

**MERITOR WABCO**

# Installation Guide

## Enhanced Easy-Stop™ Trailer ABS 2S/2M Standard with PLC Installation Instructions

### 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.

### How to Obtain Additional Maintenance and Service Information

Refer to Maintenance Manual MM-0180, Enhanced Easy-Stop™ Trailer ABS with PLC, and Maintenance Manual 33, Easy-Stop™ Trailer ABS. To obtain these publications, call ArvinMeritor's Customer Service Center at 800-535-5560, or visit the Tech Library on our website at [meritorwabco.com](http://meritorwabco.com).

### Differences Between Easy-Stop™ and Enhanced Easy-Stop™

There are some changes to Enhanced Easy-Stop™ that you need to be aware of before you begin the installation.

- Enhanced Easy-Stop™ includes Power Line Communication (PLC) function.
- The ECU/dual modulator valve assembly must be mounted as one unit.
- The LED on top of the ECU has been eliminated.
- The blink code tool LED does not operate simultaneously with the ABS lamp on the trailer.

The valve portion of the ECU/dual modulator valve assembly contains two separate modulator valves that share common control and exhaust ports.

Each valve has its own delivery port (three). Therefore, the mounting orientation — whether the valve is facing the front or the rear of the trailer — determines sensor hookup.

If this assembly is mounted facing forward — toward the front of the trailer — sensor connection YE2 goes to the curbside and sensor connection YE1 goes to the roadside. If this assembly is mounted facing the rear, sensor connection YE2 goes to the roadside, and YE1 goes to the curbside. Figure 1.

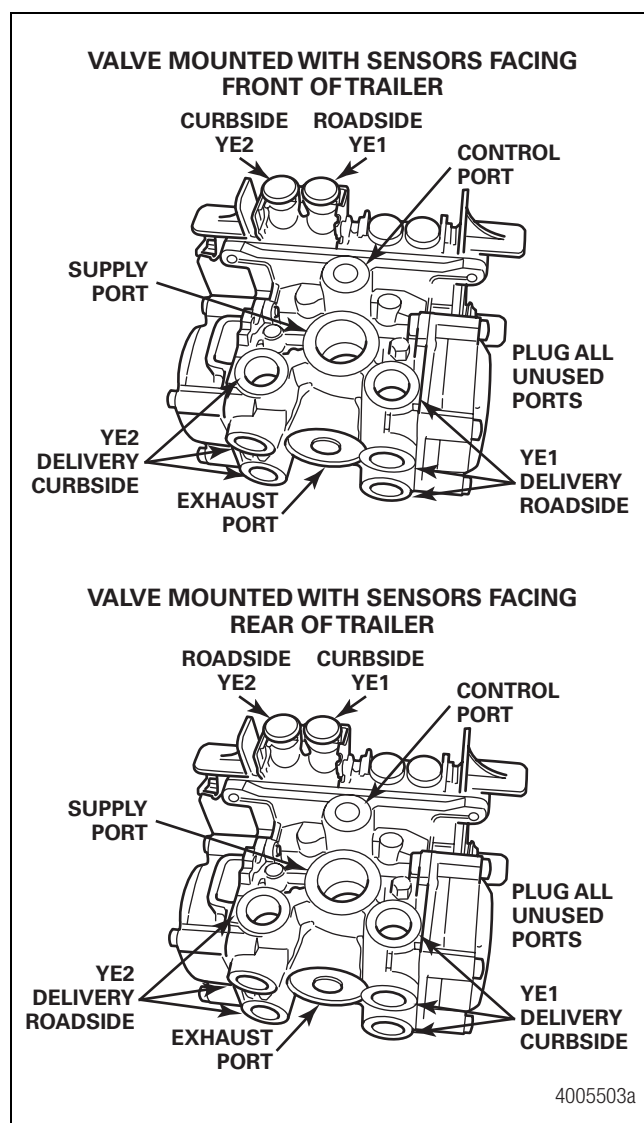


Figure 1

# Preparation

## ⚠ WARNING

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

The Anti-lock Braking System (ABS) is an electrical system. When you work on the ABS, take the same precautions that you must take with any electrical system to avoid serious personal injury. As with any electrical system, the danger of electrical shock or sparks exists that can ignite flammable substances. You must always disconnect the battery ground cable before working on the electrical system.

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.

1. Before beginning the installation procedure, inspect the ECU/dual modulator valve assembly for damage that may have occurred during shipping or storage.
  - Look for crushed or bent connectors.
  - Verify that the retainer clips have not been bent or otherwise damaged.
  - Do not install a damaged ECU/dual modulator valve assembly. Notify your supervisor, or contact Meritor WABCO if there is any apparent damage.

2. Have the following installation material available.

- \* ECU/dual modulator valve assembly
- \* Power cable or power/diagnostic cable
- \* Sensor extension cables (two pieces)
- \* Sensors (two) for non-ABS-prepped axles
- \* ABS Indicator Label (TP-95172)

5/8-inch O.D. nylon tubing for supply (frame mount)

Pipe plug (3/4-inch NPTF)

Schedule 80 hex pipe nipple (3/4-inch NPTF) for air tank mounts or two Grade 8 bolts (3/8-inch) and prevailing torque nuts for frame mounts

SAE-standard, DOT-approved thread sealant

To ensure correct lamp operation, use an incandescent-type DOT-approved lamp, or an LED with integral load resistor.

- \* Meritor WABCO components

End of line testing must be done after all installations. Meritor WABCO recommends using TOOLBOX™ Software to perform this testing. If you do not have TOOLBOX™ Software, this bulletin also includes instructions for testing without the software.

# Installation

## I. Install the ECU/dual modulator valve assembly.

The assembly may be mounted on the air tank or on the cross member of the vehicle.

### Tank-Mounted

Refer to Figure 2.

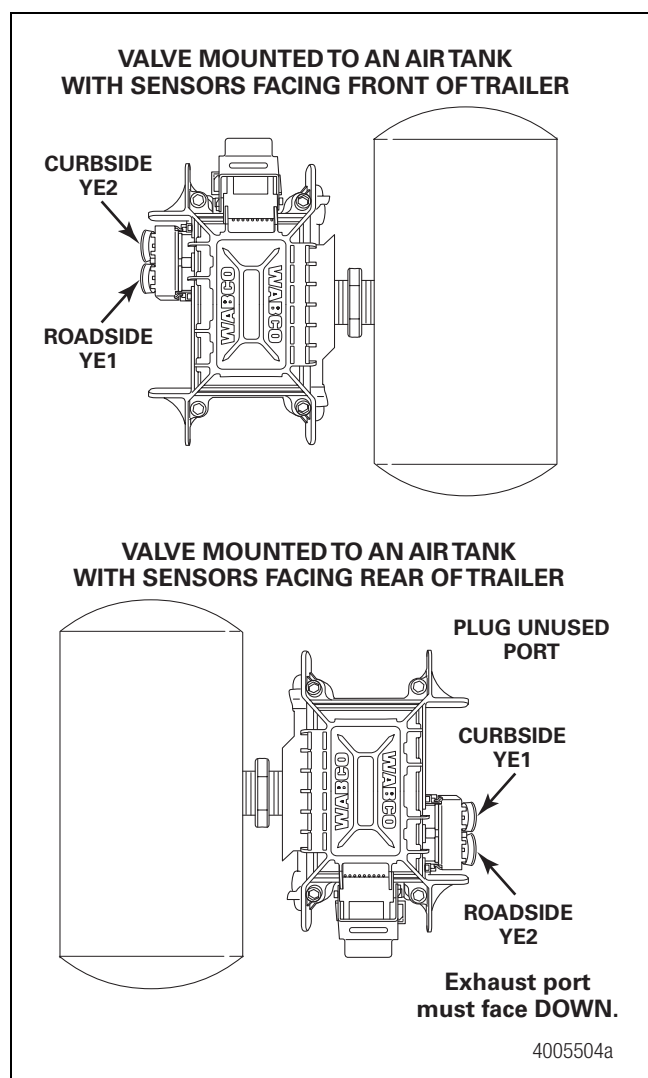


Figure 2

## ⚠ WARNING

You must use a Schedule 80 hex nipple (3/4-inch NPTF) to mount the ECU/dual modulator valve assembly securely to the air tank to avoid possible serious personal injury and damage to the component.

1. Use a 3/4-inch NPTF Schedule 80 hex nipple to attach the ECU/dual modulator valve assembly to a reinforced air tank. Do not overtighten.  
  
Meritor WABCO does not recommend the use of a vise when installing the hex nipple. Use of a vise may cause overclamping. Overclamping may damage the internal components of the ECU/dual modulator valve assembly.
2. Use a 3/4-inch NPTF pipe plug to plug the unused supply port. Apply SAE-standard, DOT-approved Teflon tape or paste-type thread sealant to all pipe threads beyond the first two threads. Pipes with pre-applied thread sealant may also be used.
3. Rotate and tighten the ECU/dual modulator valve assembly until the exhaust port faces DOWN and the connection is secure. Use a torque wrench or ratchet with an extension at the 3/4-inch pipe plug installed on the front supply port.

## Mounted to Cross Member of Vehicle (Mounting Bracket Not Supplied)

Refer to Figure 3.

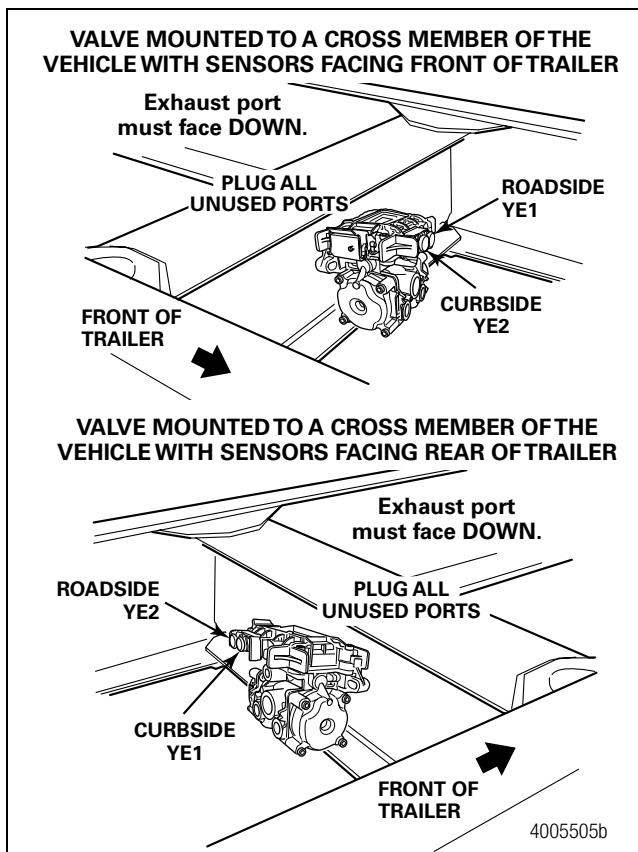


Figure 3

When mounting the ECU/dual modulator valve assembly to the trailer cross member, refer to SAE specification J447, Prevention of Corrosion of Motor Vehicle Body and Chassis Components. Follow all recommendations and procedures. Your supervisor should have a copy of this specification.

1. Install a 3/4-inch NPTF fitting in the supply port. Use a 3/4-inch NPTF pipe plug to plug the unused supply port (Port 1).  
  
Apply SAE-standard, DOT-approved Teflon tape or paste-type thread sealant to all pipe plugs beyond the first two threads. Pipes with pre-applied thread sealant may also be used.
2. Attach the assembly to the vehicle cross member midway between the side rails, close to the brake chambers the valve serves.
  - Drill two 3/8-inch mounting holes. The distance between the two holes (O.D.) must be 6.06-inches (154 mm) and mount directly to the cross member.
  - OR
  - Build a mounting bracket with two 3/8-inch mounting holes spaced 6.06-inches (154 mm) O.D. apart.
3. Use two 3/8-inch Grade 8 bolts with prevailing torque nuts to attach the assembly. Tighten the bolts to 18 lb-ft (24 N•m). 🔧

## II. Connect the air lines.

1. Connect the air supply line from the supply tank to ECU/dual modulator valve assembly supply Port 1. Plug the unused port.

Use 5/8-inch O.D. min. nylon tubing or heavy-walled Schedule 80 pipe nipple (3/4-inch NPTF) if the ECU/dual modulator valve assembly is mounted directly to the supply tank.

2. Connect the air delivery lines to the ECU/dual modulator valve assembly Port 2 (3/8-inch NPTF).
3. Connect the air delivery lines to the appropriate brake chambers (3/8-inch NPTF). Figure 4 and Figure 5.

The valve portion of this assembly contains two separate valves; one dedicated to roadside wheel ends, the other dedicated to curbside wheel ends. This is illustrated in Figure 1.

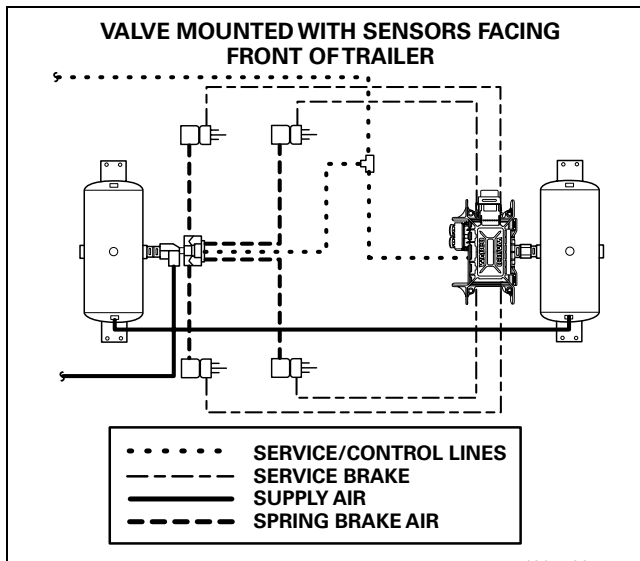


Figure 4

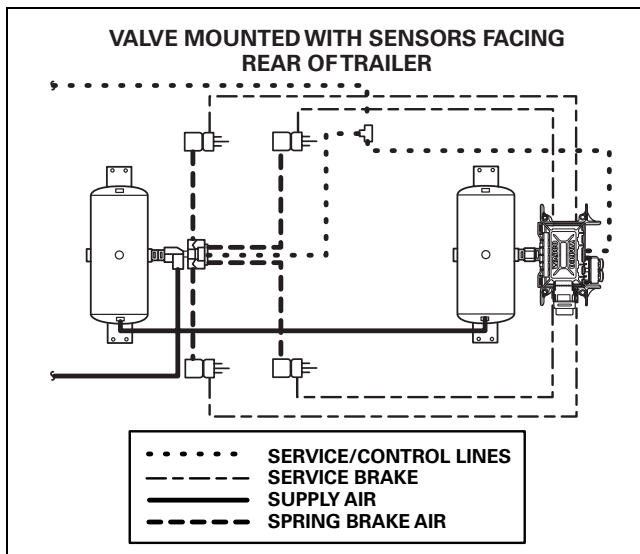


Figure 5

4. Connect the brake service (control) line to the ECU/dual modulator valve assembly Port 4 (1/4-inch NPTF).
5. Plug any unused delivery ports.

## III. Install the two sensor extension cables.

Meritor WABCO recommends placing sensors on the axle that will provide the most braking performance. The suspension manufacturer can provide this information.

1. Visually inspect the tooth wheel and sensor to ensure no damage occurred during shipping. Perform any necessary repairs.
2. Connect the sensors and cables on the prepped axles to the sensor extension cables. Figure 6.

Ensure that each connection is secure.

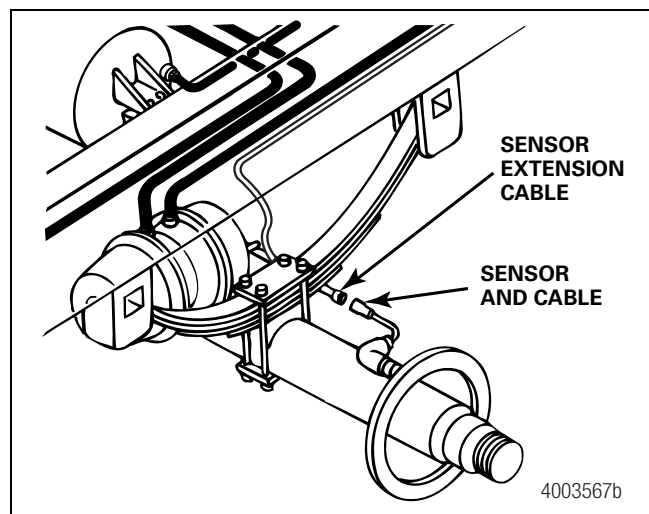


Figure 6

3. Route the sensor cable along the back side of the trailer axle to the ECU/dual modulator valve assembly. Route the cable with the brake hose. Figure 6.

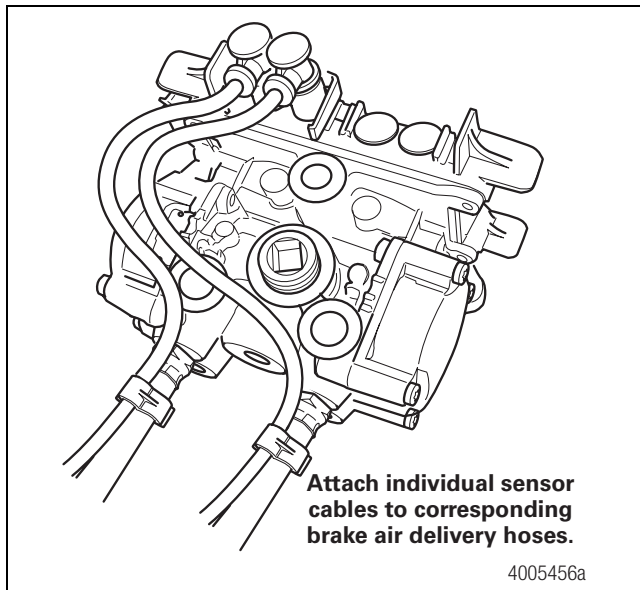
Do not overtighten the tie wraps on a cable. Overtightening can damage the cable. Do not tie wrap the molded sensor plug. The sensor extension cable must follow the brake hose to the ECU/dual modulator valve assembly to allow for axle jounce and rebound.

4. Secure the cables every eight inches (203 mm) with tie wraps or cable clips.
5. Push the sensor retainer clip on the ECU/dual modulator valve assembly UP.
6. Remove the protective caps from the YE2 and YE1 sensor connectors.

7. Plug the sensor extension cables into the ECU/dual modulator valve assembly. To secure the connection, push the sensor retainer clip DOWN. Retainer clips must fit in the groove of the sensor connectors to ensure correct connection.

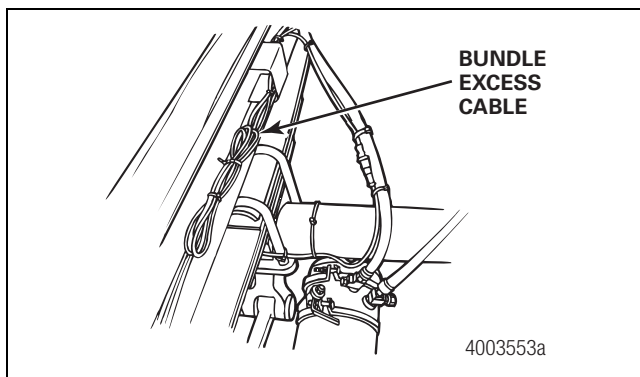
- Forward Mounted (Sensors facing front of trailer)
  - Connect curbside sensor at YE2.
  - Connect roadside sensor at YE1.
- Rear Mounted (Sensors facing rear of trailer)
  - Connect curbside sensor at YE1.
  - Connect roadside sensor at YE2.

8. Create a strain relief to protect the sensor extension connector terminals. Without this strain relief, normal trailer jounce and vibration will cause the terminals to spread and loosen. Use a tie wrap or clip to secure the cable to the air hose as close to the fitting as possible. Figure 7.



**Figure 7**

9. Bundle any excess cable in a loop (bow tie). Figure 8.



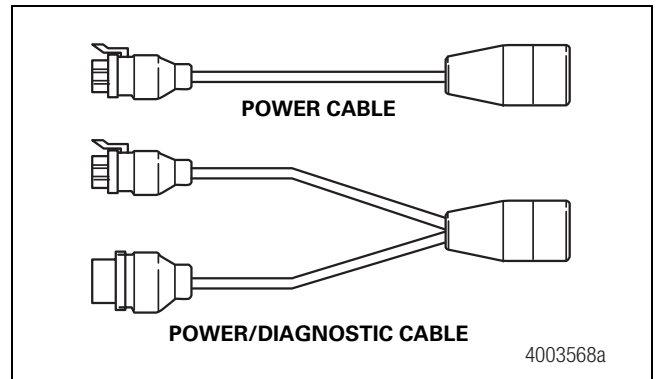
**Figure 8**

10. Secure excess cable in the sub-frame of the vehicle or along the air hoses as appropriate. Excess cable should not exceed two feet (0.61 meter).

Various cable lengths are available.

#### IV. Install the power and lamp or power and lamp/diagnostic cable.

1. Identify the type of cable to be installed. Figure 9.
  - ABS trailer industry-standard pigtail connector power cable
  - Blunt-cut power cable (not shown)



**Figure 9**

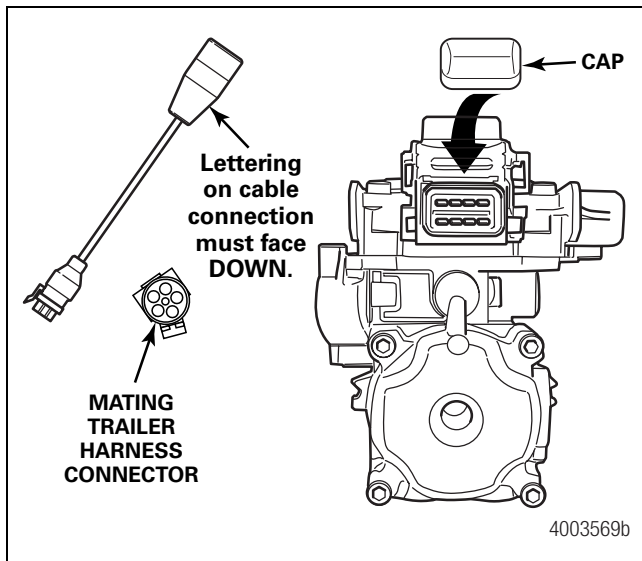
2. For industry-standard pigtail connector power cables, route the cable from the harness connector to the ECU/dual modulator valve assembly and secure it to prevent damage.

For a blunt-cut power cable, route the cable from the ECU/dual modulator valve assembly to a junction box which interfaces with the seven-way connector at the front of the trailer.

Leave enough slack in the cable to compensate for flexing of the trailer and sub-frame.

3. Bundle any excess cable in a loop (bow tie) and secure it in the sub-frame of the trailer body to prevent cable damage.

4. Push the hinged power/diagnostic connector retainer clip UP and remove the protective cap from the ECU/dual modulator valve assembly. Figure 10.



**Figure 10**

5. Plug the power 8-pin connector on the power or power/diagnostic cable into the ECU/dual modulator valve assembly. WABCO identification on the cable connection must face DOWN. Figure 10.
6. Pull the hinged power/diagnostic connector retainer clip on the ECU/dual modulator valve assembly DOWN to secure the connection.
7. If you are installing the power cable only, go to Step 9.

8. If you are installing the power/diagnostic "Y" cable:
  - A. Install the diagnostic cable bracket so that the diagnostic plug is accessible. The normal location is on the right front corner of the sub-frame, but will vary depending on the type of trailer.
  - B. Route the diagnostic cable from the ECU/dual modulator valve assembly to the diagnostic cable bracket.
  - C. Correctly secure the cable in the sub-frame to prevent cable damage.
 

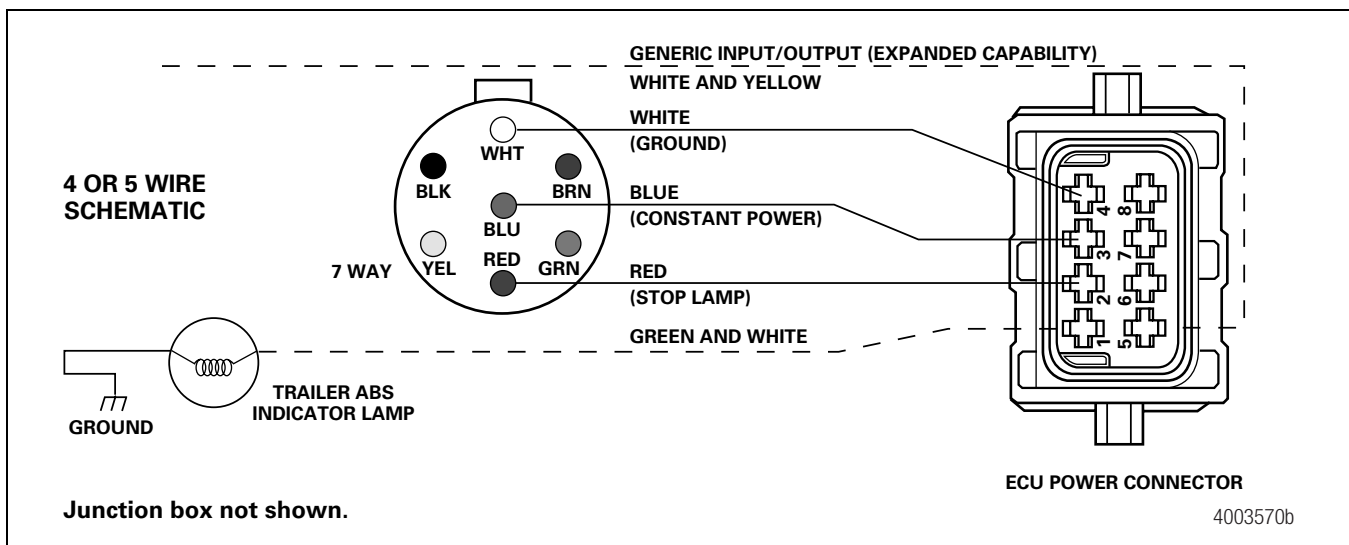
Leave enough slack in the cable to compensate for flexing of the trailer and sub-frame.
  - D. Bundle any excess cable in a loop (bow tie) and secure the cable in the sub-frame. Figure 8.
9. Install the ABS indicator lamp on the trailer. Refer to the vehicle specification sheet for the exact location of the indicator lamp. Use a DOT-approved lamp with ABS etched on the lens (available from major trailer parts suppliers).

If you are using the industry-standard connector cable and do not have access to the mating trailer harness, mask the open connector to protect it from paint or grease.

10. Connect the power. Use the industry-standard connector cable or a blunt-cut power cable.

**For industry-standard connector cables:** Attach the power cable to the harness on the trailer. Figure 10.

**For an optional blunt-cut power cable:** Wire the cable and ABS indicator lamp to the seven-way connector on the trailer according to the following diagram. Figure 11.

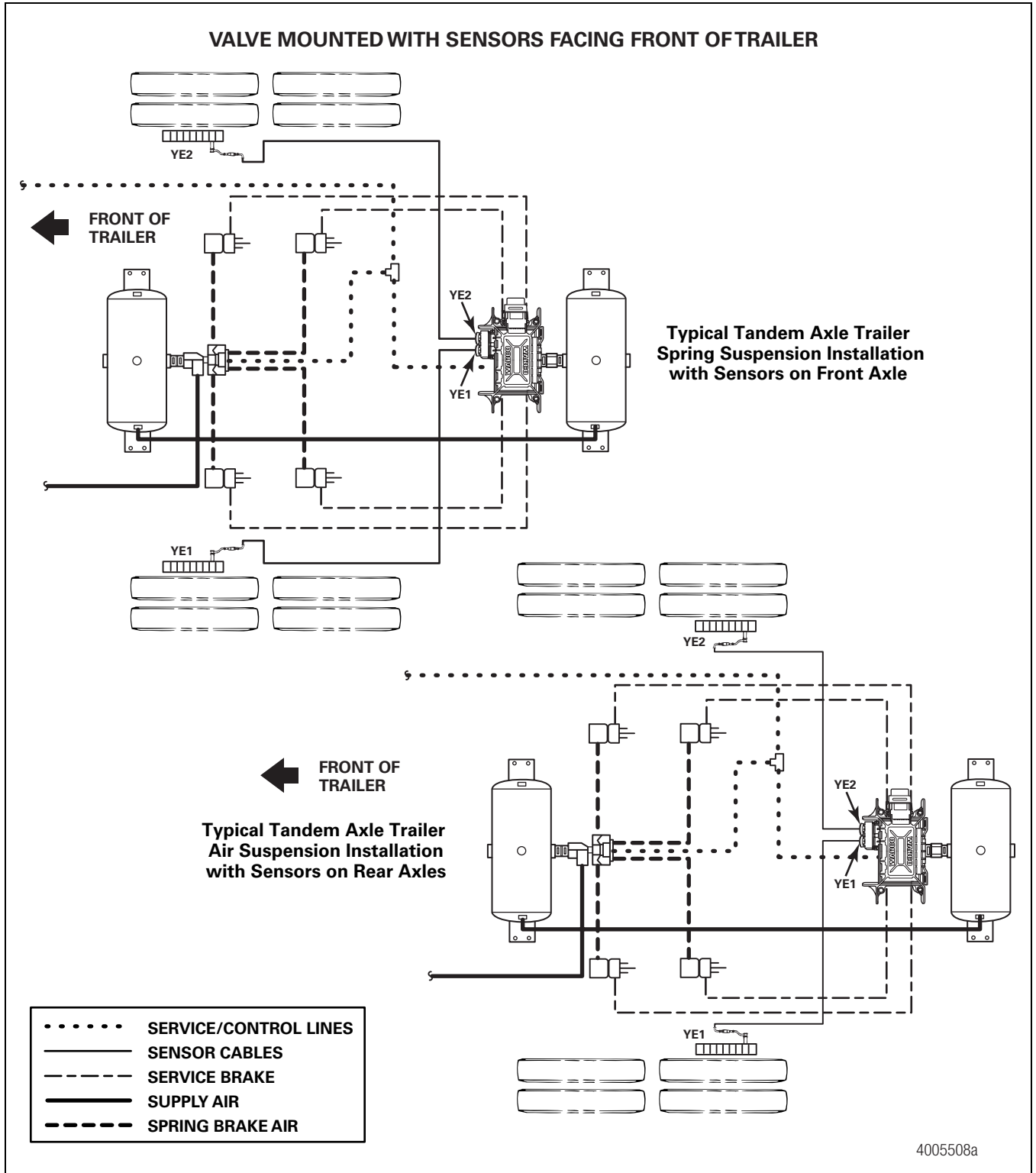


**Figure 11**

# Typical Easy-Stop™ Trailer ABS Installations

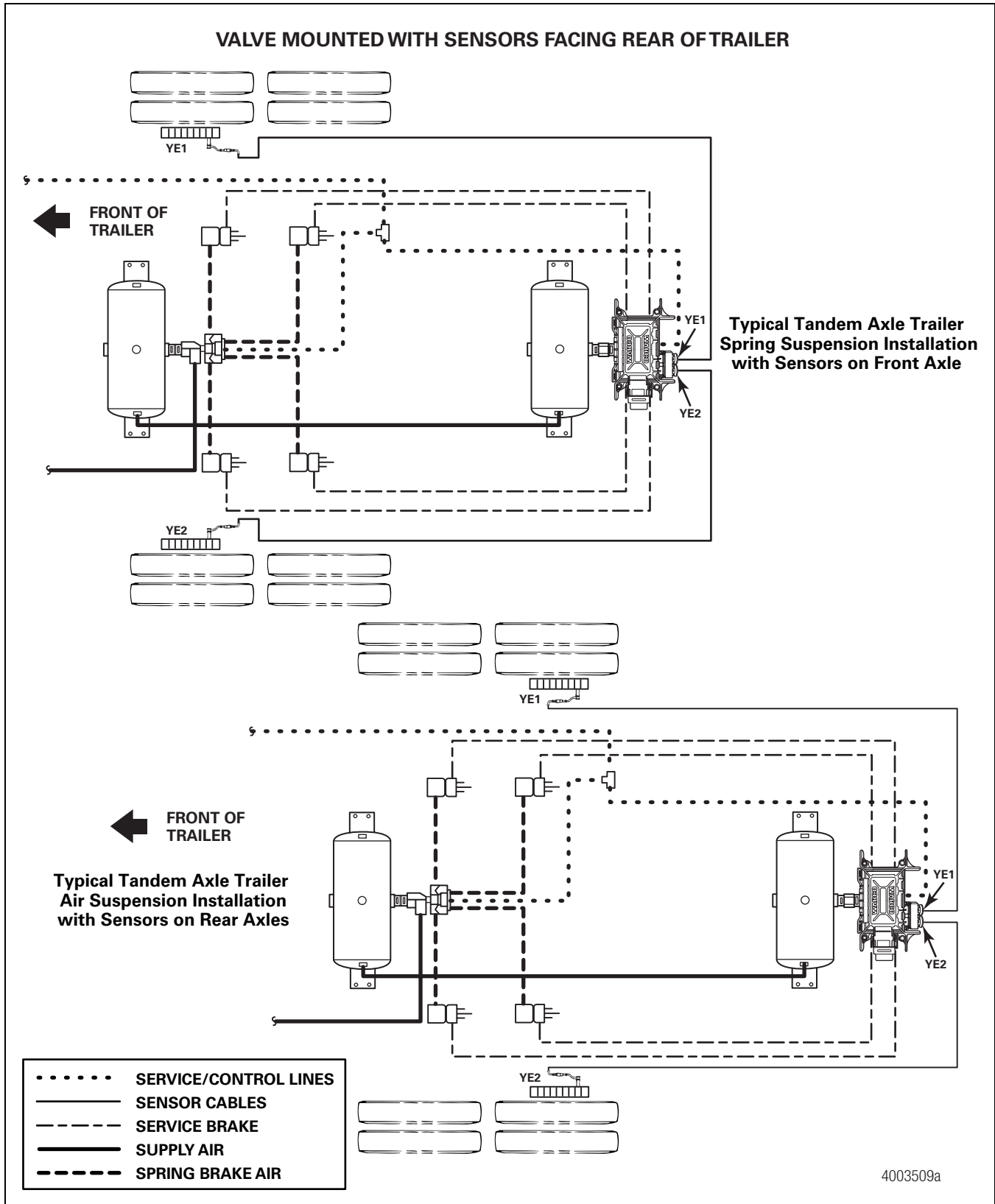
Refer to Figure 12 and Figure 13 for typical Easy-Stop™ trailer ABS installations.

Meritor WABCO recommends placing sensors on the axle that will provide the most braking performance. The suspension manufacturer can provide this information.



**Figure 12**

Meritor WABCO recommends placing sensors on the axle that will provide the most braking performance. The suspension manufacturer can provide this information.



**Figure 13**



## End of Line Testing

End of line testing is required on all Enhanced Easy-Stop™ installations. To run these tests, Meritor WABCO recommends you use TOOLBOX™ Software.

TOOLBOX™ Software and general test procedures are included in this bulletin. If you are using a Pro-Link, refer to the operating manual for test instructions.

### Enhanced Easy-Stop™ 2S/2M Standard Installation — End of Line Testing Procedure with TOOLBOX™ Software

If you are testing an installation that has a power only cable, temporarily install a Meritor WABCO combination power/diagnostics “Y” style cable.

1. Connect the diagnostic connector on the cable to the PC serial port/SAE diagnostic interface (J1587/J1708 to RS232 interface).

Refer to the Software Owner's Manual, TP-99102, for instructions for running TOOLBOX™ Software.

2. Display the **Trailer ABS Main Screen**.
3. Verify the power supply.
  - Apply 12 volts DC to the blue wire (constant). Check the screen for the correct voltage (9.4 to 14 volts). Constant power voltage is displayed in the **Primary** field. Figure 14.
  - Apply 12 volts DC to the red wire (stoplight power). Check the screen for the correct voltage (9.4 to 14 volts). Stoplight power voltage is displayed in the **Secondary** field. Figure 14.

The **Internal** field is not applicable to this test.

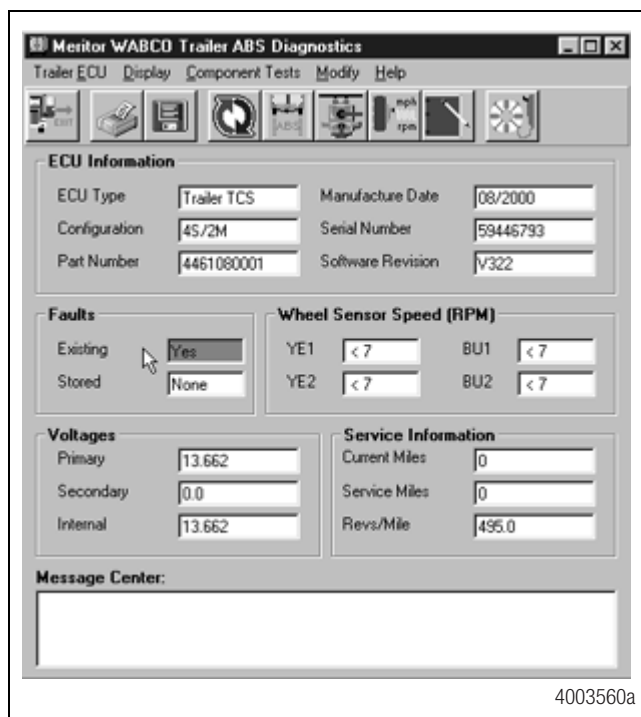


Figure 14

4. Check the **Faults** field on the Main Screen.

**NONE** = No faults present, proceed with end of line test.

**YES** = Faults present, double-click on “YES” to bring up the fault information screen. Figure 15.

Use the information in the **Repair Instructions** field to perform the necessary repairs.

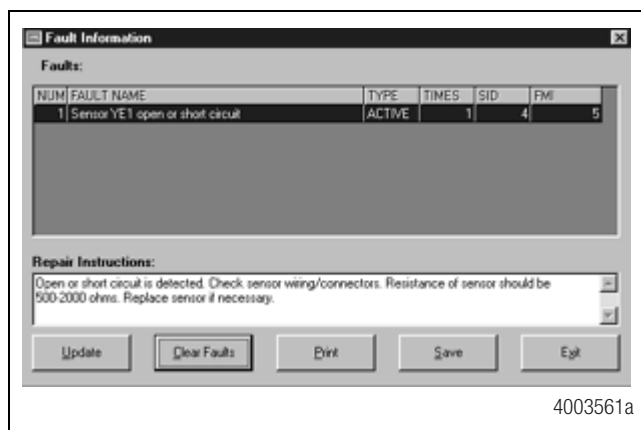


Figure 15

## End of Line Test with TOOLBOX™ Software

### Verify Correct Valve and Lamp Installation

To verify valve and lamp installations with TOOLBOX™ Software:

1. Apply 12 volts DC to the ABS.
2. Apply air to the emergency line to fill the air tanks and release the spring brakes.
3. Apply air to the control line.
4. At the **Trailer Main Screen**, click on **Component Test**, then select **Valves/Lamp** to display the **Valve Activation Screen**. The **Yellow** valve indicator will be highlighted. Figure 16.



Figure 16

5. Click on the **Activate** button.
6. Check for correct air line installation. To accomplish this, observe the slack adjusters.
  - If the ECU faces the **FRONT** of the trailer, the slack adjusters will move in and out as the **CURBSIDE** portion of the dual modulator valve cycles. If this does not happen, the air lines are not correctly connected. Perform the necessary repairs.
  - If the ECU faces the **REAR** of the trailer, the slack adjusters will move in and out as the **ROADSIDE** portion of the dual modulator valve cycles. If this does not happen, the air lines are not correctly connected. Perform the necessary repairs.

The Test Status box at the bottom of the menu will display the status of this test.

7. Repeat this test for the **Blue** valve.
  - A. Repeat Steps 1-3.
  - B. Select the **Blue** valve from the valve activation screen.
  - C. Click on the **Activate** button to verify correct valve installation (**Blue**).
  - D. Check for correct air line installation. To accomplish this, observe the slack adjusters.
    - If the ECU faces the **FRONT** of the trailer, the slack adjusters will move in and out as the **ROADSIDE** portion of the dual modulator valve cycles. If this does not happen, the air lines are not correctly connected. Perform the necessary repairs.
    - If the ECU faces the **REAR** of the trailer, the slack adjusters will move in and out as the **CURBSIDE** portion of the dual modulator valve cycles. If this does not happen, the air lines are not correctly connected. Perform the necessary repairs.
8. Click on the **Test** button to activate the ABS indicator lamp — this is the lamp that is mounted on the side of the trailer. The lamp will flash eight times, indicating lamp installation is OK. The **Test Status** box at the bottom of the menu will display the status of this test. Figure 16.
9. Click on **Close** to exit.

### Sensor Orientation Test

The sensor orientation test must be performed as part of the end of line testing procedure.

#### Sensor Orientation Test Screen

Before beginning this test, look at the ECU to see if the wheel end sensors face the front or rear of the trailer. TOOLBOX™ will ask for this information to start the test (Step 5). To perform the sensor orientation test:

1. Raise the sensed wheel ends off the ground.
2. Apply air to the emergency line to fill the air tanks and release the spring brakes so that the wheels can be rotated.
3. Apply 12 volts DC to the ABS.
4. At the **Trailer Main Menu**, click on **Component Test**, then select **Sensor Orientation Test** to display the **Sensor Orientation Test** screen. Figure 17.

When the **Sensor Orientation Test** screen first appears, the **Sensors Facing** field will display the default — **Front**. This will occur regardless of the actual sensor orientation of the installation being tested.

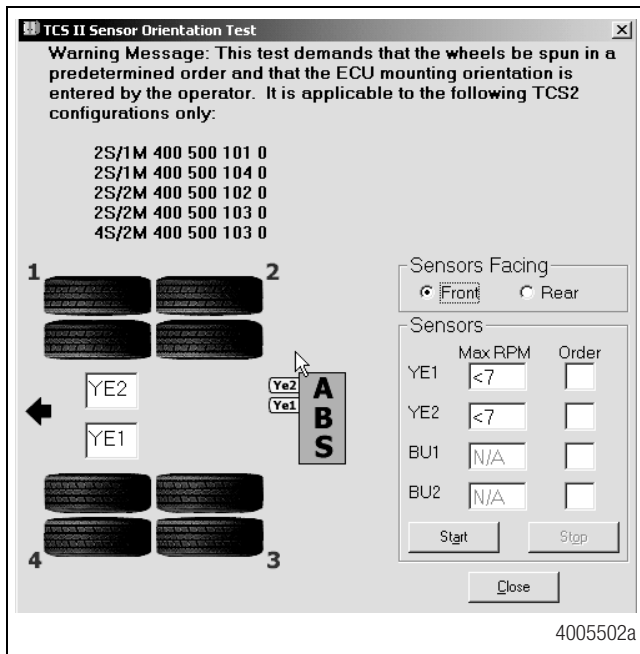


Figure 17

- Click on **Front** or **Rear** in the **Sensors Facing** field to select the mounting orientation of the ECU/dual modulator valve assembly.

Refer to Figure 17 and Figure 18 for illustrations of the ECU mounted with sensors facing forward and rear. The correct mounting orientation must be selected prior to starting the test.

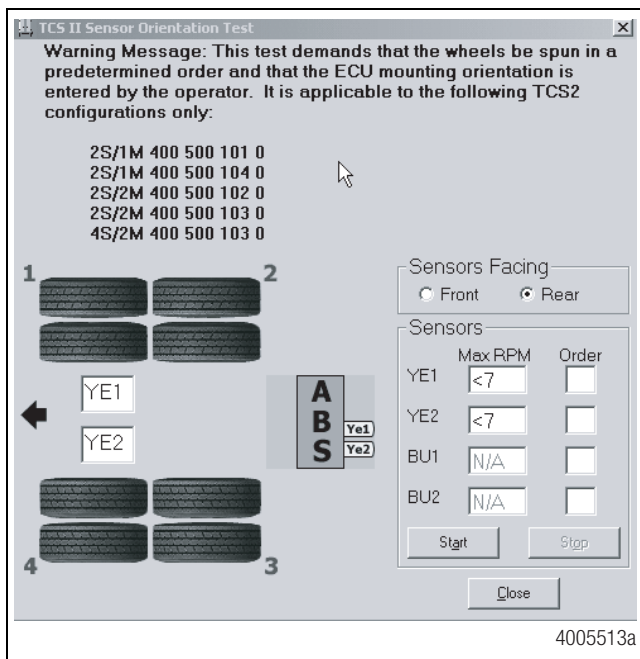


Figure 18

- Click on **Start** to begin the test. Figure 19.

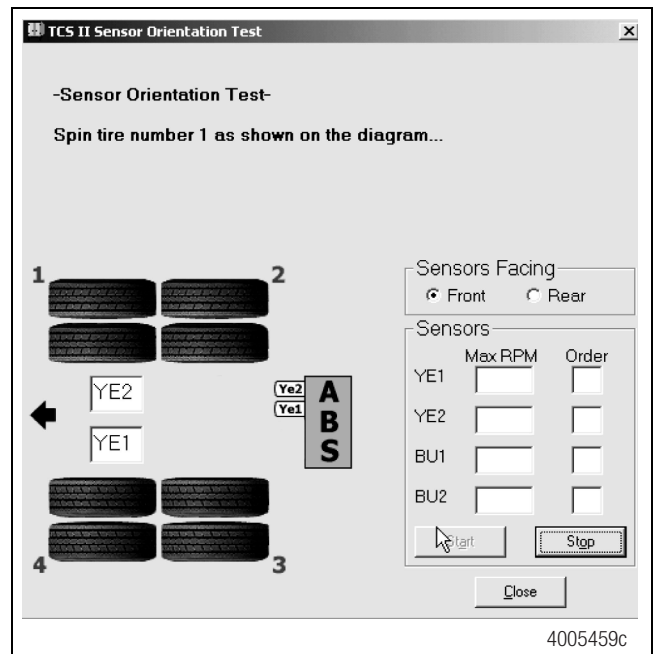


Figure 19

- Follow the screen prompts, starting with 1, to rotate each sensed wheel end at a rate of 1/2 revolution per second. This rate equals a wheel speed of approximately 4 mph (7 kph). As each sensed wheel is rotated, check the color of the sensor identification block on the screen for results. Sensor identification boxes are located in the bottom left portion of the **Sensor Orientation Test** screen. Figure 18.

**Green background:** Correct sensor location. Spin the next sensed wheel as indicated by the screen prompt.

**Red background:** Incorrect sensor location. If you get a red background, you must stop the test (click on **Stop**), make the necessary corrections and repeat Steps 3 through 6.

- To finish the Sensor Orientation Test, click on **Stop**, then on **Close**.
- Verify there is sensor output. If there is no sensor output, verify that a tone ring has been installed and that the sensor is pushed all the way in against the tone ring. Perform the necessary repairs and repeat the test. If the problem persists, contact Meritor WABCO (800-535-5560). Sensor output appears in the Sensors field located in the bottom right portion of the **Sensor Orientation Test** screen. Figure 17 and Figure 18.

# End of Line Test without TOOLBOX™ Software

## Inspect the Sensor and Air Line Installation.

### Sensor Installation

1. Look at the YE2 and YE1 sensor connectors on the ECU/dual modulator valve assembly. Ensure that the connectors are routed to the correct wheel end location, as follows:
  - If the ECU/dual modulator valve assembly is mounted with the sensors facing the front of the trailer:
    - Sensor YE2 must be routed to the curbside wheel end location.
    - Sensor YE1 must be routed to the roadside wheel end location.
  - If the ECU/dual modulator valve assembly is mounted with the sensors facing the rear of the trailer:
    - Sensor YE2 must be routed to the roadside wheel end location.
    - Sensor YE1 must be routed to the curbside wheel end location.
2. If sensors are not correctly installed, perform the necessary repairs.

### Air Line Installation

1. Ensure that all unused air ports are plugged and that the exhaust port is facing DOWN.
2. Look at the air line installation to verify that all air lines are correctly installed.
  - If the ECU/dual modulator valve assembly is mounted with the sensors facing the FRONT of the trailer, the air lines for the three delivery ports located under the YE2 sensor connector must be routed to CURBSIDE; the air lines for the three delivery ports on the opposite side of the valve must be routed to ROADSIDE. Figure 20.
  - If the ECU/dual modulator valve assembly is mounted with the sensors facing the REAR of the trailer, the air lines for the three delivery ports located under the YE2 sensor connector must be routed to ROADSIDE; the air lines for the three delivery ports on the opposite side of the valve must be routed to CURBSIDE. Figure 21.

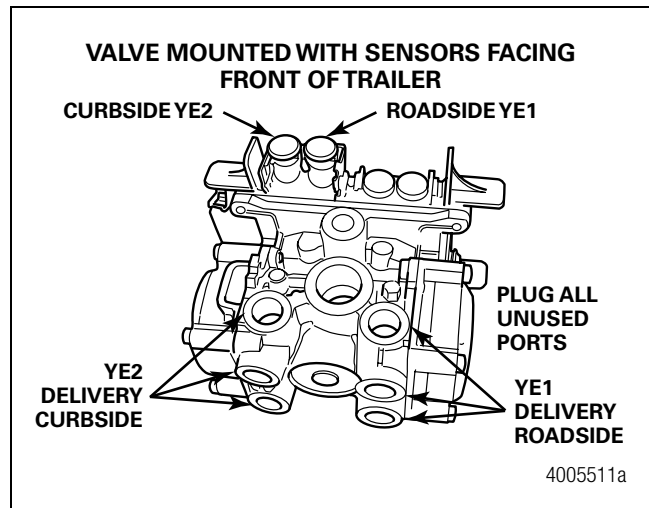


Figure 20

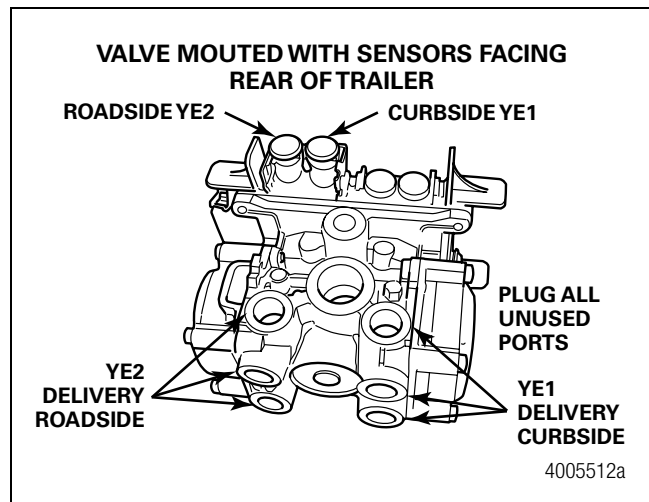


Figure 21

3. If the air lines are not correctly routed, perform the necessary repairs.

## Perform End of Line Test

1. Apply 12 volts DC power to the ABS.
2. Listen for the ECU/dual modulator valve assembly to click four times.
3. If the indicator lamp **comes on** for three seconds and then **goes out**, this indicates a correct installation. The end of line test is complete.

If the ABS indicator lamp **comes on** and **stays on**, check the sensor installation.

- A. Remove power from the ABS and raise the sensed wheels so they may be rotated.
- B. Apply emergency air to fill the air tanks and release the spring brakes so that the wheels may be rotated.
- C. Repeat Steps 1 and 2.
- D. Rotate each sensed wheel — one at a time — at a rate of 1/2 revolution per second. This rate equals a wheel speed of approximately 4 mph (7 kph).

The ABS indicator lamp should now go out and stay out indicating a correct installation. The end of line test is complete.

4. If the ABS lamp does not go out, there is a sensor gap problem or hardware fault. Adjust the sensor and, if necessary, perform a fault code check.

## Sensor Gap Adjustment

Push the sensor into its holder until it contacts the tooth wheel. At installation, there must be no gap between the sensor and the tooth wheel.

Measure the AC voltage output. The value should be 0.2 volt AC when the wheel is rotated at a rate of 1/2 revolution per second.

Perform any necessary repairs.

Repeat the end of line test. If the trailer lamp still does not go out, a system fault exists. Perform a fault code check.

## Fault Code Check

Use constant power activation to perform the following fault code check.

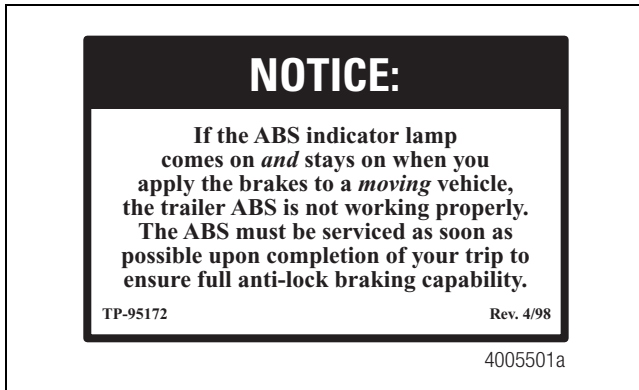
1. Apply constant power to the ECU/dual modulator valve assembly for more than one, but less than five seconds.
2. Remove the power.
3. Reapply the power.

4. Check the trailer ABS indicator lamp on the side of the trailer. The fault code will be displayed three times.
5. Find the fault on the chart and perform the necessary repairs.
6. After performing the necessary repairs, repeat the end of line test.

Blink Code Chart		
Blink Code	Problem Area	Action
4	Sensor YE1	Determine sensor location. Check sensor installation. Perform necessary repairs.
6	Sensor YE2	Determine sensor location. Check sensor installation. Perform necessary repairs.
9	Internal modulator failure, inlet valve #2	Verify correct installation. If code continues, contact Meritor WABCO for assistance.
10	Internal modulator failure, inlet valve #1	Verify correct installation. If code continues, contact Meritor WABCO for assistance.
11	Internal modulator failure, outlet valve	Verify correct installation. If code continues, contact Meritor WABCO for assistance.
14	Power Supply	Verify correct electrical installation. Check power supply. Perform necessary repairs.
15	ECU Failure	Verify correct installation. If code continues, contact Meritor WABCO for assistance.
16	SAE J1708 Failure	Internal failure, contact Meritor WABCO.
17	SAE J2497 Failure	Internal failure, contact Meritor WABCO.
18	Generic I/O Failure	Verify correct electrical installation. Check power supply. Perform necessary repairs.

## Trailer Identification

After ensuring the Enhanced Easy-Stop™ trailer ABS has been correctly installed, attach the ABS indicator label included with the ECU/dual modulator valve assembly to the trailer. Generally, this will be applied near the ABS trailer indicator lamp. Figure 22. Refer to the vehicle specification sheet for the correct location.



**Figure 22**

If this label is not included with the assembly, let your supervisor know. Labels are available from Meritor WABCO. Ask for part number TP-95172.

For additional assistance, contact Meritor WABCO at 800-535-5560.

# Appendix

## Installing Sensors on Non-ABS-Prepped Axles

Sensor locations vary due to suspension type. Meritor WABCO recommends placing the sensor on the axle that will provide the most braking performance. Contact your suspension manufacturer for further information.

1. Apply a mineral oil-based grease that contains molydisulfide to the sensor spring clip, the body of the sensor and the bore of the sensor holder. The grease must be anti-corrosive and contain adhesive properties that will continuously endure temperatures from  $-40^{\circ}$  to  $300^{\circ}\text{F}$  ( $-40^{\circ}$  to  $150^{\circ}\text{C}$ ).
2. Push the spring clip into the sensor holder from the inboard side, until the spring clip tabs are against the sensor holder. Push the sensor into the spring clip as far as possible.

Use Meritor WABCO spring clips to ensure a correct fit.

3. Push the spring clip into the sensor holder from the inboard side until the spring clip tabs are against the sensor holder. Push the sensor into the spring clip as far as possible. Figure A-1.

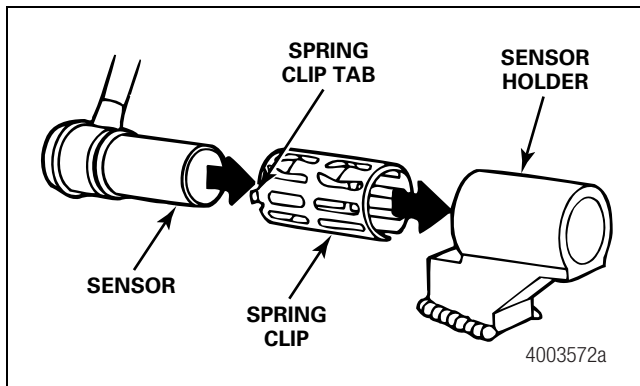


Figure A-1

4. Route the sensor cable toward the brake chamber, over the brake spider or through the pre-stamped hole dedicated to ABS sensors. Route to the back side of the axle. Secure the cable to the axle between the brake spider and the suspension brackets. Continue to route the sensor cable behind the spring seats. Secure the cable to the axle one inch from the molded sensor plug. Figure A-2.

**NOTE:** Brake hose clips with a provision for the sensor extension cable are recommended as opposed to tie wraps. Meritor WABCO does not supply this part.

Do not overtighten tie wraps on a cable. Overtightening can damage the cable. Do not tie wrap the molded sensor plug. The sensor extension cable must follow the brake hose to the ECU/valve assembly to allow for axle jounce and rebound.

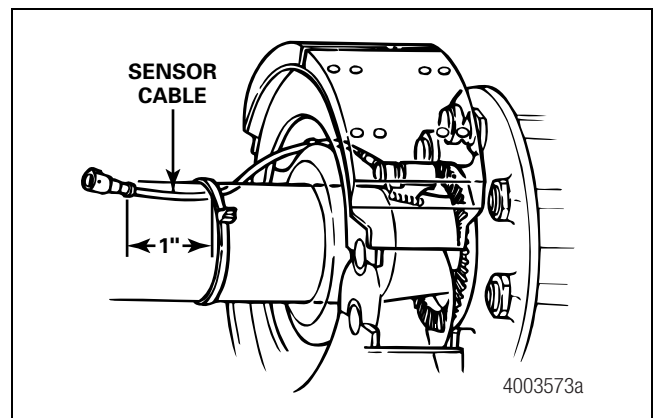


Figure A-2

5. Install the wheel hub carefully so that the tooth wheel pushes against the sensor as the wheel bearings are adjusted. There should be no gap between the sensor and the tooth wheel.
6. Test the sensor output voltage. Use a volt/ohm meter to check the output voltage of the sensors while rotating the wheel at approximately 1/2 revolution per second. Minimum output must be 0.2 volt AC. If minimum output is less than 0.2 volt AC, push the sensor toward the tooth wheel. Recheck the sensor output.

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**MERITOR WABCO**

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**Meritor WABCO Vehicle Control Systems**  
2135 West Maple Road  
Troy, MI 48084-7121 USA  
800-535-5560  
meritorwabco.com



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