

Drive-By-Wire Pedal Assembly Installation Instructions



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General Installation Notes:

Please read these instructions completely before beginning the installation. If you have any questions, please call.

Before beginning the installation, disconnect the negative battery cable and use wheel chocks to block the vehicle's wheels.

Make sure the engine, transmission, body and frame are properly grounded. We recommend using anti-seize lubricant on all aluminum threads.

Note: DO NOT disassemble the electronic throttle control module OR remove the sensor! Clayton Machine Works (CMW) Drive-By-Wire Pedal Assemblies are pre-programmed to match your application. If you disassemble the electronic throttle control module or remove the sensor you will void your warranty!

Refer to Fig. 1 for the component names.

Mounting the Drive-By-Wire Pedal Assembly

Step 1: Determine your mounting location. Mounting locations will vary from vehicle to vehicle, and the pedal assembly can be mounted in any position. The angle of the pedal arm can be adjusted as needed (**Step 4**). Some applications may require that the installer create a custom mounting bracket.

Step 2: Once you have decided on the mounting location, position the pedal assembly on the firewall. Trace around the bottom edge and up both sides of the electronic throttle control module to mark the position on the firewall.

Step 3: There are two mounting holes in the electronic throttle control module. The center of the lower mounting hole is approximately 31/32" above the bottom edge of the electronic throttle control module, and the mounting holes are 2-1/4" apart center-to-center. **Fig. 2**

Measure and mark the location of the mounting holes on your firewall. Center punch the marks and drill two 3/8" diameter holes in the firewall.

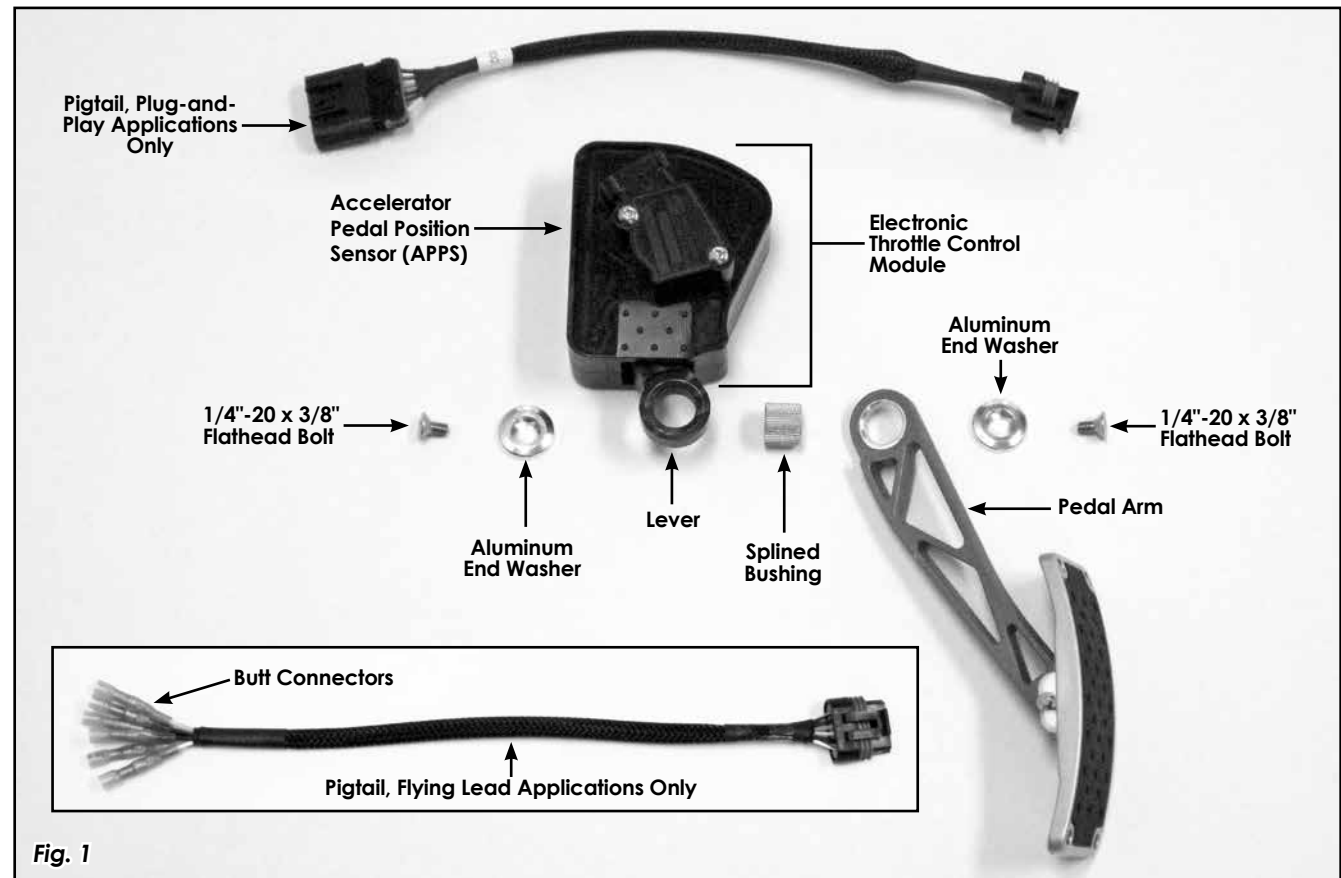


Fig. 1

Step 4: Install the pedal and electronic throttle control module onto the firewall using two 3/8"-24 bolts of your choice (not included). **NOTE:** The bolts should be no more than 1/2" longer than the thickness of your mounting surface to prevent them from bottoming out. **Using bolts that are too long can damage the electronic throttle control module!**

Once the assembly is mounted to the firewall, the angle of the pedal arm can be adjusted, if needed. Remove the 1/4"-20 x 3/8" flathead bolt and aluminum end washer from the right side of the pedal arm, using a 5/32" Allen wrench. **Fig. 3** Slide the pedal arm off of the splined bushing, and reinstall the throttle pedal arm at the desired angle. **Fig. 4** Install the aluminum end washer and 1/4"-20 x 3/8" flathead bolt back into the pedal arm, and tighten the bolt. **Fig. 5**

Connecting the CMW Drive-By-Wire Pedal Assembly

WARNING: Drive-By-Wire technology is designed to operate on a 5VDC regulated power source. **DO NOT** use a TEST LIGHT or ANY 12VDC POWERED test equipment during installation. Using this equipment will permanently damage or destroy the pedal assembly sensor or possibly the vehicle's engine controller and void your warranty.

GM, Ford and Aftermarket:

Step 5: Some of the Clayton Machine Works Drive-By-Wire pigtails are plug-and-play with an OE-type connector that plugs directly into the existing Accelerator Pedal Position Sensor (APPS) connector on your ECM wiring harness. Other applications have flying leads with butt connectors for each individual wire on the ECM end of the CMW pigtail.

If the pigtail that came with your CMW electronic throttle control module has an OE-type plug-in connector on the ECM end, simply plug the CMW pigtail into the new electronic throttle control module and to the ECM wiring harness, and you are finished with the installation.

For applications with flying leads, cut the APPS connector off of your original ECM harness with a sharp pair of wire cutters. Leave enough of the wire still attached to the original APPS connector that you can see what color wire went to each pin in the connector. **DO NOT** discard the original APPS connector until the installation is completed.

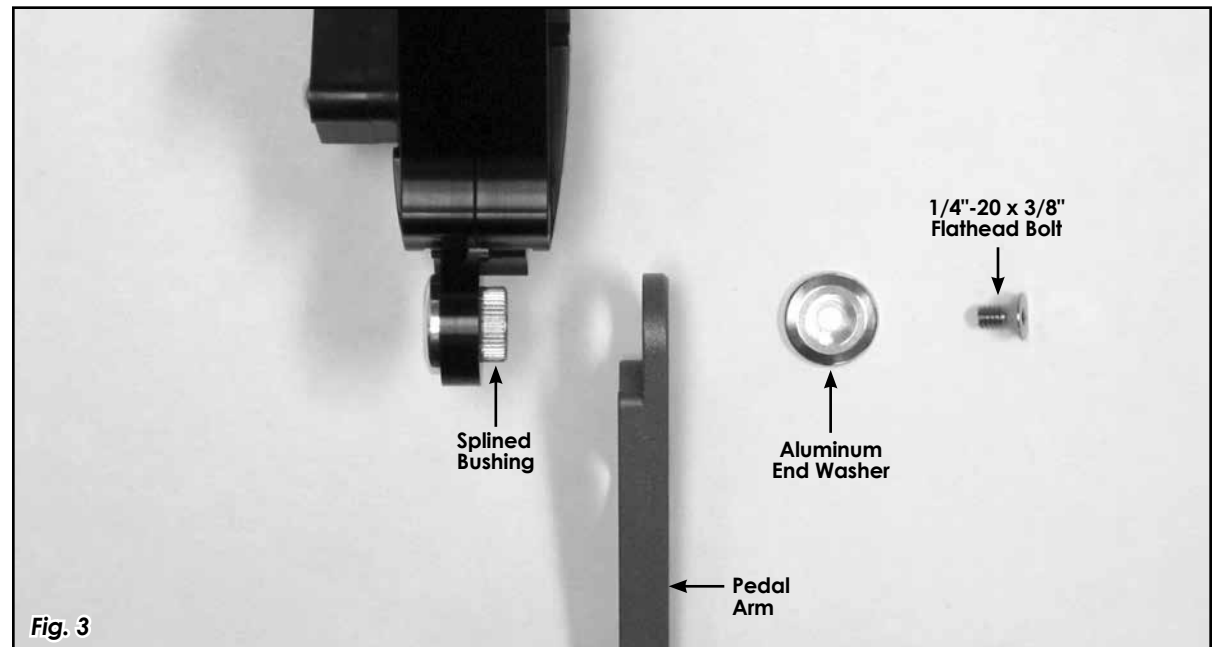
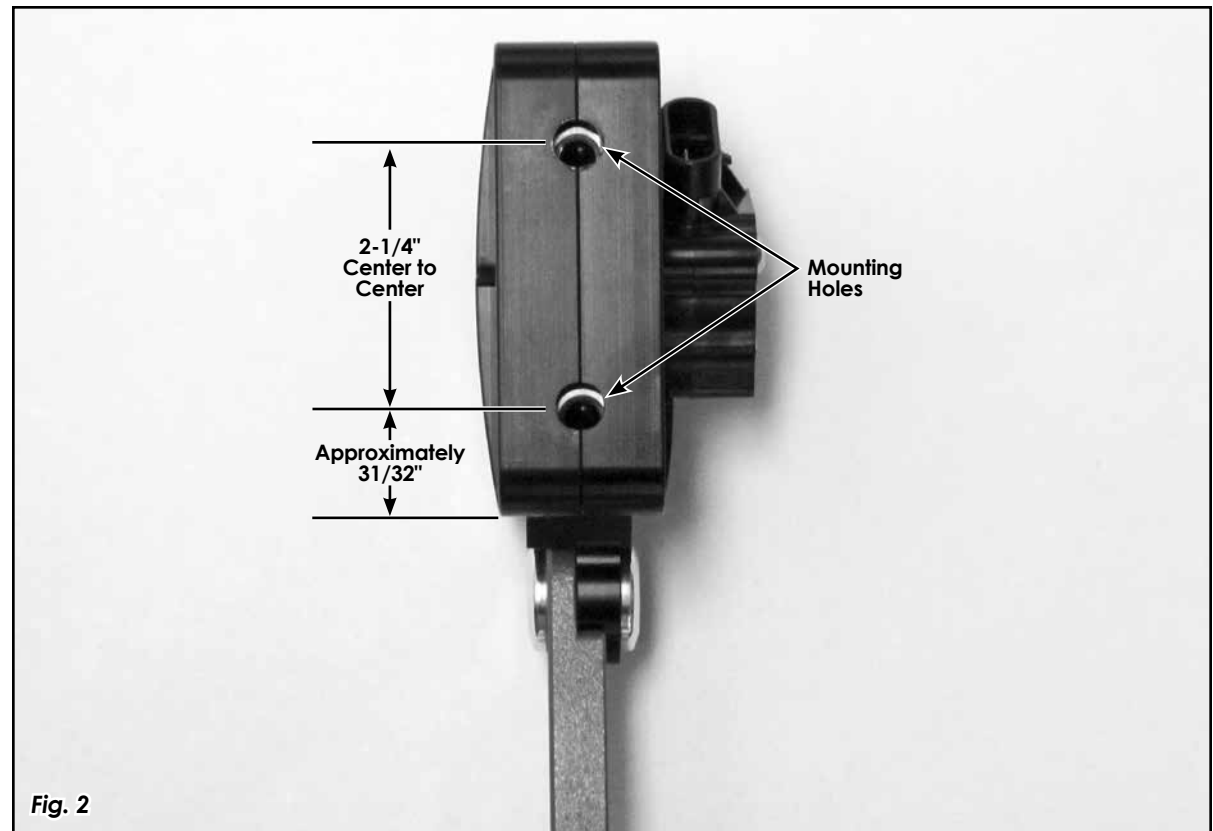
Strip approximately 1/4" of insulation off of the end of the wires coming from the ECM.

Step 6: Note that you **CANNOT** rely on the wires in the CMW pigtail being the same color as the ECM wires they will connect to. The wire colors are the same for some applications, but **NOT** for all applications.

The APPS connector you cut off of the original ECM harness will be labeled with either a letter or a number for each of the pins in the connector. Write down which wire color goes to which pin in your original connector, or label each wire on the original ECM harness with the letter or number of the pin that it went to.

Locate the CMW part number that you purchased on the "**GM and Ford Applications With Flying Leads**" chart in **Fig. 6**. Match each lettered or numbered wire in your original ECM harness to the CMW wire color that is listed in the chart. Using a good quality crimping tool, crimp each wire from the ECM wiring harness to the wire on the CMW pigtail that is specified in the application chart.

The butt connectors are a "Crimp and Solder" style that already has solder inside the connector. Once the wires are crimped together, use a heat gun to melt the solder and shrink the heat shrink tubing. Plug the pigtail into the CMW electronic throttle control module.



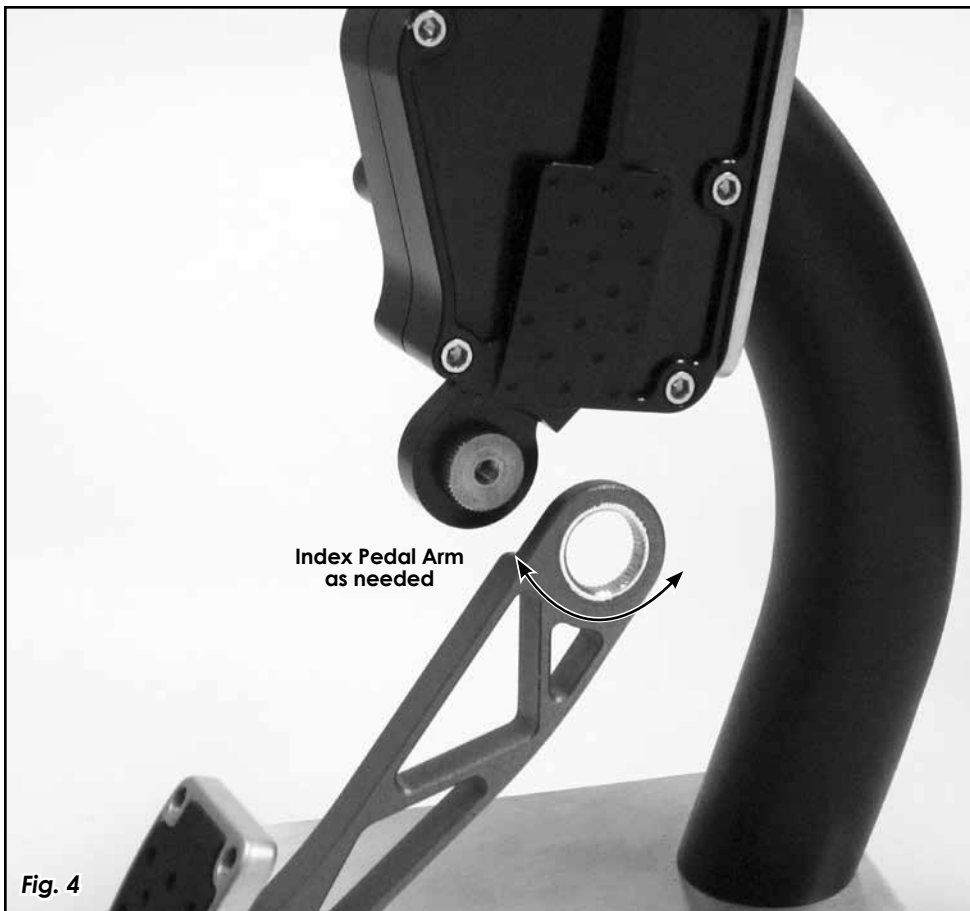


Fig. 4

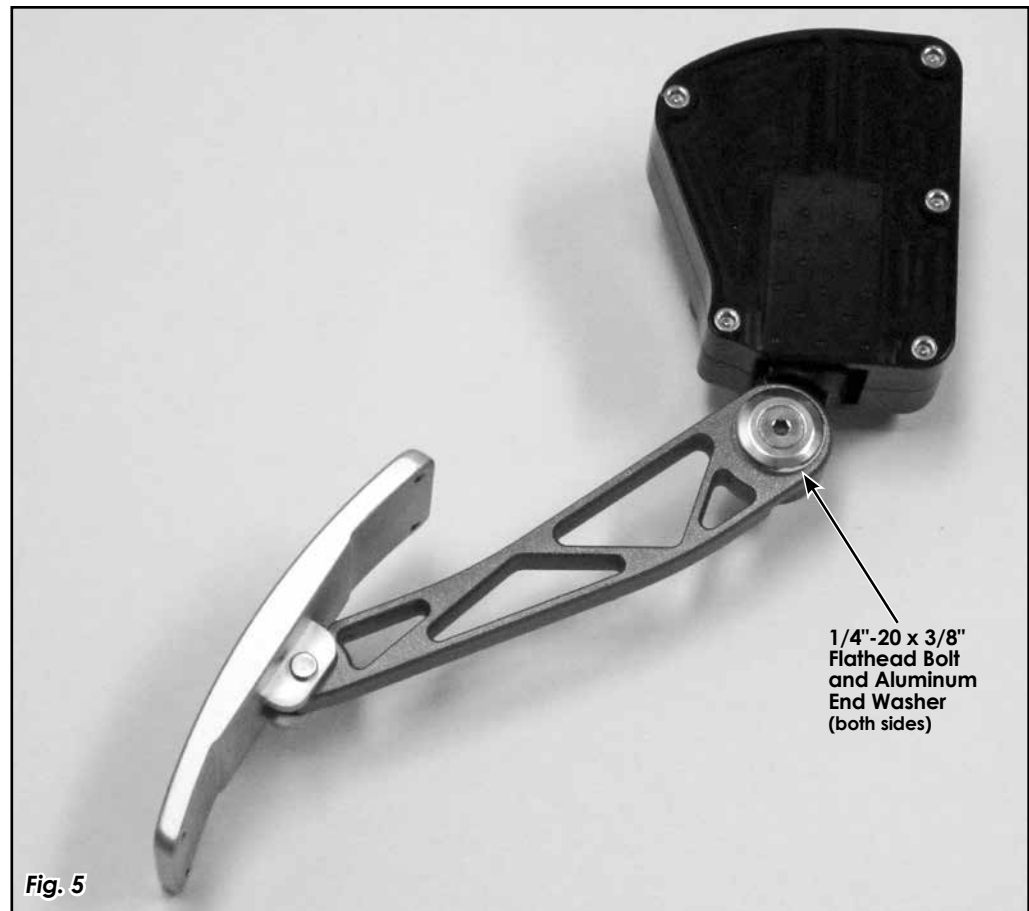


Fig. 5

GM and Ford Applications with Flying Leads						
CMW Drive-By-Wire Pedal Assembly Part Number	Pin # Or Letter On Original APPS Connector					
	CMW Wire Color					
CDBW-GM05B; CDBW-GM05G	1	2	3	4	5	6
	TN	LT BLUE	PPL	BR	DK BLU	WHT/BK
CDBW-GM07B; CDBW-GM07G	A	B	C	D	E	F
	PPL	LT BLUE	TN	BR	DK BLU	WHT/BK
CDBW-GM08B; CDBW-GM08G	1	2	3	4	5	6
	TN	WHT/BK	DK BLU	BR	PPL	LT BLU
CDBW-GM09B; CDBW-GM09G	B	C	D	E	F	G
	TN	LT BLUE	LT BLUE	BN	DK BLUE	WHT/BK
CDBW-FORD01B; CDBW-FORD01G	1	2	3	4	5	6
	BR/WHT	TN/YL	GRY/RD	GRY	LT BLU/WHT	BR

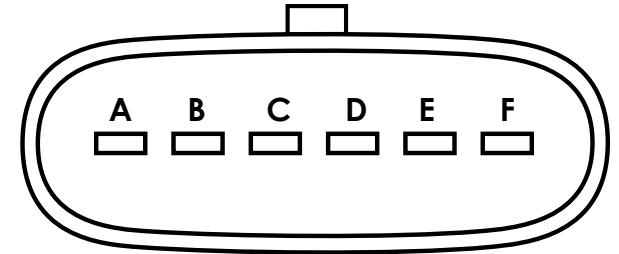
Fig. 6

Mopar Applications							
Vehicle		Connect CMW Pigtail Wire "X" To ECM Harness Wire Color Below					
Year	Model	A	B	C	D	E	F
2005	All LX Models (Charger, Magnum, 300)	BR/WT	BR/YL	PK/YL	YL/PK	BR/VT	WT/BR
2005	Ram	BR/WT	BR/YL	PK/YL	YL/PK	BR/VT	WT/BR
2005	Durango	BR/WT	BR/LT BLU	PK/YL	YL/PK	BR/VT	PK/RD
2005	Grand Cherokee	BR/LT BLU	BR/TN	PK/YL	YL/PK	BR/VT	WT/BR
2006	Ram	BR/WT	BR/YL	PK/YL	YL/PK	BR/VT	WT/BR
2006	Durango	BR/WT	BR/LT BLU	PK/YL	YL/PK	BR/VT	PK/RD
2006	All LX Models (Charger, Magnum, 300)	BR/WT	BR/YL	PK/YL	YL/PK	BR/VT	WT/BR
2006	Grand Cherokee	BR/WT	BR/YL	PK/YL	YL/PK	BR/VT	WT/BR
2007	Ram	BR/WT	BR/YL	PK/YL	YL/PK	BR/VT	WT/BR
2007	Durango	BR/WT	BR/LT BLU	PK/YL	YL/PK	BR/VT	PK/RD*
2007	All LX Models (Charger, Magnum, 300)	BR/WT	BR/YL	PK/YL	YL/PK	BR/VT	WT/BR
2007	Grand Cherokee	BR/WT	BR/YL	PK/YL	YL/PK	BR/VT	WT/BR
2008	Ram	BR/WT	BR/YL	PK/YL	YL/PK	BR/VT	WT/BR
2008	Durango	BR/WT	BR/LT BLU	PK/YL	YL/PK	BR/VT	PK/RD*
2008	All LX Models (Charger, Magnum, 300)	BR/WT	BR/YL	PK/YL	YL/PK	BR/VT	WT/BR
2008	Grand Cherokee	BR/WT	BR/YL	PK/YL	YL/PK	BR/VT	WT/BR
2009	Ram	BR/WT	BR/YL	PK/YL	YL/PK	BR/VT	WT/BR
2009	Durango	BR/WT	BR/LT BLU*	PK/YL	YL/PK	BR/VT	PK/RD*
2009	Challenger	BR/WT	BR/YL	PK/YL	YL/PK	BR/VT	WT/BR
2009	LX 5.7 liter	BR/WT	BR/YL	VT/PK*	YL/PK	BR/VT	WT/BR
2009	LX 6.1 liter	BR/WT	BR/YL	PK/YL	YL/PK	BR/VT	WT/BR
2009	Grand Cherokee	BR/WT	BR/YL	PK/YL	YL/PK	BR/VT	WT/BR
2010	Ram	BR/LT GRN*	BR/YL	PK/YL	YL/PK	BR/VT	WT/BR
2010	Challenger	BR/WT	BR/YL	PK/YL	YL/PK	BR/VT	WT/BR
2010	LX 5.7 liter	BR/WT	BR/YL	VT/PK*	YL/PK	BR/VT	WT/BR
2010	LX 6.1 liter	BR/WT	BR/YL	PK/YL	YL/PK	BR/VT	WT/BR
2010	Grand Cherokee	BR/WT	BR/YL	PK/YL	YL/PK	BR/VT	WT/BR
2011	Ram	BR/LT GRN*	BR/YL	PK/YL	YL/PK	BR/VT	WT/BR
2011	Challenger	BR/WT	BR/YL	BR/VT*	VT/BR*	BR/VT	WT/BR
2011	Charger	BR/WT	BR/YL	BR/VT*	VT/BR*	BR/VT	WT/BR
2011	Durango	BR/WT	BR/YL (PIN 3)	BR/OR*	BR/YL* (PIN 6)	BR/VT	WT/BR
2011	Grand Cherokee	BR/WT	BR/YL (PIN 3)	BR/OR*	BR/YL* (PIN 6)	BR/VT	WT/BR
2012	Ram	BR/LT GRN*	BR/YL	PK/YL	YL/PK	BR/VT	WT/BR
2012	Challenger	BR/WT	BR/YL	BR/VT*	VT/BR*	BR/VT	WT/BR
2012	Charger	BR/WT	BR/YL	BR/VT*	VT/BR*	BR/VT	WT/BR
2012	Durango	BR/WT	BR/YL	BR/OR*	BR/YL*	BR/VT	WT/BR
2012	Grand Cherokee	BR/WT	BR/YL	BR/OR*	BR/YL*	BR/VT	WT/BR

Fig. 7

NOTE: An asterisk (*) denotes that the CMW wire color does not match the ECM wiring harness wire color.

Connector Pin Configuration (all applications: GM, Ford, Mopar, and Aftermarket)



View Looking into CMW APPS Sensor

Pin	Function	Pin	Function
A	APPS1 (Signal)	D	VCC2 (+5V Supply)
B	APPS1 Return (Ground)	E	APPS2 Return (Ground)
C	VCC1 (+5V Supply)	F	APPS2 (Signal)

Fig. 8

Mopar with Flying Leads:

NOTE: Some applications have two wires in the original Accelerator Pedal Position Sensor (APPS) connector that are the same color. If your connector has two wires that are the same color, locate the pin numbers on the APPS connector body. You **MUST** label the two wires that are the same color with the pin number that they go to in the APPS connector **BEFORE** proceeding.

Step 5: Cut the APPS connector off of your original ECM harness with a sharp pair of wire cutters. Leave enough of the wire still attached to the original APPS connector that you can see what color wire went to each pin in the connector. **DO NOT** discard the original APPS connector until the installation is completed.

Strip approximately 1/4" of insulation off of the end of the wires coming from the ECM.

Step 6: Note that you **CANNOT** rely on the wires in the CMW pigtail being the same color as the ECM wires they will connect to. The wire colors are the same for some applications, but **NOT** for all applications.

Locate your specific application on the "Mopar Applications" chart in Fig. 7. Match up the wire color coming from the ECM to the CMW pin letter that is called out in the chart. **Fig. 8**

NOTE: For applications that have two wires that are the same color going to the APPS connector, the chart shows the pin numbers on the original connector.

Using a good quality crimping tool, crimp each wire from the ECM wiring harness connector to the wire on the CMW pigtail that is specified in the application chart.

The butt connectors are a "Crimp and Solder" style that already has solder inside the connector. Once the wires are crimped together, use a heat gun to melt the solder and shrink the heat shrink tubing. Plug the pigtail into the CMW electronic throttle control module.