



Western Star Bodybuilder Book: Revision 3.1

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This guide is to be used as a reference document only.
Please consult your Western Star CAE representative on
specific spec'ing needs as the information contained in
this document can change without notice.



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Frequently Asked Electrical Questions

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Question: How can I tell from the order if the truck has any body builder connections?

Answer: Look at **sales code 334** and **353** to determine if supplemental body builder harness options where ordered with your truck.

Question: If there is a Body Builder option, what type of interface plug does the option have and where will it be located?

Answer: The 4700 offers blunt cut wires at the BOC with an access plate in the floor for body builder connections see page **1A-13/14** and **1B-18/19**. The 4800/4900/6900 offer body builder harnesses to the exterior BOC and the End of Frame with std plugs. See page **1B-14** for schematics and details.

Question: Where can I find specific transmission information on the truck order and in the Body builder book?

Answer: Truck specific Transmission specifications can be located in the truck order under sales code **342** and schematic information can be found using the sales codes found on page **1B-4** of this chapter of the body builder book.

Question: Can you obtain wiring diagrams for specific options for serial numbers and any information on dealer optionally installed features?

Answer: Specific schematic information can be obtained by serial number is available to our dealers on line via PartsPro and EZ wiring. Use page **1B-4** of this chapter to locate the module location information.

Question: Does Western Star utilize the (J1939) CAN-bus data protocol?

Answer: The Western Star dash gauges and driver display (if equipped) are controlled via the J1587 data bus. See the star gauge **P 1A-6, 1A-7** for more information.

Question: Can the day time running lights be deactivated?

Answer: The instructions to deactivate the day time running lights are located on page **1A-22**.

Question: Is there a high amperage option for Plow lights on the 4800/4900/6900 Models?

Answer: Yes a plow light package is available using Sales code **329-054** which supplies a separate junction box mounted to the back wall behind the passenger seat. See details and schematics for this option on **page 1B-16**.

Question: Is there a place I can tie into the tail lights without splicing into the tail light harness?

Answer: Yes some trucks will be equipped with a capped plug at the bac of cab LH rail that is labeled supplemental trailer cable wiring (shown on **P 1B-15**) if the **388 Mod** option has ordered. If this option and plug is not in the harness **Pins #20,33,44,57** and **71** can be been accessed in the Main Chassis Bulkhead. The pinout details for this plug can be found in **page 1C-4** dependant on your model and production year.

Question: I have a unit with a Eaton manual transmission. Where would the body builder locate the vehicle speed when installing a salt/sander spreader with a controlled flow rate at different speeds on a manual transmission?

Answer: The best way to do this is by adding a second speed sensor to the rear bearing cover of the transmission. see Page **1B-20**.

Question: Is a J1939 Protocol available? If so, how can I gain access to it?

Answer: With the 2010 model year trucks or newer the J1939 protocol is available via the diagnostic connector located at the lower left hand side of the dash and new nodes can be added at the end resistors. See Page **1A-10** and **1A-11** for location and connection details.

Question: Is there any factory provisions for remote Stop?

Answer: Yes remote Stop is available using Option code **162-018** based on the engine configuration. Availability would need to be determined by the Sales and Application Engineering groups.

Question: Is there any factory provisions for remote Start/Stop?

Answer: Yes remote Start Stop is available using Option code **157-004** for the 4800/4900 models. Customer supplied harness with 4 position switch is supplied by customer for this option See **Page 1B-12** for more details.

Question: How do I get remote Engine Speed Control (ECU)?

Answer: This option can be requested on new orders via data code **163-008** or **163-009**. If these options are not present, remote engine speed control can also be accessed via the JS19 connector located in the engine compartment and is part of the main engine harness A06-63518. See Pages **1B-13** to **1B-15** for schematic information.

Question: Can you get a fast idle interface on the WST?

Answer: Data code **148-035** provides a fast idle switch interface tied to the parking brake See schematics on Page **1B-11**.

Question: Does the 4700 model have the same electrical architecture as the 4800/4900 models?

Answer: The 4700 electrical architecture is the same as other WST models but has different pin locations in the front wall. These differences are defined in the pin out charts in chapter **1C** dependant on your model and production year.

Question: Can you deactivate the brake override circuit so that the 4-way flashers stay on when the brakes are activated?

Answer: The instructions to disable the brake override circuit are located on page **1A-21**.

Question: I have installed aftermarket LED tail lamps to my vehicle but they are not working properly.

Answer: The WST electrical turn signal system requires a minimum amperage load from the tail light system. When LED lights are used a resistor needs to be added to increase the load to an acceptable level. See Page **1A-21** for installation information.

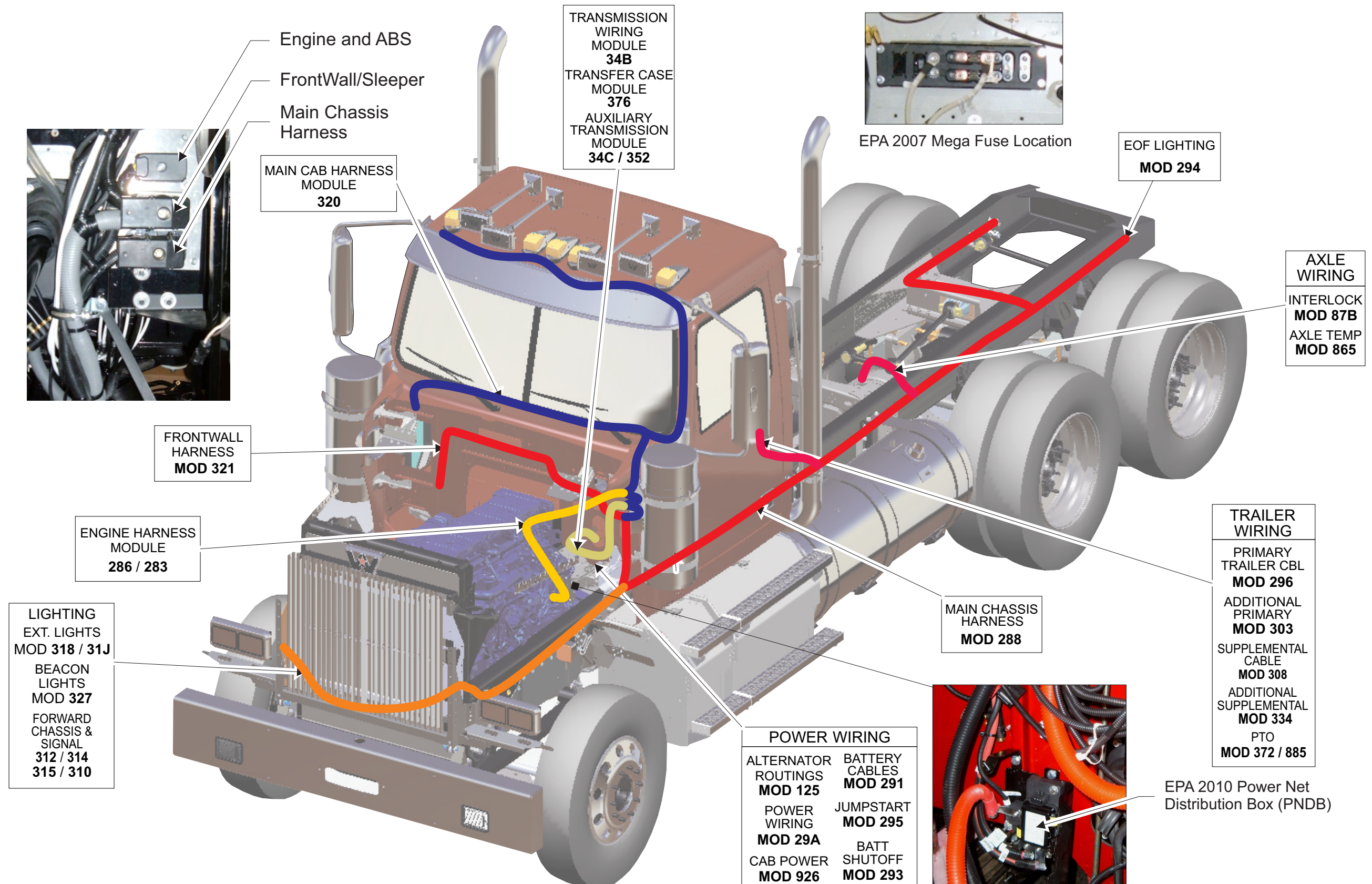
Question: Does WST offer switches that are ignition controlled that are not rated to 20 amps or relay controlled?

Answer: Yes WST offers a (6) optional switch option for this application with **329-071** see page **1A-15**.

Question: If I need to stop the truck from starting under specific conditions is there a way I can do this?

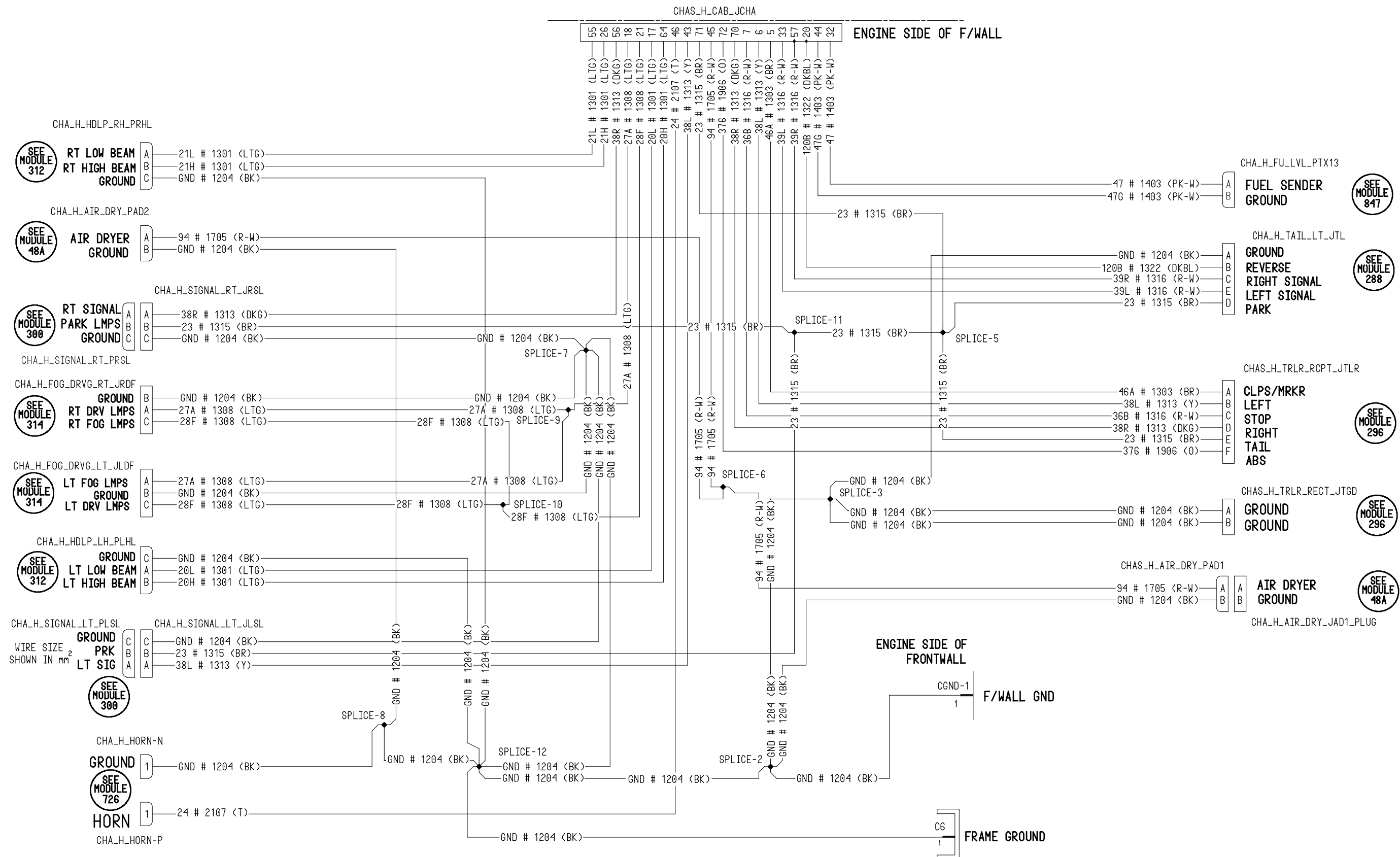
Answer: Yes, tying into the Neutral Safety switch circuit (located in the front wall PDM, see page **1A-7**) with a signal controlled relay will stop the truck from starting. the starting schematics can be found in **Mod 156** and are specific for each engine Make.

Harness/Schematic Location Information





47/48/49/69 Main Chassis Harness Schematic

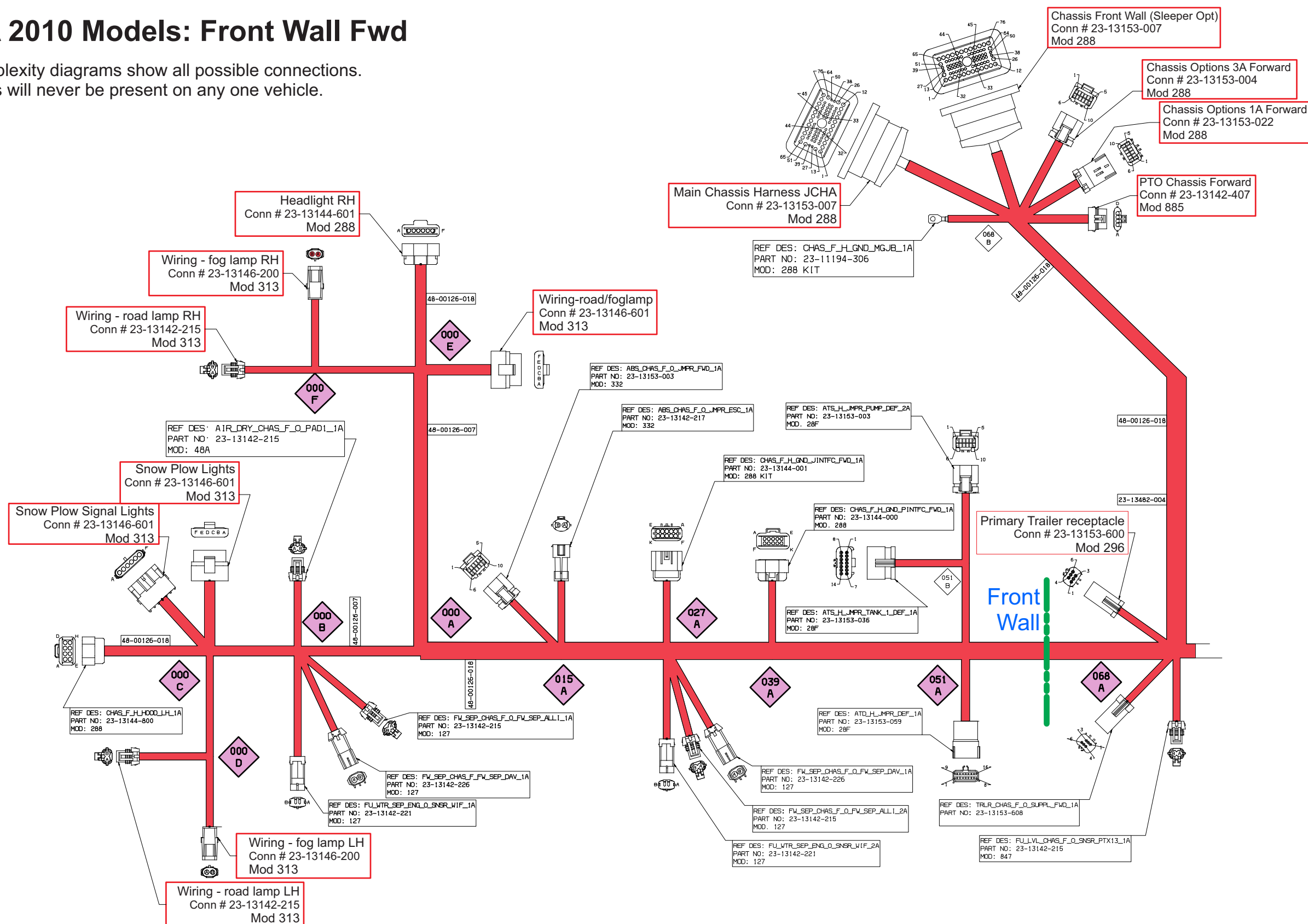


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Chassis Max Complexity Harness

All LHD EPA 2010 Models: Front Wall Fwd

Note: Maximum complexity diagrams show all possible connections.
All connections will never be present on any one vehicle.





Models: Under Cab Rear

Diagrams show all connections for one vehicle.

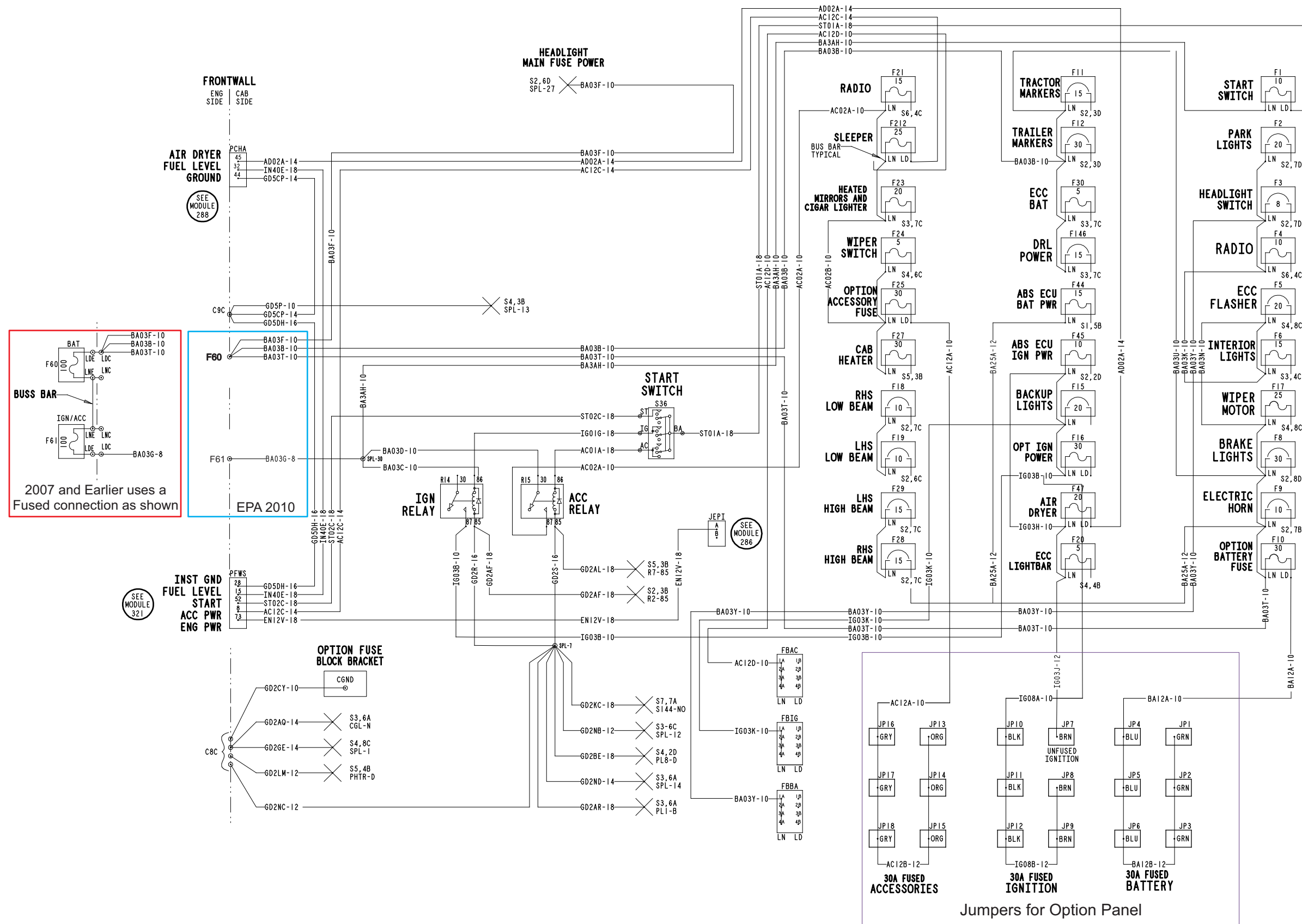
The diagram illustrates the wiring for the rear of a vehicle cab, showing various electrical components and their connections. The central blue line represents the main power distribution. Key components and their connections include:

- 082 A** (Pink diamond): AFT_DEF (Part No: 23-13153-011, Mod: 28F).
- 082 B** (Pink diamond): ATLS_HLECU_DCUL_53WAY_2A (Part No: A23-13361-004, Mod: 28F).
- 082 C** (Pink diamond): LHLATD_JMPR (Part No: 23-13153-203, Mod: 28F).
- 082 D** (Pink diamond): ATD_H_JMPR_1US_1A (Part No: 23-13148-030, Mod: 28F).
- 082 E** (Pink diamond): ATD_HLECU_ACM_1A (Part No: 23-13149-030, Mod: 28F).
- 082 F** (Pink diamond): ATD_HLECU_ACM_2A (Part No: 23-13149-029, Mod: 28F).
- 082 G** (Pink diamond): ATD_H_JMPR_ACM_EXTN_1A (Part No: 23-13153-030, Mod: 28F).
- 082 H** (Pink diamond): ATD_H_JMPR_ACM_EXTN_2A (Part No: 23-13153-003, Mod: 28F).
- 082 I** (Pink diamond): ATD_H_JMPR_PUMP_DEF_AFT_1A (Part No: 23-13153-003, Mod: 28F).
- 082 J** (Pink diamond): ATD_H_JMPR_TANK_DEF_AFT_1A (Part No: 23-13153-036, Mod: 28F).
- 082 K** (Pink diamond): ATD_H_JMPR_DOSER_1A (Part No: 23-13153-056, Mod: 28F).
- 082 L** (Pink diamond): ATD_H_HTR_ACM_1A (Part No: 23-13153-203, Mod: 28F).
- 082 M** (Pink diamond): ATD_H_HTR_ACM_2A (Part No: 23-13153-003, Mod: 28F).
- 082 N** (Pink diamond): ATD_H_HTR_ACM_3A (Part No: 23-13153-003, Mod: 28F).
- 082 O** (Pink diamond): ATD_H_HTR_ACM_4A (Part No: 23-13153-003, Mod: 28F).
- 082 P** (Pink diamond): ATD_H_HTR_ACM_5A (Part No: 23-13153-003, Mod: 28F).
- 082 Q** (Pink diamond): ATD_H_HTR_ACM_6A (Part No: 23-13153-003, Mod: 28F).
- 082 R** (Pink diamond): ATD_H_HTR_ACM_7A (Part No: 23-13153-003, Mod: 28F).
- 082 S** (Pink diamond): ATD_H_HTR_ACM_8A (Part No: 23-13153-003, Mod: 28F).
- 082 T** (Pink diamond): ATD_H_HTR_ACM_9A (Part No: 23-13153-003, Mod: 28F).
- 082 U** (Pink diamond): ATD_H_HTR_ACM_10A (Part No: 23-13153-003, Mod: 28F).
- 082 V** (Pink diamond): ATD_H_HTR_ACM_11A (Part No: 23-13153-003, Mod: 28F).
- 082 W** (Pink diamond): ATD_H_HTR_ACM_12A (Part No: 23-13153-003, Mod: 28F).
- 082 X** (Pink diamond): ATD_H_HTR_ACM_13A (Part No: 23-13153-003, Mod: 28F).
- 082 Y** (Pink diamond): ATD_H_HTR_ACM_14A (Part No: 23-13153-003, Mod: 28F).
- 082 Z** (Pink diamond): ATD_H_HTR_ACM_15A (Part No: 23-13153-003, Mod: 28F).
- 082 AA** (Pink diamond): ATD_H_HTR_ACM_16A (Part No: 23-13153-003, Mod: 28F).
- 082 AB** (Pink diamond): ATD_H_HTR_ACM_17A (Part No: 23-13153-003, Mod: 28F).
- 082 AC** (Pink diamond): ATD_H_HTR_ACM_18A (Part No: 23-13153-003, Mod: 28F).
- 082 AD** (Pink diamond): ATD_H_HTR_ACM_19A (Part No: 23-13153-003, Mod: 28F).
- 082 AE** (Pink diamond): ATD_H_HTR_ACM_20A (Part No: 23-13153-003, Mod: 28F).
- 082 AF** (Pink diamond): ATD_H_HTR_ACM_21A (Part No: 23-13153-003, Mod: 28F).
- 082 AG** (Pink diamond): ATD_H_HTR_ACM_22A (Part No: 23-13153-003, Mod: 28F).
- 082 AH** (Pink diamond): ATD_H_HTR_ACM_23A (Part No: 23-13153-003, Mod: 28F).
- 082 AI** (Pink diamond): ATD_H_HTR_ACM_24A (Part No: 23-13153-003, Mod: 28F).
- 082 AJ** (Pink diamond): ATD_H_HTR_ACM_25A (Part No: 23-13153-003, Mod: 28F).
- 082 AK** (Pink diamond): ATD_H_HTR_ACM_26A (Part No: 23-13153-003, Mod: 28F).
- 082 AL** (Pink diamond): ATD_H_HTR_ACM_27A (Part No: 23-13153-003, Mod: 28F).
- 082 AM** (Pink diamond): ATD_H_HTR_ACM_28A (Part No: 23-13153-003, Mod: 28F).
- 082 AN** (Pink diamond): ATD_H_HTR_ACM_29A (Part No: 23-13153-003, Mod: 28F).
- 082 AO** (Pink diamond): ATD_H_HTR_ACM_30A (Part No: 23-13153-003, Mod: 28F).
- 082 AP** (Pink diamond): ATD_H_HTR_ACM_31A (Part No: 23-13153-003, Mod: 28F).
- 082 AQ** (Pink diamond): ATD_H_HTR_ACM_32A (Part No: 23-13153-003, Mod: 28F).
- 082 AR** (Pink diamond): ATD_H_HTR_ACM_33A (Part No: 23-13153-003, Mod: 28F).
- 082 AS** (Pink diamond): ATD_H_HTR_ACM_34A (Part No: 23-13153-003, Mod: 28F).
- 082 AT** (Pink diamond): ATD_H_HTR_ACM_35A (Part No: 23-13153-003, Mod: 28F).
- 082 AU** (Pink diamond): ATD_H_HTR_ACM_36A (Part No: 23-13153-003, Mod: 28F).
- 082 AV** (Pink diamond): ATD_H_HTR_ACM_37A (Part No: 23-13153-003, Mod: 28F).
- 082 AW** (Pink diamond): ATD_H_HTR_ACM_38A (Part No: 23-13153-003, Mod: 28F).
- 082 AX** (Pink diamond): ATD_H_HTR_ACM_39A (Part No: 23-13153-003, Mod: 28F).
- 082 AY** (Pink diamond): ATD_H_HTR_ACM_40A (Part No: 23-13153-003, Mod: 28F).
- 082 AZ** (Pink diamond): ATD_H_HTR_ACM_41A (Part No: 23-13153-003, Mod: 28F).
- 082 BA** (Pink diamond): ATD_H_HTR_ACM_42A (Part No: 23-13153-003, Mod: 28F).
- 082 BB** (Pink diamond): ATD_H_HTR_ACM_43A (Part No: 23-13153-003, Mod: 28F).
- 082 BC** (Pink diamond): ATD_H_HTR_ACM_44A (Part No: 23-13153-003, Mod: 28F).
- 082 BD** (Pink diamond): ATD_H_HTR_ACM_45A (Part No: 23-13153-003, Mod: 28F).
- 082 BE** (Pink diamond): ATD_H_HTR_ACM_46A (Part No: 23-13153-003, Mod: 28F).
- 082 BF** (Pink diamond): ATD_H_HTR_ACM_47A (Part No: 23-13153-003, Mod: 28F).
- 082 BG** (Pink diamond): ATD_H_HTR_ACM_48A (Part No: 23-13153-003, Mod: 28F).
- 082 BH** (Pink diamond): ATD_H_HTR_ACM_49A (Part No: 23-13153-003, Mod: 28F).
- 082 BI** (Pink diamond): ATD_H_HTR_ACM_50A (Part No: 23-13153-003, Mod: 28F).
- 082 BJ** (Pink diamond): ATD_H_HTR_ACM_51A (Part No: 23-13153-003, Mod: 28F).
- 082 BK** (Pink diamond): ATD_H_HTR_ACM_52A (Part No: 23-13153-003, Mod: 28F).
- 082 BL** (Pink diamond): ATD_H_HTR_ACM_53A (Part No: 23-13153-003, Mod: 28F).
- 082 BM** (Pink diamond): ATD_H_HTR_ACM_54A (Part No: 23-13153-003, Mod: 28F).
- 082 BN** (Pink diamond): ATD_H_HTR_ACM_55A (Part No: 23-13153-003, Mod: 28F).
- 082 BO** (Pink diamond): ATD_H_HTR_ACM_56A (Part No: 23-13153-003, Mod: 28F).
- 082 BP** (Pink diamond): ATD_H_HTR_ACM_57A (Part No: 23-13153-003, Mod: 28F).
- 082 BQ** (Pink diamond): ATD_H_HTR_ACM_58A (Part No: 23-13153-003, Mod: 28F).
- 082 BR** (Pink diamond): ATD_H_HTR_ACM_59A (Part No: 23-13153-003, Mod: 28F).
- 082 BS** (Pink diamond): ATD_H_HTR_ACM_60A (Part No: 23-13153-003, Mod: 28F).
- 082 BT** (Pink diamond): ATD_H_HTR_ACM_61A (Part No: 23-13153-003, Mod: 28F).
- 082 BU** (Pink diamond): ATD_H_HTR_ACM_62A (Part No: 23-13153-003, Mod: 28F).
- 082 BV** (Pink diamond): ATD_H_HTR_ACM_63A (Part No: 23-13153-003, Mod: 28F).
- 082 BW** (Pink diamond): ATD_H_HTR_ACM_64A (Part No: 23-13153-003, Mod: 28F).
- 082 BX** (Pink diamond): ATD_H_HTR_ACM_65A (Part No: 23-131

Ref
Dwg L06-82534



4700/4800/4900/6900 Main Cab Schematic





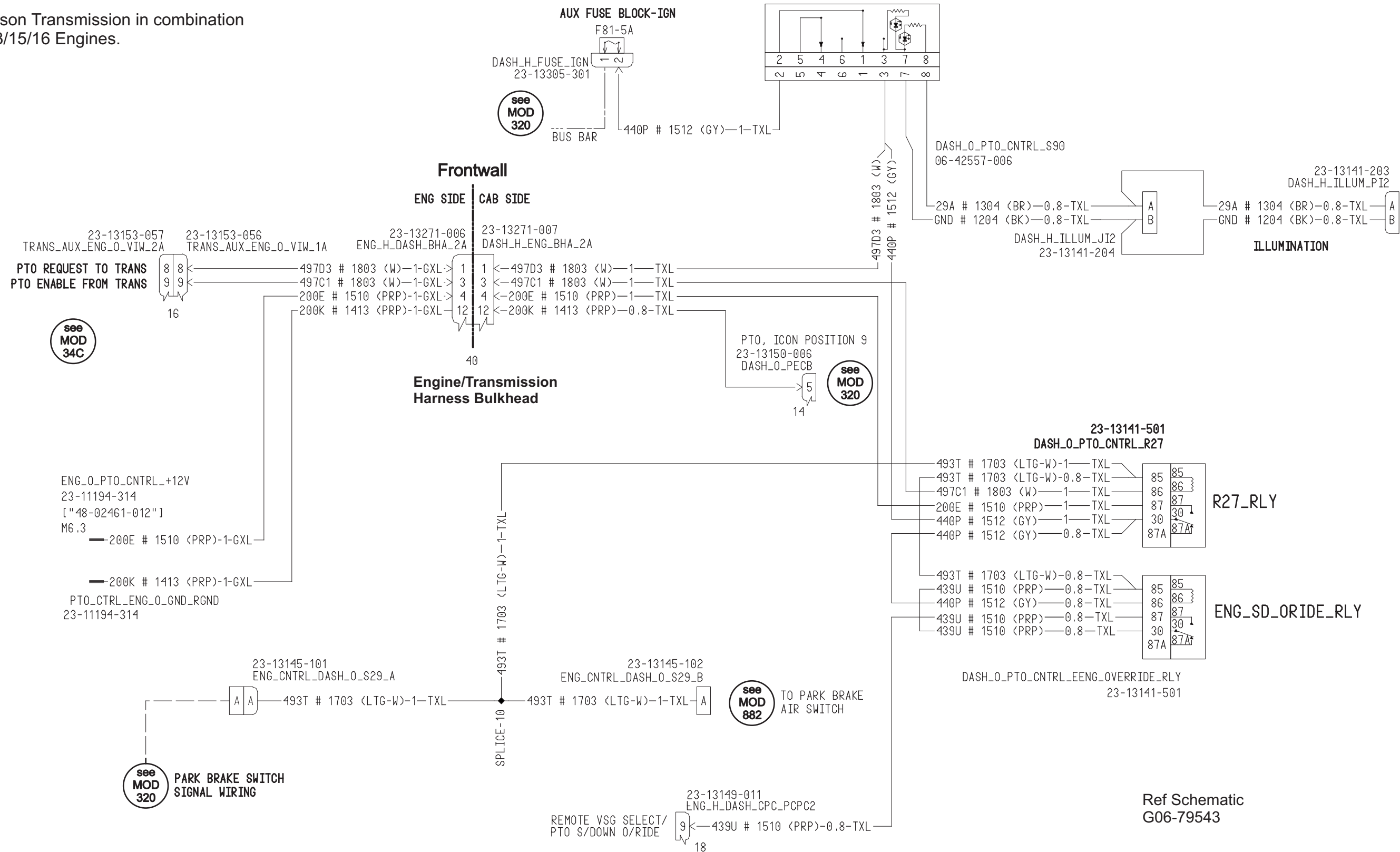
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4700/4800/4900 LHD PTO Schematic

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372-036 Dash mounted electrical PTO switch with indicator

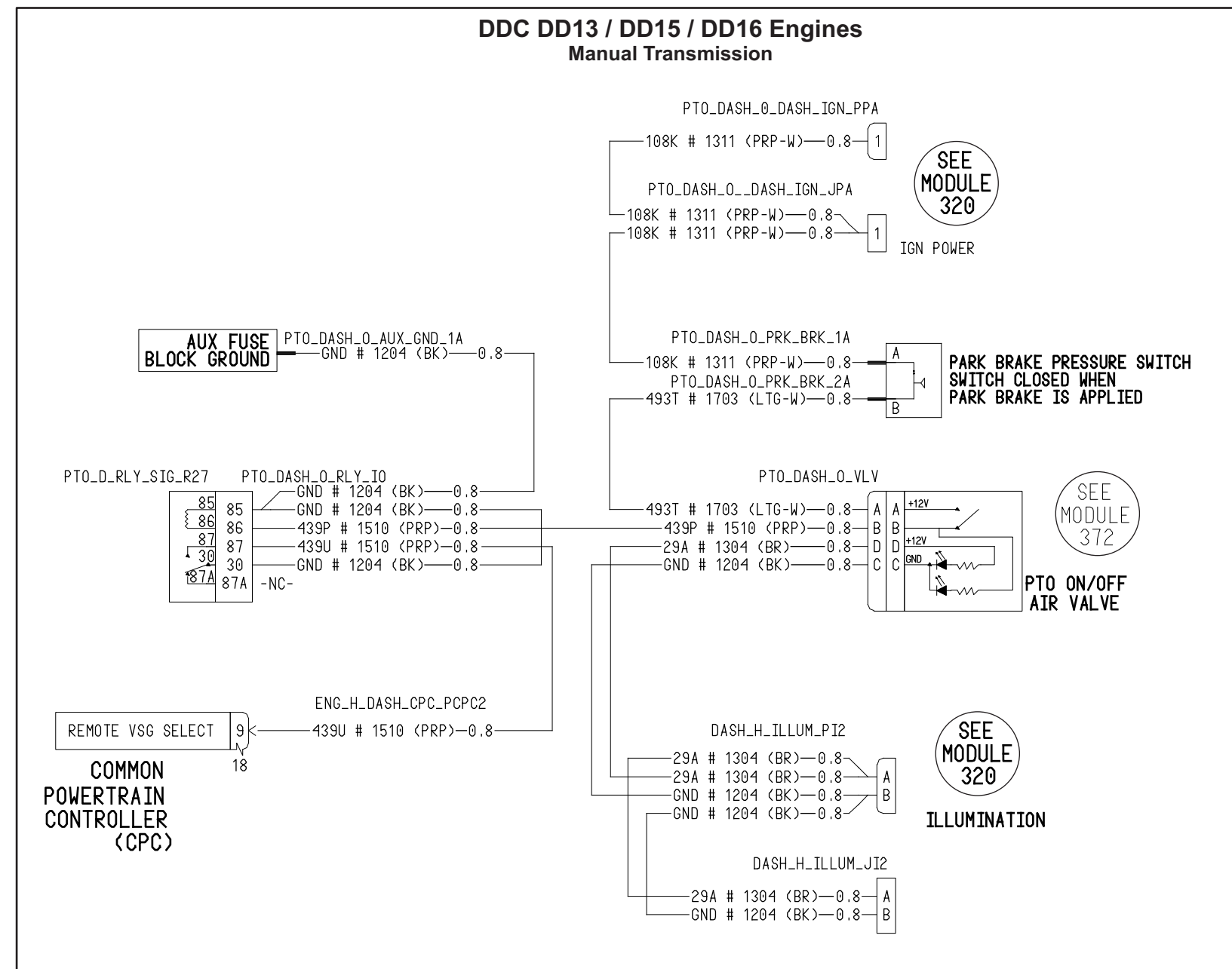
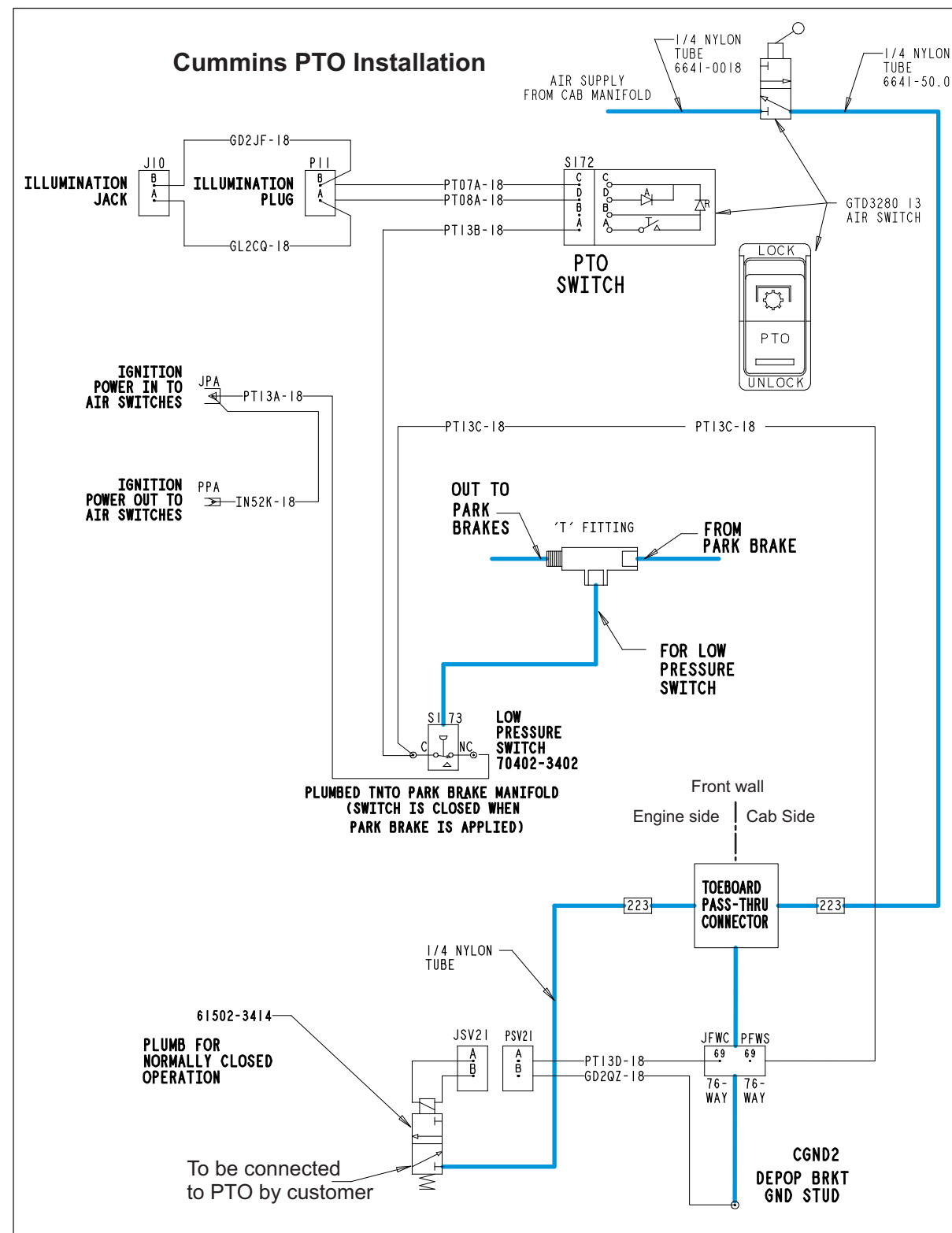
Use with Allison Transmission in combination with DDC 13/15/16 Engines.



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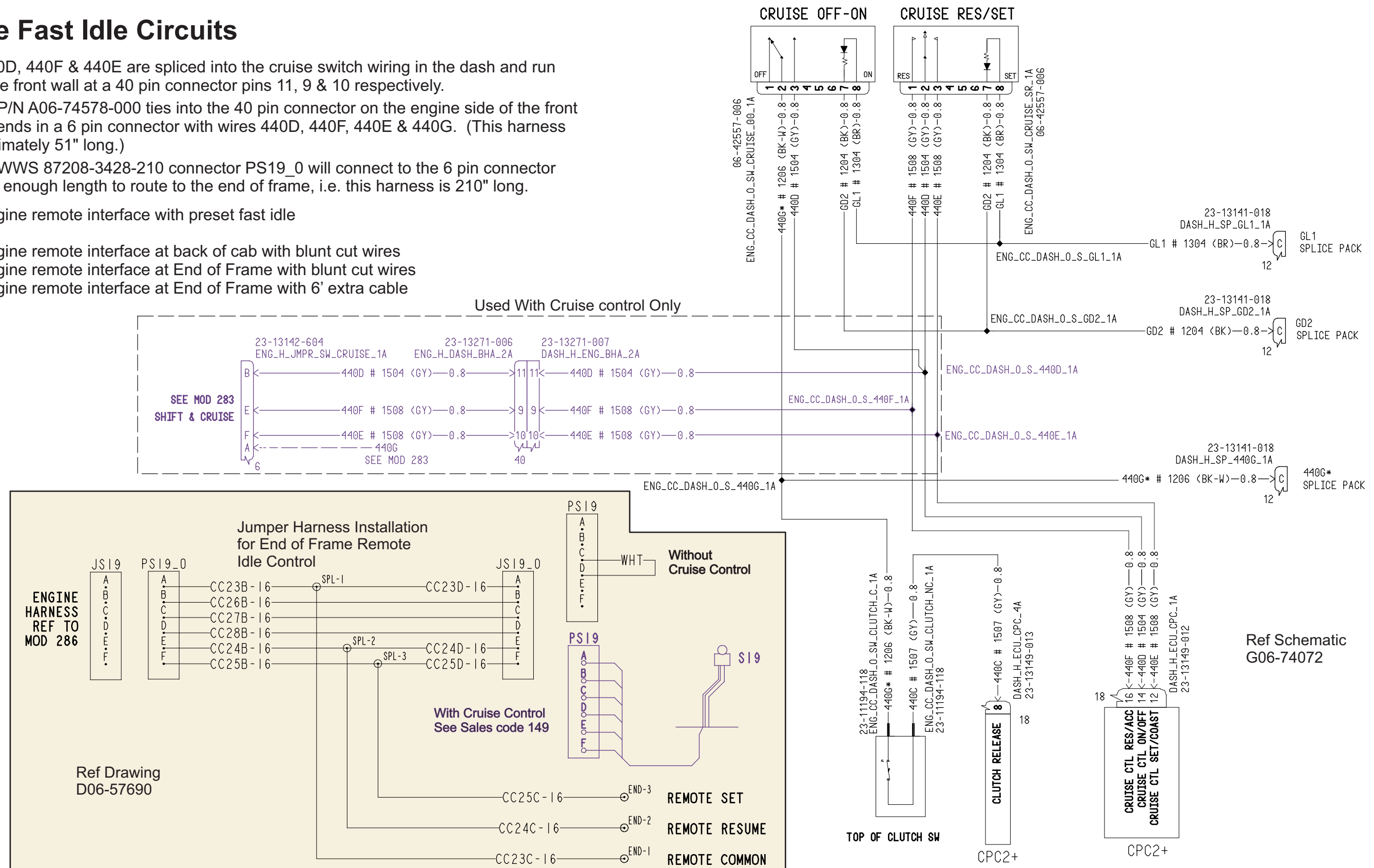
4800/4900 LHD PTO Schematic

372-033 Dash mounted PTO controls with indicator light and park brake interlock





- 163-008** Engine remote interface at back of cab with blunt cut wires
163-009 Engine remote interface at End of Frame with blunt cut wires
163-008 Engine remote interface at End of Frame with 6' extra cable

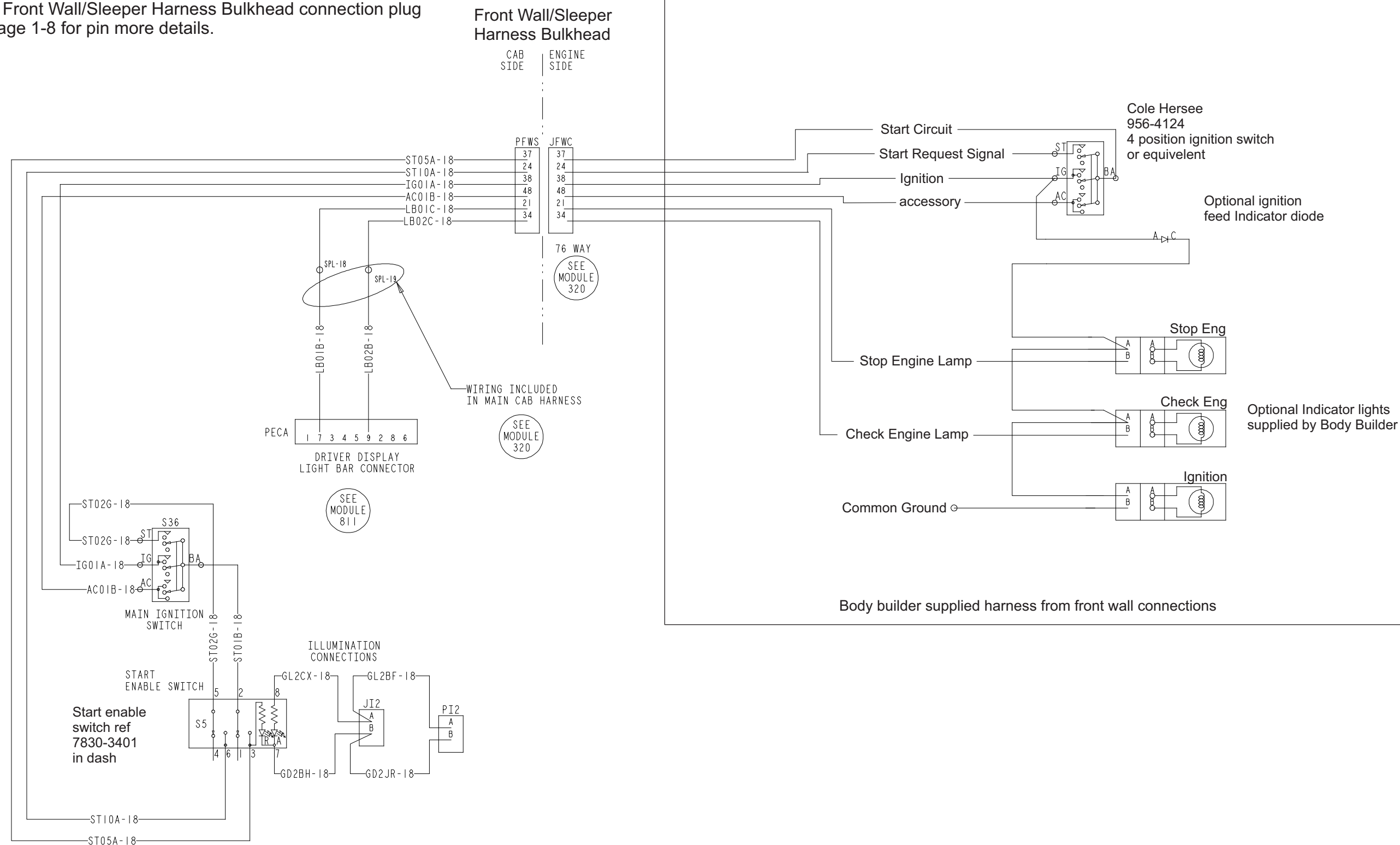


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4800/4900 Remote Start Stop

157-004 Manual remote engine start/stop

This solution supplies an internal cab harness that terminated at the Front Wall/Sleeper Harness Bulkhead connection plug see page 1-8 for pin more details.





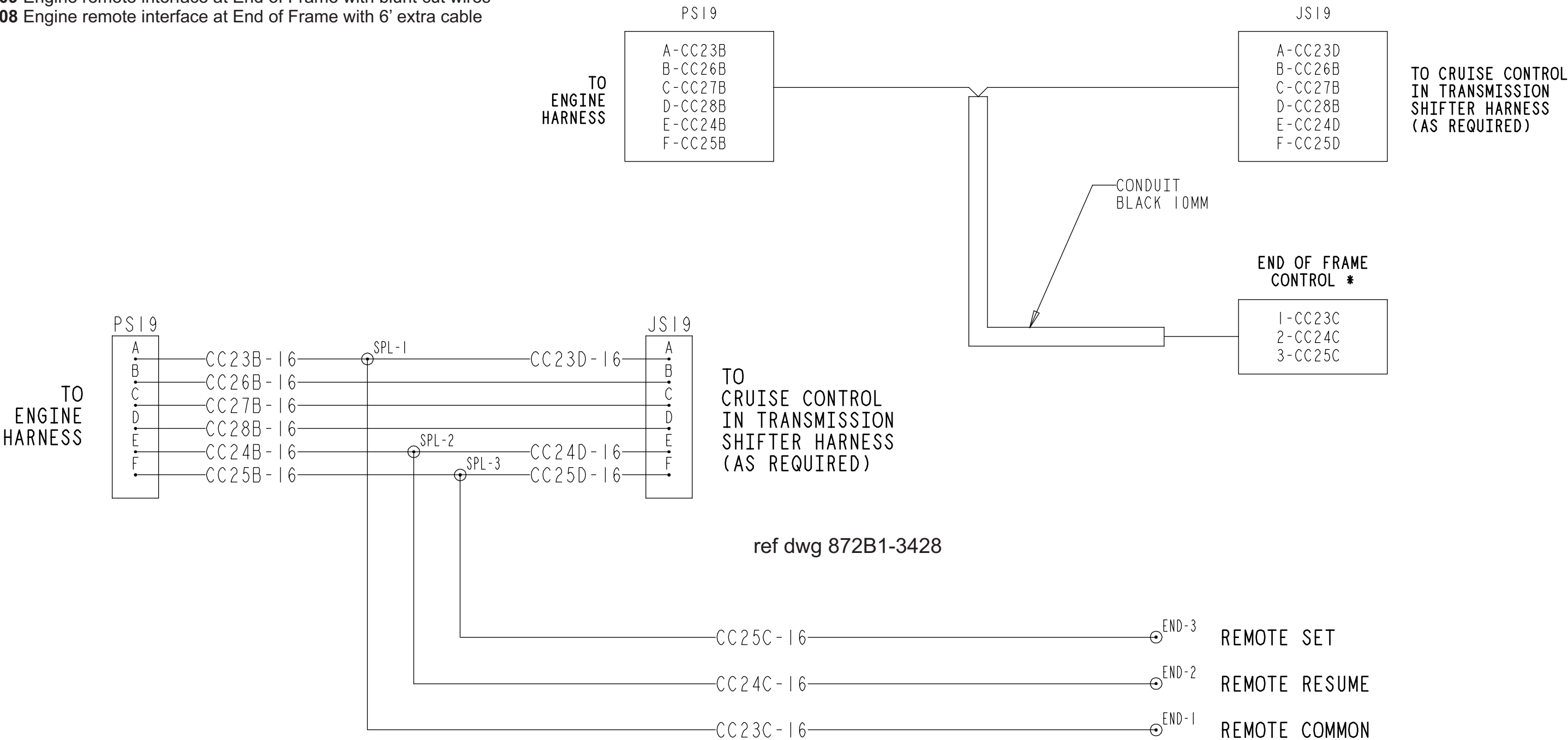
48/49/69 Engine Remote Interface - EOF

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End of Frame Engine Remote Interface - 148-071

- 148-071 Engine remote interface with increment/decrement
- + 163-008 Engine remote interface at back of cab with blunt cut wires
- 163-009 Engine remote interface at End of Frame with blunt cut wires
- 163-008 Engine remote interface at End of Frame with 6' extra cable



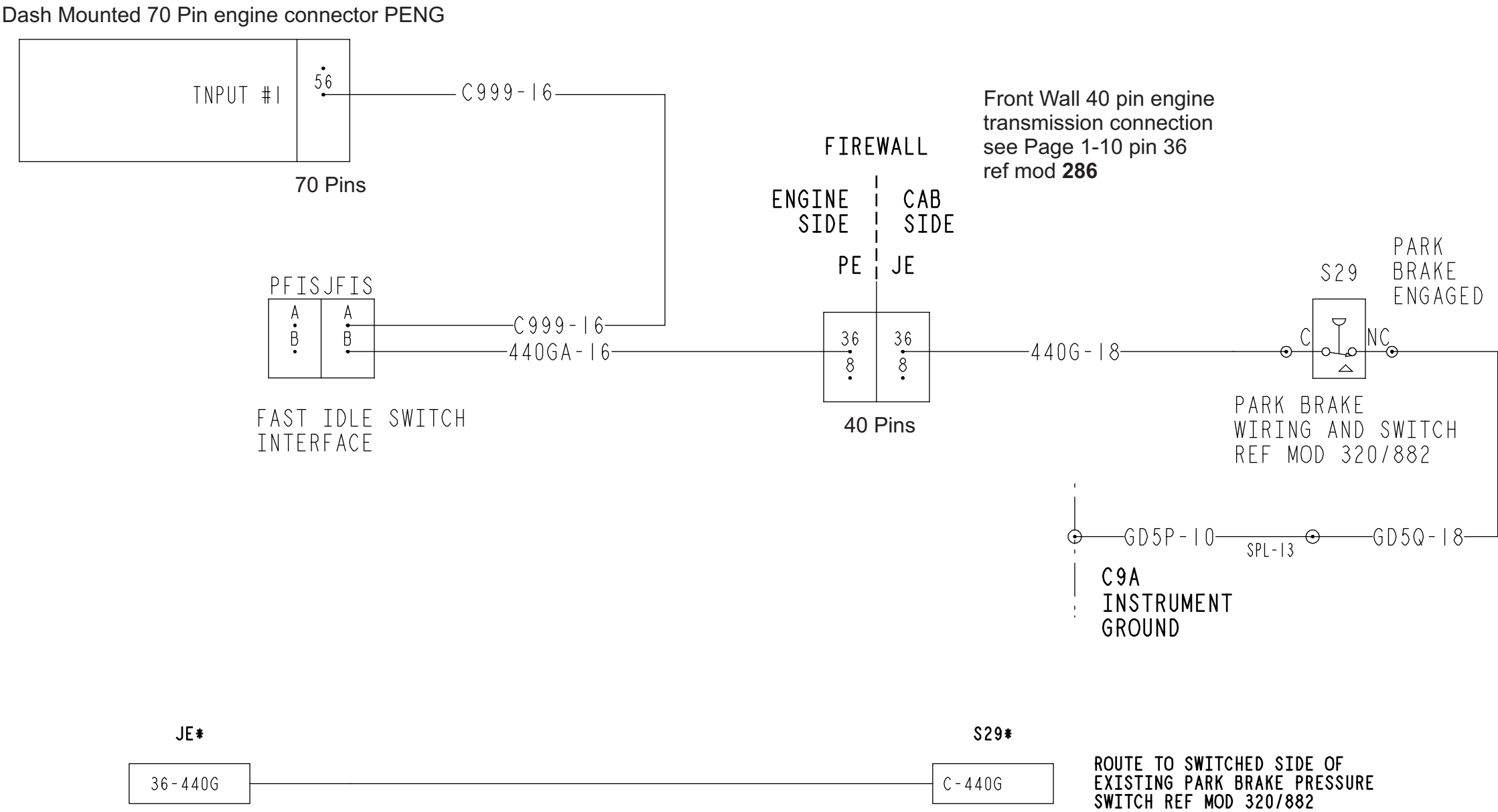


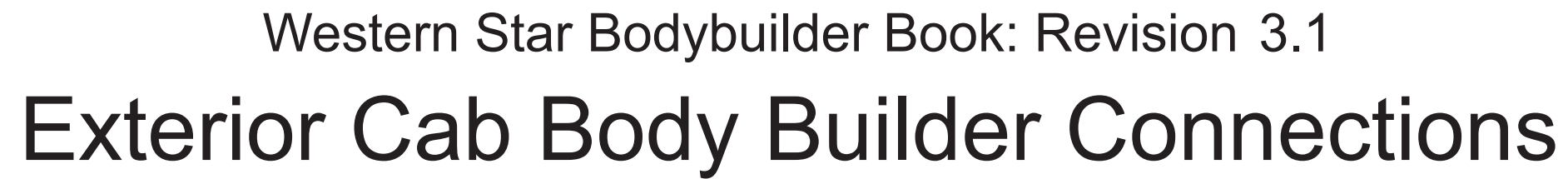
48/49/69 Engine Remote Interface - EOF

End of Frame Engine Remote Interface - 148-035

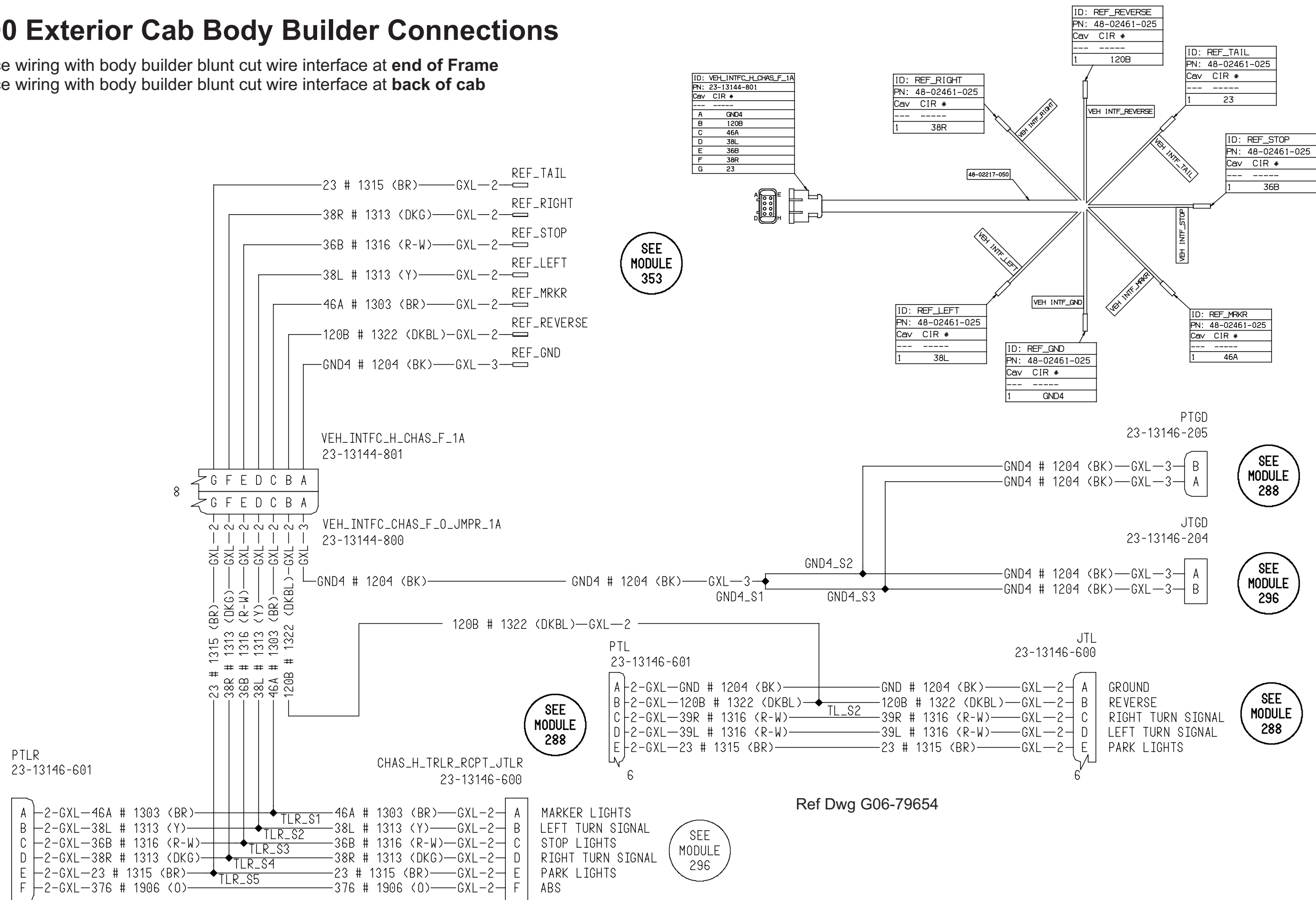
148-035 Preset fast idle switch interface for fixed single speed with engine compartment wires and park brake interlock

+
163-998 No engine opt/rpm controls wiring





353-053 Vehicle interface wiring with body builder blunt cut wire interface at **end of Frame**
353-054 Vehicle interface wiring with body builder blunt cut wire interface at **back of cab**





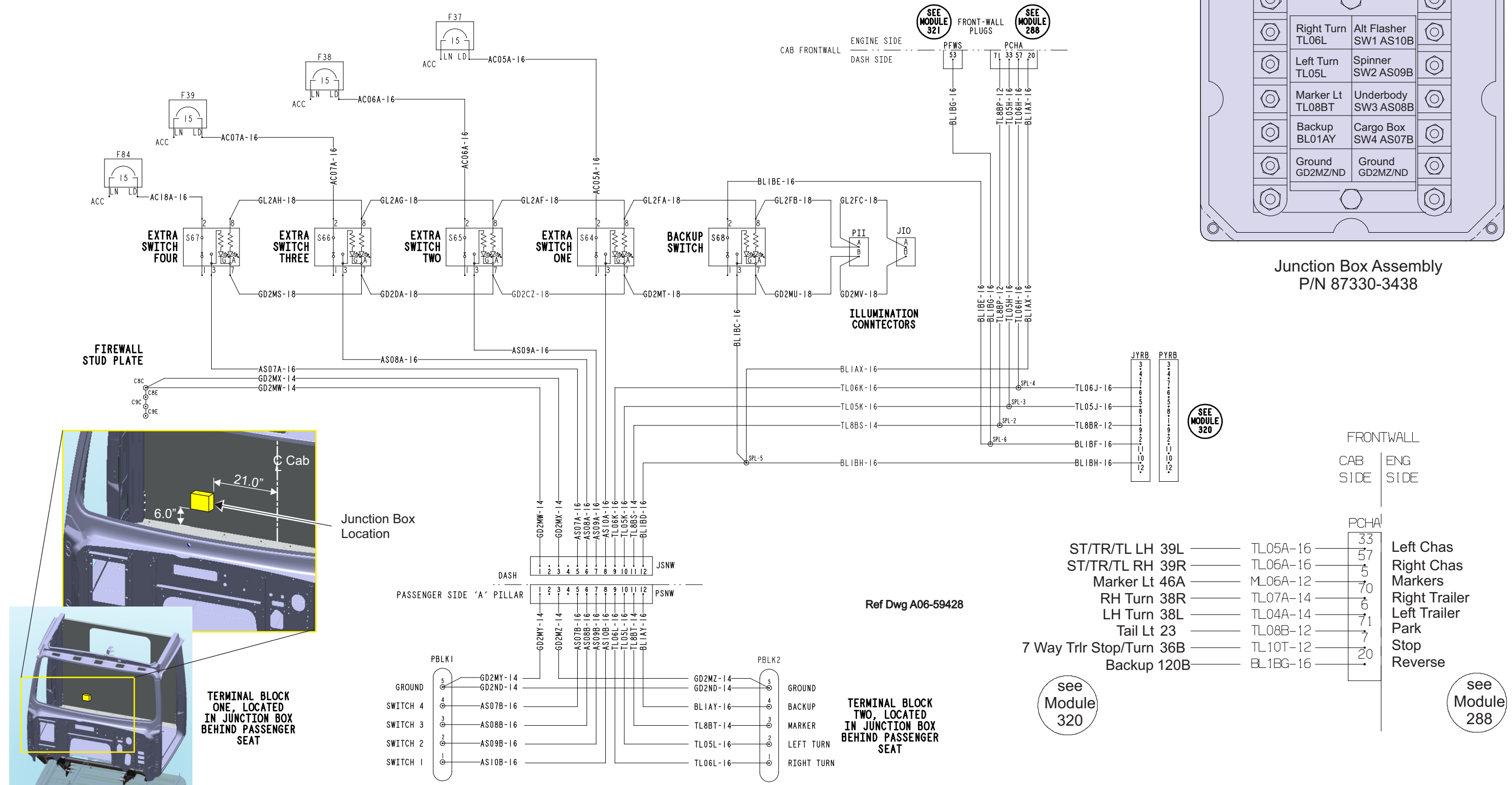
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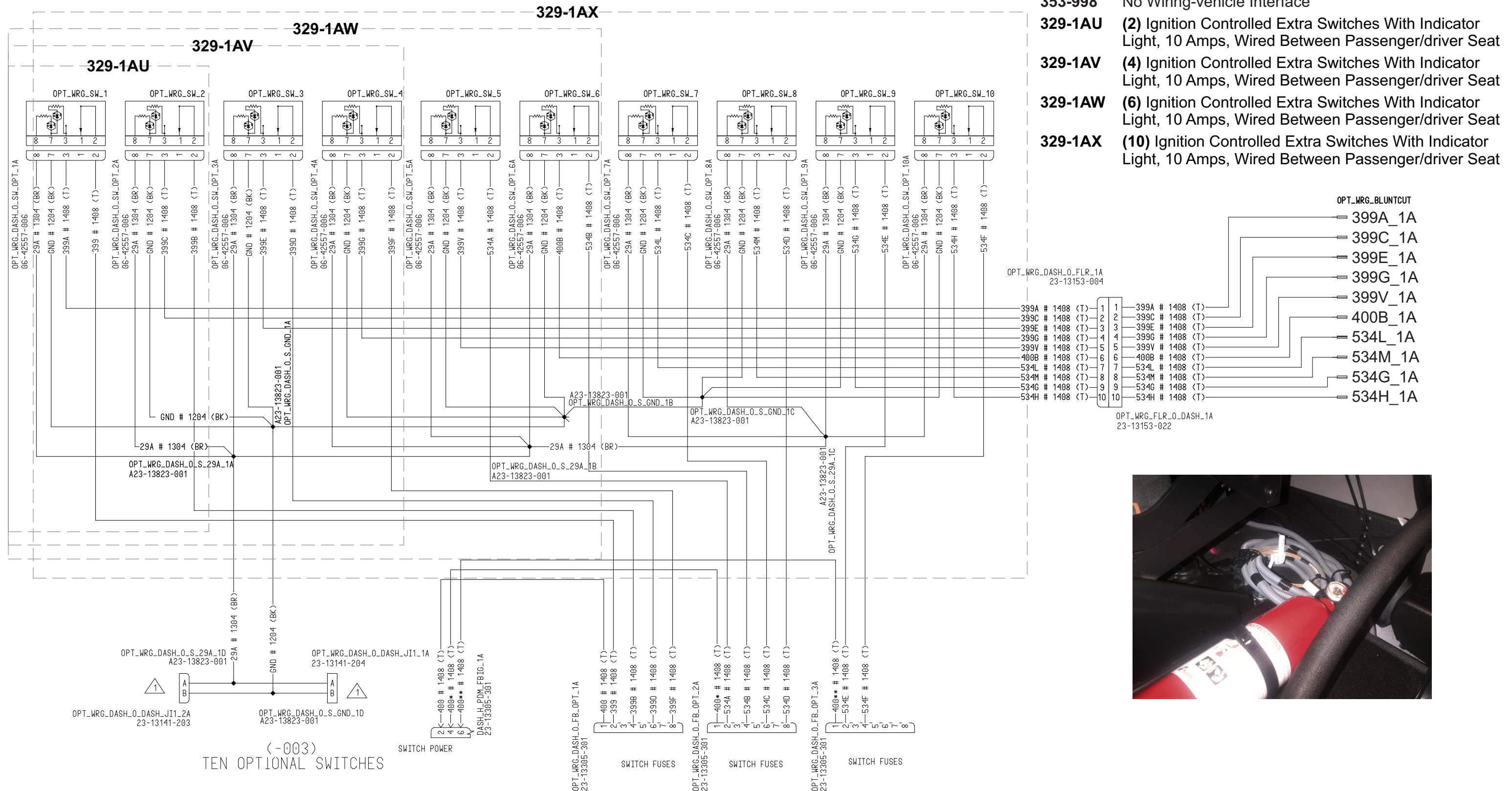
4800/4900/6900 Plow Light Prep

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4800/4900/6900 Plow Light Prep

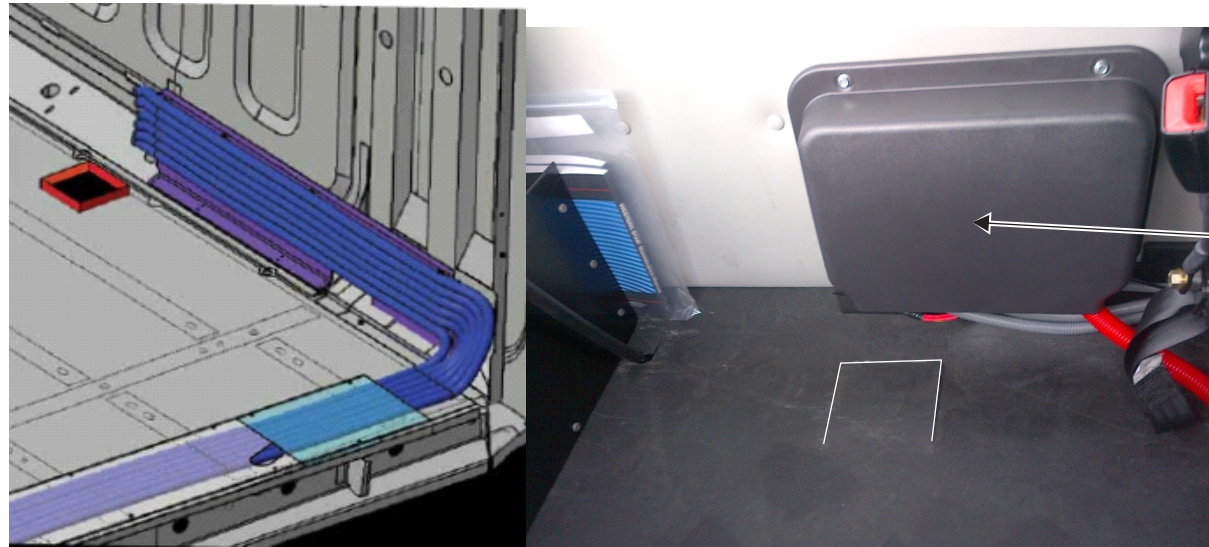
329-054 (5) Extra switches wired to 9 pole junction box mounted behind passenger seat





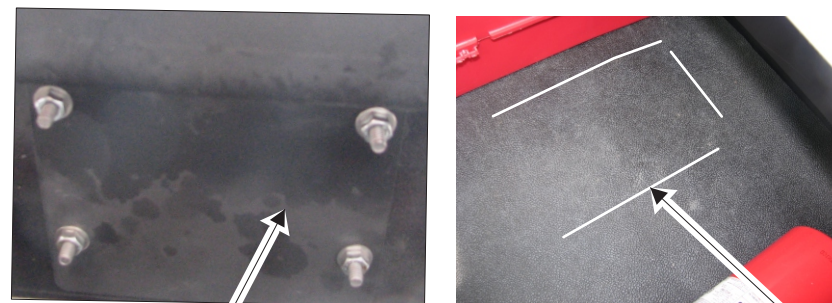
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4700 Body Builder Cab Access Port



Accessing the cab on the 4700 SF and SB is quick and simple using the floor access plate at the back of the cab. look for cuts in the floor mat at the center of the cab under this flap is a cover plate which gives you structurally designed access from the chassis into the cab.

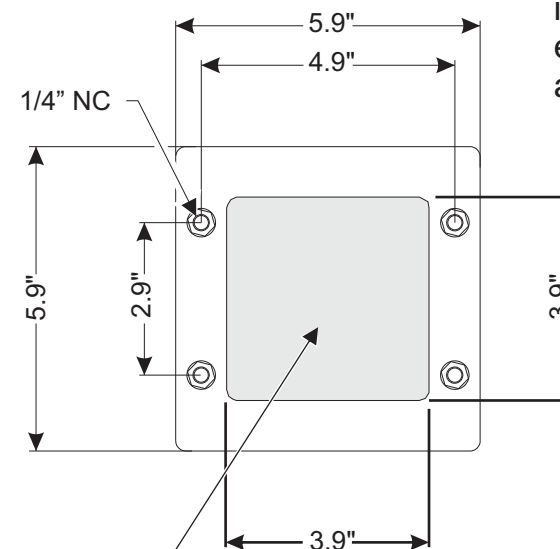
Plates can be removed from the unit and mounted at a workbench if desired for better sealing of cab mating harness.



Easy Access Floor Plate

Cab Floor access

Pre cut floor mats



access opening in floor

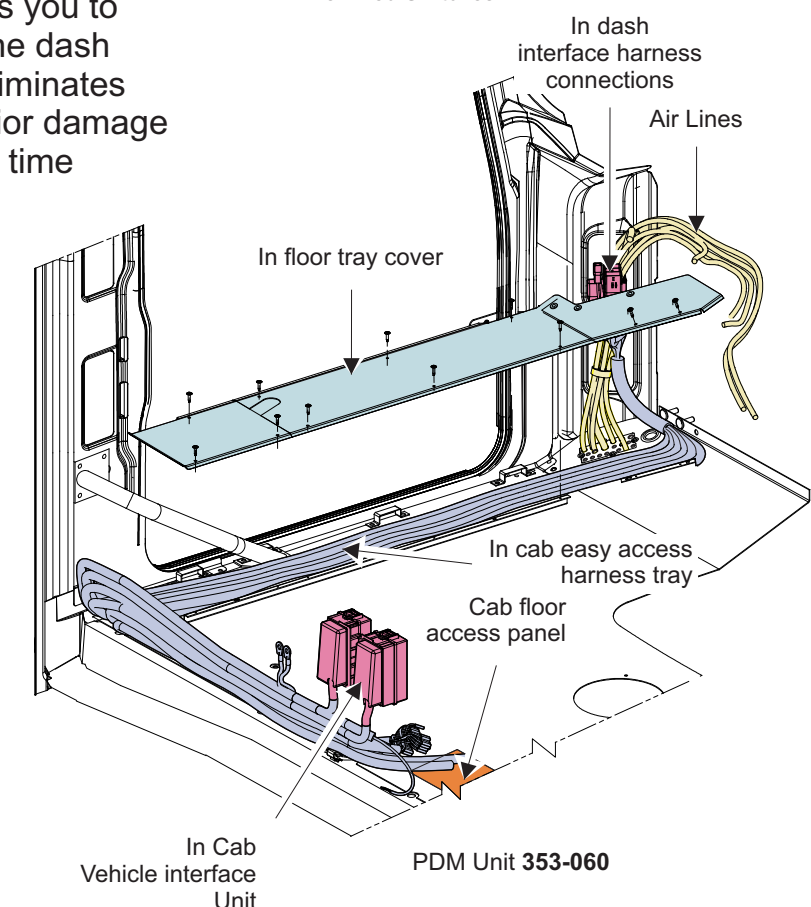
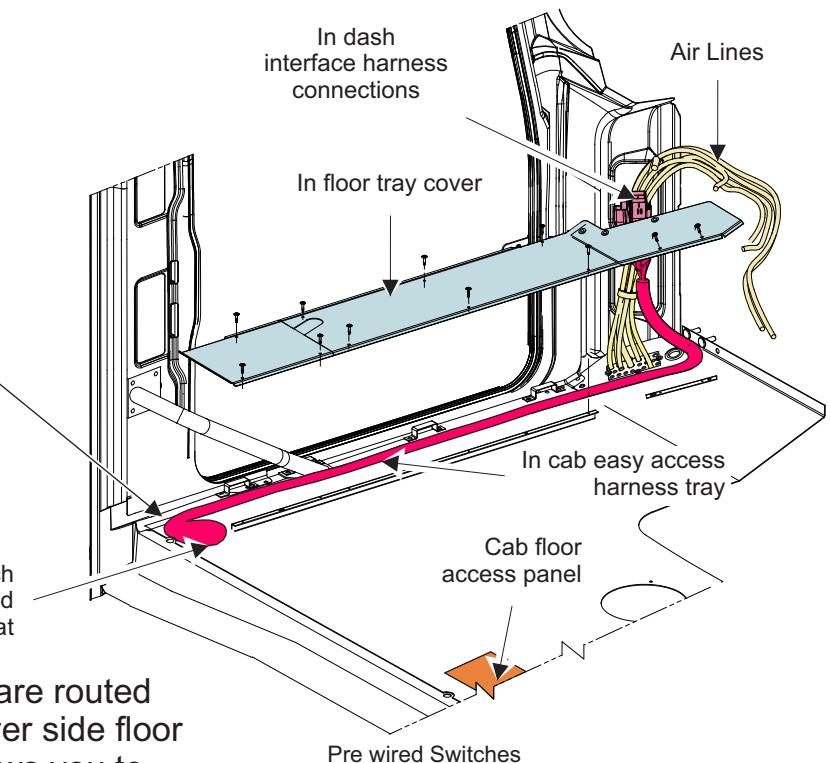
Pre wired switch harnesses can be ordered using the option codes found in section 1A page 1A-1313

Switches can be blunt cut wires or prewired to an independant realy box ready for your body connections.

In cab connections are protected from the weather and corrosion.

Blunt cut switch wires coiled behind driver seat

Prewired switches are routed on a tray at the driver side floor board. this tray allows you to safely rout wires to the dash inside the cab and eliminates ephosteery and interior damage along with assembly time

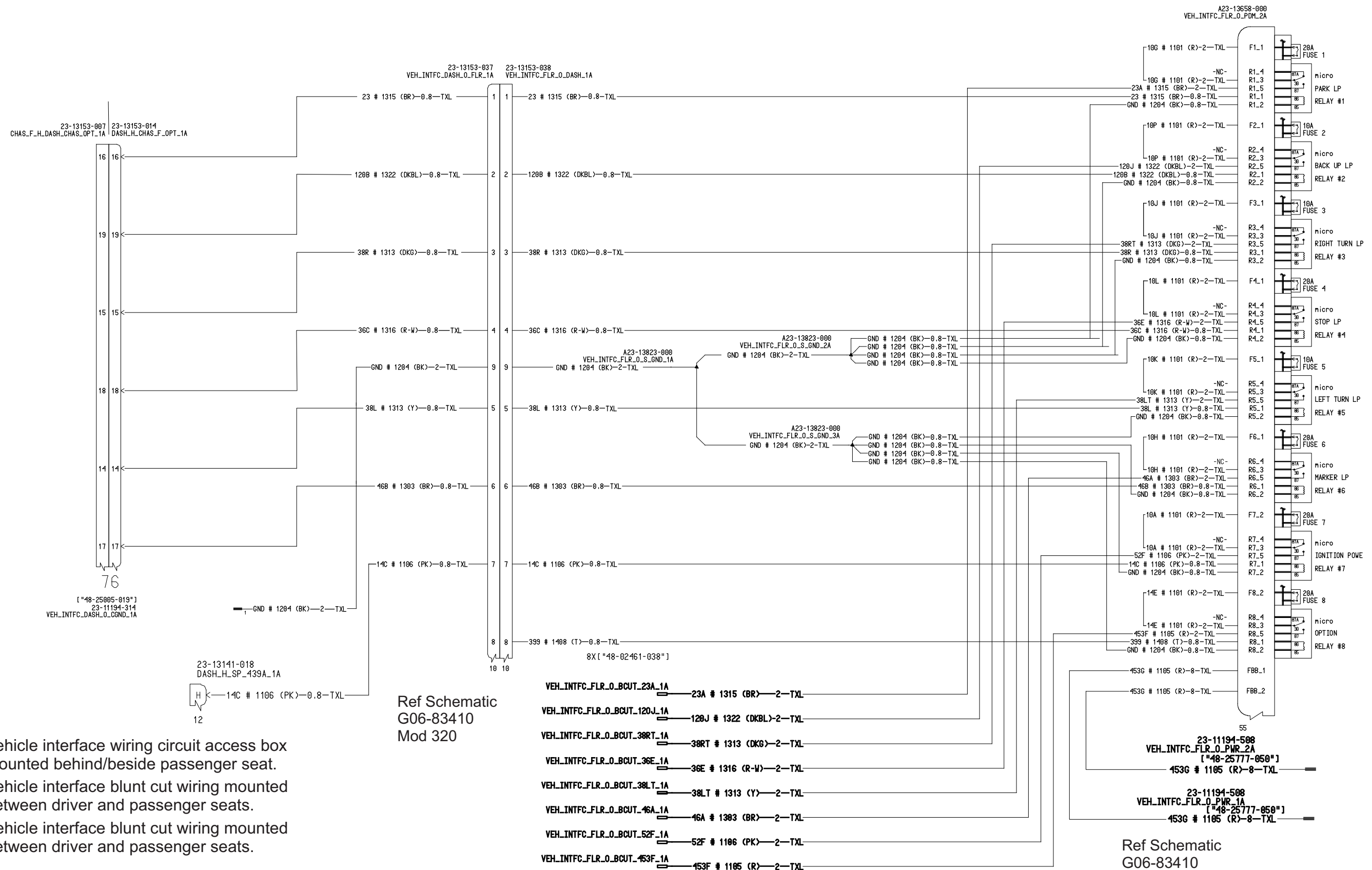




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4700 Body Builder Interface

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Speed Sensor Connections Interface

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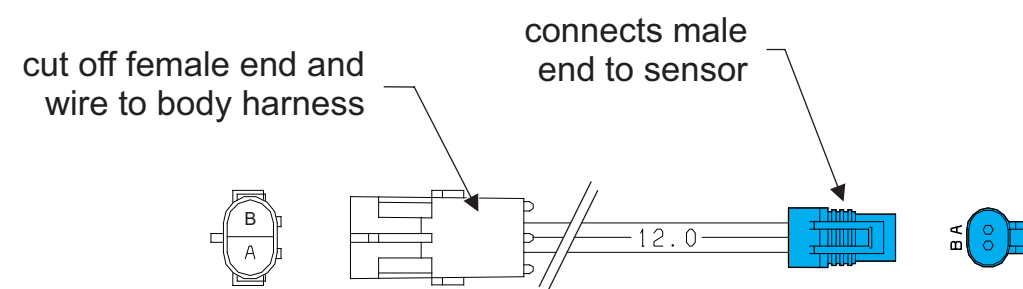
Speed Sensor Connections Interface

Adding additional equipment such as the vehicle speed when installing a salt/sander spreader with a controlled flow rate at different speeds can be accomplished by adding a second.

adding a second speed sensor to the rear bearing cover of the transmission after delivery. You will need to purchase the following parts

P/N FUL K4148 (two wire speed sensor),
P/N FUL X8 0801M (mounting screw)
P/N A06-26585-000 (adapter harness)

to connect this signal to your system simply cut off the access end of the adapter harness and wire to body harness.



Adapter harness A06-26585-000