

Installation Instructions

Bendix[®] TABS-6[™] Advanced MC (TRSP) Module Kit Complete Installation for Trailers

BENDIX[®] TABS-6[™] ADVANCED MC MODULE INTRODUCTION

The Bendix[®] TABS-6[™] Advanced MC module is an integrated multi-channel (2S/2M, or 4S/2M) trailer service brake module controller for air-braked heavy-duty semi-trailers that features Bendix[®] Antilock Brake System (ABS) and Bendix[®] Trailer Roll Stability Program (TRSP[®]).

Installed on semi-trailers, the module acts as a relay valve during normal braking, but during ABS events it will intervene to help maintain vehicle stability and minimize stopping distance by preventing wheel lock-up. The Bendix TRSP system monitors the trailer's motion and reduces the risk of roll overs by automatically applying the brakes when a risk of roll over is detected.

GENERAL KIT INFORMATION

These instructions are intended for the installation of Bendix ABS/TRSP systems on trailers that have been pre-approved for this purpose and presumes that the appropriate number and types of kits required to complete the installation are on hand when the installation begins.

GENERAL SAFETY GUIDELINES WARNING! PLEASE READ AND FOLLOW THESE INSTRUCTIONS TO AVOID PERSONAL INJURY OR DEATH:

When working on or around a vehicle, the following guidelines should be observed AT ALL TIMES:

- Park the vehicle on a level surface, apply the parking brakes and always block the wheels. Always wear personal protection equipment.
- ▲ Stop the engine and remove the ignition key when working under or around the vehicle. When working in the engine compartment, the engine should be shut off and the ignition key should be removed. Where circumstances require that the engine be in operation, EXTREME CAUTION should be used to prevent personal injury resulting from contact with moving, rotating, leaking, heated or electrically-charged components.
- ▲ Do not attempt to install, remove, disassemble or assemble a component until you have read, and thoroughly understand, the recommended procedures. Use only the proper tools and observe all precautions pertaining to use of those tools.
- ▲ If the work is being performed on the vehicle's air brake system, or any auxiliary pressurized air systems, make certain to drain the air pressure from all reservoirs before beginning ANY work on the vehicle. If the vehicle is equipped with a Bendix[®] AD-IS[®] air dryer system, a Bendix[®] DRM[™] dryer reservoir module, or a Bendix[®] AD-9si[™] air dryer, be sure to drain the purge reservoir.
- ▲ Following the vehicle manufacturer's recommended procedures, deactivate the electrical system in a manner that safely removes all electrical power from the vehicle.

- ▲ Never exceed manufacturer's recommended pressures.
- Never connect or disconnect a hose or line containing pressure; it may whip. Never remove a component or plug unless you are certain all system pressure has been depleted.
- ▲ Use only genuine Bendix[®] brand replacement parts, components and kits. Replacement hardware, tubing, hose, fittings, etc. must be of equivalent size, type and strength as original equipment and be designed specifically for such applications and systems.
- ▲ Components with stripped threads or damaged parts should be replaced rather than repaired. Do not attempt repairs requiring machining or welding unless specifically stated and approved by the vehicle and component manufacturer.
- ▲ Prior to returning the vehicle to service, make certain all components and systems are restored to their proper operating condition.
- ▲ For vehicles with Automatic Traction Control (ATC), the ATC function must be disabled (ATC indicator lamp should be ON) prior to performing any vehicle maintenance where one or more wheels on a drive axle are lifted off the ground and moving.
- ▲ The power MUST be temporarily disconnected from the radar sensor whenever any tests USING A DYNAMOMETER are conducted on a Bendix[®] Wingman[®] Advanced[™]-equipped vehicle.
- ▲ You should consult the vehicle manufacturer's operating and service manuals, and any related literature, in conjunction with the Guidelines above.



FIGURE 1 - BENDIX® TABS-6™ ADVANCED MULTI-CHANNEL MODULE (TABS-6 ADVANCED MC)

Bendix trailer ABS kits are only to be applied and installed according to the recommended practices found in this document and the Bendix[®] TABS-6[™] Advanced MC module product specification, Y047447. (See the contact information on the back page to request a copy of this document.)

The complete installation of this kit may require electric welding and machining of trailer axles and hubs. Only personnel experienced and trained in these processes should proceed.

Note: Currently this kit is only available for air ride suspensions.

If modifications to the axle or wheel hubs are necessary, the manufacturer's warranty may be affected.

The installation should be made in the order presented to avoid unnecessary steps and possible rework.

The following additional product literature may be required to provide further details of the installation:

- Y047447 Bendix TABS-6 Advanced MC Module -Specifications, Application, Installation and Diagnostics SD-13-47672 Service Data Sheet for Bendix TABS-6 Advanced MC Trailer ABS Modules
- SD-13-4860 Service Data Sheet for Bendix[®] WS-24[™] Speed Sensors
- Service Data Sheet for Bendix[®] SR-5[™] Trailer SD-03-4516 Valves

For more information on this or other Bendix product support literature, contact Bendix or talk to your local authorized Bendix distributor.

KIT SELECTION FOR BENDIX[®] TABS-6[™] ADVANCED MC MODULES

For information on other vehicle configurations or the availability of additional ABS kits, contact Bendix or talk to your local authorized Bendix dr.

Trailer Application	2S/2M	4S/	/2M
	Side	Side	Axle
	(1)		
	(1)	or (1)	
	(1)	or (1)	
		(1)	or (1)

CHART 1 - BENDIX® TABS-6™ ADVANCED **MC MODULE SYSTEM APPLICATIONS**

Use this chart to identify the vehicle and Bendix TABS-6 Advanced MC Module configurations available for installation.

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The chart shows system solutions for each vehicle type. (Other options may be available.)

For additional system options, or if the correct vehicle type is not identified in the chart, contact Bendix or talk to your local authorized Bendix distributor.

SYSTEM COMPONENTS

COMPONENTS

Installation of the Bendix[®] TABS-6[™] Advanced MC Module typically utilizes the following components:

- Bendix[®] WS-24[™] wheel speed sensors. Each sensor is installed with a Bendix Sensor Clamping Sleeve.
- Trailer-mounted ABS indicator lamp. See page 13.
- Pigtail wiring harness(es) as needed. See page 12.

BENDIX WS-24 WHEEL SPEED SENSORS

Wheel speed data is provided to the Bendix TABS-6 Advanced MC Module from the Bendix WS-24 wheel speed sensors (*see Figure 2*). Vehicles have an exciter ring (or "tone ring") as part of the wheel assembly, and as the wheel turns, the teeth of the exciter ring pass the wheel speed sensor, generating an AC signal. The Bendix TABS-6 Advanced MC Module receives the AC signal, which varies in voltage and frequency as the wheel speed changes. (The default setting expects a 100-tooth tone ring to be used.)

See Figures 18 &19 for electrical system schematics showing wheel speed sensor connector pin locations.

A proper sensor installation is critical to correct ABS operation.

Typically, the Bendix WS-24 sensor is installed in mounting blocks that are welded to the axle housing, with WS-24 wheel speed sensors that are protected by a stainless steel sheath. The sensors are designed for use with beryllium copper clamping sleeves (sometimes referred to as a "retainer bushing", "friction sleeve", or "clip") (See Figure 2). The clamping sleeve provides a friction fit between the mounting block bore and the Bendix WS-24 wheel speed sensor.



FIGURE 2 - BENDIX[®] WS-24[™] WHEEL SPEED SENSORS

Choosing The Axle To Place Wheel Speed Sensors		
Trailer Suspension	Wheel Speed Sensor Placement	
2 Axle Spring	Forward Axle	
2 Axle Air	Rear Axle	
3 Axle Spring	Forward and Rear Axles	
3 Axle Air	Center and Rear Axles	

CHART 2 - WHEEL	SPEED	SENSOR	PLACEMENT

CHOOSING THE AXLE TO PLACE WHEEL SPEED SENSORS

If any axle is to be controlled by the Bendix TABS-6 Advanced MC Module but not sensed, the wheel speed sensors are typically located on the axle that tends to unload — or lighten — during braking. The standard convention for sensor placement in this case is shown in Chart 2 above. However, due to variations in trailer suspension designs, this convention is not correct for all applications.

For more information on wheel speed sensor location, contact Bendix or refer to the vehicle or suspension manufacturer.



FIGURE 3 - TONE RING HEATED PRESS FIT TO HUB



FIGURE 4 - SENSOR BLOCK ALIGNMENT ON AXLE



FIGURE 5 - MACHINING HUB FOR TONE RING INSTALLATION

WHEEL SPEED SENSOR INSTALLATION

Wheel Speed Sensor Clips

Proper sensor installation begins by fully inserting the spring clip into the block, with the retaining tabs toward the inside of the vehicle. See Figure 9. The sensor spring clip is designed to firmly hold the wheel speed sensor in place while also allowing the sensor to adjust in position as the wheel and hub rotate. Wheel bearing play — and heavily loaded axles — will cause sensors to self-adjust as the wheels rotate.

Wheel Speed Sensor Adjustment

Speed sensors are properly adjusted by gently pushing (not striking) the sensor into the clip until it makes contact with the face of the tone ring. *See Figure 4.* The wheel speed sensor will automatically adjust as the wheel rotates. If rotating the wheel causes a gap of 0.020 in. or greater, check for excessive wheel bearing play or tone ring run-out. Proper wheel speed sensor installation is critical to proper ABS operation.

Verifying Proper Sensor Output

Once the hub is reinstalled, rotate the wheel and verify a minimum of 0.25 VAC sensor output @ 0.5 RPS across the wheel speed sensor pins. A properly positioned sensor can output more than 2.0 VAC @ 1 RPS. If the sensor output is not acceptable, recheck sensor installation.

Sensor Wire Securing

Wheel speed sensor wiring coming out of the wheel ends must be routed away from moving brake components and secured to the axle to prevent wiring damage.

Figure 11 shows the proper routing of the sensor wires. The stress loop allows the sensor to properly adjust, but not to be pulled out of adjustment. Use 25" tie wraps (extra wide) to secure the sensor leads along the axle as shown.

Use plastic hose clips to secure the speed sensor leads to the rubber brake hoses. The sensor wires should be secured along the service brake hoses leading to the Bendix[®] TABS-6[™] Advanced MC Module every 12 inches. This step may have to be done after the brake hoses are secured to the Bendix TABS-6 Advanced MC Module.

Bendix does not recommend using standard tie-wraps to secure sensor wiring directly to rubber air lines. This can cause premature wiring failure from excessive expansion when air pressure is applied.

It is recommended to tag the wheel position on each sensor connector to ensure proper connection to the Bendix TABS-6 Advanced MC Module.

All wiring used in the wheel speed sensor circuits must be a twisted pair-style. At least one twist per inch is required.

TONE RING AND SENSOR BLOCK SELECTION

One tone ring and sensor block is required for each wheel speed sensor that is to be installed. ABS-ready hubs (equipped with tone rings) may be available for purchase from the hub manufacturer.

Due to ongoing manufacturing changes to axle and hub designs, refer to your axle manufacturer for the correct part numbers.

If the axles and hubs are ABS-ready, tone rings and sensor blocks are not needed.

TONE RING INSTALLATION

The actions in this section are not required if ABS-ready hubs are already in use on the trailer or if new ABS-ready hubs have been purchased for the ABS installation.

NOTE: When altering the hubs in any way, the owner assumes all warranty responsibility for the hub. All manufacturer warranties may be void. Check with the hub supplier.

- 1. Remove the wheels and hub intended for installation of tone rings.
- 2. Non-ABS hubs can be retrofitted with tone rings by machining the hubs to the dimensions shown in *Figure 5.* The tone ring is selected according to the hub manufacturer and part number. The hub is then machined to mate with the inside mounting surface of the tone ring. A minimum interference fit of 0.004 inches must be achieved for the tone ring to stay securely mounted over the life of the vehicle.

If a tone ring is undercut during machining, it must be discarded and replaced.

- 3. Uniformly heat the tone ring to approximately 350° F. Install the ring on the machined diameter of the hub making certain it fits squarely on the machined hub diameter and that the backside of the ring (side opposite the teeth) is flush with the machined shoulder. See *Figure 3.* Cold pressing of the tone ring onto the hub is not recommended.
- 4. After the ring and hub have cooled, verify that the ring is tight on the hub and does not slip. As a final check, install the hub/ring on the axle and properly adjust the wheel bearings. Check the axial run out while turning the hub, note that the axial run out does not exceed +0.008 to -0.008 inches.



FIGURE 6 - TONE RING INSIDE DIAMETER

SENSOR BLOCK INSTALLATION

Correct installation of the speed sensor blocks is extremely important for proper operation of the ABS system. Only use electric welding equipment to install the sensor blocks.

NOTE: The spring clip and sensor must not be inserted in the sensor mounting block during the welding operation. When welding to the axle, the owner assumes all warranty responsibility for the axle assembly. All manufacturer warranties may be void. Check with the axle supplier.

- 1. Properly support the trailer axle using jack stands. Allow proper clearance for the sensor block and welding equipment.
- 2. Clean all oil or grease from the axle spindle.
- 3. For best results, the sensor mounting blocks need to be positioned at approximately the 9 or 3 o'clock position on the axle spindle. These positions will see the least effect from axle flexing during loading. *See Figure 8.*



FIGURE 7 - SENSOR BLOCK GAP TO TONE RING FACE







FIGURE 9 - SENSOR CLIP AND SENSOR INSTALLATION

- 4. Install hub with tone ring and properly adjust the wheel bearings.
- 5. Position and mark the sensor block on the axle. Before welding, verify a gap of 0.125" to 0.187" between the sensor mounting block face and the tone ring teeth. See Figure 7.



FIGURE 10 - SENSOR LEAD AND CONNECTOR



FIGURE 11 - SENSOR LEAD ROUTING AND SECURING

- 6. Weld the sensor block to the spindle axle along both sides of the block.
- 7. Allow the sensor block to cool before installing the clip and sensor. It is recommended to apply a moderate amount of anti-seize compound to the sensor clip to ensure proper sensor adjustment during vehicle operation.

Midland[®]/Wagner[®] RT Series & Sealco[®] Ratio Relay Spring Brake Control Valves



Midland/Wagner RT A88802, A88812



Midland/Wagner RT-2 A98730, A99370



Midland/Wagner RT-4 KN26000, KN26010



Sealco Ratio Relay Valve 110170, 110171, 110191, 110310, 110315

Berg[®] SERV & Midland FFV (Full Function Valve) Service Relay and Spring Brake Control Valve



Midland/Berg 12350



Midland FFV or FF2 Full Function Valve 28600

FIGURE 12 - NON-COMPATIBLE SPRING BRAKE VALVES

SPRING BRAKE VALVE (BENDIX[®] SR-5[™]) SELECTION

For trailers using spring brakes for the emergency brake function, a spring brake control valve is required. The Bendix[®] TABS-6[™] Advanced MC Module will generally function with spring brake valves from other manufacturers; however, if the vehicle is equipped with one of the valves pictured in *Figure 12*, a change over to the Bendix[®] SR-5[™] trailer spring brake control valve is recommended. Refer to Chart 3 for the correct Bendix SR-5 valve part number according to the port size on the supply reservoir.

Bendix [®] SR-5 [™] Trailer Spring Brake Valve Part Number OEM Service		Reservoir Port Size
108945	65439	1/2" Supply Port
102831	65437	3/4" Supply Port

CHART 3 - BENDIX[®] SR-5[™] VALVE PART NUMBERS



FIGURE 13 - BENDIX SR-5 TRAILER SPRING BRAKE VALVE

INSTALLATION

It is the responsibility of the trailer manufacturer to inspect all trailer ABS components prior to installation on the vehicle for any external damage, such as cracked valve ports, electronic housings, etc. Any components found to be damaged must not be installed on the vehicle and must be replaced.

During installation, the pneumatic ports and electrical connections of the Bendix[®] TABS-6[™] Advanced MC module — and all associated components (tubing, cables, external devices, etc.) – should be protected against contamination (e.g. paint, pipe-thread tape, sand blasting particles, etc.).

It is recommended that the trailer OEM verifies that the trailer's electrical circuit design meets the Technology & Maintenance Council (TMC) Recommended Practice RP 137A & RP 141 for the trailer ABS power supply requirements. The following must be considered in the design of the trailer electrical circuit:

- Use of LED-type brake lamp. This significantly lowers the current consumption of the brake lamp power circuit.
- Use of heavy-gage wiring in the trailer harnesses for the ABS circuit. This significantly lowers the voltage drop between the nose of the trailer (7-way SAE J560 connector) and the five-way ABS connector.

It is the responsibility of the trailer OEM to ensure that the trailer's wiring and electrical circuits are protected by proper fusing. It is recommended to include this proper fusing to protect the vehicle, and vehicle's components, from electrical shorts.

All connectors must be securely connected to prevent environmental contamination or damage.

All ABS electrical connectors should be greased for added protection against corrosion.

If a connector is not joined to its mate or otherwise left exposed during the painting of the trailer, damage could be done to the connector. Tape, or other means of protection, must be used to ensure the connector does not become contaminated.

The connector covers for the Bendix TABS-6 Advanced MC's electrical connectors need to be in position and locked in place any time the vehicle is in use. Once the lock is in the locked position it can be secured to prevent tampering, by using the holes provided in the cover.

If at any time the trailer is to be welded using an electric welding tool, observe the following:

- Remove the "Power" and "In-Out" connectors from the module; and
- Remove the wheel speed sensor connectors, ensure that when reassembling, the sensors are reconnected to the correct positions.

The Bendix TABS-6 Advanced MC module should not be stored or transported with the exhaust ports pointing upwards.

BENDIX TABS-6 ADVANCED MC MODULE INSTALLATION REQUIREMENTS



The Installation Test must be performed after a Bendix TABS-6 Advanced MC module has been installed.

Follow the steps shown in the Bendix[®] ACom[®] Diagnostic Software to ensure that the Bendix TABS-6 Advanced MC module, wheel speed sensors, and all associated plumbing has been correctly installed. For a unit direct from our plant, the ABS indicator lamp will remain in an extended bulb check until the installation test has been successfully performed.

Bendix TABS-6 Advanced MC Module Mounting



FIGURE 14 - INSTALLATION ON TRAILER (CENTER LINE)

The Bendix TABS-6 Advanced MC module should be mounted on the cross-member of the trailer with the following considerations:

- Within ± 40" (1 m) of the center of the axle(s) as shown in *Figure 14*, for proper balanced brake applications.
- With a minimum clearance of 2" (50 mm) around the sides of the modules to provide sufficient clearance for the connector cover removal & installation.
- With the exhaust port facing downward and unobstructed with significant free space below (> 1 inch).
- With the supply ports facing towards the front the trailer:
 - The ECU is programmed with the default orientation of 0° (with the supply port facing the driving direction). If the module needs to be mounted with the supply ports facing rearward, away from the driving direction, the ECU must be configured for 180° orientation using the Bendix ACom Diagnostic Software. It is possible that a part number preconfigured for 180° exists.
- In a location such that the module is not subjected to direct wheel spray.
- In a location such that the module is not subjected to temperatures less than -40°F or greater than +185°F (-40°C to +85°C).

In addition, for proper lateral acceleration sensing, the Bendix TABS-6[®] Advanced[™] MC module should be mounted with the following considerations:

Within $\pm 2^{\circ}$ (± 5 cm) from the lateral center of the trailer as shown in *Figure 14*.

•

- If the module needs to be mounted greater than the 2" from centerline, the ECU must be configured for module offset using the Bendix[®] ACom[®] Diagnostic Software.
- Yaw angle shall be ± 10° as measured from the trailer's lateral centerline, as shown in *Figure 14*.



FIGURE 15 - INSTALLATION ON TRAILER (LONGITUDINAL)

• Pitch angle shall be \pm 10° as measured from a flat horizontal plane, as shown in *Figure 15*.

 Roll angle shall be within ± 5° as measured from a flat horizontal plane, as shown in *Figure 16*.





MOUNTING CONFIGURATIONS

Frame (Chassis) Mount

The Bendix TABS-6 Advanced MC module provides three (3) M10 studs; length of $30 \pm 2 \text{ mm} (1.18 \pm 0.08")$ for frame mounting directly to the trailer frame rail or cross-member. *Figure 17* provides the required bolt-hole pattern for mounting the Bendix TABS-6 Advanced MC module on the cross-member. It is recommended to use minimum Class 8 steel M10x1.5 nuts with lock washers, with a torque value of 29.5 \pm 3.7 lbf•ft (40 \pm 5 N•m). *See Figure 17*.



FIGURE 17 - BENDIX[®] TABS-6[™] ADVANCED MC MODULE FRAME (BRACKET) MOUNTING HOLE PATTERN - DIMENSIONS ARE FOR REFERENCE ONLY. DO NOT USE THIS AS A TEMPLATE.

BENDIX[®] SR-5[™] SPRING BRAKE VALVE INSTALLATION

The actions in this section are not required if the vehicle is already equipped with an approved spring brake control valve.

The Bendix[®] SR-5[™] valve is designed to be tank mounted. Rotate the entire assembly into the service tank port until secure and upright. A wrench may be used on the nipple fitting to drive it into the tank port. Over-torquing of the nipple fitting could cause damage to the valve body. Plumb the Bendix SR-5 valve according to the Figures on pages 17 through 23. Wait until all valves are installed before connecting any air hoses.

AIR HOSE CONNECTIONS

Connect all air hoses and fittings to the Bendix[®] TABS-6[™] Advanced MC and/or other valving. **Do not use Teflon tape!** Make certain that no excess thread sealing material enters any valve opening. Bendix recommends using brass fittings. It is important to torque fittings to the recommended torques. Ports that need to be connected are at least two (2) of the four (4) delivery ports (identified as P21, P22), the control port (identified as P4) and the air bag suspension port (identified as P42). It will be necessary to connect P42 to the air bag suspension circuit.

Leakage and Operational Tests must be performed before returning the vehicle to service.

Troubleshooting: Electrical Schematics



FIGURE 19 - BENDIX TABS-6 ADVANCED MC MODULE ELECTRICAL SCHEMATIC - 4S/2M



FIGURE 20 - EXAMPLES OF PIGTAIL WIRE HARNESSES

INDICATOR LAMP INSTALLATION

Install the ABS indicator lamp on the vehicle, making sure a good ground is provided. The letters "ABS" must be embossed on the lamp lens or on a label next to the lamp.



FIGURE 21 - ABS INDICATOR LAMP

Trailer (Post March 1, 1998)

Per FMVSS 121, the ABS indicator lamp must be mounted on the left side of the trailer — as viewed from the rear — no closer than 150 mm (5.9 inches), and no further than 600 mm (23.6 inches) from the red rear side marker lamp.

BASIC WIRING INSTALLATION GUIDELINES

PIGTAIL WIRING HARNESSES

Several pigtail wire harnesses are available to connect the Bendix[®] TABS-6[™] Advanced MC Module with ABS and other trailer system components. Pigtail harnesses are weather sealed at the connector interface and are clearly labeled for proper installation. Because of the over-molded design of the Bendix TABS-6 Advanced MC Module wiring harnesses, Bendix recommends that the complete harness be replaced if damage or corrosion occurs.

The following connector options may be present:

Auxiliary, and diagnostic, or just diagnostic. See Figure 20.

The 12-pin connector plugs directly into the ECU. The X1 power harness plugs into the ECU and the 5-pin power harness plugs into the standard power harness for the trailer.

The four-pin connector may be used for a Bendix[®] Trailer Information Module (if present) or it also can be used to connect to J1939 diagnostics for use with Bendix[®] ACom[®] Diagnostic Software (instead of using PLC to connect).

Plug one end of the wheel speed sensor harness extension directly into the ECU and the other into the wheel speed sensor itself. Bundle any excess harness wiring as shown in Figure 22.

Function Mode	Value
Operating Range	8.0 to 32.0 VDC
ECU Active	170 mA @ 12 VDC
ABS Active (1 Modulator)	3.8 A @ 12 VDC





FIGURE 22 - BUNDLING EXTRA WIRE LENGTH



FIGURE 23 - BENDIX TABS-6 ADVANCED MC MODULE POWER HARNESS

Circuit	7-Pin Trailer Conn.	5-Pin ABS Conn.	7-Pin ECU Conn.
Ignition Power PLC (Blue Wire)	7	В	1
Brake Light Power (Red Wire)	4	А	2
Ground (White Wire)	1	E	4
Indicator Lamp (White/Green Wire)	N/A	D	5

CHART 6 - POWER AND GROUND

LEAKAGE AND OPERATIONAL TESTS

- 1. Before performing leakage tests, block the wheels.
- 2. Fully charge the air brake system and verify proper brake adjustment.
- 3. Make several trailer brake applications and check for prompt application and release at each wheel.
- 4. Check the modulator valve body and all air line fittings for leakage by spraying each area with a soap solution:

- Check the ABS solenoid body with the trailer service brakes fully applied. If leakage is excessive, replace the entire Bendix[®] TABS-6[™] Advanced MC Module modulator valve.

- Check the relay exhaust port with the trailer service brakes released. A single 1 in. bubble within three (3) seconds is permitted.

- Check the relay exhaust port with the trailer service brakes fully applied. A single 1 in. bubble within three (3) seconds is permitted.

If excessive leakage is detected at the relay exhaust port, perform the following test before replacing the Bendix TABS-6 Advanced MC Module modulator valve:

Apply the trailer spring brakes. Recheck for leakage around the relay exhaust port. If the exhaust port stops leaking, this indicates that there is a leak between the emergency and service sides of the spring brake chamber. However, if the relay exhaust port continues to leak, replace the entire Bendix TABS-6 Advanced MC Module modulator valve.

- Apply power and monitor the Bendix TABS-6 Advanced MC Module power-up sequence to verify proper system operation. Refer to the Bendix TABS-6 Advanced MC Module Power-Up Sequence section.
- Determine the current ABS configuration by using hand-held or PC-based diagnostic tools at power-up or by activating blink code diagnostics. If necessary, reconfigure the Bendix TABS-6 Advanced MC Module using a diagnostic tool.

- 7 Perform an installation test using a diagnostic tool. Minimum tests that are required to verify the proper installation of the ABS/TRSP system are:
 - ECU Information: This test provides the user with specific ECU information. It is required that no Diagnostic Trouble Codes (DTCs) (other than "end-of-line test not completed") are present and that the ECU has been configured.
 - Wheel End Sequence Test: During this test, checks are carried out that verify the correlation of the wheel installed with a Wheel Speed Sensor and the Pressure Modulator that controls the pressure to the associated brake.
 - Lateral Acceleration Test: The installation angle information is retrieved from the ECU and compared to the predefined limits (+/-5 degrees). This test verifies that the unit is installed as close to horizontal as possible.
 - **Pressure Sensor Test:** During this test, checks are carried out that verify that the proper response is received from the pressure sensors during a brake application.
 - Axle Load Sensing Test (Air Ride): The test has the user verify the expected measurement of the load pressure sensor, Port 42, for air ride suspensions. The program provides the reading of the sensor.
 - **Customer Scratch Pad:** The tester is requested to input data into the fields displayed on the screen. This data will be stored in the ECU and also can be stored to a file on the computer or printed out for reference.

Refer to SD-13-47672 for more information.

- 8. The correct wheel speed sensor position and connection can be verified by disconnecting each sensor and monitoring with a diagnostic tool. After a single sensor position is confirmed, reconnect the sensor connector and the DTC indicator will automatically clear. Repeat with each sensor connector. If the DTC does not automatically clear, use a diagnostic tool to clear the DTC.
- 9. Set tire size/tone ring and odometer parameters if necessary using a diagnostic tool. Refer to SD-13-47672 for more information.
- 10. When necessary, it is possible to road test the ABS function by making an abrupt stop from a vehicle speed of about 20 mph (32 kph) to check for proper function. The wheels should not enter a prolonged lock condition and ABS function should be audible. It is the responsibility of the technician to perform this test in a safe location.

BENDIX[®] TABS-6[™] ADVANCED MC MODULE POWER-UP SEQUENCE

At power-up, the Bendix[®] TABS-6[™] Advanced MC Module performs a series of self-checks that can assist a technician in determining the status and configuration of the system.

Trailer ABS Indicator Lamp

At power-up without detected Diagnostic Trouble Codes (DTCs), the trailer ABS indicator lamp will turn on for 2.5 seconds as a bulb check and then turn off. *NOTE: This 2.5 seconds figure will change to 6.5 seconds if the End-of-Line Test has not been completed.*

If a PLC-ready towing vehicle and trailer are powered at the same time, the Bendix TABS-6 Advanced MC Module will also trigger a bulb check on the dash-mounted trailer ABS indicator lamp.

Modulator Chuff Test at Power-Up

At power-up, the Bendix TABS-6 Advanced MC Module activates a modulator chuff test. This electrical and pneumatic ABS modulator test can help the technician identify problems with modulator installations and/or wiring.

With brake pressure applied, a properly installed modulator will cause five rapid audible chuffs of air pressure.

ABS OPERATION

The Bendix TABS-6 Advanced MC Module uses wheel speed sensors, a modulator relay valve, and an ECU to control trailer wheels by axle. By monitoring individual wheel turning motion during braking — and adjusting or pulsing the brake pressure at each wheel — the Bendix TABS-6 Advanced MC Module is able to optimize slip between the tires and the road surface. When excessive wheel slip, or wheel lock-up, is detected, the ECU will activate the Pressure Modulator Valves to modulate braking pressure at the wheel ends. The ECU is able to pump the brakes on individual wheels (or pairs of wheels), independently, and with greater speed and accuracy than a driver.

Axle Control

The Bendix TABS-6 Advanced MC Module axle control uses a single modulator relay valve to control wheels on both sides of a given axle or axles. In the case of an ABS event on road surfaces with poor traction (worn, slippery, or loose gravel roads) or areas of poor traction, (e.g. asphalt road surfaces with patches of ice), axle control will maintain the wheel that is not slipping at just under the speed that will lock the wheel. Temporary periods of wheel lock are permitted on the other wheel that is experiencing slippage.

Axle control should not be used on 5th wheel dollies or steerable axles. When braking on even surfaces, an axlecontrol system will perform similar to a side control, twomodulator system.

Side Control (Independent Control)

Side control uses a single modulator relay valve to control one or more wheels on a given vehicle side. In the case of an unbalanced braking surface, the side control will individually control wheels on each side just under the point where they would lock up.

Normal Braking

During normal braking, the Bendix TABS-6 Advanced MC Module functions as a standard relay valve. If the ECU does not detect excessive wheel slip, it will not activate ABS control, and the vehicle stops with normal braking.

NON-STANDARD TIRE SIZE

The module allows for tire rolling radius and tone ring tooth count parameters to be set for each axle using a diagnostic tool. These adjustments may be necessary for the module to accurately calculate the vehicle's velocity and odometer mileage. Wheels of the same axle must be set to the same rolling radius and tone ring tooth count. In most cases, these parameters are set by the trailer OEM and do not need to be adjusted. In the case of a service replacement unit, always check that these parameters are set to match the vehicle.

The tire-rolling radius is defaulted to 511 revs/mile and can be adjusted from 410 to 644 revolutions per mile. Refer to the manufacturer's tire specification for correct values.

Tone ring tooth count is defaulted to 100 teeth and can be set from 60 to 120 teeth.

DIAGNOSTIC TROUBLE CODES (DTCs) OR INCORRECT CONFIGURATION

If system DTCs are indicated during the power-up sequence, refer to the Bendix TABS-6 Advanced MC Module Service Data Sheet SD-13-47672 for diagnostic and configuration information.

PRE-INSTALLATION QUESTIONS

Wheel Ends

- Are the hubs ABS-ready?
- Are ABS replacement hubs available if needed?
- Is machining of the hubs needed?
- Does the axle have sensor blocks installed?
- Note the condition of the wheel bearings.
- Note the condition of the brakes and drums.
- Verify that no lift axles are present.
- Verify that there is an air suspension.

Air System (Valves, Lines, Plumbing)

- Identify the Bendix[®] TABS-6[™] Advanced MC module location.
- Is a Bendix[®] SR-5[™] valve required?
- · Are new air lines or hoses required?
- Has the air system been inspected for leakage?
- Is the tank supply port reinforced for valve installation?
- Locate a suitable location in the air suspension system to connect an air line from the P42 port of the module.

Electrical System

- Inspect the condition of the 7-pin trailer electrical connector.
- Is the trailer equipped with a constant power wire? (Blue wire / 7th pin)
- Note the gauge of the ground, stop light and ignition wires.
- Is extensive labor or drilling needed for power harness installation?
- · Is the wiring nose box accessible?
- Can the indicator lamp be located easily?

ABS Kit

- · How many axles are present?
- Note the type of suspension.
- How many axles will be sensed? (# of sensor blocks)
- Note the make and model of the axles and hubs.

Required information needed for programming with Bendix[®] ACom[®] Diagnostic Software

- 1. Write down the ECU orientation (See Figure 38.)
- 2. Write down number of axles on the trailer.
- 3. Write down the tone ring size (standard size is 100).
- 4. Write down the tire size in revolutions per mile. This information is typically available on the tire manufacturers website.
- 5. Write down if the tires are single or doubles for each wheel end.
- 6. Write down the maximum weight in pounds rated for each axle of the trailer.
- 7. Weigh the trailer when trailer is empty and write down that value in pounds.
- 8. Find out what suspension type is used on the trailer. Find out from the suspension supplier or by calling 1-800-AIR-BRAKE (1-800-247-2725, option 2)
- 9. Write down the pressure value of the air suspension for the empty weight of the trailer. The suspension supplier can typically supply this information. (With the trailer empty, it is possible to find out this pressure by connecting using Bendix[®] ACom[®] Diagnostic Software and going to the Pressures screen. Click the Start button and write down the pressure value shown for P42 in PSI.)
- 10. Write down the pressure value of the air suspension for the fully loaded weight of the trailer. The suspension supplier can typically supply this information. (With the trailer fully loaded, it is possible to find out this pressure by connecting using Bendix ACom Diagnostic Software and going to the Pressures screen. Click the Start button and write down the pressure value shown for P42 in PSI.)
- 11. Write down the distance from the kingpin to the center of the first axle.
- 12. Write down the distance between center of axle one and axle two for a two-axle trailer. If a third axle is present, also record the distance between axles two and three. If a fourth axle is present, the distance between axles three and four must also be recorded.
- If the module is offset from the vehicle's centerline more than ± 2 inches, then record that offset distance in inches, and whether the ECU is toward the curbside or roadside.
- 14. Write down the track width the measurement between the outer edges of the outermost tires, on the axle with the wheel speed sensors installed.



FIGURE 24 - BENDIX[®] TABS-6[™] ADVANCED MC MODULE - 2S/2M SIDE CONTROL (0 DEGREE) ABS ELECTRICAL & AIR SYSTEM



FIGURE 25 - BENDIX TABS-6 ADVANCED MC MODULE - 2S/2M SIDE CONTROL (180 DEGREE) ABS ELECTRICAL & AIR SYSTEM



FIGURE 26 - BENDIX[®] TABS-6[™] ADVANCED MC MODULE - 4S/2M SIDE CONTROL (0 DEGREE) ABS ELECTRICAL & AIR SYSTEM



FIGURE 27- BENDIX TABS-6 ADVANCED MC MODULE - 4S/2M SIDE CONTROL (180 DEGREE) ABS ELECTRICAL & AIR SYSTEM



FIGURE 28 - BENDIX[®] TABS-6[™] ADVANCED MC MODULE - TYPICAL 4S/2M AXLE CONTROL ABS ELECTRICAL & AIR SYSTEM



FIGURE 29 - BENDIX TABS-6 ADVANCED MC MODULE - 4S/2M AXLE CONTROL (180 DEGREE) ABS ELECTRICAL & AIR SYSTEM



FIGURE 30 - 4S/2M SIDE CONTROL (0 DEGREE) WITH FRONT LIFT AXLE, ABS ELECTRICAL & AIR SYSTEM



FIGURE 31 - 4S/2M SIDE CONTROL (0 DEGREE) WITH REAR LIFT AXLE, ABS ELECTRICAL & AIR SYSTEM



FIGURE 32 - 4S/2M SIDE CONTROL (180 DEGREE) WITH FRONT LIFT AXLE, ABS ELECTRICAL & AIR SYSTEM



FIGURE 33 - 4S/2M SIDE CONTROL (180 DEGREE) WITH REAR LIFT AXLE, ABS ELECTRICAL & AIR SYSTEM



FIGURE 34 - 4S/2M AXLE CONTROL (180 DEGREE) WITH FRONT LIFT AXLE, ABS ELECTRICAL & AIR SYSTEM



FIGURE 35 - 4S/2M AXLE CONTROL (180 DEGREE) WITH REAR LIFT AXLE, ABS ELECTRICAL & AIR SYSTEM



FIGURE 36 - BENDIX[®] TABS-6[™] ADVANCED MC MODULE - TYPICAL 4S/2M SYSTEM WITH FRONT LIFT AXLE



FIGURE 37 - BENDIX TABS-6 ADVANCED MC MODULE - 4S/2M AXLE CONTROL SYSTEM WITH REAR LIFT AXLE



FIGURE 38 - WHEEL SPEED SENSOR INSTALLATION





FIGURE 40 - WARNING LABEL ON TRAILER

AVAILABLE BENDIX[®] TABS-6[™] ADVANCED MC MODULE KITS: SIDE CONTROL

Contact Bendix for additional kits or individual part number availability.

Be	Bendix [®] TABS-6 [™] Advanced MC Module Kits - Contents List					
	Part Description	Part Number	Quantity			
K11 Adv	1656 — The Basic Kit: Side Control - mainly for changing from Bendix [®] TABS-6 [™] ABS to /anced with TRSP [®] includes:	Bendix® T	ABS-6™			
	Bendix [®] TABS-6 [™] Advanced MC module	K111180	1			
	Bendix [®] TRSP [®] Warning Label (Decal)	K026810	1			
	Bendix [®] ABS Diagnostics (Auxiliary Decal)	K031929	1			
	Bendix WS-24 Sensor Extension Cable, Din 60 in.	5015531	4			
	Bendix TABS-6 9-inch diagnostic pigtail	K025593	1			
	Bendix TABS-6 Advanced MC Power pigtail	K022146	1			
K11	1657 — Medium Kit: Side Control - mainly changing from competitors ABS or TRSP to E	Bendix® TRS	SP:			
	Bendix TABS-6 Advanced MC module	K111180	1			
	Bendix TRSP Warning Label (Decal)	K026810	1			
	Bendix ABS Diagnostics (Auxiliary Decal)	K031929	1			
	Bendix TABS-6 9-inch diagnostic pigtail	K025593	1			
	Bendix [®] WS-24 [™] Wheel Speed Sensor, DIN, 90°, 16 in. (PUR)	300083	4			
	Bendix WS-24 Sensor Extension Cable, Din 60 in.	5015531	4			
	Bendix WS-24 Speed Sensor Bushing. PN 5012878	5012878	4			
	ABS Sensor Wire Clip (Sensor Delivery Hose Routing)	5020254	10			
	Bendix TABS-6 Advanced MC power pigtail	K022146	1			
K11 sys	1658 — Full Kit: Side Control - mainly for refurbishing a trailer or a small OEM install of tem. Includes:	our Bendix				
	Bendix TABS-6 Advanced MC module	K111180	1			
	Bendix TRSP Warning Label (Decal)	K026810	1			
	ABS Diagnostics Label (Decal)	K031929	1			
	Bendix TABS-6 9-inch diagnostic pigtail	K025593	1			
	Bendix WS-24 Wheel Speed Sensor, DIN, 90°, 16 in. (PUR)	300083	4			
	Bendix WS-24 Sensor Extension Cable, Din 60 in.	5015531	4			
	Bendix WS-24 Speed Sensor Bushing. PN 5012878	5012878	4			
	5-pin Packard, (780in.), Warning Lamp (10in) Non-Terminated	5013353	1			
	Bendix [®] SR-5 [™] Trailer Spring Brake Valve 1/2"	K033088	1			
	Cable Tie 8" (Cable Routing).	560594	25			
	Cable Tie 24" (Sensor Lead Axle Routing)	112116	6			
	ABS Sensor Wire Clip (Sensor Delivery Hose Routing)	5020254	10			
	ABS Indicator Lamp	112202	1			
	Bendix TABS-6 Advanced MC Power Pigtail	K022146	1			

CHART 7 - BENDIX[®] TABS-6[™] ADVANCED MC MODULE SIDE CONTROL KITS - COMPLETE

AVAILABLE BENDIX[®] TABS-6[™] ADVANCED MODULE KITS: AXLE CONTROL

Contact Bendix for additional kits or individual part number availability.

Bendix [®] TABS-6 [™] Advanced Module Kits - Contents List					
Part Description	Part Number	Quantity			
K112219 — The Basic Kit: Axle Control - mainly for changing from Bendix [®] TABS-6 [™] ABS Advanced with TRSP [®] includes:	to Bendix [®] T	ABS-6™			
Bendix [®] TABS-6 [™] Advanced MC module	K112591	1			
Bendix [®] TRSP [®] Warning Label (Decal)	K026810	1			
Bendix®ABS Diagnostics (Decal)	K031929	1			
Bendix TABS-6 9-inch diagnostic pigtail	K025593	1			
Bendix WS-24 Sensor Extension Cable, Din 80 in.	300258	4			
Bendix TABS-6 Advanced MC Power pigtail	K022146	1			
K112220 — Medium Kit: Axle Control - mainly changing from competitors ABS or TRSP to	Bendix [®] TR	SP:			
Bendix TABS-6 Advanced MC module	K112591	1			
Bendix TRSP Warning Label (Decal)	K026810	1			
Bendix ABS Diagnostics (Decal)	K031929	1			
Bendix TABS-6 9-inch diagnostic pigtail	K025593	1			
Bendix [®] WS-24 [™] Wheel Speed Sensor, DIN, 90°, 16 in. (PUR)	300083	4			
Bendix WS-24 Sensor Extension Cable, Din 80 in.	300258	4			
Bendix WS-24 Speed Sensor Bushing. PN 5012878	5012878	4			
ABS Sensor Wire Clip (Sensor Delivery Hose Routing)	5020254	10			
Bendix TABS-6 Advanced MC power pigtail	K022146	1			
K0122221 — Full Kit: Axle Control - mainly for refurbishing a trailer or a small OEM insta system. Includes:	I of our Benc	lix TRSP			
Bendix TABS-6 Advanced MC module	K112591	1			
Bendix TRSP Warning Label (Decal)	K026810	1			
Bendix ABS Diagnostics (Decal)	K031929	1			
Bendix TABS-6 9-inch diagnostic pigtail	K025593	1			
Bendix WS-24 Wheel Speed Sensor, DIN, 90°, 16 in. (PUR)	300083	4			
Bendix WS-24 Sensor Extension Cable, Din 80 in.	300258	4			
Bendix WS-24 Speed Sensor Bushing. PN 5012878	5012878	4			
5-pin Packard, (780in.), Warning Lamp (10in) Non-Terminated	5013353	1			
Bendix [®] SR-5 [™] Trailer Spring Brake Valve 1/2"	K033088	1			
Cable Tie 8" (Cable Routing)	560594	25			
Cable Tie 24" (Sensor Lead Axle Routing)	112116	6			
ABS Sensor Wire Clip (Sensor Delivery Hose Routing)	5020254	10			
ABS Indicator Lamp	112202	1			
Bendix TABS-6 Advanced MC Power pigtail	K022146	1			

CHART 8 - BENDIX[®] TABS-6[™] ADVANCED MODULE AXLE CONTROL KITS - COMPLETE

APPENDIX: Instructions for Programming Bendix[®] TABS-6[™] Advanced Multi-Channel Modules

Note: An OEM registry key for Bendix[®] ACom[®] Diagnostic Software is required to allow changes in these instructions. Note: ACom 6.8, or later, is required to program the Electronic Control Unit (ECU).

Note: These instructions must be followed and the ECU must be programmed or the ABS and Trailer Roll Stability will not function.

Ston	APPENDIX: Instructions for	Programming Bendix [®] TABS-6 [™] Advanced MC Single Chann	el Modules
Step	Instructions	Bendix [®] ACom [®] Diagnostic Software Screen Shots	
1a	 Start Bendix[®] ACom[®] Diagnostic Software. Select the ECU and the connection line type for the adapter type by clicking on the appropriate line. 	Numerical Action® Diagnostics 6.8 ECU Connection line Protocol TEBS CAN KVP EC40 SAE JISP EC40 SAE JISP EC40 CAN TEBS KLine KVP EC40 SAE EC40 CAN VORAD/CS40/GUU JISP FLC28 CAN VORAD/CS40/GUU JISP TABS SAE TABSE Advenced PLC2 VORAD/CS40/GUU JISP7 TABSE Advenced PLC2 TABSE Advenced JISP7 ABS L/X SAE JISP7 ABS L/X SAE JISP7 MI	Diegnostic Control
		Varad Data Log Data log application for Varad	₽ 10 10 10 10 10 10 10 10 10 10 10 10 10
		Starter for ACom® Diagnostics 6.8 Starter for ACom® Diagnostics 6.8	- 0 X
	 Click on the interface adapter "select" button. 	ECU Connection Intel Ptotocol TESS CAN KVP TESS KLee KVP EC0 CAN KSP7 EC40 CAN UDS Wingman CAN UDS VORAD/S400(DU J1339 J1339 Trafet Link R522 R5232 Tradet Link Ale ABS SA2 J1597	Diagnostic Control
1b	• When the Communication Device Settings window appears, select your hardware interface by checking the box to the left.	LASSA Advanced SAE JIS67 LUIS LUIS<	
		Application Description Wingmen Deta Log Deta log application for Wingmen Vorad Deta Log Deta log application for Vorad	
			▲ 11/26/2014 7:47 AM





Ston	APPENDIX: Instructions for Programming Bendix [®] TABS-6 [™] Advanced MC Single Channel Modules				
Step	Instructions	Bendix [®] ACom [®] Diagnostic Software Screen Shots			
	• Enter the correct number of axles present on the trailer.				
6a	 After entering the number of axles on the trailer, another window pops up. In this window it is necessary to configure which axle has the SC-SD wheel speed sensors and which axle has the SE-SF wheel speed sensors. See Figures on pages 17-23. Next enter the distance in inches from the center of the king pin of the trailer to the center of the first axle. Also — in Vehicle Data field — the Module offset from Centerline must be entered in inches. If the ECU is +/- 2 inches from centerline it is ok to leave the value at 0. If the ECU is toward the curbside then enter the value in inches as a positive number. If the ECU is toward the roadside then enter the value in inches as a negative number. 	ECU Parameterization Important ! Select the Number of Axles, enter correct values for all parameters on this screen, and then push the Write button to save the changes to the ECU, in order to proceed. See the istallation instructions for detailed information. Vehicle Data ECU Orientation: Module Offset Torne ring Tire size SingleDouble Tire: SingleDouble Tire: Wheel Track Width [in]: Air Bog pressure. Entry[tos] Air Bog pressure. Entry[tos] Bogie Iood. Empty[tos] Bogie Iood. Fully Loadsd(ps) Bogie Iood. Fully Loadsd(ps) Bogie Iood. Fully Loadsd(ps) Bogie Iood. Fully Loadsd(ps)			
6b	 In wheel parameters location enter the tone ring size and the tire size (using the number of revolutions per mile [rpm]). The tire size can often be found by viewing the tire manufacturer's specifications on their website. Also, enter if the axle has a single or double tire at each end. Enter the wheel track width in inches. For single tires, measure from center of one tire to the center of the tire at the other end of the axle. For dual tires, measure from the mid-point of the tires on the right side of the trailer to the mid-point of the tires on the left side of the trailer. 	ECU Parameterization Important ! Select the Number of Axles, enter correct values for all parameters on this screen, and then push the Write button to save the changes to the ECU, in order to proceed. See the istallation instructions for detailed information. Vehicle Data Important ! Select the Number of Axles, enter correct values for all parameters on this screen, and then push the Write button to save the changes to the ECU, in order to proceed. See the istallation instructions for detailed information. Vehicle Data Important ! Select the Number of Axles; ECU Orientation: Important ! Seed sensor and lift ade locations ECU Orientation: Important ! Seed sensor Sc. Sc. Number of Axle; Important ! Sec Sc. Torne ring Important ! Speed sensor Sc. Sc. Itel : 'Rownisk'' Important ! Rear Axde(s): Important ! Speed sensor Sc. Sc. Important ! Control / Montor iff adde 1: Important ! Arie Bag pressure. Empty(ps): Important ! Bogie load. Empty(Ibs): Important ! Bogie load. Empty(Ibs): Important exe			

Ston	APPENDIX: Instructions for	Programming Bendix [®] TABS-6 [™] Advanced MC Single Channe	el Modules
Step	Instructions	Bendix [®] ACom [®] Diagnostic Software Screen Shots	
	Next, carefully enter the correct bogie parameters. WARNING Failure to correctly program the bogie parameters may result in the ABS and Trailer Roll Stability malfunction - potentially including the	ECU Parameterization Important ! Select the Number of Axles, enter correct values for all parameters on this screen, and then push the Write button to save the changes to the ECU, in order to proceed. See the istallation instructions for detailed information. Vehicle Data Sneed sensor and lift and locations	کی Write کی Load
6c	Trailer Roll Stability feature operating too actively or not actively enough. Correct programming also prevents erroneous Diagnostic Trouble Codes (DTCs) • For vehicles with air suspension systems, enter axle load values and pressures (available from the suspension supplier). In some cases, this information may be available from Bendix Call 1-800-AIR-BRAKE (1-800-247-2725, option 2). • Enter the permitted vehicle axle loads. Also, the corresponding air bag pressure at those same weight ratings must be entered.	ECU Orientation: Image: Second Se	Save Save
6d	• IMPORTANT Double-check that everything entered on the ECU Parameterization screen is completely correct. If everything is correct then click on the "Write" button to program the ECU with the entered parameters.	ECU Parameterization Important ! Select the Number of Axles, enter correct values for all parameters on this screen, and then push the Write button to save the changes to the ECU, in order to proceed. See the istallation instructions for detailed information. Vehicle Data ECU Orientation: Module Offset from Centerline [in]: Number of Axlee: 2 Wheel Parameters Tone ring Time size (pm) Front Axle(s): Vheel Track Width [in]: 77.6 Bogie Parameters Arr Bag pressure. Fully Loaded[[ps]: 0 2 Bogie load. Empty[[bs]: 0 2 Bogie load. Fully Loaded[[ps]: 0 2 Ard Bag pressure. Fully Loaded[[ps]: 0 2 Bogie load. Fully Loaded[[ps]: 0	

Step	APPENDIX: Instructions for	Programming Bendix [®] TABS-6 [™] Advanced MC Single Channel Modules
	Instructions	Bendix [®] ACom [®] Diagnostic Software Screen Shots
7	INSTRUCTIONS IMPORTANT • After entering and saving the ECU parameters, the Installation Test must be run. This step is important to ensure the correct operation of the ABS and TRSP sytems. • Click on the Installation Test and follow the instructions. • WARNING: Failure to correctly run the Installation Test may result in the ABS and Trailer Roll Stability malfunction - potentially including the Trailer Roll Stability feature operating too actively or not actively enough. Correct programming also prevents erroneous Diagnostic Trouble Codes (DTCs)	Bendix® ACom® Diagnostic Software Screen Shots

Bendix.com

For additional troubleshooting information on the Bendix[®] TABS-6[™] Advanced MC, please refer to the Service Data Sheet SD-13-47672. Visit the www.bendix.com Document Library to download a PDF, or order copies from our on-line Literature Center.

The Bendix on-line Contacts Guide will make it easy for you to find the Bendix contacts you need. From this page, you can navigate to technical support contacts, service engineers, Bendix account managers, international contacts and more. Bendix.com is your complete Bendix resource.

Bendix Technical Assistance Team

For direct personal technical support, call the Bendix Tech Team at **1-800-AIR-BRAKE** (1-800-247-2725), Monday through Friday, 8:00 am to 6:00 pm ET, and follow the prompts in the recorded message.

To better serve you, please record the following information before calling the Bendix Tech Team:

- Bendix product model number, part number and configuration.
- Vehicle make and model.
- Vehicle configuration. (Number of axles, tire size, etc.)
- System performance symptoms. When do they occur?
- What DTCs have been identified using blink codes or diagnostic tools?
- What troubleshooting / measurements have been performed?
- What Bendix service data literature do you have or need?
- Do you have access to the internet or email?

The Bendix Tech Team can also be reached by e-mail at: techteam@bendix.com.



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