



**2020 NTEA Work Truck Show
Chassis Update Session**

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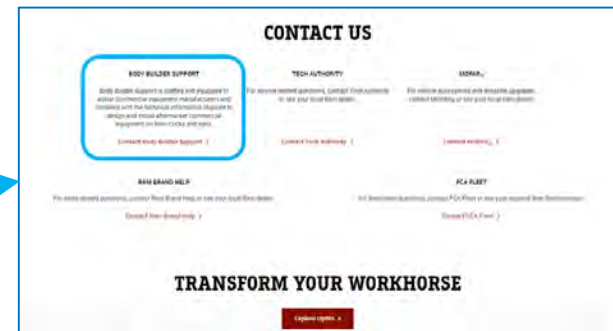
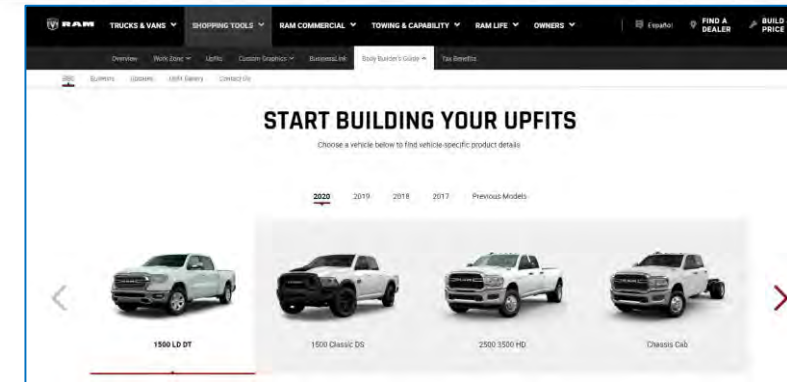


Body Builders Guide

- Now data is live 2013-2020MYs
- Schedule for 21MY roll out:
 - 2020 Q4 HD/CC truck data
 - 2020 Q3 ProMaster/City data
- 2012MY & prior
 - Old site or Contact Us

Contact Us section

- 3,500+ inquiries processed in 2019
- Will direct you to a form to fill out:
 - Put in as much detail as possible
 - Helps us better identify your area of concern
 - Requests go directly to FCA Engineering Team



Commercial Team Updates



CAD update:

- 400+ projects in 2019 calendar year
- Free service
- Electronic transfer (Syncplicity) only
- Current production vehicles only
- Must have NDA on file w/ FCA

FCA Commercial Vehicle Team
FIAT CHRYSLER AUTOMOBILES

Request For CAD Data Form

The form below is intended to assist the FCA Commercial Vehicle Team in providing you the CAD data that you require. By providing as much information in the form below we will be able to process it much quicker.

Please note – you must have an approved NDA on file before we can provide any CAD data. If you require this, or are unsure if you have an existing NDA, please contact the Ram Body Builder hotline:

Ram BBG Hotline:
Call: 248-576-6700 -or- 866-205-4102
Email: rambbg@fcagroup.com

Requester Information

Name: _____ Telephone Number: _____
Title: _____
Company (Name/Location): _____

Vehicle Information

Make: _____ Model: _____ Model Year: _____
Body Style: _____ Trim Level: _____ Market (US, Canada, etc): _____
Engine: _____ Transmission: _____ Drive (RWD/4WD): _____
Wheelbase: _____ CA (Chassis Cab Only): _____ Axles (Ratio, Locking, SRW/DRAW): _____

List Of Factory Equipment/Options Which May Affect CAD Data Request:

List Specific Vehicle Areas That Are Affected: (ie wiring, suspension, fuel tanks/bundles, HVAC lines, body panels, etc)

Description Of Usage of CAD Data Required: (ie packaging, design of componentry, etc)

Description Of Intended Vehicle Usage/Vocation: (ie Ambulance, Stake Truck, Mobility Transport, Police Pursuit Vehicle, etc)

CAD Data Transfer:
Point of Contact: _____ email: _____
Type of Files Required (X11 Parasolids preferred, STP, etc): _____
Transfer Method (electronic): ☐ Syncplicity (preferred) ☐ Rocket (FCA Account) ☐ Tribility (FCA Account)

NDA (Non Disclosure) Update:

- Must use latest form on BBG
- No expiration date
- Must be signed by Corp Officer
- All areas must be filled out (esp. Exhibit 1)

EXHIBIT 1 – UPFIT PRODUCTS

Instructions for completing Section 1 of Exhibit 1:

Section 1 of Exhibit 1 is to be completed where the Licensee intends to use the CAD data to package make upfit products and sell the upfit products to other upfitters. If the Licensee is making the upfits and does not sell upfit products other than as installed on the upfitted vehicle, Exhibit 1 does not need to be completed.

If the Licensee intends to make upfit products and sell these upfit products to other upfitters, these upfit products are to be listed below. Other information, such as the CAD data the Licensee is requesting, is not to be listed.

Section 1: List of Upfit Products that are Licensed Under Section 1 (if none listed, then none):

Instructions for Completing Section 2 of Exhibit 1:

Section 2 of Exhibit 1 is to be completed if Licensee is an engineering service provider ("Engineering Service Provider") retained by a customer who has entered into a comparable license with FCA US for Licensee to provide engineering design and development services to assist this customer in practicing the license granted to this customer under the comparable license.

Section 2:

Name and address of Licensee's customer:

(Name of Licensee's Customer)

(Address of Licensee's Customer)

Body Builders Guide – Upfitter Controls

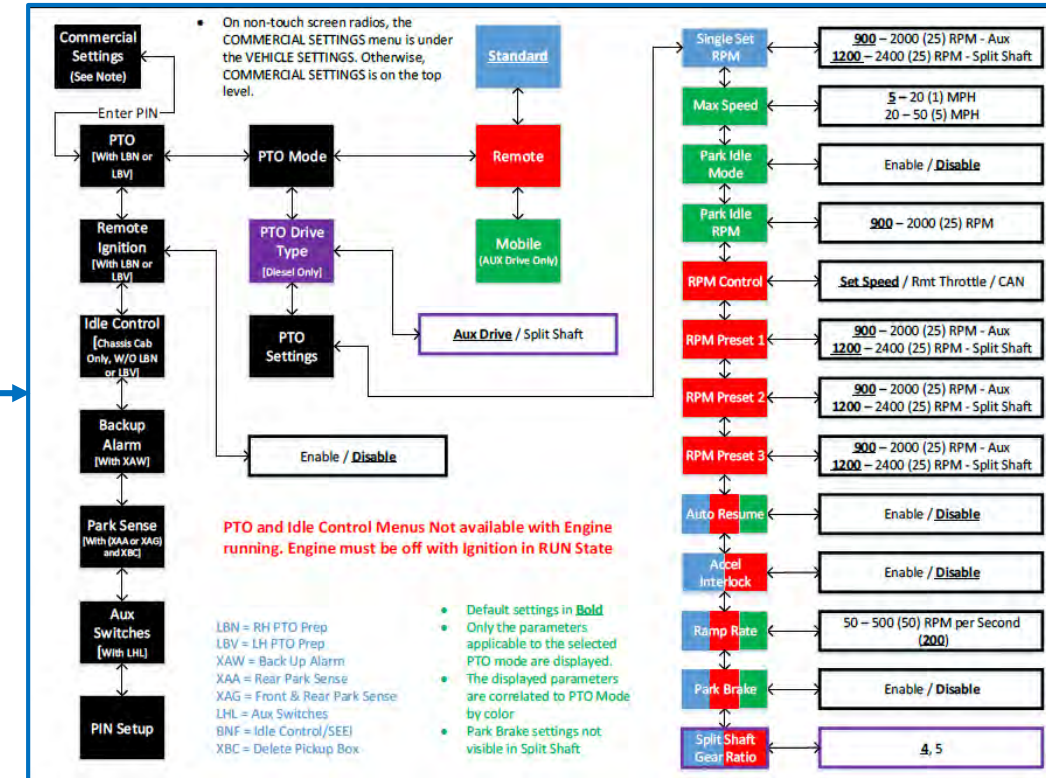


Section in BBG which provides details on controls/features:

- Programming:
 - AUX switches
 - PTO features/settings
 - Idle control
 - Front/Rear Park Sense enable/disable
- System functionality:
 - Hardwired remote start/stop
 - E-Stop
 - Idle shut down

| Upfitter Controls and Features |
|--------------------------------|
| Adjustable Idle Speed |
| EVIC Programming Menus |
| Emergency Engine Stop |
| Engine Idle Shutdown |
| Stationary Engine Idle Up |
| Wired Remote Start/Stop |

Example: EVIC PTO Programming



Flow charts are a very useful tool when programming complex vehicle functions.

Safety/Regulatory Update



Safety Act Training

- Collaboration between FCA Safety Office, Office of General Council, & Commercial Vehicle Team
- Educates upfitters on their obligations
- Located in Body Builders Guide
- Free of charge, no login required, takes less than 30 min

Regulatory Awareness

- Collaborative effort between FCA and Commercial industry
- Working with trade orgs (i.e. AMD, RVIA, etc) to better educate upfitters on their regulatory obligations
- Improves communication between upfitters and FCA
- If interested please contact the BBG Team



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Technical Update

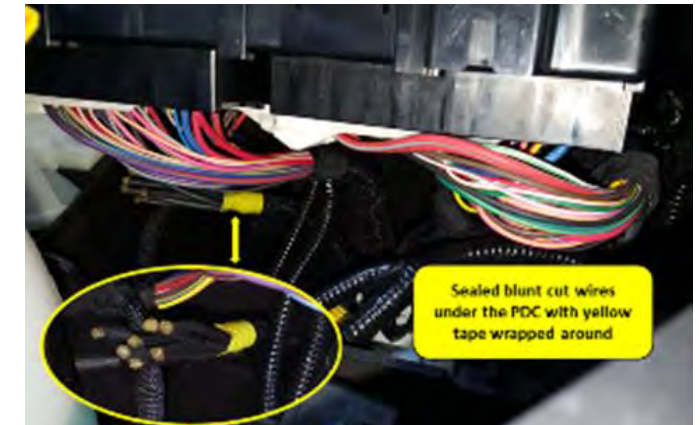
Light Duty Snow Plow Prep Package



- 21MY, Sales code: [AHD]
- Available with 5.7L Hemi, 5.7L Hemi w/ BSG, and 3.0L Diesel engines
- Packaged with 4x4 & 3.92 FDR axles
- Will add 220A alternator on 5.7L
 - Diesel and BSG are carryover
- Wiring is same as HD/CC package
- Adaptive Cruise Control, Front Park Assist, and Front Collision Avoidance are automatically disabled
- Chart assumes only options standard on trim level, additional options will require weight analysis



| 4X4 Snow Plow Availability | | | |
|----------------------------|---|---------------|---------------|
| | Tradesman | Big Horn | Laramie |
| 5.7L Gas | Quad 6'4" Box Crew 5'7" Box Crew 6'4" Box | Quad 6'4" Box | Quad 6'4" Box |
| 3.0 Diesel | Quad 6'4" Box Crew 5'7" Box | | |



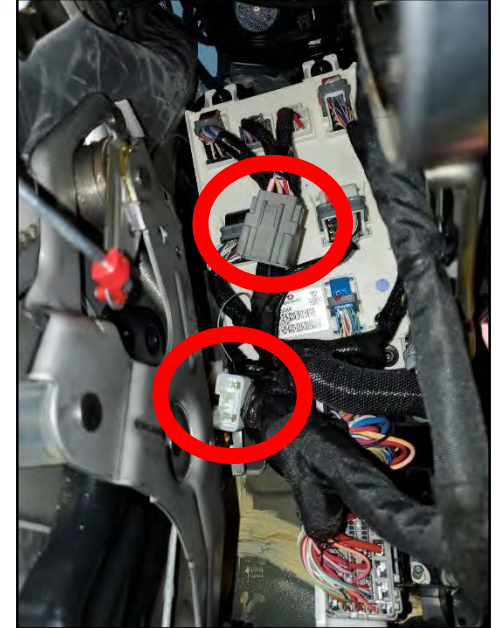
NOTE: Picture is HD truck for reference

HD/CC Upfitter Connector Improvements



Remote PTO connectors:

- Improved access to the two connectors under the instrument panel.
- Can be connected with one hand.
- Gray connector: power connector for rear of frame.
- White connector: remote PTO circuits.



HAPP (High Amp Power Point):

- Improved location to top of battery
- Robust cover
- M8 stud rated to 300A (continuous)
- Standard on HD and CC
- On dual battery diesel applications HAPP is on driver's side battery.

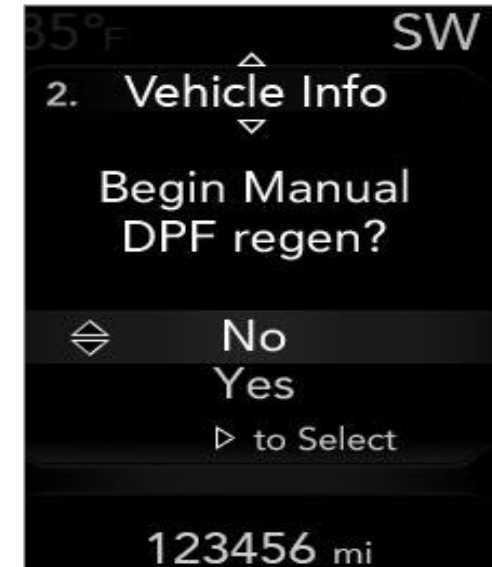
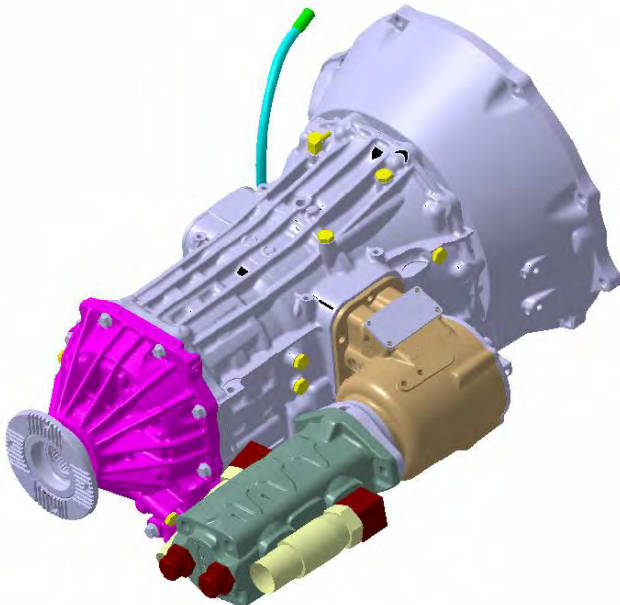


Commercial Vehicle Option Suggestions



Recommendations on configuring your commercial vehicles:

- Order Chassis Cab trucks with PTO Prep [LBN] on 4500/5500 stock unit.
- Commercial use Pickup trucks order Aux Switches [LHL] and VSIM [XXS].
- Consider VSIM on ProMaster (now available).
- Order dual alternators ([XF5] gas [XF7] diesel). The secondary alternator can be removed, but a single alternator truck cannot be upgraded to dual.
- Manual regen on diesel [XNR].



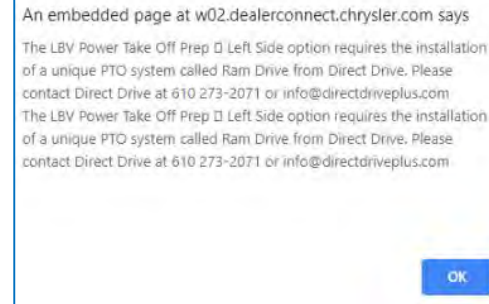
Cautionary Commercial Vehicle Options



- Carefully order dual fuel tanks [NLL] on a chassis cab stock unit – tanks cannot be added or removed in field.
- On 2019+ Pickup Trucks that may have the box removed: avoid cross path monitoring [XAN] and/or 360 degree camera [XAK]. These features currently cannot be adapted to field box removal.
- Left hand PTO on 4x4 [LBV] aftermarket PTO and transfer case must be ordered during vehicle configuration per the popup menu.



Popup menu



PTO Installed



HD Pickup Box Removal 2019MY+



- Box removal permissible on most 2500/3500 models.
 - Not recommended on diesel or 1500 models.
- Surround View [XAK] image will not stitch accurately/potential blind spots with relocated camera
- Cross Path Detection [XAN]: calibrated sensors are in tail lights and cannot be relocated.
- Park Sense [Front XAA or Rear XAG] can disabled at dealer via routine in WiTech.
- Truck has separated brake and turn circuits, signals cannot be combined.
 - Trailer tow brake/turn circuits are an option
- Bulb out detection: can be disabled by dealer by adding sales code [LB6].
- Conversion to LED tail lights: incandescent tail lights [LA6] are PWM which may cause issues LEDs.
 - Use trailer tow circuits.



Product Notice: 2019MY PTO System

Chassis Cab only



Installation of PTO may result in Engine Control Module (ECM) damage

- Affects Chassis Cab Trucks with PTOs installed only
- Clean point: Trucks built after August 6, 2019
- Will disable PTO operation only, will not affect any other vehicle functionality.
- PTO light will flash and PTO will shut off in 25 seconds
- RRT-19-100 or TSB 18-119-19 for vehicles that have not had PTO installed.
- STAR case 1918000009 for vehicles with non-functioning PTOs



Jumper

Feature Spotlight: Auxiliary Switches



Standard on Chassis Cab, optional on Heavy Duty Pickups

6 switches in optimum location

- Standard equipment on Chassis Cab
- Optional on Heavy Duty [LHL]

Full programmability:

- Last known state
- Battery/Ignition fed
- Momentary/Latching

PTO option includes PTO switch

- Replaces 6th aux switch (n/a HD)

Connections under hood

Wiring included in upfitter bag



Feature Spotlight: PTO Key Features



Last Known State latching feature

- Allows PTO resume on engine stop/restart

Mobile Mode – Idle Up in Park

- Allows PTO to maintain high idle when shifted to Park

Park Brake Interlock

- Requires park brake to engage PTO

Adjustable Engine Ramp rates

- Provides variable ramp up rates for PTO

All features are configurable in the Commercial Menu in EVIC



Feature Spotlight: VSIM* Key Features



Door Lock/Unlock

- Allows remote lock/unlock of OEM/chassis doors
- Chassis or upfit key fob can control locks on all doors/storage boxes

Emergency Stop circuit

- Allows immediate remote shut down of engine
- Does not toggle, vehicle must be restarted with other means



Idle Shutdown Defeat circuit

- Allows temporary disable of idle shut down

Wig-Wag headlamps work on all headlamps

Low/High headlamp & turn signal outputs

- To support supplemental equipment

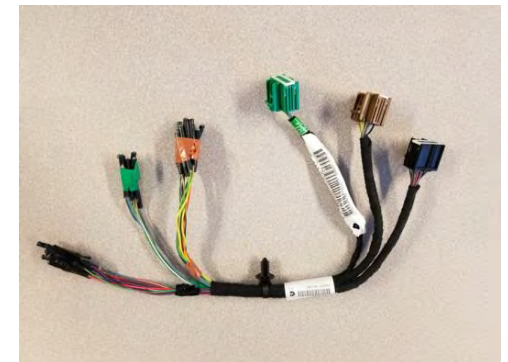
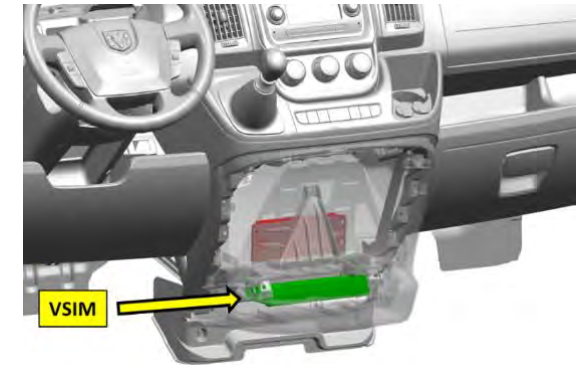
New J1939 inputs available for 2019MY



Feature Spotlight: VSIM* on ProMaster



- Optional on all ProMaster sales code [XXS]
- 41 hardwire inputs and outputs
- Located in center I/P console behind the cup holders
- All wiring/connectors included in upfit bag
- J1939 Output (only) messages SAE and ProMaster specific
- No software or accounts required
- Full list of features on BBG



* Vehicle System Interface Module

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QPro Update



Q-Pro Program



“The Quality Professional (Q-Pro) Program is a Mark of Excellence qualification program where capable Upfitters collaborate directly with FCA to provide high quality vehicle upfits for the Commercial Vehicle Marketplace”

Program Focus:

- Adherence to Regulatory Compliance
- Robust Quality Management Program
- Strict Process Control
- Strong Warranty and Continuous Improvement programs

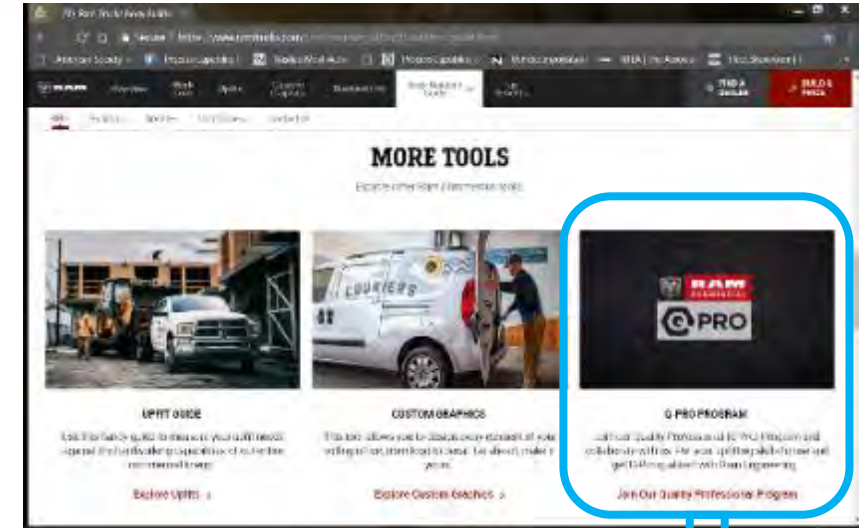
Program is available to upfitters* modifying FCA products

* 'Upfitters' includes 2nd Stage Manufacturers, Vehicle Alterers, etc.

Q-Pro Program Details



- Dedicated FCA QPro Program Manager
- Process Overview:
 - Contact us, Self Assessment packet sent out
 - Q-Pro Team reviews Self Assessment, schedules on-site Audit
 - Upfitter/Q-Pro Team review audit, identify next steps, award Q-Pro Qualification
- Timing:
 - Dependent upon complexity, availability/scheduling, readiness, etc.
- Two ways to get more information:
 - Email: RamBBG@RamTrucks.com
 - Contact Us: within BBG



GET Q-PRO QUALIFIED WITH RAM ENGINEERING

Our Quality Professional (Q-Pro) Program is looking for excellent upfitters to improve the commercial vehicle space. If selected, you'll develop strong personal relationships, get professional technical support and get direct feedback from Q-Pro-qualified Ram Engineers. Collaborate with us and show off your upfitting skills.

To qualify, you must:

- Support quality and process built at your manufacturing facility(s)
- Show evidence of corporate compliance processes
- Proactively collaborate on safety, quality and manufacturing processes
- Demonstrate a sense of urgency

[Contact Us >](#)

Q-Pro Program Participants



- 27 Participants
- Multiple vehicle lines
- Various markets/vocations
- Constant growth
- Very well received
- Currently only qualifying Canada & US upfitters



Contacting the Commercial Team



Call: 248-576-6700
866-205-4102



Email: rambbg@fcagroup.com
OR
rambbg@ramtrucks.com



Visit: <http://www.ramtrucks.com/en/bodybuildersguide/>



THANK YOU!