



Service Bulletin No. 2739

<i>MODEL</i>	102DL3 Series Coaches	<i>TYPE</i>	Product Improvement	<i>SECTION/GROUP</i>	3-- Body	<i>DATE</i>	March 22 / 99
<i>SUBJECT</i>	TAG AXLE SOLENOID						
<i>CONDITIONS</i>	Parts may be purchased from Universal Coach Parts, Inc., Des Plaines, Ill. or from MCI Service Parts Division, Newcastle, Ontario.						

Description:

Effective with unit number 51700, MCI has made design changes that will improve the reliability of the tag axle solenoid. This new design will eliminate the need for a gasket.

Parts

Qty.	Old P/N	New P/N	Description
1		19-10-143	Street Tee
4		19-10-2225	Breather
1		19-10-144	Nipple, long
3		19-11-259	Tywrap
4		19-01-1764	SST #8 Capscrew
4		19-2-82	SST #8 Lockwasher
4		19-3-111	SST #8 Nut
4		19-2-121	SST #8 Washer

Tools Required

Phillips screw driver (#1)	3 mm hex key or socket	1/4 inch wrench	masking tape
needle nose pliers	9/16 inch wrench	11/64 inch drill bit	marker
5/32 inch hex key or socket	3/4 inch wrench	electric drill	thread sealant

Service Procedure:

Use Safe Shop Practices At All Times.

Read this entire procedure before beginning work.

MANIFOLD ASSEMBLY REMOVAL:

1. Turn the main battery disconnect switch to off.
2. Open the left hand rear side service door, and locate the solenoid valves.
3. Using a piece of masking tape and a marker, mark the streetside solenoid valve harness " Left ". Mark the top airline on the same solenoid 1A, and the bottom one 1B. Mark the curbside hoses in the same manner (RH 2A and 2B).
4. Remove the harnesses from the solenoid valves, using a long Phillips screw driver.
5. Loosen the air supply hose attached to the manifold slowly with a 9/16 inch wrench, letting all air pressure bleed off. Remove the airline, making sure the 1/4 inch NPT to 45 degree Flare adapter remains attached to the manifold.

	CAUTION	
<p>To prevent personal injury and damage to interior components, use caution when bleeding off air pressure. Let the air pressure bleed off at a slow and controlled speed.</p>		

6. Remove the four airlines from the elbow fittings on the solenoids, using a 9/16 inch wrench.
7. Unscrew the four hex bolts attaching the manifold assembly to the bracket with a 5/32 inch hex key or socket. Discard the hex bolts.

VALVE BUILD--UP:

1. Remove the 1/4 inch NPT to 45 degree Flare adapter from the bushing on the manifold, using 9/16 and 3/4 inch wrenches.
2. Remove the four 3 mm hex screws from the valve / manifold assembly using a hex key or socket.
3. Discard the manifold, gaskets, 3 mm hex screws, and all fittings attached to the manifold.
4. Clamp one solenoid valve in a vise, with the three port holes facing up. Wrap a shop rag or equivalent around the solenoid valve to protect it.
5. Apply thread sealant to one muffler, and turn muffler into left most hole with a 9/16 inch wrench until it is tight.
6. Apply thread sealant to nipple, and turn nipple into the center hole with a 9/16 inch wrench until it is tight.
7. Apply thread sealant to one muffler, and turn muffler into remaining hole with a 9/16 inch wrench until it is tight.
8. Remove the solenoid valve from the vise and replace with the remaining solenoid valve with the three port holes facing up.
9. Apply sealant to street tee threads and turn tee into center hole with 3/4 inch wrench until tight. Continue tightening tee until the tee makes an approximate 60 degree angle relative to the solenoid valve facing away from the electrical contact end.
10. Apply sealant to remaining two mufflers and turn mufflers into remaining ports with 9/16 inch wrench until tight (Figure 1). Adjust street tee as necessary.



Figure 1.

11. Turn the nipple along with the attached solenoid valve into the street tee fitting in the solenoid in the vise until tight, using the valve itself as a handle. Be careful not to damage the solenoid valve or electrical connectors. Continue tightening until the two valves line up in the same plane, with the electrical connector ends facing each other. If solenoid slips on nipple, use 9/16 inch wrench to turn the nipple into the street tee until tight.

- Adjust the two elbow fittings on each valve so that they are perpendicular to the valves, where the "up" direction is approximately the direction of the street tee (Figure 2).

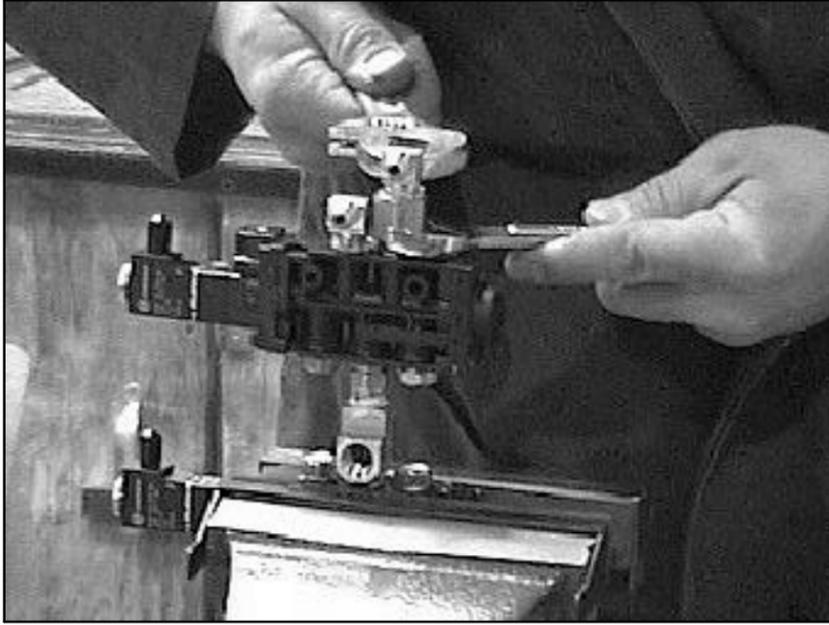


Figure 2.

- Ensure the solenoid electrical connectors are both facing toward the front of the coach. Loosen the solenoid adjustment screw on the solenoid that needs adjustment, located at the end of the solenoid. Rotate the plastic housing until the electrical connectors point in the same direction as shown in Figure 3. Tighten the adjustment screw finger tight only.
- Clean off any dirt or grease from the 1/4 inch NPT to 45 degree Flare adapter with a shop rag. Apply thread sealant to the adapter. Thread the adapter into the remaining female end of the street tee until tight.
- Remove any excess thread sealant from the fittings.

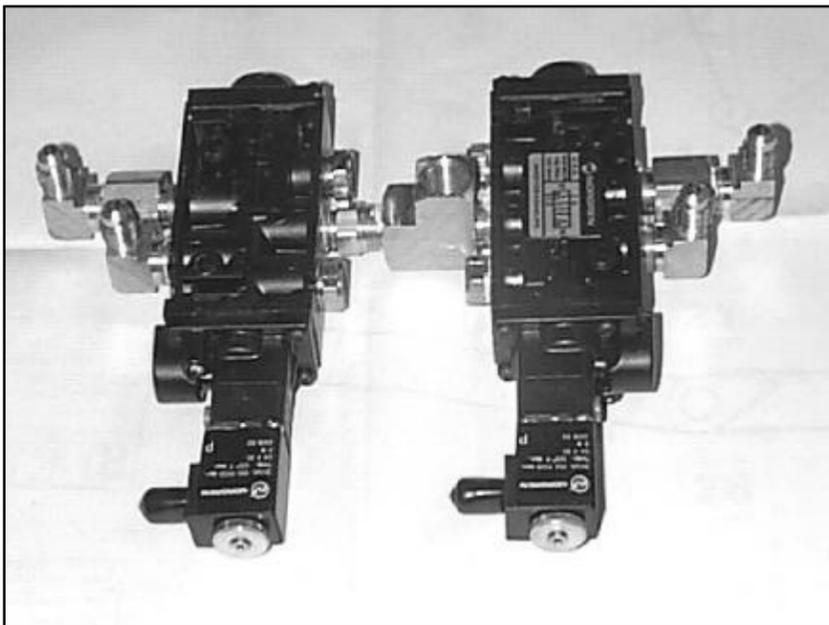


Figure 3.

VALVE ASSEMBLY INSTALLATION:

1. Position the valve assembly with the harness attachment heads facing streetside. Position and drill a new hole inboard 1/2 inch from edge and down 1/2 inch from the lowest current right hand solenoid mounting hole. Insert one #8 1 1/2 inch SST cap screw along with a washer. Thread a nut along with washer and lockwasher onto the screw and tighten with 1/4 inch wrench and needle nose pliers, making sure the valve assembly is squared on the bracket.
2. Using the valve assembly as a template, mark the remaining three holes and rotate valve assembly out of the way, to protect the interior components when drilling. Drill through the stainless steel bracket (on the new three marks) with a 11/64 inch drill bit.
3. Re-position the valve assembly and insert the remaining three screws through the valve assembly holes and install washers, lockwashers and nuts. Tighten all four screws with 1/4 inch wrench and needle nose pliers.
4. Attach the air supply hose to the 1/4 inch NPT to 45 degrees Flare adapter and tighten. Loosen the P-clip on the air hose and adjust the hose as necessary. If adjustment is made, make sure the P-clip is re-tightened.
5. Install the harnesses onto the solenoid valves, using a Phillips screw driver. Make sure the harness marked "Left" is installed on the bottom solenoid valve.
6. Attach hose 1A to the bottom left elbow fitting. Attach hose 1B to the bottom right elbow fitting. Cut tywraps restraining airlines with side cutters as necessary, to provide enough slack.
7. Attach hose 2A to the top left elbow fitting on the top solenoid, and attach hose 2B to the top right elbow fitting. Cut tywraps restraining airlines with side cutters as necessary, to provide enough slack.
8. Tywrap all four airlines together above the approximate center of the valve assembly. Tywrap airlines 1A and 1B together about six inches below the previous tywrap. Tywrap airlines 2A and 2B together about six inches left of the first tywrap. Ensure airlines are not touching any metal edges.



Figure 4.

Note: This procedure will take approximately one hour to complete.

Procedure complete.