



INSTRUCTION TO SERVICE

ITS: 5853

SECTION:	219 Engine and Transmission
WRITTEN BY:	Mike Pearson
SUBJECT:	Add 100 psi Regulator to Allison Accumulator

ITS5853

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PROCEDURE:

1. Turn the main battery disconnect switch to the "OFF" position.
2. Raise coach in accordance with the New Flyer Service Manual
3. Open the accessory tank drain valve located behind the bottom of the frame structure just behind the rear exit door, See Figure 1.
4. Close the accessory tank drain valve after the air has been completely drained.

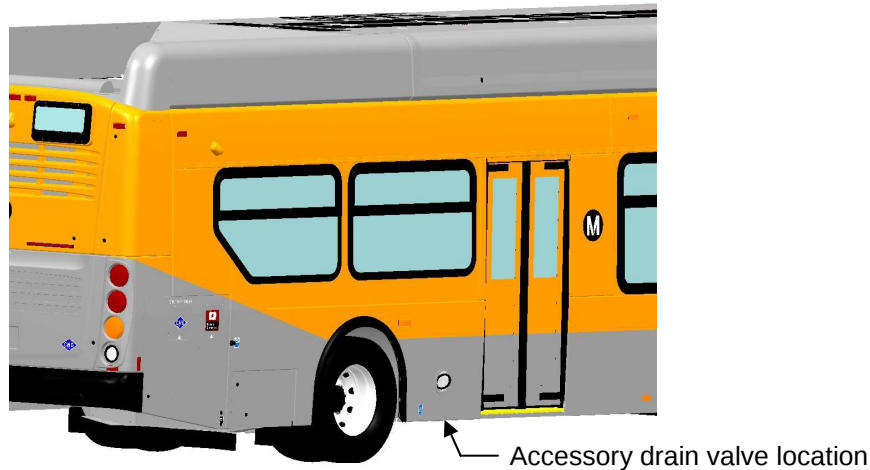


Figure 1: Accessory Drain Valve Location

5. Locate the Allison accumulator valve positioned on the curb side engine main rail. See Figure 2.
6. Remove and discard the existing solenoid cover and cover mounting hardware. See Figure 2.
7. Remove and temporarily tieback the existing wiring harness. See Figure 2.
8. Remove and tieback the ½" black air supply line leading to the retarder solenoid valve. Removing nearest supporting p-clip may be necessary, save for re-installation. See Figure 2.

⚠ Caution: Extreme care is to be taken not to kink or damage the air line when being removed.

9. Remove and discard the existing brass adapter. Inspect the threads to be sure they are not damaged or contain slivers, burrs, dirt or other contaminants. See Figure 2.

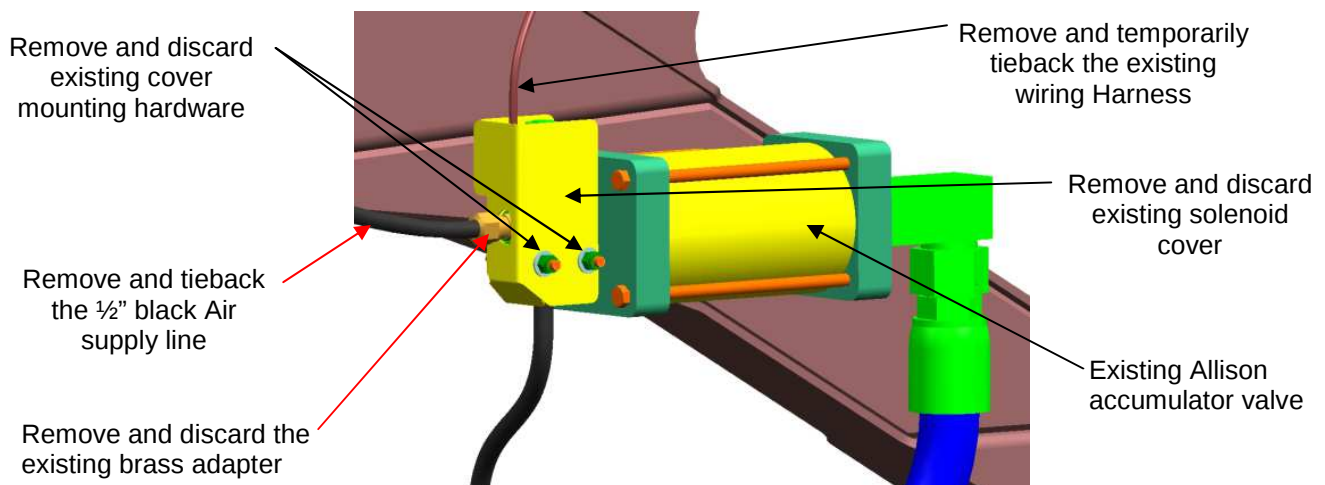


Figure 2: Retarder Solenoid Cover Removal

10. Install new reducing adapter p/n 5993697, torque to 12 – 16 lb*ft. Do not apply thread sealant. See Figure 3.
11. Apply loctite p/n 044497 to new 100 psi pressure reducing valve threads p/n 562945 ensuring orifices remain unblocked. Install new reducing valve, turn 2 full turns past finger tight. See Figure 3.
12. Apply loctite p/n 044497 to new 90 degree elbow threads p/n 085269 ensuring orifices remain unblocked. Install new elbow, turn 2 full turns past finger tight. See Figure 3.
13. Trim the ½" black air supply line remove in Step 8 and install to new 90 degree fitting. If supporting p-clip was removed in Step 8, re-install. See Figure 3.

⚠ Caution: Extreme care is to be taken not to kink or damage the air line when installing.

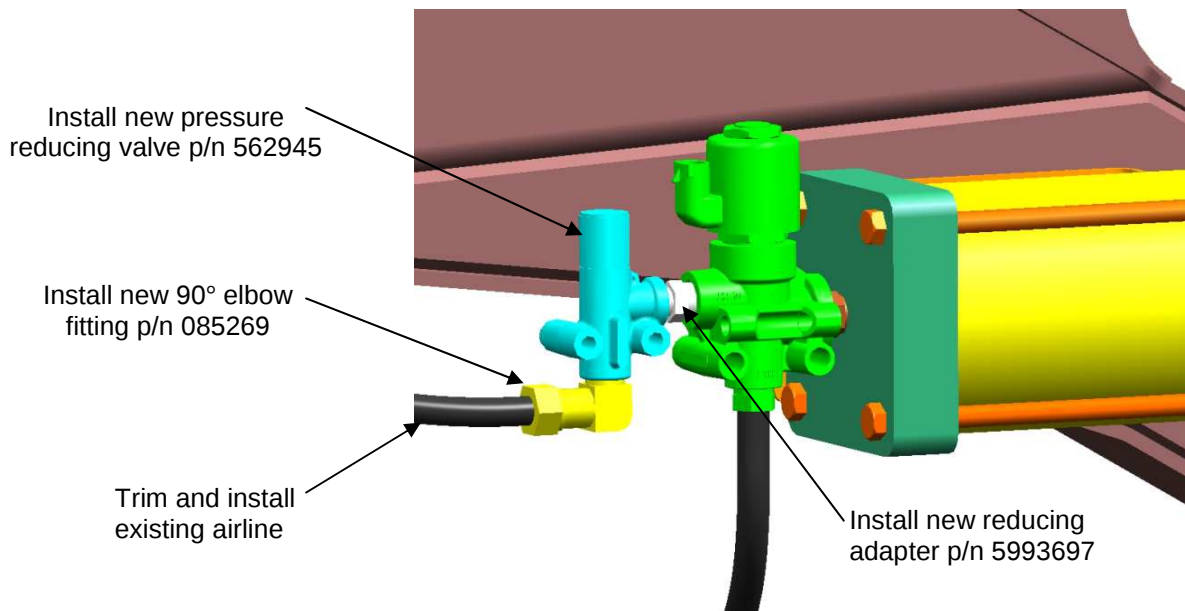


Figure 3: Pressure Reducing Valve Installation

14. Remove the existing front accumulator mounting hardware, See Figure 4. Install new bracket p/n 569312 and re-install removed hardware. Torque to 50 – 60 lb*lbs dry.

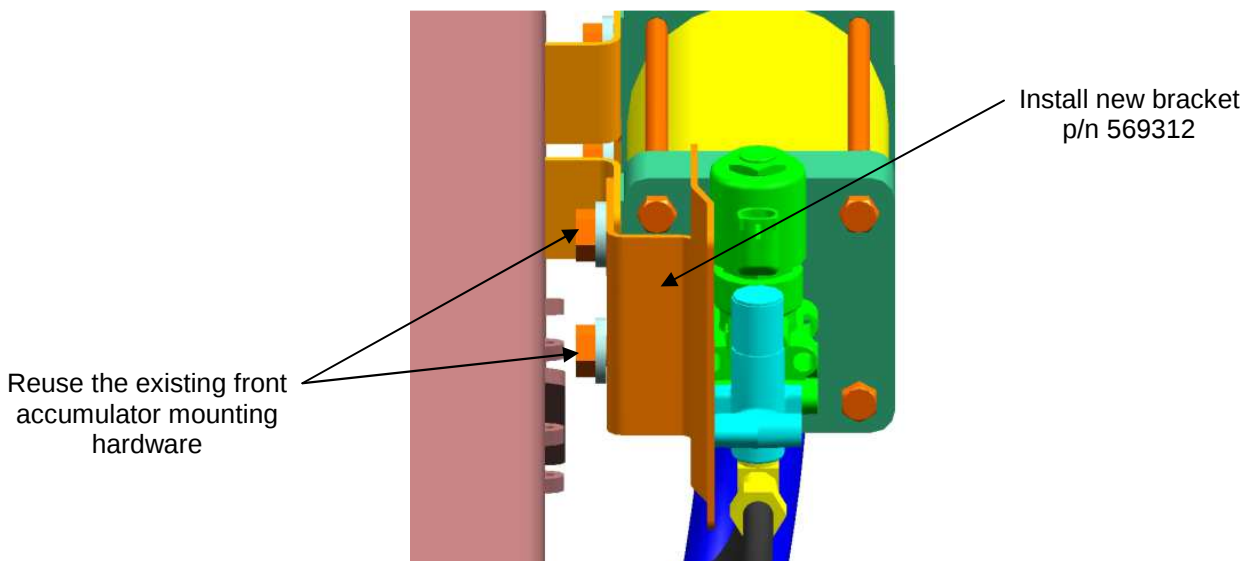


Figure 4: Accumulator Bracket Installation

15. Reconnect the existing wiring harness removed in Step 7.
16. Install new regulator cover p/n 565574 using 5/16" bolt p/n 20B05044, washer p/n 50W05000 (x2) and nut p/n 131769 for the rear mounting hole and 1/4" bolt p/n 20B04036, washer p/n 50W04000 (x2) and nut p/n 333084 for the forward mounting hole. See Figure 5.

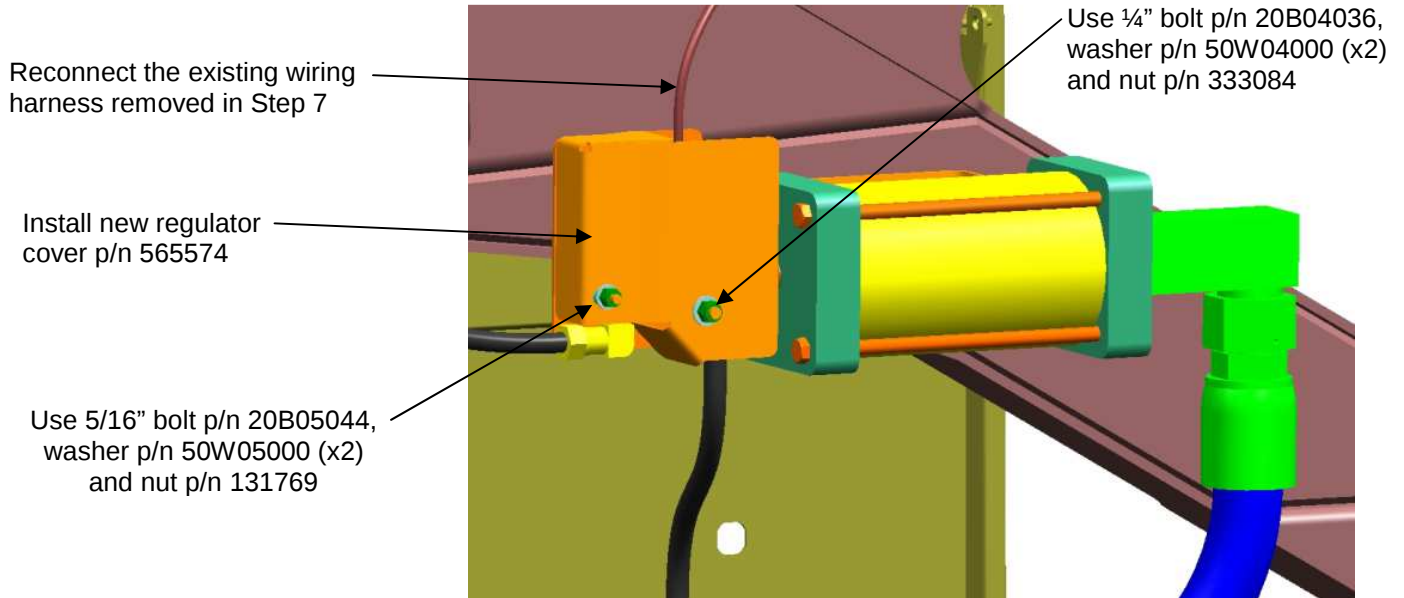


Figure 5: Accumulator Regulator Cover Installation

17. If necessary, lower coach in accordance with the New Flyer Service Manual.
18. Turn the main battery disconnect switch to the "ON" position.



LABOUR ESTIMATE

	Operation	Men	Hours	Labour Time M X HR
1	Add 100 psi Regulator to Allison Accumulator	1	1.0	1.0

PARTS REQUIRED

Item	Part Number	Description	Qty. per Coach	Units	Notes
1	5993697	Nipple-3/8 x 1/4 PT	1	EA	
2	044497	Loctite-PST 545	.05	EA	
3	562945	Valve-Pressure Reducing 100 psi	1	EA	
4	085269	Elbow-90 degree 1/2" OD x 1/4" PT	1	EA	
5	569312	Bracket-Accumulator, bolt on	1	EA	
6	565574	Cover-Accumulator Solenoid	1	EA	
7	20B05044	Bolt-Hex SST 5/16"-18unc x 2.75" Lg	1	EA	
8	20B04036	Bolt-Hex 1/4"-20unc x 2.25 Lg SST	1	EA	
9	50W05000	Washer-Flat 5/16" SST	2	EA	
10	50W04000	Washer-Flat 1/4" SST	2	EA	
11	131769	Nut-Lock 5/16"-18unc SST Nylon	1	EA	
12	333084	Nut-Lock 1/4"-20unc SST Nylon	1	EA	