

Installation Manual for VMAC *Throttle Commander* Throttle Control T500103

2003-2005 GMC C4500-5500
6.6L Duramax Diesel

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Document #1930080

Installation Manual for VMAC *Throttle Commander* Throttle Control
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Changes and Revisions

Version	Revision Details	Revised by/date	Approved	Implemented
00	Original manual small version	IB 13 Dec 2004		
01	Wiring connection change	IB 13 Jan 2005	SM Jan 14 2005	Jan 16 2005

Important Information

The information in this manual is intended for certified VMAC installers who have been trained in installation procedures and for people with mechanical trade certification who have the tools and equipment to properly and safely perform the installation. Do not attempt this installation if you do not have the appropriate mechanical training, knowledge and experience.

Follow all safety precautions and standard shop practices for mechanical work.

These instructions are a general guide for installing this throttle control on standard production trucks and do not contain information for installation on non-standard trucks. If you have difficulty with the installation, contact VMAC.

The VMAC warranty form is located at the back of this manual. This warranty form must be completed and mailed or faxed to VMAC at the time of installation for any subsequent warranty claim to be considered valid.

To order parts, contact your VMAC dealer. Your dealer will ask for the VMAC serial number, part number, description and quantity. To locate your nearest dealer, call 1-800-738-8622.

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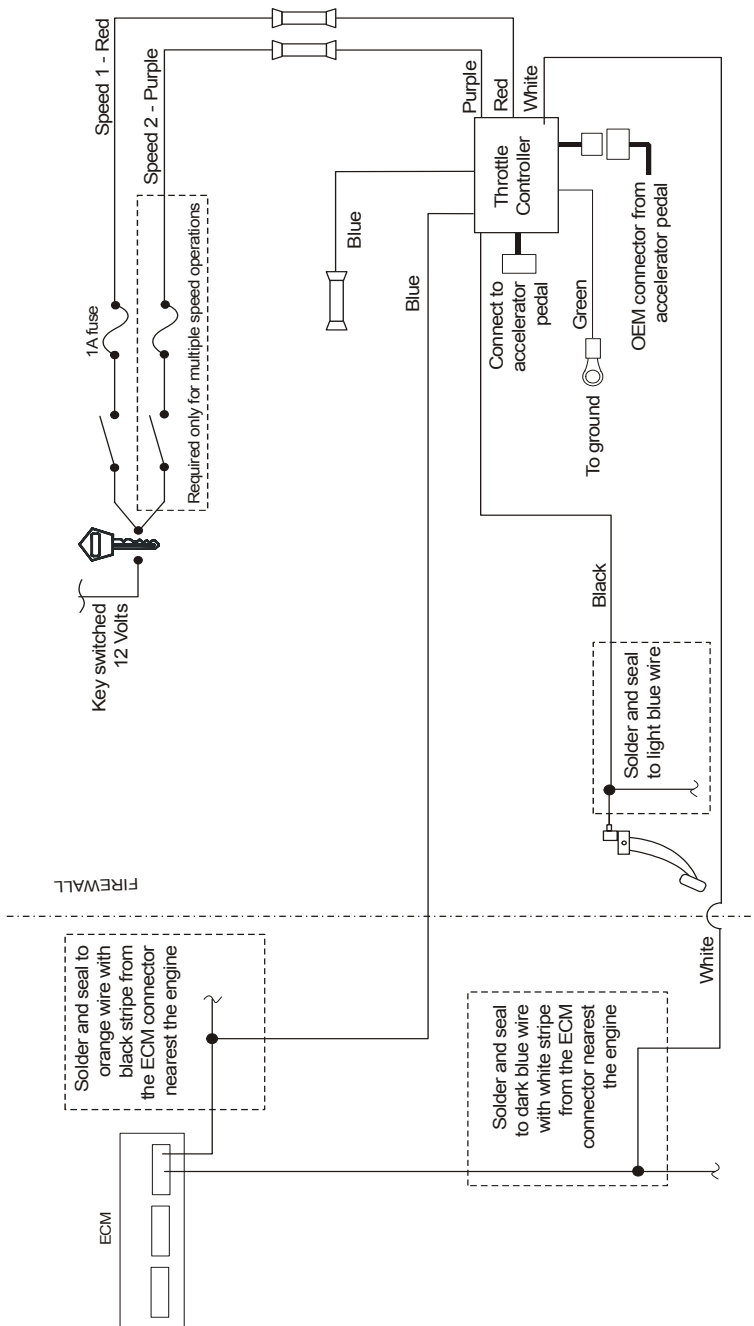
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Fax: 1-250-740-3201

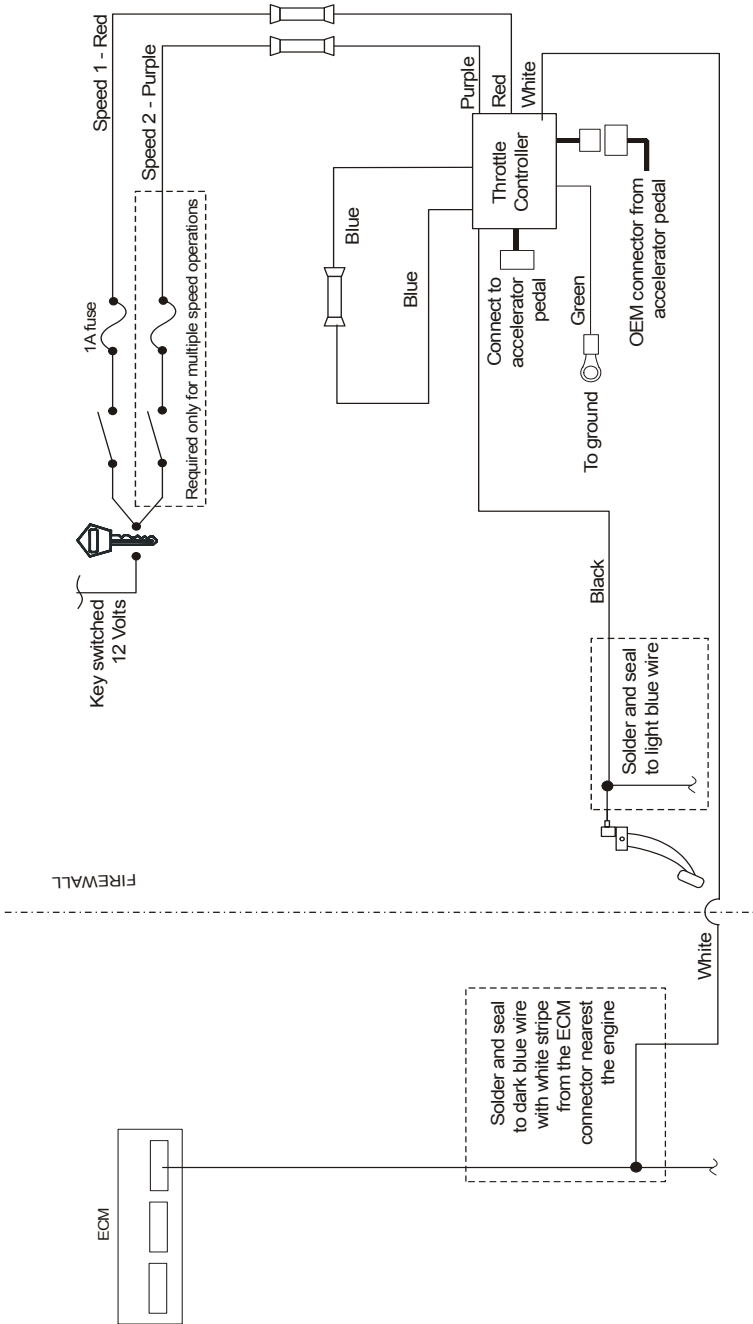


2004.5 and newer with automatic transmission

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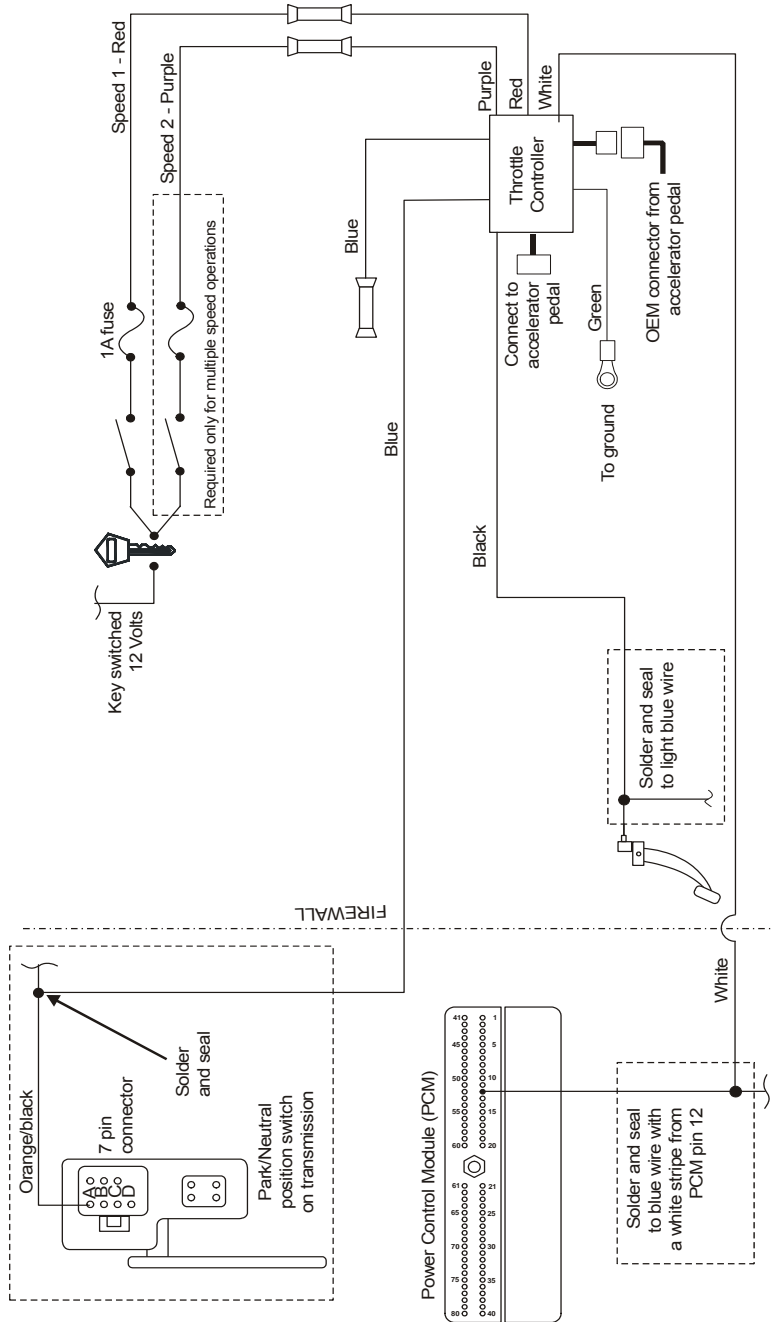


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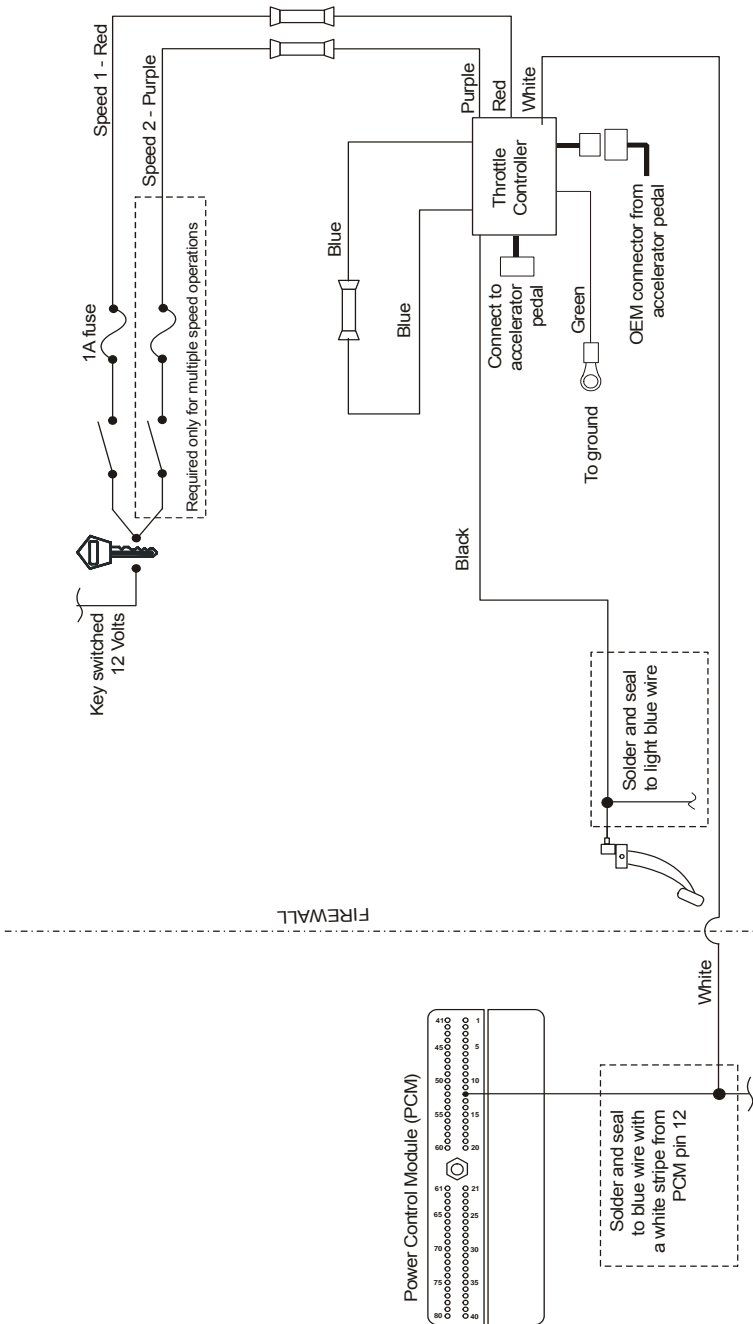


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1.0 Preparation for Installation

- Disconnect the batteries.



Handle wires and harnesses carefully. Disconnect batteries before handling electronic components.

- Lay out all of the control components and identify the wiring and connections according to the wiring diagram for the specific model year vehicle.

2.0 Installing the Throttle Control

- Fasten the throttle control under the dash in a safe location so that the connectors will reach the accelerator pedal assembly.
- Unplug the OEM cable from the accelerator pedal assembly and connect it to the harness from the throttle control. Connect the remaining harness to the connector on the accelerator pedal.
- Connect the green ground wire to a good ground under the dash.
- Locate a suitable opening in the firewall and route the white wire into the engine compartment. If the truck has an automatic transmission, also route the long blue wire with no connector into the engine compartment.
- Remove the kick panel from the driver's side of the cab, solder and seal the black wire from the throttle control to the light blue wire from the park brake switch (Figure 1). Replace the kick panel.

2.1 All Manual Transmission

- Cut the long blue wire to approximately 6 inches, strip the end and connect it to the short blue wire with the crimp connector.

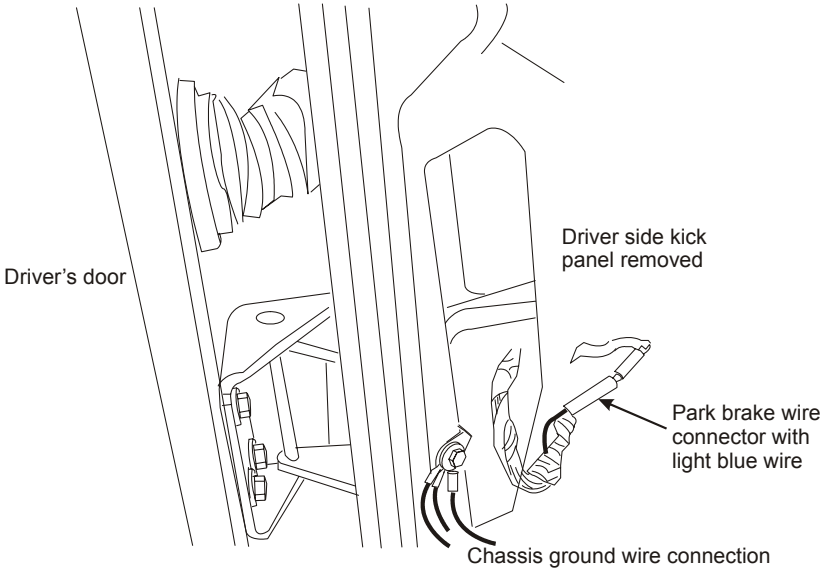


Figure 1

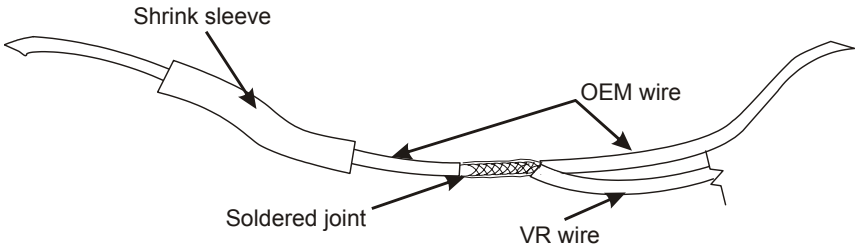


Figure 2

2.2 All Trucks from 2004.5

- Solder and seal the white tachometer wire from the throttle controller to the dark blue wire with a white stripe at the connector nearest the engine on the ECM (Figure 3). The ECM is on the passenger side firewall in the engine compartment.

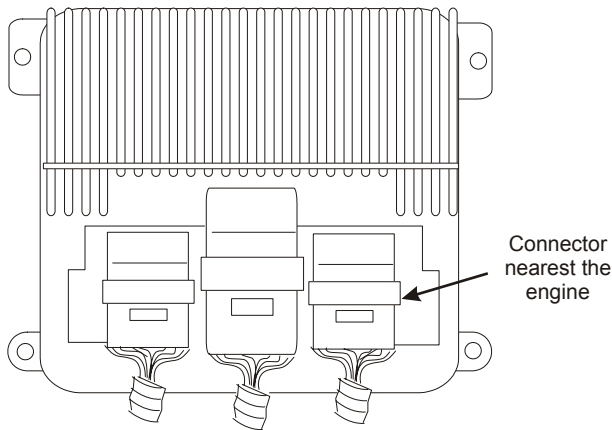


Figure 3

2.3 Automatic Transmission from 2004.5

- Solder and seal the long blue wire with no connector from the throttle control to the orange wire with a black stripe in the connector nearest the engine on the ECM (Figure 3).

2.4 All Trucks before 2004.5

- Remove the grey cover from the top wiring connector on the ECM, located on the passenger side firewall. Remove some tape from the wire harness to access the wiring away from the ECM.
- Solder and seal the white tachometer wire to the dark blue with white stripe wire at pin 12 on the connector (Figure 4).



There may be more than one dark blue with white stripe wire in the harness. Make sure that the wire is at location 12 on the connector.

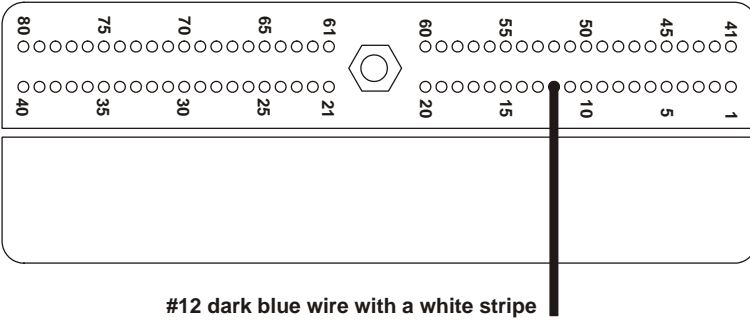


Figure 4

2.5 Automatic Transmission before 2004.5

- Solder and seal the long blue wire with no connector from the throttle control to the orange with black stripe wire at pin “A” of the top seven-pin connector on the transmission Park/Neutral position switch (Figure 5). Pull the loom back to access the wire away from the connector.

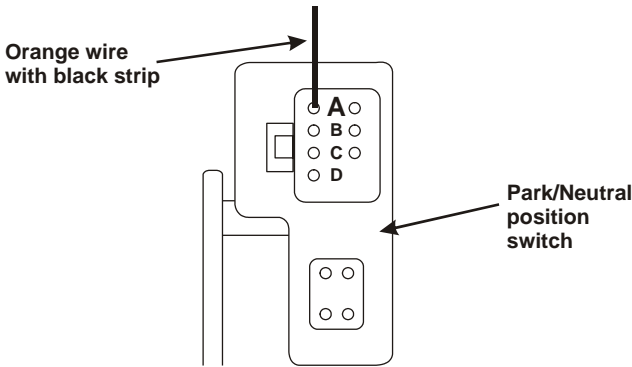


Figure 5

3.0 Operational Test

- Place the truck in a safe operating position and block the wheels. Make sure that there are no people around the vehicle. Sit in the driver’s position with the automatic transmission in Park (manual transmission in neutral) and the park brake fully engaged.

- Start the vehicle engine and wait for the idle to stabilize and engine temperature to reach normal operating range.
- Test operation of the throttle by quickly connecting and disconnecting the 18 gauge test wire from the battery wire to the red SPEED 1 throttle wire. The engine should start to idle up.
- Firmly apply and hold the foot brake. Release the park brake and activate the throttle as before. The engine should not idle up.
- Apply the park brake and shift the automatic transmission into gear while keeping your foot on the brake. Momentarily activate the throttle as before. The engine should not idle up. Repeat this test in all gears. The engine should only idle up in Park and Neutral.
- Shift back into Park and shut down the engine.
- Follow the setup instructions before connecting the throttle to the Body Builder wiring that will be used to turn the throttle on with your equipment.
- If the vehicle fails the test, check your wiring to make sure that all the connections are correct and secure. If you require additional assistance, please contact your local VMAC dealer. Call 1-800-738-8622 or 250-740-3200.

4.0 Auxiliary Equipment Connection

The throttle control has three possible speed settings by providing battery power to the red and purple wires. Default settings are:

Speed Selection	Red wire	Purple wire	Factory setting
Off	0 Volts	0 Volts	0 RPM
Speed 1	12 Volts	0 Volts	1,250 RPM
Speed 2	0 Volts	12 Volts	1,800 RPM
Speed 3	12 Volts	12 Volts	Approximate average of 1 & 2

Different methods for single speed connection are shown in Figure 6 (switched) and Figure 7 (relayed). Multiple speed connections are a duplicate of the single speed method.

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4.1 Single Speed Control

- Connect the red wire from the throttle control through a suitable switch to an ignition activated 12-volt power source using an 18 gauge or heavier wire.
- Coil and insulate the purple wire with tape.
- Install a 1-amp inline fuse between the switch and the red wire.

4.2 Multiple Speed Control

- Make the single speed connection using the red wire.
- Connect the purple wire from the throttle control through a second switch to an ignition activated 12-volt power source using 18 gauge or heavier wire.
- Install a 1-amp inline fuse between the switch and the wire.

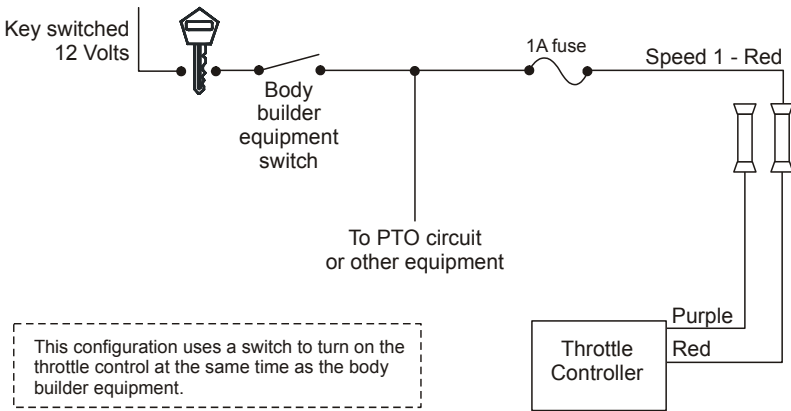


Figure 6

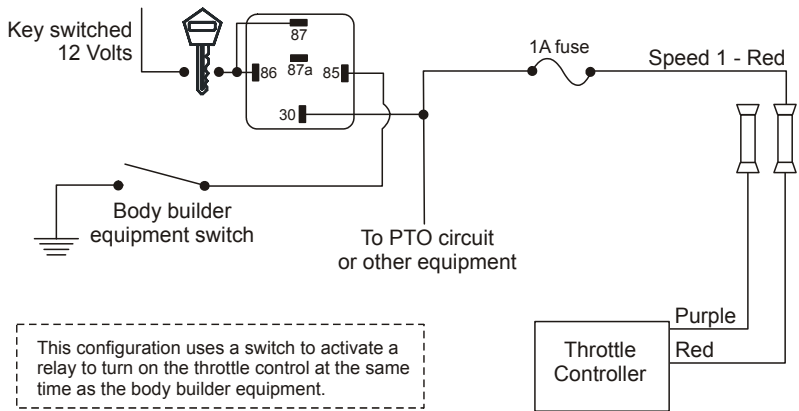


Figure 7

5.0 Adjusting the Throttle Commander

- Make sure that the switches or equipment supplying power to the throttle control are turned off.
- Start the engine. Allow the engine to reach normal operating temperature.
- Engine speed is adjusted by turning the screws on the throttle control. To increase the engine speed turn the screw clockwise, to decrease the engine speed turn the screw counter-clockwise.
- To adjust SPEED 1, activate the throttle control using the control that is connected to the red wire. Adjust the RPM by turning the RPM 1 screw.
- To adjust SPEED 2, activate the throttle control using the control that is connected to the purple wire. Adjust the RPM by turning the RPM 2 screw.
- SPEED 3 is an approximate average of SPEED 1 and SPEED 2.