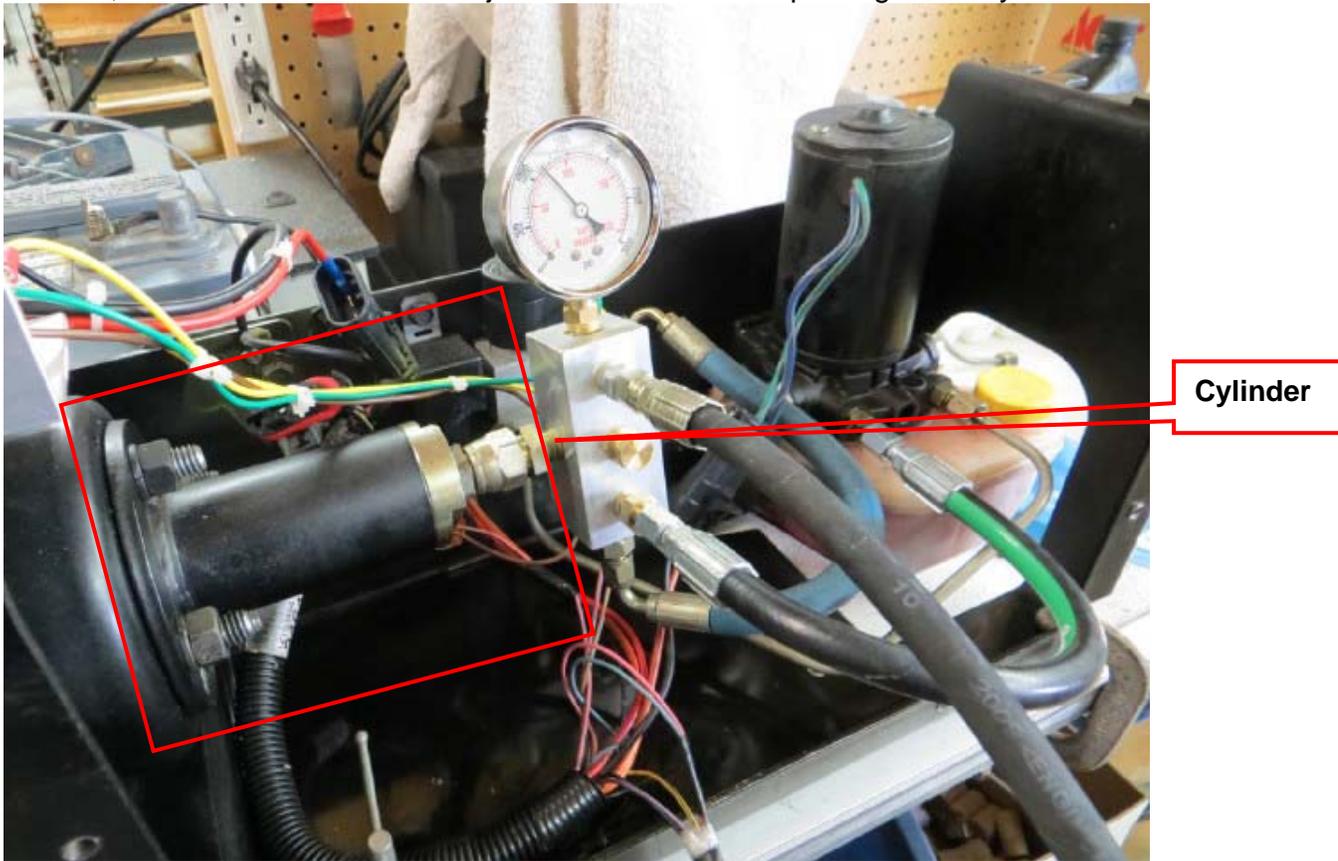


ACTUATOR CYLINDER LEAK REPAIR

This data sheet is intended primarily for those who are sending their actuator cylinder to me at my shop for replacement of a leaking seal. Below is a picture of our bench top J71 system with which we test the cylinders following repair. It has been modified with the addition of a pressure gauge and some manual controls, but other than that it looks just like the Auto Park parking brake system under an RV.



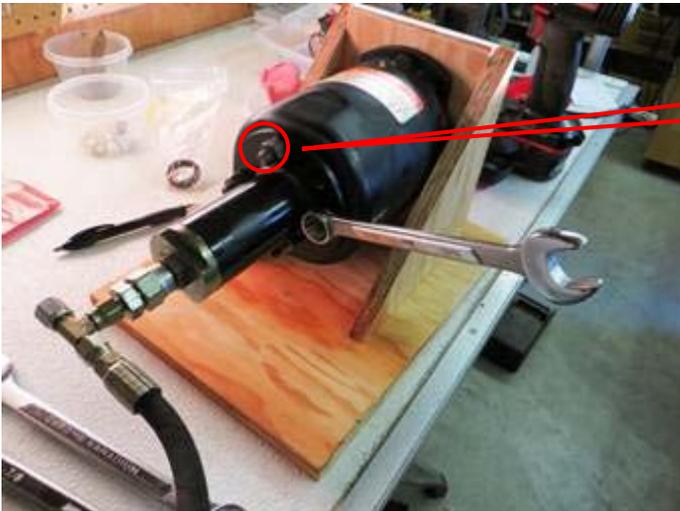
Removal of cylinder:

This is pretty straightforward - - This first picture shows the necessary wrenches and placement for disconnecting the incoming hydraulic line (the actuator is on a bench top test stand). The big wrench is a 7/8 inch and the smaller one is a 13/16 inch. This fitting will probably be pretty tight. As long as you DO NOT turn on the ignition and pull the shift lever out of PARK, this incoming line will not be pressurized and it will not lose hardly any ATF.

Here's a picture - -



The next step will be to remove all four nuts from their studs. This will allow the cylinder to simply be pulled off of the actuator studs. Another picture - -



The above picture shows an 11/16" box end wrench to loosen and remove all 4 nuts.



And alternatively this picture shows using a ratchet and 11/16" deep socket removing the same 4 nuts.



Some cylinders on newer coaches will have an over travel switch screwed into the flange on the cylinder like the one shown in the above picture.



This is the switch after removal. If your cylinder has a switch like this, you should take it off before shipping the cylinder. This requires an 11/16 inch open end wrench.

After you have removed the four nuts from their studs, and you have disconnected the incoming line, you can simply pull the cylinder off of the studs.



USPS Priority Mail medium sized box

Pack it in a good box and send it to:

Roger W. Haag
1111 Sandy Lane
Brookings, Oregon
97415

We've had good luck using USPS Priority Mail. The medium sized box is plenty big enough, and mails for about \$11.50 from anywhere in the U.S. Typical transit time is about three days (each way) in our experience. You can get the box for free from the Post Office.

While your cylinder is being repaired, you have a good opportunity to empty the old ATF out of the AutoPark reservoir, and put in fresh fluid. Use Dextron III or equivalent. You'll need about a quart for a refill. If your old ATF looks really cruddy, you might want to buy two quarts. Run the first quart for a short trip and then empty the reservoir (your wife's turkey baster works well - - but don't get caught), and fill again with your new quart. ATF is about five bucks a quart I think.

THIS IS IMPORTANT: With the actuator cylinder removed, and the incoming line disconnected, your parking brake is going to be APPLIED. It will keep the coach from rolling - - so have it parked where you want it BEFORE you do this work. Also, if you turn on the ignition and pull the shift lever out of PARK, you'll have ATF all over the place from the open line from the pump. If you need to be able to move your coach while waiting for your cylinder repair, be sure and get back in touch with me and we'll go thru the necessary steps to make this possible.

If everything goes well with the shipping, typical total turnaround time is about a week or so. Three days each way plus about 36 hours for the pressure test etc.

THE COST FOR REPAIR - - We started out originally asking for our parts and shipping costs plus a donation for the labor. Many of our contacts have said they would rather just have me state a price. Sooo

- - The AutoPark help and repair provided is not about money for me. It is a hobby. We do not charge for any of our advice or information, but we would like to recover our out-of-pocket costs and hopefully something to help us defray the costs of our shop, labor, and our web site. The replacement seals cost me about 15 bucks apiece - - we are being ripped off on the postage/shipping/handling for them but whatever - - the seal itself is about eight bucks. My cost for returning your cylinder is just under 12 bucks. Those two items add up to about \$25.00. I spend typically from three to four hours on each cylinder. More if they have corroded badly.

So I figure about 90 dollars total for parts, shipping, and labor - - This works out to about 65 dollars for the repair plus the time packing for shipment and running to the Post Office. If this is more than you can afford, send whatever works for you - - no big deal.

Please let me know when you ship the cylinder, so I can be watching for it. I do my best to start on them immediately - - trying to keep the downtime as short as possible.

We're looking forward to hearing from you. Be sure and get back to me with any questions.

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