



SERVICE BULLETIN

Bulletin Type.....: Safety Recall

Bulletin No.....: TS-S103

**Bulletin Name.....: Inversion Relay valve Recall
Acknowledge**

Bulletin Ref No.....: 700002613

NHTSA.....:15V-479

Release Date.....:10.09.2015

Vehicle Model.....:TS 45

Fiat Rate Code.....: TS-S103

Flat Rate Time.....:300 min.

Summary : Inversion Relay valve Recall
Acknowledge

Subject: This bulletin is made to replace inversion relay valve by the new one on TS45 vehicles.

Bulletin Responsible: Fikret ÖZCAN

Published by & Approved by: Sinan Şenyürek

Safety Recall/NHTSA Campaign# : 15V-479

Welding on the Chassis

- Always disconnect the batteries (starting with the negative lead).
- Disconnect the connectors of electrical and electronic equipment (electronic control units, sensors and actuators) if they are less than 2 meters away from the chassis part to be welded or the earth terminal of the welding equipment.
- The earth terminal should never be attached to vehicle components such as engine, axles and springs. Arcing on these parts is not permitted, because of the risk of damage to bearings, springs, etc.
- The earth terminal must make good contact and be placed as close as possible to the part to be welded.
- Plastic pipes, rubber parts and parabolic springs should be well protected against welding spatter and temperatures higher than 70°.

SERVICE BULLETIN

Service bulletin expiry dates differ according to service bulletin type.

Definitions

Release Date: As of this date the bulletin is released and available on E-Doc. Modification parts can be ordered. The time period between the release date and the effective date may vary according to the procurement lead time.

Effective Date: As of this date specified amount of the total modification parts will be available on Spare Parts Stock. Modification parts can be ordered and the application can be performed. (except non-compliance and safety related campaigns, i.e. S-Type Bulletin)

Part Order Deadline: Last order date for modification parts. The part orders which will be placed after this date should be approved by Regional Coordinator.

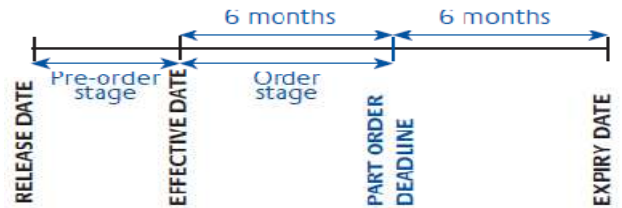
Expiry Date: Expiration date for the application.

Bulletin Types

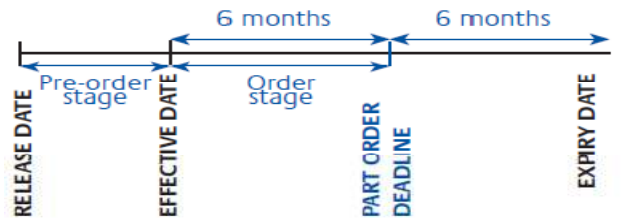
- **S-Type:** Application period of this bulletin is 18 months after the date of issue. S type bulletin is used for Recall Campaigns.



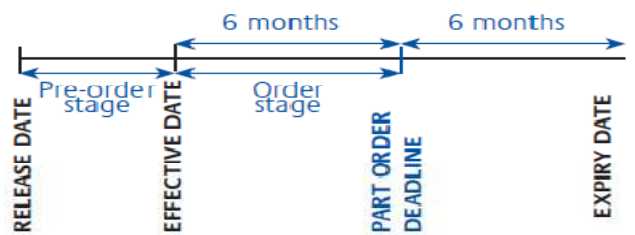
- **U-Type:** Application period of this bulletin is 12 months after the date of issue. U type bulletin is used for updates that need to be performed upon customer complaints.



- **C-Type:** Application period of this bulletin is 12 months after the date of issue. C type bulletin is generally used for supplying technical instructions or other type of information to service network.

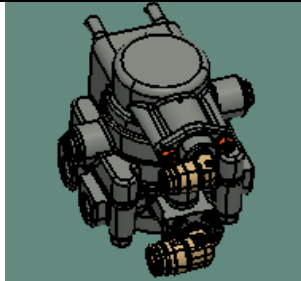
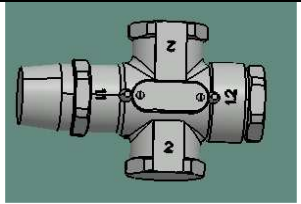
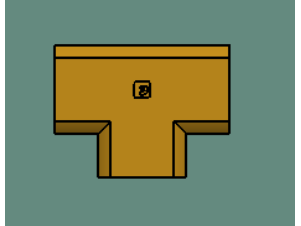
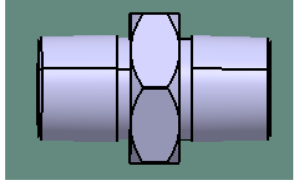
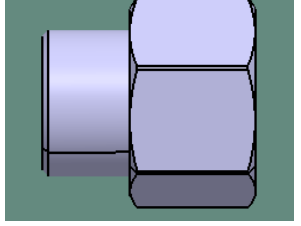
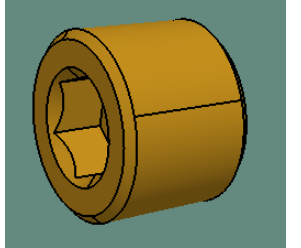


- **M-Type:** Application period of this bulletin is 12 months after the date of issue. M type bulletin is used for updates that should be implemented without waiting for customer complaints.



PART LIST


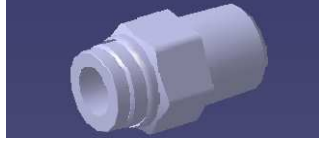
Installed Parts List

No	Part No	Part Name	Qty	Unit Of Measure
1	RP306131	INVERSION RELAY VALVE	1	
2	RP306132	DOUBLE CHECK VALVE,278599	1	
3	9111-13Y	RACOR TEE	1	
4	9111-84Y	3/8 RACOR	1	
5	RP311619Y	ADAPTER MALE M22	1	
6	9111-31Y	BLIND PLUG, 3/8" ALLEN	2	

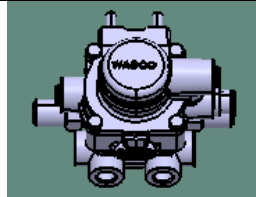
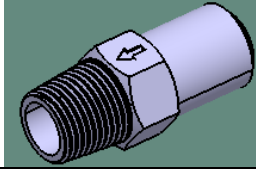
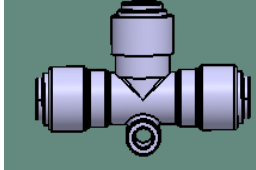
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7	9111-30Y	1/2" RACOR 3/8"	2	
8	BSMB10010C31Y	NUT, FLANGED(M10x1,5)	2	
9	9652-133Y	3/8 ADAPTOR,32ptc-6	1	
10	9652-132Y	5/8 ADAPTOR,32ptc-10	2	
11	RP311638Y	POLIAMID	14mt	
12	9111-44Y	SLEEVE, 1/2" HOSE 3/8" PIPE PRESTOMATIC	3	
13	9111-49Y	SLEEVE, 3/8" HOSE 3/8" PIPE ELBOW	1	
14	9652-134Y	1/2 ADAPTER,32PTC-8	1	
15	RP311601Y	PARKER 1/2" tube	2M	

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16	9650-12Y	PARKER 5/8" tube	1M	
17	9111-01Y	SLEEVE,38TUBE 38MALE CONNECTOR	1	

Excluded Part List

No	Part No	Part Name	Qty.	Unit
1	RP262110	INVERSION,RELAY VALVE	1	
2	9111-86	CHECK VALVE 1/2 - 1/2 (95403701M)	2	
3	RP262108	DOUBLE CHECK VALVE	1	

TECHNICAL ORDERS :

Assembly Number: RP306004Y

Application 1.

*Remove the prop shaft and cooling coil shown in Figure-1A

*Remove the old relay valve with part number RP262110 shown in Figure-1B

Please write the port numbers on each polyamide hose by using tape before valve removal which will help during new IR valve installation. (See. new IR valve and port numbers on page 7.)

*Remove the tee connector with part number 9111-13Y shown in Figure-1B

*Take care on polyamide hoses. Same hoses will be used for new valve.

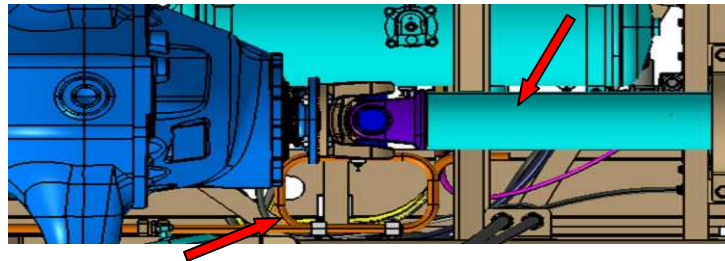


Figure-1A

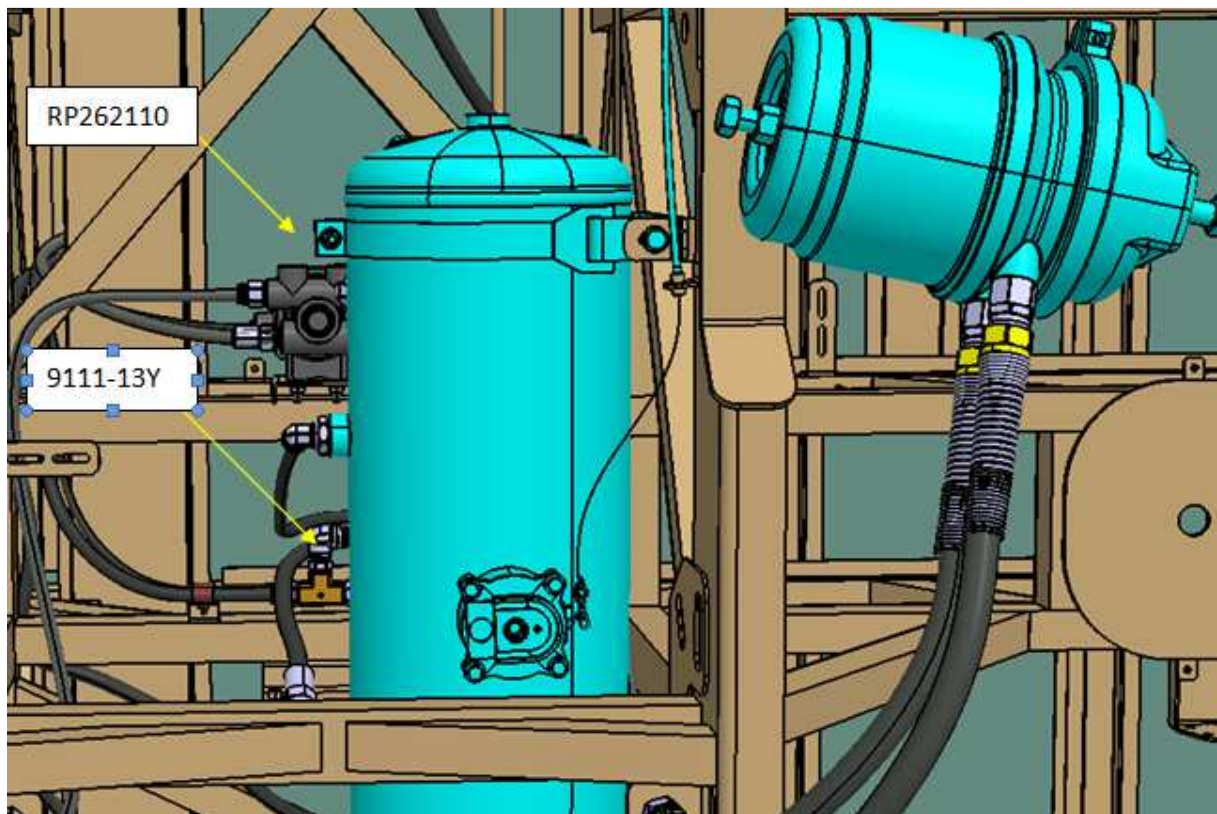


Figure-1B

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*Remove the hose between IR valve and Tee fitting shown in Figure-2. (Marked with red)

*Remove tge hose between IR valve and air reservoir shown in Figure-2. (Marked with red)

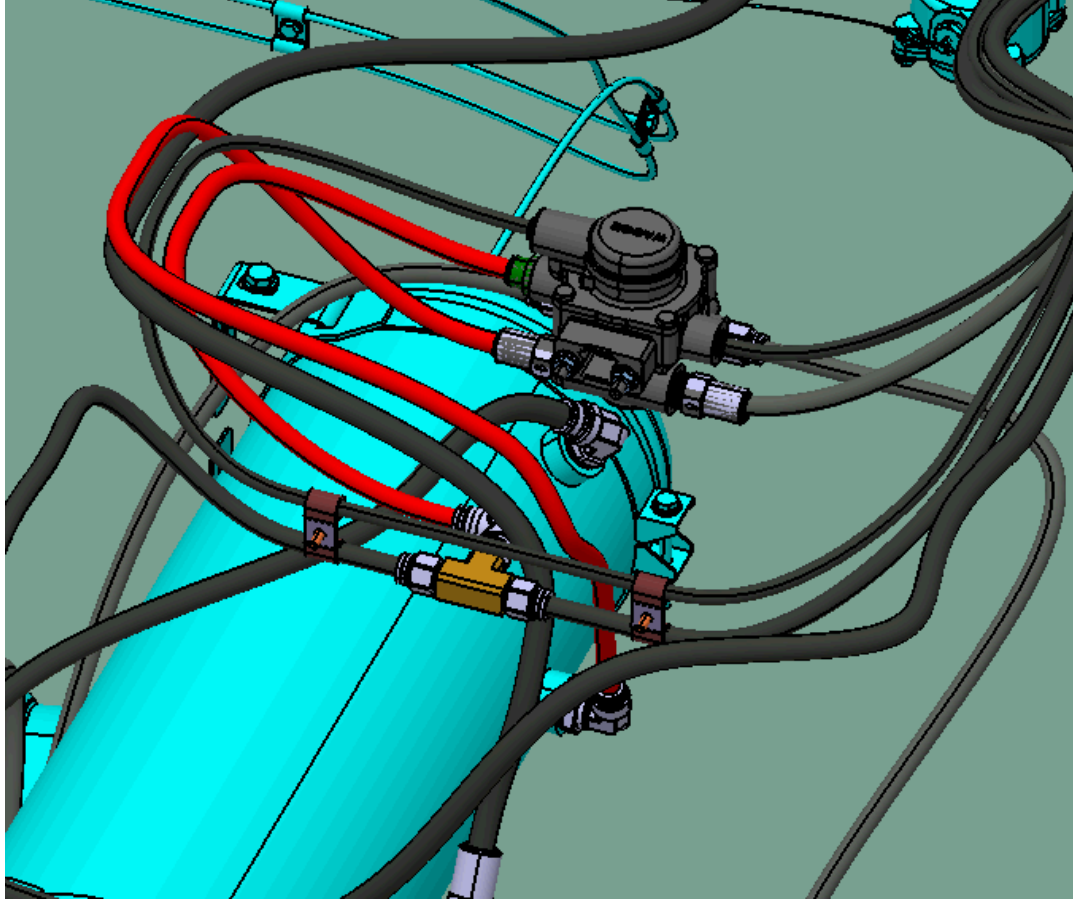


Figure-2

*Remove the connector (9111-30Y) under brake relay show in Figure-3

*Take care on polyamide hose during removal operation. Same hose needed for new installation.

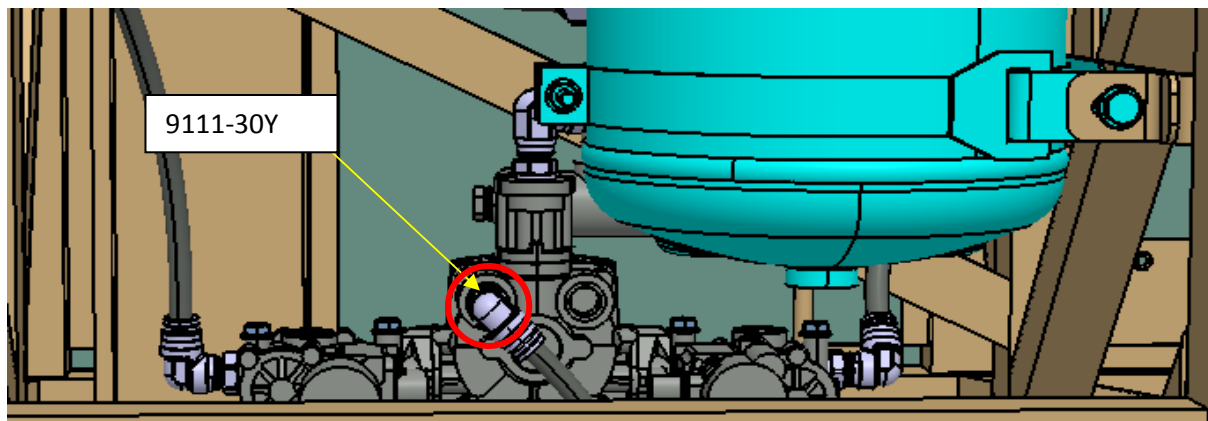


Figure-3

*Remove the maintenance lid behind the driver seat. (Figure-4)

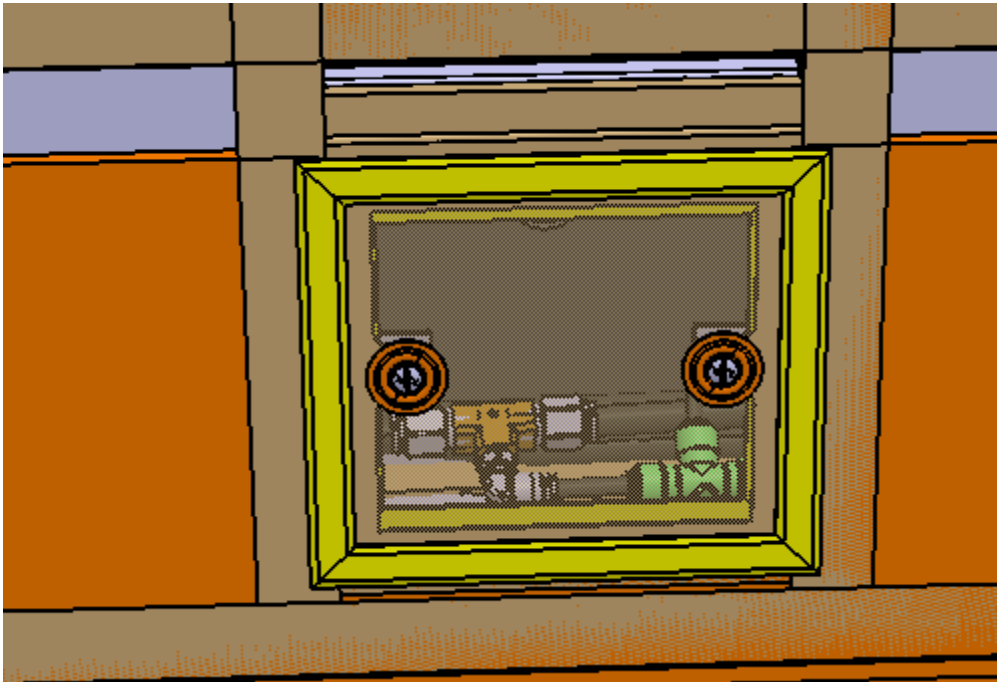


Figure-4

*Remove the all three Tee connectors shown in Figure-5

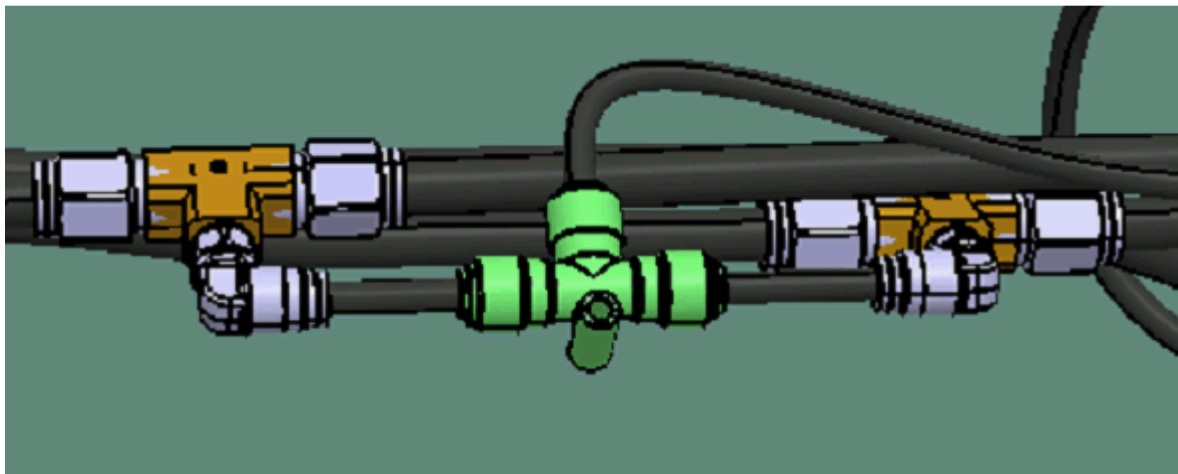


Figure-5

*Old/new IR valves are shown in Figure-6 and Figure-7

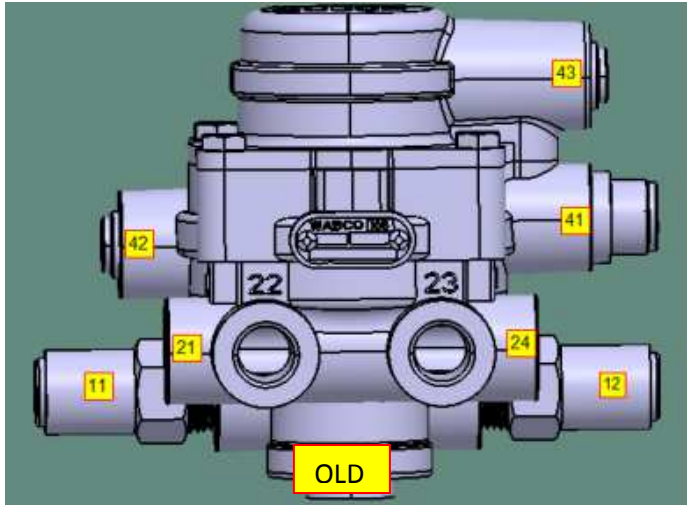


Figure-6

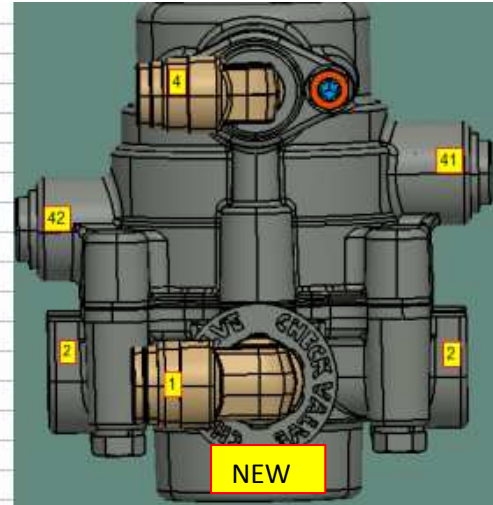


Figure-7

*Sub-assembly process is needed for new IR valve and double check valve.

*Install necessary fittings on new IR valve. Part numbers and port locations are shown in Figure-8

*Install necessary fittings on new double check valve. Part numbers and port locations are shown in Figure-9

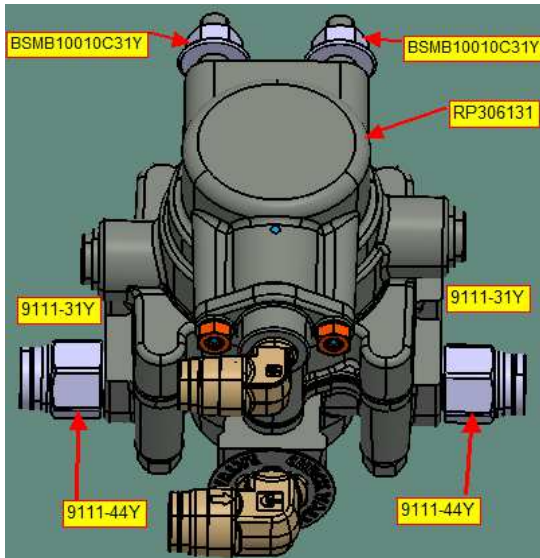


Figure-8

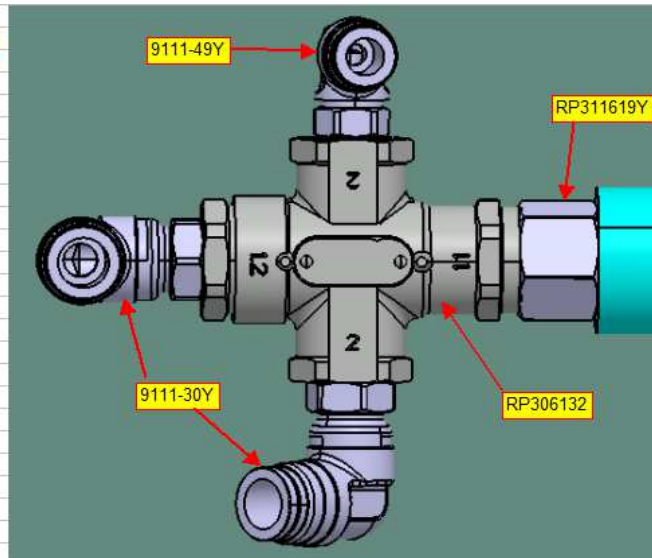


Figure-9

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*Install the necessary fittings on to the relay valve as shown in Figure 10.

*Connection port is the same one that shown in Figure-2 (Red circle)

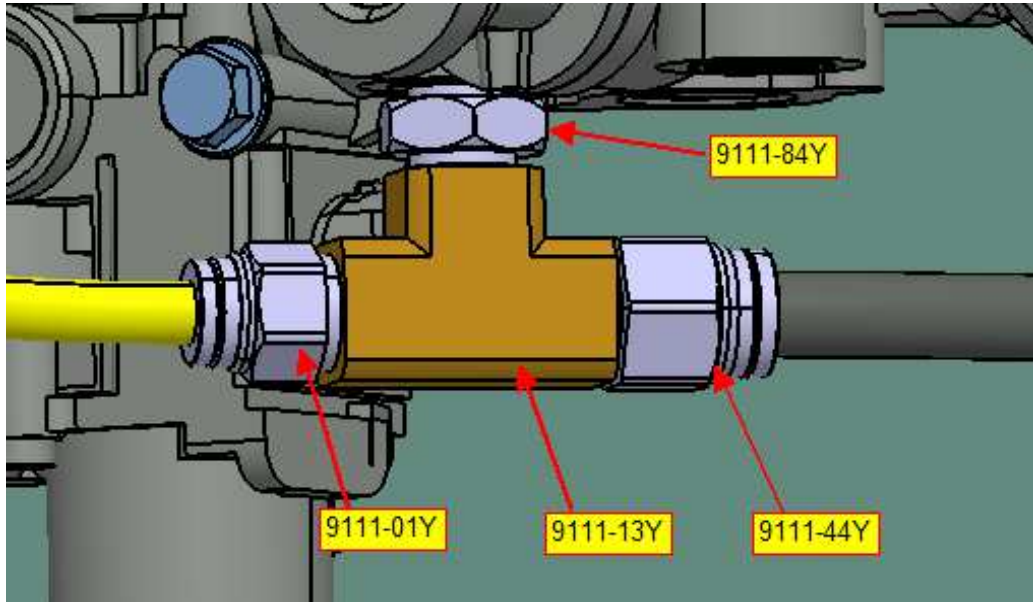


Figure-10

*Install the fitting with part number RP311619Y on to the air reservoir port shown in Figure-11

*Install the pre-assembled double check valve and fittings as shown in Figure-11 (Part number: RP311619Y)

*Install the new IR valve on same chassis bracket that you have removed old .

Note that installation holes on bracket must be enlarged to $\varnothing 11$ with drill bit.

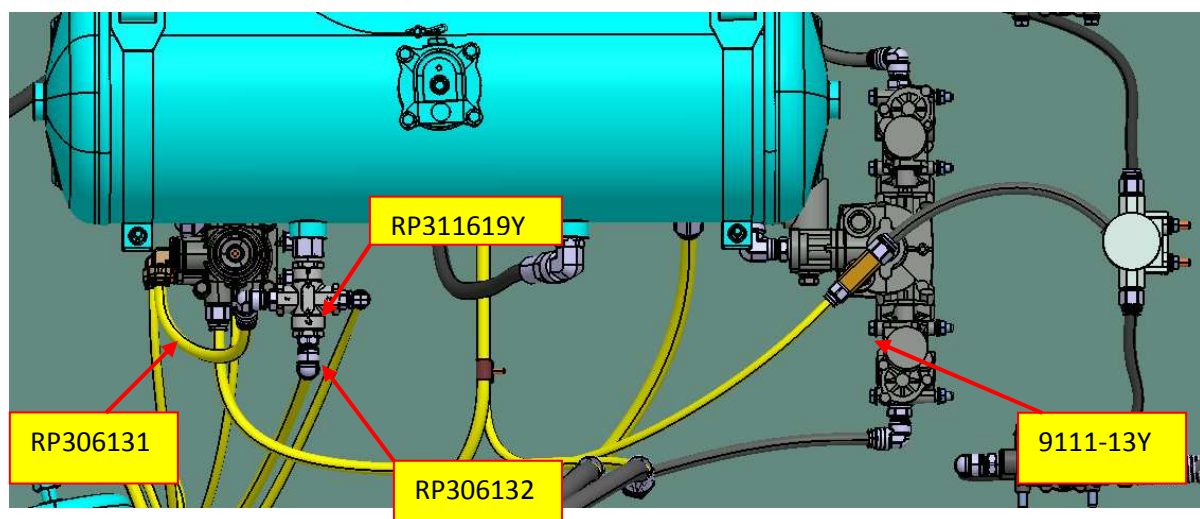


Figure-11 (Bottom View)

*Install the new polyamide hoses (purple) as shown in Figure-12. Details are explained as follows:

Hose 1: Install one side of 3/8" polyamide hose onto the connector installed on relay valve Tee shown in Figure-10 with part number 9111-01Y. Other side of hose must be connected to port 41 on new IR valve. Necessary hose length around 2mm.

Hose 2: Install one side of 1/2" polyamide hose on port 2 of double check valve. Other side of hose must be connected to port 1 on new IR valve. (See ports on Figure-7) Necessary hose length around 0,5m.

Hose 3: Install one side of 3/8" polyamide hose on port 2 of double check valve. Other side of hose must travel through middle chassis to front and must be connected to polyamide hose shown in Figure-13 marked with red circle.

*Connect the 1/2" polyamide hoses marked with blue dot by using 9652-134Y .

(The hoses that are previously disconnected by removing tee fitting as described in Page-5/Figure-1B)

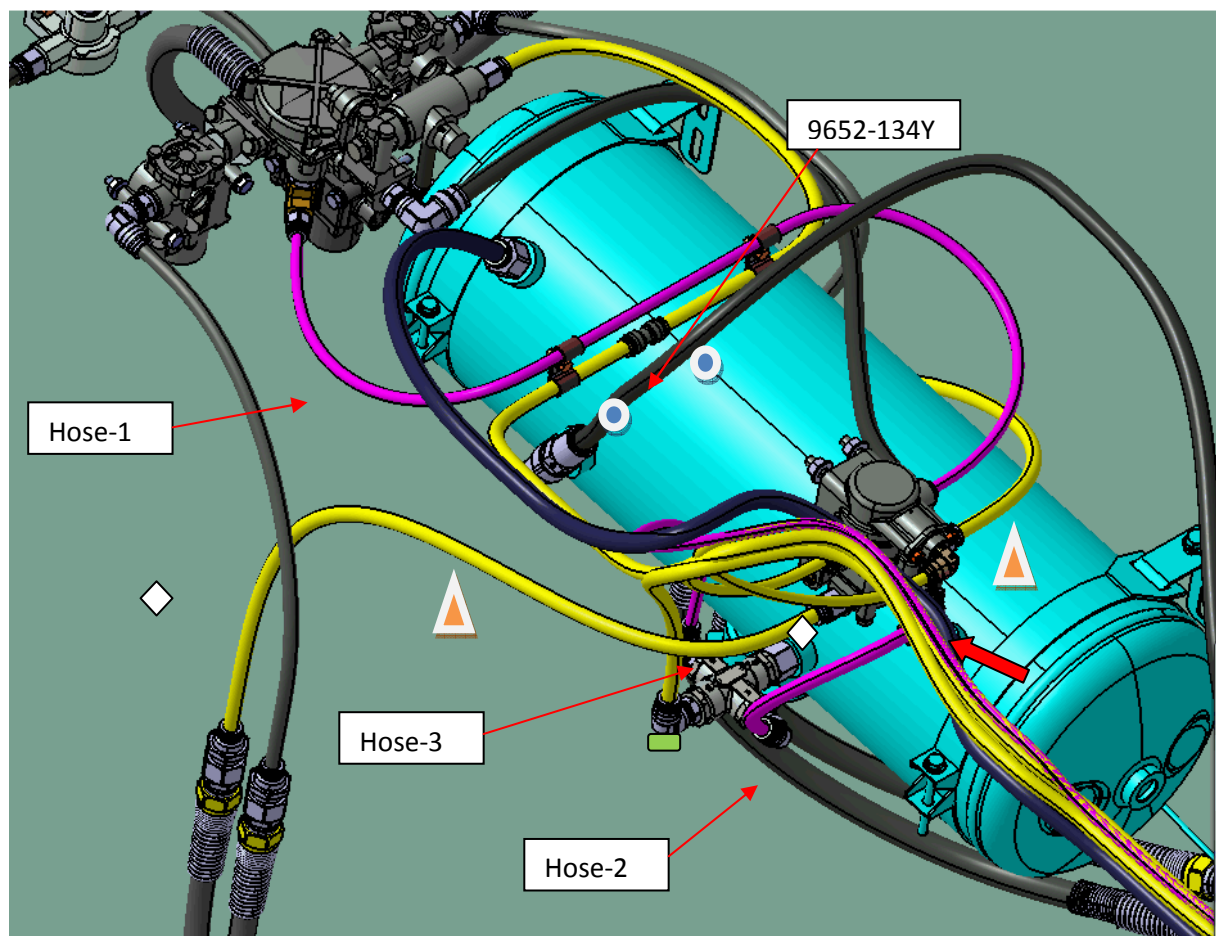


Figure-12 (Top-Side View)

*Install the 1/2" polyamide hoses marked with orange triangle on to the two independent Port 22 of new inversion relay valve shown in Figure-12. (The hoses previously disconnected from Port 21 and Port 24 of old inversion relay valve. See Figure-6 and Figure-7 for port details.)

*Install the 1/2" polyamide hose marked with green rectangle on to the port 11 of double check valve shown in Figure-12. This hose is coming from from air brake reservoir and previously disconnected from port 11 of old inversion relay valve.

*Install the 3/8" polyamide hose marked with red arrow on to the port 4 of new inversion relay valve shown in Figure-12. This hose is previously disconnected from port 43 of old inversion relay valve.

*Install the 3/8" polyamide hose marked with white diamond on to the port 42 of new inversion relay valve shown in Figure-12. This hose is previously disconnected from port 42 of old inversion relay valve.

*Connect the hoses by using adapter with the part number 9652-132Y shown in Figure-13

(The ones previously disassembled . Shown in Figure-5)

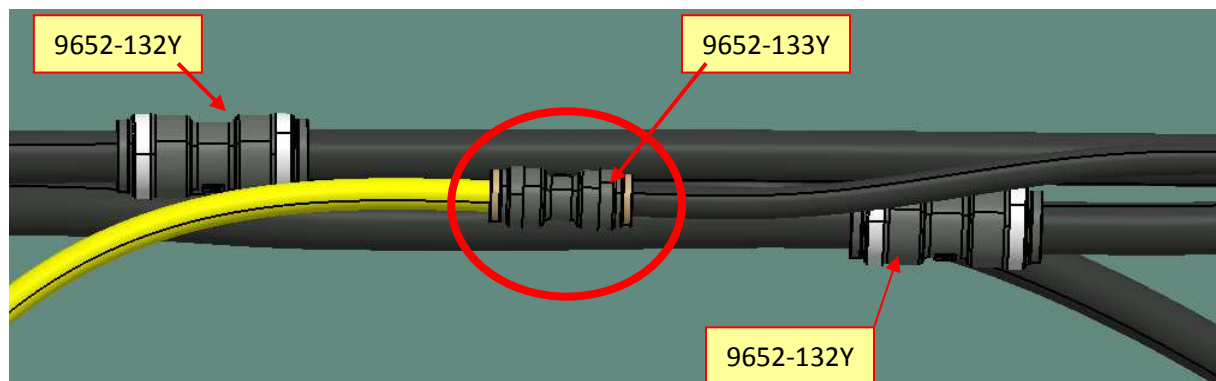


Figure-13

SYSTEM CHECKS

- 1) Run the engine and wait until air reservoirs are fully charged.
- 2) Check the air lines for any leakage.
- 3) Check the hand brake system. Both Release and hold. 3 times.
- 4) Check the service brake functionality on each wheel.

RATE BREAK DOWN

Relay valve and polyamide removal	60 min.
Front check valve removal and adapter install	40 min.
New relayvalve instalation	40 min.
Double Check Valve installation	40 min.
Polyamide installation	90 min
Mid chassis polyamide installation	30 min.
Total Time	300 min.

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AFFECTED VEHICLE LIST

No	VIN	Country
1	NLTEJXU8XD1000001	USA
2	NLTEJXU8XE1000002	USA
3	NLTEJXU81E1000003	USA
4	NLTEJXU83E1000004	USA
5	NLTEJXU85E1000005	USA
6	NLTEJXU85F1000006	USA
7	NLTEJXU87F1000007	USA
8	NLTEJXU87F1000010	USA
9	NLTEJXU80F1000009	USA
10	NLTEJXU89F1000008	USA
11	NLTEJXU89F1000011	USA
12	NLTEJXU80F1000012	USA
13	NLTEJXU82F1000013	USA
14	NLTEJXU84F1000014	USA
15	NLTEJXU86F1000015	USA
16	NLTEJXU88F1000016	USA
17	NLTEJXU8XF1000017	USA
18	NLTEJXU81F1000018	USA
19	NLTEJXU83F1000019	USA
20	NLTEJXU8XF1000020	USA
21	NLTEJXU81F1000021	USA
22	NLTEJXU83F1000022	USA
23	NLTEJXU85F1000023	USA
24	NLTEJXU87F1000024	USA
25	NLTEJXU89F1000025	USA
26	NLTEJXU80F1000026	USA
27	NLTEJXU82F1000027	USA
28	NLTEJXU84F1000028	USA
29	NLTEJXU86F1000029	USA
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31	NLTEJXU84F1000031	USA
32	NLTEJXU86F1000032	USA
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34	NLTEJXU8XF1000034	USA
35	NLTEJXU81F1000035	USA
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37	NLTEJXU85F1000037	USA
38	NLTEJXU87F1000038	USA
39	NLTEJXU89F1000039	USA
40	NLTEJXU85F1000040	USA

No	VIN	Country
41	NLTEJXU87F1000041	USA
42	NLTEJXU89F1000042	USA
43	NLTEJXU80F1000043	USA
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46	NLTEJXU86F1000046	USA
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