

### Left (Driver) Side Battery B- Connector



If a high amperage cable (with a thick ring terminal) is to be installed on the left side battery B- connector, the OEM nut shown above can be replaced with a thinner nut. Use part number 06502720 (available from Mopar) which is 3mm thinner. Torque to 11.0Ft/Lbs. ( $\pm 2.0$ Ft./Lbs.).

**Do not exceed 13Ft./Lbs.**

Left (Driver) Side Battery B+ Connector  
Do not install wiring / terminals of any kind at this location

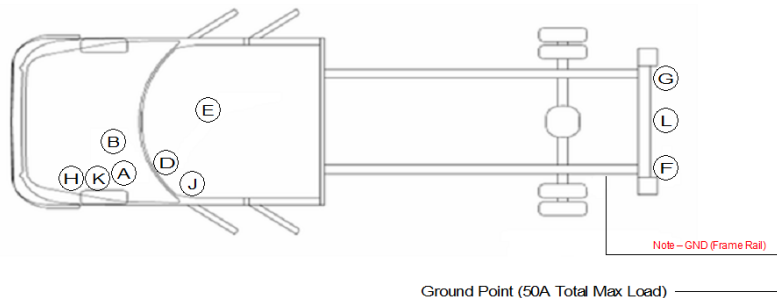


Right (Passenger) Side Battery B+ Connector  
Do not install wiring / terminals of any kind at these locations

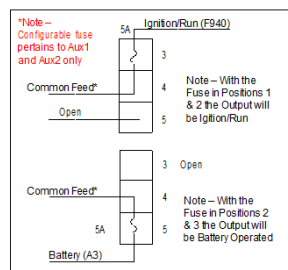
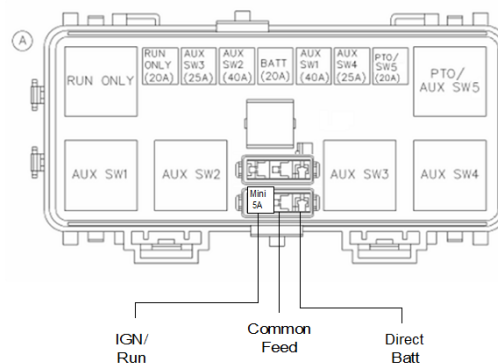


## 2014 UPFITTER SCHEMATIC

### 3500/4500/5500 CHASSIS CABS RAM Truck Upfitter Schematic



- (A) Note - Aux PDC Underhood
- (B) Note - 2 Upfitter Connectors
- (D) Note - Port Upfitters Connectors, Under Dash Board near park brake bracket / Steering Column
- (E) Note - PTO Connector Wires located underneath vehicle at Transmission Bell Housing, Left (Driver) Side for Cummins and Right (Passenger) side for Gas
- (F) Note - Vehicle Wiring, Blunt Cut (with Heat Shrink) Rear of Frame
- (H) Note - Blunt Cut (with Heat Shrink) wires, along side Left (Drivers side) fender inner.
- (J) Note - VSIM Module located interior of vehicle under dash
- (K) Note - Aux 5/PTO jumper connector, alongside left (Drivers Side) fender inner
- (L) Rear Camera Connector



5A Mini Fuse can be swapped between Battery and Ignition. This changes the function of AUX SW1 and AUX SW2 from Battery operated to Ignition/Run operated.

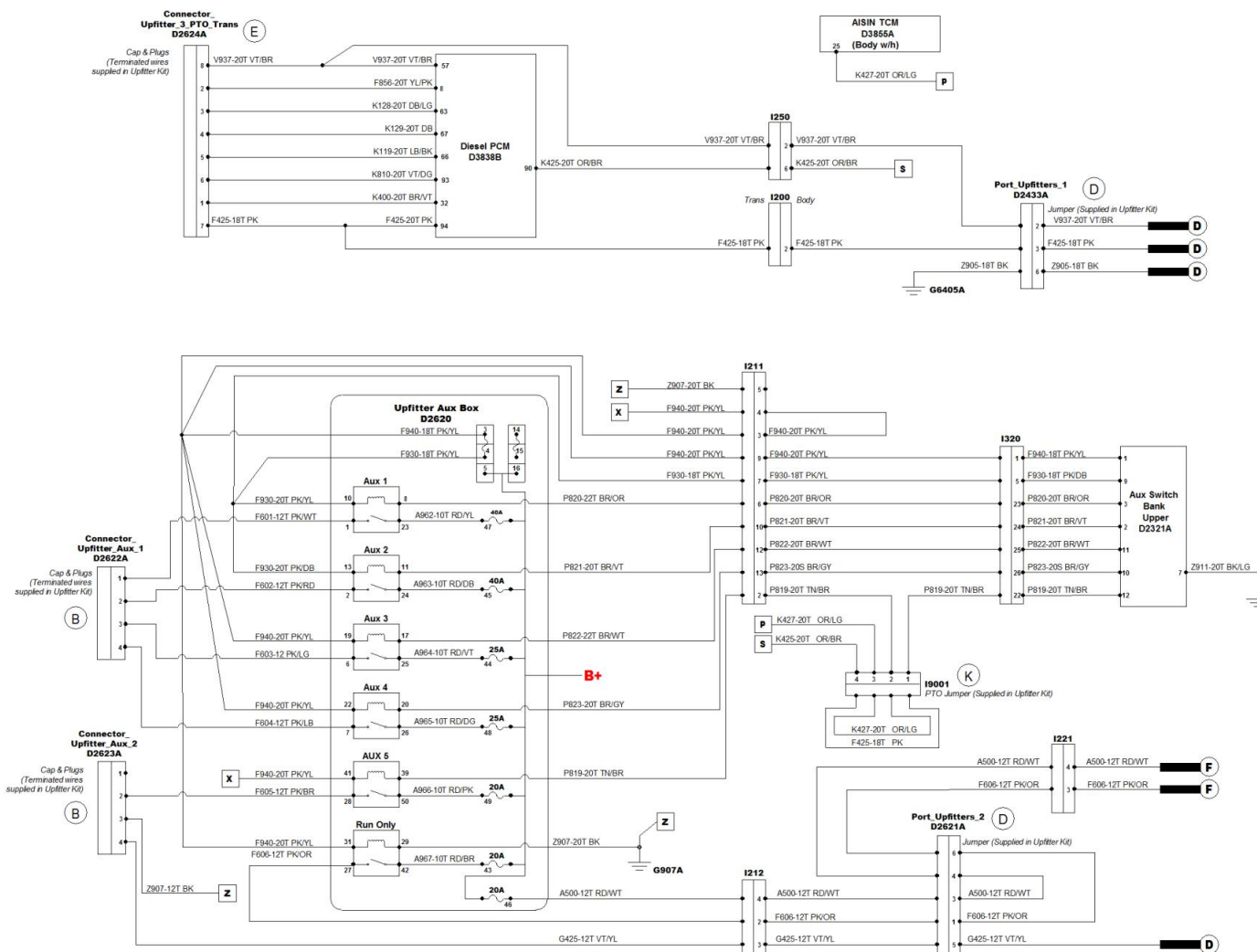
Notes -  
Max Combined Fuse "rating" allowed in box is 190A. Fuses can be relocated in box as necessary.  
Max allowable combined total continuous amperage draw is 133A.  
Max fuse "rating" in any one location is 40A.

\*The upfitter/customer is responsible for placing the correct fuse in the correct location depending on the actual load.

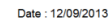
\*Amperages shown in schematics are for fuses/circuits as installed for the vehicle as sold and will change as fuses are reconfigured.

#### MAX ALLOWABLE CONTINUOUS AMPERAGE DRAW PER FUSE RATING

FUSE RATING	MAX ALLOWABLE CONTINUOUS AMPERAGE
20A	14A
25A	17.5A
40A	28A

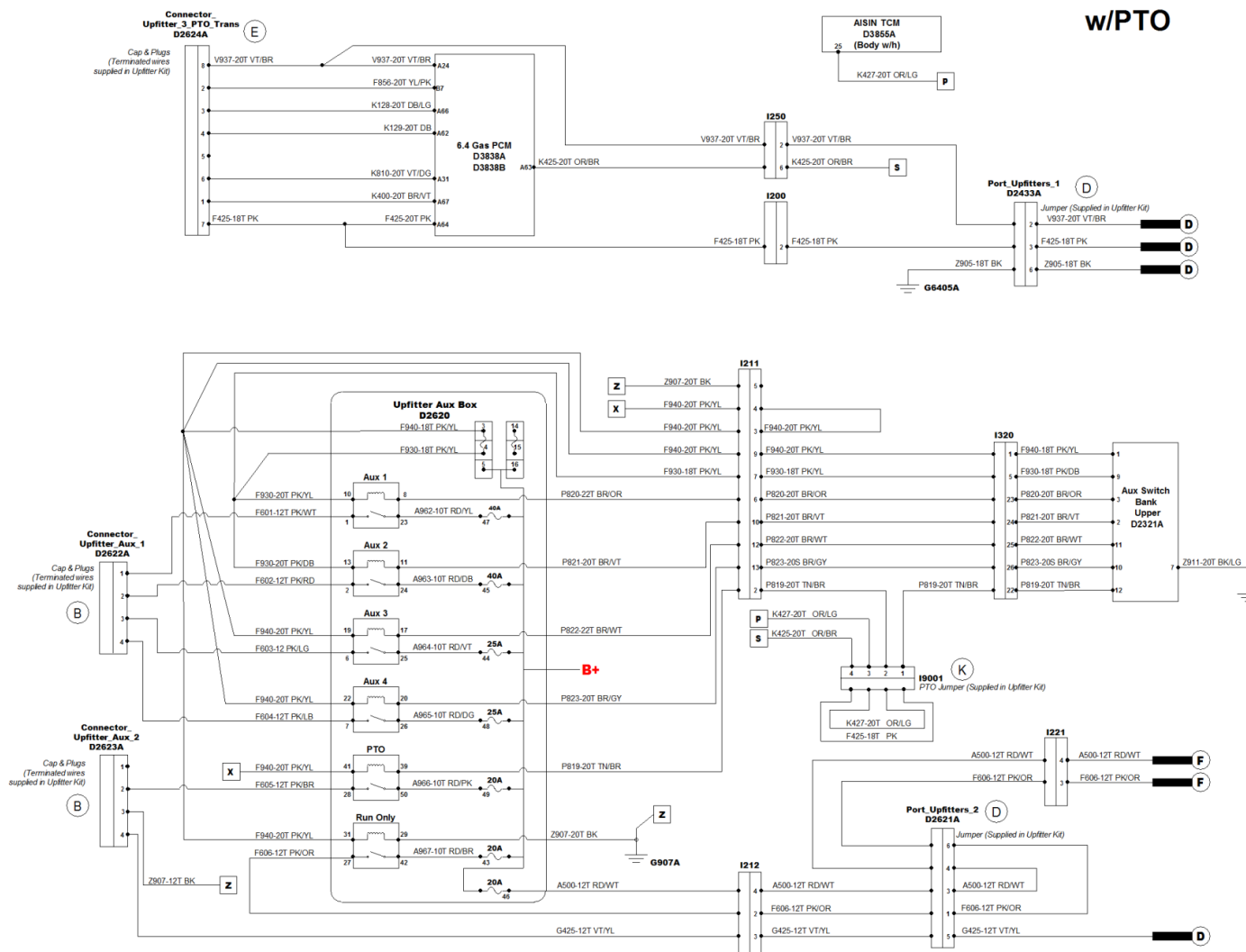
**2014 UPFITTER SCHEMATIC****3500/4500/5500 CHASSIS CAB  
6.7 Diesel Auto Trans w/PTO**

**3500/4500/5500 CHASIS CAB 6.7 Diesel  
5.7/6.4 GAS Auto Trans Non - PTO**

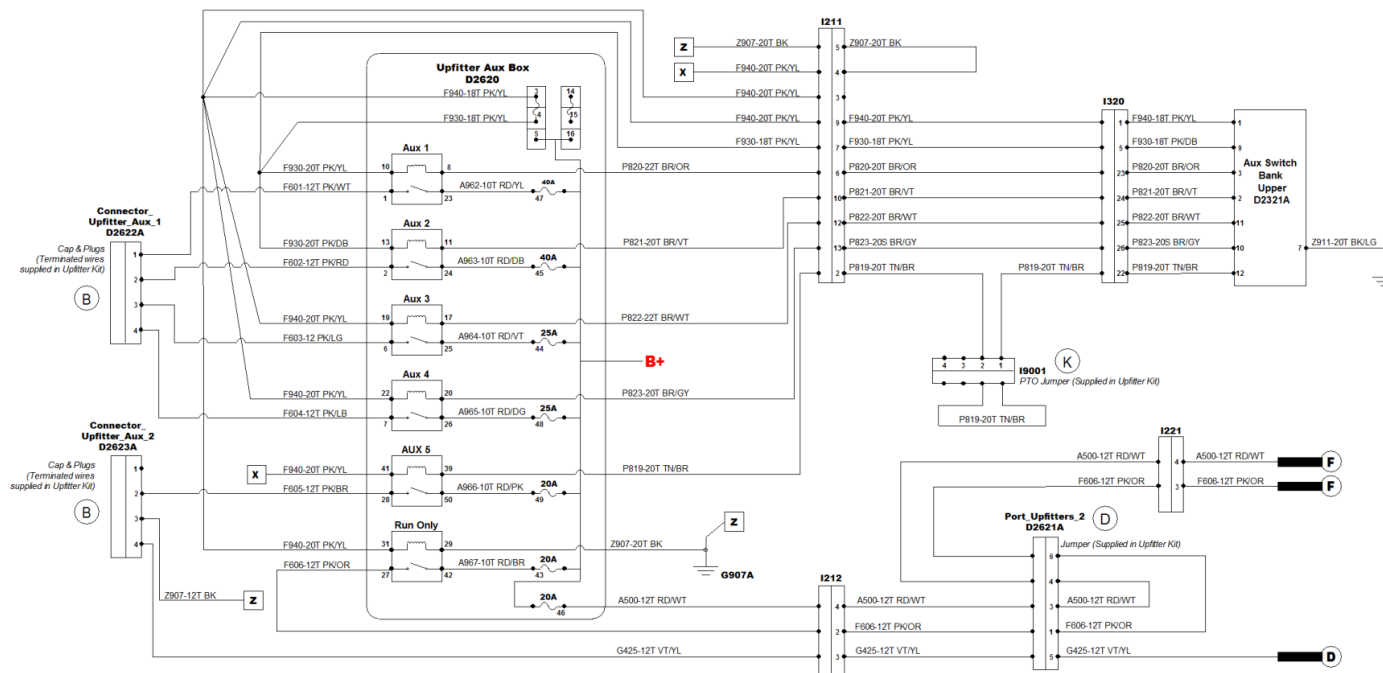


**2014 UPFITTER SCHEMATIC**

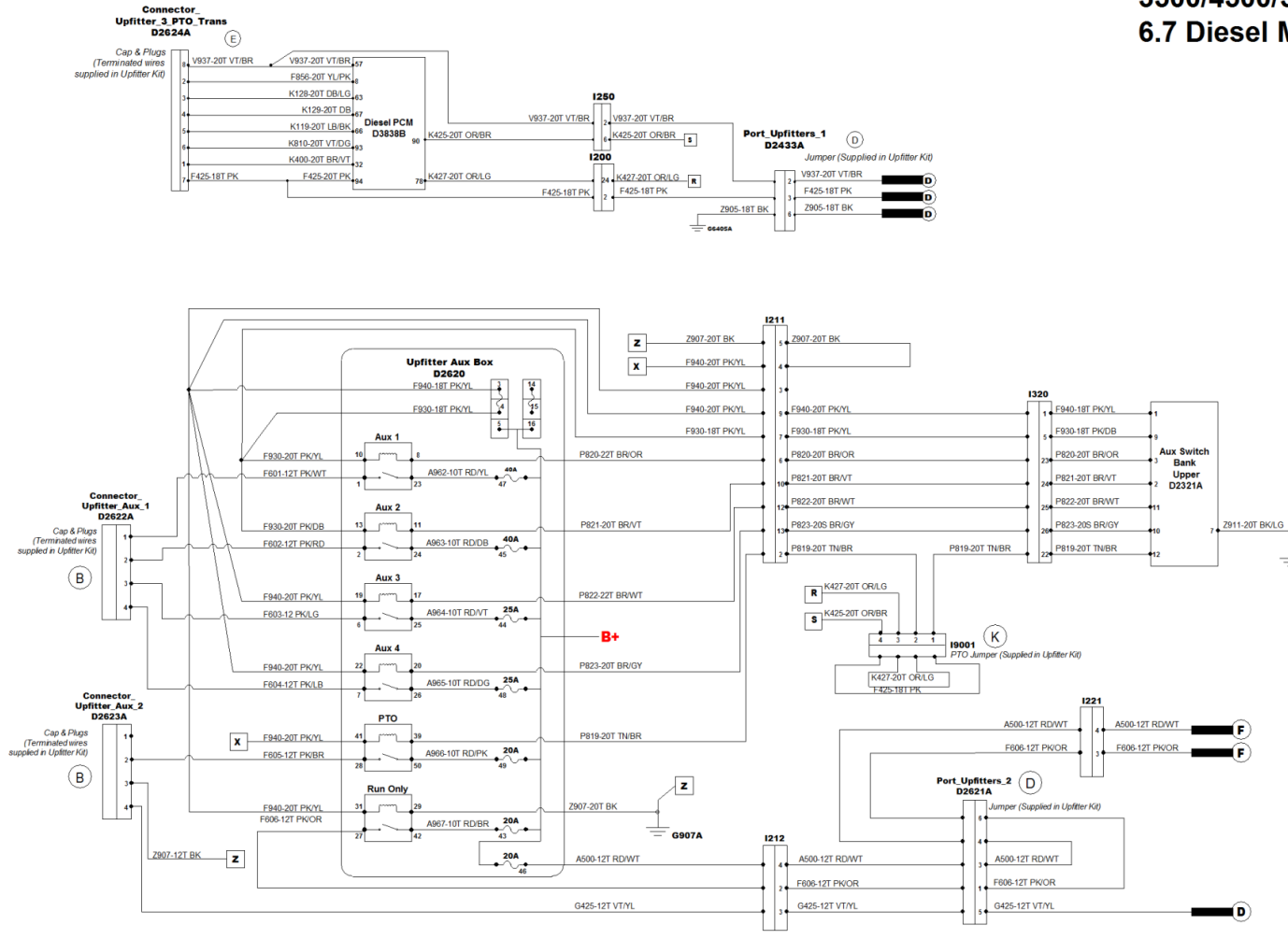
**3500/4500/5500 CHASSIS CAB**  
**6.4 Gas Aisin Trans (ONLY)**  
**w/PTO**





**2014 UPFITTER SCHEMATIC****3500/4500/5500 CHASSIS CAB  
6.7 Diesel Manual Trans non-PTO**

## 2014 UPFITTER SCHEMATIC

3500/4500/5500 CHASSIS CAB  
6.7 Diesel Manual Trans w/PTO



## 2014 UPFITTER SCHEMATIC

### Blunt Cut Wires 3500/4500/5500 CHASSIS CAB

"G" Blunt Cut wires located at Right (Passenger side) Rear of Frame

A100-14T RD/VT (Trailer Tow Battery feed) **G**  
 B40-14T GY (Electric Brake feed) **G**  
 L76-16T WT/BR (Trailer Tow Running/Park Lamps feed) **G**  
 L111-16T WT/OR (Trailer Tow Back-up Lamps feed) **G**  
 L614-18T LG (Trailer Tow Stop/Turn Right) **G**  
 L615-18T YL (Trailer Tow Stop/Turn Left) **G**  
 Z914-12T BK/GY (Ground) **G**

MAXIMUM AMPERAGE ALLOWED FOR THESE TRAILER TOW CIRCUITS ARE AVAILABLE IN THE "ELECTRICAL POWER USAGE" CHAPTER OF ELECTRICAL / WIRING INFORMATION OF THE BODY BUILDER GUIDE

"H" Blunt Cut wires located along side left (Drivers Side) fender inner

H L177-18T WT/BR (DO NOT USE)  
 H L312-18T BK/VT (DO NOT USE)  
 H L313-18T BK/LG (DO NOT USE)  
 H L314-18T BK/TN (DO NOT USE)  
 H L315-18T BK/LB (DO NOT USE)  
 H L316-18T BK/OR (DO NOT USE)  
 H L317-18T WT/VT (DO NOT USE)  
 H L318-18T WT/DB (DO NOT USE)  
 H T754-22T DG/GY (HARD-WIRED REMOTE START/STOP)  
 H T120-20T DG/OR (TRANS PARK POSITION DETECTION)  
 H L950-20T LG/WT (REAR BULB OUTAGE DETECTION DISABLE)  
 H L779-18T WT/LB (SEPARATE REAR STOP / TURN LAMPS)

VEHICLE WIRING

V937-20T VT/BR (Speed Control Switch return) **D**  
 F425-20T PK (PTO switch) **D**  
 Z905-18T BK/DG (Ground) **D**  
 G425-12T VT/YL (Spare Circuit - Pass Thru) **D**

"D" Blunt Cut wires are part of the Upfitter Ports 1 & 2 Jumpers located under Dash near Park Brake Bracket/Steering Column

A500-12T RD/WT (Battery feed) **F**  
 F606-12T PK/OR (Ignition Run feed) **F**  
 L56-18T WT/VT (Stop Lamp signal / CHMSL feed) **F**

"F" Blunt Cut wires located at Left (Drivers Side) Rear of Frame

Date : 12/09/2013

## **2014 UPFITTER SCHEMATIC**

### **Bagged Upfitter Kit Detail**

**68209998AB**

**3500/4500/5500 CHASSIS CAB ONLY**

\*Upfitter Connection Jumper

\*8 – 12 GA Circuits for AUX Connectors 1 & 2

\*8 – 20 GA Circuits for the Transmission PTO Connector

\*2 – PTO/Non-PTO Jumper Connectors

The Vehicle has been equipped to ease the installation of a PTO by allowing convenient access to circuits needed without having to splice into the main harness.

Located left of Main PDC Box and along the left (Drivers Side) fender inner (location K) is a dark gray jumper connector that allows the vehicle function to switch between PTO and non-PTO operation. The required jumpers are located in the Upfitter Kit. Verify proper jumper usage by reviewing jumper design on previous pages.

In the rear of the vehicle, you can find all required T-TOW circuits, two (2) additional power circuits (1 Battery and 1 Ignition) and a Stop Lamp / Chmsl Feed Circuit

In the Engine compartment you will find two (2) (Light Grey and Dark Grey) Upfitter connectors (location B) which allow easy access to the switch bank and fuse box outputs, mating terminated circuits are included in the kit as needed.

The Battery line to the AUX PDC is protected by a wire fuse link.

Warning about adding auxiliary batteries:

An auxiliary battery may be used, however a battery isolation unit is not supplied and the auxiliary battery may discharge the truck battery when the engine is not running.

Ground Studs on the chassis/frame may be utilized as a grounding point with a 50A Maximum total load, see "Vehicle Ground Locations" section in the RAM Body Builder Guide, Electrical/Wiring Information

**2014 UPFITTER SCHEMATIC**

**Upfitter Jumper Harness Only**  
**68049501AB**  
**3500/4500/5500 CHASSIS CAB ONLY**

PTO Connector



- 1 K400-20T BR/VT (ENG - ACCEL PEDAL POS SNSR RTN 2)  
 2 F856-20T YL/PK (ENG - 5V ENGINE SNSR FEED SEC)  
 3 K128-20T DB/LG (ENG - REMOTE THROTTLE SWITCH SIGNAL)  
 4 K129-20T DB/DG (ENG - REMOTE THROTTLE SWITCH)  
 5 K119-20T LG/BK (ENG - MAXIMUM OPERATING SPEED SWITCH)  
 6 K810-20T VT/DG (ENG - ACCELERATOR INTERLOCK SWITCH)  
 7 F425-20T PK (PWR - POWER TAKEOFF SWITCH)  
 8 V937-20T VT/BR (SCS - SPEED CTRL SW RTN)

Dash - Dark Gray  
Connector\_Upfitter Aux\_1

\*Note - Each Circuit can handle maximum continuous current of 28A. Maximum combined load for AUX Switches is 133A  
 \*The upfitter/customer is responsible for placing the correct fuse in the correct location depending on the actual load.

- 1 F601-12T PK/WT (RELAY 1 OUTPUT)  
 2 F602-12T PK/RD (RELAY 2 OUTPUT)  
 3 F603-12T PK/DG (RELAY 3 OUTPUT)  
 4 F604-12T PK/LB (RELAY 4 OUTPUT)

Dash - Light Gray  
Connector\_Upfitter\_2 Aux\_2

- 1  
 2 F605-12T PK/YL (RELAY 5 OR PTO RELAY OUTPUT)  
 3 Z907-12T AWG BK (GND)  
 4 G425-12T AWG VT/YL (Spare Circuit - Pass Thru)

Jumper  
Port\_Upfitters

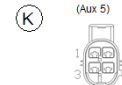
- 1 K425-20T OR/BR (ENG - IN CAB PTO SWITCH INPUT)  
 2 V937-20T VT/BR (SCS - SPEED CTRL SW RTN)  
 3 F425-20T PK (PWR - PTO SWITCH)  
 4  
 5 K427-20T OR/LG (ENG - PTO RELAY ENABLE)  
 6 Z905-18T BK/DG (GROUND)

Jumper  
Port\_Upfitters\_2

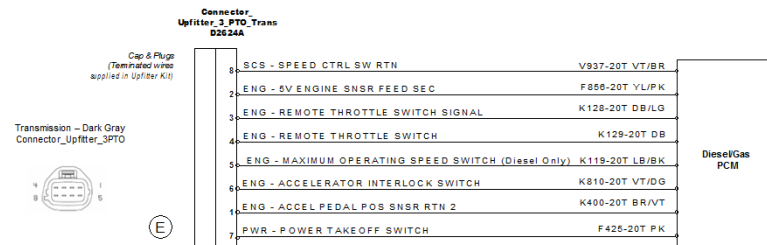
- 1 F606-12T AWG PK/YL (PWR - ATM UPFITTER IGN RUN FEED)  
 2  
 3 A500-12T AWG RD (PWR - BATT - ATM - UPFITTER FUSED FEED)  
 4  
 5 G425-12T VT/YL (Spare Circuit - Pass Thru)  
 6

Jumper  
PTO

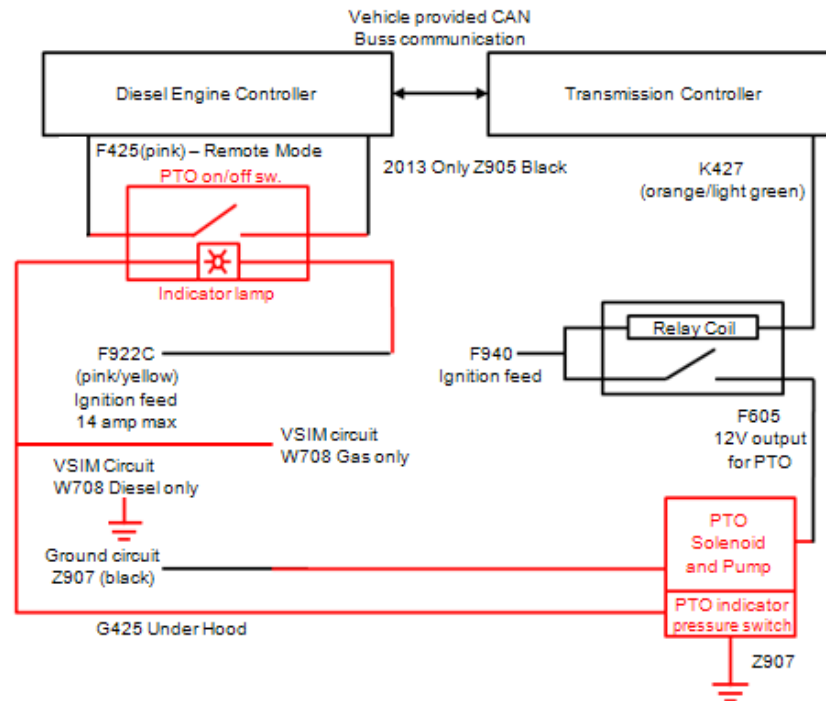
- 1  
 2 K427-20T OR/LG  
 3  
 4 F425-18T PK

Jumper  
NON-PTO  
(Aux 5)

- 1 P819 20T TN/BK  
 2  
 3  
 4

**2014 UPFITTER SCHEMATIC****PTO CONNECTOR Underneath Vehicle at Transmission****Circuit Function and Pin - Out****3500/4500/5500 CHASSIS CAB ONLY**

## Aisin Automatic Transmission Remote Mode

**Notes:**

Remote mode uses an upfitter installed PTO switch

Z905 and F425 are circuits that can be found located under the dash just in board of the park brake pedal

F922C and Z907 can also be found in the same area described above

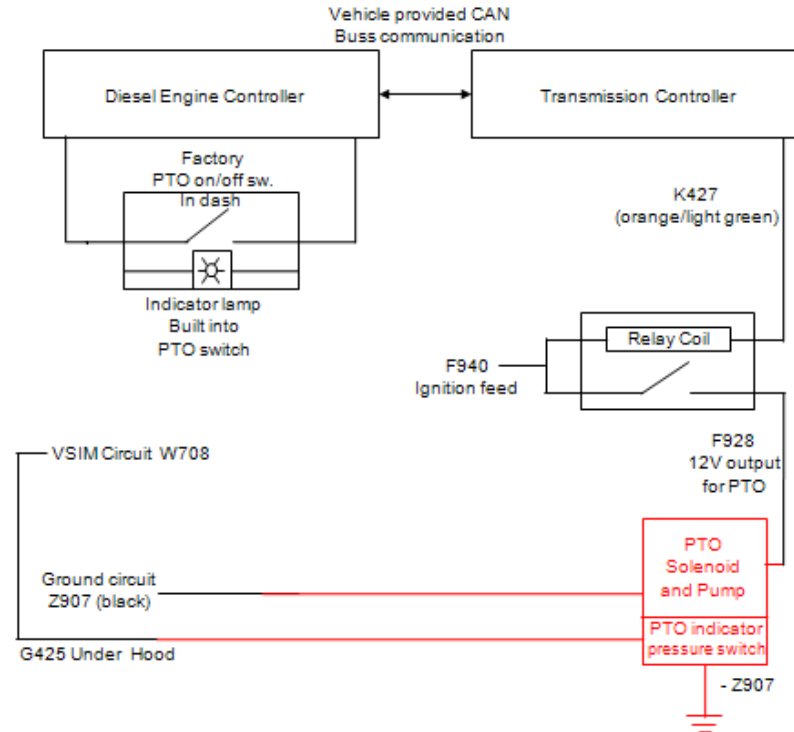
All other wiring, switches, relays and other components will need to be provided by the PTO installer. Anything in black comes with the truck

Do NOT externally ground circuit V937 to anything

You **MUST** permanently ground VSIM circuit W708

See the [VSIM Circuit Definition](#) for more information

## Aisin Automatic Transmission in Cab Stationary and Mobil Mode

**Notes:**

K425, V937 are now connected to the in dash PTO switch, Circuit G425 that that can be found located under the dash just in board of the park brake pedal. Must be connected to VSIM circuit W708

F922C and Z914 can also be found in the same area described above

All other wiring, switches, relays and other components will need to be provided by the PTO installer. Anything in black comes with the truck

The PTO switch is assumed to be installed inside the cab

Do NOT externally ground circuit V937 to anything

You **MUST** connect circuit G425 to VSIM circuit W708

See the [VSIM Circuit Definition](#) for more information