VSS/OSS-driven T56 Reverse Lockout Unit
Installation Guide

Rev. 3.3

www.accutach.com

Thank you for purchasing the Accutach Co. VSS/OSS-driven T56 Reverse Lockout Unit. It is designed to turn on the Tremec T56 transmission's reverse lockout solenoid whenever the vehicle is stopped, and to turn off the solenoid when the vehicle is moving. This operation enables a shift into reverse when stopped and disables a shift into reverse when the vehicle is moving. This unit was designed for use with reluctor style Vehicle Speed Sensors found in all T56 transmissions. It will work with other transmissions with VSS/OSS's that generate a speed signal with a peak-to-peak voltage of less than 0.5V at a nearly stopped speed. The frequency of the VSS/OSS signal is not important for this unit. This unit can also be used with a Dallas Mustang Speedcal (Standard or Extended Range).

Before you begin, you will need to purchase the connector for the T-56 reverse lockout solenoid is GM part number: 12101857 or ACDelco # PT249. It is not supplied by Accutach Co. You should locate a suitable mounting point for the Reverse Lockout Unit. The best location for mounting the unit is inside the passenger compartment where the temperatures are not as extreme, but the unit was designed so it can be zip-tied to the transmission harness under the car. Keep the unit away from heat sources such as exhaust pipes. Do not mount it in the engine compartment.

Be sure to use good splicing techniques, such as solder and shrink tubing. Do not use the "twist & tape" method. "Scotch-lock" style splices are not recommended. Protect all wiring with proper conduit.

Installation in a 94+ Ford Mustang:

You will need to locate the Vehicle Speed Sensor (or Output Shaft Sensor) signal wire, both wires from the Tremec T56 reverse lockout solenoid, a good chassis ground point and a switched 12V power source capable of supplying one amp of current.

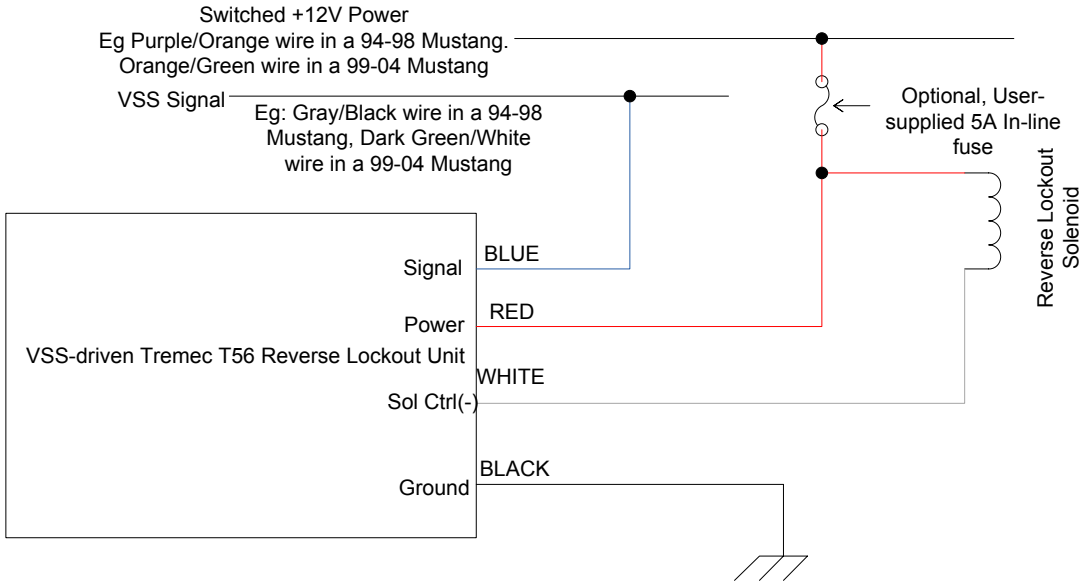
In 94-98 Mustangs, the VSS signal wire is a Gray/Black wire found in the transmission harness, the PCM harness or the instrument cluster harness. In 99-04 Mustangs, the OSS signal wire is a Dark Green/White wire. FYI, the VSS/OSS signal return (ground) wires are Pink/Orange for the 94-98 Mustangs and are Gray/Red for 99-04 Mustangs. A ground lug under the OSS/VSS screw is a good grounding point for the Reverse lockout unit if it is mounted under the car, and any good ground point will work inside the passenger compartment.

Since the Tremec reverse lockout solenoid requires one amp of current, if you power your unit from a power source that is always on, you will run the risk of draining the battery when the car is parked. An "on-in-run" power source is much preferable. Do not supply the unit and the solenoid with power from different sources. If the solenoid is powered when the unit is not, the solenoid will be activated at all times. A 5A in-line fuse (not supplied) would be good wiring practice.

If your choose to mount the unit near the transmission under the car, you can splice into the power wire for the backup lights and zip-tie the unit to the harness. In 96-98 Mustangs, this is a Purple/Orange colored wire and in 99-04 Mustangs, this is an Orange/Green wire. If you choose to install it in the console of a 96-98 Mustang coupe, we suggest you trim a male spade lug to fit the switched power pin (Purple/Orange) on the convertible switch connector found under the console bucket. You will need to splice into this wire if installing in the console of a convertible.

VSS/OSS Connection Diagram:

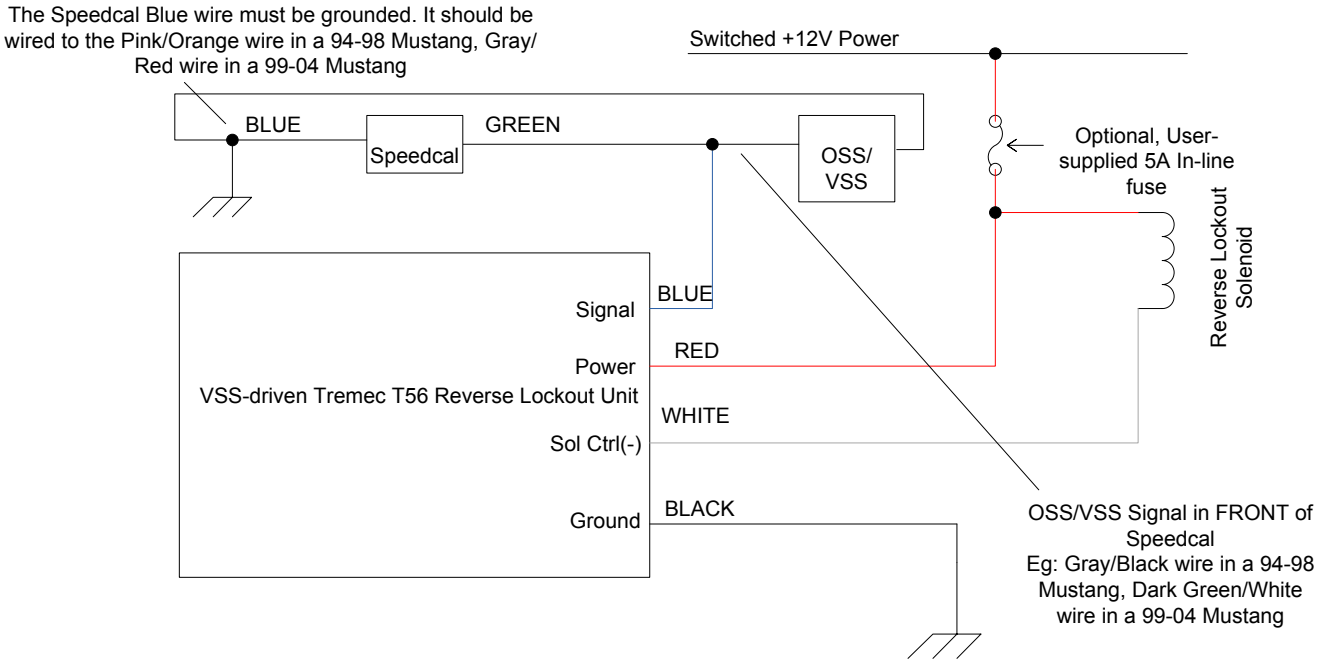
The VSS/OSS-driven Reverse Lockout Unit has four wires: Power (RED), Ground (BLACK), VSS Signal (BLUE) and Solenoid Control (-)(WHITE). If you add the recommended fuse, splice the fuse wire to the switched power line. Connect the Lockout Unit's RED wire and one of the the lockout solenoid wires to the other side of the fuse. Connect the Lockout Unit's WHITE Solenoid Control wire to the other lockout solenoid wire. Connect the BLACK Wire to a good chassis ground point. Splice the BLUE wire to the VSS/OSS signal wire. The following diagram shows how the unit should be wired into the vehicle.



Installation with a Dallas Mustang Speedcal:

If your vehicle is equipped with a Dallas Mustang Speedcal unit, you will simply need to connect the Reverse Lockout Unit's BLUE signal wire to the GREEN speed signal wire from the OSS/VSS in front of the Speedcal unit. DO NOT connect the Lockout Unit's BLUE wire to the speed signal after the Speedcal. You must ground the Speedcal's BLUE wire. The other wires are connected as they are in a non-Speedcal equipped vehicle.

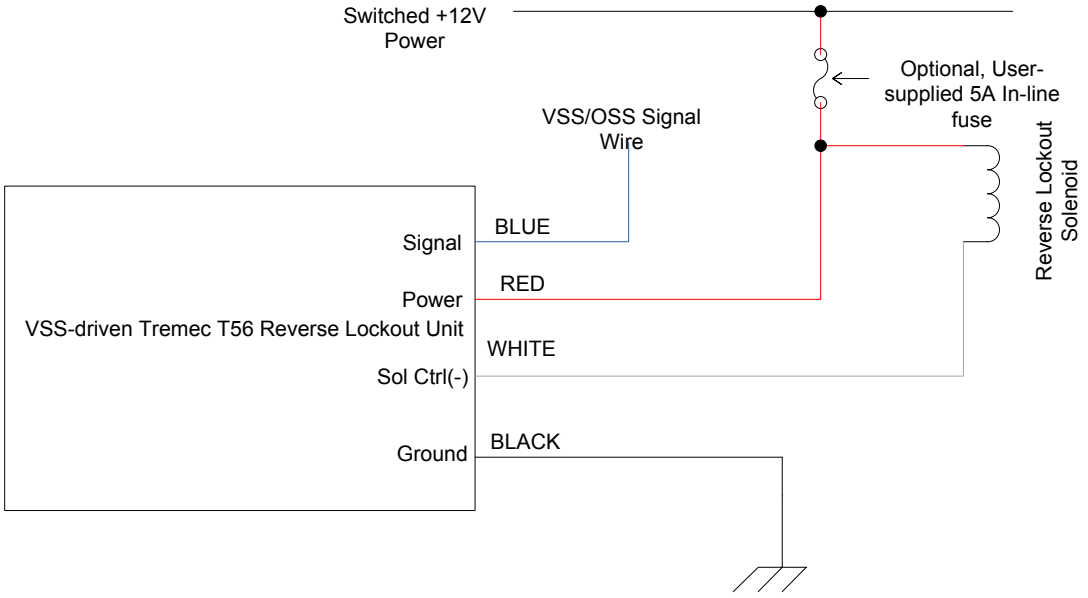
Earlier versions of this Install Guide said that you must solder a wire to a test point inside of the Speedcal. We have now learned that this Lockout unit will work with all correctly functioning Speedcal units without modification to the speedcal. We apologize to customers who have done the special Speedcal installation.



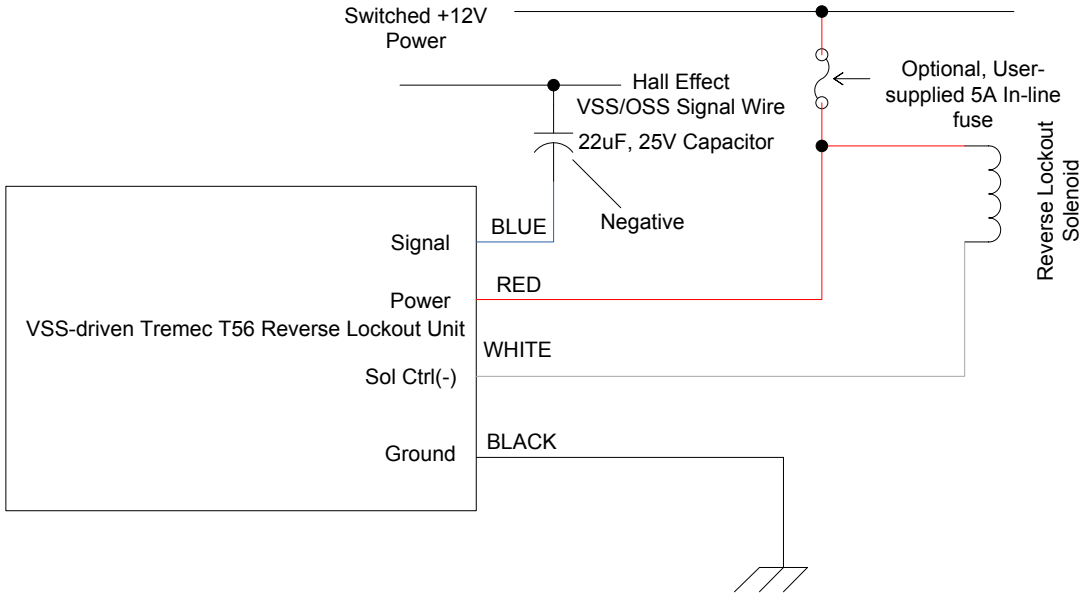
VSS/OSS Connection Diagram (for general electronic speedometer cars):

You will need to locate a hot-in-run power wire in your vehicle capable of supplying at least one amp of current. You will also need to locate the VSS/OSS signal wire. Do not use the VSS/OSS signal return wire.

The VSS/OSS-driven Reverse Lockout Unit has four wires: Power (RED), Ground (BLACK), VSS Signal (BLUE) and Solenoid Control (-)(WHITE). If you add the recommended fuse, splice the fuse wire to the switched power line. Connect the Lockout Unit's RED wire and one of the lockout solenoid wires to the other side of the fuse. Connect the Lockout Unit's WHITE Solenoid Control wire to the other lockout solenoid wire. Connect the BLACK Wire to a good chassis ground point. Splice the BLUE wire to the VSS/OSS signal wire. The following diagram shows how the unit should be wired into the vehicle.



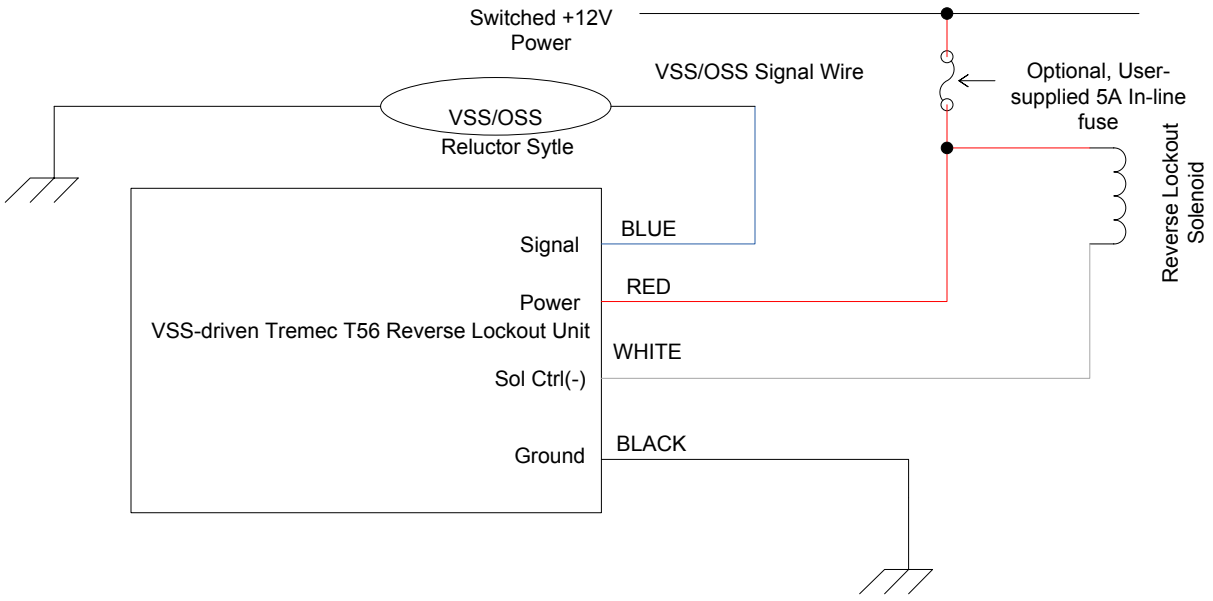
Hall Effect sensors such as those used in Dodge Vipers generate a 0-5 or 0-12V square wave signal which is not directly compatible with our Lockout Units. To use the Accutach Co. T56 OSS/VSS Reverse Lockout Unit with a Hall Effect speed sensor, simply put a 22uF, 25V capacitor in series between the Hall Effect signal and the BLUE input wire to the Lockout Unit.



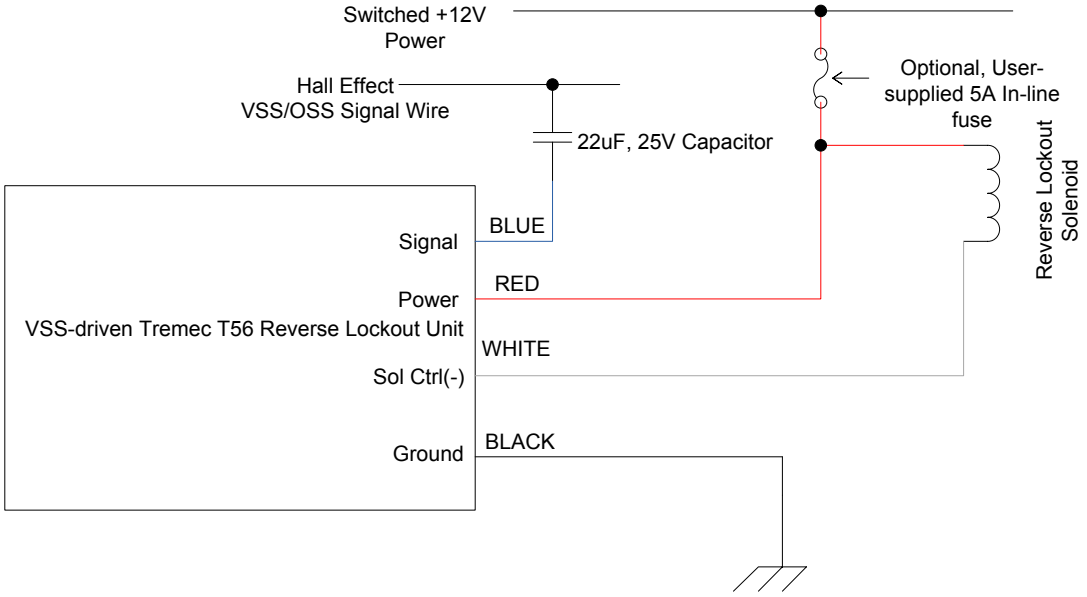
VSS/OSS Connection Diagram (for mechanical speedometer cars):

Your transmission will need to be equipped with a reluctor-style VSS/OSS speedometer cable adapter so you will have a VSS/OSS signal to drive the Reverse Lockout unit. You will need to ground one of the sensor wires, and the other will be the VSS/OSS signal wire. Sensor polarity is not important. You will need also to locate a hot-in-run power wire in your vehicle capable of supplying at least one amp of current.

The VSS/OSS-driven Reverse Lockout Unit has four wires: Power (RED), Ground (BLACK), VSS Signal (BLUE) and Solenoid Control (-)(WHITE). If you add the recommended fuse, splice the fuse wire to the switched power line. Connect the Lockout Unit's RED wire and one of the lockout solenoid wires to the other side of the fuse. Connect the Lockout Unit's WHITE Solenoid Control wire to the other lockout solenoid wire. Connect the BLACK Wire to a good chassis ground point. Connect the BLUE wire to the VSS/OSS signal wire, and ground the other VSS/OSS wire. The following diagram shows how the unit should be wired into the vehicle.



Hall Effect sensors such as those found in Dodge Vipers generate a 0-5 or 0-12V square wave signal which is not directly compatible with our Lockout Units. To use the Accutach Co. T56 OSS/VSS Reverse Lockout Unit with a Hall Effect speed sensor, simply put a 22uF, 25V capacitor in series between the Hall Effect signal and the BLUE input wire to the Lockout Unit.



Testing Considerations

With the key off, validate that the T56 Lockout prevents the shifter from going all the way to the right, which disables the transmission from accidentally going into reverse. Note that, with enough force, you can still overpower the T56 reverse lockout spring.

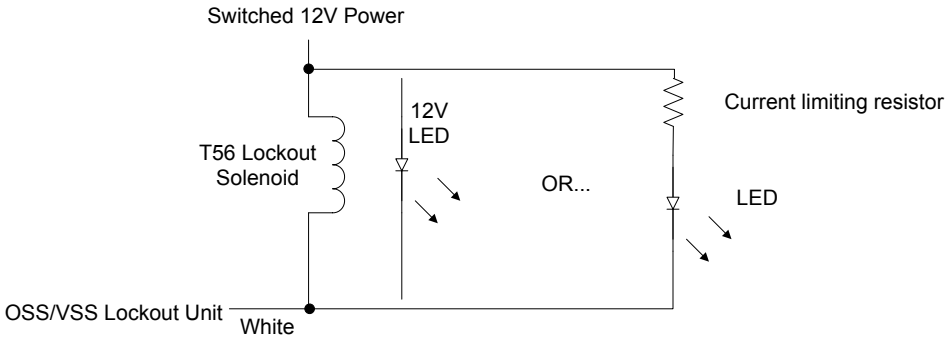
Turn the key to the On position to ensure that the lockout unit is powered up, without the car moving. You should now be able to easily push the shifter all the way to the right, which enables a shift into reverse.

Now drive the car at 10MPH or above and try to push the shifter all the way to the right. If the lockout unit has been installed correctly, and is working properly, It will not allow you to easily push the shifter all the way to the right. If there is a problem and the lockout system does not prevent you from moving the shifter all the way to the right, DO NOT try to push the shifter up into Reverse while the car is moving. Significant damage to your vehicle can occur.

If you have any problems with the installation, please contact Accutach Co.

Optional LED Indicator (not included)

Should you want a visual indicator that a shift into reverse is enabled, you can add a 12V LED or a regular LED with a current limiting resistor in parallel with the T56 Lockout solenoid:



Dimensions

The OSS/VSS T56 Reverse Lockout unit measures about 1" x 1" x 0.75", and the case is made of ABS plastic (color may vary):

Disclaimer

You use this product at your own risk. Accutach Co. is not responsible for any damage done to you, your vehicle or your accessories. Accutach Co. guarantees this product for one year after purchase, you only pay the shipping. We will repair or replace any failed unit at our discretion. Contact Information: http://accutach.com/contactus.aspx

www.accutach.com
molson@accutach.com
+1 (408) 357-3541