

Ford Racing Speedometer Recalibration Tool (94-98) - Installation Instructions



The below installation instructions work for the following products:

- **Ford Racing Speedometer Recalibration Tool (94-10)**



Please read through the instructions carefully before starting this project. Take the time to get all the materials together as well as all the safety equipment.

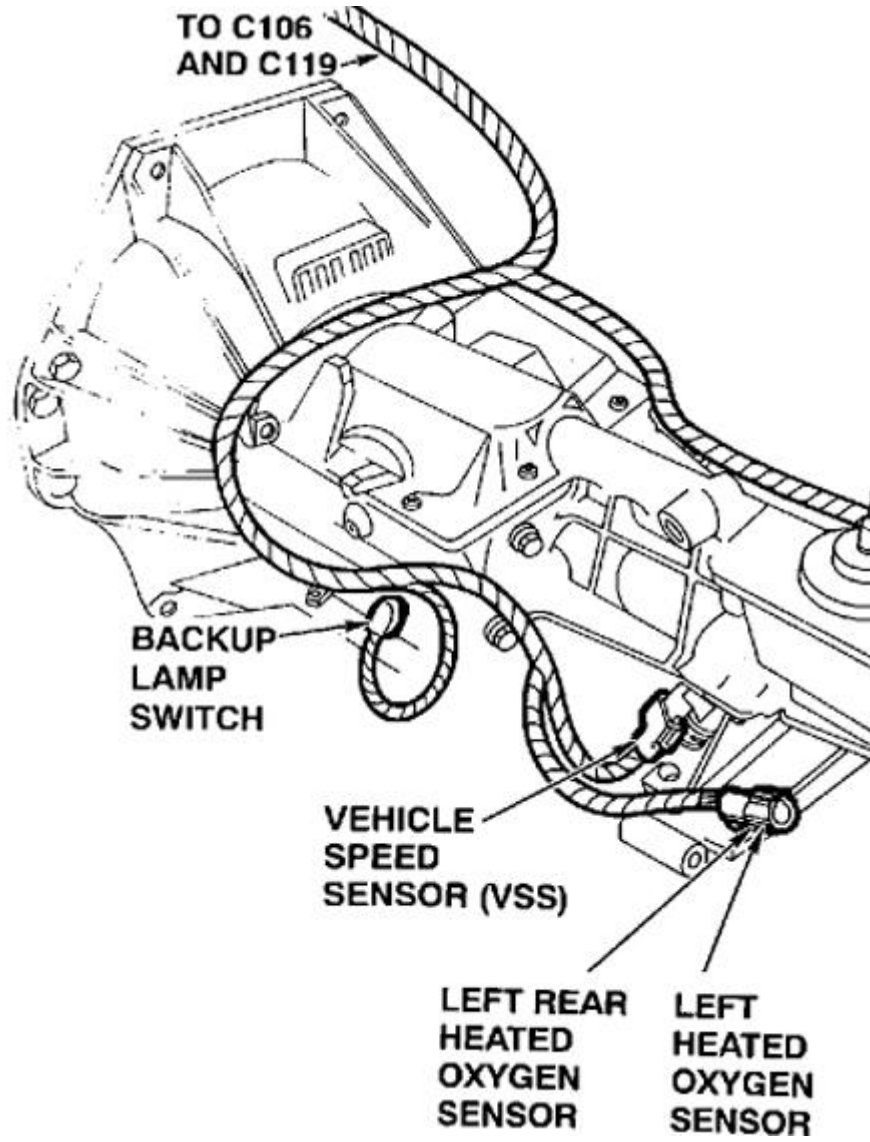
Overview:

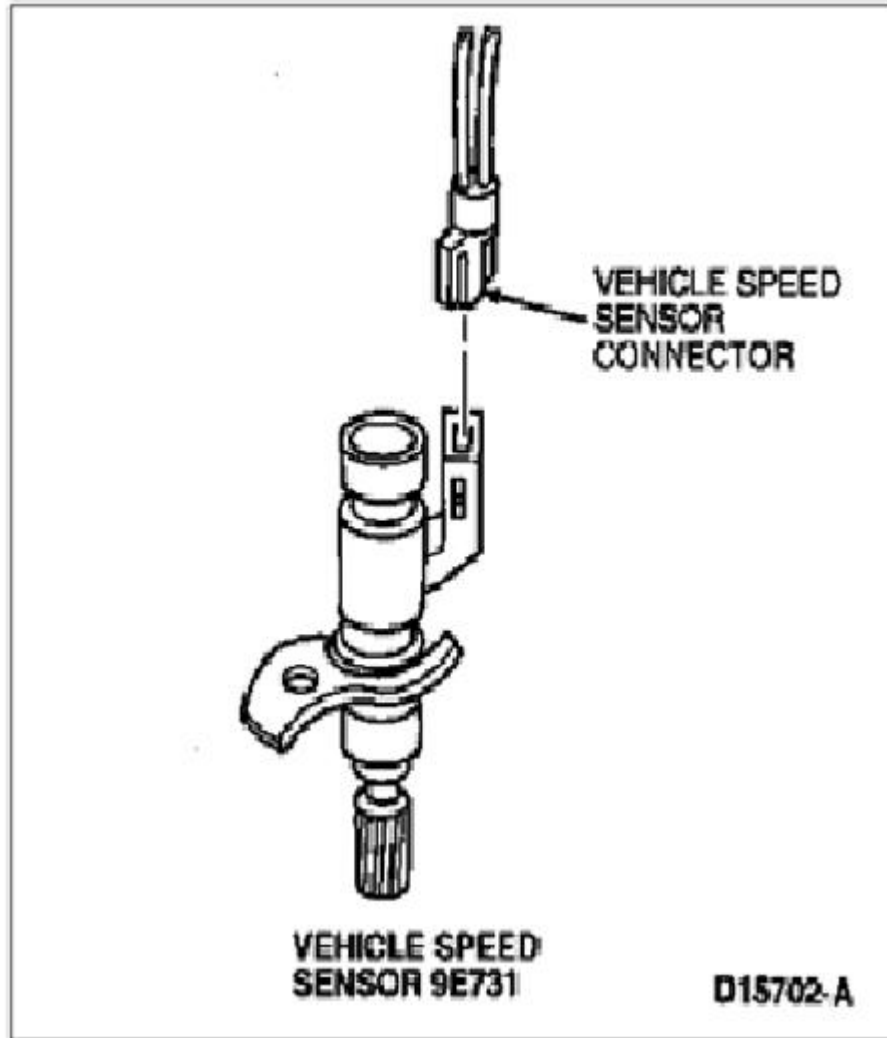
Speed-Dial has been developed to be the simplest speedometer recalibration device on the market. It is designed to change the output signal of the Vehicle Speed Sensor (VSS) to compensate for axle ratio swaps or changes in tire size. Speed-Dial can increase the VSS signal up to 200% of the original signal, or decrease the signal by as much as 99%. Once the proper ratio has been determined, simply dial it into Speed-Dial, and the speedometer now reads correctly!

Speed-Dial is capable of modifying the VSS signal on nearly any vehicle which uses a variable reluctance type VSS, but the calibration in the PCM of those other vehicles may not utilize this signal correctly. For example, on 2005-10 Mustangs equipped with Automatic transmissions, the speedometer signal can be corrected, but the PCM interprets the higher engine RPM as a torque converter that may be slipping, and may generate additional diagnostic faults.

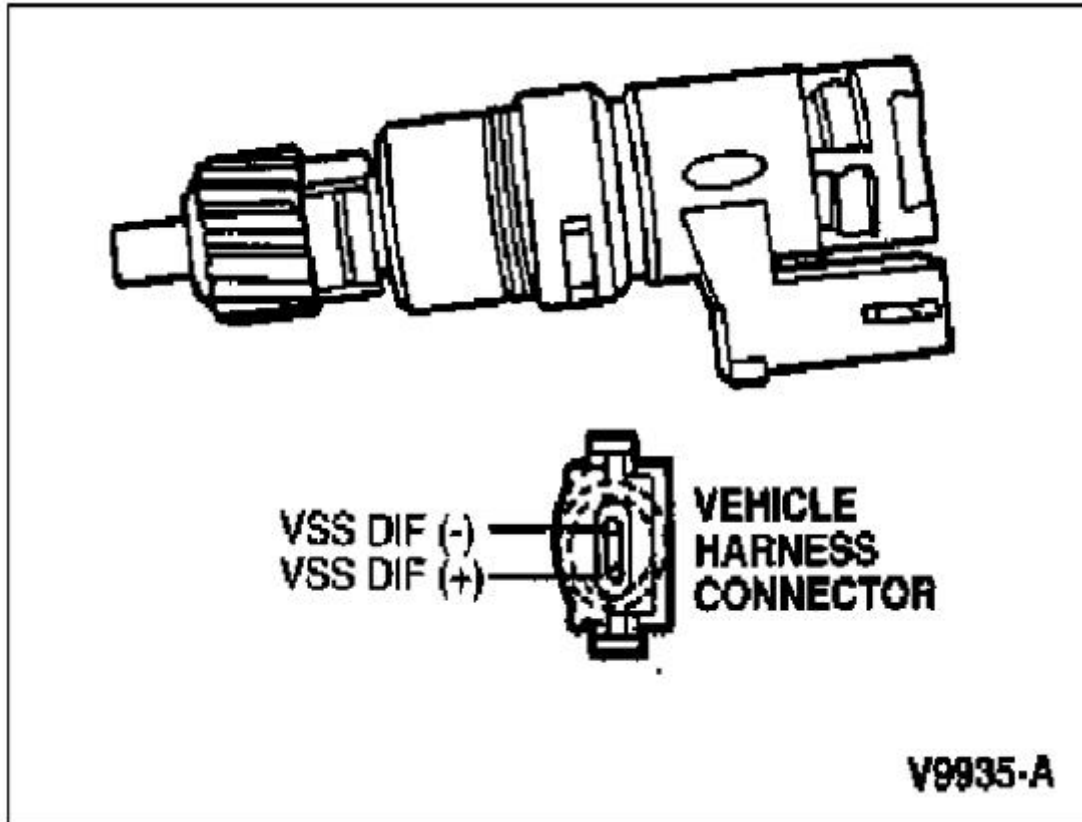
Installation on 1994-1998 Mustang:

1. Identify and disconnect the VSS connector from the transmission.





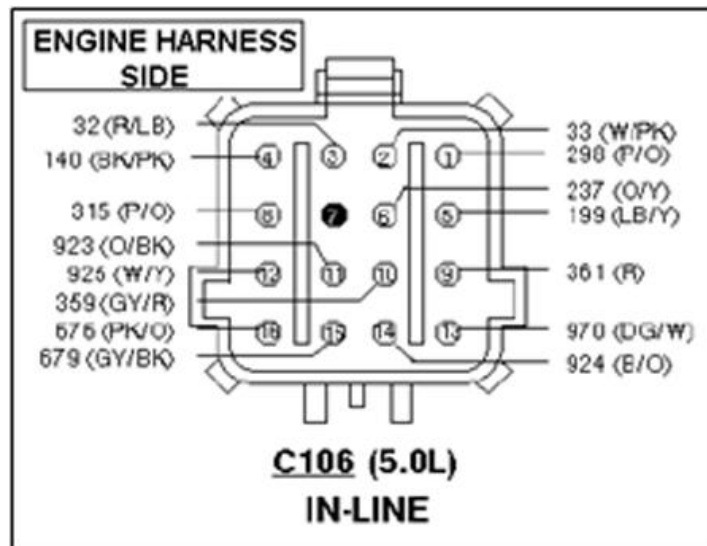
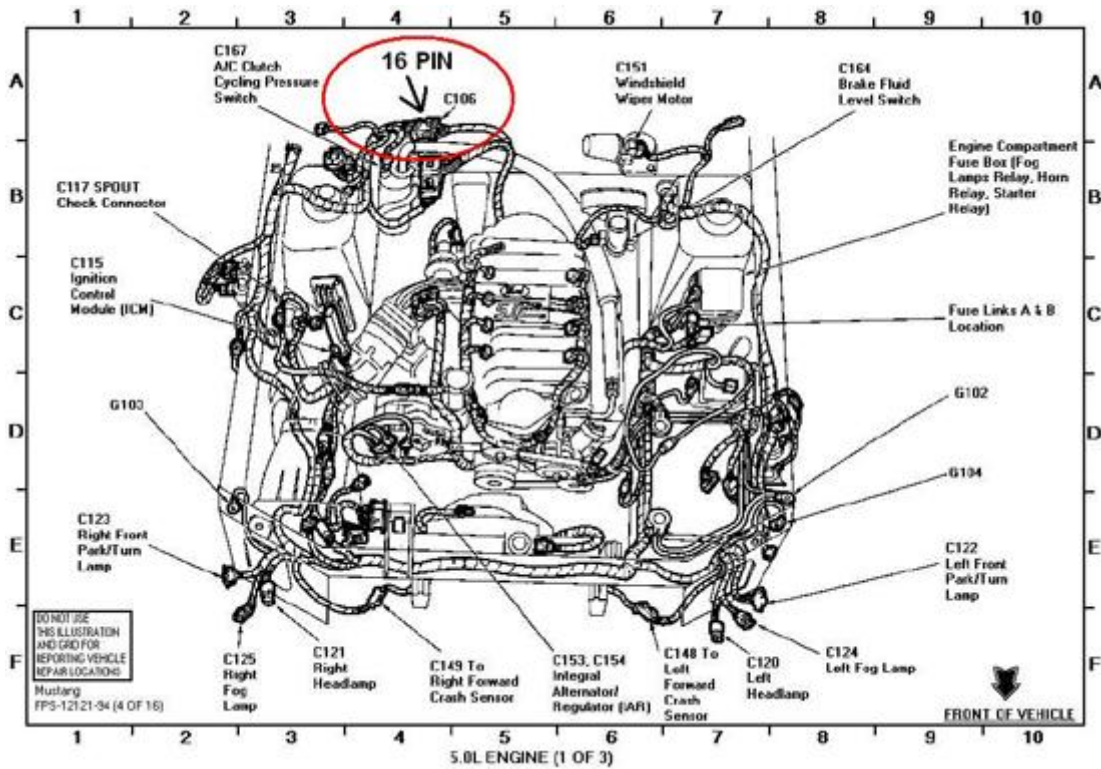
2. Identify the VSS (+) signal output wire. The wire colors are typically GRAY/BLACK on the VSS (+) signal side, and PINK/ORANGE on the VSS (-) return side. Remove the harness wrap to expose approximately 6 inches of the VSS wire leads, and cut the GRAY/BLACK signal wire, insuring that there is enough wire remaining on each side to splice in the wires coming from Speed-Dial.
Note: DO NOT CUT THE PINK/ORANGE WIRE!!!



3. Once the GRAY/BLACK VSS (+) signal wire has been cut, attach the GREEN wire from Speed-Dial to the cut wire coming FROM the transmission. The GREEN wire on Speed-Dial is the SIGNAL IN.
4. Now attach the WHITE wire from Speed-Dial to the remaining GRAY/BLACK cut wire which leads INTO the vehicle harness. The WHITE wire on Speed-Dial is the SIGNAL OUT.
5. Splice the RED wire (using solder and heat shrink) from Speed-Dial to a 12V KEY-ON voltage source. This RED wire should only have voltage when the ignition key is in the 'RUN' position.
6. Finally, attach the BLACK wire from Speed-Dial to a ground source.
Note: For best results, this ground source should be checked for continuity to the negative side of the battery. An optimum ground path should measure less than 0.5 ohms to the negative battery post. (When measuring resistance, always make sure the key is in the OFF position.)

Alternate Installation for Underhood Applications in 1994-1998 Mustang

- For under hood installation on a 1994 to 1998 Mustang, the VSS (+) signal wire can also be found at the right rear of the engine compartment in the black 16-Pin connector.



On 4.6L applications, circuit 361 may be located in cavity 5

2. In the 16 pin connector, identify circuit 679, which should be a GRAY/BLACK wire in cavity 15. This is the VSS (+) signal wire. Use the procedure listed above for installation on this wire. To insure you are working with the correct wire, you should verify continuity to the VSS wire at the transmission BEFORE CUTTING THIS WIRE!
3. You may also use circuit 361 as the 12V Key-On Source. This should be a RED wire located in cavity 5 or cavity 9. Once again, you should verify that this is the correct wire BEFORE splicing into it!

Speed Setting Procedure

FIRST METHOD:

If an axle ratio change has been made, and the speedometer read properly before making this change, this can be figured by dividing the OLD numerical gear by the NEW numerical gear ratio. For example, if the vehicle was originally equipped with 3.27 gears, and is replaced with 3.73 gears, use the following math equation:

$$\frac{\text{OLD GEAR}}{3.27} \quad / \quad \frac{\text{NEW GEAR}}{3.73} \quad = \quad \frac{\text{RATIO CHANGE}}{0.88 \text{ (rounded off to nearest 100th)}}$$

Set Speed-Dial to "0-8-8"

If the vehicle originally had 4.56 gears, and is replaced with 3.55 gears, use the same equation:

$$\frac{\text{OLD GEAR}}{4.56} \quad / \quad \frac{\text{NEW GEAR}}{3.55} \quad = \quad \frac{\text{RATIO CHANGE}}{1.28 \text{ (rounded off to nearest 100th)}}$$

Set Speed-Dial to "1-2-8"

SECOND METHOD:

If a tire change has been made, and the speedometer read properly before making this change, this can be figured by dividing the NEW tire diameter by the OLD tire diameter. For example, if a truck originally had a 29" tall tire, and is replaced with a 35" tire, use the following math equation:

$$\frac{\text{NEW TIRE}}{34.5 \text{ (actual)}} \quad / \quad \frac{\text{OLD TIRE}}{28.8 \text{ (actual)}} \quad = \quad \frac{\text{RATIO CHANGE}}{1.20 \text{ (rounded off to nearest 100th)}}$$

Set Speed-Dial to "1-2-0"

THIRD METHOD:

If a starting point is uncertain, it is still possible to determine the proper ratio using the vehicle's trip odometer. Run the vehicle on a highway paying special attention to the mile markers on the side of the road. While driving past a mile marker, identify the mile marker number as you press the reset button on the trip odometer. After traveling 10 miles (as measured against the mile markers), make note of the trip odometer reading. If the trip odometer reads 12.2 miles, use the following equation to determine the proper ratio:

$$\frac{\text{ACTUAL DISTANCE}}{10 \text{ (miles)}} \quad / \quad \frac{\text{MEASURED DISTANCE}}{12.2 \text{ (miles)}} \quad = \quad \frac{\text{RATIO CHANGE}}{0.82 \text{ (rounded off)}}$$

Set Speed-Dial to "0-8-2"

Installation instructions provided by Ford Racing

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