room is running in a synchronized manner.

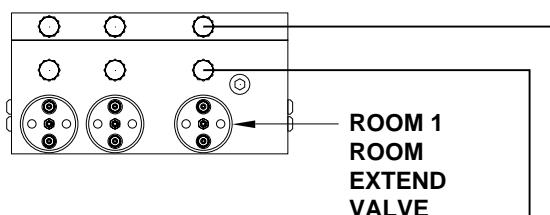
If the room cannot be made to extend without excessive binding, it will be necessary to disconnect the room mechanisms from the room itself. After disconnecting the mechanisms from the room, push the room control switch to "EXTEND" until both mechanisms are fully collapsed. Use the manual release cams to open both valves for the room. Remove hose A at the hydraulic manifold. Cap the MANIFOLD fitting with a steel cap. Close both valves. Direct the hose A into the reservoir or a drain tank. Push the room control switch to "RETRACT" until both mechanisms are fully extended into the vehicle. Reattach hose A to the manifold. Extend and retract the mechanisms several times or until the mechanisms are running synchronized. Reattach the mechanisms to the room. Extend and retract the room several times to insure proper operation of the room.

15. Repeat this complete process with each room.

When all rooms have been purged, operate the leveling system in the automatic mode, then extend and retract each room again to insure proper operation of all HWH equipment. Make a final check of the fluid level. To check the fluid level, all rooms should be fully extended and down. The jacks should be fully retracted. The oil level should be one (1) inch below the top of the fill hole.

The oil level should be checked again after the vehicle has been used a few times.

**VIEW FROM MOTOR END
ROOM MANIFOLD ONLY**



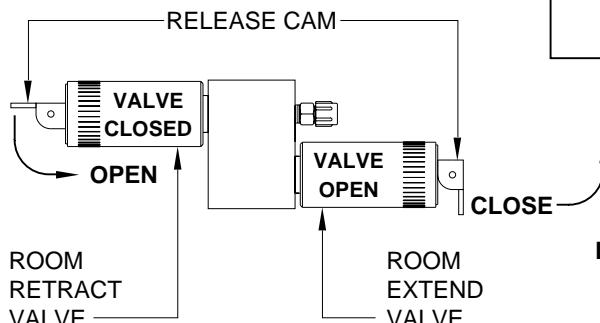
ROD END

**LH ASSY.
CAP END**

**LH ASSY.
CAP END**

ROD END

**SIDE VIEW OF
ROOM MANIFOLD ONLY**



LIFT ASSY.

**LIFT SYNCH.
CYLINDER**

LIFT ASSY.

LIFT ASSY.

**LIFT SYNCH.
CYLINDER**

LIFT ASSY.

IMPORTANT: ONLY MOVE THE RELEASE CAM IN THE DIRECTION SHOWN. MOVING THE CAM IN THE OPPOSITE DIRECTION CAN DAMAGE THE VALVE.

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