



DATE: 5-9-19

APPLIES TO: This service bulletin applies to Model Year 2013 through 2020 Gladiator and Metro Star emergency response chassis cabs built between April 16, 2013 and May 2, 2019 equipped with electric pump shift controls.

CONDITION: Electric pump shift valve may exhaust air when system pilot pressure is reduced.

CORRECTION: Replumb the supply line to the pump shift solenoid.

LABOR ALLOCATION: 1 hour

CLASSIFICATION: T3

PARTS NEEDED:

<u>QTY</u>	<u>Part Number</u>	<u>Description</u>
1	S-2703-001A	Kit-Service,Pump Shift Solenoid, PPV W/Check, Nylon

Kit # S-2703 -001A Contains:

<u>QTY</u>	<u>Part Number</u>	<u>Description</u>
1	0716-MM5-C02	Fit Brss M 45D Elbow 4-4
1	0716-MM5-H02	Fit Brss Hex Nipple -4
2	0716-MM5-J05	Fit Brss Bushing 8-4
1	0716-MM5-P04	Fit Brss 90D.ST Elbow 8-8
1	0716-MM5-MM04	Fit Brss Coupling -8
1	2674-MM5-003	Valve,Press Protection w/Check
1	TSB19-330-003	Instruction Document
1	TSB19-330-004	Instruction Document

<u>QTY</u>	<u>Part Number</u>	<u>Description</u>
1	S-2703-002A	Kit-Service,Pump Shift Solenoid, PPV W/Check, Wire Braid

Kit # S-2703 -002A Contains:

<u>QTY</u>	<u>Part Number</u>	<u>Description</u>
1	0716-MM5-DD02	Fit Brss M Elbow 4-4

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1	0716-MM5-H02	Fit Brss Hex Nipple -4
2	0716-MM5-J05	Fit Brss Bushing 8-4
1	0716-MM5-P04	Fit Brss 90D.ST Elbow 8-8
1	0716-MM5-MM04	Fit Brss Coupling -8
1	2674-MM5-003	Valve,Press Protection w/Check
1	TSB19-330-003	Instruction Document
1	TSB19-330-004	Instruction Document

<u>QTY</u>	<u>Part Number</u>	<u>Description</u>
1	S-2703-003B	Kit-Service,Pump Shift Solenoid, W/Check, Nylon

Kit # S-2703 -003B Contains:

<u>QTY</u>	<u>Part Number</u>	<u>Description</u>
1	0716-MM5-C02	Fit Brss M 45D Elbow 4-4
1	0716-MM5-H04	Fit Brss Hex Nipple -8
1	0716-MM5-J03	Fit Brss Bushing 6-4
1	0716-MM5-K04	Fit Plug Brss SQ Head-8
1	0716-MM5-P04	Fit Brss 90D.ST Elbow 8-8
1	0716-MM5-MM04	Fit Brss Coupling -8
1	1631-MM5	Valve, Single Check
1	TSB19-330-003	Instruction Document
1	TSB19-330-004	Instruction Document

<u>QTY</u>	<u>Part Number</u>	<u>Description</u>
1	S-2703-004B	Kit-Service,Pump Shift Solenoid, W/Check, Wire Braid

Kit # S-2703 -004B Contains:

<u>QTY</u>	<u>Part Number</u>	<u>Description</u>
1	0716-MM5-DD02	Fit Brss M Elbow 4-4
1	0716-MM5-H04	Fit Brss Hex Nipple -8
1	0716-MM5-J03	Fit Brss Bushing 6-4
1	0716-MM5-K04	Fit Plug Brss SQ Head-8
1	0716-MM5-P04	Fit Brss 90D.ST Elbow 8-8
1	0716-MM5-MM04	Fit Brss Coupling -8
1	1631-MM5	Valve, Single Check
1	TSB19-330-003	Instruction Document
1	TSB19-330-004	Instruction Document

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GENERAL INSTRUCTIONS:

Thoroughly review entire service bulletin before starting work. If there are questions or concerns with steps defined in this service bulletin, contact Spartan Motors USA, Inc. Customer & Product Support Group.

All applicable industry safety standards must be followed when performing work identified in this procedure.

STEP-BY-STEP INSTRUCTIONS:

1. Identify if vehicle is equipped with an auxiliary or air horn tank and air supply line type (nylon or wire braid). S-2703-001 is required for vehicles without an auxiliary or air horn tank with nylon air supply lines. S-2703-002 is required for vehicles without an auxiliary or air horn tank with wire braid air supply lines. S-2703-003 is required for vehicles with an auxiliary or air horn tank with nylon air supply lines. S-2703-004 is required for vehicles with an auxiliary or air horn tank with wire braid air supply lines.
2. Properly support chassis to gain access to work underneath.
3. Locate air tanks and drain all air from tanks.
4. Identify which air line on the air tank is supplying the pump shift solenoid.
5. Disconnect air line supplying pump shift solenoid from air tank. Remove installed pressure protection valve and fittings from air tank.
6. For vehicles without an auxiliary or air horn tank (nylon or wire braid) continue to step 7. For vehicles with an auxiliary or air horn tank skip to step 12.

Vehicles Without an Auxiliary or Air Horn Tank (Nylon and Wire Braid)

7. Install pressure protection valve with check valve, 2674-MM5-003 (Item 4) into air tank port using 0716-MM5-H02 (Item 3), 0716-MM5-J05 (Item 2) and 0716-MM5-P04 (Item 1). Refer to Fig 4-1.
8. Install fitting (Item 7) on to pressure protection valve with check valve using 0716-MM5-MM04 (Item 5), 0716-MM5-J05 (Item 2). Refer to Fig 4.1.
 - a. For Nylon Air Lines use fitting 0716-MM5-C02

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- b. For Wire Braid Air Lines use fitting 0716-MM-DD02

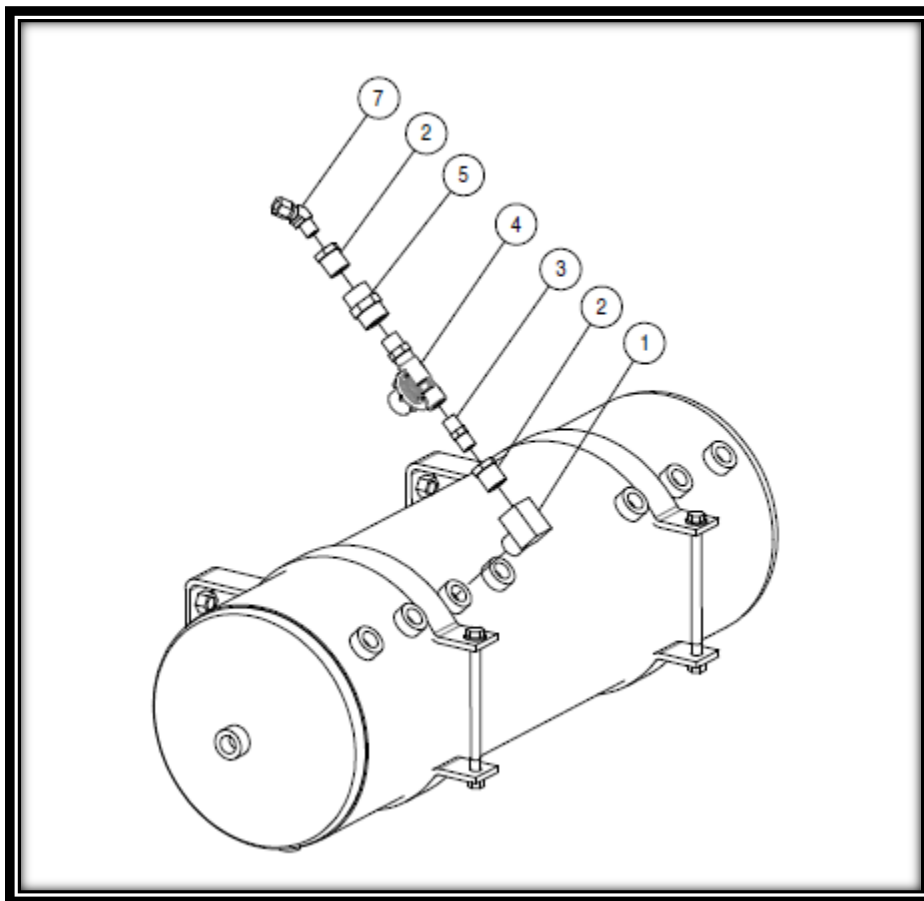


FIG. 4-1

9. Reconnect air line from pump shift solenoid to pressure protection valve with check valve.
10. Fill air system and check for air leaks. Solenoid valve may have a slight leak upon initial system fill until proper air pressure is achieved downstream of check valve.
11. Check that pump will shift between road and pump modes.

Vehicles With an Auxiliary or Air Horn Tank (Nylon and Wire Braid)

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12. If there were additional air lines plumbed in same port as pump shift air supply reinstall those fittings into port. If there were no other air lines installed in air tank port install 0716-MM5-K04 (Item 1) into empty port. Refer to Fig 5.1

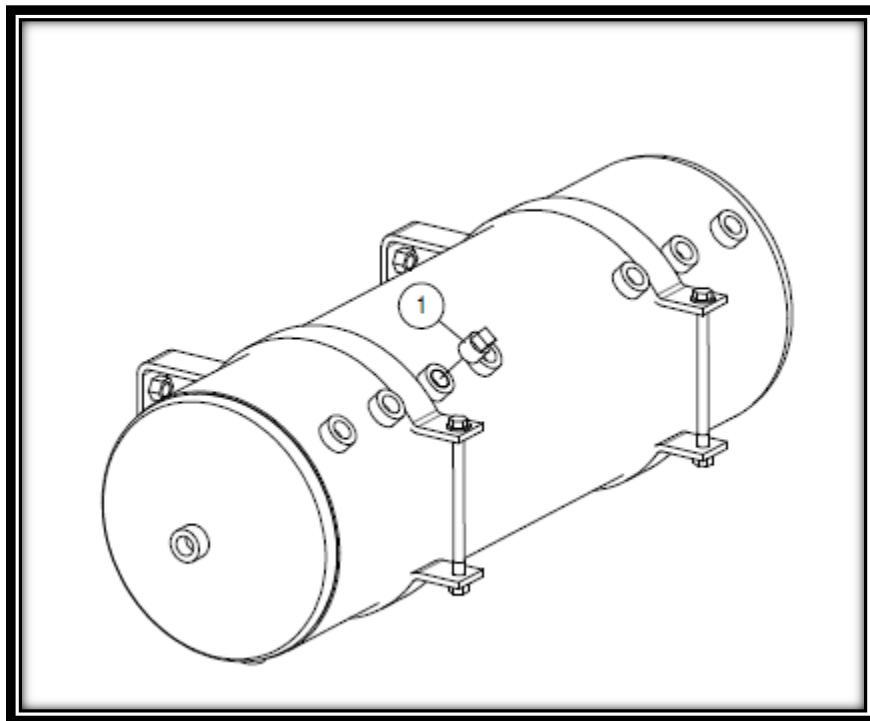


FIG 5.1

13. Install 1631-MM5 (Item 2) into auxiliary or air horn tank port using 0716-MM5-P04 (Item 1) and 0716-MM5-H04 (Item 2). Refer to Fig 6-1.

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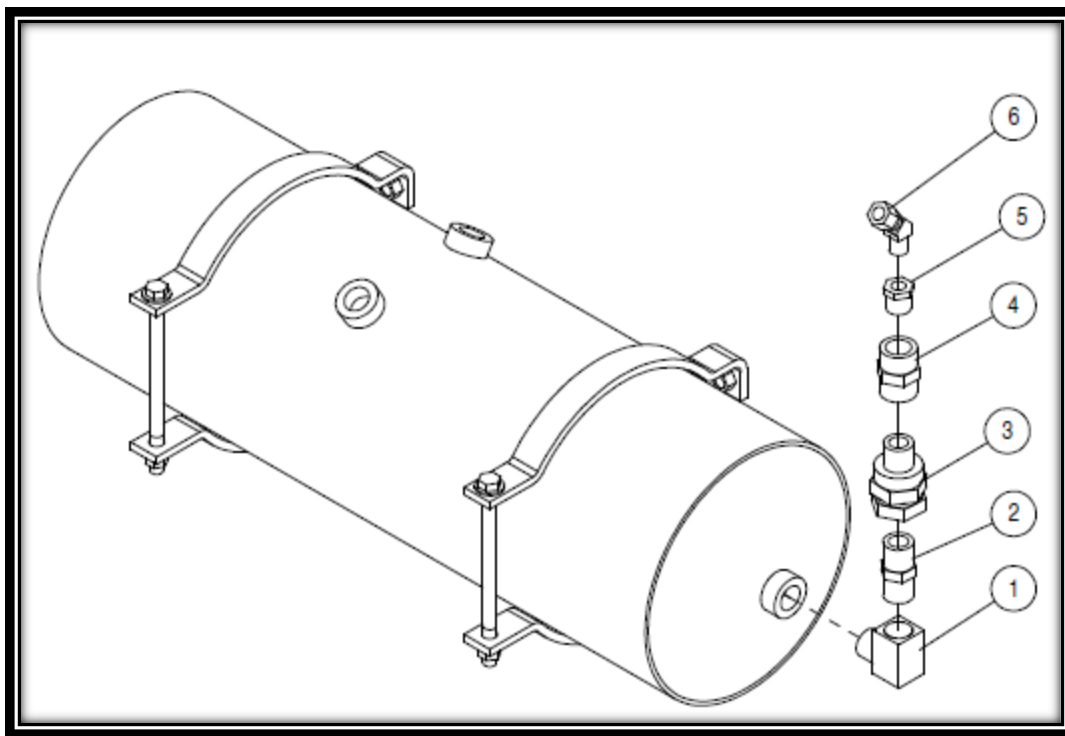


FIG 6.1

14. Install fitting (Item 6) to the check valve using 0716-MM5-MM04 (Item 4) and 0716-MM5-J03 (Item 5). Refer to Fig 6.1.

- a. For Nylon Air Lines use fitting 0716-MM5-C02
- b. For Wire Braid Air Lines use fitting 0716-MM-DD02

15. Reconnect air line from pump shift solenoid to pressure protection valve with check valve.

16. Fill air system and check for air leaks.

17. Check that pump will shift between road and pump modes.

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