

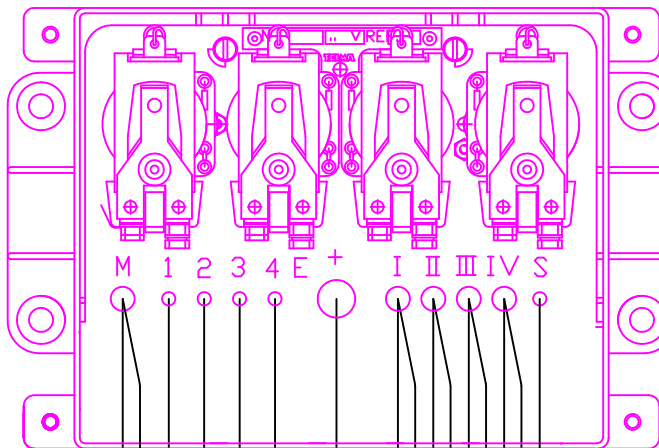
# TL134057a AIR BRAKE WIRING DIAGRAM WITH TRCM AND J1939

FREIGHTLINER 19jun14jh

NOTE: FIRMWARE VERSION 11.03.14 OR  
03.00.05 & LATER REQUIRED FOR J1939.  
REFER TO TL103037 FOR MORE DETAILS

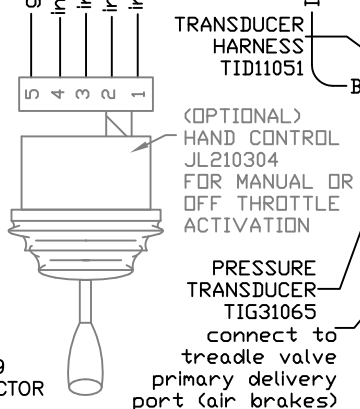
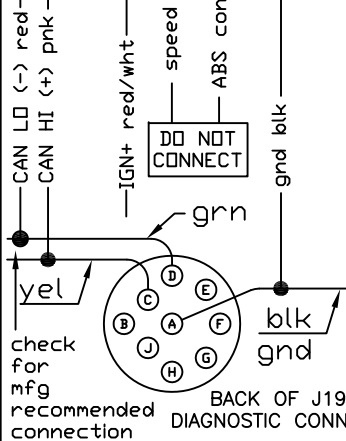
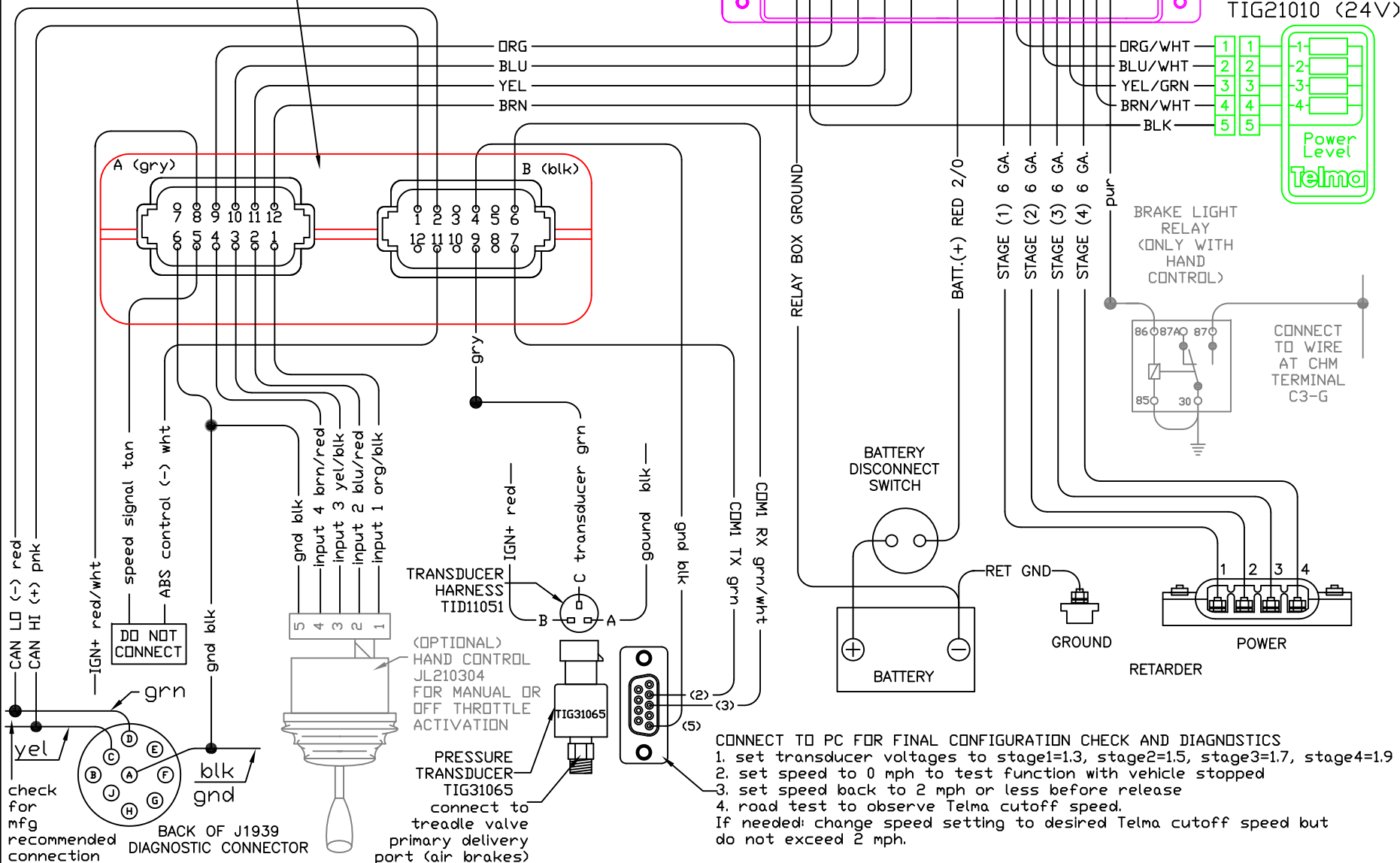
J1939 CAN control features:  
TRCM active outputs turn off  
under the following conditions.  
1) during ABS event  
(with progressive reactivation)  
2) Speed below 2 mph  
3) Throttle position greater than 1%  
4) Cruise Control is engaged

TRCM  
TIG31062  
12V/24V



RELAY BOX  
JD331121 (12V)  
JD332121 (24V)

LIGHT BAR  
DISPLAY  
TIG11010 (12V)  
TIG21010 (24V)



- CONNECT TO PC FOR FINAL CONFIGURATION CHECK AND DIAGNOSTICS
1. set transducer voltages to stage1=1.3, stage2=1.5, stage3=1.7, stage4=1.9
  2. set speed to 0 mph to test function with vehicle stopped
  3. set speed back to 2 mph or less before release
  4. road test to observe Telma cutoff speed.
- If needed: change speed setting to desired Telma cutoff speed but do not exceed 2 mph.



## EPA 2010 Models System Tap Points

### Dash Tap Points

#### Ignition Power, Ground and Dash Illumination

Tapping into dash illumination and ignition power and ground can be accomplished by using the center tap point connections located in the center back wall of the dash.

**Note:**

- \* Ignition power source will be powered during engine cranking
- \* Ignition power source will not be powered when key is in accessory position.

#### J1939 Connections

Tying into the J1939 backbone is accomplished by tapping into the system using the terminating resistor tee's located at each end of the backbone

The Chassis terminating resistor is located in a tee along the left frame rail, usually behind the cab.

The cab terminating resistor is located in the dash tucked up above the dash tap points for the J1587.

The correct datlink resistance measured at any device, or at the diagnostic plug should be 60 ohms with the battery disconnected.

**IMPORTANT:**

- It is essential that both terminating resistors remain connected to the ends of the J1939 backbone to dampen feedback signals. Numerous J1939 problems can be attributed to terminated resistors are missing or disconnected.
- If connections under dash become disconnected. Connections should never be reconnected back together directly IE ABS with ABS as this creates an independent circuit in the system that is not connected to the backbone.



#### J1939 Connections for Body Builders

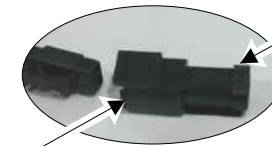
To connect easily to J1939 at dash or chassis locations order the following parts:

- (1) Tee and Jumper FTL# A06-37868-000
- (1) Jumper Plug # DUFDTM06 2S E004
- (2) Female Pins DUFWM2SB

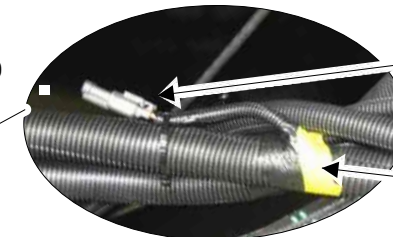
#### Component Module Locations

Component	Module Number
General J1939 harness drawings, schematics, and installation drawings	160
Engine harness, installation drawings and wiring diagrams	283 and 286
Transmission harness, installation drawings and wiring diagrams	34A, 34B and 343
ABS harness and installation drawings	330, 332, and 333
Gateway harness and installation drawings	860 and 835

Resistor Receptor  
Part FTL# 23-13303-902  
Deutsch # DTM04 - 2P - EP10

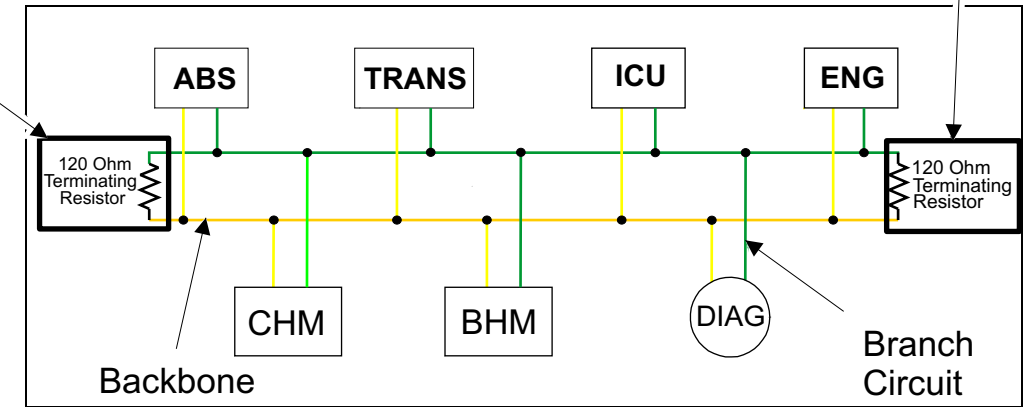


Chassis resistor located in chassis frame rear of cab



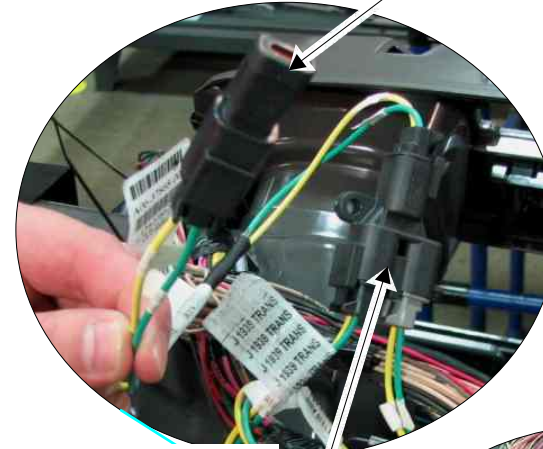
Look for Yellow or Red tape located at breakout point under cab Drivers side

#### The J1939 Datalink

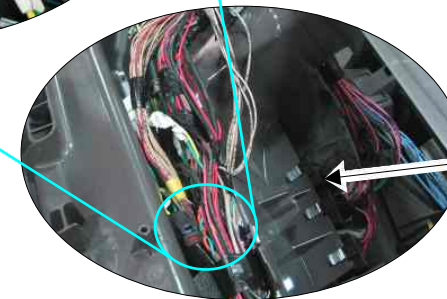


J1939 Multiplexing System connections

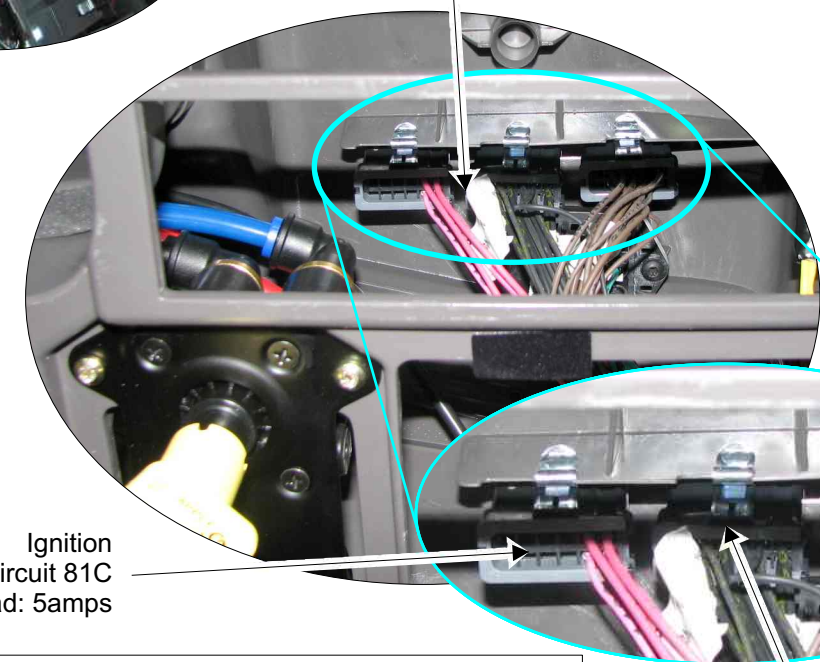
Cab resistor located in dash behind ICU panel



J1939 Tee connection is used for Switch Expansion or adding additional devices Modules only and is not used on std assemblies (FTL # A06-37868-000)



Dash Tap point



Illumination Circuit 29A  
Max load: 5amps

Ignition Circuit 81C  
Max load: 5amps

**Pin part number for harness connection**  
TERM-FEMALE,(18-16) PAC12110844  
TERM-FEMALE,(14-12) PAC12110842

Ground Circuit GND  
Max load: 10amps

### Dash Tap Points



## EPA 2010 Models

### Chassis Module (CHM) Pin Detail



A B C D E F G  
H J K L M N P

### C1 Tail Light Harness

Taillight Harness Pinouts at Connector C1				
Connector and Pin Numbers	Signal Name	Signal Type	Full	Standard
C1-A	Left Backup Lamp	Digital Output	X	X
C1-D	Left Taillight Pass-through	Pass-through	X	X
C1-E	Right Taillight Pass-through	Pass-through	X	X
C1-F	License Plate Lamp	Digital Output	X	X
C1-G	Left Rear Turn Lamp	Digital Output	X	X
C1-H	Backup Alarm	Digital Output	X	X
C1-J	Right Backup Lamp	Digital Output	X	X
C1-L	Right Stop Lamp	Digital Output	X	X
C1-N	Left Stop Lamp	Digital Output	X	X
C1-P	Right Rear Turn Lamp	Digital Output	X	X

### C2 Trailer Module Harness

A B C D  
E F G H

Trailer Module Harness Pinouts at Connector C2				
Connector and Pin Numbers	Signal Name	Signal Type	Full	Standard
C2-A	Trailer Power Relay	Digital Output	X	
C2-C	Ground	Power Ground	X	
C2-D	Trailer Stop Lamp Relay Pass-through	Pass-through	X	
C2-E	Trailer Right Turn Lamp	Digital Output	X	
C2-F	Trailer Marker Lamps Relay	Digital Output	X	
C2-G	Trailer Taillight Relay Pass-through	Pass-through	X	
C2-H	Trailer Left Turn Lamp	Digital Output	X	

### C3 Forward Chassis Harness

H G F E D C B A  
J K L M N P R S

Forward Chassis Harness Pinouts at Connector C3				
Connector and Pin Numbers	Signal Name	Signal Type	Full	Standard
C3-A	Fuel/Water Separator Heater	Digital Output	X	
C3-B	J1587{ Datalink	Datalink	X	X
C3-C	Fog/Road Lamps	Digital Output	X	
C3-D	Fog/Road Lamps	Digital Output	X	
C3-E	Low Air Pressure	Digital Input (active low)	X	X
C3-F	Park Brake	Digital Input (active low)	X	X
C3-G	Service Brake	Digital Input (active low)	X	X
C3-H	Ground	Power Ground	X	X
C3-J	Main Battery Power (VBAT2)	Power	X	X
C3-K	Right DRL	Digital Output	X	
C3-L	Right Low Beam	Digital Output	X	X
C3-M	Ignition	Digital Input (active high)	X	X
C3-N	Left Front/Side Turn Lamp	Digital Output	X	X
C3-P	Taillight/License Plate Lamps Pass-through	Pass-through	X	X
C3-R	Right Front/Side Turn Lamp	Digital Output	X	X
C3-S	J1587+ Datalink	Datalink	X	X

### C5 Air Management Unit

M L K J H G  
F E D C B A

Connector C5 Air Management Unit (AMU) Harness Pinouts				
Connector and Pin Numbers	Signal Name	Signal Type	Full	Standard
C5-A	AMU Analog Input 0	Digital Input (active low), Analog Input	X	
C5-B	AMU Analog Input 1	Digital Input (active low), Analog Input	X	
C5-C	Ground	Signal Ground	X	
C5-F	AMU Analog Input 2	Digital Input (active low), Analog Input	X	
C5-G	AMU Analog Input 3	Digital Input (active low), Analog Input	X	
C5-H	AMU Solenoid 0	Digital Output	X	
C5-J	AMU Solenoid 1	Digital Output	X	
C5-L	AMU Solenoid 2	Digital Output	X	
C5-M	AMU Solenoid 3	Digital Output	X	

### C4 Forward Chassis Harness

S R P N M L K J  
H G F E D C B A

Forward Chassis Harness Pinouts at Connector C4				
Connector and Pin Numbers	Signal Name	Signal Type	Full	Standard
C4-A	Module Wake-up Signal	Digital Input/Output	X	X
C4-B	Address Identification A	Analog Input	X	X
C4-C	Left Park Lamp	Digital Output	X	X
C4-D	Left Marker Lamp	Digital Output	X	X
C4-E	Address Identification C	Analog Input	X	X
C4-F	Left DRL	Digital Output	X	
C4-G	J1939+ Datalink	Datalink	X	X
C4-H	Ground (address identification D)	Signal Ground	X	X
C4-J	Main Battery Power (VBAT3)	Power	X	
C4-K	Right High Beam	Digital Output	X	X
C4-L	Right Park Lamp	Digital Output	X	X
C4-M	Right Marker Lamp	Digital Output	X	X
C4-N	Address Identification B	Analog Input	X	X
C4-P	Main Battery Power (VBAT1)	Power	X	X
C4-R	J1939{ Datalink	Datalink	X	X
C4-S	Ground	Power Ground	X	X