2015 – 2023 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, circlips, 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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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.

FLEET WEBSITE



Figure 2: Fleet Website, aftermarket equipment shown

The 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 <u>www.stellantisfleet.com</u>.

VEHICLE DIMENSIONS

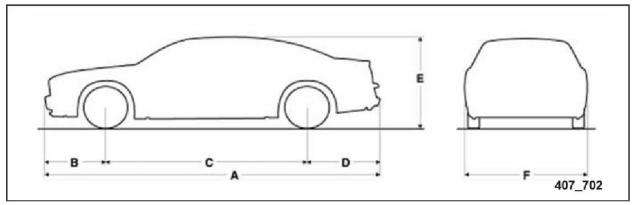


Figure 3: Vehicle Dimensions

A. Length

5,040 mm (198.4 in.) 924 mm (36.4 in.)

- B. Front overhang
 - 3,052 mm (120.2 in.)
- C. WheelbaseD. Rear overhang
- E. Height
- F. Width
- 1,101.5 mm (43.4 in.) 1,482 mm (58.4 in.)
- 1,905 mm (75.0 in.)

ELECTRICAL

Vehicle Systems Interface Module (VSIM)

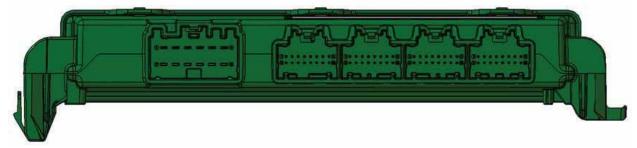


Figure 4: VSIM

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

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.

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

Table 1: VSIM CAN Signals

| Signal Name | Function | | |
|-----------------|---|--|--|
| 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 | | |
| 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) | | |

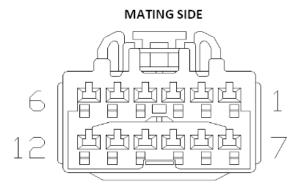
The database for CAN (.dbc) file for these signals is available, send an e-mail to lawenforcement@chrysler.com to request it and include "VSIM upfitter CAN dbc file for [your model year] Charger Pursuit" in your e-mail.

Radar or other aftermarket CAN bus connections

Radar speed measuring equipment or other police equipment may require a connection to the vehicle to determine the police vehicle's speed. The Charger pursuit provides two connection methods for this purpose:

- 1. A hardwired output from the Vehicle Systems Interface Module (VSIM) which gives vehicle speed as a square wave output. Refer to the section on the VSIM 24-way upfitter C2 connector cavity 19 for more details on this signal.
- 2. A CAN output from the VSIM upfitter bus which gives vehicle speed as a CAN signal. Refer to the information on the VSIM upfitter CAN signals above.
- **CAUTION:** Do not connect a radar unit or any other police equipment to the vehicle's diagnostic connector or the vehicle operating CAN bus. These connections are designed only for authorized service tools during vehicle maintenance. Other equipment connected to the vehicle in this manner can induce unexpected faults and/or degraded vehicle performance and will not be covered by the vehicle's manufacturer warranty.

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



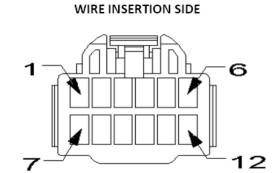


Figure 5: 12-way connector

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

| 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 u | |
| | | upfitter | |
| 11 | 18 OG | Pass-thru Extra unused wire for use l | |
| | | upfitter | |
| 12 | 18 OG/BN | Pass-thru Extra unused wire for u | |
| | | | upfitter |

Table 2: VSIM 12-way connector pinout

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

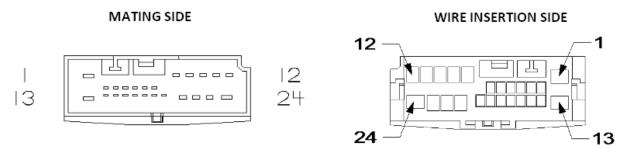


Figure 6: VSIM 24-way C1 connector

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

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

| Table 3: VSIM 24-way | y C1 Connector Pinout |
|----------------------|-----------------------|
| | |

| Cavity | Circuit/Gauge/Color | Function | Upfitter Requirements |
|--------|---------------------|--------------------------------------|-------------------------------|
| 13 | G776 20 VT/YL | VSIM Inline, Rear Right Door Ajar – | LSD - Ground output, low |
| | | active (low) when right rear door is | current |
| | | opened | |
| 14 | NC | | |
| 15 | NC | | |
| 16 | NC | | |
| 17 | NC | | |
| 18 | NC | | |
| 19 | G755 20 VT/GY | Rear Left Door Ajar – active (low) | LSD - Ground output, low |
| | | when left rear door is open | current |
| 20 | W521 18 OR / GY | Interior Lights Dimmed – active | HSD - 12V Digital output, low |
| | | (high) when interior lights are | current (Vbatt+0/-0.5V / |
| | | dimmed (not stealth mode) | 500mA) |
| 21 | W702 20 DG/DB | Transmission Reverse Position – | LSD - Ground output, low |
| | | active (low) when transmission is in | current |
| | | Reverse | |
| 22 | W703 20 DG/LB | Transmission Drive Position – active | LSD - Ground output, low |
| | | (low) when transmission is in Drive | current |
| 23 | K682 20 DB/WT | (2016 and newer) AUX 4 Output – | HSD - 12V Digital output, low |
| | | | current (Vbatt+0/-0.5V / |
| | | highlighted on 12.1 touchscreen | 500mA) |
| 24 | NC | | |

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

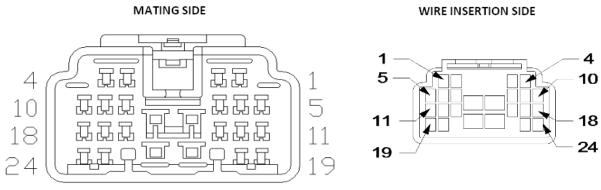


Figure 7: VSIM 24-way C2 connector

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

| | Table 4: VSIVI 24-way C2 connector pinout | | | |
|--------|---|-------------------------------------|-------------------------------|--|
| Cavity | Circuit/Gauge/Color | Function | Upfitter Requirements | |
| 1 | W500 18 BR/OR | Front Wig Wags – Controls the wig | Active high input to VSIM | |
| | | wag function in headlamps | (internally pulled down to | |
| | | | GND/ 2.2 mA max) | |
| 2 | W501 18 BR/VT | Rear Wig Wag – Controls the wig | Active high input to VSIM | |
| | | wag function in the tail lamps | (internally pulled down to | |
| | | | GND/ 2.2 mA max) | |
| 3 | W640 18 BR/WT | Audio Switch Mute Signal – to | Active high input to VSIM | |
| | | mute the vehicle radio | (internally pulled down to | |
| | | (entertainment) audio | GND/ 2.2 mA max) | |
| 4 | W726 18 BR/VT | - | HSD - 12V Digital output, low | |
| | | (high) when brake pedal is pressed | current (Vbatt+0/-0.5 V / 250 | |
| | | | mA) | |
| 5 | W513 18 BR/GY | Horn Activation – active (high) | HSD - 12V Digital output, low | |
| | | when horn pad is pressed | current (Vbatt+0/-0.5 V / 500 | |
| | | | mA) | |
| 6 | W700 20 BR/YL | Transmission Park Position – active | e , , | |
| | | | current (Vbatt+0/-0.5 V / 500 | |
| | | Park | mA) | |
| 7 | W515 18 BR/LB | Panic Alarm Activation – active | HSD - 12V Digital output, low | |
| | | (high) when panic alarm is active | current (Vbatt+0/-0.5 V / 500 | |
| | | | mA) | |
| 8 | W516 18 BR/DB | Headlamps ON – active (high) | HSD - 12V Digital output, low | |
| | | when headlamps are on | current (Vbatt+0/-0.5 V / 500 | |
| | | | mA) | |
| 9 | W524 18 BR/LG | - | HSD - 12V Digital output, low | |
| | | | current (Vbatt+0/-0.5 V / 250 | |
| | | 30 MPH | mA) | |

Table 4: VSIM 24-way C2 connector pinout

| Cavity | Circuit/Gauge/Color | Function | Upfitter Requirements |
|--------|---------------------|--|--------------------------------|
| 10 | W553 18 BR/DG | Stealth Mode Active – active (high(| HSD - 12V Digital output, low |
| | | when Stealth Mode is active | 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 Signal | Pulse width modulated |
| | | | (PWM) output proportional |
| | | | to level of dimming |
| 14 | W522 18 BR/VT | Engine Running/Hour Meter – | HSD - 12V Digital output, low |
| | | | current (Vbatt+0/-0.5 V / 500 |
| | | v | mA) |
| 15 | W523 18 BR/GY | | HSD - 12V Digital output, low |
| | | - | current (Vbatt+0/-0.5 V / 1 A) |
| | Z910 18 BK | VSIM Inline Ground | |
| 17 | W745 21 DB/YL | · · · · | HSD - 12V Digital output, low |
| | | | current (Vbatt+0/-0.5 V / 500 |
| | | park is active | mA) |
| | K686 20 DB/WT | | N/A |
| 19 | W526 18 BR/DB | Vehicle Speed – square wave signal, | • |
| | | 10Hz per mph | (50% duty cycle / 500 mA) |
| 20 | W536 18 BR/YL | | 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 Active high input to VSI | |
| | | the panic alarm (internally pulled down | |
| | | GND/ 2.2 mA max) | |
| | | N/A | |
| 23 | W710 18 BR/DB | Seat Belt not latched – active (high) | - |
| | | when driver seat belt is not latched | , |
| | | | mA) |
| 24 | W540 20 BR/DG | | HSD - 12V Digital output, low |
| | | | current (Vbatt+0/-0.5 V / 500 |
| | | lamp is on | mA) |

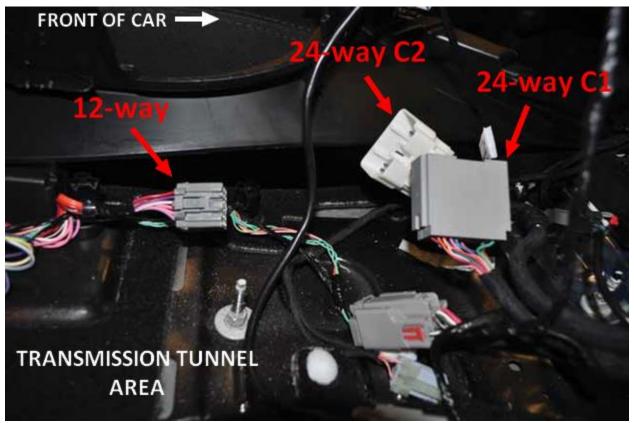


Figure 8: VSIM Interface Connectors

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 the Mopar Service Library for disabling restraint system. Failure to do so could cause airbag deployment.

12-Way Connector Pass-thru Circuits



Figure 9: 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

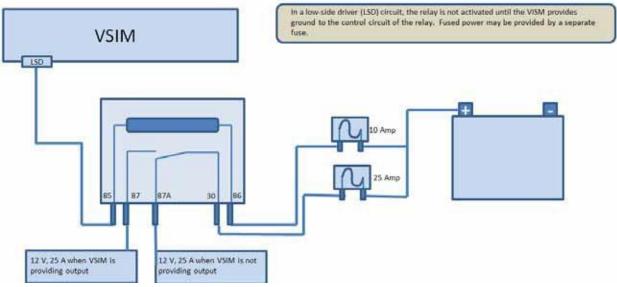


Figure 10: Low Side Driver Controlled Circuit

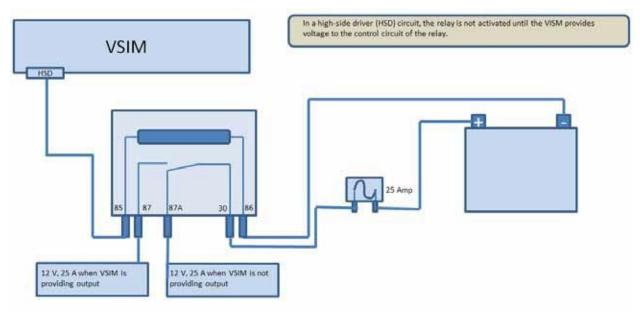


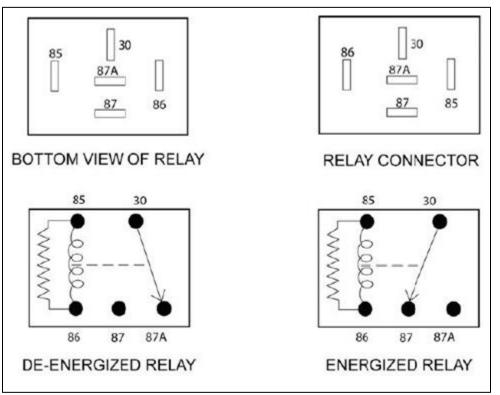
Figure 11: High Side Driver Controlled Circuit

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 12: 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

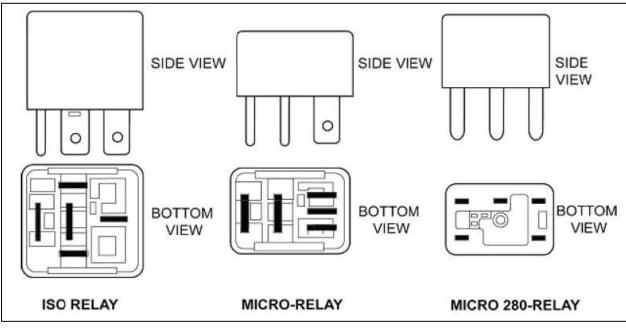


Figure 13: Micro Relays

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.

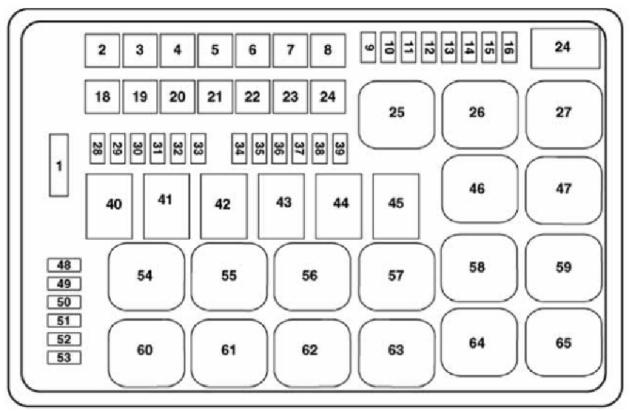


Figure 14: Underhood PDC

Table 5: 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.

| | Cartridge Fuse | Mini-fuse | Description |
|---|-------------------|-----------|------------------|
| 1 | | | Spare |
| 2 | 50 | | 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 | 23 | | 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

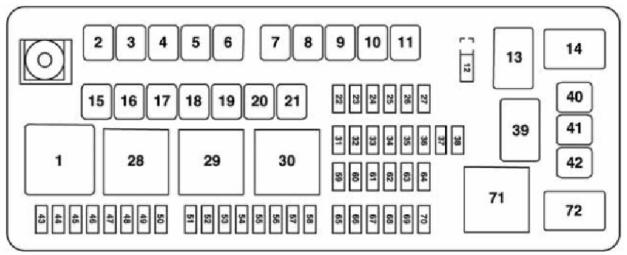


Figure 15: Rear PDC

Table 6: 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 patrol package base prep or wiring prep package. Use the contact info on the fleet website for more information on that package.

Auxiliary Switches



Figure 16: 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 17: UConnect 12.1 System, aftermarket equipment shown

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 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.

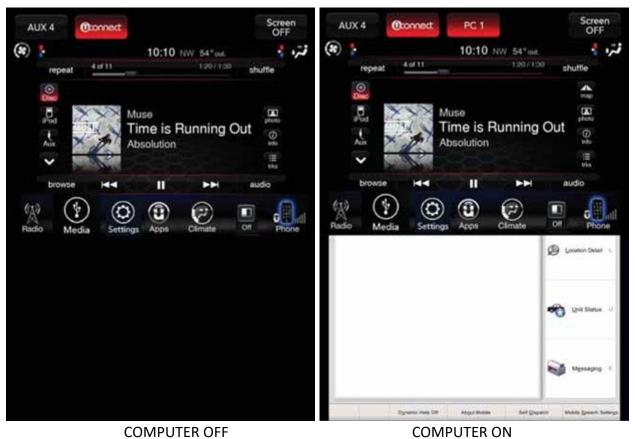


Figure 18: UConnect Screens

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.



Figure 19: 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.



1 Audio Cable connected to vehicle AUX port 2 Keyboard connected to USB cable Figure 20: 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

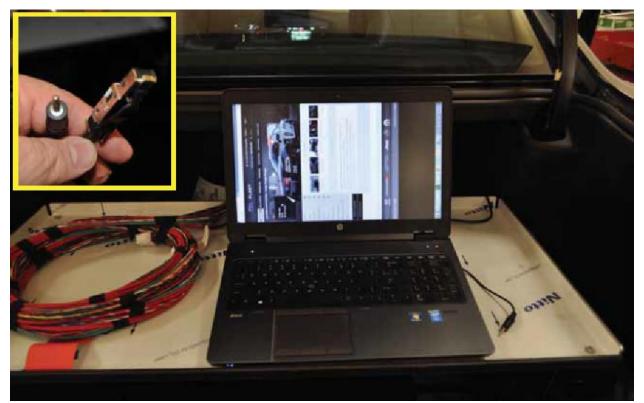
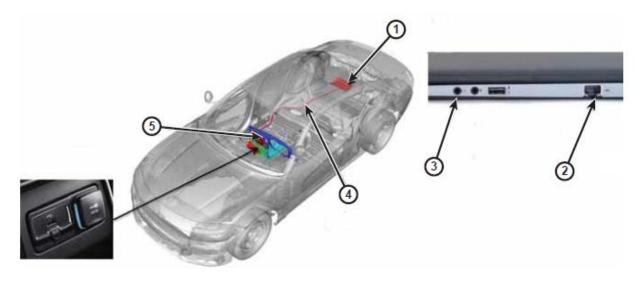


Figure 21: Trunk Connectors for Laptop (optional trunk tray and wiring prep package shown)

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 22: 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 23: 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 24: 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 25: Spot Lamp

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 spot lamp. 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. Stealth mode will exit when the vehicle is shifted to Reverse so that the rear camera will display, and return to stealth mode when the vehicle is shifted out of Reverse.

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.

MANUAL PARK RELEASE

2021 and newer Charger pursuit models equipped with the standard mini console or the Mopar police console have a manual park release (MPR) behind the trim panel shown below. Information about the operation of the MPR can be found in the Charger Police Supplement manual on the Mopar website. If the car is equipped with a full length retail-style console (sales code CUF), information about the MPR can be found in the Charger Owner's Manual.

With the Mopar police console, an access panel is provided and can be removed to access the MPR handle.

If an aftermarket console or equipment is installed in this area, be sure to provide access to the MPR in the event that the vehicle needs service.

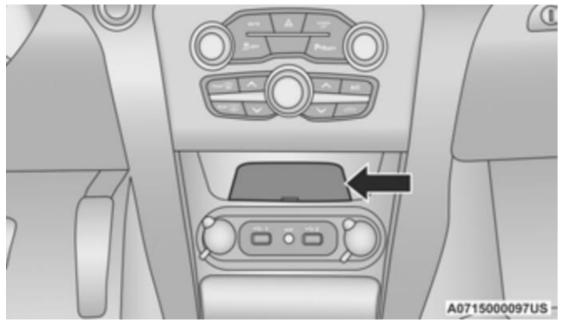


Figure 26: Manual Park Release location

RESTRAINTS

Occupant Restraint System Overview

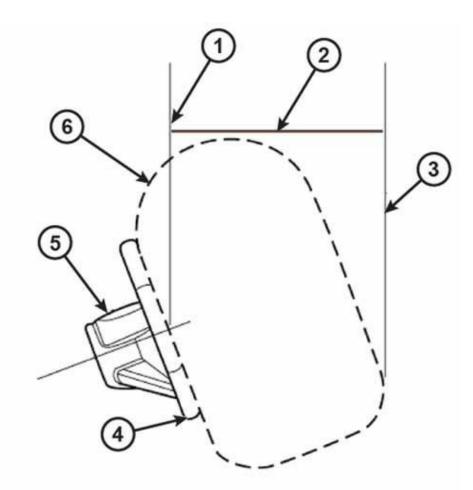
- WARNING: INSTALLING A CONVENTIONAL PRISONER PARTITION IS NOT RECOMMENDED ON VEHICLES EQUIPPED WITH LEFT AND RIGHT SIDE CURTAIN AIRBAGS, AS POLICE CAGES MAY INTERFERE WITH THE DEPLOYING AIRBAG. THE AREA WHERE THE SIDE CURTAIN AIRBAG IS LOCATED SHOULD REMAIN FREE FROM ANY OBSTRUCTIONS. ONLY INSTALL A PARTITION THAT IS DESIGNED TO BE COMPATIBLE WITH SIDE CURTAIN AIRBAGS.
- WARNING: YOUR VEHICLE IS EQUIPPED WITH LEFT AND RIGHT SIDE CURTAIN AIRBAGS, AND CARE MUST BE TAKEN WHEN INSTALLING ANY TYPE OF ROOF EQUIPMENT. DRILLING AND INSTLALLATION OF FASTENERS OR OTHER EQUIPMENT THAT MAY INTERFERE WITH THE SIDE CURTAIN AIRBAGS AND AIRBAG WIRING HARNESSES 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 NO 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
- Front and side impact sensors
- Seatbelt pretensioners
- Driver and passenger side knee impact bolsters
- Airbags:
 - Driver airbag
 - Driver side (seat mounted) airbag
 - Drivers side curtain airbag
 - o Supplemental driver knee 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



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

Figure 27: Driver Airbag Dimensions

NOTE: The illustration represents the maximum dynamic deployment shape.

Table 7: 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.) |

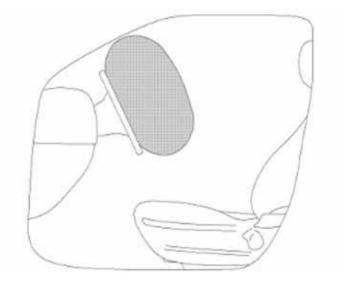


Figure 28: Driver Airbag Deployed Shape

Table 8: Steering Column Tilt Position Range

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

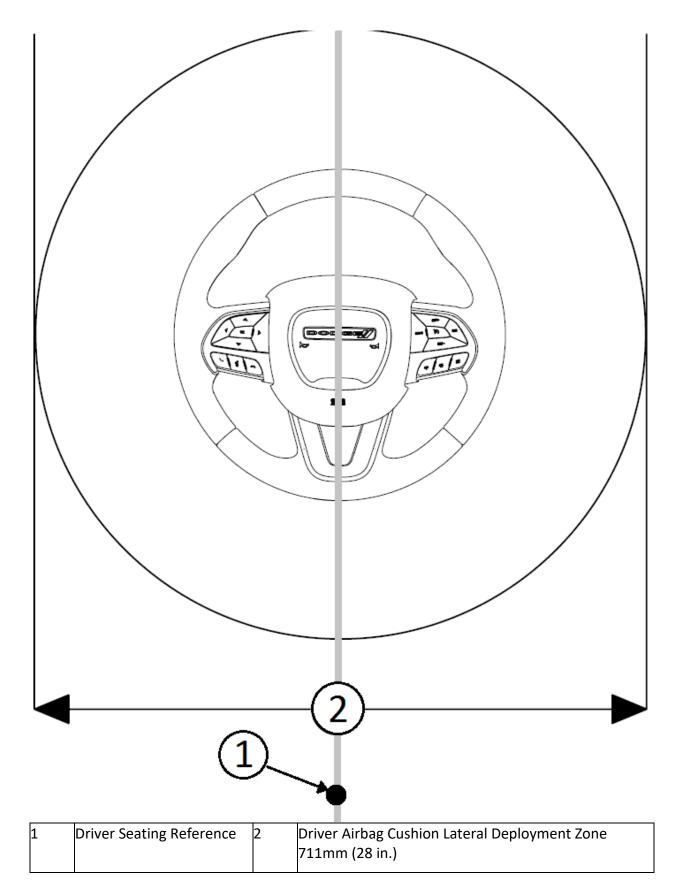
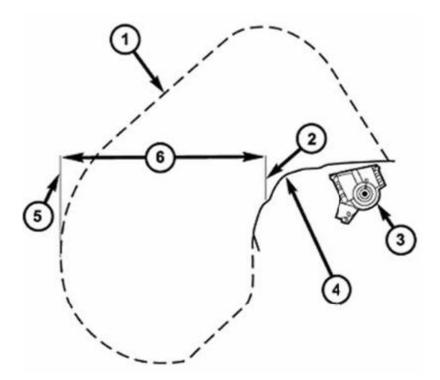


Figure 29: Deployment Zone



| 1 | Passenger Airbag Cushion | 4 | Instrument Panel Surface |
|---|---|---|---|
| 2 | Vertical Plane from Rearmost Point of Instrument Panel | | 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 30: Passenger Airbag Deployment Zone

NOTE: The illustration represents the maximum dynamic deployment shape.

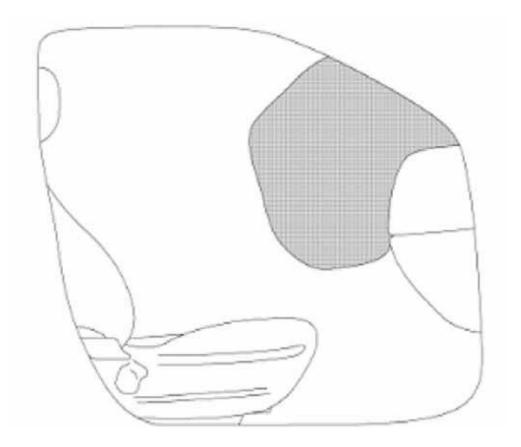
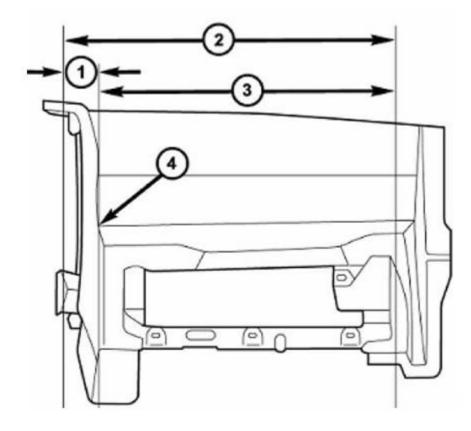


Figure 31: Final Deployment Shape



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

| Figure | 32: | Dep | loyme | ent | Zone |
|--------|-----|-----|-------|-----|------|
|--------|-----|-----|-------|-----|------|

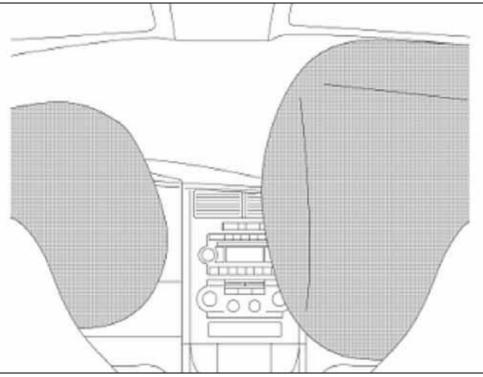


Figure 33: Center Interior Area

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.

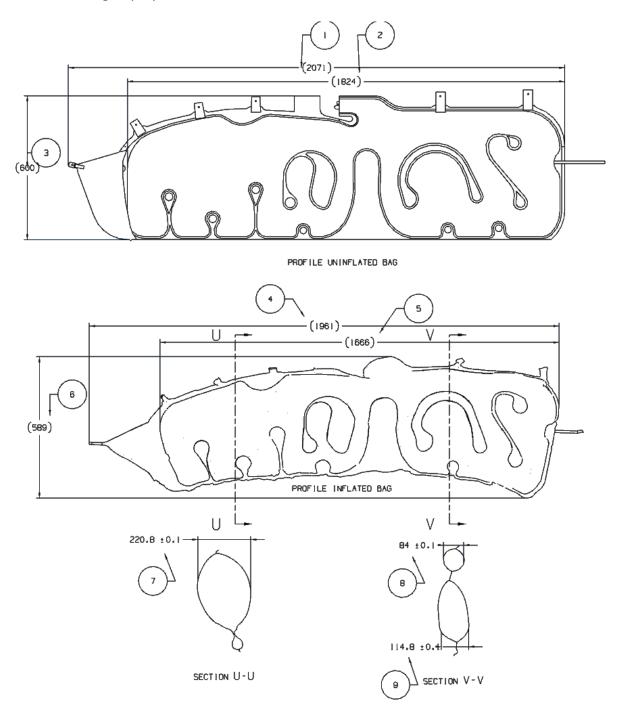


Figure 34: Side Curtain Airbag Deployment Zone

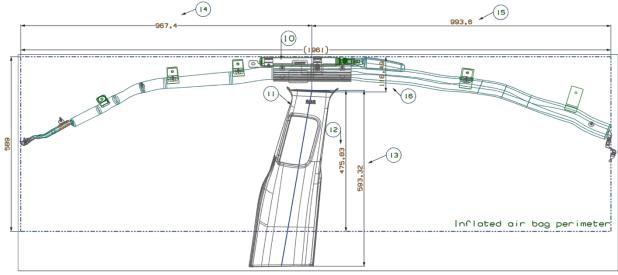


Figure 35: Side Curtain Airbag Deployment Zone

| 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 | |

Table 9: Side Airbag Deployment Zone Reference Chart

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 36: 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 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 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.

Shipping Mode

The body control module has a shipping mode 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.

To exit shipping mode, turn the hazard lamps on and press/hold the up arrow on the steering wheel electronic vehicle information center (EVIC) controls until the vehicle exits shipping mode. This same process can put the car back into shipping mode, but note that it 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 a WiTECH service 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 / window disable feature, it may have been ordered with the optional bag of parts in the trunk to re-enable rear door lock, handle, and window function. 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 37: 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 keyalike 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.

| Notes: | |
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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



WE ENCOURAGE PROFESSIONALISM







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