GRC PERFORMANCE

T56 Reverse Lockout Solenoid Installation Instructions

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Make sure you read item #4 on next page (page 2) or you will very likely damage something.

How It Works

The electronic module contains a microprocessor that constantly monitors the vehicle speed while you are driving. At low vehicle speeds, the reverse lockout solenoid is energized to allow you to shift into Reverse. At speeds above about 5 MPH the control box de-energizes the reverse lockout solenoid, thereby preventing inadvertent shifting into reverse at higher speeds. The threshold speed is between 1 and 9 MPH depending on the your vehicle's drive train gear ratio and speed sensor configuration. The average is around the 5 MPH mark.

NOTES:

1) This installation only intended for the Tremec T56 6-Speed Transmission. While it may work with others, these instructions are tailored toward the T56 and do not address any other installations or situations including any aftermarket add-ons or any scenario not covered in the instructions (make sure you read EVERYTHING – go grab a beverage, sit down and actually read it…seriously, read it ALL so you don't screw something up). If nothing else, make sure you read item #4 on next page (page 2) or you will very likely damage something.

2) This installation only intended for 2-Wire VSS Sensors and 2-Wire Lockout Solenoids. Again, it can be applied to a variety of sensor and solenoid types, but the attached instructions do not address those scenarios.

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NOTICES

1) This installation procedure requires some mechanical aptitude and minimal splicing into existing vehicle wiring. If you do not feel comfortable or do not feel you can properly install this product, please have a professional mechanic perform the work.

2) This installation only intended for Tremec T56 transmissions with 2-Wire VSS Sensors and 2-Wire Lockout Solenoids.

INSTRUCTIONS AND SAFETY PRECAUTIONS

1) Make sure the vehicle is in NEUTRAL when performing this installation.
2) Make sure the rear tires of the vehicle are suspended (vehicle securely on jack stands or on a vehicle hoist). BE SAFE and CAREFUL.
3) Disconnect all vehicle BATTERY GROUND connections until T56 CONTROLLER MODULE WIRING INSTALLATION IS COMPLETED. SEE NOTE #4 – YOU CAN DAMAGE THE T56 CONTROL BOX OR YOUR VEHICLE ELECTRONICS IF YOU DO NOT FOLLOW THESE INSTRUCTIONS PROPERLY.
4) ****** *The Black ground wire labeled "(-) NEG/GND" of the T56 Control Box must be connected FIRST, before other connections of the controller box are made to prevent permanent damage to the T56 control module or your vehicle computer. If you securely connect (-)NEG/GND of the T56 Control Box to vehicle ground/chassis before proceeding with any other connections, this risk is eliminated. If you have any questions or are uncertain about anything, STOP and ask for advice or double check whatever you are unsure about. Failure to properly connect the remaining wires could result in damage to either the product or the vehicle as well.*
5) If your vehicle wiring is any different than the attached instructions show (read all pages and see all diagrams), call us for help or do not proceed, as these instructions are not meant to cover any other scenarios other than those outlined here.
6) Exercise caution when reconnecting the Battery Negative and restoring power – If you see or smell any smoke coming out of the vehicle, you most likely have incorrectly connected something.
7) Make sure you have a fire extinguisher handy whenever working around vehicles and modifying anything that requires cutting wiring.
8) Wear eye protection when cutting, snipping or anytime you are under the vehicle. Rust, dirt and dust can easily get into your eyes and this takes the fun out of the whole project.
9) Route all wires AWAY from exhaust system, sharp metal edges, moving parts, and avoid having wires hang down. Tuck wiring preferably along existing vehicle wiring and attach with the included zip ties. Allow sufficient slack in wiring for drive train movement relative to the vehicle body.
10) We recommend you solder all connections and then tape with high grade electrical tape.

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Kit Includes:

1) **Electronic Module with Harness**
2) **Zip Ties For Routing Wires**
3) **2 Screws For Mounting Controller Box**
4) **4 Amp Fuse Pre-Installed in Module Box Wiring**
5) **Installation Instructions**

NOTE ON MOUNTING LOCATION OF MODULE

Because this kit is used on a variety of different vehicles, the instructions do not specify where to mount the electronic module (Black Box). Some prefer mounting the module under the dash, while others behind the glove box or behind the driver's side kick panel. It must be installed somewhere inside the vehicle away from the elements and somewhere out of the way where it won't get damaged.

All wires in the kit are about 6 feet long to allow you to find the perfect location for your particular application.

The electronic control module is already fuse protected, however it is necessary that you connect the +12V/IGN wire to an unused 10 AMP fused connection in your fuse box. This protects the red +12V/IGN supply wire should you ever short it out against something along the length between where our fuse is located and where you make your connection to the vehicle.

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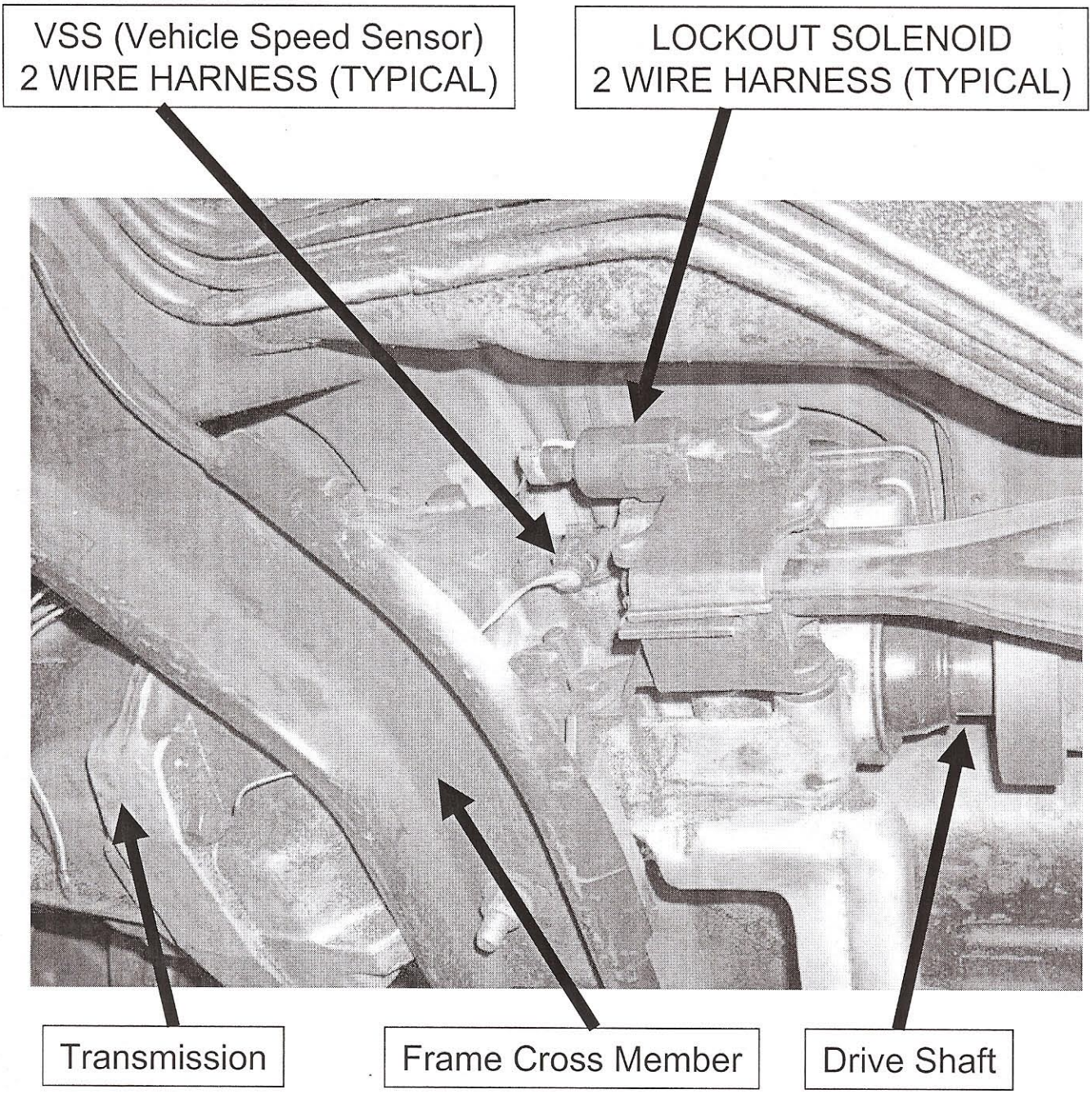

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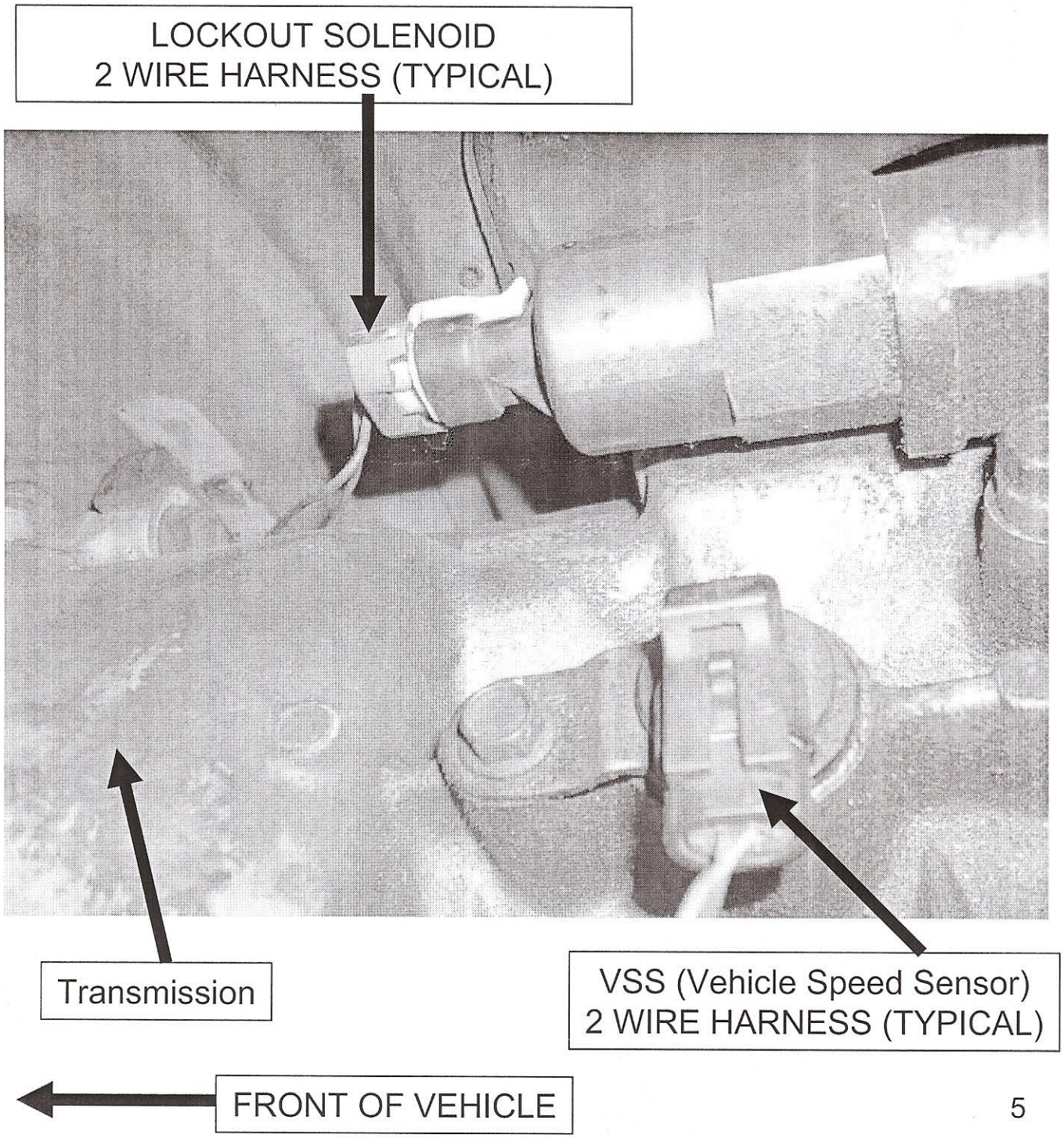

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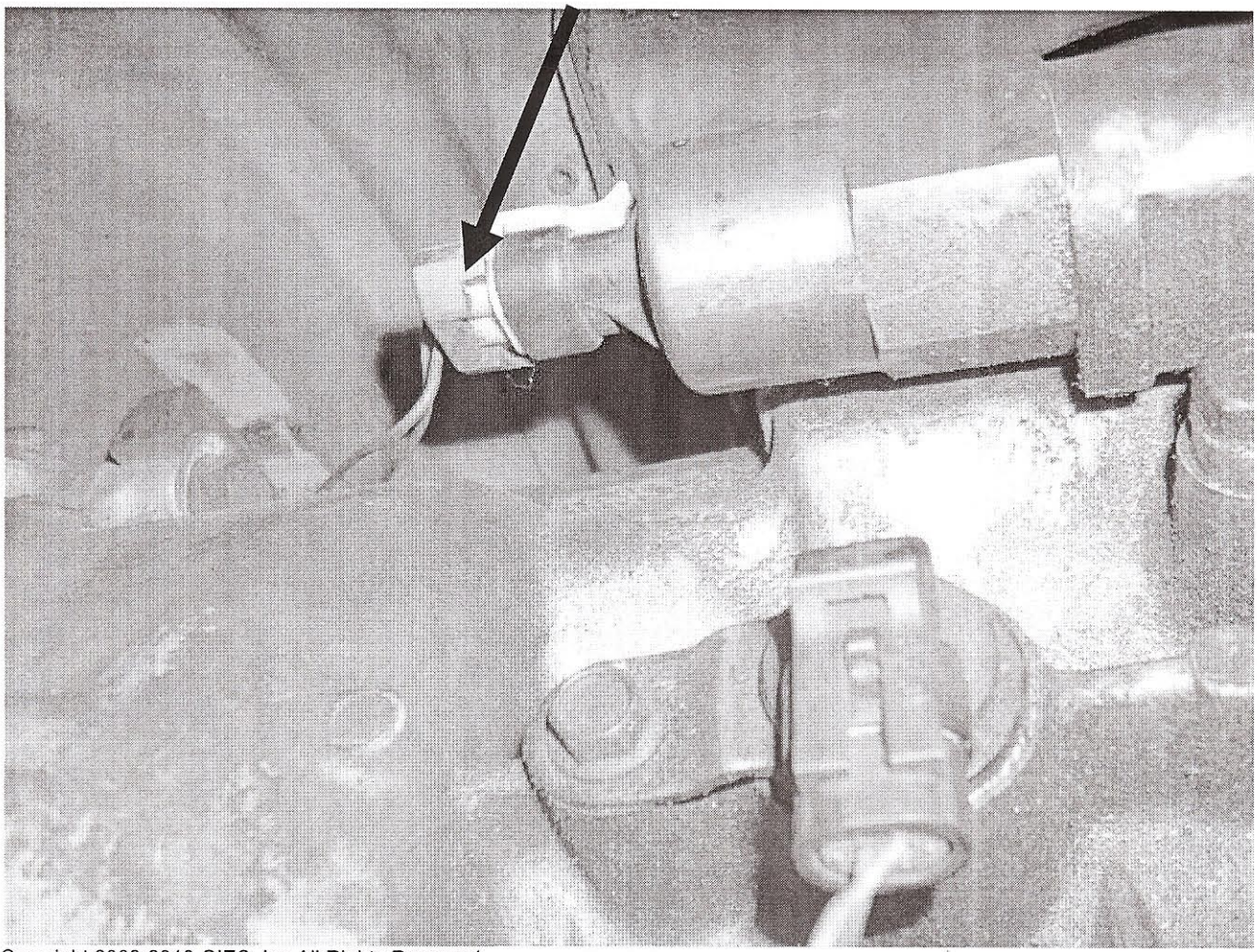
THIS INSTALLATION ASSUMES THAT THE ONLY WIRES THAT WILL BE CONNECTED TO THE REVERSE LOCKOUT SOLENOID ARE THE TWO WIRES IN THIS KIT (PINK & GREEN). ANY EXISTING WIRING TO THE SOLENOID SHOULD BE DISCONNECTED AND SAFELY INSULATED AND TUCKED OUT OF THE WAY IN A SECURE PLACE.

WE REPEAT: NO FACTORY WIRING TO THE SOLENOID SHOULD BE USED. THE ONLY WIRES GOING TO THIS SOLENOID SHOULD BE THE PINK/GREEN WIRES FROM THE MODULE. IN THE CASE OF THE TYPICAL 2-WIRE SOLENOID, POLARITY IS NOT AN ISSUE. THIS KIT NOT INTENDED FOR 3 WIRE SOLENOIDS. EMAIL US FOR ANY QUESTIONS ON 3 WIRE INSTALLATIONS



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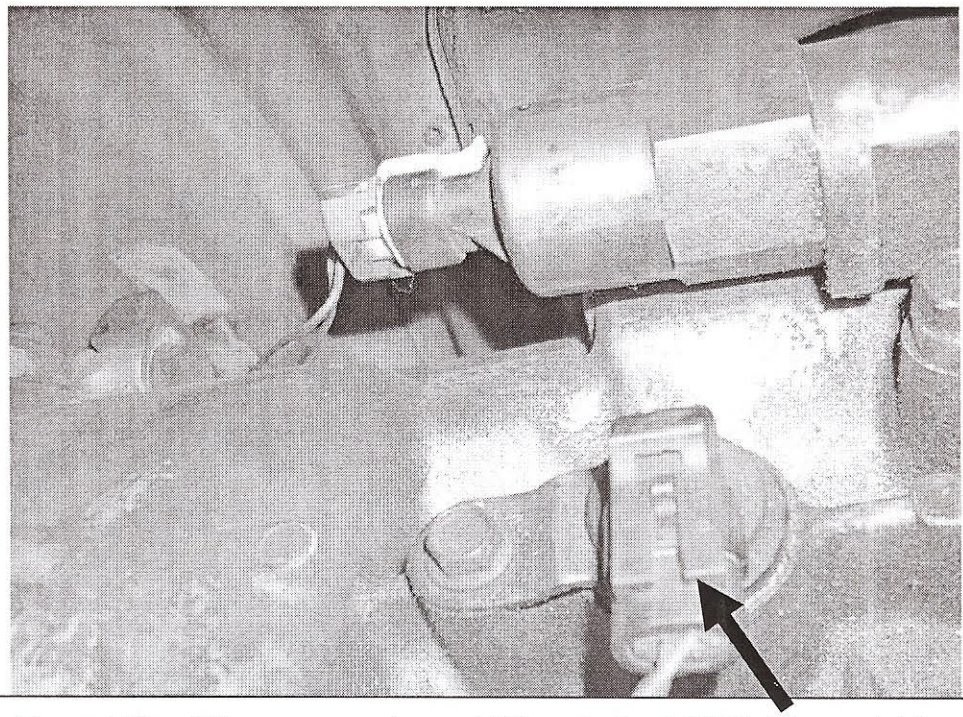

You Will Need To Disconnect and Tap Into VSS Signal Harness Wiring

Using an Ohm Meter – Check Resistance Between "Negative Ground" (Chassis/Frame) And Each of the 2 Existing Vehicle VSS wires in the vehicle harness to determine which wire is the "VSS Reference" Wire And which is the "VSS Signal" Wire. If you have no existing vehicle wiring, skip down to #4 below…

NOTES: **THIS CHECK PERFORMED WITH IGNITION OFF AND VSS PLUG DISCONNECTED….**

*** For these these tests, one test probe should be against vehicle metal, body ground, chassis.

1) With **Ignition in OFF Position**, "VSS Reference" Wire shows nearly zero resistance to ground. Typically the resistance is about 1 Ohm with Ignition OFF (Typical). Note that if you do not turn the ignition OFF, you will not get a proper reading.

2) "VSS Signal" Wire typically has a very high resistance to Ground (usually 60 to 200 Kilo-Ohm range – Thousands of Ohms - Very High).

3) Remember – In 1 and 2 above we are checking the resistance of the connector terminals in the existing vehicle harness to vehicle body ground, not the sensor itself. Sensor should be DISCONNECTED.

4) If you don't have any wiring at all in your vehicle for this sensor, you need to add wiring for your speedometer (unless you have a mechanical speedo kit). This kit does not address that, however it is relatively simple. Consult your vehicle wiring diagrams for more info.

*****YELLOW MODULE WIRE FROM T56 BOX CONNECTS TO THE "VSS SIGNAL" WIRE ON HARNESS AND ONE OF THE VSS SENSOR TERMINALS AT THE VSS SENSOR**

*****THE OTHER VSS SENSOR TERMINAL ON VSS SENSOR CONNECTS TO EITHER THE EXISTING VEHICLE REFERENCE HARNESS WIRE *or* BLUE "VSS REFERENCE" WIRE FROM THE T56 BOX YOU ARE INSTALLING. IF YOU DON'T HAVE ANY VEHICLE WIRING TO THE VSS SENSOR, YOU WILL ONLY BE CONNECTING THE BLUE "VSS REFERENCE" WIRE FROM THE T56 BOX BOX TO THIS VSS SENSOR TERMINAL.** AGAIN, YOU DO NOT NEED BOTH THE VSS REFERENCE WIRE FROM VEHICLE HARNESS AND THE BLUE WIRE FROM OUR BOX TO BOTH CONNECT TO THE VSS SENSOR. IT IS REDUNDANT. OUR BLUE "VSS REFERENCE" WIRE IS MEANT TO TAKE THE PLACE OF THE REFERENCE WIRE WHEN IT IS NOT PRESENT IN THE VEHICLE. IF YOU ALREADY HAVE THE FACTORY 2 WIRE HARNESS TO THE VSS SENSOR CUT & TAPE OUR BLUE WIRE OUT OF THE WAY IN A SAFE PLACE AND DO NOT USE IT. - See Attached Wiring Diagram For More Info

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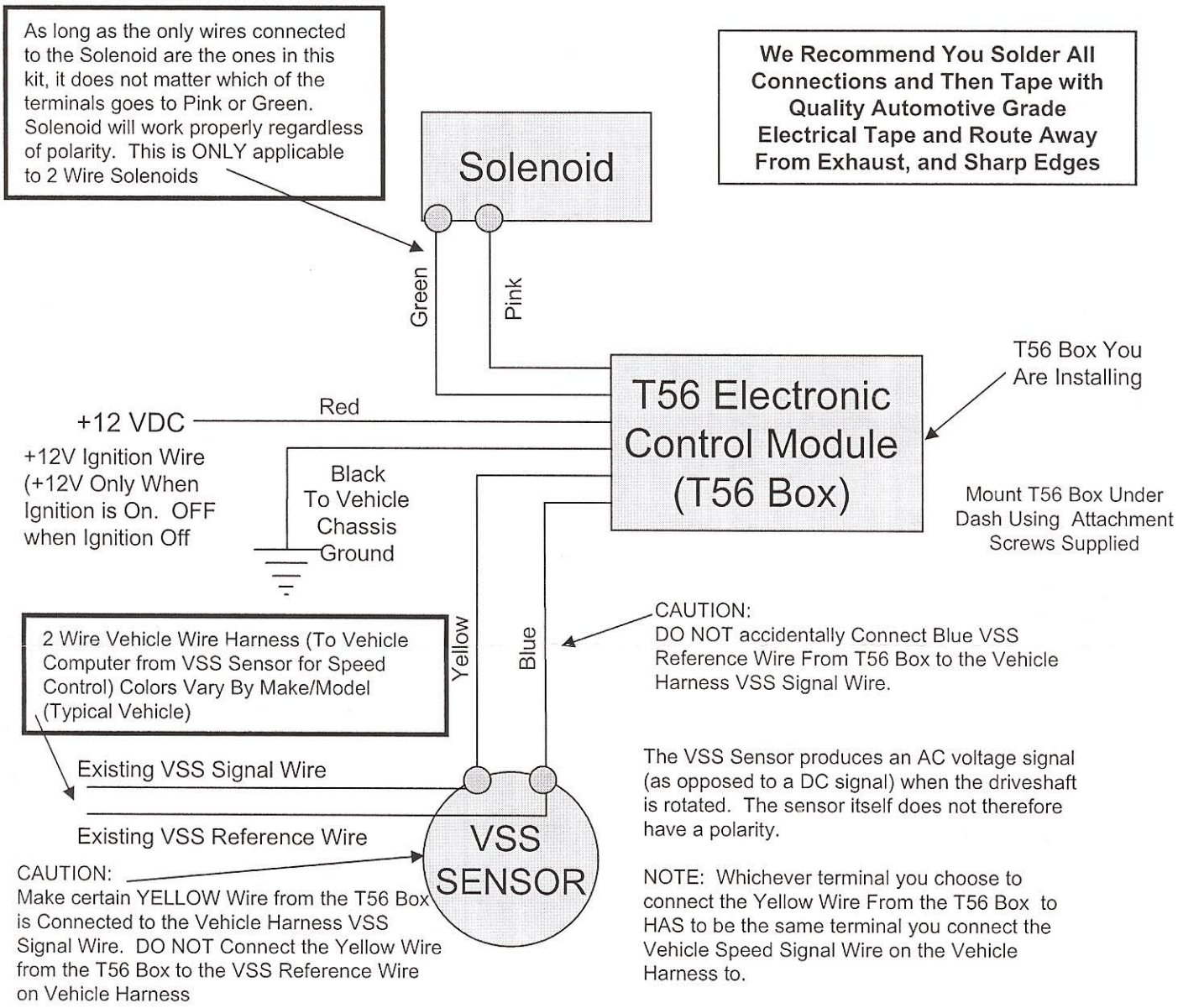

REMEMBER:
****Blue VSS Reference wire From T56 Box to One Terminal on VSS Sensor
****Yellow VSS Signal Wire from T56 Box to One Terminal On VSS Sensor and To VSS Signal Wire on Vehicle Harness

DETERMINING WHICH WIRE IS THE VSS SIGNAL WIRE: With IGNITION OFFAND VSS CONNECTOR DISCONNECTED, check resistance with an Ohm Meter between Vehicle Negative Body Ground and each of the two wires that run to the VSS Sensor from the existing VSS Sensor Vehicle Wiring Harness with plug disconnected and Ignition OFF. VSS Reference wire will have typically less than 1 Ohm resistance to ground. Ignition MUST BE IN OFF Position or you will get an incorrect resistance reading. The VSS Signal Wire typically has a resistance in the thousands of ohms to ground (much higher than the VSS Reference Wire). Note: If using original vehicle wiring that includes a VSS Reference Wire, you can eliminate the Blue VSS Reference from the box connection in this kit (since you already get the reference from the Vehicle Harness Reference Wire – Tape it securely and safely out of the way if you aren't using it.