

Converting Between Combination and Separate Stop/Turn-Lights

54-174

FLA COE
FLB COE
FLD Conventional
Business Class
FLC 112 Conventional

Century Class Conventional
Argosy COE
Cargo
Columbia

112SD and Coronado
> Business Class M2
Cascadia
108SD/114SD

Freightliner
Service Bulletin

Description of Revisions: This bulletin replaces the version dated June 2012. PAC 12191235 is superseded to PAC 12191235 B in [Table 3](#), and additional information is added to [Table 4](#) about reference parameters.

General Information

Business Class M2 stop/turn-light wiring can be converted from combination stop/turn lights, to separate stop/turn lights. It can also be converted from separate stop/turn lights, to combination stop/turn lights. Converting between combination and separate configurations involves wiring and reference parameter changes.

When the vehicle is wired for combination stop/turn lights, the right and left stop/turn lights are wired to the chassis module (CHM) stop-light circuits. See [Table 1](#). When the vehicle is wired for separate stop/turn lights, the stop lights are wired to the CHM stop-light circuits and the turn signals are wired to the CHM turn-signal circuits. See [Table 2](#).

Combination Stop/Turn Light Wiring				
CHM Connector	Pin	CHM Circuit	Function	Maximum Load
C1	G	Left Turn Rear	Not Used	7.5 Amps
	L	Right Stop	Right stop/turn signal light	6.7 Amps
	N	Left Stop	Left stop/turn signal light	6.7 Amps
	P	Right Turn Rear	Not Used [†]	7.5 Amps [†]

C1.G retains function of the left turn signal output. The combined current draw of pins C1.G, C2.H, and C3.N must not exceed 7.5A.

[†] C1.P retains function of the right turn signal output. The combined current draw of pins C1.P, C2.E and C3.R must not exceed 7.5A.

Table 1, Combination Stop/Turn Light Wiring

Separate Stop/Turn Light Wiring				
CHM Connector	Pin	CHM Circuit	Function	Maximum Load
C1	G	Left Turn Rear	Left rear turn signal light	7.5 Amps
	L	Right Stop	Right stop light	6.7 Amps
	N	Left Stop	Left stop light	6.7 Amps
	P	Right Turn Rear	Right rear turn signal light	7.5 Amps [†]

The combined current draw of pins C1.G, C2.H, and C3.N must not exceed 7.5A.

[†] The combined current draw of pins C1.P, C2.E and C3.R must not exceed 7.5A.

Table 2, Separate Stop/Turn Light Wiring

Converting Combination Stop/Turn Lights to Separate Lights

Use the parts listed in [Table 3](#) for making additional CHM connections for separate stop/turn lights.

Parts Required		
Qty.	Description	Part Number
2	Packard GT280 female terminals	PAC 15304720 L or equivalent for 14 or 16 AWG
2	Packard GT280 cable seals	PAC 12191235 B
A/R	14 or 16 AWG wire, cut to length, for connecting to lights and modules	

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Service BulletinFLA COE
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108SD/114SD

Parts Required		
Qty.	Description	Part Number
A/R	Convoluting tubing cut to length to protect wire	
A/R	Tie-straps	

Table 3, Parts Required to Convert to Separate Stop/Turn Lights

Procedure

1. Park the vehicle on a level surface, shut down the engine, and set the parking brake. Chock the tires.
2. Locate the existing wiring to the combination stop/turn lights. This wiring will become the stop-light wiring when the procedure is complete. Route the wiring to the stop lights (if not using the existing lights as stop lights.) If current draw will exceed 6.7 Amps for either the right or left stop-light circuit, install relays.
3. Measure the required length of wire between the CHM connector C1, and the right-rear and left-rear turn-signal lights. Be sure to leave enough length for routing the wiring and installing the wire terminals.

NOTE: The CHM is located on a bracket on the left-hand frame rail, either behind, or under the cab.

4. Crimp a terminal, and terminal seal, to one end of each of the wires.
5. Disconnect connector C1 from the CHM. See [Fig. 1](#).
6. Remove the seals from CHM connector C1, and cavities G and P. See [Fig. 2](#).

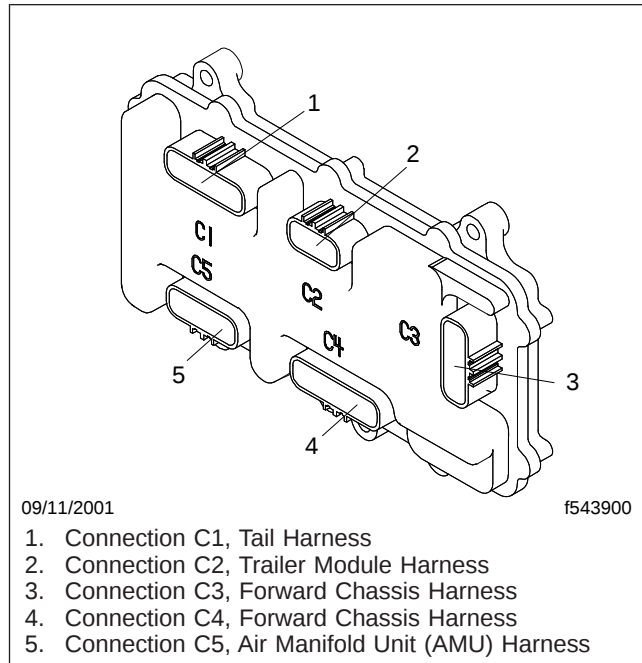


Fig. 1, Chassis Module

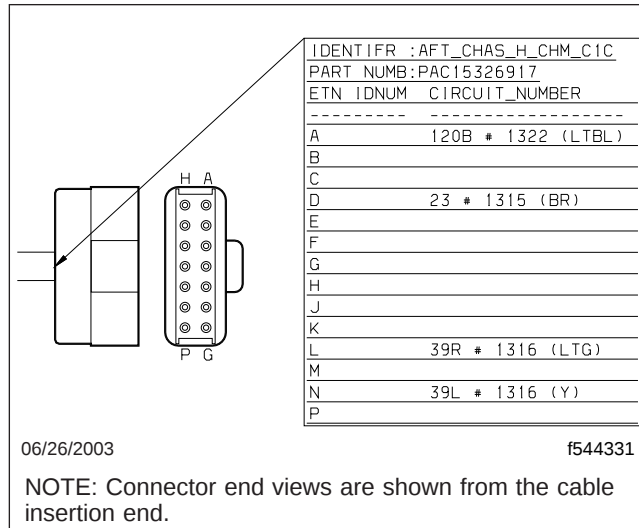


Fig. 2, Chassis Module Connector C1 Pinouts (typical)

7. Install the wire for the LEFT turn-signal light into connector CV1, cavity G. See [Fig. 2](#).

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**Freightliner
Service Bulletin**

8. Install the wire for the RIGHT turn-signal light into connector CV1, cavity P. See [Fig. 2](#).

NOTE: Be sure the terminals are fully seated in the connector.

9. Connect harness C1 to the CHM.

10. Route the wires to the right-rear and left-rear turn-signal light. Use convoluted tubing to protect the wires, and tie-strap the wires to the existing harness where appropriate.

11. Using ServiceLink, apply the appropriate reference parameter to the vehicle. For example, if changing from combination stop/turn lights to separate stop/turn lights, and the original reference parameter on the vehicle is 26-01020-014, it is necessary to apply 26-01020-015 to complete the modification. See [Table 4](#).

Reference Parameter Changes		
Parameter for Combination Stop/Turn Lights	Parameter for Separate Stop/Turn Lights	Notes
26-01020-000, -010	26-01020-004 or 26-01020-009	—
26-01020-001	26-01020-003	
26-01020-006	26-01020-007	
26-01020-012	26-01020-013	
26-01020-014	26-01020-015	If converting from separate to combined stop/turn lights, ServiceLink only allows the compatible parameter to be loaded based on the bulkhead module software level. Try each parameter (-014, -016, or -017) to determine compatibility.
26-01020-016		
26-01020-017		
26-01020-018	N/A	The -018 parameter includes front and side DRL, clearance, and tail lights. To convert from combined to separate stop/turn lights requires changing to parameter 26-01020-015, however the lights listed above will not function with DRLs.
N/A	26-01020-019	The -019 parameter turns on brake lights when the park brake is applied. If the customer is willing to give up this function, it can be replaced with a 26-01020-014 for combined lighting.
26-01020-020	26-01020-022	This parameter only applies to vehicles with side marker lights with turn signals. Side turn signals are also affected by this programming.
26-01020-023*	N/A	This parameter allows the brake signal to override the hazard lights. The parameter is used when the brake signal needs to be seen while the hazard lights are operating. Parameter 26-01020-015 can be used in this case. Hazards and brake lights function on separate circuits, so both are visible when operated.
26-01020-024	N/A	This parameter enables a separate 12-volt output for the service brake, and is not affected by the turn signal function. This function is not needed with separated lights that have a separate 12-volt stop signal. Parameter 26-01020-015 can be used for separated lights, if requested.

* Production uses parameter 26-01082-001, which allows the brake signal to override the hazard lights regardless of which 26-01020-XXX is selected. 26-01082-001 can be used in place of 26-01020-23.

Table 4, Reference Parameter Changes

12. Verify the correct operation of the lighting.

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Converting Separate Stop/Turn Lights to Combination Stop/Turn Lights

Procedure

1. Park the vehicle on a level surface, shut down the engine, and set the parking brake. Chock the tires.
2. Locate the existing turn-signal wiring, where it terminates at the rear turn-signal lights. Cut the wires, heat-shrink them to seal the chassis-side wire, and tuck them into the harness loom.
3. Locate the wiring that terminates at the existing stop lights. Route these wires as necessary to the new combination stop/turn lights. Use convoluted tubing to protect the wires, and tie-strap the wires to the existing harness, where appropriate.

NOTE: If the total current draw for the combination stop/turn light circuit, on either side, will exceed 6.7A, install relays.

4. Using ServiceLink, apply the appropriate reference parameter to the vehicle. For example, if changing from separate stop/turn lights to combination stop/turn lights, and if the original reference parameter on the vehicle is 26-01020-015, it is necessary to apply 26-01020-014 to complete the modification. See [Table 4](#).
5. Verify the correct operation of the lighting.

Warranty

This is an informational bulletin only; warranty does not apply.