



Installation Instructions

Bendix® EC-30™ ECU Replacement Kit



FIGURE 1 - BENDIX® EC-30™ ECU, AND ACOM™ DIAGNOSTICS SOFTWARE CD

This kit is intended for the replacement of a Bendix® EC-30™ Electronic Control Unit (ECU). The following are the necessary steps to replace and configure the replacement ECU.

PREPARATION:

Follow all standard industry safety precautions, including, but not limited to, those listed at the end of this document. Park the vehicle on level ground, chock wheels, and turn off the ignition. Locate the Bendix® EC-30™ Electronic Control Unit (ECU) on the vehicle.

1. Remove the wire harness connectors from the ECU.
2. Remove the four fasteners securing the ECU and retain for re-installation. Dispose of ECU.
3. Install the replacement ECU and tighten the fasteners to 98 in-lbs.
4. Inspect the wire harnesses and connectors for corrosion, damage, etc. Replace as necessary. Insert the wire harness connectors into the replacement ECU and ensure that the harness is securely attached to the vehicle. Torque the connector retaining screws to 15-20 in-lbs.

CONFIGURATION PROCESS - PART ONE

Replacement ECUs typically require a self-configuration to adjust to the number of wheel speed sensors and/or the Automatic Traction Control (ATC) configuration of the vehicle.

To Self-Configure:

- a. Verify that the following are connected to the EC-30™ ECU and are operational:
 - All connectors to the ECU.
 - J1939 or J1922 communication link to the engine.
 - ATC active/indicator lamp.
 - ATC enable/disable switch (NOTE: Switch must be toggled prior to self-configuration if enabling ATC).

b. Self-Configuration Procedure

Verify that all ECU, communication, sensor, and ABS modulator connectors are in place and then turn the ignition power on. Toggle the ATC enable/disable switch if equipped. Activate an EC-30™ controller self-configuration by one of the following actions:

- Hold a magnet on the reset location of the Remote Diagnostic Unit (RDU) for approximately 20 seconds (until the LEDs begin to rapidly roll), then remove the magnet.
- Hold a magnet on the reset location of the diagnostic display for more than 6 seconds, but less than 11 seconds, then remove the magnet to initiate a self-configuration.
- Using ACom™ Diagnostic Software (version 5.9 or higher) in the "configuration window" select the "self-config" button or select "modify and configure the ECU" from the parameters available in the "configuration window".

When the self-configuration process is complete, the EC-30™ controller will automatically go through the power-up sequence and show the new configuration on its LED diagnostic display. If the EC-30™ controller was properly configured for wheel speed sensors and ATC, both the ABS and ATC indicator lamps will extinguish at the end of the power-up sequence.

CONFIGURATION PROCESS - PART TWO

Almost all Bendix replacement ECUs support Power Line Carrier (PLC). Using ACom™ Diagnostic Software (version 5.9 or higher), confirm that the ECU installed has this feature.

Some older vehicles, however, may not support PLC. In these cases, it is recommended that the technician turn off the ECU's support of PLC.

Steps 2 through 5 are needed only if the vehicle does not support PLC.

- Using a diagnostic tool, look for an active Trailer ABS Warning Lamp Open (Dash Mounted) Diagnostic Trouble Code (DTC). The DTC will be found as an active DTC, however, the ABS indicator lamp will not be illuminated. See Figure 2 for typical ACom™ diagnostic trouble code screen showing the Trailer Indicator Lamp DTC.

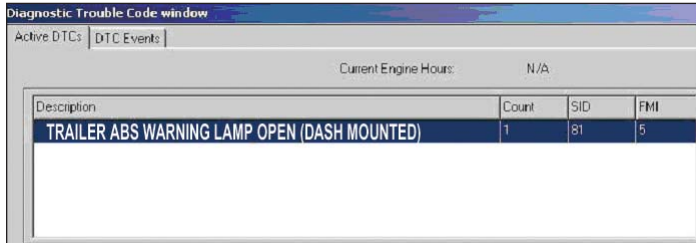


FIGURE 2 - DTC: INDICATOR LAMP OPEN

When using ACom™ Diagnostics (version 5.9 and higher), the configuration screen will show a configuration item under Antilock, which will display:

In-Cab Trailer Warning Lamp – Enabled (PLC) or Disabled (No PLC) - see Figure 3:



FIGURE 3 - ACOM™ DIAGNOSTICS: IN-CAB TRAILER LAMP

- To disable PLC, Bendix® ACom™ Diagnostics (version 5.9 or higher) is required. The technician will need to open the configuration screen and see if the current configuration shows PLC being used. In addition, verify that the in-cab trailer lamp (located under "Antilock" in the configuration window) is configured for PLC.
- To change the setting, select the "Modify" button on the right side of the configuration screen to open the "Change Configuration" window. See Figure 4.

Click inside the box to remove the check mark, disabling the In-Cab Trailer Lamp.

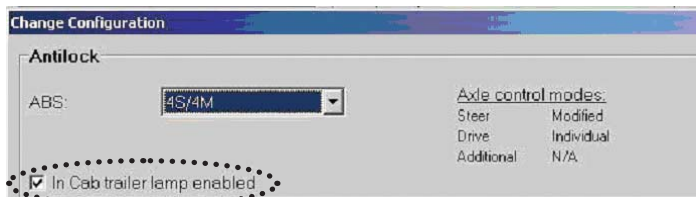


FIGURE 4 - CHANGE CONFIGURATION: IN-CAB TRAILER LAMP

Removing the check mark switches off the PLC feature, disables the in-cab trailer lamp and will also clear the active Trailer ABS Warning Lamp Open DTC. See Figure 5.

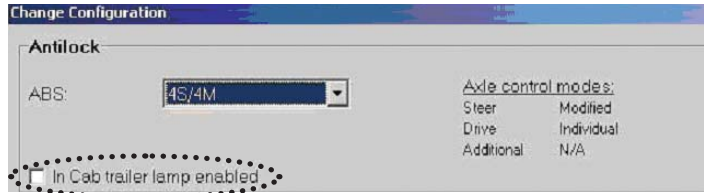


FIGURE 5 - IN-CAB TRAILER LAMP DISABLED

- The configuration screen will now display "In Cab trailer lamp: Disabled", showing that the configuration is complete. See Figure 6.



FIGURE 6 - CONFIGURATION WINDOW: IN-CAB TRAILER LAMP DISABLED

- Use the ACom™ diagnostic program to check that there are no active DTCs before returning the vehicle to service.

Additional Assistance:

If there are communication issues, or the configuration is unsuccessful after several attempts, contact Bendix at **1-800-AIR-BRAKE** (1-800-247-2725), Monday through Friday, 8:00 A.M. to 6:00 P.M. EST. Please have the following information ready when you call: Bendix product model number, part number and configuration, vehicle make and model, vehicle configuration (number of axles, tire size, etc.).

Reference:

The full Service Data sheet for the Bendix® EC-30™ ABS / ATC Controller is SD-13-4815 (BW2160) and is available for download on www.bendix.com, or order copies from the Literature Center at the website.

Bendix® ACom™ Diagnostic Software is available for free download from www.bendix.com, or order copies from the Literature Center at website.

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 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 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.

