

PENNTEX HIGH IDLER
 '95-6 GMC 6.5LD (mechanical throttle) Vandura
 Installation and Testing

INSTALLATION:

NOTE: The PARK/NEUTRAL/REVERSE switch may need to be replaced in certain instances. Skip to installation step number 4 to determine if this is necessary before installation.
 Modifications to chassis and idler may be necessary in some applications.
 Controller extension harnesses are available.

******* DISCONNECT THE GROUND CABLE FROM ALL BATTERIES. *******

1. Mount the idle controller (inside vehicle) in a location that is both easily accessible to driver and within wiring harnesses reach.
2. Connect the red wire from the idler to a source that provides +12 volts when the ignition switch is in the run position (ex. Yellow wire to radio from fuse box).
3. Connect the green wire from idler to a white wire on the brake light switch. This wire should be +12v only when the brake pedal is pressed. If the hazard circuit intermittently pulls this wire to +12v, two 6 amp. rectifiers may need to be installed as shown in fig. 1-A. This wire might also be more accessible at the steering column connector as in fig. 1-B.
4. Connect the orange wire from idler to an orange w/black stripe wire from the left side of the Neutral/Park switch. This wire should be grounded only when the gear selector is in Park or Neutral. The switch is mounted on top of the steering column, near the fire wall (fig. 2 & 3). Some chassis that have mechanical park/neutral lockouts in the steering column do not use these terminals. If these terminals are not in use, then connect one to the idler and the other to ground. Some switches may not have terminals for the Park/Neutral part of the switch. If so see fig. 3 for replacement. This switch may need to be adjusted if its position is disturbed during installation.
5. Connect the black wire from idler to chassis ground.
6. Drill a 1/2 inch hole through the fire wall. Be careful not to drill through harnesses, hose etc..
7. Feed harness through to grommet. Be sure grommet seats properly in hole.
8. Tape and tie any loose wire or harnesses away from sharp edges and moving parts.
9. Mount Circuit Breaker & Relay close to a source for +12v (>30A), and away from heat sources such as exhaust manifolds or direct exposure to water spray from tires.
10. Route the idler harness over to relay. Secure harness away from heat sources, sharp edges or moving parts.
11. Connect the blue wire to relay terminal #85.
12. Connect the gray wire to relay terminal #86.
13. Connect the circuit breaker's "BAT" terminal to a +12 Volt source that can supply >30A such as the battery or the power studs on the under-hood fuse center.
14. Check to insure that the solenoid's idle control nut and cable housing are fully retracted. Mount solenoid close to relay and within cable's reach of throttle bracket but away from direct exposure to high heat sources or water spray.
15. Ground the negative terminal of the solenoid to a suitable high current ground. Solenoid mounting screws may be used if solenoid is mounted to frame/chassis.
16. Connect the positive terminal of the solenoid to relay terminal #87.
17. Secure ALL loose wires away from heat sources, sharp edges or moving parts.

Idler Instructions # PD-0010

- 18 Remove throttle clip and throttle linkage from fuel injection regulator.
- 19 Mount idler's throttle bracket to the OEM bracket with the two #10-32x1/2" hex machine screws, #10 lock washers, & #10 keps nuts.
- 20 Remove one 3/8" nut, one 3/8" lock washer and one 3/8" flat washer from the idler throttle cable. Screw the remaining nut all the way onto the cable. Mount idler throttle cable to idler's throttle bracket using only one of the 3/8" lock washers and one of the 3/8" flat washers. Be sure to leave approximately 1/2" of threads exposed at the end.
21. Using the remaining 3/8" flat washer and 3/8" lock washer, mount the hexagonal throttle cable extension tube onto the throttle cable.
22. Use 7/8" hose clamp to attach the linkage adapter to the OEM throttle linkage as shown in fig. 4. The hose clamp adjustment screw should be positioned on the side of the linkage adapter.
23. Slide the idler throttle cable through the linkage adapter as shown in fig. 4.
24. Follow these steps to install 2 non-insulated barrel crimp connector on idler throttle cable as a cable stop in fig. 4:
 - a. Slide the non-insulated barrel crimp connector onto the idler throttle cable. Use a piece of masking tape to temporarily hold the crimp connector in place onto the cable.
 - b. Temporarily re-attach the throttle linkage to the throttle.
 - c. Position the crimp connector on the cable leaving approx. 1/2" of slack between crimp connector and linkage adapter. Use tape to hold in place.
 - d. Disconnect the linkage from the throttle and crimp the connector onto the cable.
 - e. Remove the tape and crimp the second connector onto the cable directly after the first for added slip resistance.
 - f. Using hardened cutters or abrasive cutting wheel cut excess idler throttle cable approx. 1" from the cable stops previously installed.
25. Install the throttle linkage onto the throttle and re-install throttle clip. An extra clip is included if the original is lost.
26. Operate throttle manually to insure that the idler throttle cable slides through the linkage adapter freely and smoothly and that nothing kinks, jams or hangs.
27. Secure all loose harnesses, wires, throttle cables, etc. away from sharp edges, moving components, heat sources or anything that could cause damage.
28. Reconnect all battery ground cables.

TESTING:

1. Set the park brake (emergency brake). Turn ignition switch to run position, but **DO NOT START ENGINE**. The "LOW" battery indicator (red) should be lit. After 10 seconds the "HIGH IDLE" indicator (yellow) should light up.
2. Press the brake pedal. The "HIGH IDLE" indicator (yellow) should turn off. Release the brake and it should come back on with no delay.
3. Press the brake pedal and move the gear shift to "DRIVE". Release the brake pedal. The "HIGH IDLE" indicator (yellow) should not be lit. Put the shifter in "PARK". The "HIGH IDLE" indicator should light.
4. Start engine and press the "MANUAL ENGAGE" button. Allow engine to fully warm up. Turn on all possible engine and electrical loads. Using solenoid's adjustment nut adjust engine RPM to a level adequate to maintain battery voltage above 12.75 volts (1000 to 1500 RPM). Tighten solenoid's locking nut after final adjustment. Alternator may take a few minutes to recharge batteries before voltage can rise. Alternator must also be capable of putting out more current than vehicle and accessories draw at a given RPM.
5. Press brake to insure idle speed returns to normal. Installation complete.

Fig. 1-A

green wire connection to Brake

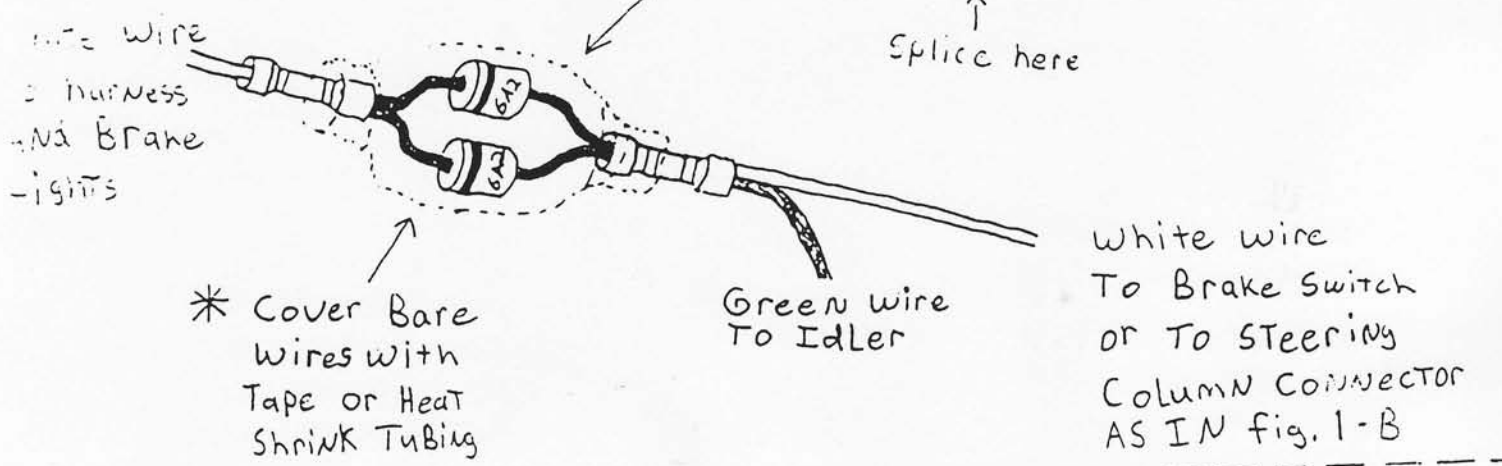


Fig. 1-B

green wire connection to Brake

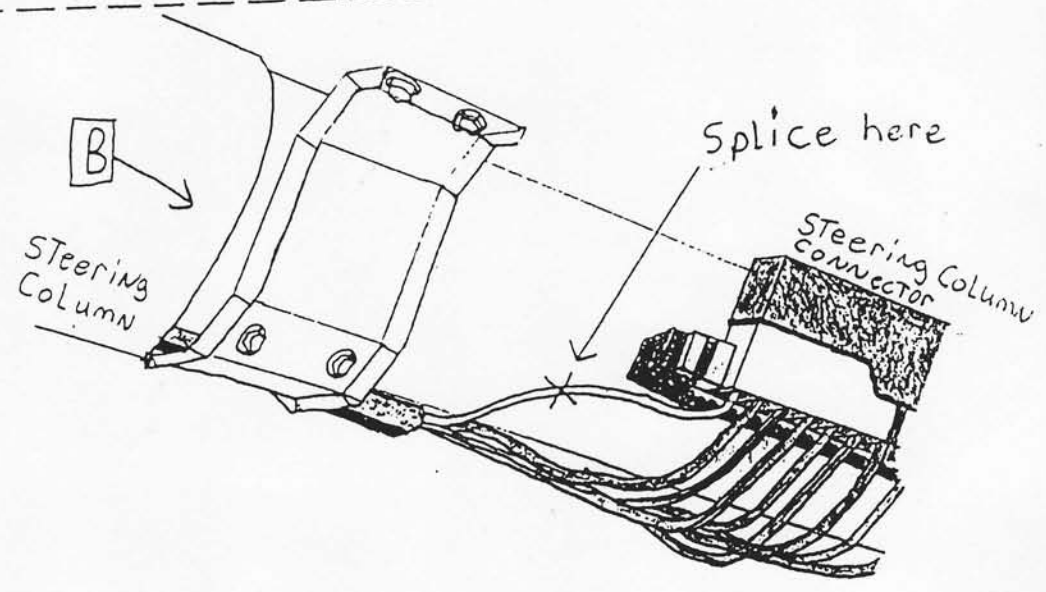
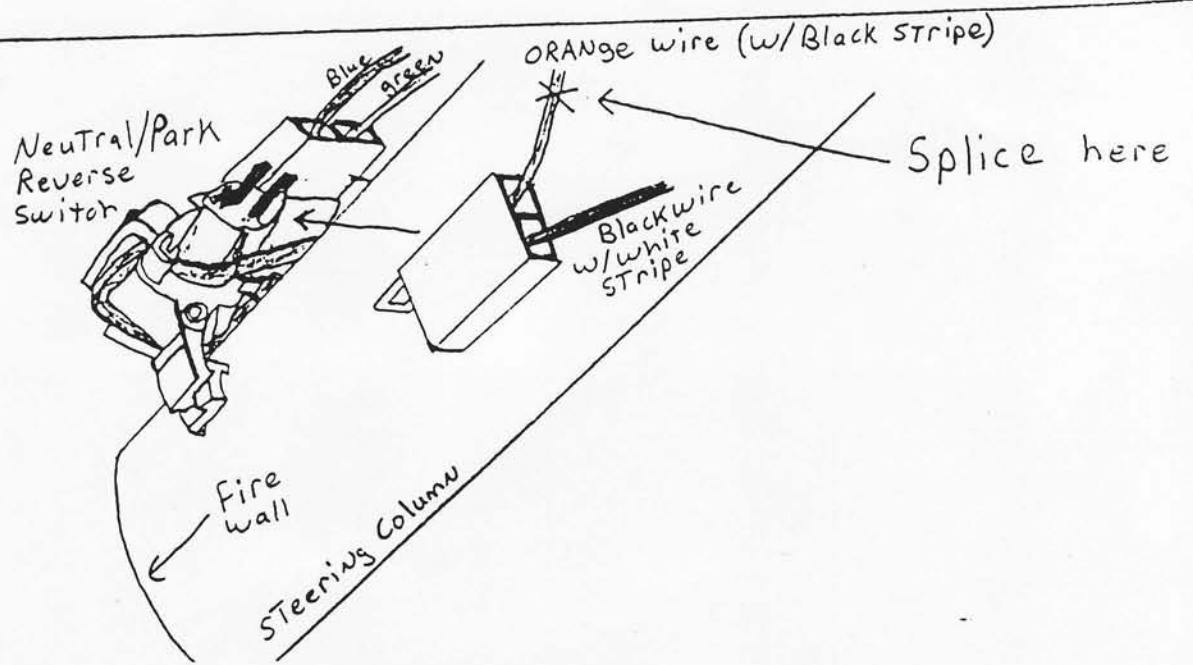
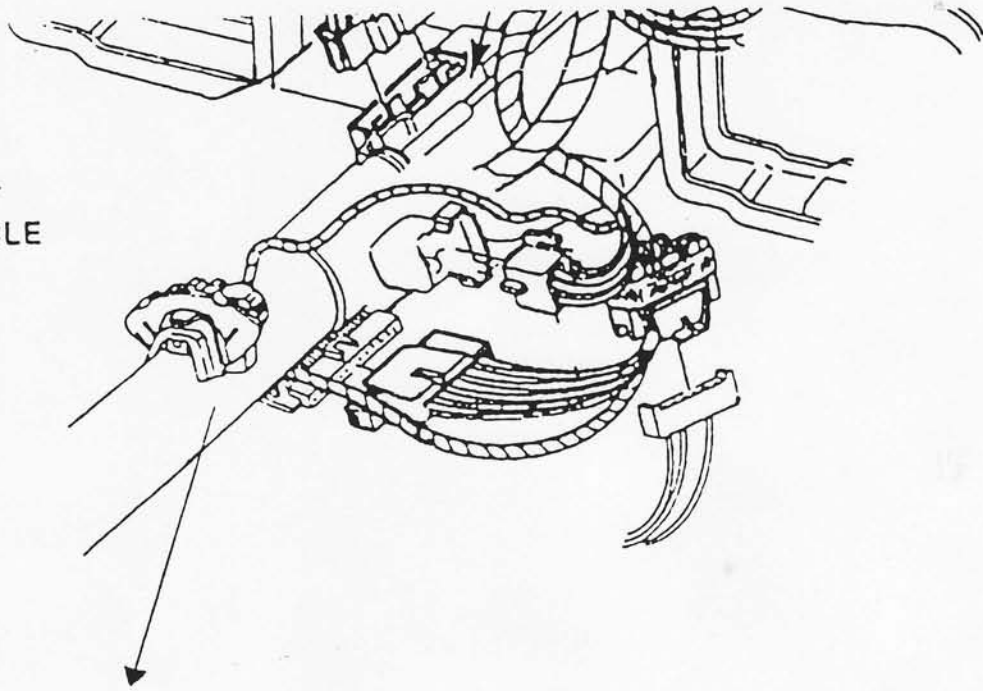


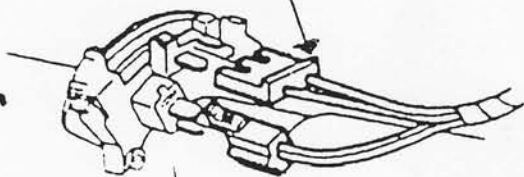
Fig. 2

ORANGE wire connection - Neutral/Park Switch



FRONT
OF VEHICLE

DO NOT USE THE GREEN AND BLUE WIRES !!!
These are for the backup lamps.

FRONT
OF VEHICLE

Steering Column Wiring and Switches

The park/neutral portion of the switch shorts the terminals together when the gear selector is in park or neutral position. The usual colors for these wires are orange and black. Certain chassis do not use this portion of the switch and therefore do not have these wires or connector present. *** Some switches may not have terminals for the park/neutral part of the switch. If so replace switch with GM part # 22514861 or 15705308 or AC/DELCO part # 15679680 or similar. If wires are not present use two 1/4" female quick disconnect crimp connectors to ground the lower terminal (closest to steering column) and connect the upper terminal to the idler's orange wire. **The switch may need to be adjusted for proper operation. Always check for proper idler and backup lamp operation after installation is complete.**

