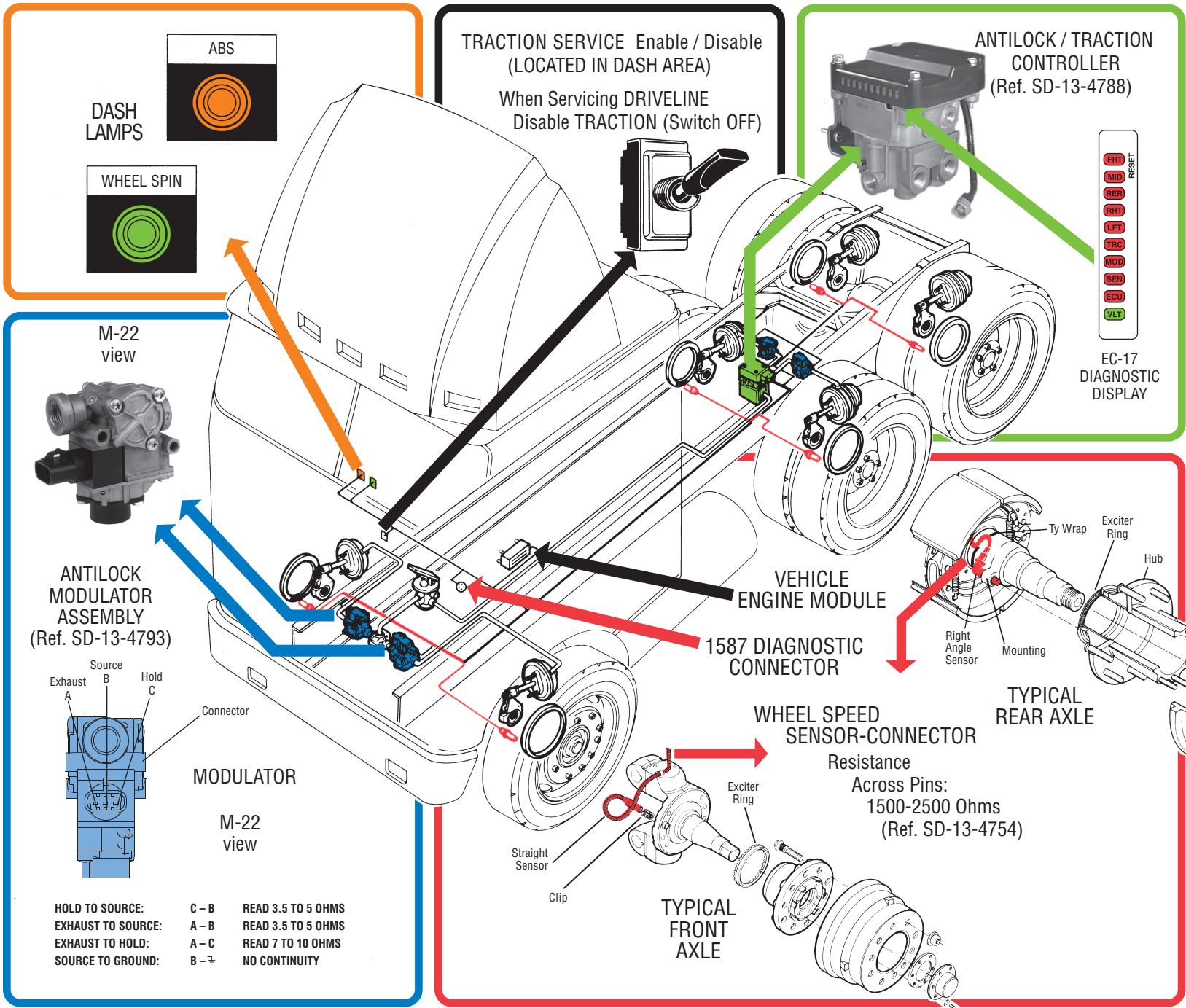


TROUBLESHOOTING EC-17 ANTILOCK SYSTEMS WITH OPTIONAL TRACTION CONTROL



INSTRUCTIONS

START UP: When power is applied the Antilock and Traction dash warning lamps will illuminate while the electronic Control Unit (ECU) is performing a Self Check, and "Chuff" test. The ABS and Traction Control modulators will be energized during the Chuff test. At the completion of the Chuff test the ABS and Traction dash lamps will flash and extinguish. It is recommended during the initial start up that the brakes be applied to audibly hear the modulators exhaust during the "Chuff" test.

SERVICE NEEDED: When an issue is detected at start up, the dash lights will flash and remain illuminated at the completion of the chuff test. When a dynamic wheel speed issue is detected the dash lamps will illuminate as early as 10 mph, indicating a wheel speed issue. The dash lamps notify the driver that all or part of the ABS function has been disengaged and standard air braking is in effect. The ECU will automatically reset most intermittent codes (self healing). In most instances, if the intermittent code has occurred more than five times the issue will be latched and require a magnetic reset. The area of concern will always be identified in the diagnostic display.

TRACTION FUNCTION: The ECU monitors wheel spin. When a spin condition exist, the traction dash lamp will blink continuously indicating the traction control system is active. **IF SERVICING THE VEHICLE DRIVE LINE, TRACTION SERVICE ENABLE / DISABLE SWITCH MUST BE DISABLED.** (The traction dash lamp will be illuminated)

RESET: The ECU can be magnetically reset by momentarily holding a magnet against the RESET area on the controller. **SELF CONFIGURING:** During self configuring the ECU will automatically determine the number of sensors and if electronic engine equipped. The ECU will also determine if the vehicle is traction equipped ONLY if the traction switch is toggled prior to magnetically Self Configuring. Holding a magnet against the RESET area for 30 seconds completes Self Configuring.

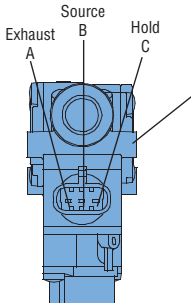
- FR1
- MRD
- REB
- RHT
- LFT
- TRC
- MOD
- SEN
- ECU
- VL1

EC-17 DIAGNOSTIC DISPLAY

TRACTION SERVICE Enable / Disable (LOCATED IN DASH AREA)
When Servicing DRIVELINE Disable TRACTION (Switch OFF)

ANTILOCK / TRACTION CONTROLLER (Ref. SD-13-4788)

M-22 view
ANTILOCK MODULATOR ASSEMBLY (Ref. SD-13-4793)



HOLD TO SOURCE:	C - B	READ 3.5 TO 5 OHMS
EXHAUST TO SOURCE:	A - B	READ 3.5 TO 5 OHMS
EXHAUST TO HOLD:	A - C	READ 7 TO 10 OHMS
SOURCE TO GROUND:	B - ⚡	NO CONTINUITY

VEHICLE ENGINE MODULE

1587 DIAGNOSTIC CONNECTOR

WHEEL SPEED SENSOR-CONNECTOR

Resistance Across Pins:
1500-2500 Ohms (Ref. SD-13-4754)

TYPICAL FRONT AXLE

TYPICAL REAR AXLE



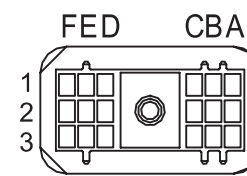
If the LED's shown below are illuminated . . .

Check the vehicle WIRING HARNESS CONNECTOR for the proper resistance with system power off (ignition off.)

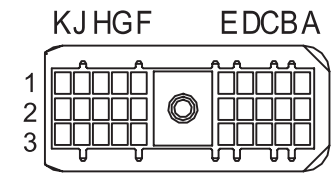
Component	LEDs	Connector Diagram	Resistance
RIGHT FRONT SENSOR	ECU, SEN, MOD, TRC, LFT, RHT, RER, MID, FRT, RESET		H2 - H3 1500 - 2500 Ohms
LEFT FRONT SENSOR	ECU, SEN, MOD, TRC, LFT, RHT, RER, MID, FRT, RESET		J1 - J2 1500 - 2500 Ohms
RIGHT FRONT MODULATOR	ECU, SEN, MOD, TRC, LFT, RHT, RER, MID, FRT, RESET		C1-D1 3.5-5.0 Ohms C1-E1 3.5-5.0 Ohms D1-E1 7.0-10.0 Ohms
LEFT FRONT MODULATOR	ECU, SEN, MOD, TRC, LFT, RHT, RER, MID, FRT, RESET		H1-G1 3.5-5.0 Ohms H1-F1 3.5-5.0 Ohms G1-F1 7.0-10.0 Ohms
TRACTION ENGINE SERIAL	ECU, SEN, MOD, TRC, LFT, RHT, RER, MID, FRT, RESET		B2(+), B3(-) C3(+), D3(-) J1922 J1939 ENGINE SERIAL NOT COMMUNICATING (See Owner's Manual)
		Orient flat side of connector	
RIGHT REAR SENSOR	ECU, SEN, MOD, TRC, LFT, RHT, RER, MID, FRT, RESET		E2 - E3 1500 - 2500 Ohms
LEFT REAR SENSOR	ECU, SEN, MOD, TRC, LFT, RHT, RER, MID, FRT, RESET		F2 - F3 1500 - 2500 Ohms
RIGHT REAR MODULATOR	ECU, SEN, MOD, TRC, LFT, RHT, RER, MID, FRT, RESET		A1-B1 3.5-5.0 Ohms A1-C1 3.5-5.0 Ohms B1-C1 7.0-10.0 Ohms
LEFT REAR MODULATOR	ECU, SEN, MOD, TRC, LFT, RHT, RER, MID, FRT, RESET		F1-E1 3.5-5.0 Ohms F1-D1 3.5-5.0 Ohms E1-D1 7.0-10.0 Ohms
TRACTION SOLENOID	ECU, SEN, MOD, TRC, LFT, RHT, RER, MID, FRT, RESET		D2 - D3 10 - 12 Ohms

Contacts above should have no continuity to ground, except contacts A1, A2, and A3 of 30 pin connector. Contacts B1, K2, and K3 supply power to the EC-17.

18 Pin Connector



30 Pin Connector



Most Commonly Encountered Problems That Result In LEDs Being Illuminated.

Repair or Replace Components As Necessary

1. Abraded or cut wires in the convoluted tubing near frame clamps.
2. Cut or corroded wires near sharp frame members and frame mounted modulators.
3. Wire jacket worn through from overlapping sensor and modulator wires near frame members and frame mounted modulators.
4. Corroded connectors and connections not properly sealed or damaged seals.
5. Damaged connector latches or connectors not completely seated to mating assemblies.
6. Terminals not completely latched or seated into connectors.
7. Excessive sensor air gap, sensor clip tension, or excessive bearing end play (gently push sensor against wheel hub, or readjust bearings.)
8. Damage to exposed wires exiting or entering the convoluted tubing.
9. Worn, chipped or damaged sensor or modulator.
10. Non functioning antilock controller.

If Traction Dash Lamp Only Illuminated, Check/ Repair These Items First:

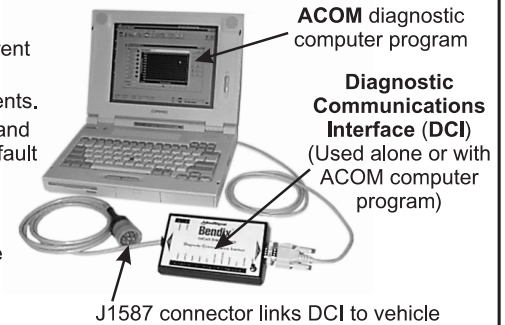
1. Traction enable/disable switch in wrong position.
2. Loss of traction engine serial communication (check service manual).
3. Traction solenoid not connected, or exceeds resistance range.

For units without LED's use the Bendix Diagnostic Communications Interface (DCI)



EC-17 Computer Analysis

- Locate and diagnose current faults.
- Test components.
- Obtain, view and store vehicle fault history.
- Record performance during vehicle operation.



Ordering Information

- Bendix ACOM kit 5004892
- Bendix DCI Kit 5004893
- Kent-Moore PCMCIA card J-38500-2400
- SPX PCMCIA Card ZTSE4455