



Installation Manual v1.2:

601-950-2104

Select Shift Standalone [Transmission Controller](#)

94-2007 Dodge 47/48 4-Speed Automatic

Please read all instructions before installation.



The Standalone Transmission Controller is the most advanced way to control the 47re and 48re transmissions, giving complete control over your transmission. This permits tuning of every aspect of your transmission such as full torque converter lockup control, full shift point control, line pressure adjustment, shift quality control, and independence from the factory control and logic.

The Standalone Transmission Controller changes your transmission from a governor and throttle valve based shift control to complete independent line pressure and shift control. Converting your mechanical transmission to a modern fully electronic transmission, opening a whole new world of possibility!

TCU Location and Wire Routing

The TCU was designed to handle abuse. The TCU can withstand high temperature, extreme humidity and corrosive environments. Even though the TCU is tough, installing inside the vehicle is preferable. Please keep the TCU away from extreme heat sources, ignition wires or any obvious water sources. Once you have chosen a location for your TCU, you may begin routing the wiring harness. Be careful to avoid moving and/or hot parts when routing the harness. Route the harness to your sensor locations and wire them as noted. Route the connectors and wires down towards the transmission. Watch for possible fitment issues or places where the harness can rub or be damaged over time.

Power and Ground Connections

The TCU requires an active power and ground connection to operate correctly. The power connection to the TCU should be switched (only turns on when you turn the ignition key to the start/run position). If you wire the TCU to a constant power source, you risk **severe** damage to the TCU and your transmission. The power source should be protected with a 10amp fuse (this can vary based on the transmission application). Your switched power source should also be capable of providing at least 10 amps (or more depending on your transmission application) and should come from a clean terminal or wire. If you splice into a wire or create a switched power junction, please protect and seal the wire or joint with sealant type heat shrink or something similar to ensure reliability.

RED Wire (12V Supply):

This wire is used for supplying 12V power to the transmission. Use a key on source to prevent battery draw. The standalone controller's memory will not be lost when power is removed.

BLACK Wire (Ground):

This wire is used to ground the Standalone controller. Use constant ground preferably at the battery negative terminal. A bad ground will cause very erratic behavior.

Digital Inputs:

The TCU has sixteen digital inputs which are provided for simple on/off devices. An important function of the digital inputs is gear selection. Most transmissions require several digital inputs be wired to the transmission or lever position switch to determine which gear the driver has selected. A brake light input is another important use of a digital input. When activated, this input will unlock the torque converter clutch (TCC). Additional on/off inputs may include buttons for mode switching (performance mode, tow mode, manual mode, etc). Each digital input has five parameters to consider: Function, active high or active low, button type (momentary or toggle), and reverse logic. This programmability allows the user to wire the digital inputs in almost any configuration or with almost any type of switch and still function properly. Select active high for inputs that are on when power is applied. Select active low for inputs that are on when ground is applied. Select momentary for buttons that are depressed for a short time period before returning to their original state. Select toggle for buttons that are depressed or moved and stay in their position until moved again. Select reverse logic for buttons or switches that are active when neither power nor ground is applied and inactive when power or ground is applied.

Digital inputs used on a 1994-1998 Dodge 12-Valve:

- BROWN with Black Stripe** (optional switch input)
- BROWN with PINK Stripe** (4wheel drive indication). This is not used. It can be used as a switched input.
- BROWN with WHITE Stripe** (overdrive cancel signal). This is wired in to the overdrive switch. A standard switch or the factory switch will work.

Digital inputs used on a 1998-2002 Dodge 24-Valve:

- BROWN with Black Stripe** (optional switch input)
- BROWN with PINK Stripe** (4wheel drive indication). This is not used. It can be used as a switched input.
- BROWN with WHITE Stripe** (overdrive cancel signal). This is wired in to the overdrive switch. A standard switch or the factory switch will work.

Locate the OD (Overdrive) wire in the vehicle's computer wiring harness. This **Orange with White Stripe** wire is located at pin **13** of the C3 PCM connector (PCM connectors are behind the air box on the passenger-side firewall, the C3 connector is the one closest to fender).

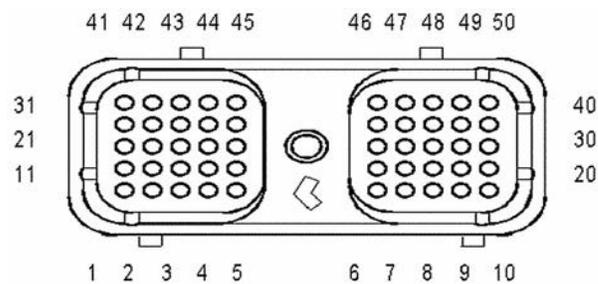
Digital inputs used on a 2003-2007 Dodge:

-**BROWN with Black Stripe** (optional switch input)

-**BROWN with PINK Stripe** (4wheel drive indication). This is not used. It can be used as a switched input.

-**BROWN with WHITE Stripe** (overdrive cancel signal)

This wire is optional. Tap the **Dark Green** wire that goes to **Pin 13** of the **C2** PCM connector to use the factory signal.



**MODULE-
ENGINE
CONTROL C2**

Analog Inputs:

The TCU has six analog inputs which read a 0-5V scaled input. Analog inputs are important for a variety of sensors such as throttle position (TPS), manifold absolute pressure (MAP), engine coolant temperature (ECT) and transmission fluid temperature (TFT). An analog input can also be used with stock steering wheel buttons, like cruise control and volume control, of some vehicles where different buttons correspond to different voltages. These voltages can be programmed to perform up shifting and downshifting when in manual mode.

Analog inputs 1-4 have been designed so that they can piggyback any sensor from an engine controller or directly measure most sensors. Analog inputs 1-4 should not be used to directly measure any temperature sensors or other resistance based 2-wire sensors. Analog inputs 5-6 have been designed so that they can measure any sensor directly. Analog inputs 5-6 should not be used to piggyback any sensors from an engine controller. Analog inputs 5-6 should be used to directly measure any temperature sensors or other resistance based 2-wire sensors.

Analog Inputs used on a 1998 -2002 Dodge:

-YELLOW with RED Stripe (MAP)

OPTIONAL: This is used as an engine load indicator. A 0-100 PSI pressure sensor can be purchased from ATS Diesel Performance if desired.

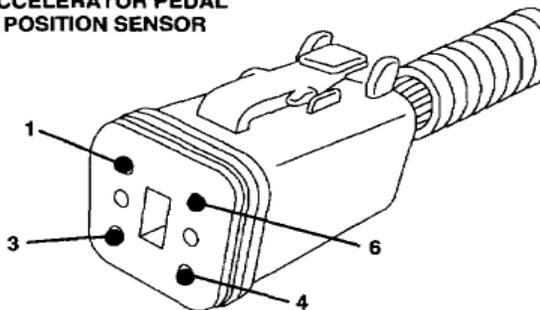


-YELLOW with ORANGE Stripe (ENGINE COOLANT temp). This is not used.

-YELLOW with BLACK Stripe (TPS)

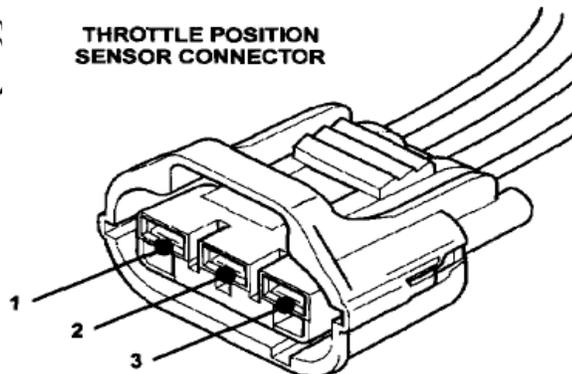
This wire is NOT optional. This wire tells the controller the desired power level. If you have the square connector, use **Pin 3 LB/BK APP Sensor Signal**. This signal will need to be scaled in the software. If you have the older 3 wire connector, tap **Pin 2 OR/BK TP Sensor Signal**. This will also need to be scaled in the software.

ACCELERATOR PEDAL POSITION SENSOR



CAV	COLOR	FUNCTION
1	BK/LB	SENSOR GROUND
2	LG/DB	IDLE VALIDATION (NOT IDLE)
3	LB/BK	APP SENSOR SIGNAL
4	BK/YL	SENSOR RETURN (APPS)
5	DB/WT	5-VOLT SUPPLY
6	BR/OR	IDLE VALIDATION (IDLE)

THROTTLE POSITION SENSOR CONNECTOR



CAV	COLOR	FUNCTION
1	VT/WT	5-VOLT SUPPLY
2	OR/DB	TP SENSOR SIGNAL
3	BK/LB	SENSOR GROUND

Analog Inputs used on a 1994 -1998 Dodge 12-Valve:

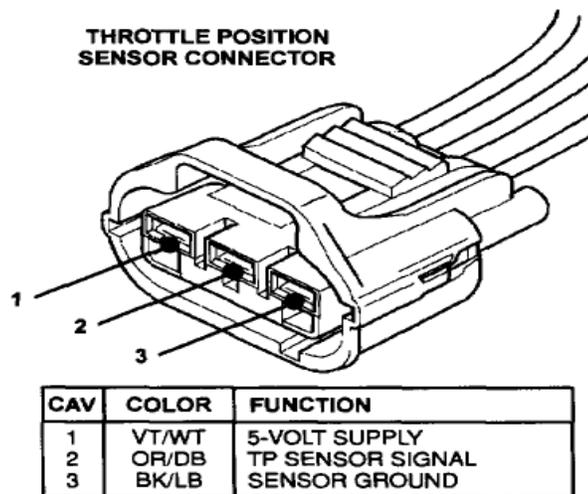
-YELLOW with RED Stripe (MAP)

OPTIONAL: This is used as an engine load indicator. A 0-100 psi pressure sensor can be purchased from ATS Diesel Performance if desired.

-YELLOW with ORANGE Stripe (ENGINE COOLANT TEMP). This is not used.

-YELLOW with BLACK Stripe (TPS)

This wire is NOT optional. This wire tells the controller the desired power level.



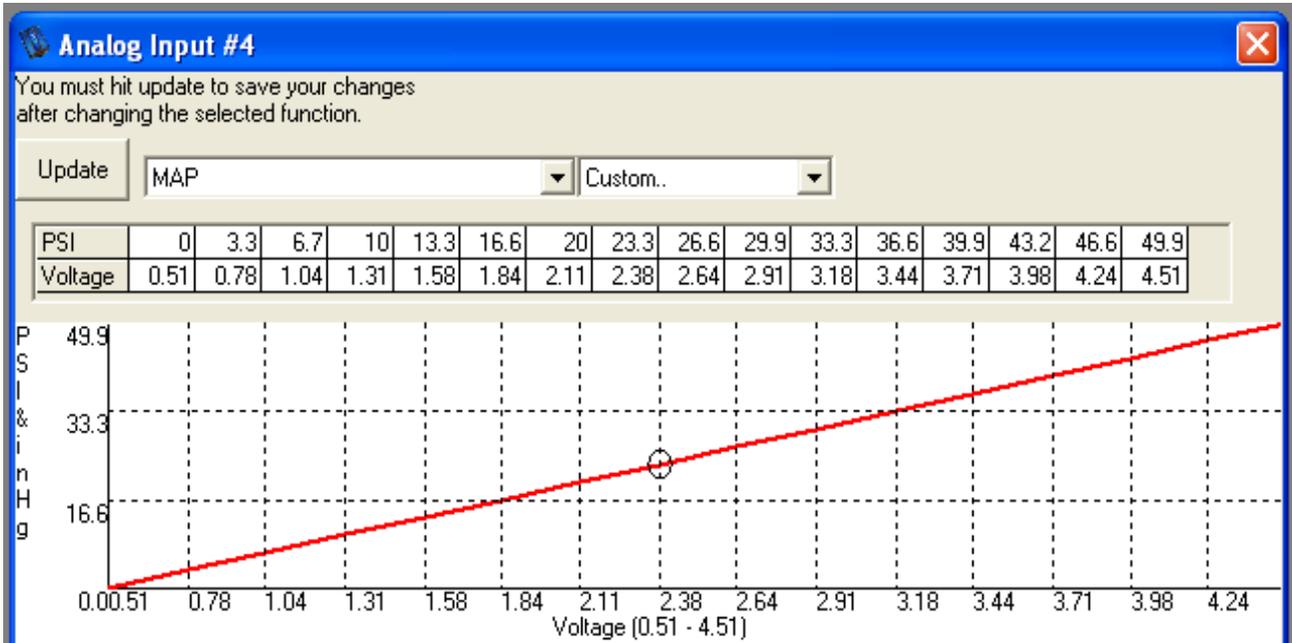
If you have the 3 wire connector, tap **Pin 2 OR/BK TP Sensor Signal**. This will also need to be scaled. We also offer a remote mount TPS sensor, found later on in the instructions.

Analog Inputs used on a 2003 Dodge:

-YELLOW with RED Stripe (MAP). This wire is optional. Tap into **Cavity "A" LB/WT Map Sensor Signal**.

2003 Dodge MAP Sensor Scaling:

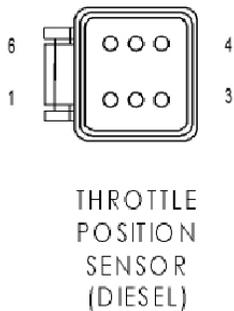
Below shows how the 5.9L MAP sensor is scaled into the TCU.



-YELLOW with ORANGE Stripe (ENGINE COOLANT temp). This is not used.

-YELLOW with BLACK Stripe (TPS)

This wire is NOT optional. This wire tells the controller the desired power level. Tap into **Pin 3 YL Throttle Position Signal**. This signal will need to be scaled.



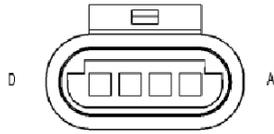
THROTTLE POSITION SENSOR (DIESEL) - 6 WAY

CAV	CIRCUIT	FUNCTION
1	K104 18RD/WT	SENSOR GROUND
2	K101 18WT	THROTTLE POSITION SENSOR RETURN
3	K232 18YL	THROTTLE POSITION SIGNAL
4	K56 18LG/OR	SUPPLY VOLTAGE
5	K900 18DB/DG	SENSOR GROUND
6	K49 18VT/BK	No Function Defined

Analog Inputs used on a 2004-2005 Dodge:

-YELLOW with RED Stripe (MAP)

This wire is optional. Tap into *Cavity "A"* LB/WT MAP Sensor Signal.



INTAKE AIR TEMPERATURE/
MANIFOLD ABSOLUTE PRESSURE SENSOR (DIESEL)

INTAKE AIR TEMPERATURE/MANIFOLD ABSOLUTE PRESSURE SENSOR (DIESEL) - 4 WAY

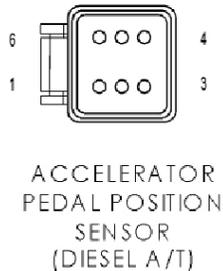
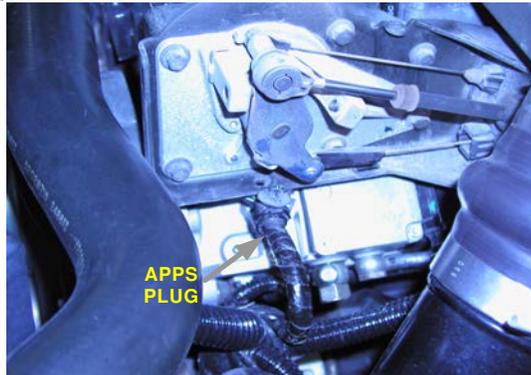
CAV	CIRCUIT	FUNCTION
A	K55 18LB/WT	MAP SENSOR SIGNAL
B	K21 18BK/RD	INTAKE AIR TEMPERATURE SENSOR SIGNAL
C	K72 18DG/OR	5 VOLT SUPPLY
D	K9 18LB	5 VOLT SUPPLY

-YELLOW with ORANGE Stripe (ENGINE COOLANT TEMP). This is not used.

-YELLOW with BLACK Stripe (TPS)

This wire is NOT optional. This wire tells the controller the desired power level.

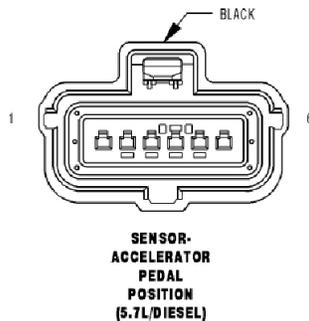
For 2004 models: Locate the APPS, it is under a black plastic cover, on the driver's side of the engine, in front of the intake manifold. Tap the ***Brown with White Stripe*** wire in the APPS plug wire loom.



ACCELERATOR PEDEL POSITION SENSOR (DIESEL A/T) - 6 WAY

CAV	CIRCUIT	FUNCTION
1	K914 18RD/WT	SENSOR GROUND
2	K556 18OR/BR	NOT IDLE SWITCH
3	K22 18BR/WT	TP SIGNAL
4	K922 18LG/OR	THROTTLE POSITION SENSOR RETURN
5	K851 18VT/PK	5-VOLT SUPPLY
6	K565 18OR	IDLE SWITCH

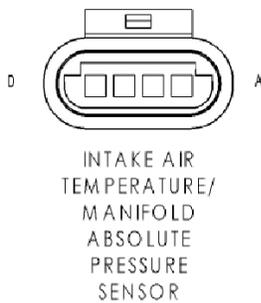
For 2005 models: Connect at the TPS connector located at the top of the accelerator pedal arm. This is a six wire connector, in the fifth terminal there is a **Brown with White Stripe** wire, tap this wire.



SENSOR-ACCELERATOR PEDAL POSITION (5.7L/DIESEL) - BLACK 6 WAY		
CAV	CIRCUIT	FUNCTION
1	F856 20YL/PK	5 VOLT SUPPLY
1	K854 20VT/BR (DIESEL)	5 VOLT SUPPLY
2	K29 20WT/BR	APPS NO. 2 SIGNAL
3	K400 20BR/VT	APPS NO. 2 RETURN
4	K167 20BR/YL	APPS NO. 1 RETURN
5	K23 20BR/WT	APPS NO. 1 SIGNAL
6	F855 20PK/YL	5 VOLT SUPPLY
6	K852 20BR/VT (DIESEL)	5 VOLT SUPPLY

Analog Inputs used on a 2006-2007 Dodge:

-**YELLOW with RED Stripe** (MAP). This wire is optional. Tap into **Cavity "A" LB/WT MAP Sensor Signal**.

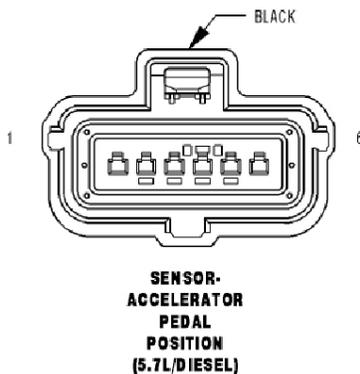


INTAKE AIR TEMPERATURE/MANIFOLD ABSOLUTE PRESSURE SENSOR (DIESEL) - 4 WAY		
CAV	CIRCUIT	FUNCTION
A	K55 18LB/WT	MAP SENSOR SIGNAL
B	K21 18BK/RD	INTAKE AIR TEMPERATURE SENSOR SIGNAL
C	K72 18DG/OR	5 VOLT SUPPLY
D	K9 18LB	5 VOLT SUPPLY

-**YELLOW with ORANGE STRIPE** (ENGINE COOLANT temp). This is not used.

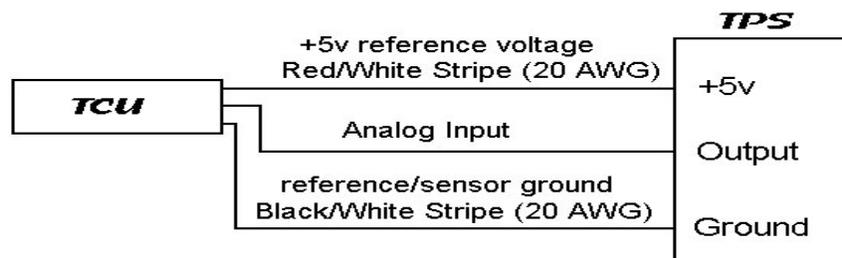
-**YELLOW with BLACK STRIPE** (TPS)

This wire is NOT optional. This wire tells the controller the desired power level. Tap in to the **Brown with White Stripe** wire.



SENSOR-ACCELERATOR PEDAL POSITION (5.7L/DIESEL) - BLACK 6 WAY		
CAV	CIRCUIT	FUNCTION
1	F856 20YL/PK	5 VOLT SUPPLY
1	K854 20VT/BR (DIESEL)	5 VOLT SUPPLY
2	K29 20WT/BR	APPS NO. 2 SIGNAL
3	K400 20BR/VT	APPS NO. 2 RETURN
4	K167 20BR/YL	APPS NO. 1 RETURN
5	K23 20BR/WT	APPS NO. 1 SIGNAL
6	F855 20PK/YL	5 VOLT SUPPLY
6	K852 20BR/VT (DIESEL)	5 VOLT SUPPLY

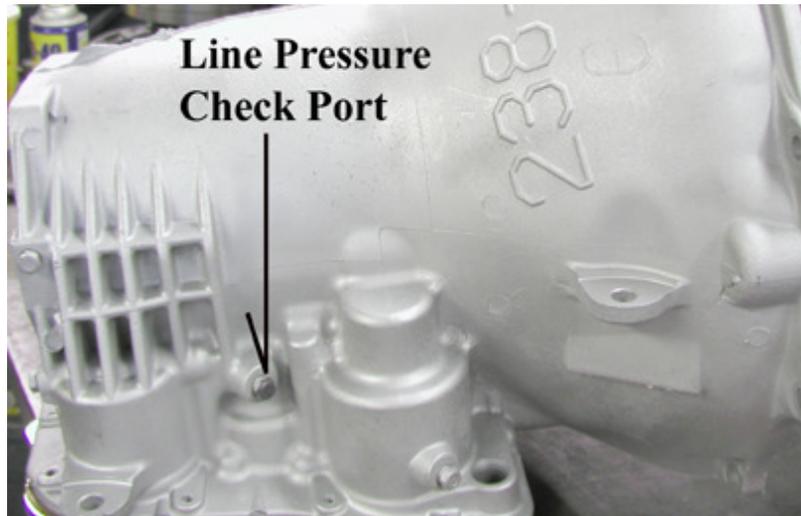
We offer a remote mount TPS sensor. This is typically used on conversions or where there is not a TPS sensor used on the vehicle. This is shown below.



This is wired directly into the TCU controller. Red with White stripe is wired in to the Red with white stripe on the TCU harness. Red with White stripe is a 5V supply can be used for other sensors as well. Black with White stripe is the sensor ground. This is wired in to the Black with White stripe on the TCU harness. The remaining output wire is wired in to the Yellow with White striped wire.

Pressure Transducer:

On our current harness, the pressure sensor we include is Plug-N-Play. It is used to watch line pressure in the transmission and has no effect on line pressure. It is only used for reference. The Standalone is an open loop pressure system.



We use a 0-250 psi pressure transducer. This allows the TCU to monitor line pressure. Remove the plug on the side of transmission and insert the 1/8 inch threaded pressure transducer into the case. Fitting may be required to clear the sensor if the exhaust system is in the way.



Speed Inputs:

The TCU has four speed inputs which will interpret an incoming signal from a speed sensor. The most important function of speed inputs is to determine driven wheel speed. At least one speed sensor is required to determine driven wheel speed. Additional speed inputs may be used for measuring engine RPM, TCC speed, driveshaft speed or non-driven wheel speed.

The TCU has been designed to accommodate as many speed sensor types as possible, including both magnetic (2-wire) and hall-effect speed sensors (3-wire).

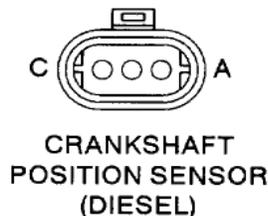
The only required speed input is driven wheel speed; however the flexibility of the TCU allows even this value to be calculated. To calculate driven wheel speed, you must have drive shaft RPM, driven tire diameter and final drive ratio. Non-driven wheel speed, engine RPM and drive shaft RPM must be measured directly. Torque converter RPM can be directly measured or calculated. You must connect the positive side or output wire of each speed sensor to the respective speed input. If these wires are reversed you may not receive the proper signal. To accommodate a wide range of speed sensor applications, speed input trigger levels and filter values are programmable. This trigger level and filtering programmability helps eliminate false triggering in a noisy environment or no triggering with a low speed or weak signal. Though this parameter can be difficult to understand and deal with, it allows the TCU to accommodate nearly all available sensors.

24-Valve Engine:

ORANGE/ WITH BLACK STRIPE (Tachometer)

This wire is optional. It is used for rpm reference primarily as a gauge in the software.

This is wired in to a crank position sensor **Cavity C** which is a **Gray Wire** (pictured below). This wire is used for the factory dash so only share this signal. The signal should be a pulsed 5V signal.

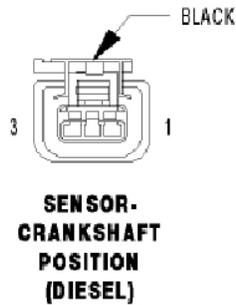


CRANKSHAFT POSITION SENSOR (DIESEL) - 3 WAY		
CAV	CIRCUIT	FUNCTION
A	K6 18VT/WT	5V SUPPLY
B	K14 18BK/DB	SENSOR GROUND
C	K124 18GY	CRANKSHAFT POSITION SENSOR SIGNAL

2003-2007 Commonrail Engine:

ORANGE with BLACK STRIPE (Tachometer)

This wire is optional. It is used for rpm reference primarily as a gauge in the software.
Tap into **Pin 3 Brown with Light Blue Stripe Wire Crankshaft Position Signal**.



SENSOR-CRANKSHAFT POSITION (DIESEL) - BLACK 3 WAY

CAV	CIRCUIT	FUNCTION
1	K853 18DB/BR	5 VOLT SUPPLY
2	K975 18BR/OR	CKP SENSOR GROUND
3	K24 18BR/LB	CKP SIGNAL

Speed Inputs/Gearing Chart
✕

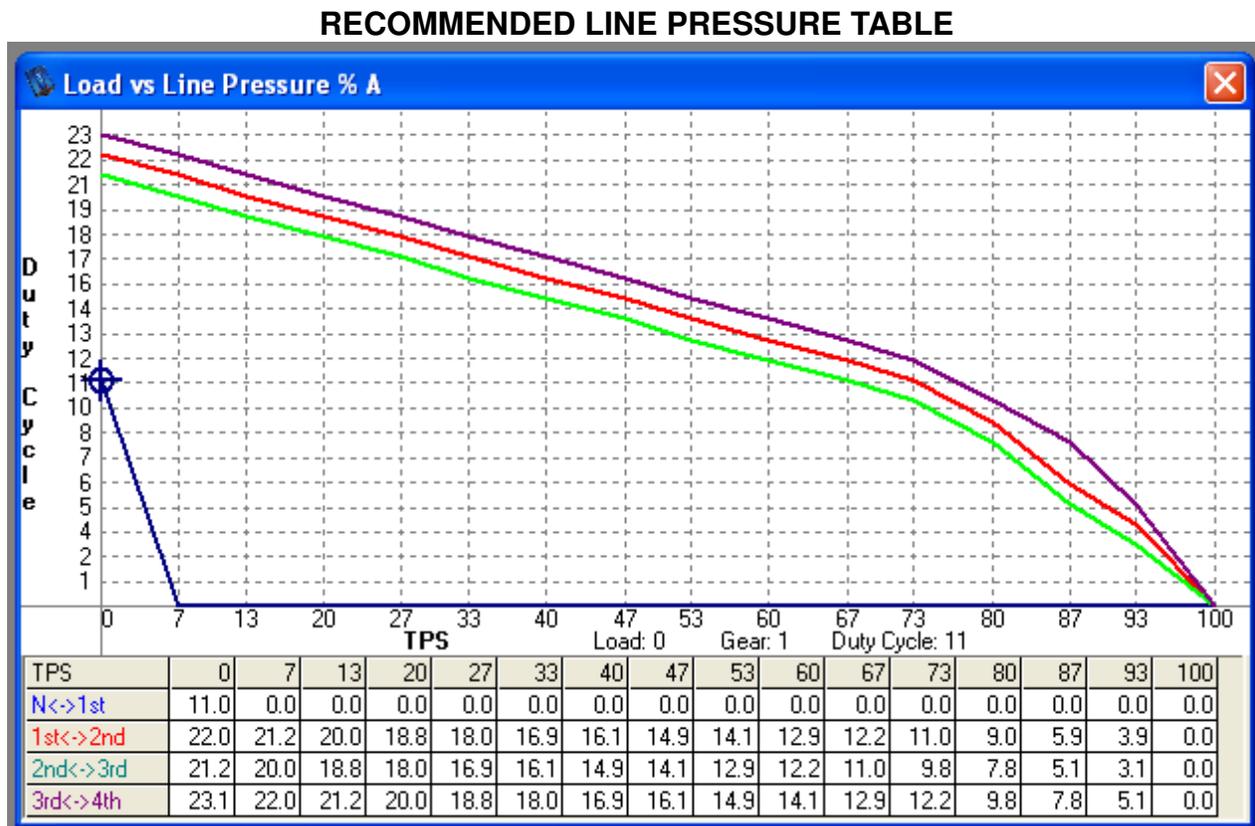
Function	Channel/Calculation	Calibration Value
Engine RPM	Speed 1	# of cylinders <input style="width: 50px;" type="text" value="120.0"/>
Torque Converter RPM	Disabled	Pulses per rev <input style="width: 50px;" type="text" value="0.0"/>
Drive Shaft RPM	Speed 2	Pulses per rev <input style="width: 50px;" type="text" value="23.0"/>
Driven Wheels Speed	Calculated Vehicle Speed	Pulses per rev <input style="width: 50px;" type="text" value="0.0"/>
Non-driven Wheels Speed	Disabled	Pulses per rev <input style="width: 50px;" type="text" value="0.0"/>
Gear Ratios Max MPH 1st <input style="width: 50px;" type="text" value="2.451"/> <input style="width: 50px;" type="text" value="0"/> 2nd <input style="width: 50px;" type="text" value="1.451"/> <input style="width: 50px;" type="text" value="0"/> 3rd <input style="width: 50px;" type="text" value="1.000"/> <input style="width: 50px;" type="text" value="0"/> 4th <input style="width: 50px;" type="text" value="0.690"/> <input style="width: 50px;" type="text" value="0"/>	Enter maximum engine RPM. For max speed calculation purposes only. <input style="width: 50px;" type="text"/> [Press enter] Driven Tire Diameter (in) <input style="width: 50px;" type="text" value="33.00"/> <input type="button" value="Help"/> Final drive ratio 4WD Low ratio <input style="width: 50px;" type="text" value="3.729"/> <input style="width: 50px;" type="text" value="0.200"/>	Pulses Per Mile <input style="width: 100px;" type="text" value="8050"/> Speed Output <input style="width: 100px;" type="text" value="Disabled"/>

The factory common rail has 60 teeth. Being a 4-stroke, the sensor would need to count 120 teeth to see a complete combustion cycle. The above speed input and gearing chart is setup for a commonrail 5.9L Cummins with a 60 tooth trigger wheel. The mph is also adjusted here. Input vehicle information to get accurate vehicle speed so your shift points will be correct.

Software:

Line Pressure Adjustment

Line pressure is preset to a good baseline. Because not every transmission is identical, we recommend monitoring line pressure to make sure it does not fall too low (less than 110 psi). We recommend running the highest line pressure possible without binding up the shifts. Most shifts should happen at about 170-225 psi. The maximum pressure the transducer can read is 250 psi but keep in mind that pressure could be as high as 300 psi. The diagram below is just a good starting point for pressure; however, always look at the actual pressure in the monitor. We recommend making small changes. Very small changes on this table will affect a lot. To adjust pressure, read below.



Keep in mind that we use a **normally open (NO) solenoid** for line pressure control. This means duty cycle is used to bring pressures down. **0 duty cycle is full line pressure** and **40 duty cycle is very low lone pressure**. **By bringing down the duty cycle the line pressure is increased**. **BE CAREFUL**, line pressure too low will slip clutches. Too high of line pressure can reduce cooler flow causing transmission overheating.

Torque Converter Clutch Lockup Control

In the **TCC Lockup Parameters A** menu we typically enter the values shown below:

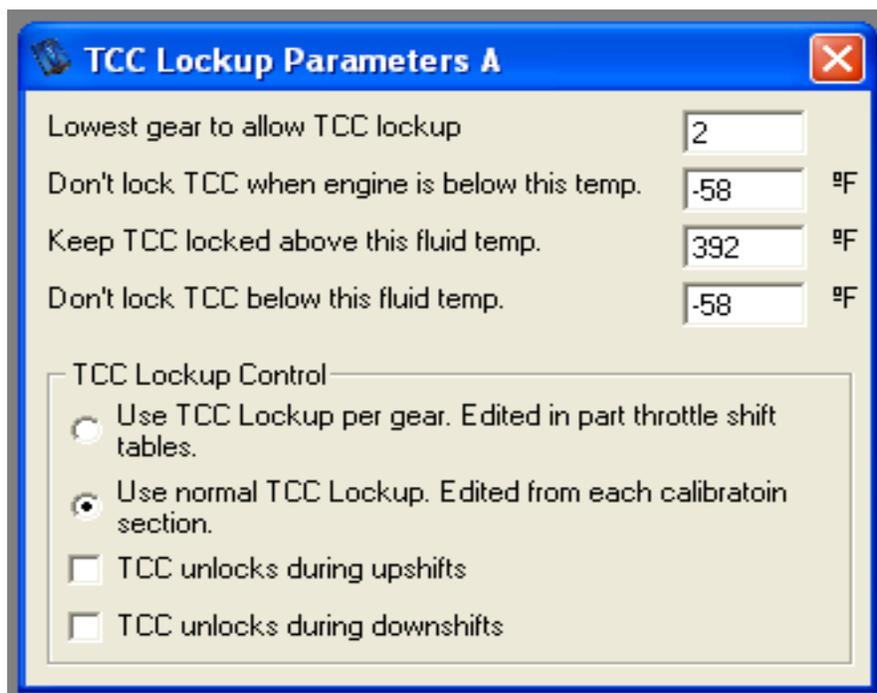
Enter the “**2**” in the “**Lowest gear to allow TCC lockup**” field to allow lockup in 2nd gear. In the 47 and 48 transmission we can lock in 2nd, 3rd and 4th.

Enter “**-58**” in the “**Don't lock TCC when engine is below this temp.**” field. Engine temperature is not used as an input so setting it to any other temperature will not affect lockup.

Enter “**392**” in the “**Keep TCC locked above this fluid temp.**” This can be used to limit fluid temperatures by keeping the TCC locked in. We don't currently use this function but it can be adjusted as desired.

Enter “**-58**” in the “**Don't lock TCC below this fluid temp.**” field. To help the transmission warm up, you can select a higher temperature if desired.

TCC lockup may be selected per gear or for all gears (normal). TCC lockup per gear provides a different TCC lockup and unlock curve for each gear. Normal TCC lockup provides a single TCC lockup and unlock curve that is not gear related. Most users should select normal TCC lockup. TCC lockup per gear should only be used by advanced users and for installations requiring this complexity. The TCC can be unlocked during up-shifts and downshifts to provide smoother shifting and reduce unnecessary impact loading on the drivetrain.



TCC Lockup Parameters A

Lowest gear to allow TCC lockup	<input type="text" value="2"/>	
Don't lock TCC when engine is below this temp.	<input type="text" value="-58"/>	°F
Keep TCC locked above this fluid temp.	<input type="text" value="392"/>	°F
Don't lock TCC below this fluid temp.	<input type="text" value="-58"/>	°F

TCC Lockup Control

- Use TCC Lockup per gear. Edited in part throttle shift tables.
- Use normal TCC Lockup. Edited from each calibratoin section.
- TCC unlocks during upshifts
- TCC unlocks during downshifts

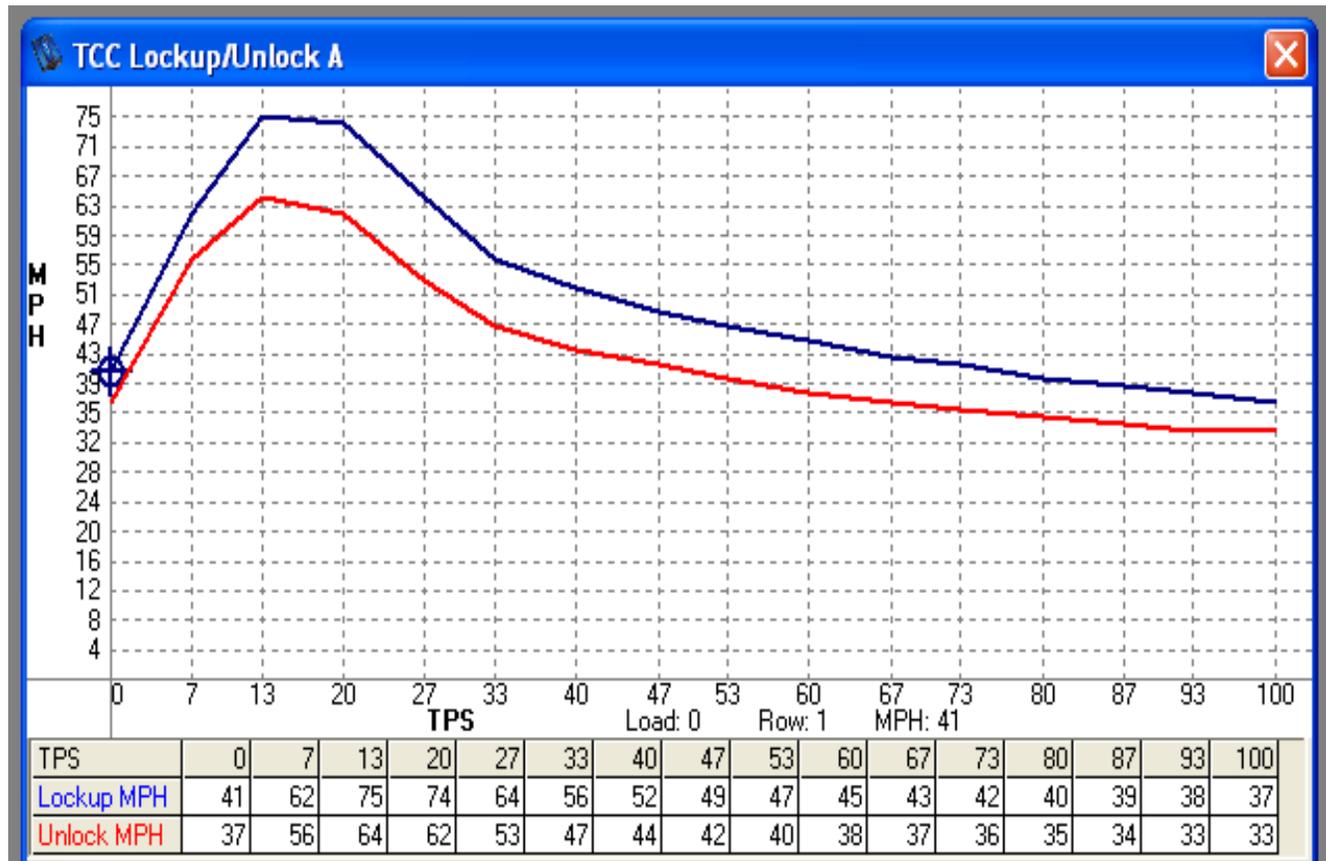
TCC Lockup/ Unlock Table

With this table lockup can be adjusted based on TPS vs. MPH.

The **BLUE** line is the TCC lockup curve. It controls the conditions when the TCC will lock under acceleration.

The **RED** line is the TCC unlock curve. It controls when the torque converter will unlock after lockup occurs.

Both the red and blue curves are fully tunable to suit your vehicle and driving style. Always keep adequate room between the lockup and unlock curves. If they are too close, the converter can go in and out of lockup erratically.



Adjusting Downshifts and Upshifts

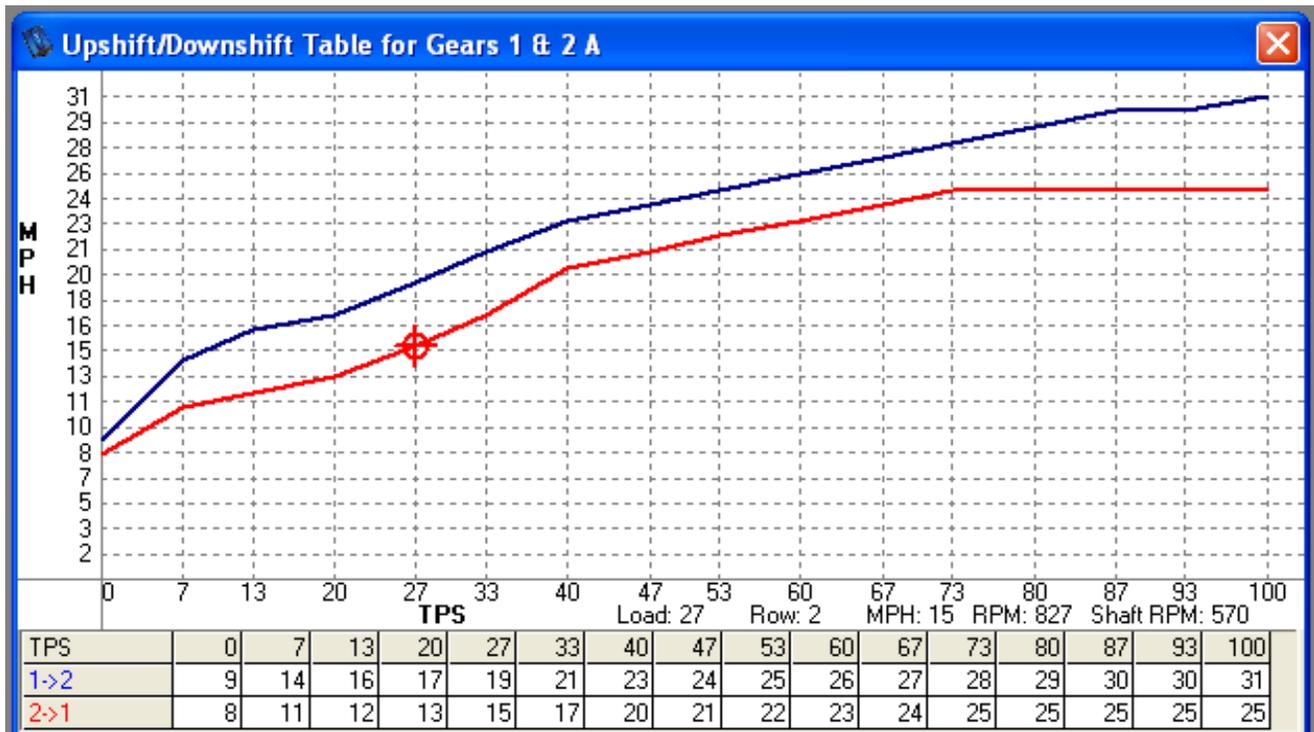
The **Upshift/Downshift Tables** are how and where to control when the vehicle changes gear. The diagram below provides a good example of a 1 & 2 shift table.

The **BLUE** line is the 1-2 upshift curve. The transmission will not upshift until it satisfies the conditions set in the table.

The **RED** line is the 2-1 downshift curve. The transmission will not downshift until vehicle speed and throttle percent drop below the curve.

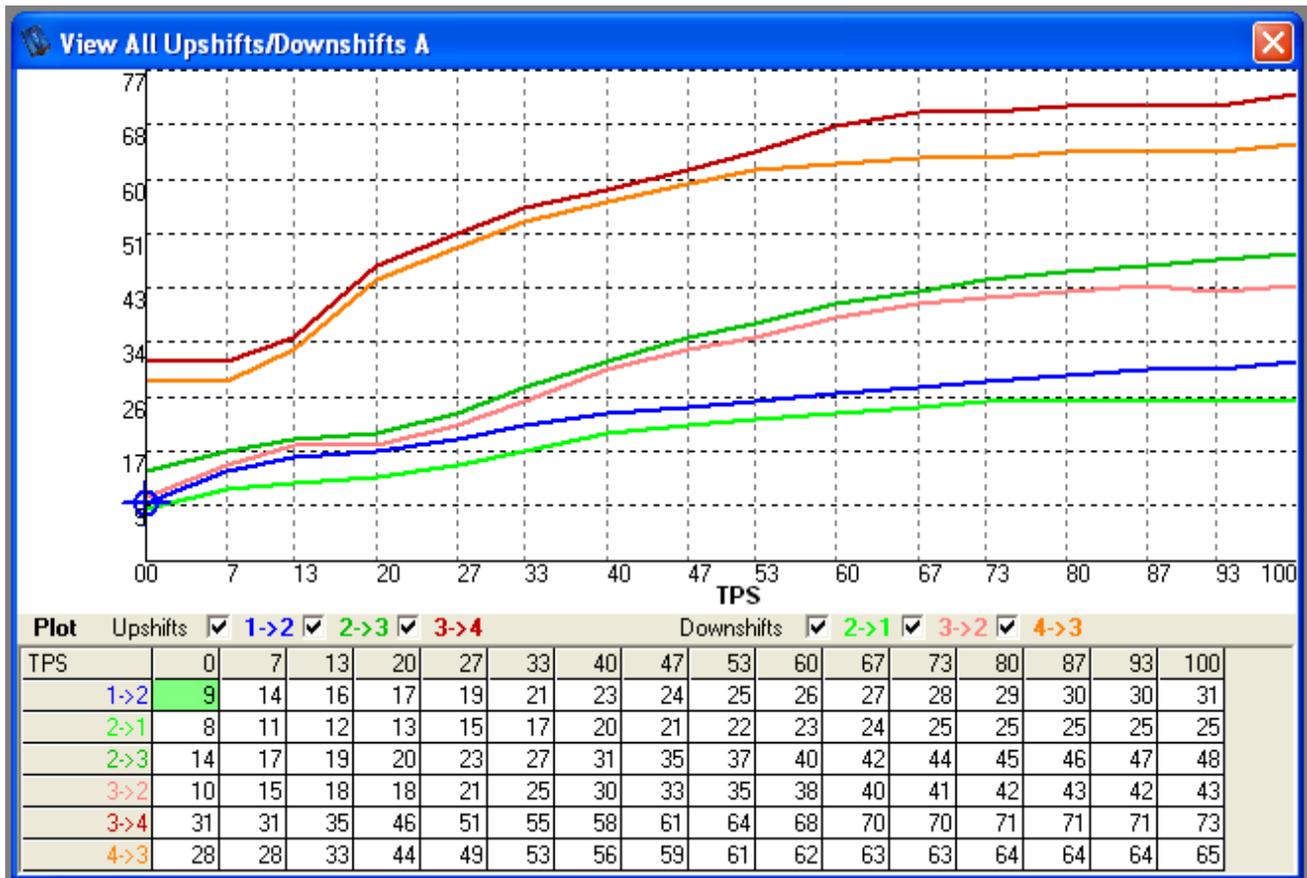
BE CAREFUL: Do not to exceed the maximum engine rpm with the speed values. The speed input/output form has a speed calculator based on engine rpm, gearing, final drive ratio and tire size which can help you match this chart with the WOT settings.

Always keep adequate room between the up shift table and downshift table. If you do not, your transmission may hunt for gears and shift too often or shift when it shouldn't.



Shift Points

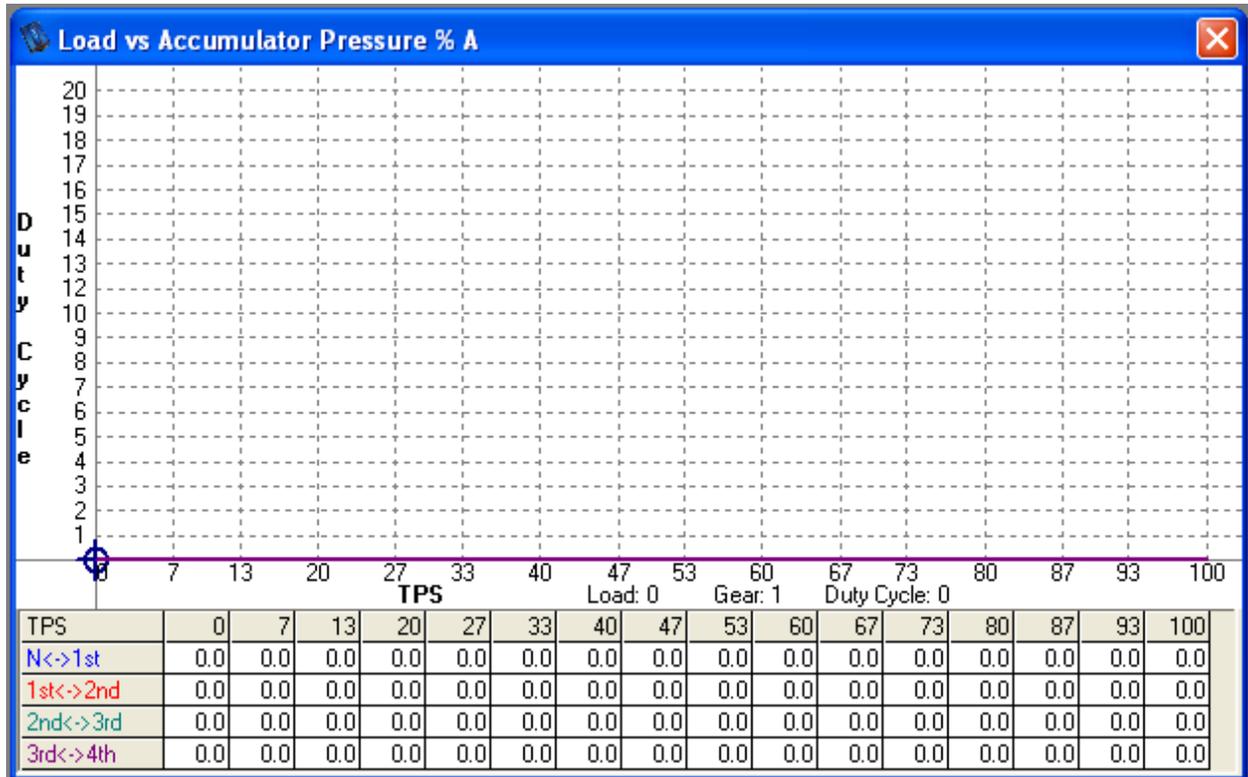
Shift points can be adjusted at any time. Each line represents a downshift or upshift curve and they are color coded for quick recognition. A green dot will indicate the TPS to MPH helping identify ways to improve shift points.



The upshift/downshift table parameters shown above are a good starting point for most applications. In this view, you can adjust the upshifts/downshifts and see where you are in the table (very useful when tuning on the fly).

Load vs. Accumulator Pressure Table

We recommend leaving this table at 0 because an accumulator is not used.



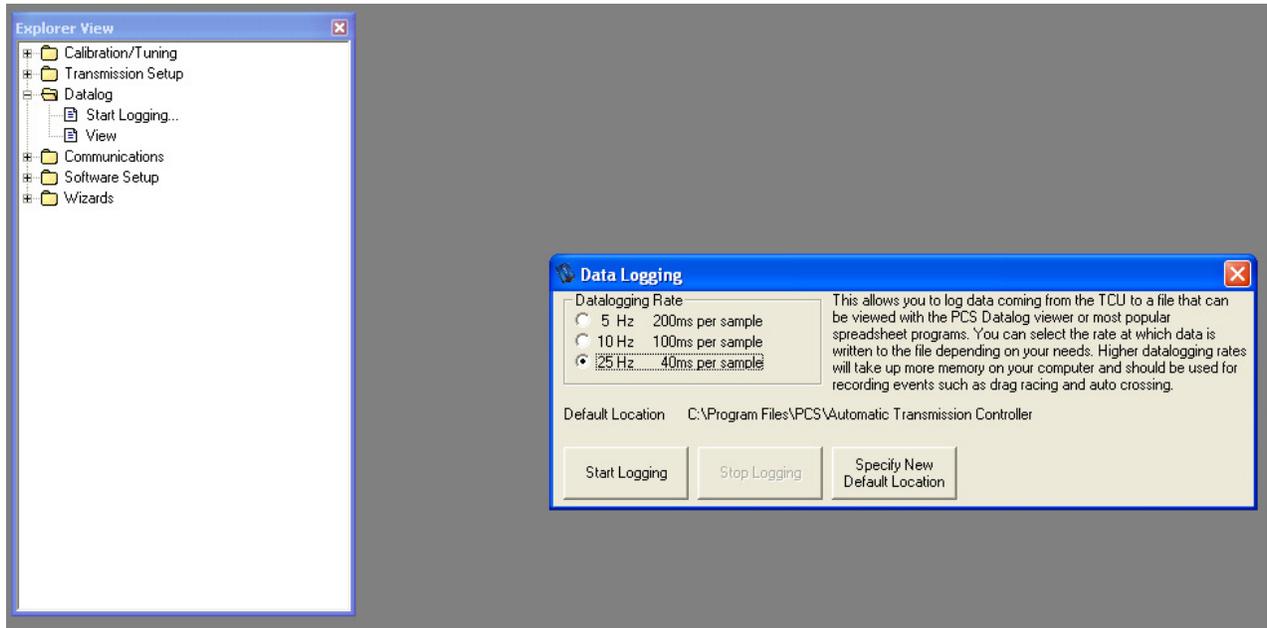
Wide Open Throttle Settings A

If you wired in the crank signal, this can be used as a safety feature. This table overrides the shift point table. Make sure this table is correct before adjusting shift points.

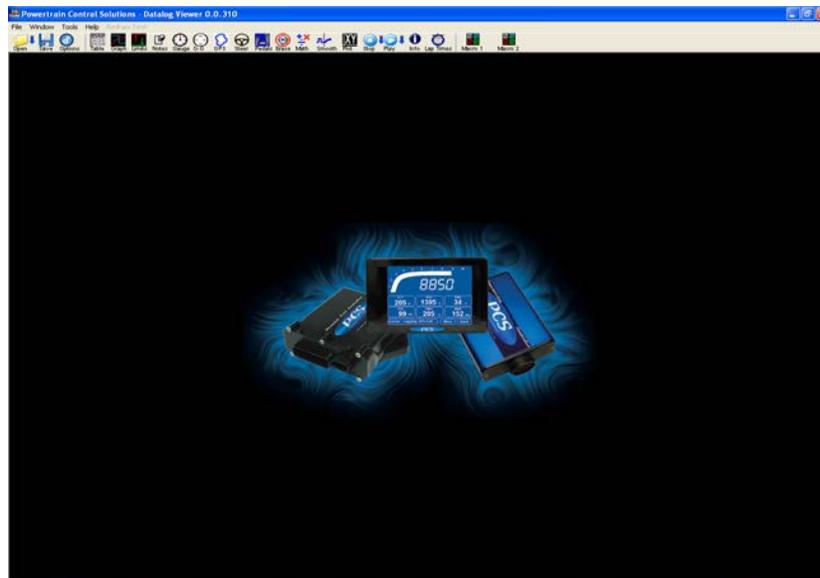
WOT Upshift RPM 1st Gear	<input type="text" value="4841"/>	WOT Downshift MPH 2nd Gear	<input type="text" value="38"/>
WOT Upshift RPM 2nd Gear	<input type="text" value="4851"/>	WOT Downshift MPH 3rd Gear	<input type="text" value="64"/>
WOT Upshift RPM 3rd Gear	<input type="text" value="4862"/>	WOT Downshift MPH 4th Gear	<input type="text" value="92"/>

Data Logging

The TCU has a data logging feature. This is a very useful part of the standalone TCU. This can be used to review previous runs. You must start the data log in order to record the run.

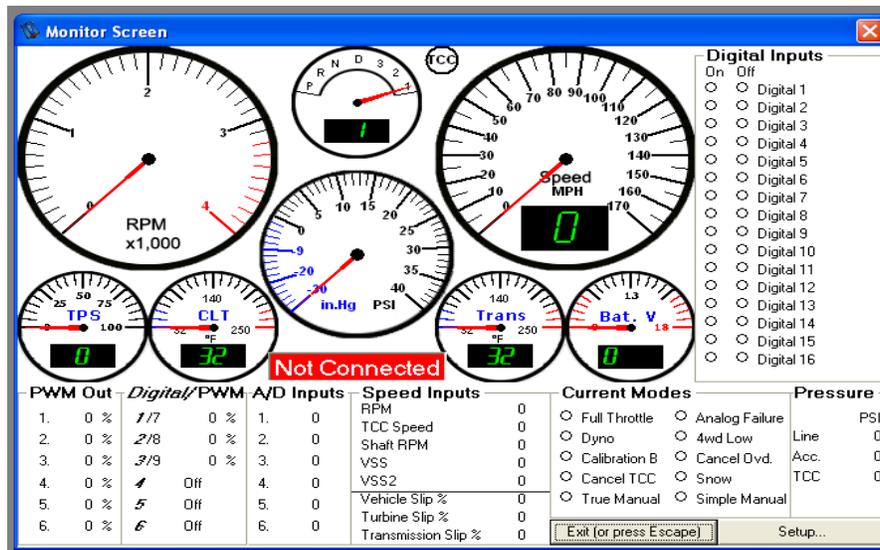


To launch the data log viewer, press the “View” icon in the “Datalog” folder.



Monitor Screen

This can be used to watch all inputs and outputs including TCC lockup, current gear, vehicle speed, RPM, TPS and a lot more.



Watching pressure:

Watching pressure is a very important part of the monitor function. Pressure is found on the right hand side of the screen. Pressure will only read accurately when in drive position because of the hydraulic circuit. Pressure should average 170 psi and run at 250 psi at wide open throttle.

Verifying TPS:

Throttle position is shown on a gauge on the far left. Before starting the truck you can make sure your TPS is reading accurately. If it is not, it may need to be rescaled.

Verifying MPH:

Because of tire size changes and gear ratio changes your vehicle speed may not read accurately. It can be view here it can be checked against the factory speedometer or a GPS. This can also be adjusted in the TCU software.

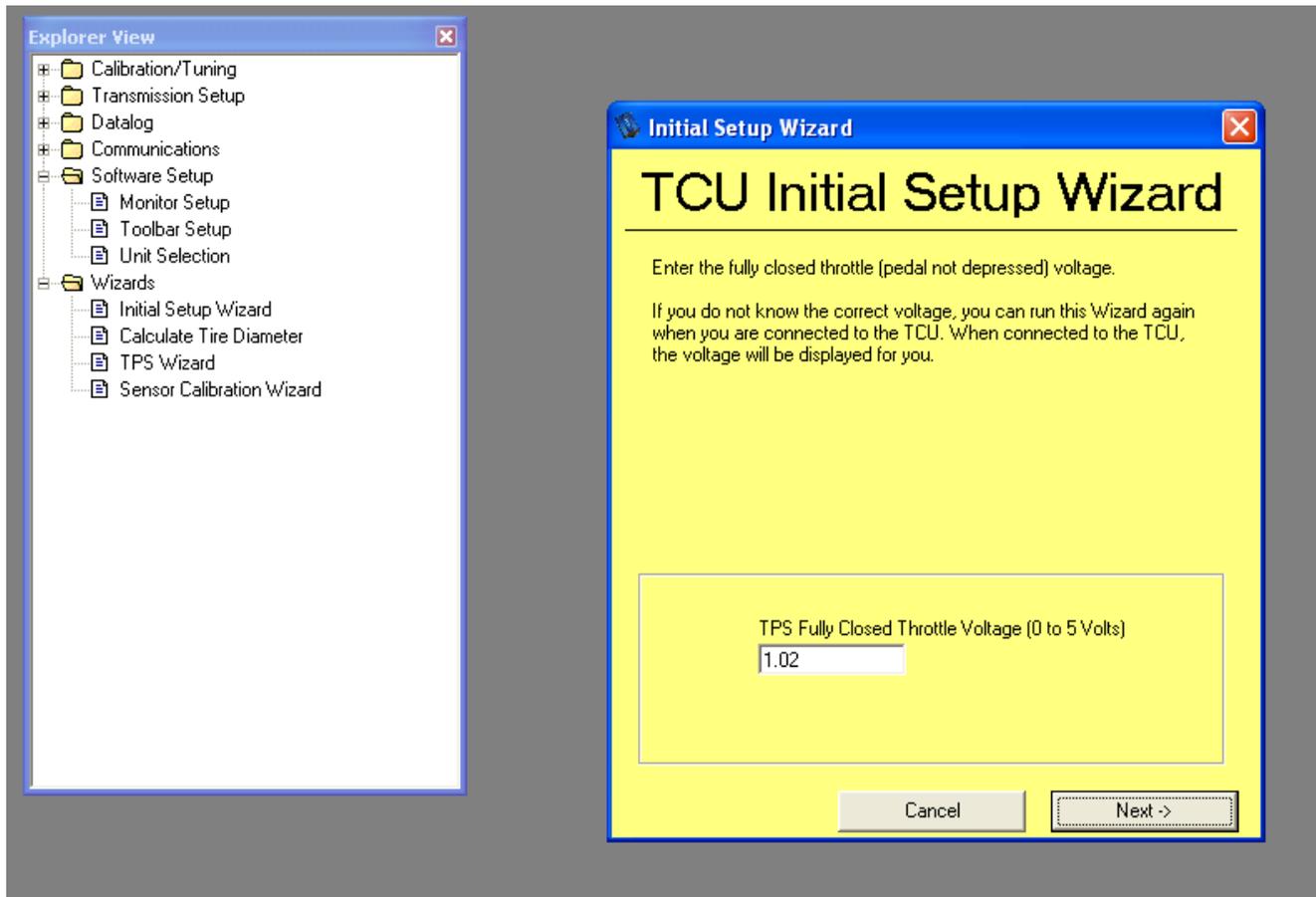
Watch RPM:

The engine RPM is not required but it is useful. It can be watched here.

HELPFUL HINT: All inputs and outputs can be watched from the monitor screen. It can be used to diagnose any issues.

Calibrating the TPS Sensor

To calibrate the TPS voltage wired in earlier, use the “TPS Wizard” in the “Wizards” folder.



Common Questions:

Do I need to hook up my throttle valve?

Throttle Valve and Electronic Throttle Valve Control

Because we no longer use throttle valve to trim shift points, the throttle valve is not used on the 47 and 48 Standalone transmission. If you had an electronic throttle motor, leave it hooked up to prevent engine lights. It is not required to make the transmission work.

With the standalone installed, the Trans Temp light on my dash is illuminated?

When we unhook the transmission's original connector, several codes may appear. The transmission temperature light may illuminate on your dash. Simply use a 150 ohm resistor wired to 12v power to turn factory transmission temperature light off.

150 ohm resistors are available through ATS Diesel Performance.

I have a check engine light now?

The transmission controller is designed to control a transmission, not necessarily designed to function in a factory environment. It does not communicate with factory body control modules, engine control modules, modern dashboards, or vehicle communication networks. If the factory transmission controller is removed, the check engine light will turn on. Many factory functions (like cruise control) may not work. The engine may run in a limp mode. The TCU is a standalone transmission controller. It cannot tell (and doesn't care) whether the transmission is connected to a fuel-injected engine, a carbureted engine, or even an electric motor. A simple test is to unplug the transmission and factory transmission controller connectors and observe if there are any problems.

Things you might need to get:

Serial to USB adapter: This is an adapter used to connect modern laptops to your TCU.



Laptop Computer:

Minimum Computer Requirements

- Processor: Pentium 200MHz or above RAM: 24MB
- OS: Windows 98, ME, NT, 2000, XP (32 and 64-bit), Vista (32 and 64-bit)
- Hard Drive Space: 20MB for install, additional space for data logs & calibrations
- Video: 800x600 or greater resolution
- Peripherals: CD-ROM or internet connection required to obtain software
- Comm Port: The TCU communicates using a 9-pin RS-232 serial communication port. Please note that most new laptops do not have this port. If your laptop does not have this port, you will need to purchase a USB to Serial Port Adapter. ATS sells an adapter (part num WRE-2200) but you can purchase one from a local electronics store. If you use a USB to serial adapter, you absolutely **MUST** run the CD that came with the adapter before you plug it into the computer. Failure to run the USB to serial adapter CD before plugging in the adapter will prevent communication to the TCU.

150 Ohm Resistor:

This is used to prevent trans. temp lights. This is available through ATS Diesel Performance.

MAP Sensor:

A 0-100 PSI MAP sensor is needed, available through ATS Diesel Performance.

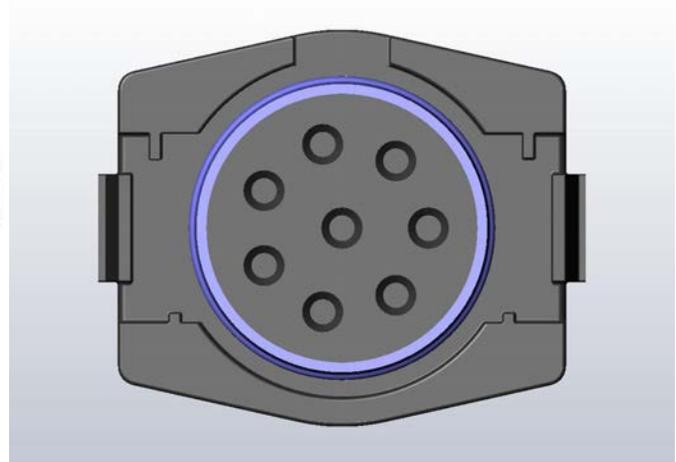
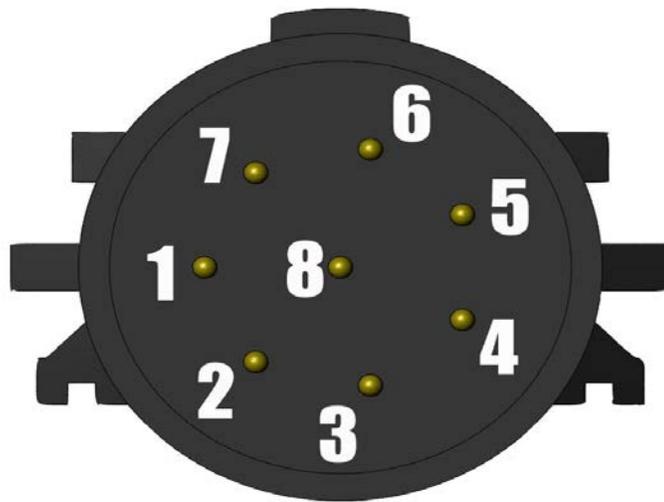
Remote Mount TPS Sensor:

If the vehicle does not have a factory TPS sensor, one is available through ATS Diesel Performance.

Diagrams:

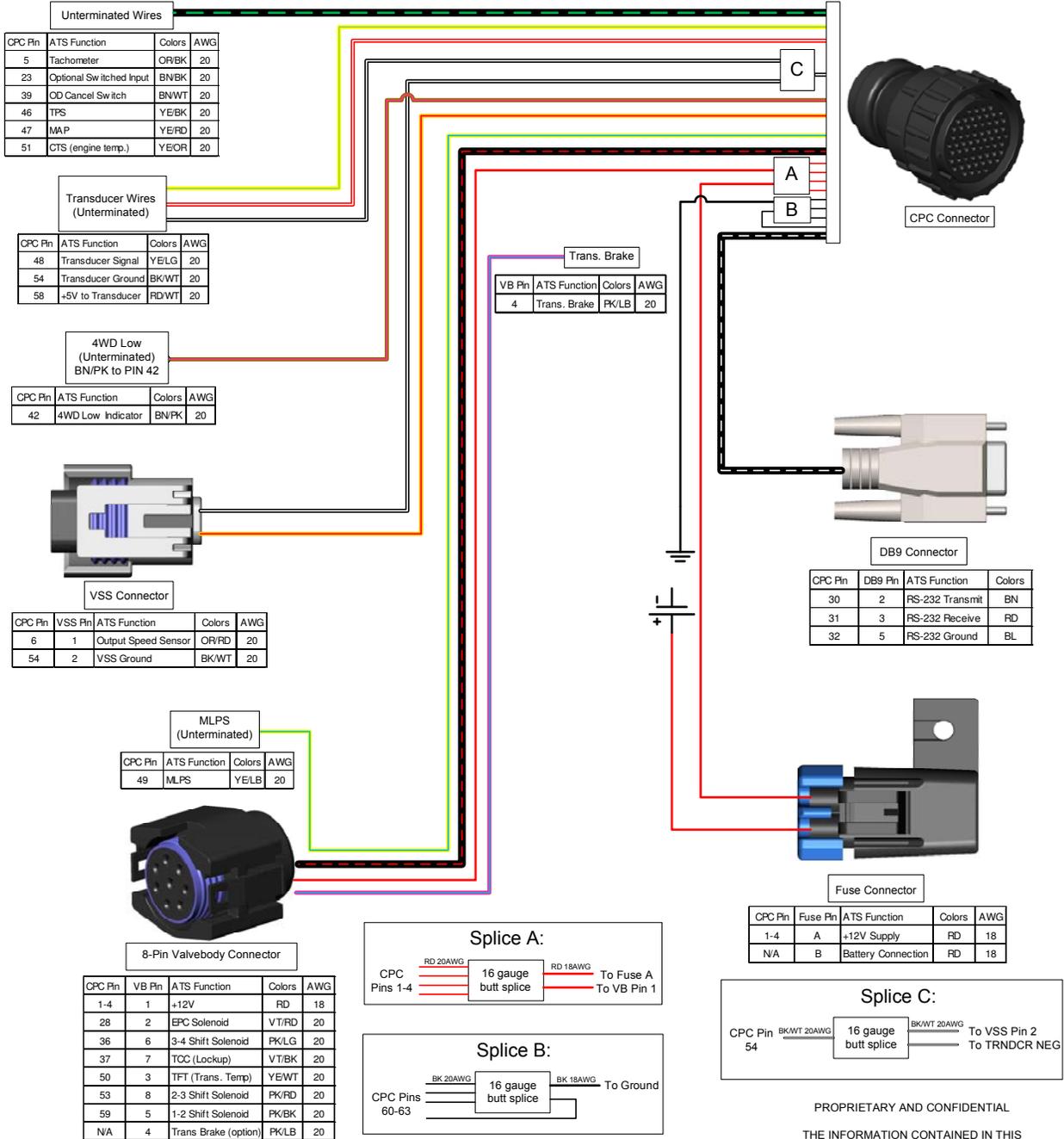
ATS Standalone Valve body Connector

Trans. Conn.	Function	Position	PCS Wire	Trans. Wire (int.)
1	12V Source	Pins 1-4	Red (18 AWG)	Blue
2	EPC+	Pin 28	Violet/Red	Red
3	Trans Temp	Pin 50	Yellow/White	Green
4	Not Used	-	-	-
5	1-2 Solenoid	Pin 59	Pink/Black	Violet
6	3-4 Solenoid	Pin 36	Pink/Lt. Green	Orange
7	TCC Solenoid	Pin 37	Violet/Black	Brown
8	2-3 Solenoid	Pin 53	Pink/Red	Black





Standalone Valvebody External Wiring Harness v1.0
96-07 Dodge 48-RE Automatic Transmissions

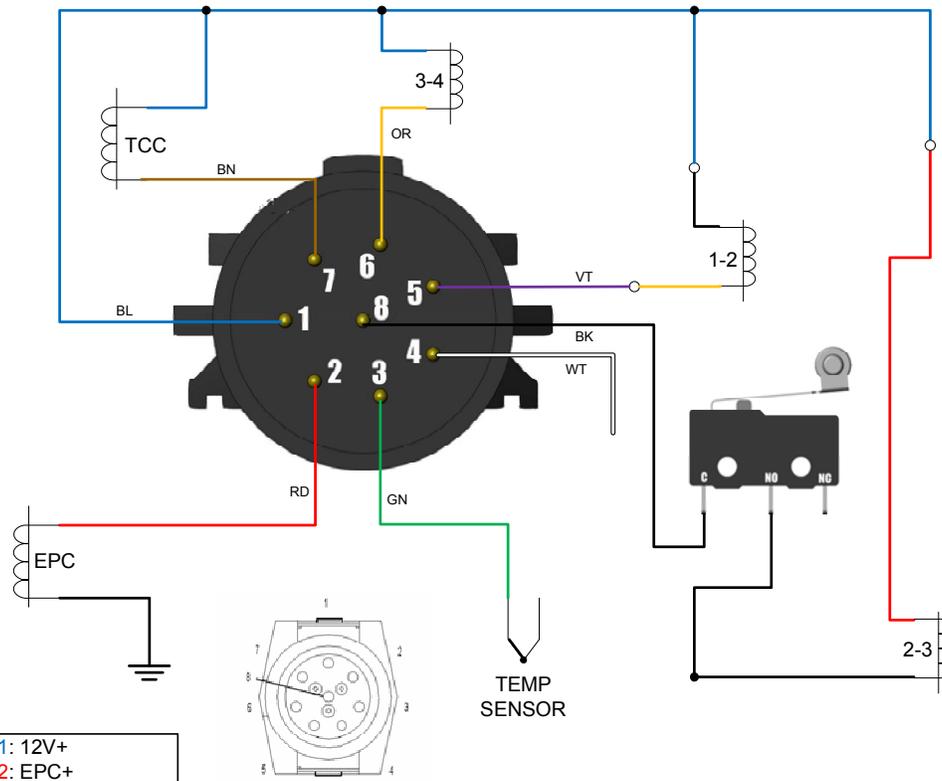


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Standalone Valvebody Internal Wiring Harness v1.1
96-07 Dodge 48-RE Automatic Transmissions



- PIN 1: 12V+
- PIN 2: EPC+
- PIN 3: TFT
- PIN 4: NOT USED
- PIN 5: 1-2 SOLENOID
- PIN 6: 3-4 SOLENOID
- PIN 7: TCC SOLENOID
- PIN 8: 2-3 SOLENOID

**TRANSMISSION
SOLENOID ASSEMBLY
(5.9L/8.0L/DIESEL)**

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