

MERITOR WABCO

Technical Bulletin

Park Brake Quick Release Valve (QRDC) Replacement Procedures

Hazard Alert Messages

Read and observe all Warning and Caution hazard alert messages in this publication. They provide information that can help prevent serious personal injury, damage to components, or both.

⚠ WARNING

To prevent serious eye injury, always wear safe eye protection when you perform vehicle maintenance or service.

Park the vehicle on a level surface. Block the wheels to prevent the vehicle from moving. Support the vehicle with safety stands. Do not work under a vehicle supported only by jacks. Jacks can slip and fall over. Serious personal injury and damage to components can result.

Release all air from the air systems before you remove any components. Pressurized air can cause serious personal injury.

How to Obtain Additional Maintenance, Service and Product Information

If you have any questions about the material covered in this publication, or for more information about the Meritor WABCO product line, please contact the Meritor OnTrac™ Customer Call Center at 866-OnTrac1 (668-7221) or visit our website: meritorwabco.com.

How to Obtain Parts

Call the Meritor OnTrac™ Customer Call Center at 866-OnTrac1 (668-7221).

Park Brake Valve Replacement

This technical bulletin provides instructions for identifying park brake valves for replacement and complete replacement procedures. It also includes instructions for destroying the removed valve.

Identify Park Brake Valves for Replacement

1. Wear safe eye protection. Park the vehicle on a level surface. Block the wheels to prevent the vehicle from moving.
2. Locate the park brake quick release valve on the vehicle. The location may differ based on the make and model of the vehicle. Typically, it is located on the cross member behind the fifth wheel. Figure 1.

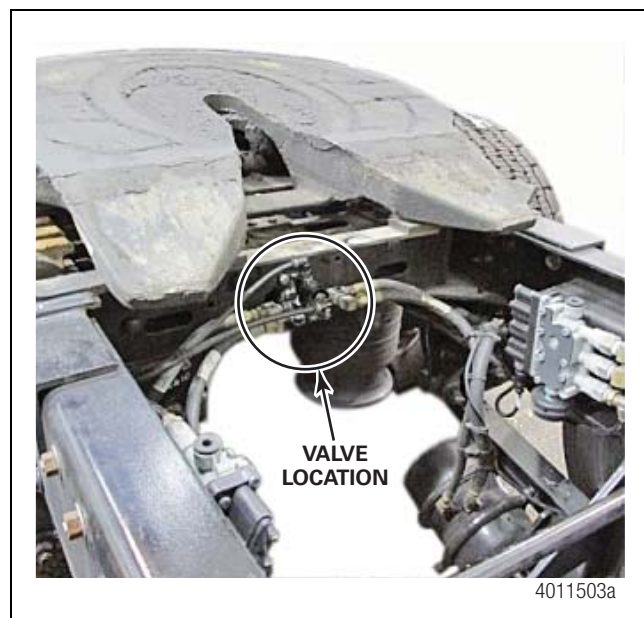


Figure 1

3. Locate the date code on the part. If the valve is painted, scratch the paint off the metal tag on the front of the valve to read the manufacture date code. Locate the date code as shown. The date code will be a 4 digit code. Figure 2, Figure 3 and Figure 4.

For example: 2014. The first two digits are the week number (20) and last two digits are the year number (14).

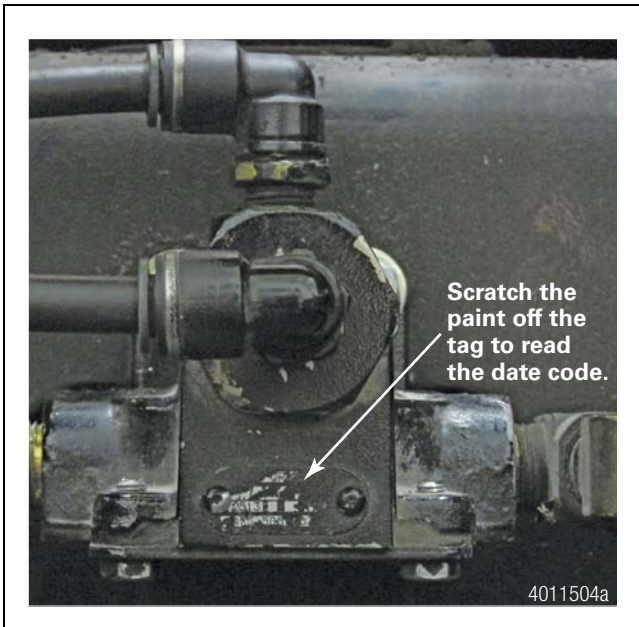


Figure 2



Figure 3

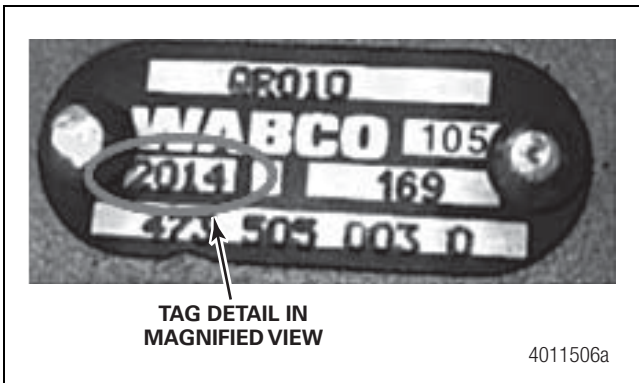


Figure 4

4. Determine if the park brake valve requires replacement based on the date code.

- **If date code on the valve is prior to 1714 (week 17 of year 2014):** Replace the valve.

For example, if date code is 1514, the valve must be replaced.

For example, if date code is 1714 or 1814, the valve does NOT need to be replaced.

Replace the Park Brake Valve

1. Drain all air pressure from the system.
2. Disconnect the air lines from the park brake quick release valve and mark each line so they can be reinstalled in the correct position. Figure 5.

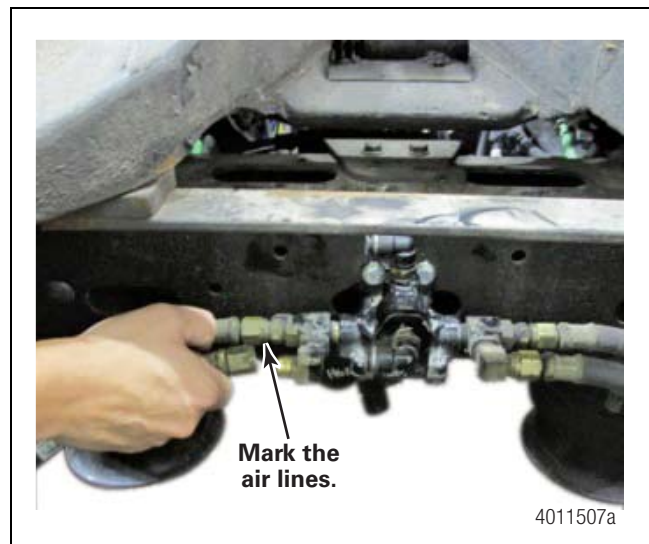


Figure 5

3. Remove the mounting bolts and remove the valve from the vehicle. Meritor WABCO recommends replacing the bolts with new bolts when replacing the valve.

CAUTION

Do not overtighten the fittings or damage to the valve or fittings can occur.

4. Apply a thin coating of PTFE thread sealant to the appropriate-size, D.O.T.-approved fittings and install the fittings into the new valve. Do NOT use Teflon-based tape. Tighten the fittings to approximately 1-1/2 to 2-1/2 turns past finger tight. Do not overtighten the fittings. Figure 6.

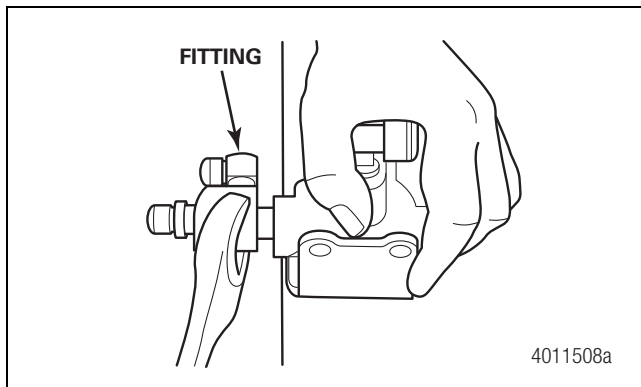


Figure 6


5. Place the new park brake quick release valve into position and install the 5/16" bolts. Tighten the bolts as follows. 
 - 5/16"-18 Grade 5 bolts – 17 ft-lb (23.05 N•m)
 - 5/16"-18 Grade 8 bolts – 24 ft-lb (32.53 N•m)
 - 5/16"-24 Grade 5 bolts – 19 ft-lb (25.76 N•m)
 - 5/16"-24 Grade 8 bolts – 27 ft-lb (36.6 N•m)
6. Reinstall the air lines in the correct positions as marked during removal. Figure 7.



Figure 7

7. Perform the following leak and operational check procedure to ensure correct installation.

Leak and Operational Check Procedure

1. Verify that all connections are tight.
2. Pressurize the air system and perform the following leak and operational checks.
3. Verify the vehicle wheels are blocked correctly. Place the transmission in Neutral. Release the park brake.

- A. Check the Supply and Delivery line connections for leaks. Apply a soap solution to the Supply, Delivery and Exhaust ports. Leakage of a one-inch bubble in three seconds is permissible at each location.
 - B. Check the actuators to ensure the spring brakes release.
4. Apply the park brake and check the actuators to ensure the spring brakes apply.
 5. With the park brake applied, press and hold the service brake pedal.
 - A. Check the Balance port connection for leaks. Apply a soap solution to the Balance port. Leakage of a one-inch bubble in three seconds is permissible.
 - B. Check to ensure anti-compounding air is exhausted from the quick release valve.

Removed Valve Destruction Procedure

The park brake (QRDC) valve removed from the vehicle must be destroyed as per the following procedure. Record the date code from the part tag and submit a photo(s) of the valve's tag showing the part number, suspect date code and evidence of destruction with each OEM claim.

1. Using a minimum 1/4" drill bit, drill through the center hole of the bottom plate of the valve as shown in Figure 8. The drill should bottom out and cut through the valve balance port on the opposite end. Figure 9.

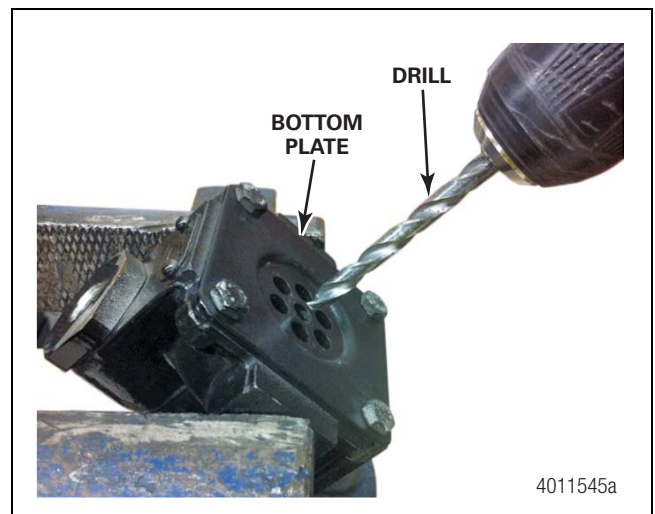


Figure 8

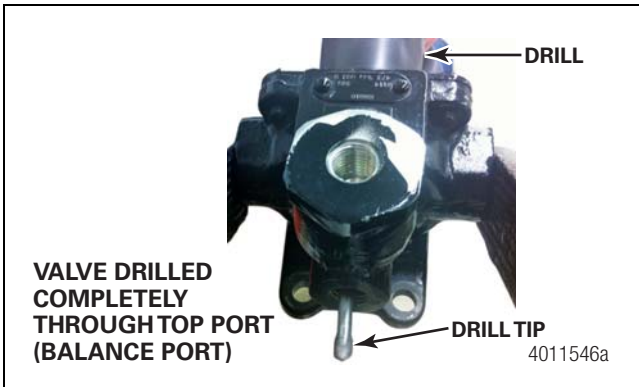


Figure 9

2. Take a photo of the destroyed valve and the date code for evidence of destruction.

Examples of evidence: Drilled hole as seen from top of the valve, Figure 10, OR drilled plastic seat inside the valve after the exhaust plate is removed, Figure 11.

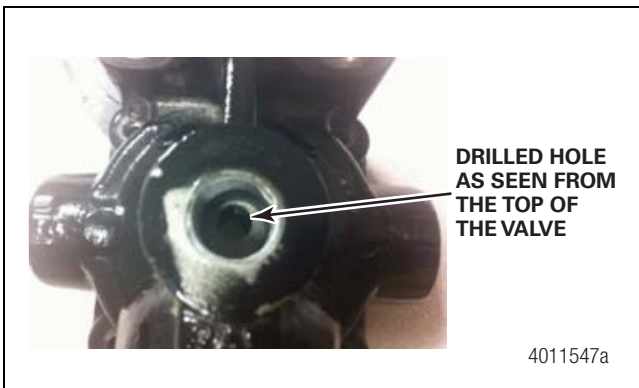


Figure 10

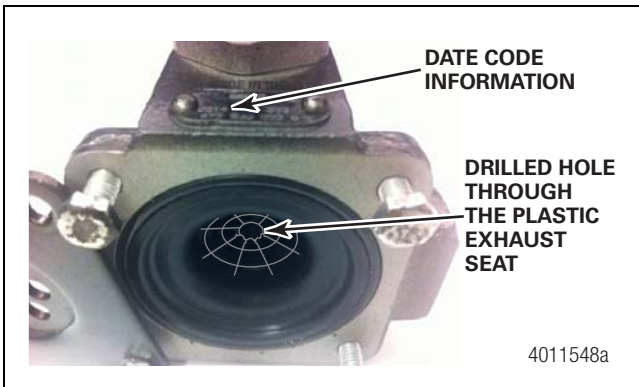


Figure 11

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