

2011MY – 2020MY
Dodge Charger Pursuit
Upfit Guide



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.

Cautions and warnings cover only the situations and procedures FCA has encountered and recommended. Neither FCA GROUP nor its subsidiaries or affiliates cannot know, evaluate, and advise the service trade of all conceivable ways in which service may be performed, or of the possible hazards for each. Consequently, FCA GROUP and its subsidiaries and affiliates have not undertaken any such broad service review. Accordingly, anyone who used a service procedure or tool that is not recommended in this publication must be certain that neither personal safety, nor vehicle safety, is jeopardized by the service methods they select.

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TABLE OF CONTENTS

ABOUT THIS GUIDE	1
FCA FLEET WEBSITE.....	2
VEHICLE DIMENSIONS.....	3
ELECTRICAL.....	4
Vehicle Systems Interface Module (VSIM) 2011–2014½	4
Vehicle Systems Interface Module (VSIM) 2015 – Current.....	7
CAN Communication and Cybersecurity	7
VSIM Connector identification (2015 – Current)	14
12-Way Connector Pass-thru Circuits	15
Basic Electrical Tips	16
Fuses / Power Distribution Centers	19
Auxiliary Switches.....	25
UNCONNECT 12.1	26
Connections – Interior of Vehicle.....	28
Connections – Trunk.....	30
LIGHTING	33
Police Dome Lamp.....	33
Spot Lamp(s).....	34
Stealth Mode.....	35
RESTRAINTS.....	36
Occupant Restraint System Overview.....	36
Driver Airbag (DAB) Deployment Zone	36
Side Curtain Airbag Deployment Zone.....	44
Side Airbag Deployment Zone.....	46
Occupant Restraint System Wiring	48
Occupant Restraint System Verification	48
VEHICLE STORAGE.....	49
General Storage Recommendations	49
Battery Maintenance	50
Shipping Mode	51
DECOMMISSIONING A VEHICLE	52
Rear Door Locks.....	52
RF Hub Reprogram	53
12.1 Display Disconnection	53

ABOUT THIS GUIDE



Figure 1: Dodge Charger Pursuit Interior with optional 12.1 Display

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.

FCA FLEET WEBSITE

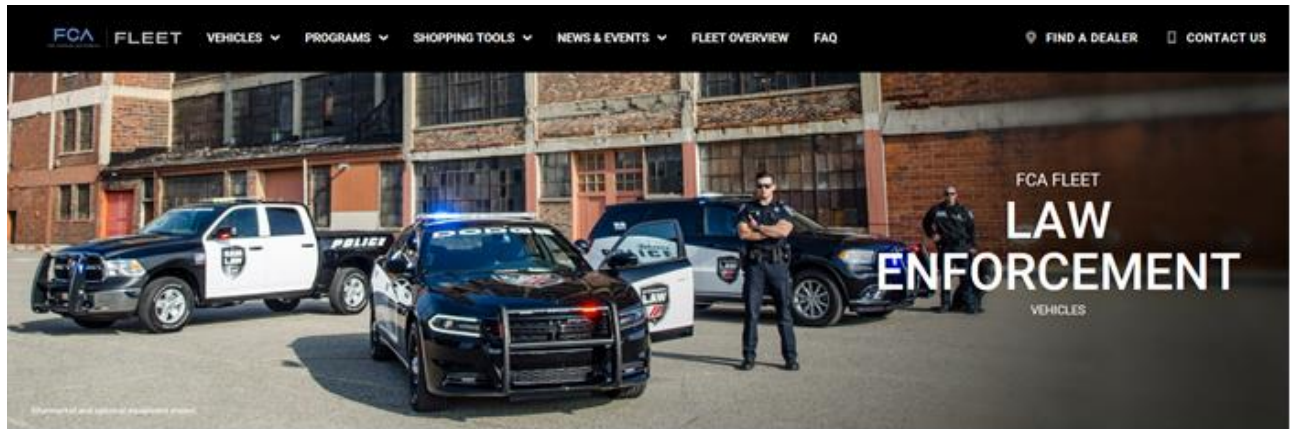


Figure 2: FCA Fleet Website

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 DIMENSIONS

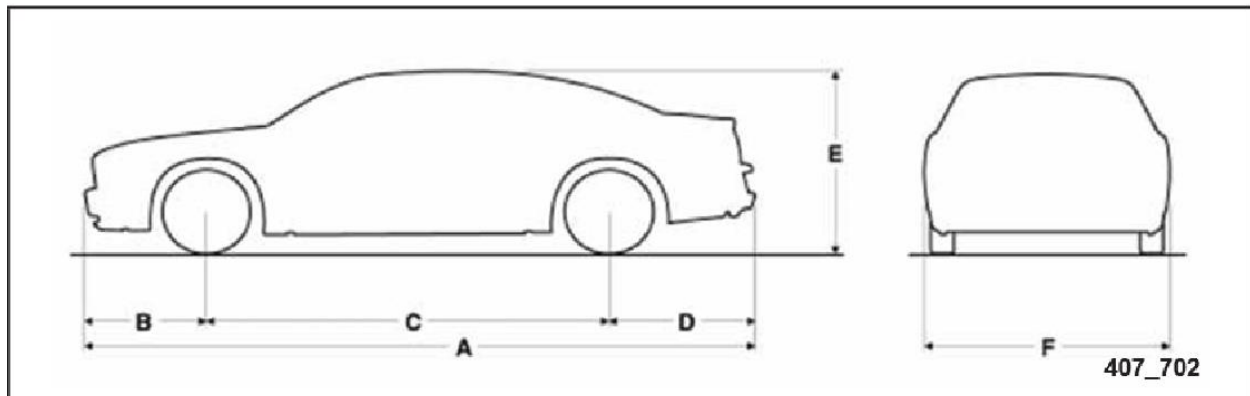


Figure 3: Vehicle Dimensions

A. Length	5,040 mm (198.4 in.)
B. Front overhang	924 mm (36.4 in.)
C. Wheelbase	3,052 mm (120.2 in.)
D. Rear overhang	1,101.5 mm (43.4 in.)
E. Height	1,482 mm (58.4 in.)
F. Width	1,905 mm (75.0 in.)

ELECTRICAL

Vehicle Systems Interface Module (VSIM) 2011–2014½

NOTE: This shows the vehicle harness connector, not the short jumper pigtail that plugs into it

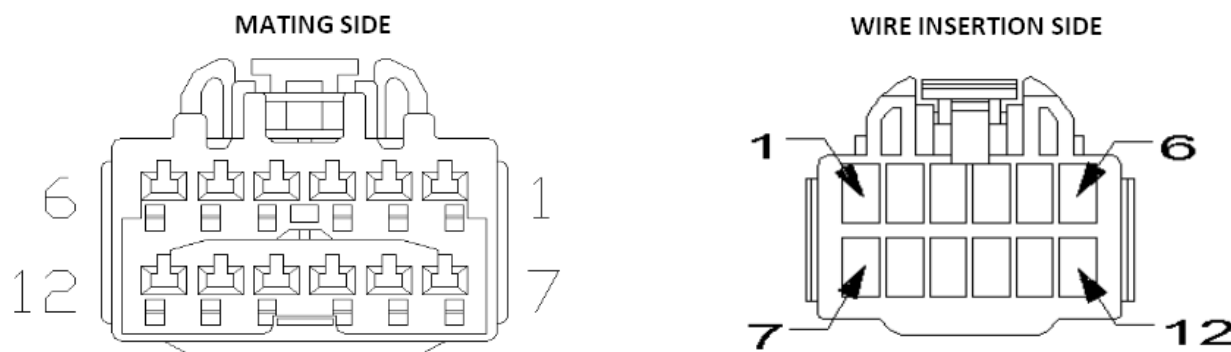


Figure 4: 2011–2014½ VSIM 12-way Connector

Table 1: 2011–2014½ VSIM 12-way Connector Pinout

Cavity	Circuit/Gauge/Color	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 in RUN or ACC. Police 1 Relay Output	
5	F101 16 VT/PK	Fused 20A accessory voltage with IGN in RUN or ACC. Police 3 Relay Output	
6	F102 16 WHT/PK	Fused 20A accessory voltage with IGN in RUN or ACC. Police 2 Relay Output	
7	18 BK/TN	Pass-thru	Extra unused wire for use by upfitter
8	18 BK/WT	Pass-thru	Extra unused wire for use by upfitter
9	18 BK/OR	Pass-thru	Extra unused wire for use by upfitter
10	18 BK/GR	Pass-thru	Extra unused wire for use by upfitter
11	18 BK/RD	Pass-thru	Extra unused wire for use by upfitter
12	18 BK/BL	Pass-thru	Extra unused wire for use by upfitter

NOTE: The 12-way 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.

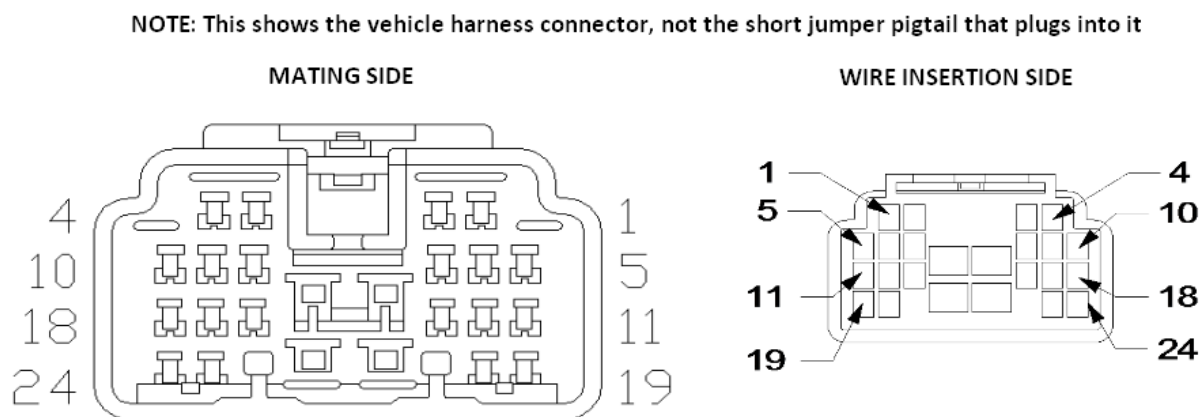


Figure 5: 2011–2014½ VSIM 24-way Connector

Table 2: 2011–2014½ VSIM 24-way Connector Pinout

Cavity	Circuit/Gauge/Color	Function	Upfitter Requirements
1	W500 20BR/OR	Front flashing lights (wigwags) 12V input to VSIM	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 9V output when horn is pressed	None - current limiting resistor is internal to VSIM
6	W514 20BR/YL	P/N switch sense 10V output from VSIM	
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 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
11	W530 20BR/DG	VSIM CAN-B bus (+)	N/A
12	W531 20BR/LG	VSIM CAN-B bus (-)	N/A

2011 – 2014½ ONLY

Cavity	Circuit/Gauge/Color	Function	Upfitter Requirements
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 10 Hz/mph pulse-width modulated	N/A
20	W536 20BR/YL	Horn mute signal 12V, 20mA input to VSIM disables horn function	NONE - Current limiting resistor is internal to the VSIM
21	W537 20BR/VT	VTSS mute signal 12V, 20mA 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

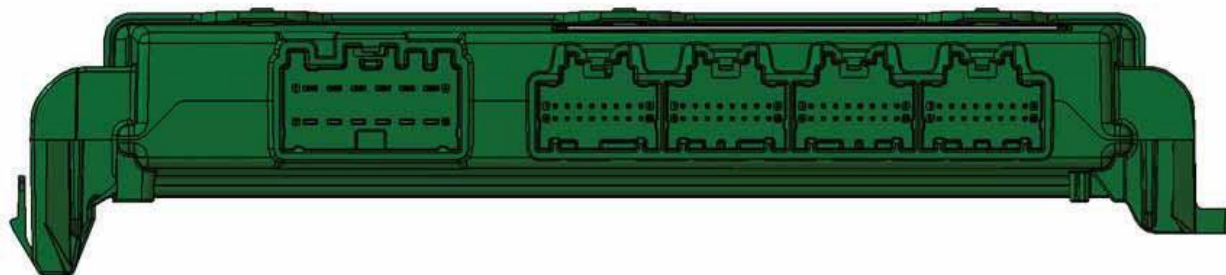


Figure 6: 2015 – Current VSIM

The microcontroller-based electronic Vehicle System Interface Module (VSIM) (also known as the Vehicle Systems Integration Module 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.

CAN Communication and Cybersecurity

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

Table 3: VSIM CAN Signals

Signal Name	Function
FtWigWagRq	Front WigWag Request
RrWigWagRq	Rear WigWag Request
SupHrnRq	Suppress Horn Request
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

Signal Name	Function
CmdIgnStat	Ignition Status
VEH_SPEED	Vehicle Speed
DRV_SEATBELT	Driver Seatbelt Status
StrWhl_AUX1_Sts	AUX1 Status
StrWhl_AUX2_Sts	AUX2 Status
StrWhl_AUX3_Sts	AUX3 Status
DCSD_AUX4	AUX4 Status (12.1" display vehicles only)

The database for CAN (.dbc) file for these signals is available, use the contact info on the fleet website to request it for your application.

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.

NOTE: This shows the vehicle harness connector, not the short jumper pigtail that plugs into it

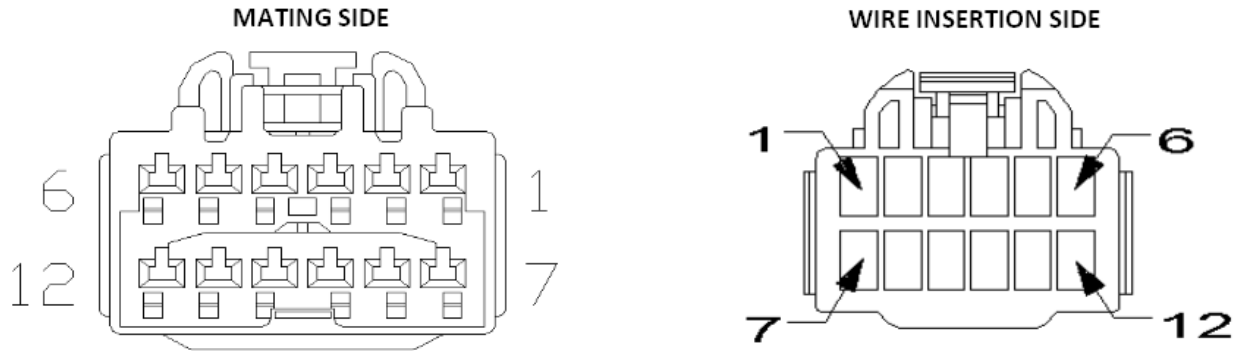


Figure 7: 2015–current 12-way connector

Mating connector/pigtail 68251805AA (has 12-way gray connector)

Table 4: 2015–current VSIM 12-way connector pinout

Cavity	Circuit/Gauge/Color	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 in RUN or ACC Police 1 Relay Output	
5	F101 16 PK/GY	Fused 20A accessory voltage with IGN in RUN or ACC Police 3 Relay Output	
6	F102 16 PK/DB	Fused 20A accessory voltage with IGN in RUN or ACC Police 2 Relay Output	
7	18 BK	Pass-thru	Extra unused wire for use by upfitter
8	18 GN/WH	Pass-thru	Extra unused wire for use by upfitter
9	18 BN/OG	Pass-thru	Extra unused wire for use by upfitter
10	18 BN/WH	Pass-thru	Extra unused wire for use by upfitter
11	18 OG	Pass-thru	Extra unused wire for use by upfitter
12	18 OG/BN	Pass-thru	Extra unused wire for use by upfitter

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 headlight area.

NOTE: This shows the vehicle harness connector, not the short jumper pigtail that plugs into it

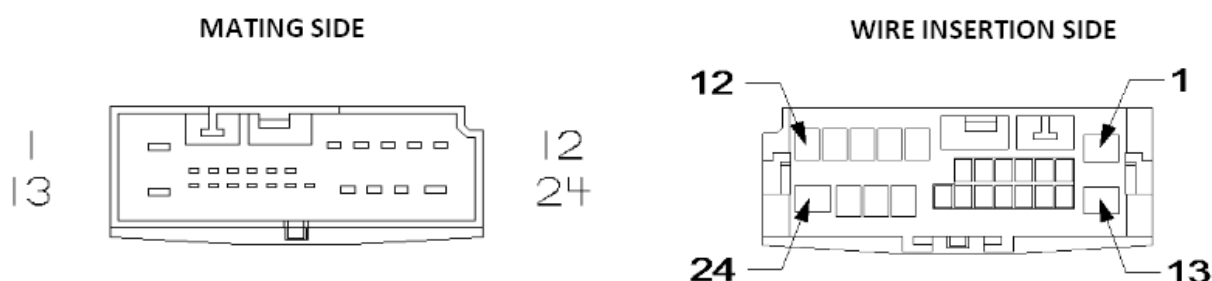


Figure 8: 2015–current VSIM 24-way C1 connector

Mating connector/pigtail 68213591AA (has 24-way gray connector)

Table 5: 2015–current VSIM 24-way C1 Connector Pinout

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

Cavity	Circuit/Gauge/Color	Function	Upfitter Requirements
13	G776 20 VT/YL	VSIM Inline, Rear Right Door Ajar – active (low) when right rear door is opened	LSD - Ground output, low current
14	NC		
15	NC		
16	NC		
17	NC		
18	NC		
19	G755 20 VT/GY	Rear Left Door Ajar – active (low) when left rear door is open	LSD - Ground output, low current
20	W522 18 OR/WT	Engine Running/Hour Meter – active (high) when engine is running	HSD - 12V Digital output, low current (Vbatt+0/-0.5V / 500mA)
21	W702 20 DG/DB	Transmission Reverse Position – active (low) when transmission is in Reverse	LSD - Ground output, low current
22	W703 20 DG/LB	Transmission Drive Position – active (low) when transmission is in Drive	LSD - Ground output, low current
23	K682 20 DB/WT	(2016 and newer) AUX 4 Output – active (high) when AUX is highlighted on 12.1 touchscreen	HSD - 12V Digital output, low current (Vbatt+0/-0.5V / 500mA)
24	NC		

NOTE: This shows the vehicle harness connector, not the short jumper pigtail that plugs into it

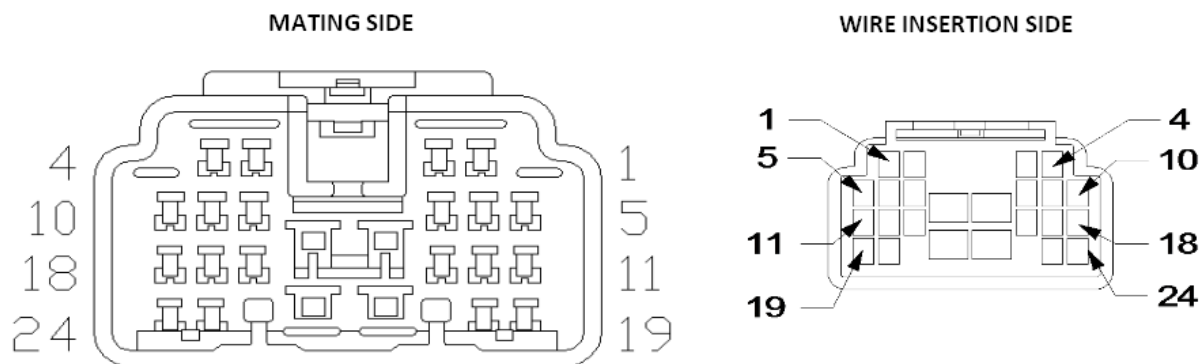


Figure 9: 2015–current VSIM 24-way C2 connector

Mating connector/pigtail: 68251804AA (has 24-way white connector)

Table 6: 2015–current VSIM 24-way C2 connector pinout

Cavity	Circuit/Gauge/Color	Function	Upfitter Requirements
1	W500 18 BR/OR	Front Wig Wags – Controls the wig wag function in headlamps	Active high input to VSIM (internally pulled down to GND/ 2.2 mA max)
2	W501 18 BR/VT	Rear Wig Wag – Controls the wig wag function in the tail lamps	Active high input to VSIM (internally pulled down to GND/ 2.2 mA max)
3	W640 18 BR/WT	Audio Switch Mute Signal – to mute the vehicle radio (entertainment) audio	Active high input to VSIM (internally pulled down to GND/ 2.2 mA max)
4	W726 18 BR/VT	Brake Pedal Depressed – active (high) 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 – active (high) when horn pad is pressed	HSD - 12V Digital output, low current (Vbatt+0/-0.5 V / 500 mA)
6	W700 20 BR/YL	Transmission Park Position – active (high) when the transmission is in Park	HSD - 12V Digital output, low current (Vbatt+0/-0.5 V / 500 mA)
7	W515 18 BR/LB	Panic Alarm Activation – active (high) when panic alarm is active	HSD - 12V Digital output, low current (Vbatt+0/-0.5 V / 500 mA)
8	W516 18 BR/DB	Headlamps ON – active (high) when headlamps are on	HSD - 12V Digital output, low current (Vbatt+0/-0.5 V / 500 mA)
9	W524 18 BR/LG	Vehicle Speed Transmit – active (high) when vehicle speed is below 30 MPH	HSD - 12V Digital output, low current (Vbatt+0/-0.5 V / 250 mA)

Cavity	Circuit/Gauge/Color	Function	Upfitter Requirements
10	W553 18 BR/DG	Stealth Mode Active – active (high) when Stealth Mode is active	HSD - 12V Digital output, low current (Vbatt+0/-0.5 V / 500 mA)
11	W532 22 BR/DG	Upfitter CAN bus IHS (+)	CAN bus output from VSIM for upfitter use
12	W534 22 BR/LG	Upfitter CAN bus IHS (-)	CAN bus output from VSIM for upfitter use
13	W552 18 BR/WT	Cluster Dimming Active Signal	
14	W522 18 BR/VT	Engine Running/Hour Meter – active (high) 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 – active (high) 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	
17	W745 21 DB/YL	(2017 and newer) Secure park signal – active (high) when secure park is active	HSD - 12V Digital output, low current (Vbatt+0/-0.5 V / 500 mA)
18	K686 20 DB/WT	Spare	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 / 500 mA)
20	W536 18 BR/YL	Horn Switch Mute – to mute the vehicle horn and use the horn pad output for another purpose	Active high input to VSIM (internally pulled down to GND/ 2.2 mA max)
21	W537 18 BR/OR	Panic Alarm Switch Mute – to mute the panic alarm	Active high input to VSIM (internally pulled down to GND/ 2.2 mA max)
22	NC		N/A
23	W710 18 BR/DB	Seat Belt not latched – active (high) when driver seat belt is not latched	HSD - 12V Digital output, low current (Vbatt+0/-0.5 V / 250 mA)
24	W540 20 BR/DG	MIL Lamp ON – active (high) when powertrain malfunction indicator lamp is on	HSD - 12V Digital output, low current (Vbatt+0/-0.5 V / 500 mA)

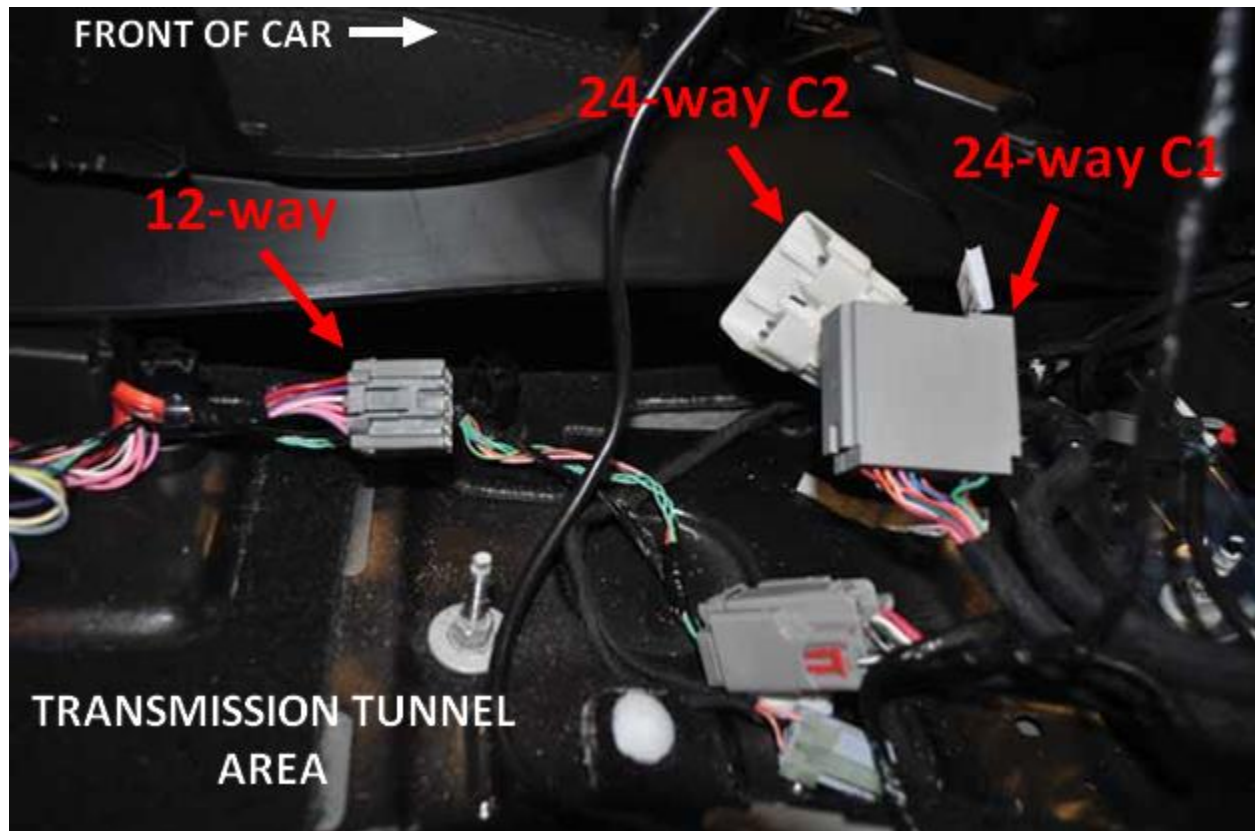


Figure 10: VSIM Interface Connectors

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.

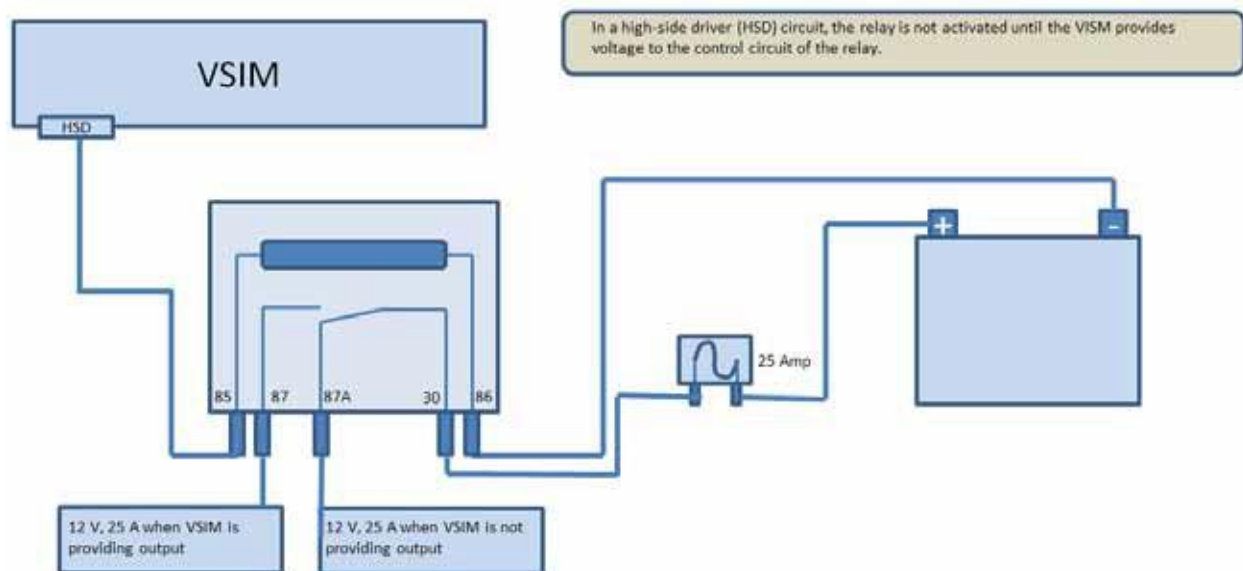
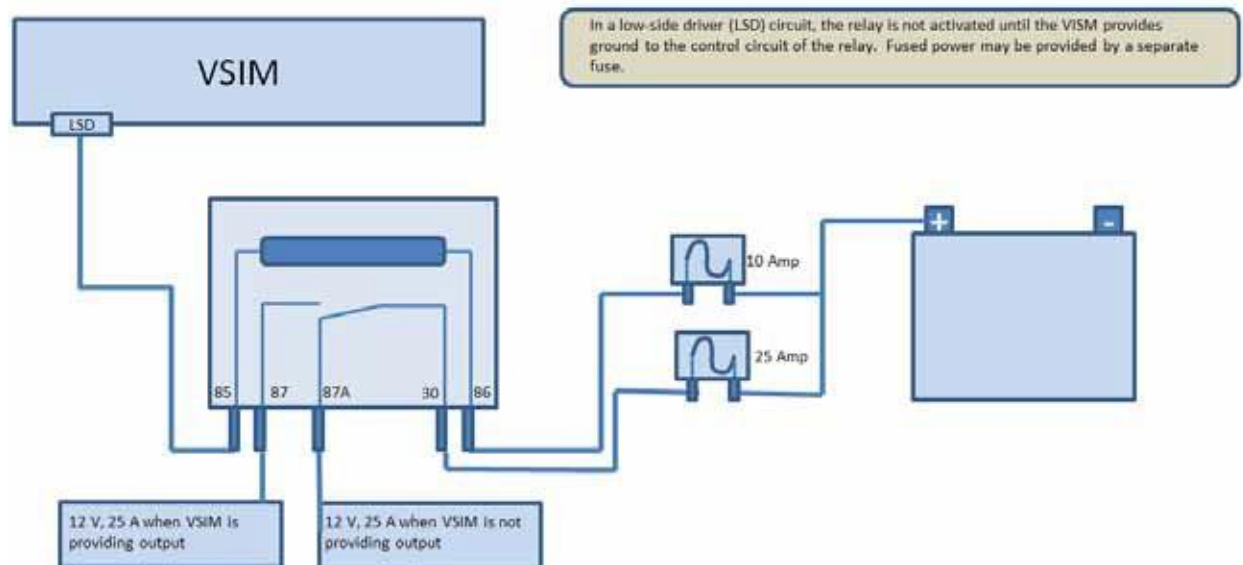
12-Way Connector Pass-thru Circuits



Figure 11: 12-way underhood pass-thru circuits location

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

Basic Electrical Tips



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

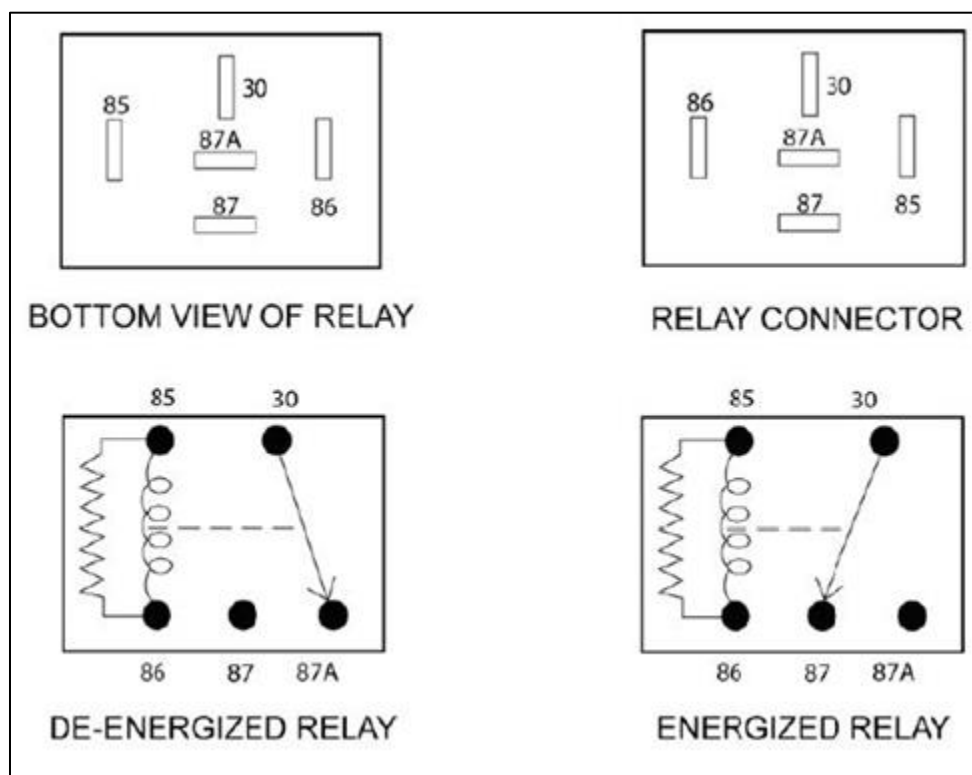


Figure 14: ISO Relays

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 unswitched ground

Micro Relays

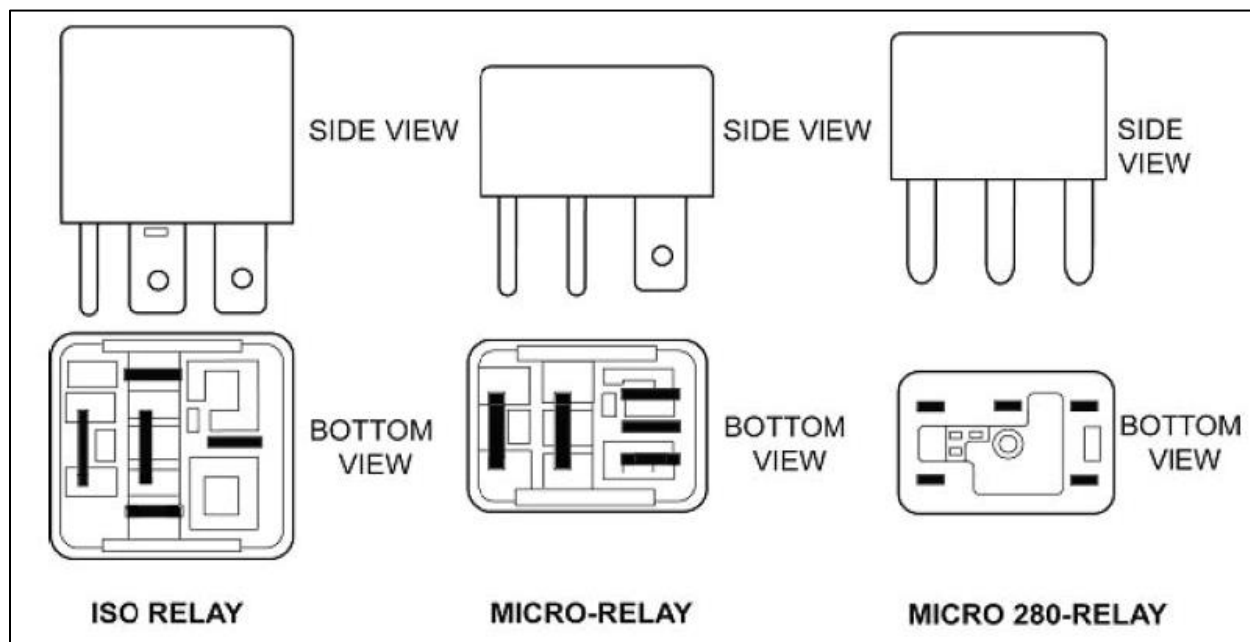


Figure 15: Micro Relays

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.

Fuses / Power Distribution Centers

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 Power Distribution Center (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.

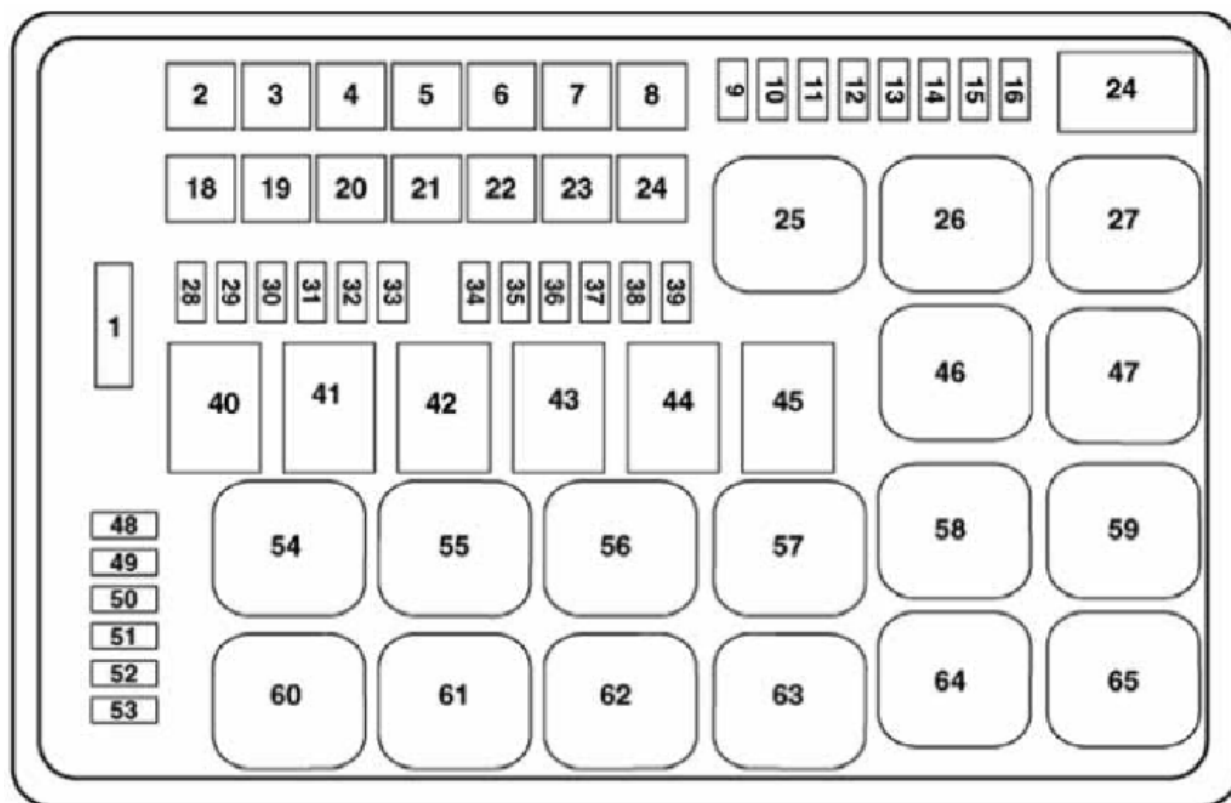


Figure 16: Underhood PDC

Table 7: Underhood Fuses and Relays

Note: Fuse and relay specifications may vary slightly from the table below, refer to the vehicle owner's manual or service information for the most current information.

Cavity	Cartridge Fuse	Mini-fuse	Description
1			Spare
2		40	Radiator Fan 1
3		50	Power Steering 1
4		30	Starter

Cavity	Cartridge Fuse	Mini-fuse	Description
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
49			Spare
50			Spare
51		20	Vacuum Pump
52			Spare

Cavity	Cartridge Fuse	Mini-fuse	Description
53			Spare
Relays			
Cavity			Description
17			Spare
25			Vacuum Pump
26			Spare
27			Starter

Rear Power Distribution Center

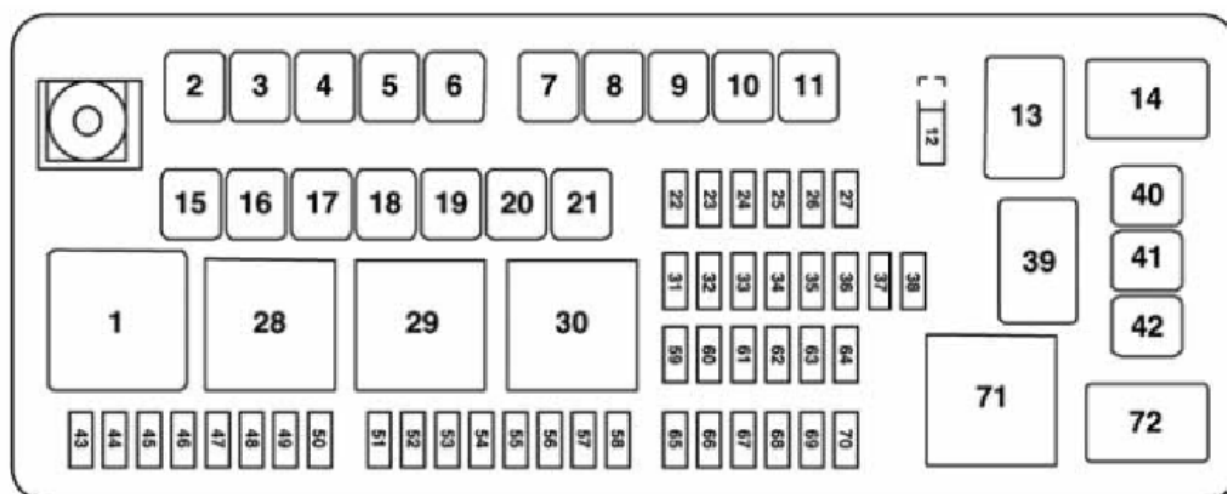


Figure 17: Rear PDC

Table 8: Rear PDC Fuses and Relays

Note: Fuse and relay specifications may vary slightly from the table below, refer to the vehicle owner's manual or service information for the most current information.

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
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

Cavity	Cartridge Fuse	Mini-fuse	Description
42		30	Rear Defrost
43			Spare
44			Spare
45		15	Cluster / Rearview Mirror
46			Spare
47			Spare
48			Spare
49			Spare
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

Relays	
Cavity	Description
1	Ignition Run
13	Adjustable Pedals
14	Spare
28	Rear Defrost
29	Rear Windows / Run Sense

Relays	
Cavity	Description
30	Power Outlets
39	Spare
71	HVAC Blower
72	Spare

Auxiliary Power Distribution Center

The Auxiliary PDC is provided as part of the optional Mopar wiring package. Refer to the Mopar instructions for the most current information on wiring, relays, and fuses for that package.

Auxiliary Switches

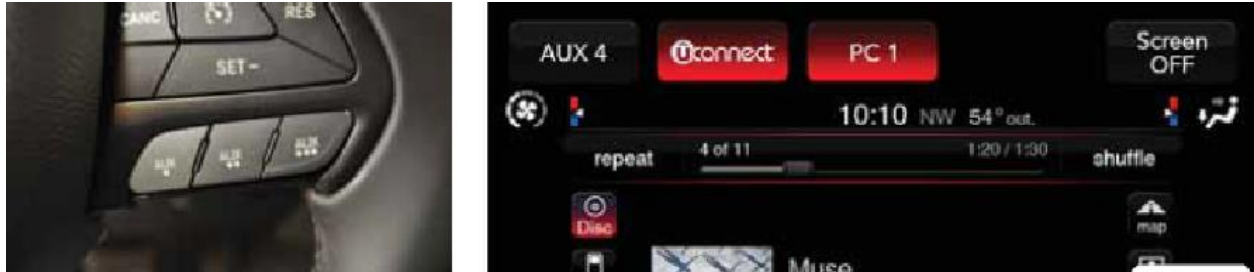


Figure 18: Programmable Auxiliary Switches

The Pursuit has programmable switches mounted in the steering wheel and in the touchscreen (on vehicles equipped with the 12.1 display) 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 latches an output circuit. The VSIM will provide the output until the switch is pressed again.

See the VSIM section of this Upfitter Guide for wiring cavities for each switch.

UCONNECT 12.1



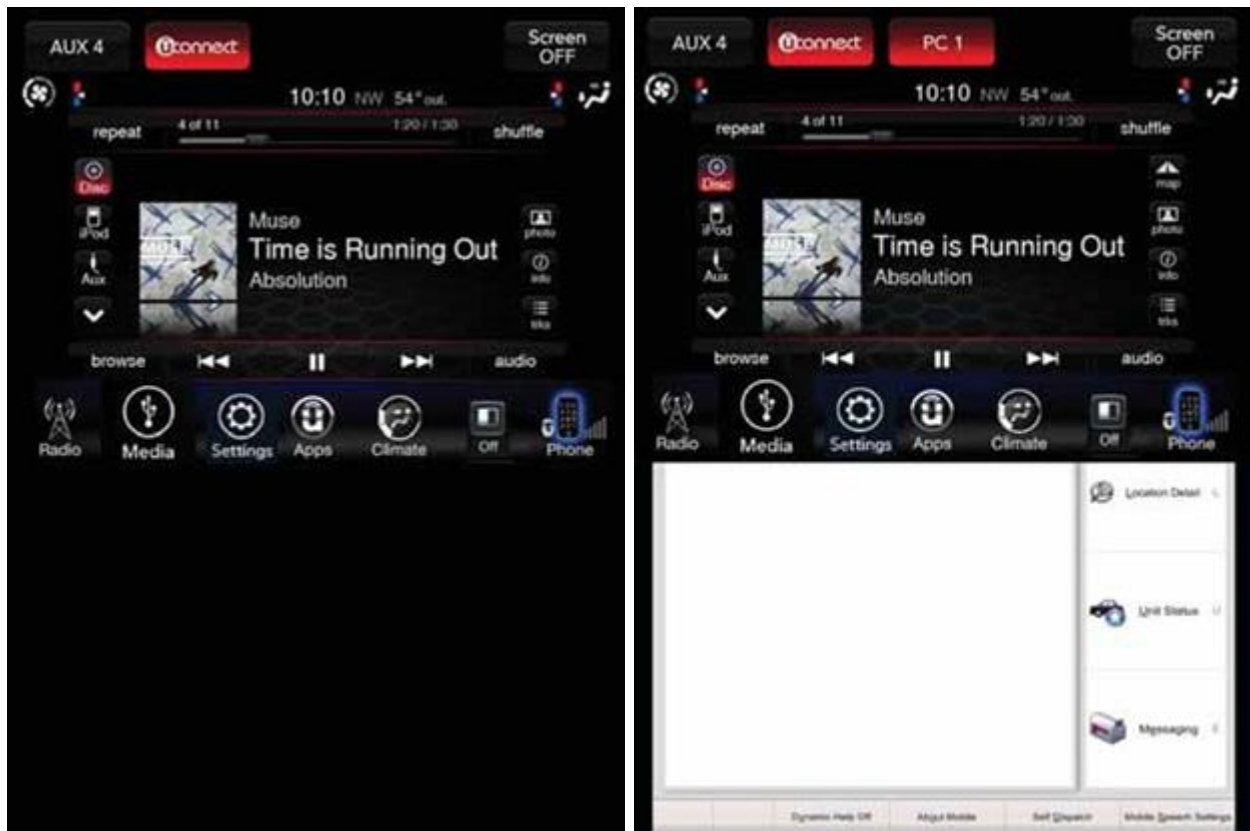
Figure 19: UConnect 12.1 System

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° C to 85° C (-40° F to 185° 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 some 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.



COMPUTER OFF

COMPUTER ON

Figure 20: UConnect Screens

The vehicle is shipped from the factory with no computer connected or included. The system will operate as long as the vehicle is in the 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 as other interior lighting, next to the headlamp switch. There is also manual lighting control available within the UConnect settings menu.

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 UConnect again hides the radio screen.

Climate control, time, and outside temperature information is displayed at the top of the screen, regardless of whether in split screen or full screen mode.



1	Pass-through harness	4	Audio cable from trunk
2	24-way connector C1	5	Adapter for AUX audio port
3	USB cable for keyboard		

Figure 21: 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.

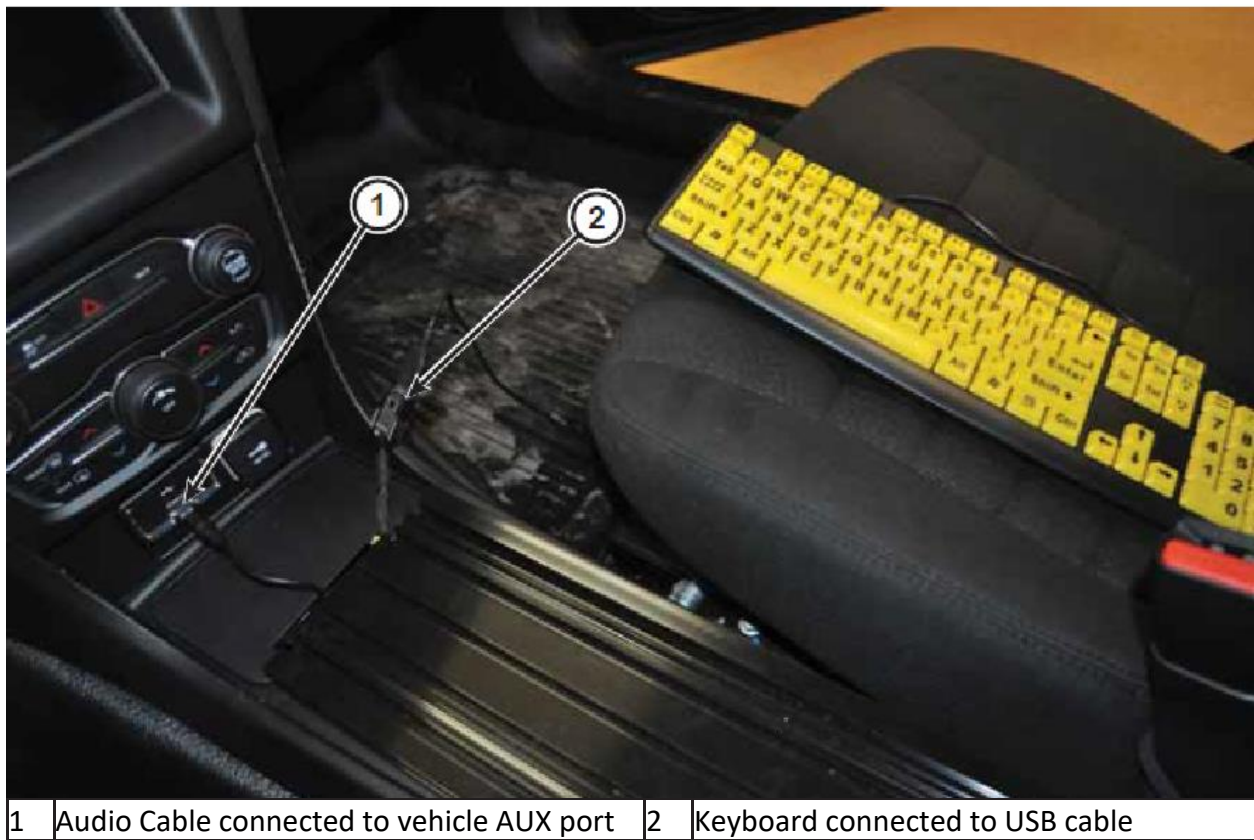


Figure 22: UConnect Interior Connections

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 needs 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

Connections – Trunk

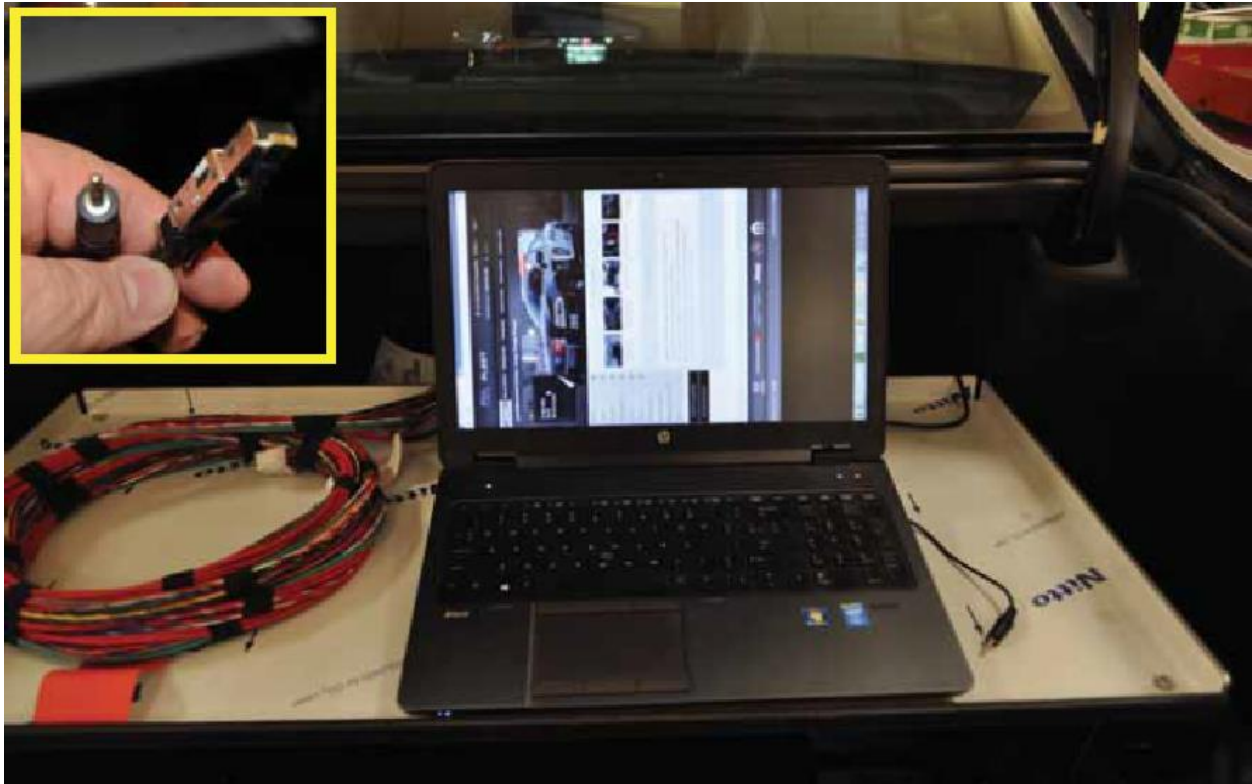
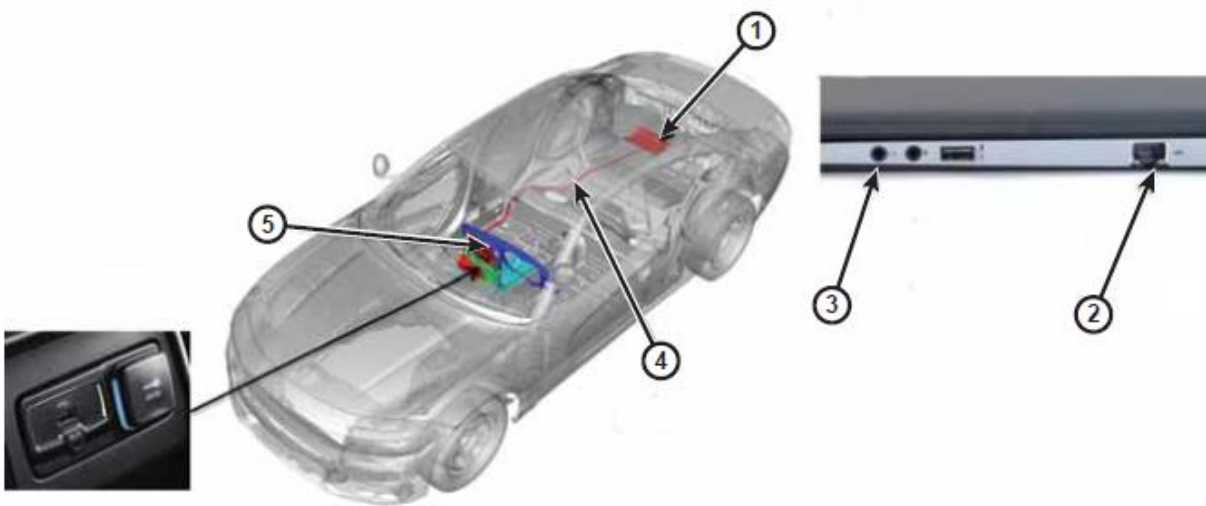


Figure 23: Trunk Connectors for Laptop
(optional trunk tray and wiring prep package shown)

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.



1	Agency Laptop	4	Vehicle Ethernet/Audio Cables
2	Laptop Ethernet Port	5	Integrated Display
3	Laptop Headphone Jack		

Figure 24: Laptop System Overview

Configuring the System

To configure the system, you will need to download RealVNC software to the agency 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.



Figure 25: 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 here:
<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.

LIGHTING

Police Dome Lamp



Figure 26: Police Dome Light

The police dome light switch has three positions. One side of the switch turns on white LED lights, the other side turns on red LED lights, and the center position turns the lamp OFF. This lamp operates off a direct battery feed so, 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 Lamp(s)



Figure 27: Spot Light

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

CAUTION: The side curtain airbag is tethered in the area of the spotlamp. If drilling and installing your own lamp, make sure the tether is not damaged during the install and is properly reattached when the installation is complete.

Stealth Mode

This vehicle is designed for periods of surveillance. The dimmer control is located to the right of the headlight switch. By rotating the dimmer control thumbwheel down to the extreme OFF position (to stealth mode), all interior illumination except for the electronic vehicle information center (EVIC) display on the instrument panel cluster (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.

RESTRAINTS

Occupant Restraint System Overview

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 HARNESES 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.

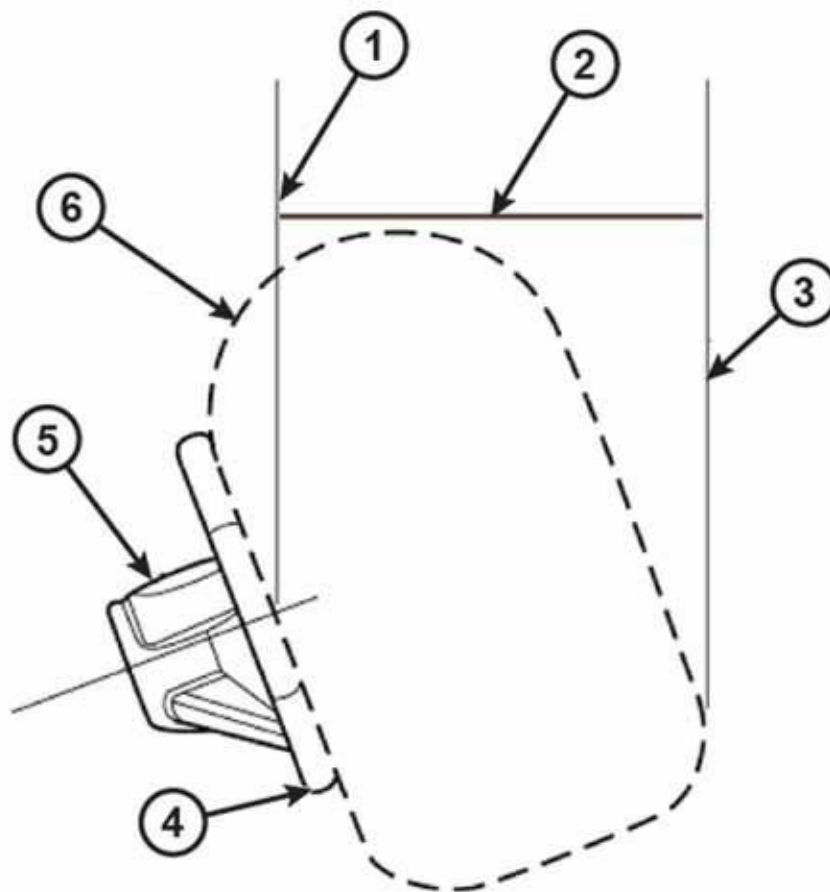
The occupant restraint system contains the following components:

- Occupant restraint controller (ORC) module
- Impact Sensors: left front, left side, right front, right side
- Seatbelt Tensioners: driver side, passenger side
- Airbags:
 - Driver airbag
 - Driver side (seat mounted) airbag
 - Drivers side curtain airbag
 - Passenger airbag
 - Passenger side (seat mounted) airbag
 - Passenger side curtain airbag

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 (DAB) Deployment Zone



1	Vertical Plane Passing Through the Center of the Steering Wheel	4	Steering Wheel
2	475 mm (18.7 in.)	5	Driver Airbag Retainer/Housing
3	Vertical Plane Passing Through the Maximum Rearward Point that the Driver Airbag Cushion Reaches	6	Driver Airbag Cushion

Figure 28: Driver Airbag Dimensions

NOTE: The illustration represents the maximum dynamic deployment shape.

Table 9: Driver Airbag Cushion Position

DAB (Driver AirBag) 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.)

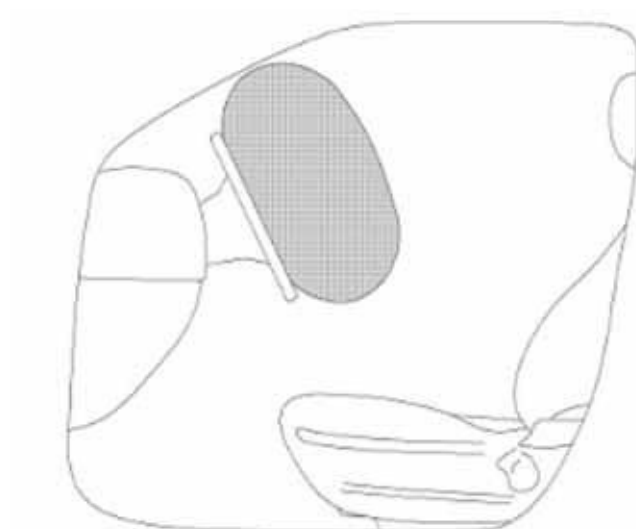
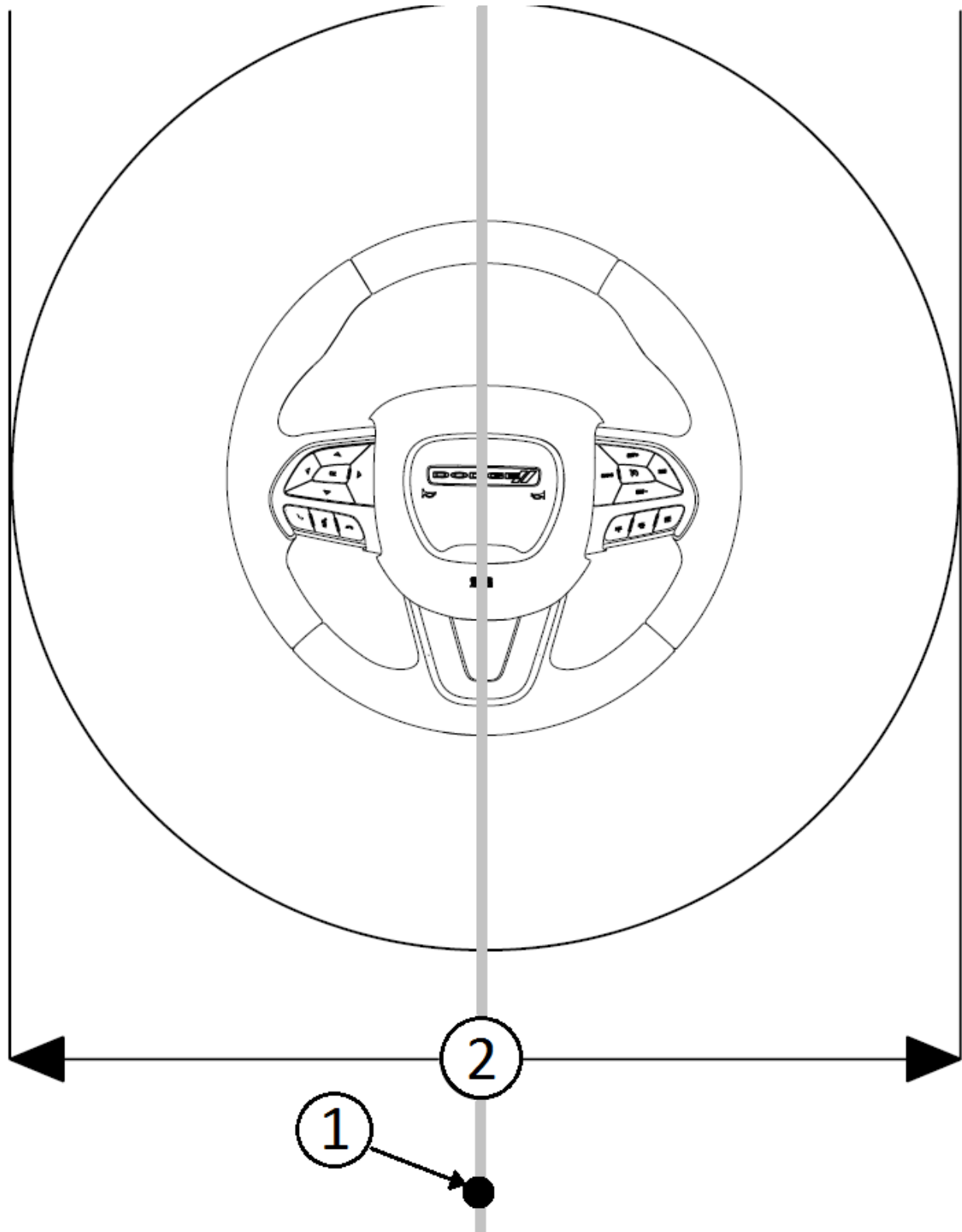


Figure 29: Driver Airbag Deployed Shape

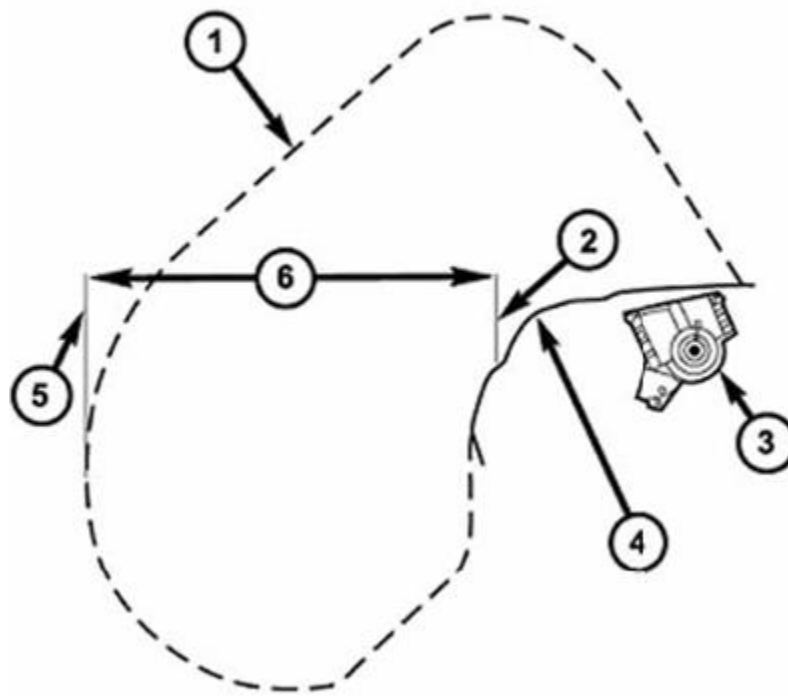
Table 10: Steering Column Tilt Position Range

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



1	Driver Seating Reference	2	Driver Airbag Cushion Lateral Deployment Zone 711mm (28 in.)
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Figure 30: Deployment Zone



1	Passenger Airbag Cushion	4	Instrument Panel Surface
2	Vertical Plane from Rearmost Point of Instrument Panel	5	Vertical Plane Passing Through the Maximum Rearward Point That the Passenger Airbag Cushion Reaches
3	Passenger Airbag Module	6	470 mm (18.5 in.)

Figure 31: Passenger Airbag Deployment Zone

NOTE: The illustration represents the maximum dynamic deployment shape.

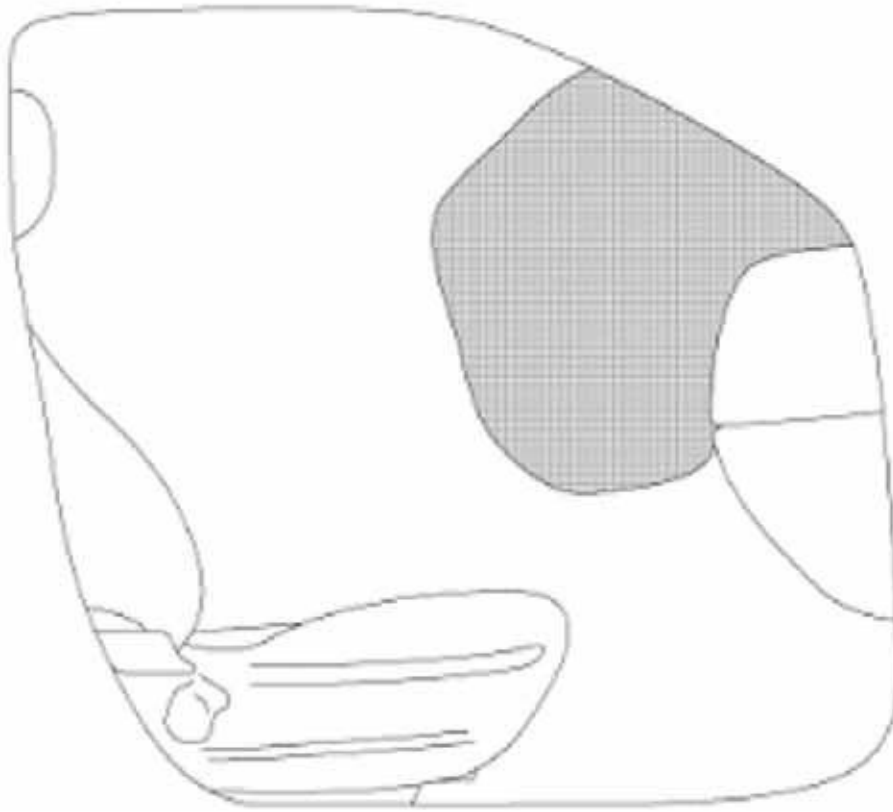
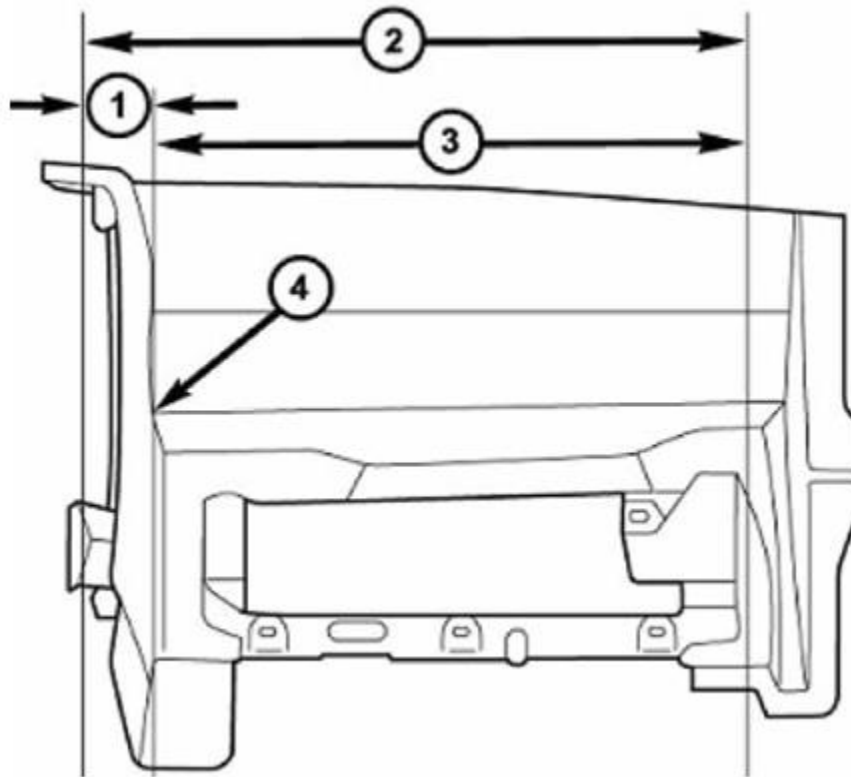


Figure 32: Final Deployment Shape



1	70 mm (2.75 in.)	3	508 mm (20.0 in.)
2	Passenger Airbag Deployment Zone	4	Reference Point

Figure 33: Deployment Zone

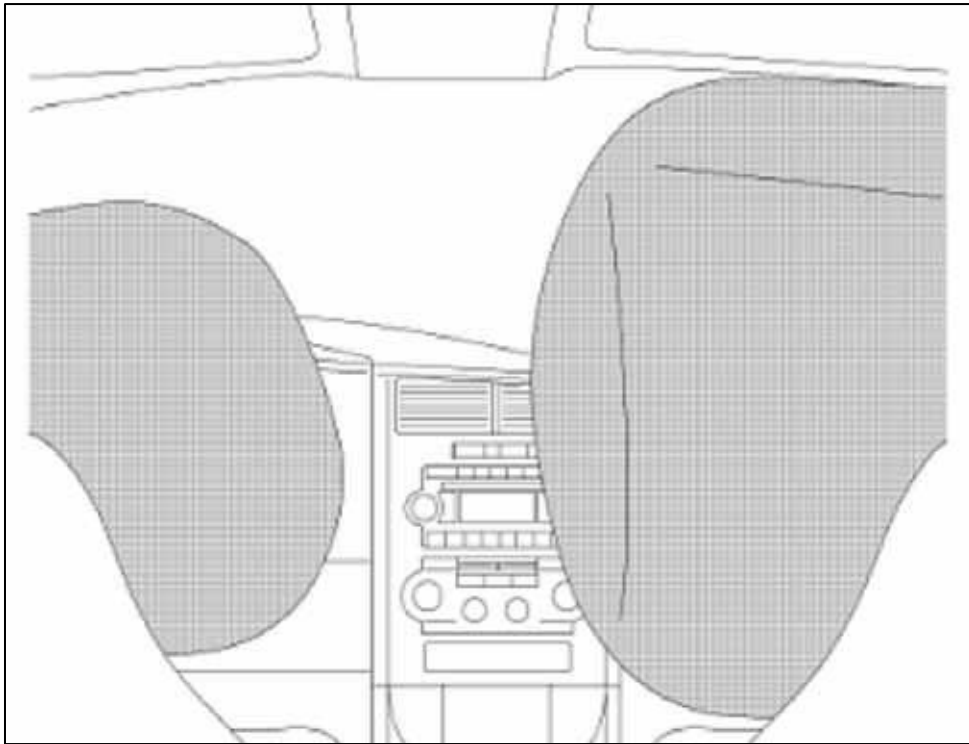


Figure 34: Center Interior Area

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

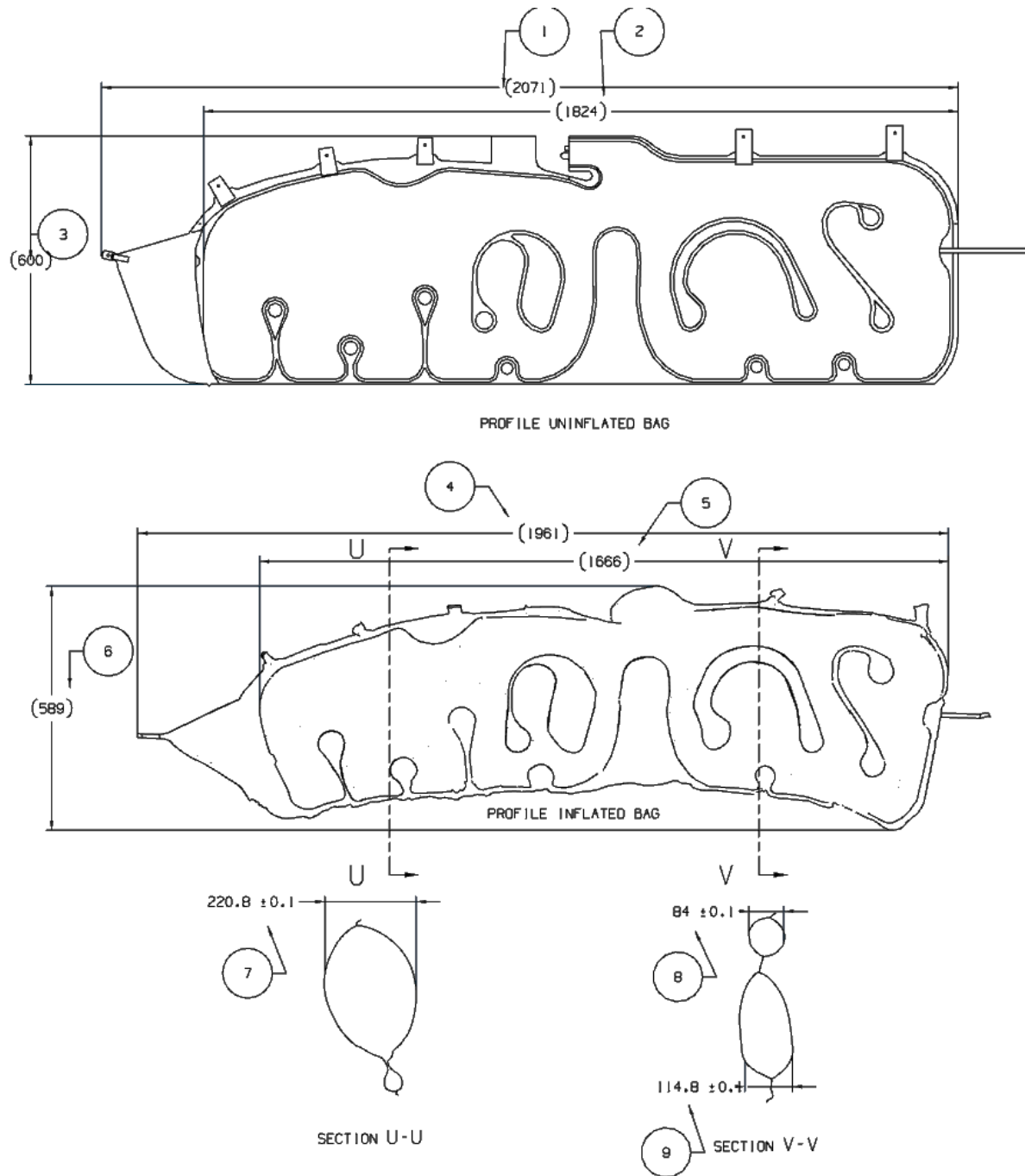


Figure 35: Side Curtain Airbag Deployment Zone

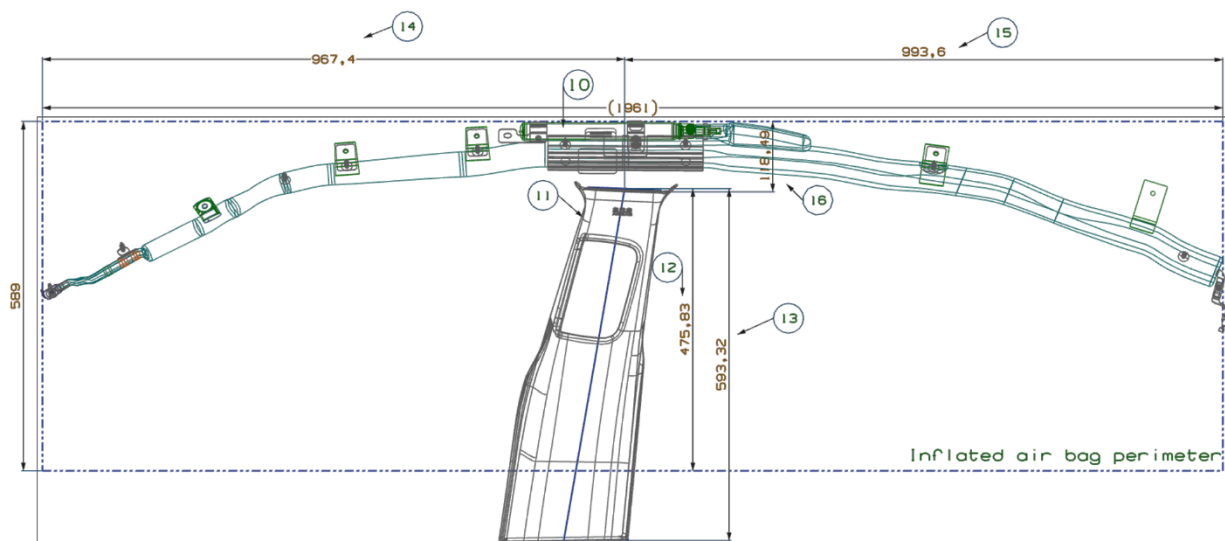


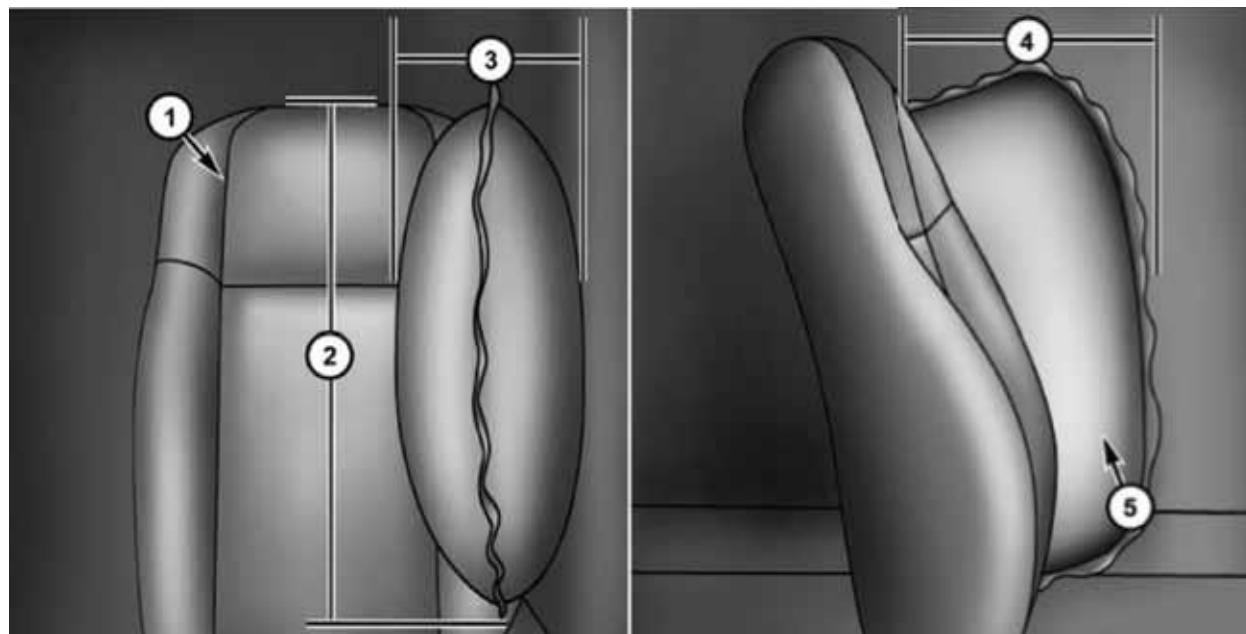
Figure 36: Side Curtain Airbag Deployment Zone

Table 11: 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.

Side Airbag Deployment Zone



1	Front Driver Seat	4	1998.9 mm (78.7 in.)
2	4495.8 mm (177 in.)	5	Seat-mounted Airbag
3	1998.9 mm (78.7 in.)		

Figure 37: Side Seat-mounted Airbag Deployment Zone

NOTE: The illustration represents the maximum dynamic deployment shape.

Use caution when installing equipment along the roof side rails to avoid drilling or installing fasteners in the side curtain airbag area. Also make sure that no equipment 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.

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 modifications 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 FCA dealership before shipping the vehicle to the customer.

VEHICLE STORAGE

General Storage Recommendations

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
- 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

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.

Battery Maintenance

NOTE: The 2011 and newer Dodge Charger Pursuit vehicle does not have an ignition off draw (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.
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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.

Shipping Mode

The Dodge Charger Pursuit vehicle no longer uses an ignition off draw (IOD) fuse when transporting or storing for a long period of time. The body control module has a Shipping Mode that takes the place of pulling the IOD fuse, for the time between when the vehicle leaves the factory and is ready for use by the customer. The vehicle will come from the factory in Shipping mode.

2011 – 2014½ 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 body control module (BCM) then Misc. functions.

2015 – Current models

Turn the hazard lamps on and press/hold the up arrow on the steering wheel electronic vehicle information center (EVIC) controls until the vehicle enters or exits 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. You can also enable/disable the vehicle from Shipping Mode by using the scan tool: go to BCM then Misc. functions.

In all cases, if shipping mode is no longer available for a vehicle, to reduce battery drain follow the battery disconnection recommendation described in the battery maintenance section above.

DECOMMISSIONING A VEHICLE

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

Rear Door Locks

If a vehicle is equipped with the rear door open from outside only feature, the vehicle may have come with a bag of parts in the trunk that includes the attaching hardware to connect the inside handle to the door latch. The bag may also include the manual lock/unlock lever. If the bag of parts was not included at time of vehicle purchase, it may be ordered from a dealer.



Figure 38: Rear door lock hardware bag

RF Hub Reprogram

The RF Hub controls actuation of the trunk and other remote features. On a pursuit vehicle, using the button located on the trunk-mounted brake lamp only wakes up one of the CAN bus networks but does not open the trunk. This is a function of the Vehicle Configuration for a pursuit 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:

1. Navigate to the RF Hub using the scan tool
2. Select Misc. Functions
3. Select Disable Key Alike

Follow the instructions on the screen. The municipality may decide to keep the original key-alike FOBs for use with other key-alike pursuit cars still in service, as they will no longer work with the vehicle being decommissioned.

NOTE: Once the Disable Key Alike function is performed, the FOBs will have to be replaced with retail, non-key-alike FOB(s). If a technician attempts to program Key Alike FOB(s) to an RF Hub that has had the Disable Key Alike function performed, the programming will fail. **Once the Disable Key Alike routine has been performed, it cannot be reversed.**

12.1 Display Disconnection

To reduce driver distraction when the vehicle is no longer in use by a law enforcement agency, the 12.1 display (where equipped) should be disabled so a computer cannot be operated on the display. To disable the 12.1 display:

1. Locate the Ethernet cable in the trunk
2. Remove the RJ-45 connector by cutting the end off and discarding the connector.

[illegible]



FIAT CHRYSLER AUTOMOBILES

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



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