



INSTRUCTION TO SERVICE

ITS: 6014

SECTION:	246 Air, Brake & Levelling System.
WRITTEN BY:	Michael Rooney
SUBJECT:	Remove front brake air line p-clamps and brackets.

ITS6014

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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. Locate the P-clamp and bracket that retain the brake air line. It is attached to front the suspension below the air bag. Figure 1.

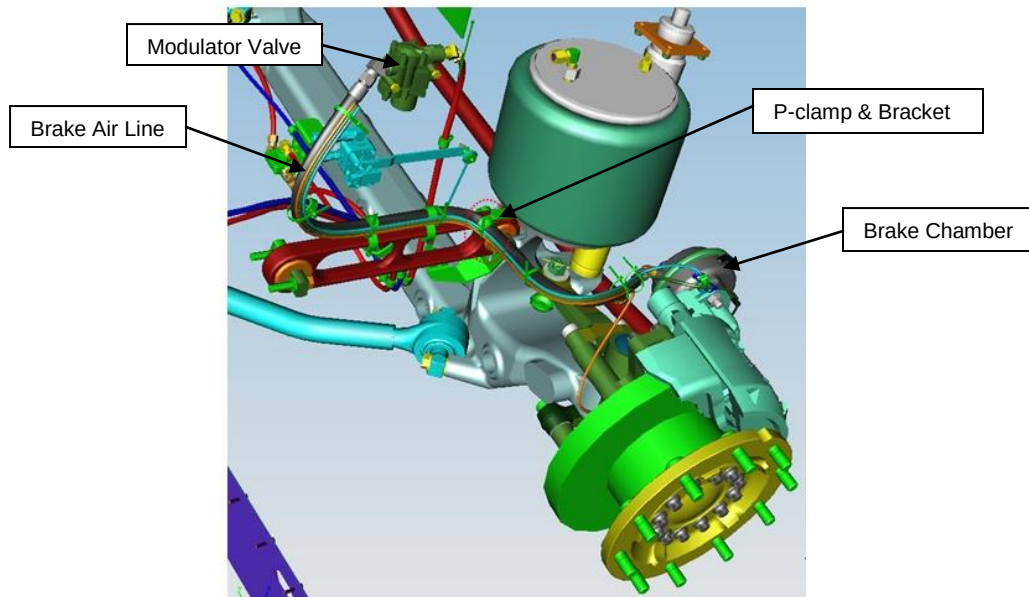


Figure 1: Existing Brake Hose Routing & P-Clamp/Bracket.

4. Remove and discard the P-clamp that attaches the air hose to the bracket and then unbolt and discard the bracket. Figure 2.

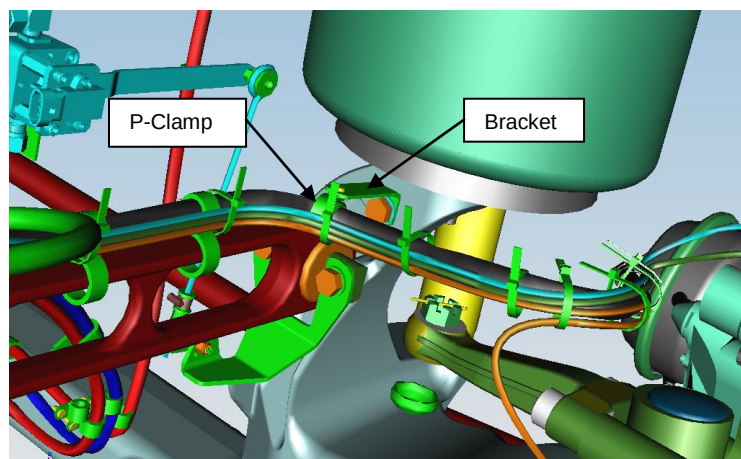


Figure 2: Existing P-Clamp & Bracket.

5. Inspect the air hose at the point where the P-clamp was attached. Check for cuts and abrasions that may have been caused by hose movement between the p-clamp and hose. If the silicone jacket on the P-clamp is worn through or missing, pay extra attention. If the hose reinforcement fibers are exposed or damaged, the hose should be replaced with a new hose NF P/N 543288.
 - a. If new air hoses are required, the pressure in the air system should be depleted before the air lines can be disconnected. See Service Manual for the procedure to deplete air pressure.
 - b. The ABS sensor wires and other brake sensor wiring are attached to the air lines with tyrap, cut the tyrap and move the wires aside.
 - c. Mark the new hose at a point 23.5 inches from the end that will be connected to the modulator valve.
 - d. When installing new air hoses the connections at the modulator valve and the brake chamber should be torqued to 36 – 39 FT LBS (Dry).
 - e. If the p-clamps that attach the air lines to the radius arms are damaged replace the p-clamps around the radius arms with new p-clamps NF P/N 092590 and the p-clamps around the air line with new p-clamps NF P/N 092587. Each p-clamp around the radius arm and the p-clamp around the air hose should be fastened to each other using a screw NF P/N 14S00012 and locknut NF P/N 40N00000.
6. Using a piece of string, trace the path of the brake air line from the far end of the nut that attaches to the modulator valve to the first P-clamp on the forward end of the ladder style suspension radius arm. This distance should be 23.5 inches. If it is not 23.5 inches, loosen the P-clamps and adjust the hose position. See Figure 3. If installing a new hose use the mark from step 5C as a reference.
7. Adjust the position of the rearward P-clamp attached to the suspension radius arm so that it is next to the connecting web at the mid-point of the radius arm. The rearward edge of the p-clamp should be 9.95 inches from the edge of the radius arm mounting bar. Figure 3.

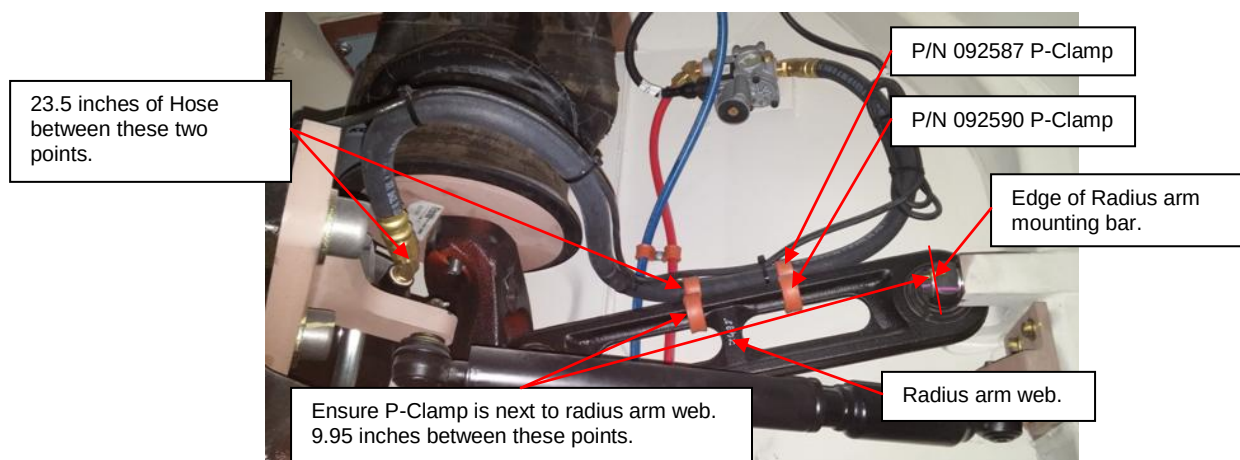


Figure 3: P-Clamp Locations

8. Check the orientation of the brake chamber air hose connections. The hose connectors should be oriented 90 degrees relative to the parting line of the brake chamber. Figure 4A & 4B.

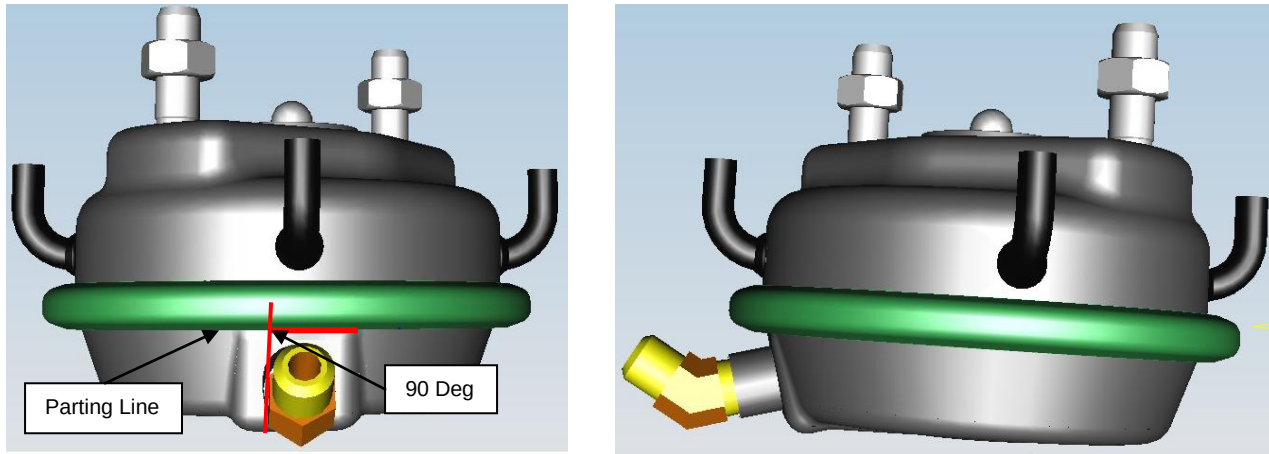


Figure 4A & 4B: Brake Chamber Hose Connector Orientation.

9. Re-secure any sensor wires that were disturbed during inspection and adjustment of the air lines using tyraps NF P/N 5955945.
 - a. The ABS sensor and brake wear sensor wiring must be secured at specific locations to ensure that they will not chafe on other suspension components through the full range of wheel lock and suspension travel. See Figure 5A & 5B for locations of tyraps and wiring slack measurements on street side and curb sides.

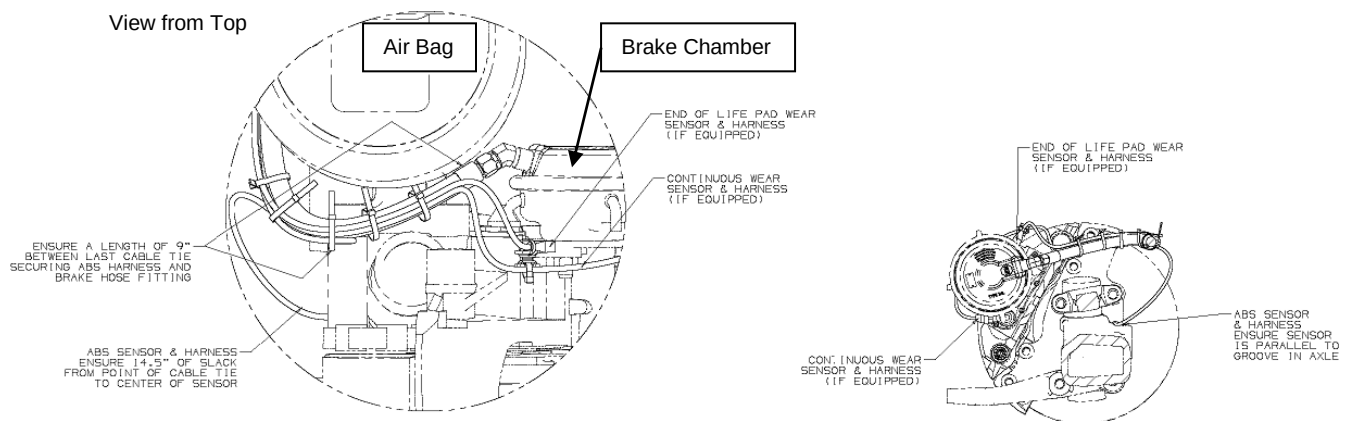


Figure 5A: Street Side ABS & End of Life Sensor Wiring Routings.

View from Top

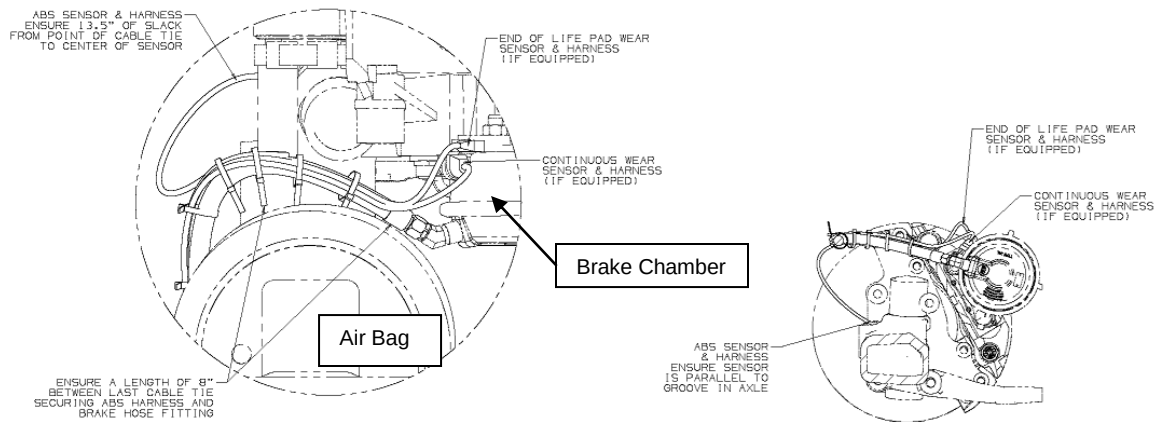


Figure 5B: Curb Side ABS & End of Life Sensor Wiring Routings.

10. Repeat steps #3 to #9 for the brake air line and p-clamp/bracket on the other side of the front suspension.
11. If necessary, lower coach in accordance with the New Flyer Service Manual.
12. Turn the main battery disconnect switch to the "ON" position.
13. If brake air hoses were replaced, start the bus, pressurize the air system and check for leaks and brake function. Repair as necessary.
14. Remove all tools and debris to return the bus to service condition.

LABOUR ESTIMATE

	Operation	Men	Hours	Labour Time M X HR
1	Remove P-Clamp/Bracket and adjust air lines	1	1.0	1.0

PARTS REQUIRED

Item	Part Number	Description	Qty. per Coach	Units	Notes
1	543288	HOSE – ASSY 3808 FL45.1	2	EA	If Required
2	5955945	TYRAP – 14.0 BLACK	24	EA	
3	092587	CLAMP-P 0.875	4	EA	If Required
4	092590	CLAMP-P 1.250	4	EA	If Required
5	14S00012	SCREW PH 10-24 X3/4	4	EA	If Required
6	40N00000	LOCKNUT NO. 10	4	EA	If Required

SPECIAL TOOLS REQUIRED

Item	Part Number	Description	Qty. per Coach	Units	Notes
1		No Special Tools Required			