

1/9/2020
CAL FTL 54-006

Subject: Automatic Headlamp and Wiper Ret- rofit

**Models Affected: New Cascadia vehicles with Detroit Assurance
5.0**

Our records indicate that you are the owner of certain vehicles, and DTNA has decided to share the following documentation with you.

Please see the attached communication in this email. We hope you find this information helpful.

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Work Instructions

Subject: Automatic Headlamp and Wiper Retrofit

Models Affected: New Cascadia vehicles with Detroit Assurance 5.0

Parts

Parts		
Part Number	Part Description	Quantity
A 960 820 05 26	MODULE-RAIN LIGHT SENSOR	1
	Select one of the two automatic headlamp options below.	
A66-07689-003	SW-HDLP,AUTO,WITH FOG LIGHT	1
A66-07689-004	SW-HDLP,AUTO,WITHOUT FOG LIGHT	1
	Select either the harnesses below or all the individual parts	
A66-07989-000	HARN-LT_HDLP,OL,DASH,SENSOR	1
A66-07962-000	HARN-WIPE,OL,OVHD,LT_HDLP	1
	Or	
23-13151-306	Connector for rain/light sensor	1
23-13208-080 (-083)	Terminals for rain/light sensor connector	3
23-13209-730	Terminal for SSAM connector X5	3
—	18-gauge black wire	15 feet (5.4 meters)
—	18-gauge blue wire	15 feet (5.4 meters)
—	18-gauge white wire	15 feet (5.4 meters)

Table 1, Parts Table

Work Instructions

1. Park the vehicle on a level surface, shut down the engine, and apply the parking brakes. Disconnect the battery cables and chock the tires.
2. Open the hood.
3. Remove the right VPDM cover, the right upper and lower A-pillar covers and grab handle, the lower center single SAM (SSAM) cover, the multipurpose camera (MPC) cover, the center overhead console light assembly and cover, and the switch panel. Refer to **Group 60** in the *New Cascadia Workshop Manual* for instructions.
4. Replace headlight switch with the auto version.
5. Clean the windshield mounting surface with IPA wipe (50/50 mix of isopropyl alcohol and water) or equivalent cleaner. Use a clean towel, and make sure the windshield surface is completely clean and free of grease and dust.
6. Install the rain/light sensor next to the MPC. See **Subject 54.11.150** Rain Light Sensor Removal and Installation in the *New Cascadia Workshop Manual* for instructions.

NOTE: If needed, see Service Bulletin 54-290 for different types of harness wraps and part numbers.

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7. Add an appropriate wrap to the Overhead (OH) and Dash overlay harnesses to protect them from chaffing and snagging during installation.

NOTE: If harnesses are being built manually, it is not necessary to pass through the OH/Dash CBR 3A connector in the right kick panel. The three circuits can run from SSAM connector X5 directly to the rain light sensor.

8. Install harnesses from RLS to SSAM. Snake the upper harness through the overhead, route to the right A-pillar CBR 3A connector, and make the connections. See [Fig. 1](#), [Fig. 2](#), [Fig. 3](#), [Fig. 4](#), and [Fig. 5](#).

Then route the dash overlay from the SSAM to the CBR 3A connector, and make the connections. See [Fig. 6](#), [Fig. 7](#), and [Fig. 8](#).



Fig. 1, Installing the OH Harness

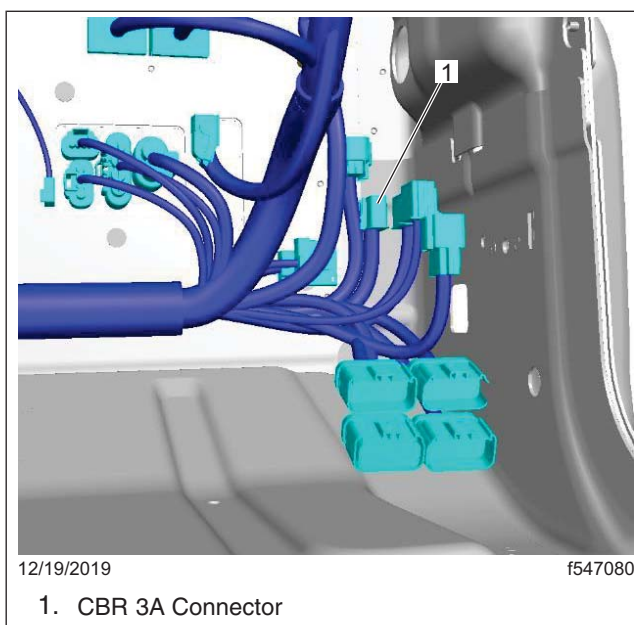


Fig. 2, Locating the CBR 3A Connector

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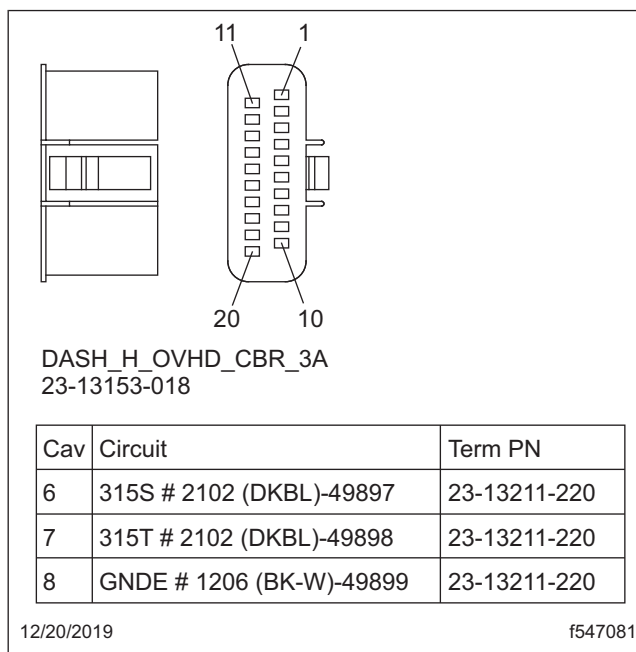


Fig. 3, Overhead A-Pillar Connector CBR 3A

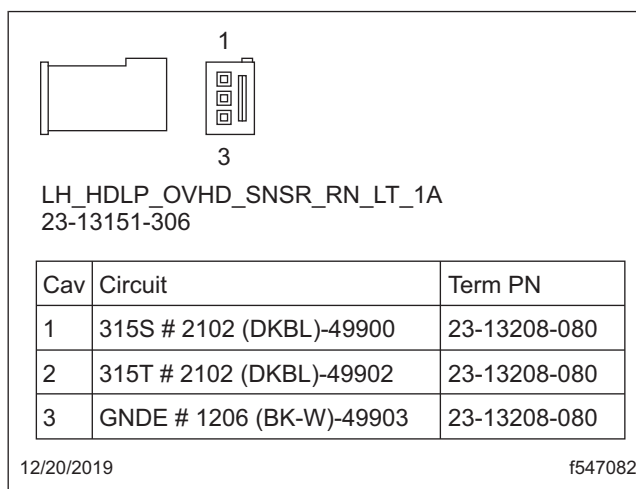


Fig. 4, Overhead Rain/Light Sensor Connector RN LT 1A

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Fig. 5, Rain/Light Sensor Installed

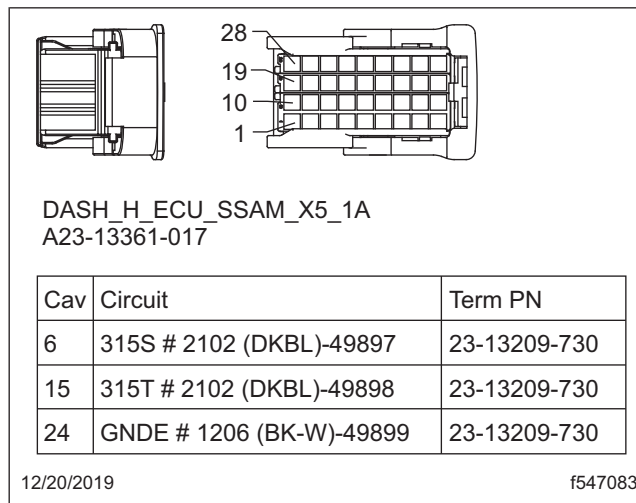


Fig. 6, Dash ECU SSAM Connector X5 1A

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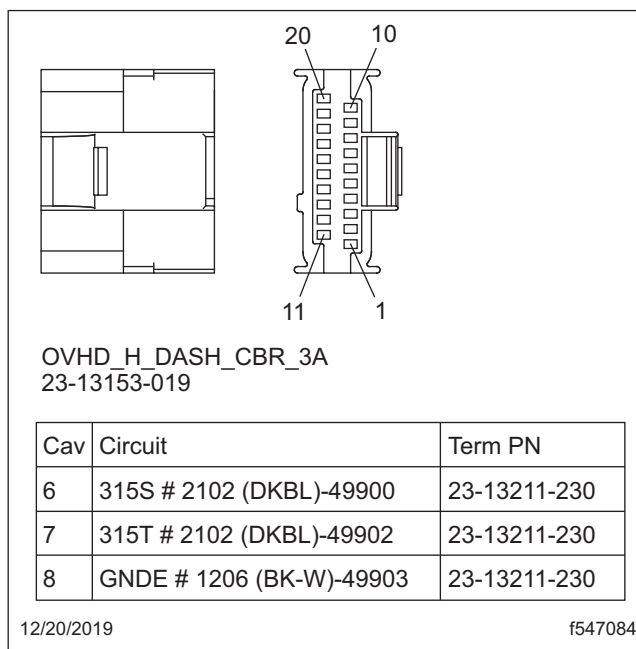


Fig. 7, Dash Overlay A-pillar Connector CBR 3A

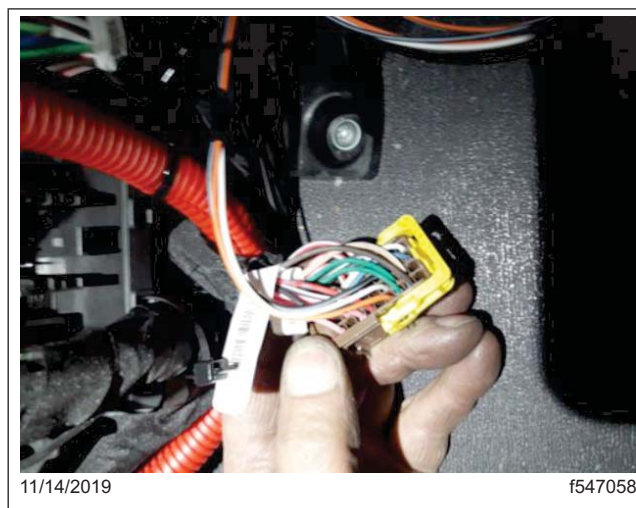


Fig. 8, SSAM connector X5 with the Dash Overlay Installed

9. Connect the battery cables.
10. Using DiagnosticLink, go to the Parameter screen and enter the parameters from Table 2 into the SSAM. See [Fig. 9](#), [Fig. 10](#), [Fig. 11](#), [Fig. 12](#), [Fig. 13](#), [Fig. 14](#), [Fig. 15](#). After all parameter changes have been made, click "Send."

SSAM Parameter Changes		
Old Parameter	New Parameter	Name
038 447 98 58	039 447 11 58	MSC HLS

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SSAM Parameter Changes		
043 447 92 58	043 447 93 58	GPC PGPC LGTSENS
032 447 50 58	034 447 23 58	WWC RAIN-LIGHT SENSOR
039 447 22 58	069 447 74 58	WWC CONTINUED
031 447 82 58	034 447 08 58	ELC LIGHT SENSOR
043 447 17 58	043 447 18 58	ELC HLS
—	043 447 19 58	ELC HLS

Table 2, SSAM Parameter Changes

ISC - R1801 Extension		
MSC - Continued	A0434478558-002	MSC Continued - LG3 002
MSC HLS Headlampswitch interface	A0394471258-001	MSC HLS - Fog/Road, Auto LG3
MSC - HW Config	A0314472558-001	MSC HW Config - Default

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Fig. 9, MSC HLS - Fog/Road, Auto LG3

ISC - R1801 Extension		
MSC - Continued	A0434478558-002	MSC Continued - LG3 002
MSC HLS Headlampswitch interface	A0394471158-001	MSC HLS - No Fog/Road, Auto LG3
MSC - HW Config	A0314472558-001	MSC HW Config - Default

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Fig. 10, MSC HLS - No Fog/Road, Auto LG3

FSC Timer Block 1_20	A0434475058-001	FSC Timer Block - Suspen Dump Fix
GPC - Continued	A0434477658-001	GPC Continued - LG3
GPC Global Parameter Control	n/a	
PGPC_N3_starter_cutoff_rpm	A0334472758-002	300.0 rpm 0.0 8031.9
PGPC_GVC_FogLmpFtCf	A0334474158-001	Available
PGPC_GVC_active	A0334472858-001	Not active
PGPC_LgtSens	A0434479358-001	Available
PGPC_revgeat_message	A0334475658-001	CAN Message from CPC
ILC Ambience Light	A0434473858-001	ILC Ambience Light - LG3

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A. Open GPC Global Parameter Control
B. Change the PGPC_LgtSens parameter

Fig. 11, GPC Global Parameter Control - PGPC LgtSens

WWC - HW Config	A0334475158-001	WWC HW Config - Default
WWC - R1801 Extension		
WWC Rain-Light sensor	A0344472358-001	WWC Rain-Light Sensor - Enabled JYST
PWWC_rls_rain_sensor_mode	(from parent)	Available

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Fig. 12, WWC Rain-Light Sensor

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VDC Requested Engine Speed	A0694479358-001	VDC Requested Engine Speed - First Set Speed - JYST
VDC Vehicle Speed Limit Request	A0444472358-001	Ride Height Speed Limiting
WWC - Continued	A0694477458-001	WWC Continued - Standard - JYST
WWC - HW Config	A0334475158-001	WWC HW Config - Default
WWC - R1801 Extension		
WWC Rain-Light sensor	A0344472358-001	WWC Rain-Light Sensor - Enabled JYST

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Fig. 13, WWC - Continued

ELC - HW Config	A0334476058-003	ELC HW Config - LED 003
ELC Lamps check	A0324474058-002	ELC Lamps Check - SOP 002
ELC Light sensor	A0344470858-001	ELC Light Sensor - Enabled
ELC Lights on warning buzzer	A0314478058-001	ELC Lights on warning buzzer - Standard

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Fig. 14, ELC Light Sensor

ELC Backup lighting	A0434473258-001	ELC Backup Lighting - LG3
ELC Camouflage	A0314476758-001	ELC Camouflage Mode - Disabled
ELC - Continued	n/a	
PELC_hls2_min_off	A0434472058-001	0.00 s 0.00 655.35
PELC_hls2_ihc_min_off	A0434471958-002	2.00 s 0.00 600.00
PELC_hls2_ihc_available	A0434471858-001	Present at position auto
PELC_hls1_ml_turn_light_dep	A0434472858-001	On
PELC_hls1_ml_flashing_enable	A0434473058-001	Enabled

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A. Open ELC - Continued and change the PELC-hls2_ihc_min_off parameter
B. Change the PELC-hls2_ihc_available parameter

Fig. 15, ELC - Continued

NOTE: "Latest" is the last service record (may be older software) and "Newest" is the most up to date software available for the installed hardware. Both will have parameter sets that have been updated relative to the upload from the vehicle. If the last service record is the most up to date software available, no "Newest" record will be provided.

- Next, go to Program Device and program the SSAM to the "Latest" software from server. Then go to the "Actions" tab and perform the instrumentation control unit (ICUC) auto-configuration routine. See Freightliner **Service Bulletin 54-308** Chassis ECU Programming for additional directions.
- Install the right VPDM cover, the right upper and lower A-pillar covers and grab handle, the lower center SSAM cover, the MPC cover, the center overhead console light assembly and cover, and the switch panel. Refer to **Group 60** in the *New Cascadia Workshop Manual* for instructions.
- Check the vehicle for proper operation of headlights and wipers, validate that the intelligent high-beams work.