# **IGNITION SWITCH TEST**

# Switch Test

The easiest way to test these circuits is to use a battery or a battery charger. If using a charger set to 2 or 10 amps not start!! Connect a power source to the red wire. Connect a test light to the ground side of source.

Here is what you should get:

Key off	Brown, Pink and Purple dead
Key counterclockwise Acc.	Power to Brown wire only
Key in run mode	Power to Brown and Pink
Key in crank mode	Power to Pink and Purple

If any of these fail, please verify that the plug was wired correctly.

Should be as follows:

- A= Pink
- B= Brown
- C= Purple

D= Red

This should be the same on each side of the plug.

We will not send out a replacement switch. The column must come back to us for service.

# Ignition wire. Pink

The pink wire travels from the pink wire on the column, through the ballast resistor and out to the coil, or ignition system. This wire is hot in the run position and in the crank position.

If the vehicle is equipped with an electronic ignition, the feed for this is still the pink wire.

If this is a points distributor the pink wire still goes through the ballast resistor.

If using an aftermarket ignition, the pink wire will most likely connect to a power in wire.. Red

IF the aftermarket system says they can bypass the ballast resistor. Then they probably can.



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#### Accessory wire. Brown

This wire is feed for the acc. on the fuse panel. These would be items that can be in use with or without the vehicle running. Radio, heater, windows, this feeds the fuse panel, panel could say acc feed, maybe, from key

This circuit goes dead during crank Do not install fuel pump on this circuit!!!! Do not hook ignition to this circuit!!!

#### Crank, starter. Purple

This wire runs from switch, through neutral safety switch, and on to the "S" lug on the starter.

Depending on the harness it may go through the fuse panel and then out to starter.

If this is a FORD this will most likely go to a starter solenoid on the fender or firewall.

The location of the neutral safety switch could be either on a steering column, on the floor shifter or on some manual trans cars, it could be on the clutch pedal.

We assume with the new paddle shifters the neutral safety switch must be located in their control module.

## Power wire, Red

This is a feed source for the key and all related circuits. This wire is feed for all the relays. Its feed is from the starter and is attached where the battery cable attaches to the starter. This if used with the wiring from a standard harness is going to pick up all power wires, normally 2 from a GM column.

If this wire is fused it better be BIG some company's recommend a maxi fuse. This is normally not fused.

This is the prime location to check if there is no power. It controls most circuits.

This is a power in wire.

If this wire gets hot, then there is probably a short! It should be warm to the touch, under normal load. Not hot!!!!

If this wire gets a short, there is no choice but to disconnect it from the battery.



This wire could be the cause of a fire in a car!!! Protect it well.

If a customer is looking for a power source for some unexplained acc. That must be hot at all times, this is NOT the place!!! Make them go to the starter!!!!

# Green wire?!?!?

There is a green wire in some GM harnesses. This wire is a bulb check. It makes the idiot lights on the dash come on so you can inspect the bulbs.

We cannot support this wire. We will however recommend that a toggle switch be installed that is grounded on one lug to the body, and the other to the green wire. This will provide the ground for this function to work.

We have also heard this wire to be BLACK on Chrysler vehicles. This can be verified by putting the key to the on position, verify there is no power to the wire..test light.. then provide ground to the wire. This should light idiot lights on dash. If so than the switch idea can be used.

## Orange wire??!?!?!

This is an accessory feed wire for a GM vehicle. It should be grouped with the brown wire. This was originally a separate feed for the air conditioning on the OEM type column.

## Vehicle won't shut off!!!!!!

Three possible reasons:

#1 Painless Performance Harness ? see their instructions about the diode between the alternator and ignition system. Item # 276-1661 from Radio Shack. This item keeps the alternator from back feeding the ignition circuit. This is installed in the wire that goes to the #1 terminal on the alternator with the stripe on the alternator side.

#2 could be a defective relay, pull the relay with the pink wires attached.

#3 could be that the ignition system is wired wrong. Pull the pink and brown relays to verify. This should kill the system!! If this worked, it means that the ignition system is wired.. coil.. to the accessory wires instead of the pink wire. This must be corrected!!

If none of this works disconnect the battery and give us call for further assistance.



#### Check a relay

The dirty way to find out if the relay is working in the car.. does it click ?? Hold relay in hand and turn the key.. you will feel and hear it when it connects. Use caution. As the other relays are near this and you could hear other relays click at the same time.

OR

Remove relay from plug.

Get a 12 volt power supply..battery.. battery charger..

Provide ground to #85

Provide power to #30 and #86, #86 is the trigger wire and can be toggled

Check with a test light for power on terminal #87

If relay is good on bench test but not good when installed..Check wire terminal in plug. Should be corresponding wire to terminal #30.

If wire has power, make sure the terminal wire is not pushing out the back of the plug when relay is installed.

Our relays have a mounting tab. This tab is not needed, and not a ground.

