

# **SAFETY NOTICE**

This publication's purpose is to provide technical training information to individuals in the automotive trade. All test and repair procedures must be performed in accordance with manufacturer's service and diagnostic manuals. All *warnings*, *cautions*, and *notes* must be observed for safety reasons. The following is a list of general guidelines:

- Proper service and repair is critical to the safe, reliable operation of all motor vehicles.
- The information in this publication has been developed for service personnel, and can help when diagnosing and performing vehicle repairs.
- Some service procedures require the use of special tools. These special tools must be used as recommended throughout this Technical Training Publication, the diagnostic manual, and the service manual.
- Special attention should be exercised when working with spring- or tension-loaded fasteners and devices such as E-Clips, Cir-clips, snap rings, etc. Careless removal may cause personal injury.
- Always wear safety goggles when working on vehicles or vehicle components.
- Improper service methods may damage the vehicle or render it unsafe.
- Observe all *warnings* to avoid the risk of personal injury.
- Observe all *cautions* to avoid damage to equipment and vehicles.
- *Notes* are intended to add clarity and should help make your job easier.

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## **UPFITTER GUIDE**

#### **VEHICLE SPECIFICATIONS**



Figure 1 Dodge Charger Pursuit Vehicle

This upfitter guide has been assembled to give facilities technical information on the Dodge Charger Pursuit vehicle that may be required when installing accessories or equipment for use in fleet applications. Not all vehicles purchased are equipped with the same accessories, so there may be items covered in this guide that are not featured on the vehicle purchased by your department.

## **VEHICLE DIMENSIONS**

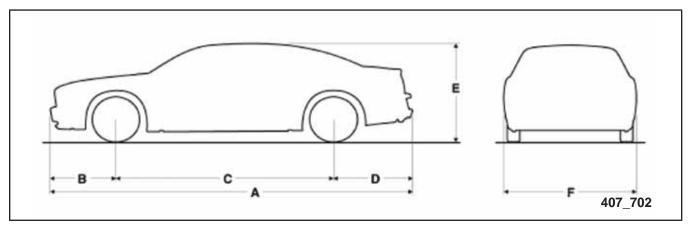


Figure 2 Vehicle Dimensions

## **Vehicle Dimensions**

- Length (A) = 5,077 mm (199.9 in.)
- Front overhang (B) = 924 mm (36.4 in.)
- Wheelbase (C) = 3,052 mm (120.2 in.)
- Rear overhang (D) = 1,101.5 mm (43.4 in.)
- Height (E) = 1,491 mm (58.7 in.)
- Width (F) = 1,904 mm (75.0 in.)

#### **FCA FLEET WEBSITE**



Figure 3 Chrysler Fleet Website

The FCA Fleet website is another resource for up-to-date specification information on the Dodge Charger Pursuit and other fleet vehicles. An electronic copy of additional upfitter information, as well as options and service recommendations, are also found at www.fcausfleet.com.

## Vehicle Systems Interface Module (VSIM) 2011–2014.5

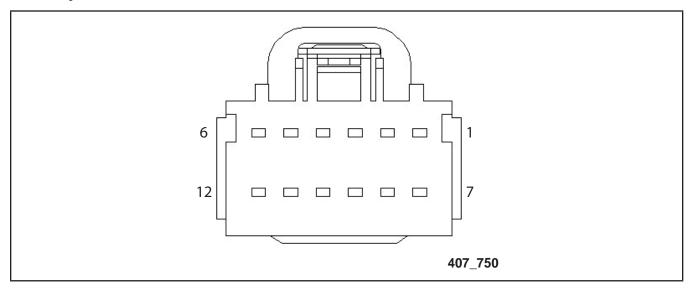


Figure 4 2011–2014.5 VSIM 12-way Connector

Table 1 2011–2014.5 VSIM 12-way Connector Pinout

Cavity	Circuit	Function	Upfitter Requirements
1	A100 16 RD/WHT		Fused (20A) B (+)
2	A101 16 VT/RD		Fused (20A) B (+)
3	A102 16 WHT/RD		Fused (20A) B (+)
4	F100 16 PK/VT		Fused 20A accessory Voltage (with IGN ON or ACC - Police 1 Relay Output)
5	F101 16 VT/PK		Fused 20A accessory Voltage (with IGN ON or ACC - Police 3 Relay Output)
6	F102 16 WHT/PK		Fused 20A accessory Voltage (with IGN ON or ACC - Police 2 Relay Output)
7	BK/TN	Pass Through	
8	BK/WT	Pass Through	
9	BK/OR	Pass Through	
10	BK/GR	Pass Through	
11	BK/RD	Pass Through	
12	BK/BL	Pass Through	

NOTE: The 12- and 24-way connectors are located under the center console. The opposite end of the 12-way connector is found near the RH front bumper near the power steering pump, or attached to a stud near the underhood PDC.

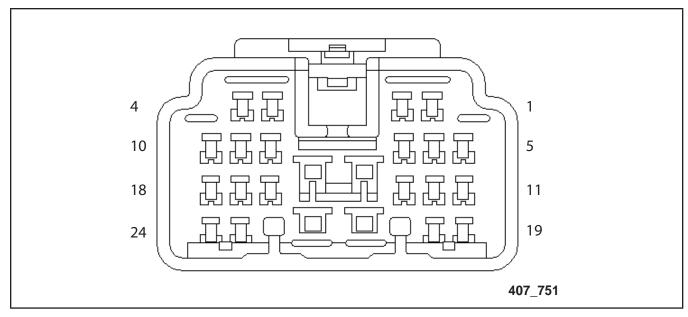


Figure 5 2011–2014.5 VSIM 24-way Connector

Table 2 2011–2014.5 VSIM 24-way Connector Pinout

Cavity	Circuit	Function	Upfitter Requirements
1	W500 20BR/OR	Front flashing lights (WigWags) <b>12V input to VSIM</b>	None - current limiting resistor is internal to VSIM
2	W501 20BLK	Rear flashing lights (WigWags)  12V input to VSIM	None - current limiting resistor is internal to VSIM
3	W511 20BR/WT	Police radio input  12V input to VSIM	None - current limiting resistor is internal to VSIM
4	W512 20BR/VT	Brake lamp switch sense 10V output from VSIM	N/A
5	W513 20BR/GY	Horn switch sense <b>9V output</b> when horn is pressed	None - current limiting resistor is internal to VSIM
6	W514 20BR/YL	P/N switch sense <b>10V Output from VSIM</b>	
7	W515 20BR/LB	VTSS/Panic alarm ON signal 9V Output from VSIM	N/A
8	W516 20BR/DB	Headlamp switch sense 10V Output from VSIM	N/A
9	W517 20BR/LG	Side airbag status signal 12V Output from VSIM when airbag deploys	N/A
10	W518 20BR/DG	Front airbag status signal 12V Output from VSIM when airbag deploys	N/A

Cavity	Circuit	Function	Upfitter Requirements
11	W530 20BR/DG	VSIM CAN-B bus (+)	N/A
12	W531 20BR/LG	VSIM CAN-B bus (-)	N/A
13	W521 20BR/WT	Cluster dimming sense 12V Output from VSIM	N/A
14	W522 20BR/VT	Engine running signal 10V Output from VSIM	N/A
15	W523 20BR/GY	Driver door ajar switch sense  10V Output from VSIM with door open	N/A
16	Z384 20BK	Signal ground that is noise suppressed	N/A
17	NOT USED	NOT USED	N/A
18	NOT USED	NOT USED	N/A
19	W526 20BR/DB	Vehicle speed signal 12V	N/A
		10 Hz/mph pulse-width modulated	
20	W536 20BR/YL	Horn mute signal 12V, 20 mA Input to VSIM disables horn function	NONE - Current limiting resistor is internal to the VSIM
21	W537 20BR/VT	VTSS mute signal 12V, 20 mA Input to VSIM	NONE - Current limiting resistor is internal to the VSIM
22	W538 20BR/OR	Fuel level status signal 12V PWM Output	N/A
23	W539 20BR/DB	Driver seat belt switch sense 10V Output from VSIM when buckled	N/A
24	W540 20BR/DG	MIL Malfunction indicator lamp 9V Output from VSIM when MIL is on	N/A

#### 2015 - CURRENT VSIM

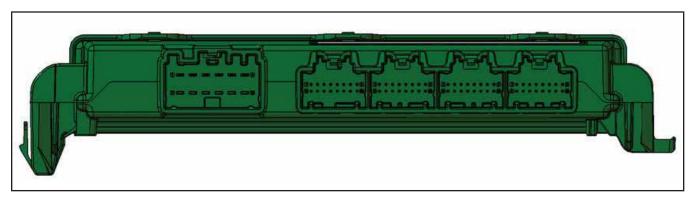


Figure 6 2015 - Current VSIM

The microcontroller-based electronic Vehicle System Interface Module (VSIM) (also known as the Vehicle Systems Integration Module/VSIM or the aftermarket module) is located under the LH side of the instrument panel assembly. The VSIM contains the electronic logic circuitry and software that enable many of the aftermarket equipment and systems typically installed on police or fleet vehicles to communicate with and be integrated with the electronic control modules and features already installed in the vehicle. It can communicate with aftermarket modules or with other electronic modules in the vehicle using the Controller Area Network (CAN) C data bus.

The VSIM is powered by a fused B(+) circuit and is grounded at all times so that it can operate regardless of the ignition switch position. The module awakens or sleeps based upon the status of the CAN C data bus network. The module monitors both active and stored Diagnostic Trouble Codes (DTC) through On-Board Diagnostics (OBD) and communicates with a diagnostic scan tool using the CAN C data bus.

The VSIM upfitter CAN bus (cavities 11 and 12 in the VSIM 24-way C2 Connector) outputs the following signals.

•	FtWigWagRq	Front WigWag Request
•	RrWigWagRq	Rear WigWag Request
•	SupHrnRq	Suppress Horn Request
•	PNC ALM MUTE	Panic Alarm Mute

•	PNC_ALM_MUTE	Panic Alarm Mute
•	DRV_AJAR	Driver Door Ajar
•	PSG_AJAR	Passenger Door Ajar
•	L_R_AJAR	Left Rear Door Ajar
•	R_R_AJAR	Right Rear Door Ajar
•	DAY_LGT_MD	Day Lighting Mode

•	PANEL_INTS	Instrument Panel Intensity
•	LOBEAM_ON	Low Beam Headlamps On

•	CmdIgnStat	Ignition Status
•	VEH_SPEED	Vehicle Speed

<ul> <li>DRV_SEATBELT</li> </ul>	Driver Seatbelt Status
----------------------------------	------------------------

•	StrWhl_AUX1_Sts	AUX1 Status
•	StrWhl_AUX2_Sts	AUX2 Status
•	StrWhl_AUX3_Sts	AUX3 Status

• DCSD\_AUX4 AUX4 Status (12.1" only)

The Database for CAN (DBC) file for these signals is available for download from the fleet website.

In 2018 and newer vehicles, the vehicle security gateway blocks unauthorized CAN communication from the vehicle diagnostic connector. Legislated/regulated diagnostic modes \$01-\$0A under SAE J1979 are still fully supported for aftermarket tools.

## Vehicle Systems Interface Module (VSIM) 2015 - Current

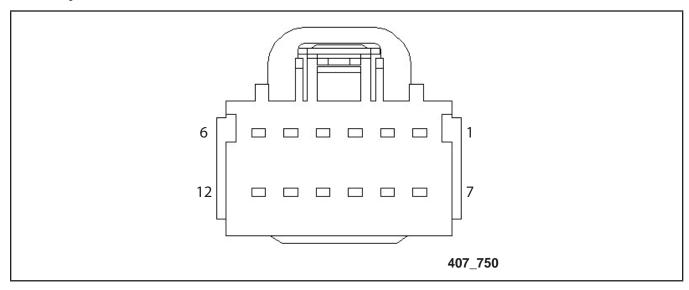


Figure 7 2015–current 12-way Connector

Table 3 2015-current VSIM 12-way Connector Pinout

Cavity	Circuit	Function	Upfitter Requirements
1	A100 16 RD/VT		Fused (20A) B (+)
2	A101 16 VT/RD		Fused (20A) B (+)
3	A102 16 WT/RD		Fused (20A) B (+)
4	F100 16 PK		Fused 20A accessory Voltage (with IGN ON or ACC - Police 1 Relay Output)
5	F101 16 PK/GY		Fused 20A accessory Voltage (with IGN ON or ACC - Police 3 Relay Output)
6	F102 16 PK/DB		Fused 20A accessory Voltage (with IGN ON or ACC - Police 2 Relay Output)
7	BK	Pass Through	
8	LG/WT	Pass Through	
9	BR/OR	Pass Through	
10	BR/WT	Pass Through	
11	OR	Pass Through	
12	OR/BR	Pass Through	

NOTE: Mating connector/pigtail 68251805AA

NOTE: The 12- and two 24-way connectors are located under the center console. The opposite end of the 12-way connector is found near the RH front bumper near the power steering pump, or attached to a stud near the underhood PDC.

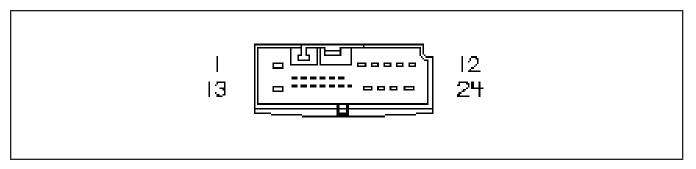


Figure 8 2015–current VSIM 24-way C1 Connector Table 4 2015–current VSIM 24-way C1 Connector Pinout

Cavity	Circuit	Function	Upfitter Requirements
1	W561 18 LG/BR	Steering Wheel Switch 1 - Sends signal out when AUX 1 is pressed	HSD - 12V Digital output, low current (Vbatt+0/-0.5 V / 500 mA)
2	W562 18 LG/VT	Steering Wheel Switch 2 - Sends signal out when AUX 2 is pressed	HSD - 12V Digital output, low current (Vbatt+0/-0.5 V / 500 mA)
3	NC	Future Use	
4	NC	Future Use	
5	NC	Future Use	
6	NC	Future Use	
7	NC	Future Use	
8	W563 18 LG/DB	Steering Wheel Switch 3 - Sends signal out when AUX 3 is pressed	HSD - 12V Digital output, low current (Vbatt+0/-0.5 V / 500 mA)
9	W734 18 PK/GY	Ignition Run/Accy 2 - Sends signal out when ignition is in ACC	HSD - 12V Digital output, low current (Vbatt+0/-0.5 V / 500 mA)
10	W736 18 PK/YL	Ignition Run - Sends signal out when ignition is in RUN	HSD - 12V Digital output, low current (Vbatt+0/-0.5 V / 500 mA)
11	W720 20 VT/OR	Any Door Ajar - Sends signal out when any door is opened	LSD - Ground output, low current
12	G745 20 VT/WT	VSIM Inline, Passenger Door Ajar - Sends signal out when passenger front door is opened	LSD - Ground output, low current

Cavity	Circuit	Function	Upfitter Requirements
13	G776 20 VT/YL	VSIM Inline, Rear Right Door Ajar - Sends signal out when right rear door is opened	LSD - Ground output, low current
14	NC	Future Use	
15	NC	Future Use	
16	NC	Future Use	
17	NC	Future Use	
18	NC	Future Use	
19	G755 20 VT/GY	VSIM Inline, Rear Left Door Ajar - Sends signal out when left rear door is opened	LSD - Ground output, low current
20	W522 18 OR/WT	Engine Running/Hour Meter - Sends signal out when engine is running	HSD - 12V Digital output, low current (Vbatt+0/-0.5 V / 500 mA)
21	W702 20 DG/DB	Trans Reverse Position - Sends out the transmission 'Reverse' position	LSD - Ground output, low current
22	W703 20 DG/LB	Trans Drive Position - Sends out the transmission Drive position	LSD - Ground output, low current
23	K682 20 DB/WT	(2016 - current model year) AUX 4 Output - Sends signal out when aux 4 is pressed on 12.1 touchscreen	HSD - 12V Digital output, low current (Vbatt+0/-0.5 V / 500 mA)
24	NC		

NOTE: Mating connector/pigtail 68213591AAA

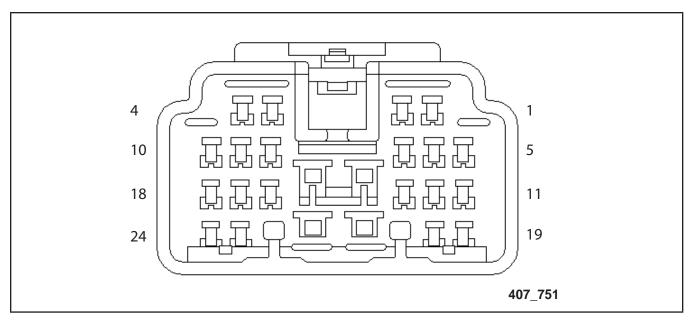


Figure 9 2015–current VSIM 24-way C2 Connector

Table 5 2015–current VSIM 24-way C2 Connector Pinout

Cavity	Circuit	Function - Description	Upfitter Requirements
1	W500 18 BR/OR	Front flashing lights (WigWags) - Controls the flashing of the wig wag function in the headlamps	Active High Input to VSIM (Pull down to GND/ 2.2 mA max)
2	W501 18 BR/VT	Rear Wig Wag Switch Signal - Controls the flashing of the wig wag function in the taillamps	Active High Input to VSIM (Pull down to GND/ 2.2 mA max)
3	W640 18 BR/WT	Audio Switch Mute Signal - Sends request to vehicle radio to mute the audio	Active High Input to VSIM(Pull down to GND/ 2.2 mA max)
4	W726 18 BR/VT	Brake Pedal Depressed - Sends signal out when brake pedal is pressed	HSD - 12V Digital output, low current (Vbatt+0/-0.5 V / 250 mA)
5	W513 18 BR/GY	Horn Activation - Sends signal out when horn is pressed	HSD - 12V Digital output, low current (Vbatt+0/-0.5 V / 500 mA)
6	W700 20 BR/YL	Trans Park Position - Sends out the transmission 'Park' position	HSD - 12V Digital output, low current (Vbatt+0/-0.5 V / 500 mA)
7	W515 18 BR/LB	Panic Alarm Activation - Sends signal out when panic alarm is active	HSD - 12V Digital output, low current (Vbatt+0/-0.5 V / 500 mA)

Cavity	Circuit	Function - Description	Upfitter Requirements	
8	W516 18 BR/DB	Headlamps ON - Sends signal out when headlights are on	HSD - 12V Digital output, low current (Vbatt+0/-0.5 V / 500 mA)	
9	· · · · · · · · · · · · · · · · · · ·		HSD - 12V Digital output, low current (Vbatt+0/-0.5 V / 250 mA)	
10	W553 18 BR/DG	Stealth Mode Active - Sends signal out when Stealth Mode is active	HSD - 12V Digital output, low current (Vbatt+0/-0.5 V / 500 mA)	
11	W532 22 BR/DG	Upfitter Side CAN-IHS (+)	CAN bus message output from VSIM for upfitter use	
12	W534 22 BR/LG	Upfitter Side CAN-IHS (-)	CAN bus message output from VSIM for upfitter use	
13	W552 18 BR/WT	Cluster Dimming Active Signal	N/A	
14	W522 18 BR/VT	Engine Running/Hour Meter - Sends signal out when engine is running	HSD - 12V Digital output, low current (Vbatt+0/-0.5 V / 500 mA)	
15	W523 18 BR/GY	Driver Door Ajar - Sends out signal when driver door is ajar	HSD - 12V Digital output, low current (Vbatt+0/-0.5 V / 1 A)	
16	Z910 18 BK	VSIM Inline Ground	N/A	
17	W745 21 DB/YL	(2017 Model Year) Secure park signal - Sends signal out when secure park is active	HSD - 12V Digital output, low current (Vbatt+0/-0.5 V / 500 mA)	
18	K686 20 DB/WT	VSIM Inline	N/A	
19	W526 18 BR/DB	Vehicle Speed Square Wave Signal - Frequency of signal is proportional to vehicle speed (10Hz per MPH)	HSD - 12V pulse, low current (50% duty cycle / 7 500 mA)	
20	W536 18 BR/YL	Horn Switch Mute - Sends request to vehicle body control module to mute the horn	Active High Input to VSIM (Pull down to GND/ 2.2 mA max)	
21	W537 18 BR/OR	Panic Alarm Switch Mute Signal - Sends request to vehicle's body control module to mute the alarm	Active High Input to VSIM (Pull down to GND/ 2.2 mA max)	
22	NC		N/A	
23	W710 18 BR/DB	Seat Belt Not Latched - Sends out signal when driver seat belt is not latched	HSD - 12V Digital output, low current (Vbatt+0/-0.5 V / 250 mA)	

Cavity	Circuit	Function - Description	Upfitter Requirements
24	W540 20 BR/DG	l <u>*</u>	HSD - 12V Digital output, low current (Vbatt+0/-0.5 V / 500
		Signal when will is on	mA)

NOTE: Mating connector/pigtail 68251804AA

**VSIM Connectors for Upfitting (2015 - Newer)** 

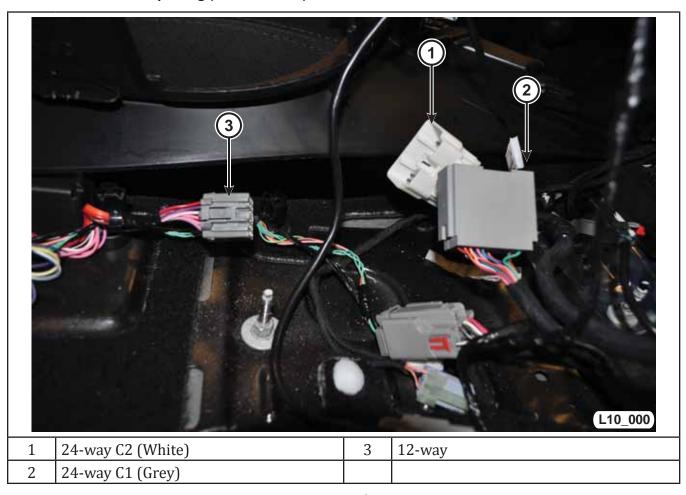


Figure 10 VSIM Interface Connectors

The VSIM upfitter connectors are located under the center console. The two 24-way connectors are located close to the bottom of the instrument panel, while the 12-way connector is located next to the mounting bolt for the console.

NOTE: There are sensors for the keyless entry system and antilock brake system located under the console. Make sure during upfit that the sensors are not repositioned. Sensor placement is critical for proper system operation.

NOTE: Do not remove the occupant restraint controller without first disconnecting the battery and waiting two minutes. Follow information in TechCONNECT for disabling restraint system. Failure to do so could cause airbag deployment.

## **12-Way Connector Terminals**



Figure 11 12-Way Pigtail Location

The opposite end of the 12-way connector (terminals 7-12) are located under the hood, next to the power distribution center.

## **BASIC ELECTRICAL TIPS**

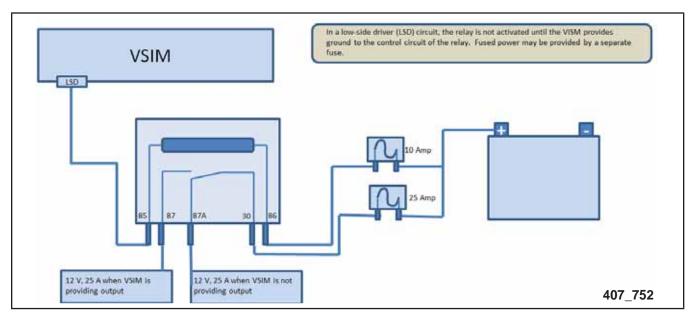


Figure 12 Low Side Driver Controlled Circuit

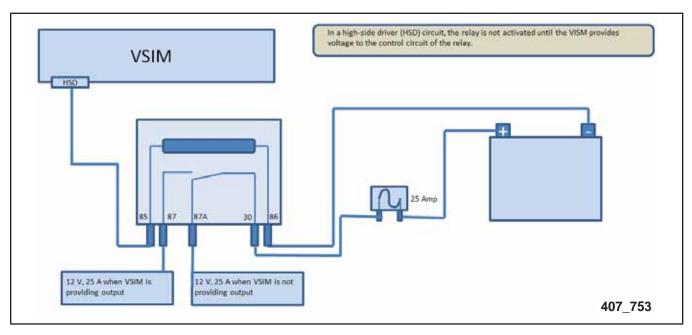


Figure 13 High Side Driver Controlled Circuit

#### **High and Low Side Drivers**

When connecting to the VSIM as a method of controlling an electrical device, it is important to know how a device is controlled. For example, some output circuits are low-side drivers, while others are high-side drivers. This is how the module is designed, and nothing that can be changed through programming or settings. Each driver inside the module is part of the control board, and designed for circuit protection.

In all cases, the VSIM should not be connected directly to an output device, but to a relay which is wired into that device. A relay is designed to use a smaller current than most outputs, and is used to allow this smaller current to control a larger current.

#### **ISO Relays**

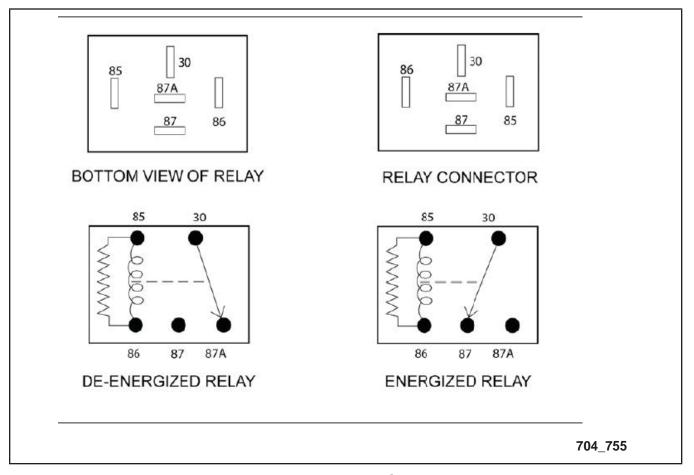


Figure 14 ISO Relays

ISO relays conform to the specifications of the International Organization for Standardization for common size and terminal pattern. ISO relays are used in many applications such as the starter, horn, electric fan, air conditioning clutch, auto shut down, and fuel pump circuits.

Relay connection terminals are defined as follows:

- Terminal 30 is usually connected to battery voltage. This battery voltage source can be switched on or off by the ignition switch, or un-switched, connected directly to the battery.
- Terminal 87A is connected to Terminal 30 in the de-energized position.
- Terminal 87 is connected to Terminal 30 in the energized position. When energized, the relay supplies battery voltage to Terminal 87, or removes battery voltage from a device connected to Terminal 87A.
- Terminal 86 is connected to the electromagnet and is usually connected to a switched battery voltage source.
- Terminal 85 is connected to the electromagnet and is usually connected to a switched or un-switched ground.

## Micro Relays

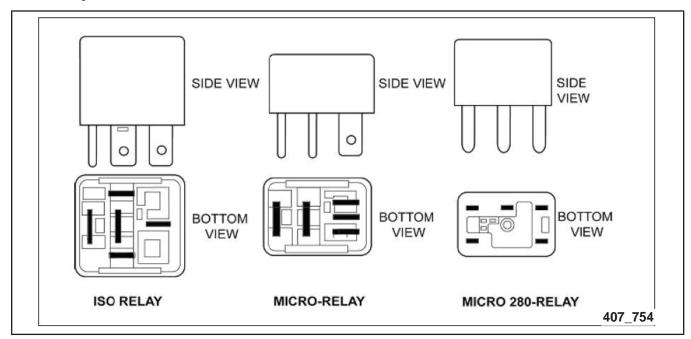


Figure 15 Micro Relays

Micro relays and micro 280 relays perform the same function as ISO relays but are smaller in size and have different terminal patterns. A map of the pattern and terminal identification is usually located on the top or side of the relay.

#### **UCONNECT 12.1**



Figure 16 Uconnect 12.1 System

The Uconnect 12.1 system incorporates the normal functions and features of the Uconnect system, but also includes a 12.1-inch touchscreen that emulates an officer's laptop, if connected.

The UConnect 12.1 system allows the customer the ability to move their PC out of the front seat, freeing up passenger space that is typically occupied by laptop mounts and auxiliary screens (i.e. Radar/Camera screen).

The system consists of a resistive touchscreen that is designed to be used with all types of gloves. It operates from  $-40^{\circ}$  C to  $85^{\circ}$  C ( $-40^{\circ}$  F to  $185^{\circ}$  F).

The vehicle's radio is mounted behind the touchscreen. The touchscreen acts as a radio display and input only, so diagnosing the audio system will follow standard procedures found in TechCONNECT. Unlike other FCA audio systems, the Uconnect 12.1 system is not WIFI capable, however the Bluetooth system operates normally, and can be paired with an officer's phone.

#### **Uconnect Operation**



Figure 17 Uconnect Screens

The vehicle is shipped from the factory with no computer connected. The system will operate as long as the vehicle is in the ACC/RUN position.

The screen will stay on as long as the UConnect radio and/or the PC are on. The screen will turn off once the UConnect radio is off and the PC is either disconnect or put into sleep mode. Screen brightness is controlled by the same thumbwheel, next to the steering wheel controls.

When there is a PC connected, the laptop screen is displayed, along with the AUX 4, Uconnect, PC 1, PC 2(if configured), and Screen Off soft keys. When the Uconnect button is pressed the radio screen is displayed over the top half of the screen. Pressing PC 1 hides the radio screen.

As with today's radio, same HVAC, time, outside temp information is displayed at the top of the screen, regardless of whether in split screen or full screen mode

#### **Connections**



Figure 18 Uconnect IP Connections

The system comes with a USB cable (located near the Audio/HVAC controls) that allows the customer to connect a keyboard or mouse. The system may also be connected to a Bluetooth™ keyboard. The keyboard should be wirelessly connected to the laptop

There is also an audio cable that can be connected to the PC headphone jack in the trunk, then to the AUX port in the Media center. The cable equipped with the vehicle has a female connector in the console, so an adapter is provided to allow a connection to the AUX port in the Media Center. This allows PC audio to play through the vehicle's speakers when the audio system is set to AUX Input.

#### **Connections in Trunk**

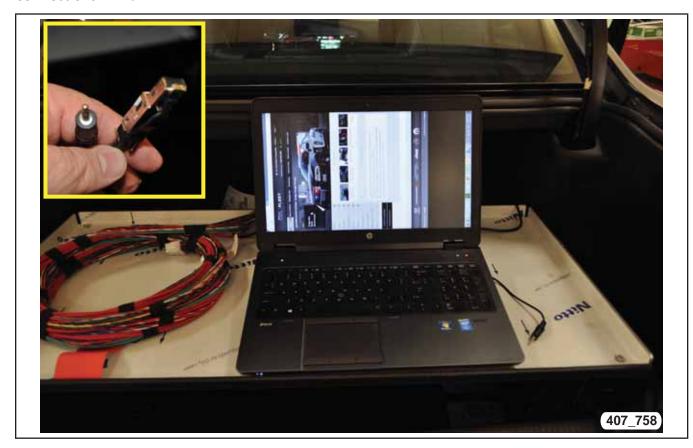


Figure 19 Trunk Connectors for Laptop

An ethernet cable connector is located in the trunk, along with the audio cable. If the vehicle is not equipped with the trunk tray, the cables are located in the forward, right side of the trunk, on the inside surface of the right rear wheel well..

## **Laptop Configuration**

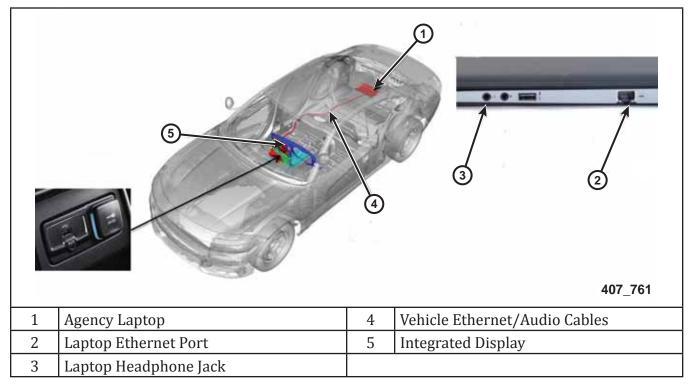


Figure 20 Laptop System Overview

To configure the system you will need to download Real VNC software to your computer. To obtain directions for downloading software and license email your request to: lawenforcement@chrysler. com. Depending on municipality security, this may be a function that the IT department needs to complete.

Connect the agency laptop to the ethernet and audio cables located in the trunk.

## **Laptop Display**

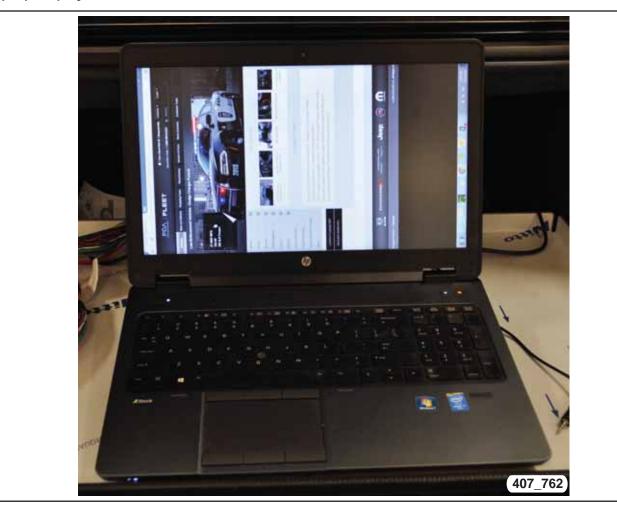


Figure 21 Laptop Configuration

Due to the vertical integration of the Uconnect system, it is best to rotate your laptop screen orientation to fully utilize the in-vehicle screen. The below instructions will only work with Windows systems whose video card supports this feature.

NOTE: The best laptop display resolution for viewing is 768x1024. Touchscreen PCs and tablets will auto size the screen resolution

NOTE: A list of supported video cards can be found at http://www.intel.com/support/graphics/sb/cs-016829.htm.

#### *Windows XP/7/8/10*

- To rotate the screen by 90-degrees, simultaneously press CTRL, ALT, and the right arrow key.
- To return the screen to the original orientation, simultaneously press CTRL, ALT, and the up arrow

## **System Connections Inside Vehicle**



Figure 22 Uconnect Interior Connections

Inside the vehicle, connect the audio cable to the Media Hub port. Connect the keyboard or mouse to the USB cable under the front console cover.

NOTE: The audio system need to be in AUX mode to hear the laptop audio through the vehicle speakers.

The touchscreen can be operated with a computer stylus if desired.

#### **Auxiliary Switches**



Figure 23 Programmable Auxiliary Switches

The Pursuit has programmable switches mounted in the steering wheel and in the touchscreen (on vehicles equipped with the 12.1" screen) that can be configured to an output. Each switch connects to the VSIM which provides an output that can be connected to a relay to drive a higher-current device.

The switches are momentary contacts that send a signal to the VSIM, which activates an output circuit. This means that the VSIM will provide the output until the switch is pressed again.

See the VSIM section of the Upfitter Guide for pin position for each switch.

#### **LIGHTING**

## **Police Dome Light**



Figure 24 Police Dome Light

The police dome light switch has three positions. Position one is used for white light, position two is used for red LED light, and position three is OFF. When the dome light is not needed, always remember to return the dome light switch to the OFF (center) position to prevent the vehicle battery from discharging.

#### **Spot Light**



Figure 25 Spot Light

If your vehicle is not equipped with factory installed spot lamps, you can find the spot light connector at the leading edge of the headliner near the A-pillars.

CAUTION: Make sure the airbag tether is correctly fastened in place before doing any drilling and after installation of an aftermarket spot lamp is complete..

#### Stealth Mode

This vehicle is designed for periods of surveillance. The dimmer control is located next to the headlight switch, on the left side of the instrument panel. By rotating the dimmer control to the extreme OFF position (to stealth mode), all interior illumination, except for the EVIC display on the IPC, backlighting for the door switches, and the vehicle critical warning indicators, will be eliminated. The EVIC display and the warning indicators will go to the lowest legal limit.

The courtesy (interior) lights are disabled when opening the door and will operate only by rolling the headlight dimmer switch to the fully upward (detent) position, or by pressing each map light individually.

#### **FUSES**

## Wiring provisions

The wiring take outs and connections are in similar locations as previous models. Refer to the current Charger Police Vehicle Upfitting Guide for 2006 to 2010 vehicles.

#### POWER DISTRIBUTION CENTER

#### **Front Power Distribution Center**

There are two fuse and relay locations on the vehicle for the standard electrical systems. The fuse values and positions for the standard electrical systems are described below.

#### **CAUTION:**

When installing the PDC cover, make sure it is properly positioned and latched to prevent water from getting into the PDC and causing an electrical system failure. When replacing a blown fuse, use only a fuse having the correct amperage rating. The use of a fuse with a rating other than indicated may result in an electrical system overload. If a properly rated fuse continues to blow, it indicates a problem in the circuit that must be corrected.

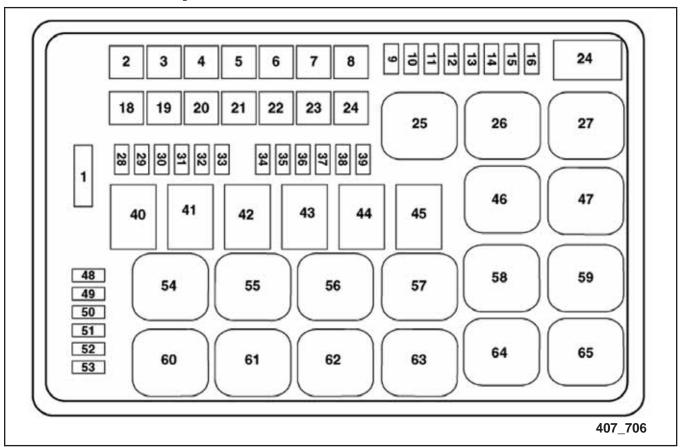


Figure 26 Underhood PDC

Table 6 Underhood Fuses and Relays

Cavity	Cartridge Fuse	Mini-fuse	Description
1			Spare
2		40	Radiator Fan 1
3		50	Power Steering 1
4		30	Starter
5		20	Antilock Brakes
6			Spare
7		20	Police Ignition Feed 1
8		20	Police Ignition Feed 2
9			Spare
10		10	Underhood Lamp
11		20	Horns
12		10	A/C Clutch
13			Spare
14		25	Antilock Brakes
15			Spare
16			Spare
18		50	Radiator Fan 2
19		50	Power Steering 2
20		30	Wiper Motor
21		20	Police Battery Feed 3
22		20	Police Battery Feed 2
23		20	Police Battery Feed 1
24		20	Police Ignition Feed 3
28		25	Fuel Pump
29		15	Transmission
30			Spare
31		25	Engine Module
32			Spare
33			Spare
34		25	ASD Feed 1
35		20	ASD Feed 2
36		10	Antilock Brake Module
37		10	Engine Control/Fan
38		10	Airbag Module
39		10	Power Steering Module/A/C Clutch
48			Spare

Cavity	Cartridge Fuse	Mini-fuse	Description		
49			Spare		
50			Spare		
51		20	Vacuum Pump		
52			Spare		
53			Spare		
	Relays				
Cavity			Description		
17			Spare		
25			Vacuum Pump		
26			Spare		
27			Starter		

## **Rear Power Distribution Center**

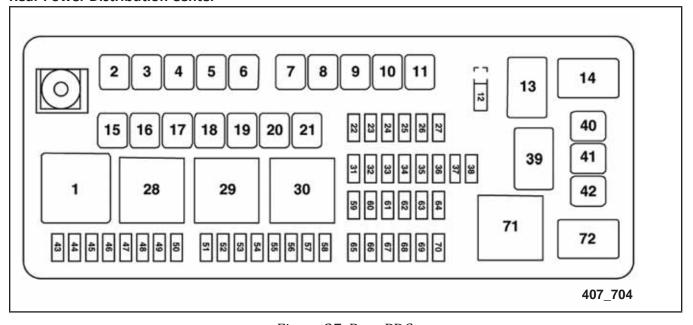


Figure 27 Rear PDC

Table 7 Rear PDC Fuses and Relays

Cavity	Cartridge Fuse	Mini-fuse	Description
2	60		Front PDC Feed 1
3			Spare
4	60		Front PDC Feed 2
5		20	Dome Lamp
6		40	Exterior Lighting 1

Cav	rity Cartridge Fuse	Mini-fuse	Description
7		40	Exterior Lighting 2
8		30	Interior Lighting/Washer Pump
9		30	Power Locks
10		30	Driver Door
11		30	Passenger Door
12		20	Power Outlets (selectable)
15		40	HVAC Blower
16			Spare
17			Spare
18			Spare
19			Spare
20			Spare
21			Spare
22		20	Right Spot Lamp
23		10	Fuel Door/Diagnostic Port
24		15	Radio Screen
25		10	Tire Pressure Monitor
26			Spare
27			Spare
31		25	Power Seats
32		15	HVAC Module/Cluster
33		15	Ignition Switch/Wireless Module
34		10	Steering Column Module/Police Module
35		10	Battery Sensor
36		20	Left Spot Lamp
37		15	Radio
38			Spare
40			Spare
41			Spare
42		30	Rear Defrost
43			Spare
44			Spare
45		15	Cluster/Rearview Mirror
46			Spare
47			Spare
48			Spare
49			Spare

Cavity	Cartridge Fuse	Mini-fuse	Description	
50			Spare	
51			Spare	
52			Spare	
53		10	HVAC Module	
54			Spare	
55			Spare	
56			Spare	
57			Spare	
58		10	Airbag Module	
59		20	Adjustable Pedals	
60			Spare	
61			Spare	
62			Spare	
63			Spare	
64		25	Rear Windows	
65		10	Airbag Module	
66			Spare	
67		15	Run Sense	
68			Spare	
69			Spare	
70			Spare	
		Rel	ays	
	Cavity		Description	
1			Ignition Run	
13			Adjustable Pedals	
14			Spare	
28			Rear Defrost	
29	29		Rear Windows/Run Sense	
30	30		Power Outlets	
39	39		Spare	
71			HVAC Blower	
72			Spare	

#### **Auxiliary Power Distribution Center**

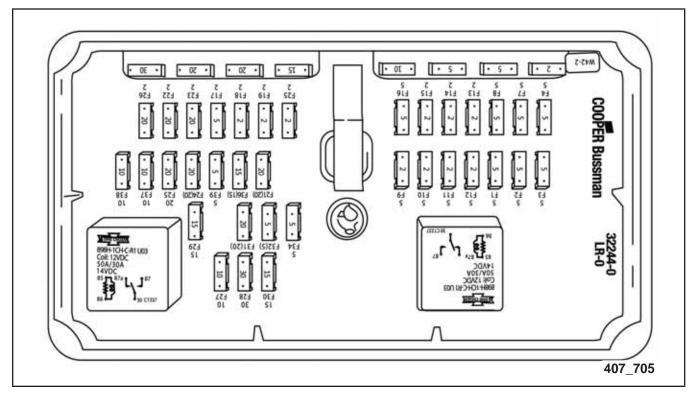


Figure 28 Auxiliary Power Distribution Center

Cavity	Amperage	Description
F1	5	Front Corner LEDs
F2	5	Grill LEDs
F3	5	Mirror LEDs
F4	2	Visor Trigger
F7	5	B Pillar LEDs
F8	5	Deck LEDs
F9	2	Takedown
F10	2	Right Alley
F11	2	Left Alley
F12	2	Lightbar Front
F13	2	Lightbar Rear
F14	2	Tail Lamp Flash
F15	2	Headlamp Flash
F16	5	Rear LEDs
F17	5	Gun Lock
F18	2	T/A Left
F19	2	T/A Right

Cavity	Amperage	Description	
F20	2	T/A Flash	
F21	25	Siren In1A	
F22	25	Siren In1B	
F23	25	Siren In2A	
F24	25	Siren In2B	
F25	20	Front Radio	
F26	20	Rear Radio	
F27	10	Radar	
F28	30	Lightbar	
F29	15	Visor	
F30	15	T/A	
F31	20	Siren Controller	
F32	5	Front Radio	
F34	5	Fan/Timer Module Ign	
F36	15	Computer	
F37	10	Camera	
F38	10	Modem	
F39	5	Printer	
Relays			
	Cavity	Description	
R1		Ignition Relay	
R2		Horn Relay	

#### PASSIVE RESTRAINTS

#### **Occupant Restraint System**

WARNING: INSTALLING A CONVENTIONAL PRISONER PARTITION IS NOT RECOMMENDED ON VEHICLES EQUIPPED WITH LEFT AND RIGHT SIDE CURTAIN AIRBAGS, AS POLICE CAGES MAY INTERFERE WITH THE DEPLOYING AIRBAG. THE AREA WHERE THE SIDE CURTAIN AIRBAG IS LOCATED SHOULD REMAIN FREE FROM ANY OBSTRUCTIONS. ONLY INSTALL A PARTITION THAT IS DESIGNED

TO BE COMPATIBLE WITH SIDE CURTAIN AIRBAGS.

WARNING: IF YOUR VEHICLE IS EQUIPPED WITH LEFT AND RIGHT SIDE CURTAIN AIRBAGS, CARE MUST BE TAKEN WHEN INSTALLING ANY TYPE OF ROOF EQUIPMENT. DRILLING AND INSTALLATION OF FASTENERS OR OTHER EQUIPMENT THAT MAY INTERFERE WITH THE SIDE CURTAIN AIRBAGS AND AIRBAG WIRING HARNESS IS NOT PERMITTED. MAKE SURE THAT NO EQUIPMENT OR FASTENERS ARE LOCATED IN THE AIRBAG DEPLOYMENT

ZONE.

WARNING: DO NOT PLACE OBJECTS, OR MOUNT EQUIPMENT, IN FRONT OF THE

AIRBAG MODULE COVER OR IN FRONT OF THE SEAT AREAS THAT MAY COME IN CONTACT WITH A DEPLOYING AIRBAG. FAILURE TO FOLLOW THIS

INSTRUCTION COULD RESULT IN PERSONAL INJURY.

WARNING: DO NOT PLACE DASH, TUNNEL, OR CONSOLE-MOUNTED EQUIPMENT

OUTSIDE OF THE SPECIFIED ZONE. FAILURE TO FOLLOW THIS INSTRUCTION

COULD RESULT IN PERSONAL INJURY.

The occupant restraint system contains the following components:

- Left front impact sensor
- Right front impact sensor
- Driver airbag
- Driver side airbag
- Passenger airbag
- Passenger side airbag
- Occupant restraint controller (ORC) module
- Driver seat belt tensioner
- Passenger seat belt tensioner
- Left side impact sensors
- Right side impact sensors

There are four interior zones to be aware of:

- Driver airbag deployment zone
- Passenger airbag deployment zone
- Side curtain airbags deployment zone
- Side airbags (seat-mounted) deployment zone

#### **Driver Airbag Deployment Zone**

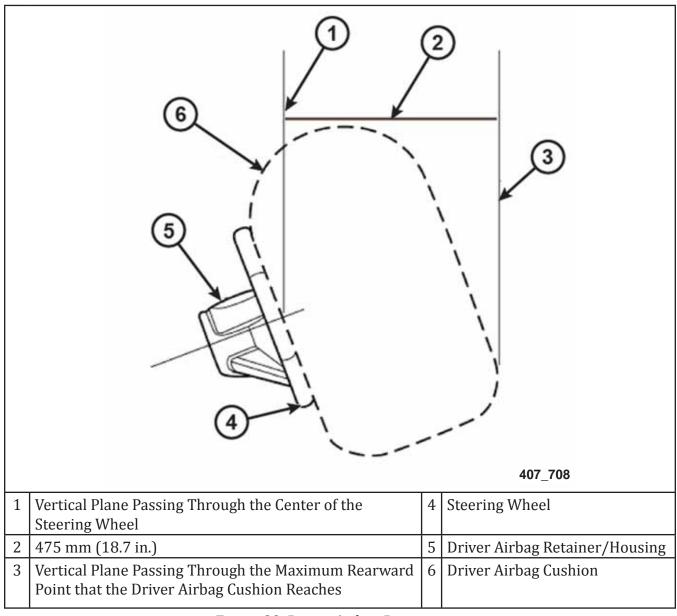


Figure 29 Driver Airbag Dimensions

NOTE: The illustration represents the maximum dynamic deployment shape.

Table 8 Driver Airbag Cushion Position

DAB diameter when full	673 mm (26.5 in.)	
DAB depth when full	381 mm (15 in.)	
Maximum rearward displacement during fill	470 mm (18.5 in.)	

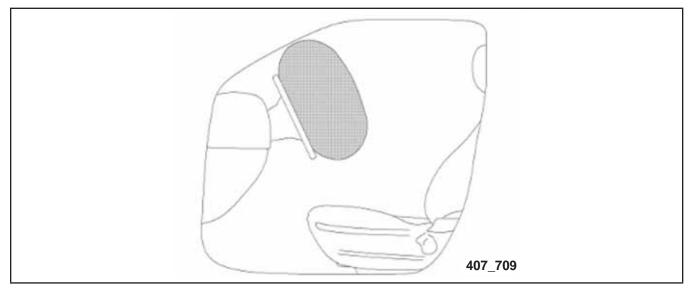
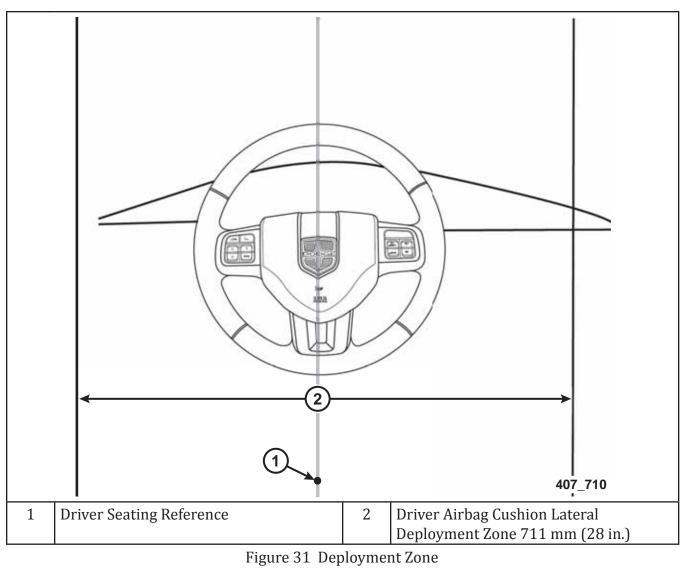


Figure 30 Driver Airbag Deployed Shape

Table 9 Steering Column Tilt Position Range

± 2.7 degrees from steering column tilt pivot point
21.0 degrees from vertical is the normal position



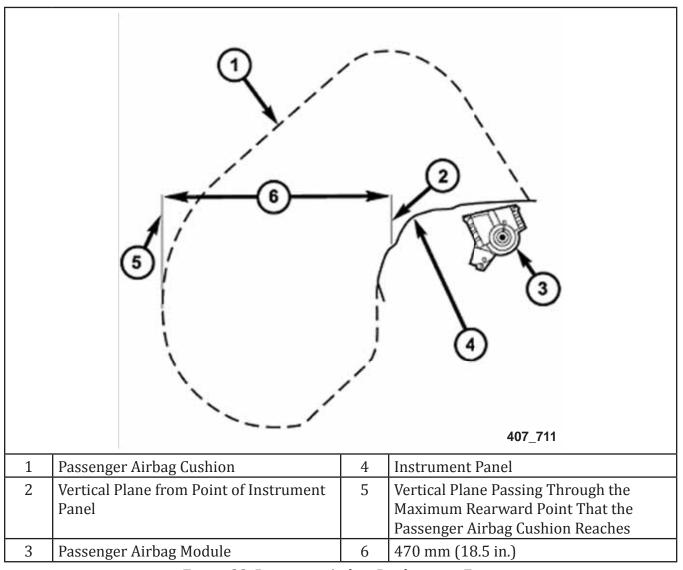


Figure 32 Passenger Airbag Deployment Zone

NOTE: The illustration represents the maximum dynamic deployment shape.

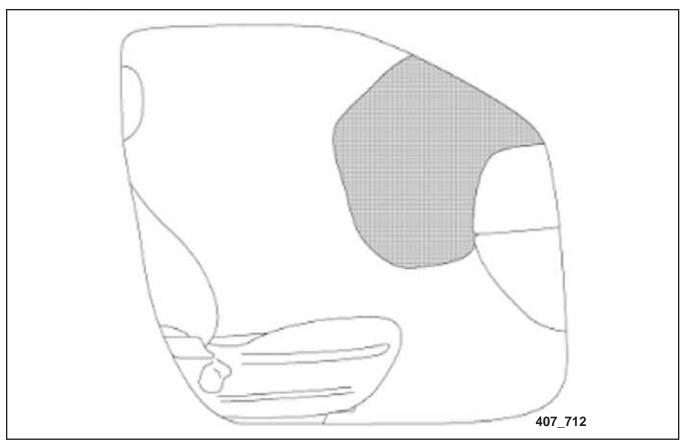


Figure 33 Final Deployment Shape

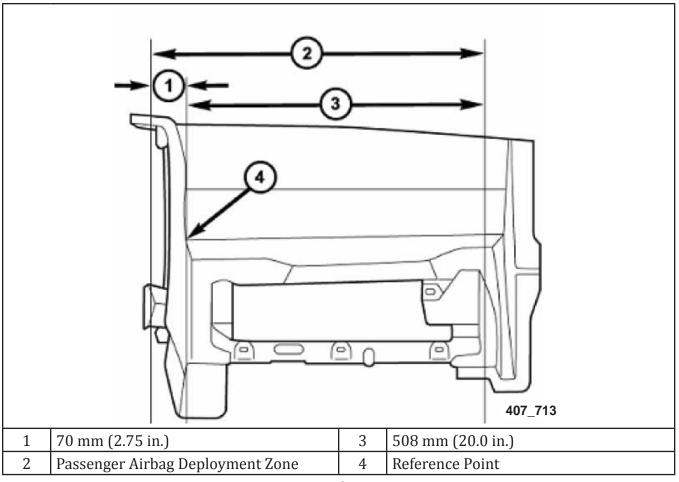


Figure 34 Deployment Zone

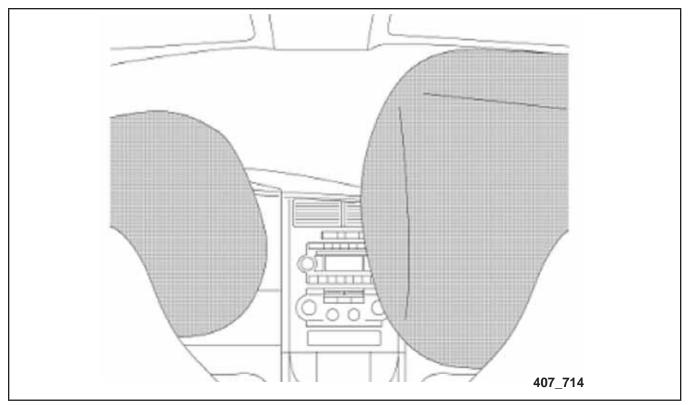


Figure 35 Center Interior Area

WARNING: MAKE SURE ADEQUATE SPACE IS AVAILABLE FOR AIRBAG DEPLOYMENT.
MOUNTING ACCESSORIES AND EQUIPMENT INSIDE THE DEPLOYMENT
ZONES IMPEDES AIRBAG DEPLOYMENT.

NOTE: The illustration represents the maximum dynamic deployment shape.

#### **Side Curtain Airbag Deployment Zone**

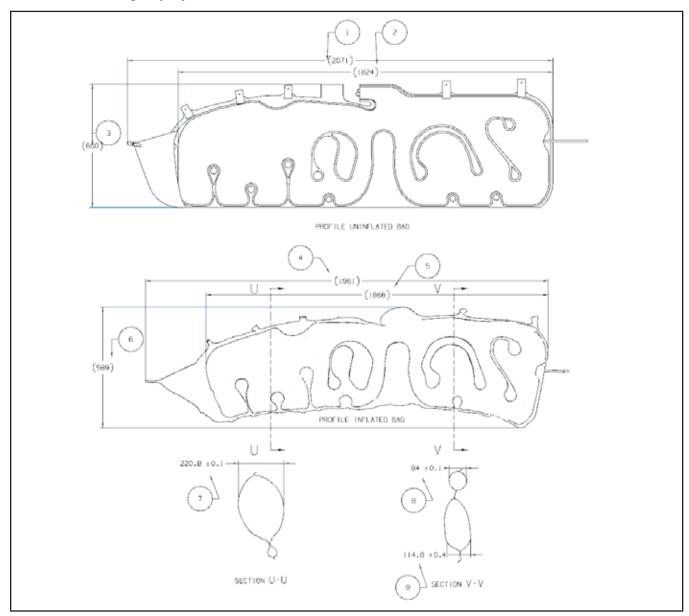


Figure 36 Side Curtain Airbag Deployment Zone

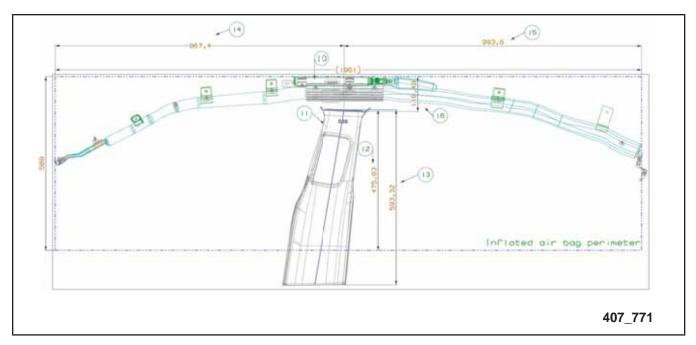


Figure 37 Side Curtain Airbag Deployment Zone

Table 10 Side Airbag Deployment Zone Reference Chart

Callout	Millimeters	Inches	
1	2071	81.5	
2	1824	71.8	
3	600	23.6	
4	1961	77.2	
5	1666	65.6	
6	589	23.2	
7	220.8	8.7	
8	84	3.3	
9	114.8	4.5	
10	Inflator		
11	B-Pillar		
12	475.83	18.7	
13	593.32	23.4	
14	967.4	38.1	
15	993.6	39.1	
16	118.49	4.7	

#### **WARNING:**

MAKE SURE ADEQUATE SPACE IS AVAILABLE FOR AIRBAG DEPLOYMENT. DO NOT MOUNT EQUIPMENT OR ROUTE WIRES IN A WAY THAT WILL IMPEDE SIDE CURTAIN AIRBAG DEPLOYMENT.

If the vehicle is equipped with side curtain airbags, take care when installing equipment in the roof area to avoid drilling or installing fasteners in the side curtain airbag area. Also make sure that no equipment installed inside the vehicle interferes with the airbag deployment areas. If additional wiring needs to be routed on the sides of the roof, take care that the installed harness does not impede the airbag deployment. Point fasteners used to attach roof-mounted equipment outward from the passenger compartment to minimize risk of head injury and to avoid altering the head impact protection system (FMVSS 201) that is standard on these vehicles. Do not allow fasteners to extend into the passenger compartment, even between the roof and headliner.

#### **Side Airbag Deployment Zone**

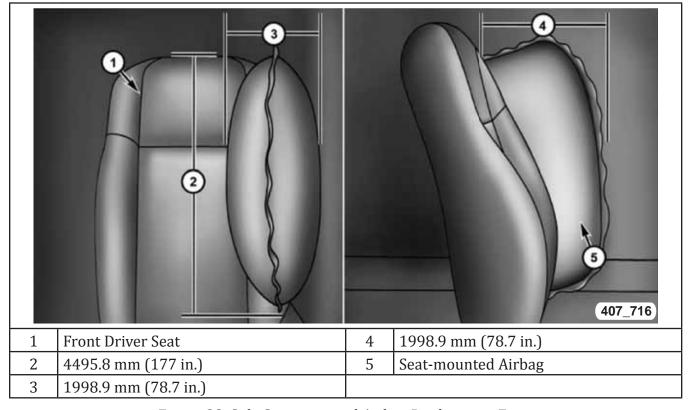


Figure 38 Side Seat-mounted Airbag Deployment Zone

**NOTE:** The illustration represents the maximum dynamic deployment shape.

#### **CAUTION:**

It is imperative that all occupant restraint system components remain in their original location and orientation. Any modification, removal, or relocation of components may be detrimental to the occupant restraint system performance and is prohibited. Any vehicle modification that may affect the occupant restraint system characteristics should be verified through vehicle calibration/impact testing.

#### **Occupant Restraint System Wiring**

All occupant restraint system wiring must remain intact and may not be used for any other purpose. This includes the driver and front passenger seat wiring. Any electrical connector that is yellow is part of the occupant restraint system and should not be modified or used for other purposes.

#### **Occupant Restraint System Verification**

After any modification work is complete, confirm the occupant restraint system readiness as follows: turn the ignition key to the ON position. The airbag lamp in the instrument cluster illuminates for 6 to 8 seconds, and then turns off. If the airbag lamp fails to illuminate, repeatedly cycles on and off, or does not turn off, have the condition corrected by an authorized Chrysler LLC dealership before shipping the vehicle to the customer.

#### **TOWING**

Chrysler Group LLC does not recommend towing with the Dodge Charger Pursuit vehicle.

#### **VEHICLE STORAGE**

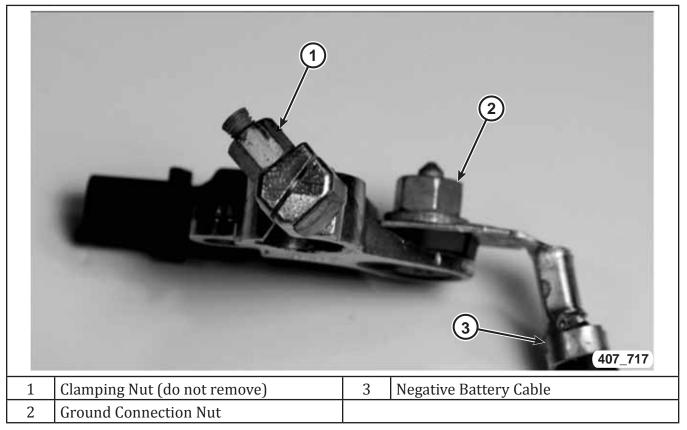


Figure 39 Intelligent Battery Sensor

If a vehicle is not immediately delivered to the customer, store the vehicle according to the following guidelines:

- Store the vehicle indoors, in a clean and dry place.
- Check the engine coolant and anti-freeze protection.
- Leave the parking brake in the OFF position.

#### If vehicles must be stored outside:

- Avoid storage locations near obvious sources of industrial or environmental contamination (such as trees, factories, steam or vapor vents, railroad tracks, etc.).
- Maintain tight security to help prevent vandalism. Inspect the vehicle regularly to check for such damage.
- If the vehicle must be parked on an incline, park it with the front end higher than the rear. This prevents hydrostatic lock caused by fuel draining into the engine.
- Rinse the vehicle at least once a week. Wash away the snow more often because it can trap harmful contaminants. Dry all horizontal surfaces.
- Remove the negative battery cable by removing the ground connection nut to prevent battery drain and possible damage.
- Keep all windows closed, all doors locked, and all trim covers intact and in place.
- Do not use chalk, crayon, or any marker containing abrasives on painted, plated, or glass surfaces.
- Use protective, thin, plastic film to avoid soiling seats when moving a vehicle.

NOTE: The 2011 and newer Dodge Charger Pursuit vehicle does not have an IOD fuse as in previous models. Therefore, the negative battery cable should be removed from the intelligent battery sensor to prevent draining the battery during extended vehicle storage. Only loosen the ground connection nut from the intelligent battery sensor to remove the negative battery cable.

### WARNING:

THE BATTERY IN THIS VEHICLE HAS A VENT HOSE THAT SHOULD NOT BE DISCONNECTED AND SHOULD ONLY BE REPLACED WITH A BATTERY OF THE SAME TYPE (VENTED). FAILURE TO FOLLOW THIS WARNING CAN RESULT IN SERIOUS OR FATAL INJURY.

#### Once a month:

- Check the battery state for charge (at least 12.4 volts). Charge the battery as necessary to help prevent freezing and deterioration.
- Make sure that the battery vent tube is properly connected to the battery and to the floor pan.
- Check the vehicle tire pressures and inflate them to the maximum recommended levels. To help avoid flat spotting, move the vehicle at least once a month so that a different portion of the tire tread contacts the ground.

#### **Shipping Mode**

The Dodge Charger Pursuit vehicle no longer uses an IOD fuse when transporting or storing for a long period of time. The BCM has a Shipping Mode that takes the place of pulling the IOD fuse. The vehicle will come from the factory in Shipping mode.

#### 2011 - 2014.5 Models

To enable/disable the Shipping Mode function, press and hold the Front Defrost and Enter/Browse for five seconds. You can also enable/disable the vehicle from Shipping Mode by using the scan tool: go to BCM then Misc. function.

#### 2015 - newer

Description	Action		
Keep all protective transit film, wheel covers, and films on vehicle	Keep all protective transit film, wheel covers, and films on vehicle until sold.		
Inflate the tire pressure to the maximum side wall pressure	Inflate the tire pressure to the maximum side wall pressure (except heavy duty trucks).		
Put the vehicle into Ship Mode (if no IOD fuse)	Turn the hazard lamps on and press/hold the up arrow on the steering wheel EVIC controls until the vehicle enters shipping mode. Note that this procedure is only possible while the vehicle has relatively low mileage. If the procedure fails, threshold mileage has most likely been exceeded.		

Table 11 Shipping Mode

#### TRUNK COOLING FAN



Figure 40 Trunk Cooling Fan

The trunk cooling fan is driven by the necessity to either heat or cool the trunk area when equipment is installed in the trunk. Previous models of camera systems contained a vault that had its own environmental controls, but (with the arrival of digital recording) most of these went away. Multi-piece computers or laptops have been moved to the trunk area and this has caused the systems to either freeze in cold climates or become overheated in warm climates. The trunk fan helps to stabilize the temperature in the trunk in a relatively short period of time, helping the components to function properly. With the cabin of the vehicles becoming more congested, the trunk-mounting of equipment will continue to be the only available location and the need to control climate will increase.

#### **Decommissioning a Vehicle**



Figure 41 Restore RF Hub to Customer Mode

A Dodge Charger Pursuit vehicle may be auctioned or sold to the public at the end of its service life. Because of the unique and purpose=specific functions of various systems, it may be necessary to adapt or nullify some of these features.

#### Rear Door Locks

If a vehicle is equipped with the rear door open from outside only feature, the vehicle came with a bag of parts in the trunk that includes the attaching hardware to connect the inside handle to the door latch. It also may include the manual lock/unlock lever. These parts need to be installed or at least placed in the trunk.

#### **RF Hub Reprogram**

The RF Hub controls actuation of the trunk and other remote features. On a police vehicle, using the button located on the trunk-mounted brake lamp only wakes up one of the CAN bus networks and does not open the trunk. This is a function of the Vehicle Configuration for a police vehicle. If the vehicle is equipped with Key Alike, the Disable Key-Alike function should be performed in

the RF hub. To perform this function:

- Navigate to the RF Hub using the scan tool
- Select Misc. Functions
- Select Disable Key Alike

Follow the instructions on the screen. The municipality shop may decide to keep the FOBIKS, as they will no longer work with the vehicle.

NOTE: Once the Disable Key Alike function is performed, the FOBIKS will have to be replaced. If a technician attempts to program Key Alike FOBIKs to an RF Hub that has had the Disable Key Alike function performed, the programming will fail. Once the routine has been performed, it cannot be reversed.

#### **Ballistic Panels**

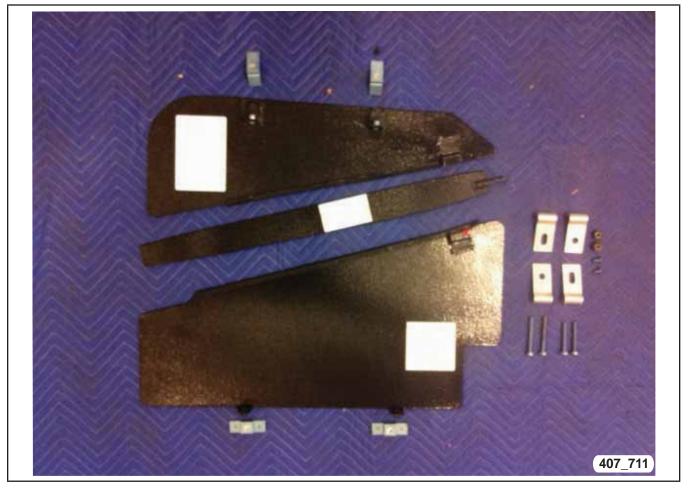


Figure 42 Ballistic Panels

The Dodge Charger Pursuit is available with ballistic panels inside the front doors. These panels are installed between the outer door skin and inner door module. The panels are serviced separately by contacting Mopar and ordering the following panels:

- 82214465 right hand
- 82214466 left hand

Instructions are included with the replacement panels.

Notes:	 		

Notes:	



#### WORLDWIDE

The special service tools referred to herein are required for certain service operations. These special service tools or their equivalent, if not obtainable through a local source, are available through the following outlet:

## Mopar Essential Tools and Service Equipment Snap-on Business Solutions

Telephone 1-855-298-2687

2801-80th Street Kenosha, WI 53143, U.S.A.

FAX 1-855-303-8985



www.moparessentialtools.com



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# THROUGH TECHNICIAN CERTIFICATION





# TRAINING PROGRAM DEVELOPMENT DEPARTMENT



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