



SERVICE BULLETIN

SB1264

ADDRESSEES	: ABC Customer Care and Parts Source Owners and operators of coaches listed under 'Application'
VEHICLE MODEL	: TD925US
MANUAL SECTION	: Chapter 3.6: Air suspension
BULLETIN TYPE	: Field Change Program
DATE	: May 12th, 2015
SUBJECT	: To modify "Lincoln Tunnel" lowering system
TERMS & CONDITIONS	: Refer to the warranty section further in this Bulletin.

APPLICATION:

Model	VIN
TD925US 8-wheeler	42301 → 42302, 42304 → 42317, 42320 42325 → 42329, 42331 → 42333, 42335 → 42338, 42340 → 42345 42363 → 42370, 42374 → 42377 42380, 42386 → 42389 42391 → 42393 42395, 42400, 42403 42414 → 42459 42461 → 42477, 42479 → 42494 42496 → 42525, 42536 → 42539 42541 → 42546, 42547 → 42558 42559 → 42615
TD925US 10-wheeler	42630 → 42647, 42691 → 42739 42765 → 42766

DESCRIPTION:

- It has been determined that the "Lincoln Tunnel" lowering system of the above mentioned vehicles shows early failure. The internal of the air cylinder mounted in the actuating linkage of the leveling valve may corrode and eventually seize due to contaminants sucked in by the vent line.
- To address this issue, Van Hool is conducting a Field Change Program, the terms and conditions of which are explained further on under "Warranty". Owners and operators of the affected units should follow the procedure below to modify the "Lincoln Tunnel" lowering system.

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MATERIAL

	Kit number to modify front axle	Kit number to modify trailing axle
TD925US 8-wheeler	11447621	11447624
TD925US 10-wheeler	11447621	11447626

1. Material to modify limited lowering system on front axle (Van Hool kit 11447621):

VH Reference	Description	Qty.
11443785	Adapter plate for limited lowering valve	1
660222802	Screw (M8x1.25, length 45mm, grade 8.8, DIN933)	2
660203201	Hexagonal nut (M8x1.25, grade 8)	2
10692138	Spring washer M8	2
11443822	Distance bushing (OD: 0.67 inch, ID: 0.35 inch, Length: 1 inch)	2
11442703	Limited lowering valve (Knorr-Bremse 0 504 003 004)	1
11449547	Air fitting for port of limited lowering valve (includes 637317600, 637302850, 637307060, 637307010)	2
11318584-3000	Air vent line for port 11 of limited lowering valve	3m (10ft)
660229804	Screw (M8x1.25, length 20mm, grade 8.8, DIN933)	2
10692138	Spring washer M8	2
660229808	Screw (M8x1.25, length 40mm, grade 8.8, DIN933)	2
10692138	Spring washer M8	2
11447446	Leveling valve control arm, length 125 mm (5 inch)	1
11443833	Leveling valve connecting rod, length 153 mm (6 inch)	1
631202250	Ball-joint for leveling valve connecting rod	2
660209922	Nut for leveling valve connecting rod	2
10698094	Anchorage plate for connecting rod of leveling valve	1
660229752	Screw (M6x1, length 16mm, DIN933)	2
11354416	Conical spring washer	2
660623508	Washer	2
660623508	Washer	1
660207111	Nut	1
637302090	Plug	2
637303360	Washer	2
637303420	O-ring	2

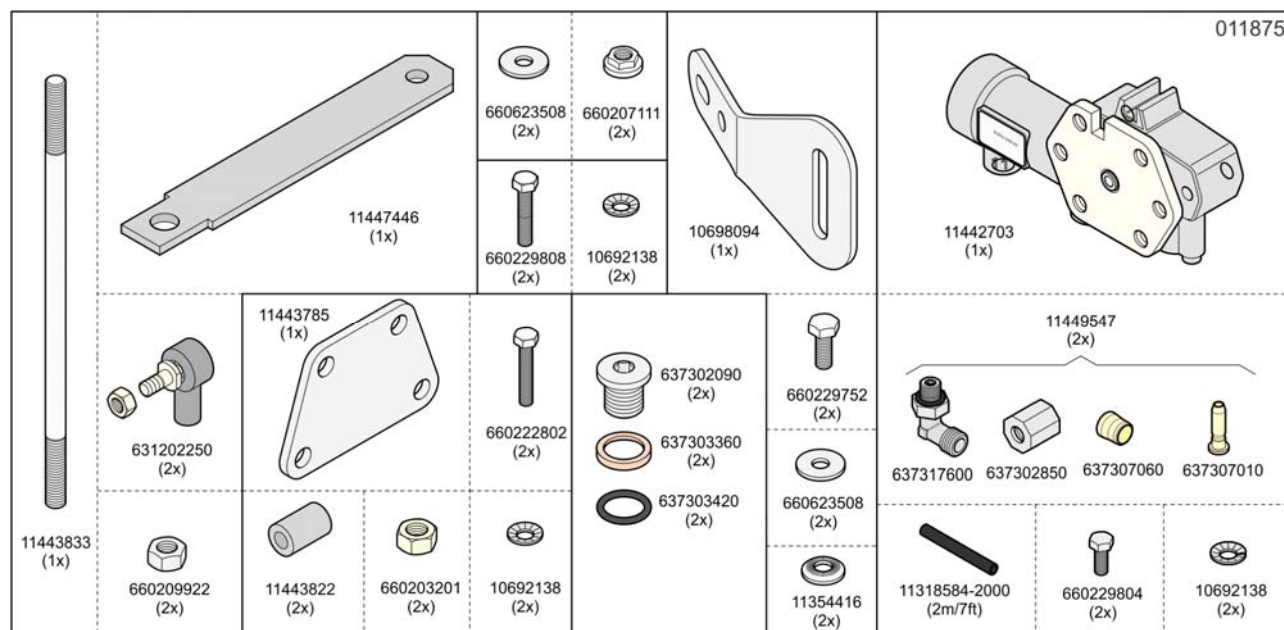


Figure 1: Van Hool kit 11447621 (to modify front axle)

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2. Material to modify limited lowering system on trailing axle of 8-wheeler (Van Hool kit 11447624):

VH Reference	Description	Qty.
11443849	Adapter plate for limited lowering valve	2
660229804	Screw (M8x1.25, length 20mm, grade 8.8, DIN933)	4
10692138	Spring washer M8	4
660203201	Hexagonal nut (M8x1.25, grade 8)	4
11442703	Limited lowering valve (LHS) (Knorr-Bremse 0 504 003 004)	1
11442702	Limited lowering valve (RHS) (Knorr-Bremse 0 504 003 003)	1
11449547	Air fitting for port of limited lowering valve (includes 637317600, 637302850, 637307060, 637307010)	4
11318584-3000	Air vent line for port 11 of RHS limited lowering valve	3m (10ft)
11318584-3000	Air vent line for port 12 of RHS limited lowering valve	3m (10ft)
660229804	Screw (M8x1.25, length 20mm, grade 8.8, DIN933)	4
10692138	Spring washer M8	4
660229808	Screw (M8x1.25, length 40mm, grade 8.8, DIN933)	4
10692138	Spring washer M8	4
11443978	Leveling valve connecting rod, length 100 mm (3.94 inch)	2
11465884	Anchorage plate for connecting rod of leveling valve (LHS)	1
11465882	Anchorage plate for connecting rod of leveling valve (RHS)	1

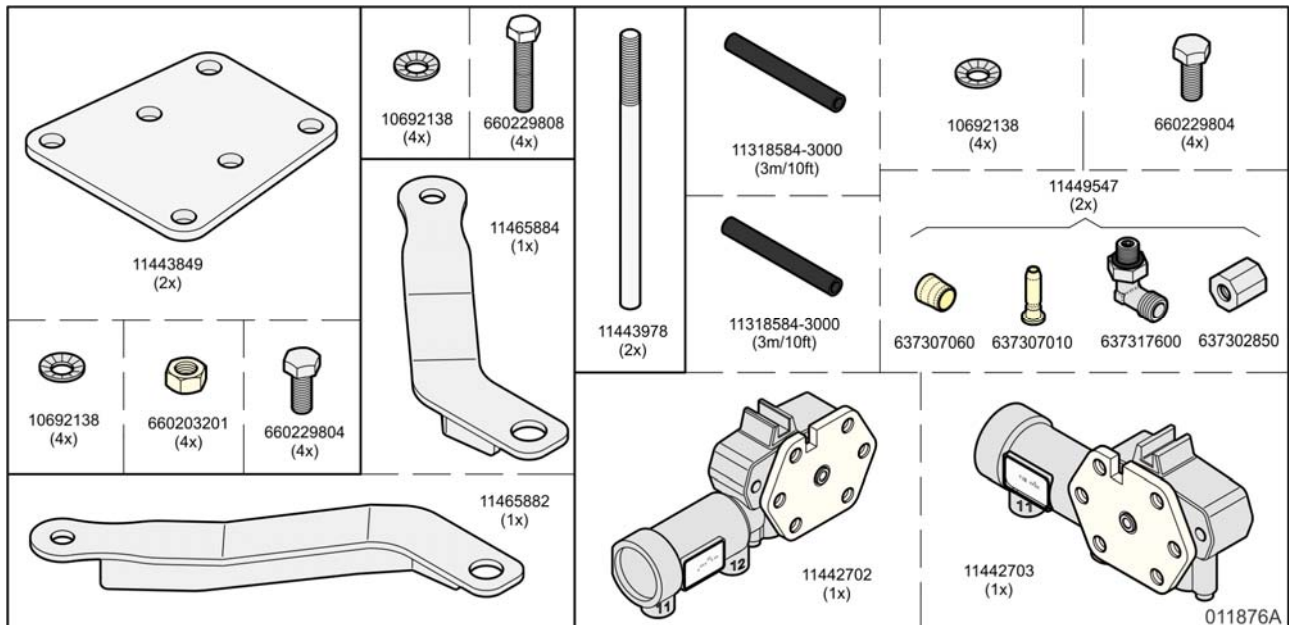


Figure 2: Van Hool kit 11447624 (to modify trailing axle of 8-wheeler)

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3. Material to modify limited lowering system on trailing axle of 10-wheeler
(Van Hool kit: 11447626):

VH Reference	Description	Qty.
11444035	Adapter plate for limited lowering valve	2
660229804	Screw (M8x1.25, length 20mm, grade 8.8, DIN933)	4
660203201	Hexagonal nut (M8x1.25, grade 8)	4
10692138	Spring washer M8	4
11442703	Limited lowering valve (LHS) (Knorr-Bremse 0 504 003 004)	1
11442702	Limited lowering valve (RHS) (Knorr-Bremse 0 504 003 003)	1
11449547	Air fitting for port of limited lowering valve (includes 637317600, 637302850, 637307060, 637307010)	4
11318584-3000	Air vent line for port 11 of RHS limited lowering valve	3m (10ft)
11318584-3000	Air vent line for port 12 of RHS limited lowering valve	3m (10ft)
660222503	Screw (M8x1.25, length 30mm, grade 8.8, DIN933)	4
10692138	Spring washer M8	4
11444094	Spacer	4
660229808	Screw (M8x1.25, length 40mm, grade 8.8, DIN933)	4
10692138	Spring washer M8	4
11423503	Anchorage plate for connecting rod of leveling valve (LHS)	1
11423506	Anchorage plate for connecting rod of leveling valve (RHS)	1
660242701	Screw (M8x1.25, length 50mm, DIN931)	4
660207107	Self-locking nut (M8x1.25, grade 8)	4
11291178	Distance bushing	4
11445562	Brackets to route air lines	1
11449567	Air fitting assembly (includes 637311000, 637308740, 660636800, 637302870 (3x), 637307080 (3x), 637307030 (3x), 637306890)	1

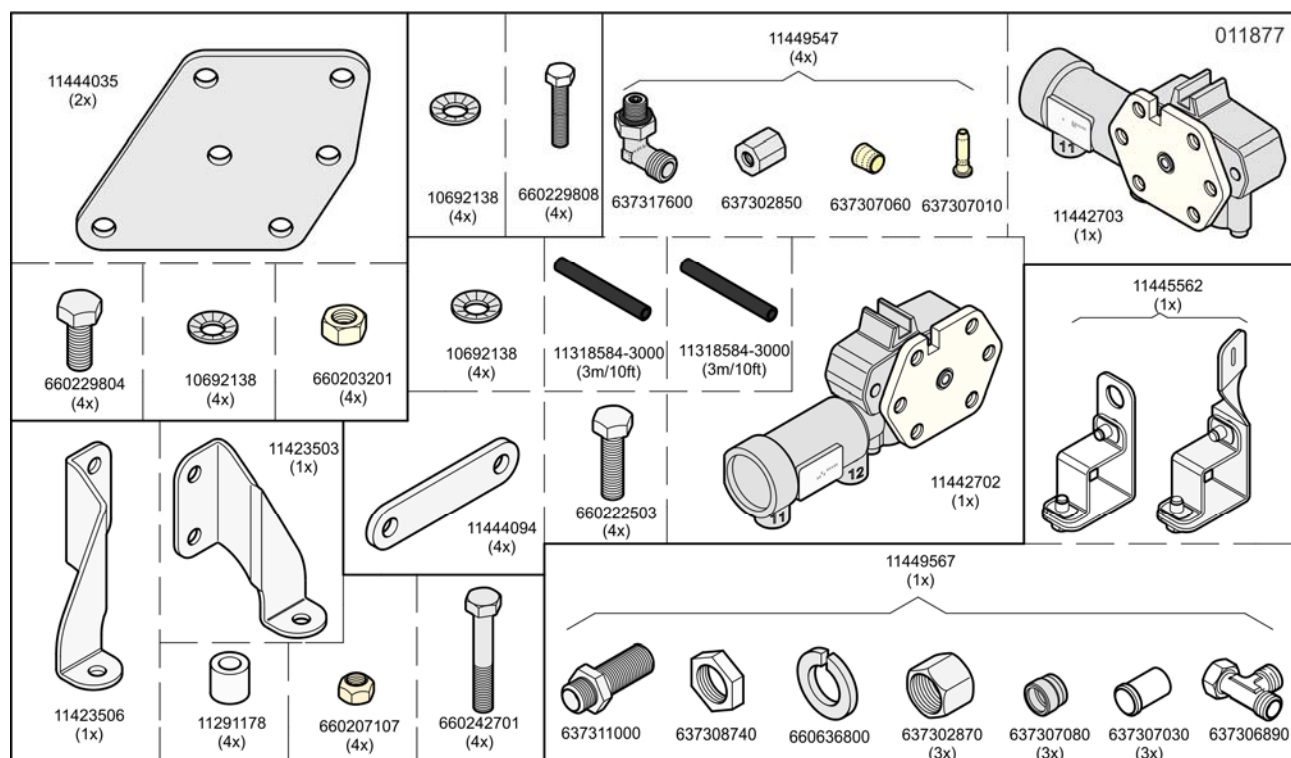


Figure 3: Van Hool kit 11447626 (to modify trailing axle of 10-wheeler)

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PREPARATIONS:

- Park the vehicle on a level-surfaced inspection pit with the front wheels straight. Apply the parking brake, stop the engine, switch off all systems and turn off the battery master switch on the dashboard.

When using portable post lifts (always use 6 post lifts) instead of an inspection pit, always lower the suspension first.

- Turn off the mechanical battery switch.
- Put a “DO NOT OPERATE” tag on the instrument panel before beginning any inspection or performing any repair.
- Place chocks in front of and behind the drive axle wheels.
- Read the entire procedure before beginning to work.



WARNING!

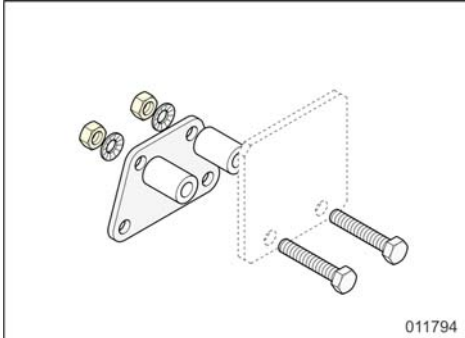
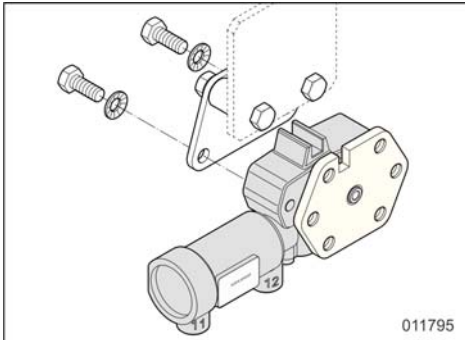
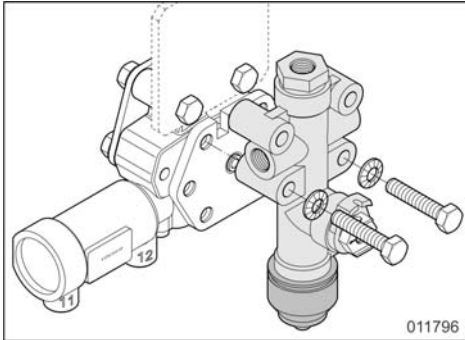
Observe safe shop practices at all times.

PROCEDURE:

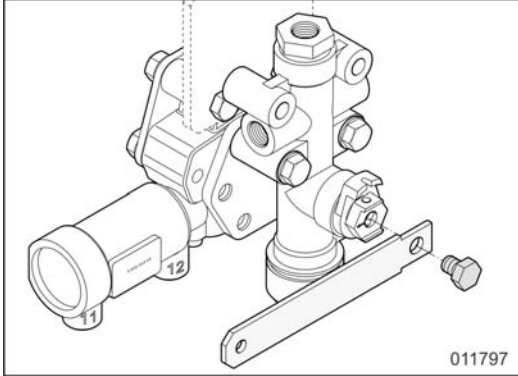
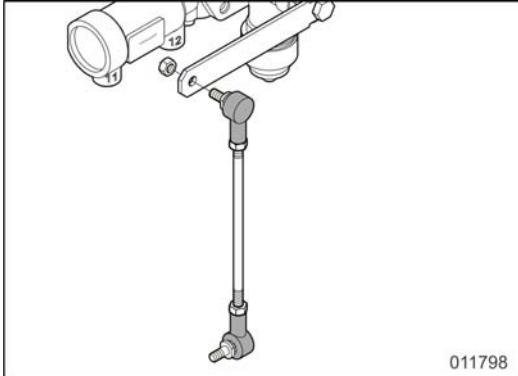
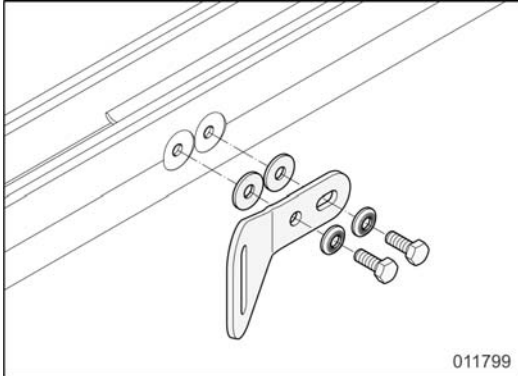
Step	Action
1	Ensure chocks are placed in front of and behind the drive axle wheels.
2	Discharge all the air from the air suspension system by opening the drain valve of the accessories air tank.
3	Modify the limited lowering system on the front axle. Refer to “STEP 3 IN DETAIL: To modify limited lowering system on front axle” further in this Service Bulletin.
4	Modify the limited lowering system on the trailing axle. <ul style="list-style-type: none">• For 8-wheelers, refer to “STEP 4A IN DETAIL: To modify limited lowering system on trailing axle of 8-wheeler”.• For 10-wheelers, refer to “STEP 4B IN DETAIL: To modify limited lowering system on trailing axle of 10-wheeler”.
5	Only if pilot valve V049.2 of the Lincoln tunnel lowering system in the main junction box is a momentary 4/2 solenoid valve and the vent lines are connected to the pilot valve: Disconnect the air vent lines at both ports 22 of the pilot valve. Close both ports with a plug 637302090, a copper washer 637303360 and an O-ring 637303420. Leave the disconnected air lines open.
6	Adjust the air suspension ride height.
7	Check the operation of the limited lowering system.

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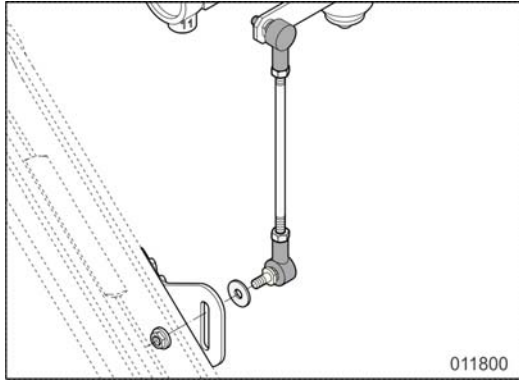

STEP 3 IN DETAIL: To modify limited lowering installation on front axle

Step	Action
1	Disconnect the leveling valve connection rod from its lower attachment . Pull down the leveling valve actuating lever to deflate the air bellows.
2	Note the position of the air lines at the leveling valve (line ends identified by colored rings). Disconnect the air lines from the leveling valve and the air cylinder.
3	Remove the complete leveling valve assembly (leveling valve + linkage + support for air cylinder).
4	<p>Install the adapter plate for the limited lowering valve to the chassis with the shorter base pointing up. Line up the holes of the adapter plate with the holes in the chassis. Secure the adapter plate to the chassis with two distance bushings 11443822, two screws 660222802, two spring washers 10692138 and two nuts 660203201 from the kit. Tighten the nuts to a torque of 15 ft.lbf (20 Nm).</p>  <p>Figure 4: Adapter plate to chassis</p>
5	<p>Secure the limited lowering valve to the adapter plate with two screws 660229804 and two spring washers 10692138 from the kit.</p>  <p>Figure 5: Limited lowering valve to adapter plate</p>
6	<p>Secure the leveling valve to the limited lowering valve with two screws 660229808 and two spring washers 10692138 from the kit. Take the two upper tap holes on the limited lowering valve so that the leveling valve spindle coincide with the limited lowering valve spindle. Tighten the screws to a torque of 15 ft.lbf (20 Nm).</p>  <p>Figure 6: Leveling valve to limited lowering valve</p>

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7	<p>Install the leveling valve control arm from the kit. Tighten the screw to a torque of 25 to 35 ft.lbf (35 to 45 Nm).</p>  <p>Figure 7: Installation of leveling valve control arm</p>
8	<p>Screw the two ball-joints 631202250 together with the two nuts 660209922 on the leveling valve connecting rod from the kit and secure the connecting rod to the leveling control arm.</p>  <p>Figure 8: Connecting rod to leveling valve control arm</p>
9	<p>Secure the anchorage plate for the leveling valve connecting rod to the suspension arm with two screws 660229752, two conical washers 11354416 and two washers 660623508 from the kit.</p>  <p>Figure 9: Anchorage plate for leveling valve connecting rod to suspension arm</p>

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<p>10</p>	<p>Secure the levelling valve connecting rod to the anchorage plate with washer 660623508 and nut 660207111 from the kit.</p> <div data-bbox="497 266 1018 645">  <p>011800</p> </div> <p>Figure 10: Leveling valve connecting rod to anchorage plate</p>
<p>11</p>	<p>Screw the air line fittings of the kit into the ports of the limited lowering valve.</p>
<p>12</p>	<p>Connect the air supply line (marked with No.29, previously used for the air cylinder) to port 12 of the limited lowering valve. Reconnect the air lines to the leveling valve. Make sure the air lines are routed in such a way that they will not strain during operation of the limited lowering system. The figure shows an example of a proper routing.</p> <div data-bbox="501 871 1013 1247">  <p>011894</p> </div> <p>Figure 11: Routing of air lines</p>

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- **SITUATION 1: pilot valve V049.2 in the main junction box is a normally closed 3/2 solenoid valve (Rexroth) or a momentary 4/2 solenoid valve (Bosch), and the vent port of the air cylinder was not connected with an air vent line to a clean and dry compartment:** connect port 11 of the limited lowering valve with the air vent line of the kit. Route the air vent line to the compartment in the front stair where the door control valves are located. Secure the air vent line with cable ties.
- **SITUATION 2: pilot valve V049.2 in the main junction box is a normally closed 3/2 solenoid valve (Rexroth) and the vent port of the air cylinder was connected with an air vent line to a clean and dry compartment:** connect port 11 of the limited lowering valve with the already installed air vent line (marked with No. 30).
- **SITUATION 3: pilot valve V049.2 in the main junction box is a momentary 4/2 solenoid valve (Bosch) and the vent port of the air cylinder was connected with an air vent line to a clean and dry compartment:** connect port 11 of the limited lowering valve with the already installed air vent line (marked with No. 30).

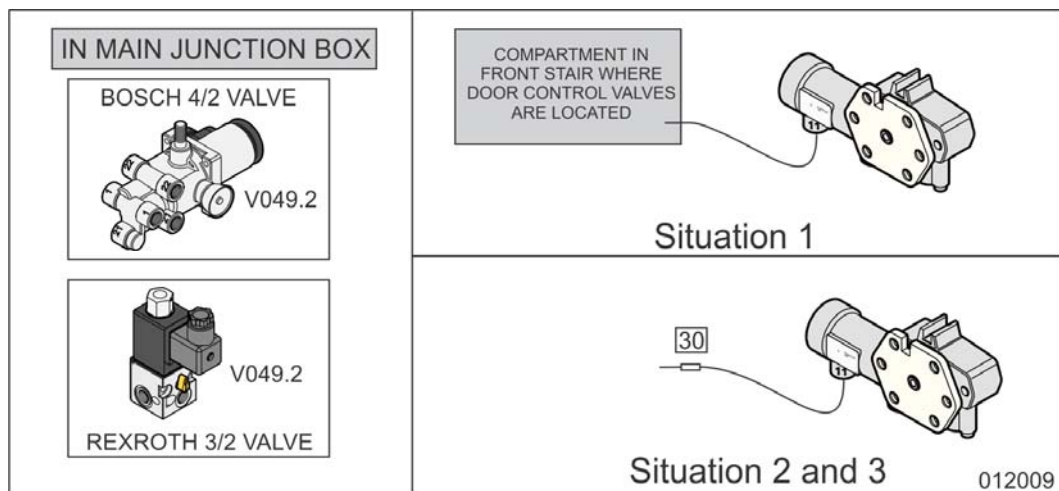
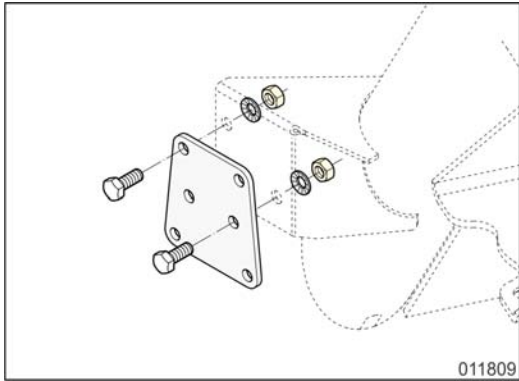
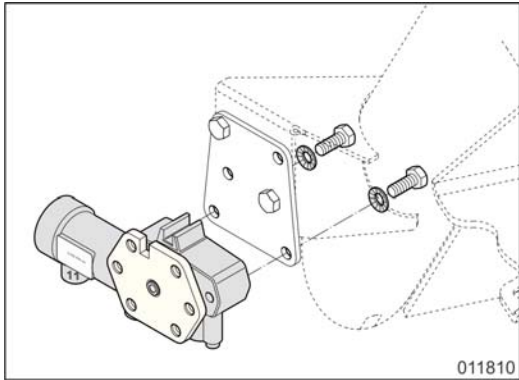


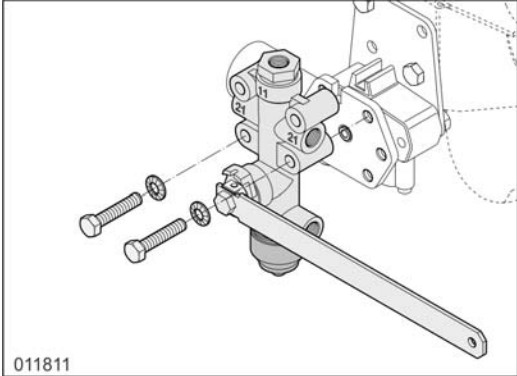
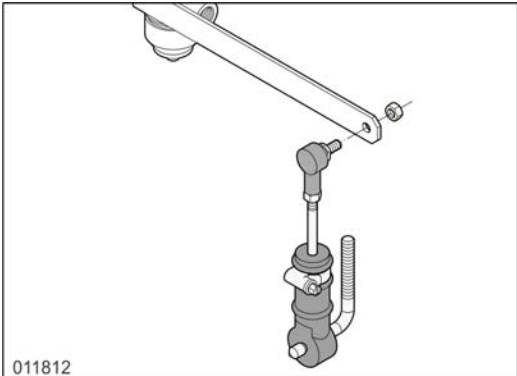
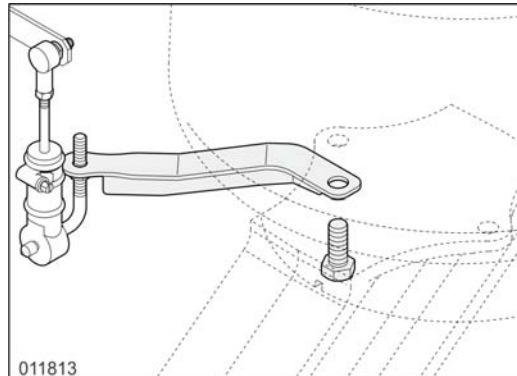
Figure 12

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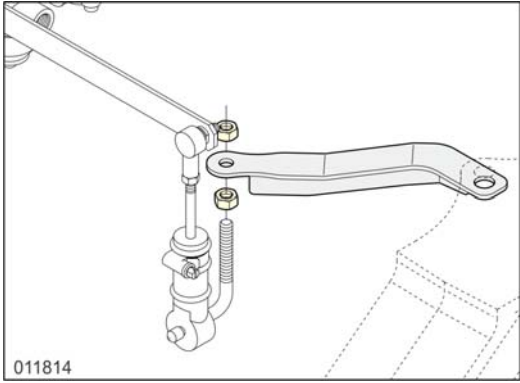
STEP 4A IN DETAIL: To modify limited lowering system on trailing axle of eight-wheeler

Step	Action
1	Disconnect the leveling valve connection rod from its lower attachment . Pull down the leveling valve actuating lever to deflate the air bellows.
2	Note the position of the air lines at the leveling valve (line ends identified by colored rings). Disconnect the air lines from the leveling valve and the air cylinder.
3	Remove the complete leveling valve assembly (leveling valve + linkage + support for air cylinder).
4	<p>Install the adapter plate for the limited lowering valve to the chassis with the shorter base pointing up. Line up the holes of the adapter plate with the holes in the chassis. Secure the adapter plate to the chassis with two screws 660229804, two spring washers 10692138 and two nuts 660203201 from the kit. Tighten the nuts to a torque of 15 ft.lbf (20 Nm).</p>  <p>Figure 13: Adapter plate to chassis</p>
5	<p>Secure the limited lowering valve to the adapter plate with two screws 660229804 and two spring washers 10692138 from the kit.</p>  <p>Figure 14: Limited lowering valve to adapter plate</p>

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<p>6</p>	<p>Secure the leveling valve together with its arm to the limited lowering valve with two screws 660229808 and two spring washers 10692138 from the kit. Take the two upper tap holes on the limited lowering valve so that the leveling valve spindle coincide with the limited lowering valve spindle. Tighten the screws to a torque of 15 ft.lbf (20 Nm).</p> <div data-bbox="491 376 1010 750">  <p>011811</p> </div> <p>Figure 15: Leveling valve to limited lowering valve</p>
<p>7</p>	<p>Screw the ball-joint together with its nut on the leveling valve connecting rod from the kit.</p>
<p>8</p>	<p>Push the other side of the connecting rod at least 1.6 inch (40 mm) in the rubber end.</p>
<p>9</p>	<p>Secure the connecting rod assembly with the ball-joint to the leveling valve control arm.</p> <div data-bbox="491 936 1010 1310">  <p>011812</p> </div> <p>Figure 16: Connecting rod assembly to leveling valve control arm</p>
<p>10</p>	<p>Secure the anchorage plate for the leveling valve connecting rod to the bottom of the air piston. Ensure that the rubber end of the connecting rod is aligned as closely as possible with the ball-joint. Tighten the screw of the anchorage plate to a torque of 52 ft.lbf (70 Nm).</p> <div data-bbox="491 1480 1010 1854">  <p>011813</p> </div> <p>Figure 17: Anchorage plate to air piston</p>

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<p>11</p>	<p>Secure the leveling valve connecting rod to the anchorage plate.</p> <div data-bbox="496 226 1018 607">  </div> <p>Figure 18: Connecting rod to anchorage plate</p>
<p>12</p>	<p>Screw the air fittings of the kit into the ports of the limited lowering valves.</p>
<p>13</p>	<p>Connect the air supply line (marked with No.29, previously used for the air cylinder) to port 12 of the RHS limited lowering valve, to port 11 of the LHS limited lowering valve. Reconnect the air lines to the leveling valve. Make sure the air lines are routed in such a way that they will not strain during operation of the limited lowering system.</p>
<p>14</p>	<p>Repeat steps 1 up to and including step 13 for the other leveling valve.</p>

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- **SITUATION 1: pilot valve V049.2 in the main junction box is a normally closed 3/2 solenoid valve (Rexroth) or a momentary 4/2 solenoid valve (Bosch), and the vent ports of the air cylinders were not connected with an air vent line to a clean and dry compartment:** connect port 11 of the RHS limited lowering valve with the air vent line of the kit. Connect port 12 of the LHS limited lowering valve with the air vent line of the kit. Route the air vent lines to the junction box in the luggage compartment. Secure the air vent line with cable ties.
- **SITUATION 2: pilot valve V049.2 in the main junction box is a normally closed 3/2 solenoid valve (Rexroth) and the vent ports of the air cylinders were connected with an air vent line to a clean and dry compartment:** connect port 11 of the RHS limited lowering valve and port 12 of the LHS limited lowering valve with the already installed air vent lines (marked with No. 30).
- **SITUATION 3: pilot valve V049.2 in the main junction box is a momentary 4/2 solenoid valve (Bosch) and the vent ports of the air cylinders were connected with an air vent line to a clean and dry compartment:** connect port 11 of the RHS limited lowering valve and port 12 of the LHS limited lowering valve with the already installed air vent lines (marked with No. 30).

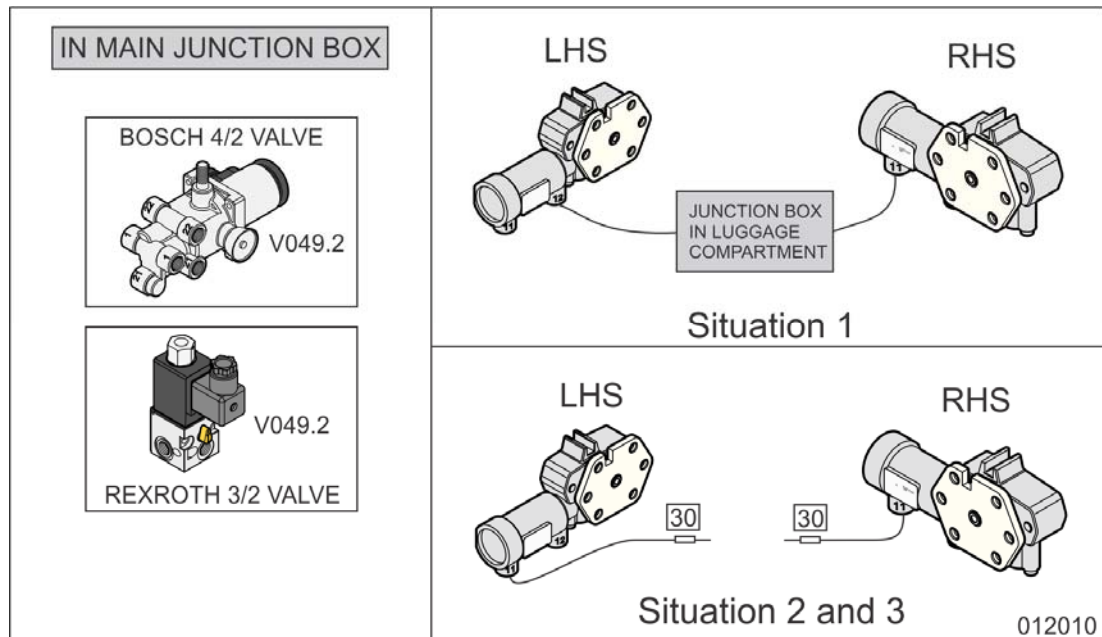
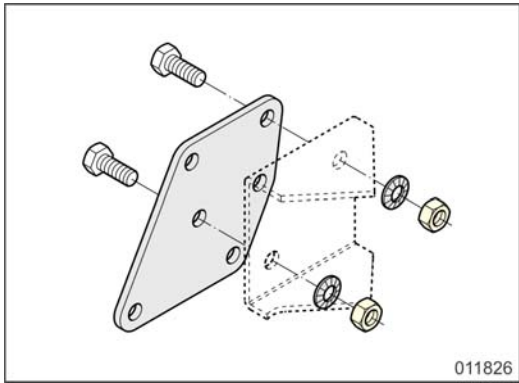
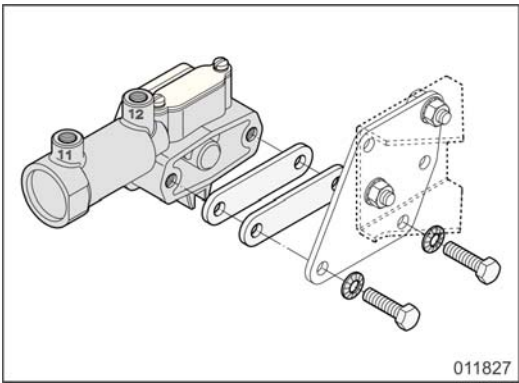


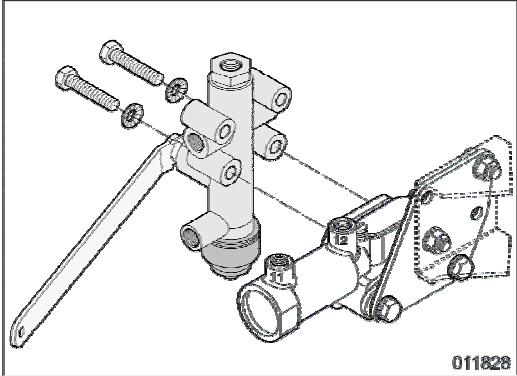
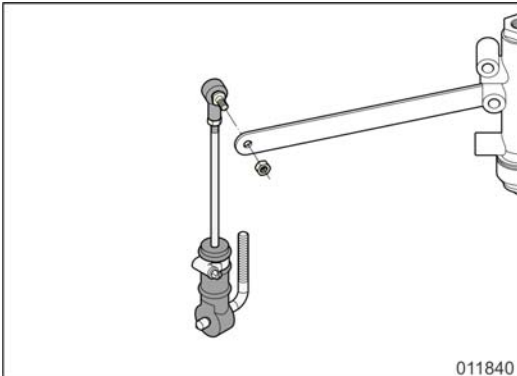
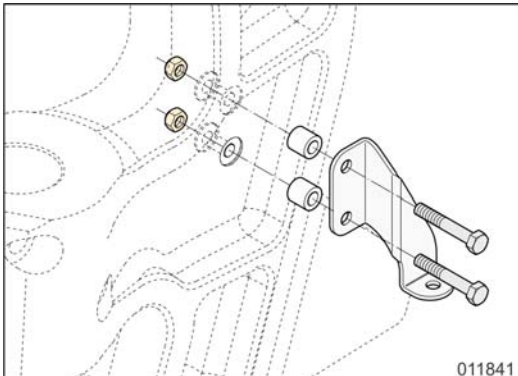
Figure 19

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STEP 4B IN DETAIL: To modify limited lowering system on trailing axle of ten-wheeler

Step	Action
1	Disconnect the leveling valve connection rod from its lower attachment . Pull down the leveling valve actuating lever to deflate the air bellows.
2	Note the position of the air lines at the leveling valve (line ends identified by colored rings). Disconnect the air lines from the leveling valve and the air cylinder.
4	Remove the complete leveling valve assembly (leveling valve + linkage + support for air cylinder).
5	<p>Install the adapter plate for the limited lowering valve to the chassis with the shorter base pointing up. Line up the holes of the adapter plate with the holes in the chassis. Secure the adapter plate to the chassis with two screws 660229804, two spring washers 10692138 and two nuts 660203201 from the kit. Tighten the nuts to a torque of 15 ft.lbf (20 Nm).</p>  <p>Figure 20: Adapter plate to chassis</p>
6	<p>Secure the limited lowering valve to the adapter plate with two screws 660222503, two spring washers 10692138 and two spacers 11444094 from the kit.</p>  <p>Figure 21: Limited lowering valve to adapter plate</p>

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7	<p>Secure the leveling valve together with its arm to the limited lowering valve with two screws 660229808 and two spring washers 10692138 from the kit. Take the two upper tap holes on the limited lowering valve so that the leveling valve spindle coincide with the limited lowering valve spindle. Tighten the screws to a torque of 15 ft.lbf (20 Nm).</p>  <p>011828</p> <p>Figure 22: Leveling valve to limited lowering valve</p>
8	<p>Screw the ball-joint together with its nut on the leveling valve connecting rod from the kit.</p>
9	<p>Push the other side of the connecting rod at least 1.6 inch (40 mm) in the rubber end.</p>
10	<p>Secure the connecting rod assembly with the ball-joint to the leveling valve control arm.</p>  <p>011840</p> <p>Figure 23: Connecting rod assembly to leveling control arm</p>
11	<p>Secure the anchorage plate (11423503 at LHS, 11423506 at RHS) for the leveling valve connecting rod to the steering knuckle carrier with two screws 660242701, two distance bushings 11291178 and two self-locking nuts 660207107 from the kit. Ensure that the rubber end of the connecting rod is aligned as closely as possible with the ball-joint. Tighten the nuts of the anchorage plate to a torque of 15 ft.lbf (20 Nm).</p>  <p>011841</p> <p>Figure 24: Anchorage plate to steering knuckle carrier</p>

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<p>12</p>	<p>Secure the levelling valve connecting rod to the anchorage plate.</p> <div data-bbox="501 232 1023 611"> </div> <p>Figure 25: Levelling valve to anchorage plate</p>
<p>13</p>	<p>Screw the air fittings into the ports of the limited lowering valve.</p>
<p>14</p>	<p>Repeat steps 1 up to and including step 13 for the other leveling valve.</p>
<p>15</p>	<p>Install the air line brackets from the kit as indicated in the figure A= 74 mm (2.9 inch)</p> <div data-bbox="454 734 1075 1184"> </div> <p>Figure 26: Air line brackets to chassis</p>
<p>16</p>	<p>Install the bulkhead air fitting. Screw the T-fitting on the bulkhead fitting. Connect and route the air lines as indicated in the figure.</p> <div data-bbox="451 1285 1075 1738"> </div> <p>Figure 27: Bulkhead air fitting installation</p>

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17	Connect the air supply line (marked with No. 29, previously used for the air cylinder) to port 12 of the RHS limited lowering valve. Reconnect the air lines to the leveling valve. Make sure the air lines are routed in such a way that they will not strain during operation of the limited lowering system. Secure with cable ties where necessary. Refer to figure 29 for proper routing.
18	Connect the air supply line (marked with No. 29, previously used for the air cylinder) to port 11 of the LHS limited lowering valve. Reconnect the air lines to the leveling valve. Make sure the air lines are routed in such a way that they will not strain during operation of the limited lowering system. Secure with cable ties where necessary. Refer to figure 29 for proper routing.
19	<ul style="list-style-type: none"> • SITUATION 1: pilot valve V049.2 in the main junction box is a normally closed 3/2 solenoid valve (Rexroth) or a momentary 4/2 solenoid valve (Bosch), and the vent ports of the air cylinders were not connected with an air vent line to a clean and dry compartment: connect port 11 of the RHS limited lowering valve with the air vent line of the kit. Connect port 12 of the LHS limited lowering valve with the air vent line of the kit. Route the air vent lines to the junction box in the luggage compartment. Secure the air vent line with cable ties. • SITUATION 2: pilot valve V049.2 in the main junction box is a normally closed 3/2 solenoid valve (Rexroth) and the vent port of the air cylinders were connected with an air vent line to a clean and dry compartment: connect port 11 of the RHS limited lowering valve and port 12 of the LHS limited lowering valve with the already installed air vent lines (marked with No. 30). • SITUATION 3: pilot valve V049.2 in the main junction box is a momentary 4/2 solenoid valve (Bosch) and the vent ports of the air cylinders were connected with an air vent line to a clean and dry compartment: connect port 11 of the RHS limited lowering valve and port 12 of the LHS limited lowering valve with the already installed air vent lines (marked with No. 30). <div data-bbox="327 1205 1428 1836"> </div>

Figure 28

Continued on next page

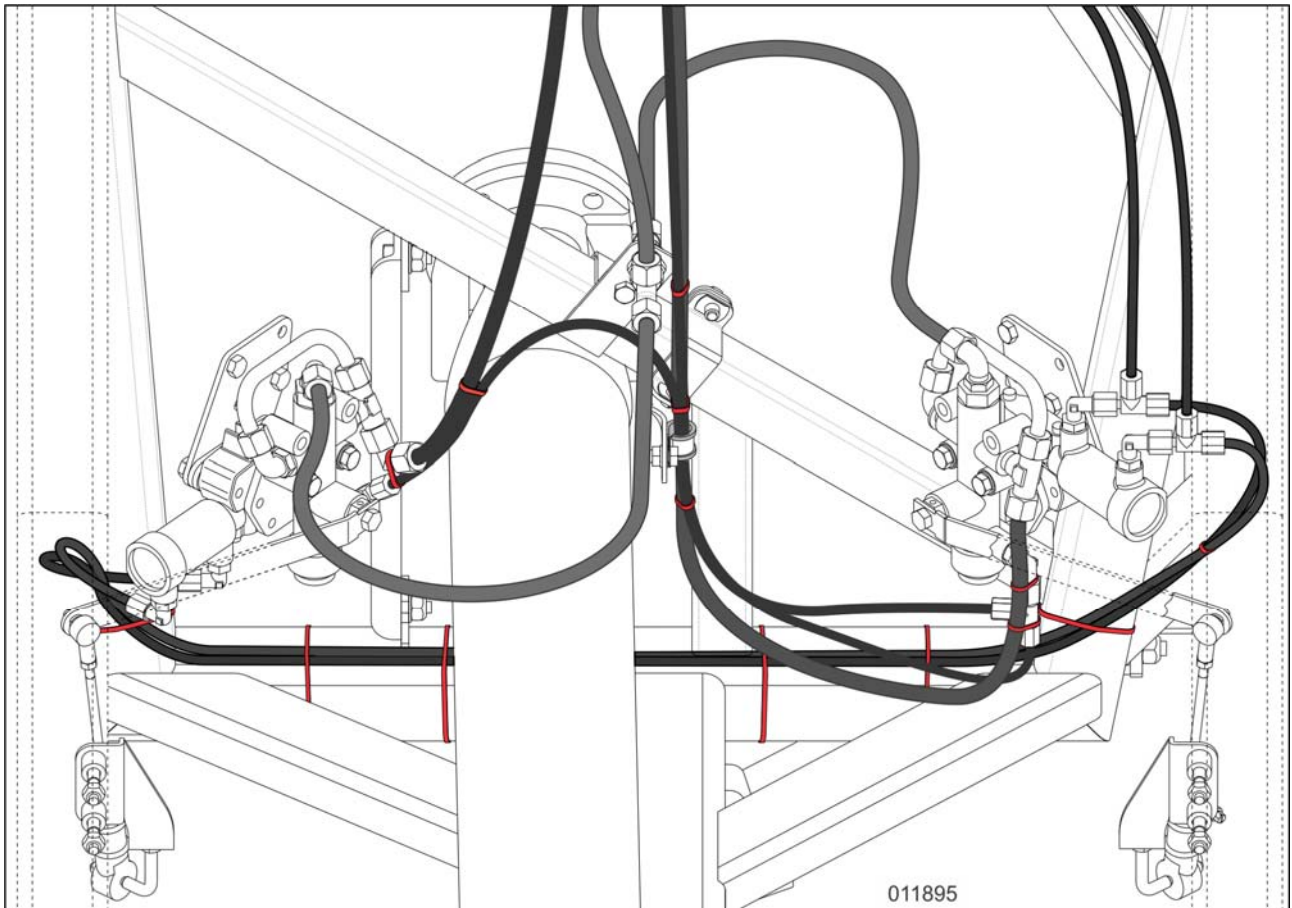


Figure 29 : Routing of air lines

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WARRANTY:

1. Terms and conditions:

Van Hool will accept warranty claims for this repair as follows:

Parts: parts will be supplied through regular channels, free of charge.

Labor allowance:

- 8 hours for labor will be awarded per 8-wheeler coach repaired.
- 10 hours for labor will be awarded per 10-wheeler coach repaired.

Campaign expiration date: Service Bulletin issue date + 1 year.

2. Claim references:

- Causal part: air cylinder 11110013
- Job code: G32300

Claim submission: Contact ABC Customer Care Warranty Department for guidance.

Monitoring and performance: The claim records pertaining to this Bulletin will be used to determine that the remedy has been executed in accordance with the manufacturer's instructions and to evaluate the status of this Field Change Program.