



Installation Instructions

This kit is intended to provide the necessary components to replace a Bendix® Gen. 4™ ABS ECU (part number 300126) with a Bendix® Gen. 5™ ABS ECU (part number 801753 or equivalent).

For many vehicles, the ECU replacement requires only a changeout of the ECU and a reconfiguration step.

For vehicles where the original ECU used the J1922 link to communicate with the engine retarder control, the extra steps outlined in the “Retarder Relay Installation” section will also need to be carried out.

Read and follow all standard safety guidelines, including those found in the General Maintenance Precautions section on page 2 of this document.

The replacement controller is a Gen. 5™ ABS ECU, which does not support J1922 engine communications, so, as mentioned above, for installations which use J1922, please also follow the Section “**Retarder Relay Installation.**” To determine if the vehicle is using J1922, verify if pins 1 and 3 on the X1 connector are being used, or connect the vehicle to a PC computer and use the Bendix® ACom™ Diagnostics program to look for “Retarder Control” on the ECU Status or Configuration screens. Bendix® ACom™ Diagnostics is available as a free download from the bendix website.

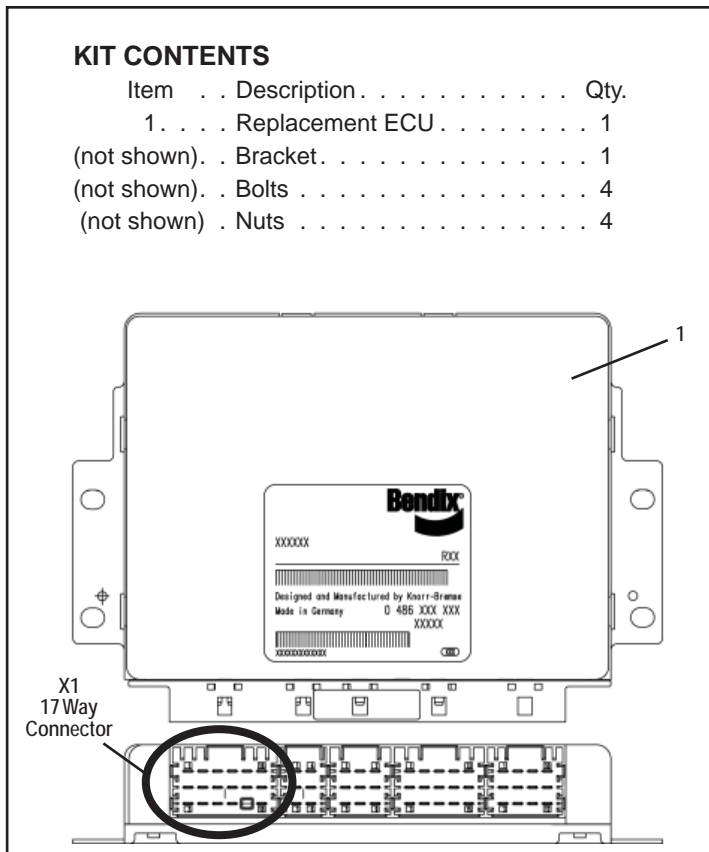


FIGURE 1 - KIT CONTENTS, VIEW OF ECU AND CONNECTORS

Reconfiguration

After installation, in all cases, use a diagnostic tool such as the Bendix® ACom™ Diagnostics program, Nexiq Pro Link (using the Eaton cartridge), or the blink code switch, to verify that the configuration of the ABS ECU is correct.

Remove the Controller Assembly

1. Locate the Gen 4™ ECU on the vehicle.
2. Note if pins 1 and 3 of X1 are used (indicating retarder control over J1922 was used). Where they are present, remove and discard these wires.
3. Release all the connectors to the ECU assembly.
4. Remove the original mounting bolts from the controller. Retain the bolts for re-installation.

Install Controller Assembly

1. Install the mounting bracket onto the replacement ECU, using the nuts and bolts supplied in this kit.
2. Position the ECU/bracket assembly at the original location on the vehicle and attach it using the original mounting bolts.

Retarder Relay Installation

In cases where the Gen. 4™ ABS ECU used the J1922 link to control the retarder, the technician will need to hard-wire a retarder relay for retarder control and remove the J1922 connection. Follow the wiring diagram in Figure 2 throughout this procedure.

Required materials (not supplied): A 12V, 20/30 Amp, automotive relay (single pole, double throw), a 5 Amp in-line fuse, 18-gauge wire and terminals for the connector.

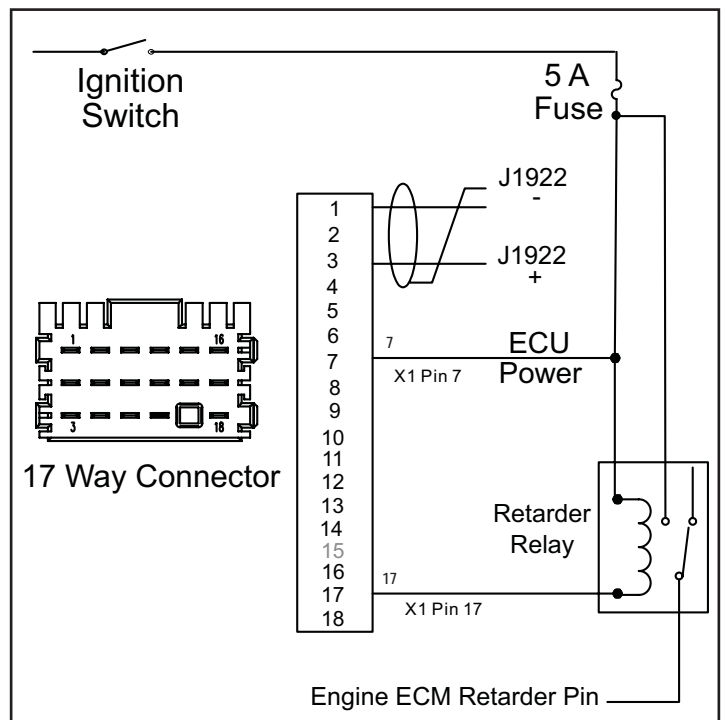


FIGURE 2 - WIRING DIAGRAM WHERE J1922 COMMUNICATION TO RETARDER IS REQUIRED

Follow Figure 2 throughout this procedure.

1. Crimp the terminal for the X1 connector to a wire which will be inserted into pin location 17 of the X1 connector. Connect the other end of the wire to the Relay coil.
2. Connect a second wire to ignition power, by either splicing the wire into the wire located in pin 7 of the X1 connector or make a connection to the ignition switch, in either case be sure the connection is protected by a 5 AMP fuse. Connect the other end of the wire to the Relay coil.
3. Connect a third wire to the engine ECM mechanical retarder connection - see the vehicle manufacturer's manual as needed for location. Connect the other end of the wire to the Relay (typically the common/wiper connection).
4. Connect a fourth wire to the other side of the NO (normally open) connection on the relay and connect the other end of the wire to ignition power, following the wiring diagram.
5. Install all other wire harness connectors, checking that each connector snaps into the locked position.

OPERATIONAL TEST AND RECONFIGURATION

Use a diagnostic tool such as the Bendix® ACom™ Diagnostics program, Nexiq Pro Link (using the Eaton cartridge), or blink code switch (see Figure 3 below and Service Data Sheet SD-13-4767) to reconfigure the ECU to a 4 sensor, 4 modulator, with retarder relay (if applicable) configuration.

Before returning the vehicle to service, use the diagnostic tool to check the installation. Also, check for any diagnostic trouble codes present and troubleshoot and/or make repairs as necessary.

Blink Code Sequence	VOLTAGE CONFIGURATIONS			
1st	Flashes	Description		
	1	12 Volt System		
	2	24 Volt System		
1.5 Sec. Pause	ABS CONFIGURATIONS			
2nd	Flashes	Description		
	2	4 Sensors/4 Modulator Valves		
	3	4 Sensors/3 Modulator Valves		
	6	6 Sensors/4 Modulator Valves		
	8	6 Sensors/6 Modulator Valves		
9	6 Sensors/5 Modulator Valves - Select Low Steer			
4.5 Sec. Pause	RETARDER CONFIGURATIONS/INTERAXLE			
3rd	Flashes	Engine Interface	Retarder Relay Control	Interaxle Lock Control
	1 (5)	NO	NO	NO (YES)
	2 (6)	YES	NO	NO (YES)
	3 (7)	NO	YES	NO (YES)
	4 (8)	YES	YES	NO (YES)
1.5 Sec. Pause	ATC CONFIGURATIONS			
4th	Flashes	Engine Control	Brake Control	
	2	NO	NO	
	3	N/A	N/A	
	4	N/A	N/A	
	5	YES	YES	

FIGURE 3 - READING ABS CONFIGURATION CODES



GENERAL MAINTENANCE PRECAUTIONS

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

When working on or around a vehicle, the following general precautions should be observed at all times.

1. Park the vehicle on a level surface, apply the parking brakes, and always block the wheels. Always wear safety glasses.
2. Stop the engine and remove 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.
3. 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.
4. 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 an AD-IS® air dryer system or a dryer reservoir module, be sure to drain the purge reservoir.
5. Following the vehicle manufacturer's recommended procedures, deactivate the electrical system in a manner that safely removes all electrical power from the vehicle.
6. Never exceed manufacturer's recommended pressures.
7. 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.
8. Use only genuine Bendix® 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.
9. 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.
10. Prior to returning the vehicle to service, make certain all components and systems are restored to their proper operating condition.
11. For vehicles with Antilock 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.