Pantera Electronics Wiper and Washer Rocker Switch Installation Manual

1. These are Windshield Wiper and Windshield Washer switches for 1973 and 1974 L-Panteras.   (for 1971 and 1972 Panteras, see pages 12 and 13)

2. Both wiper and washer switches have plug and play connections to the factory wire harness including a wire for edge illumination.

3. The wiper switch has indicators for low and high speed while the washer switch has indicators for the washer cycle mode.

4. The wiper switch has an internal setting for low speed to compensate for wiper blade loading.

5. Both wiper and washer switches have a connection to match the washer switch to allow for automatic activation when the washer switch is activated. Only 1 wire is required from switch to switch.

6. The washer switch has to wash modes:

>   [Mode 1 - Continuous] Washer fluid is sprayed as long as the rocker switch is held. (as the factory switch operation) This activates the wiper switch in low speed until the washer switch completes the cycle.

>   [Mode 2 - Pulsed] The washer sprays 3 short intervals then stops while activating the wiper switch in low speed until the washer switch completes the cycle.

Note: There is a delay to maintain the wipers active for a short time to complete the windshield cleaning after the washer has stopped.

Wiper Rocker Switch

Note the green LED indicators MUST be on the right hand side of the rocker as in the picture.

Washer Rocker Switch

Removing Factory Wiper and Washer Rocker Switches

Disconnect the Battery by removing the negative (-) or ground cable from the battery terminal.

Gently pry between the switch bezel and the dash to move the switch away from the dash. As the switch moves, the bulb will be pushed back into the bulb bracket. When the bulb is all the way back in the bulb bracket the switch will resist any further movement outward.
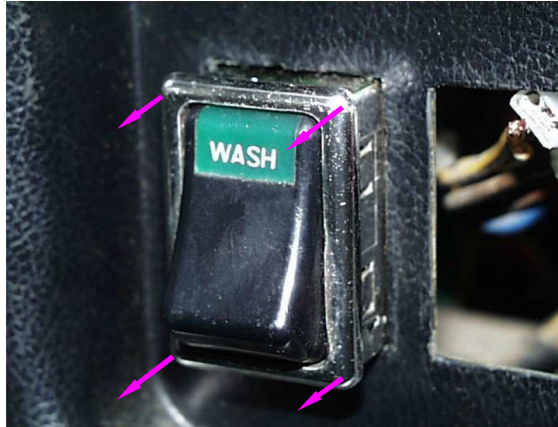
Tilt the top of the switch inward allowing the bottom of the switch to exit the hole.

Lower the switch so the switch can be removed from the opening with the wires, bulb and bulb bracket attached.

Carefully pull the switch out of the dash, do not force the bulb and bracket off the switch. The bulb bracket mounts with a small plastic standoff which can be easily broken.

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Remove the wires from the switch terminals.

If replacing both wiper and washer switch use the same removal procedure for the wipers switch.

This alignment corner configuration needs to be removed.

If the corners have alignment profiles these must be removed. Use a utility knife or razor blade to remove them.
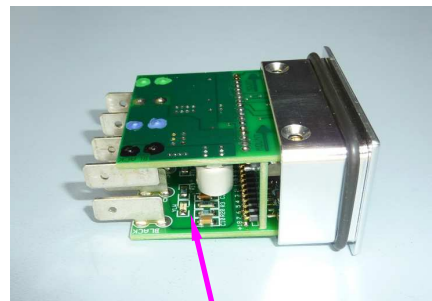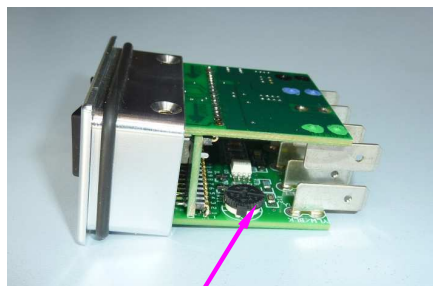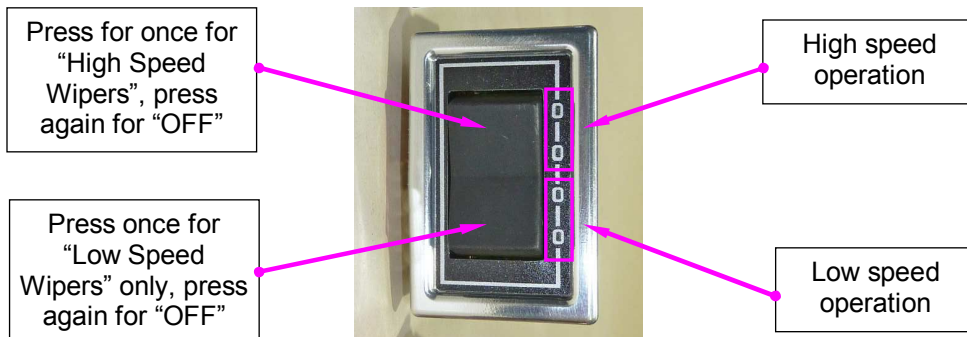
There was some variation of switch opening sizes some holes will except the PE rocker switch and some will require some filing to remove material.
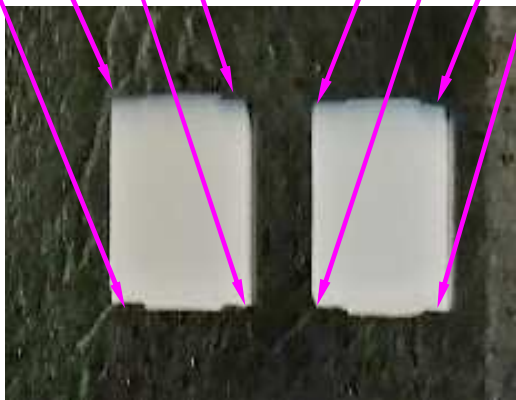
Wiper Switch Connections, Adjustments and Indicator.

> Upper status indicators for high speed wipers, lower indicators for low speed wipers.

> Wipers will always park in low speed even if the high speed is used this assures stopping in the parked position.

> Wipers low speed internal adjustment to compensate for wiper load.

> The wiper parking position switch that is internal to the motor drive unit still needs to be functional and reliable for parking.

> Internal yellow indicator for the parking position switch for verification of proper operation. The indicator will be "OFF" when the wipres are in the park position. (ORANGE terminal/wire)

> Input for washer switch for automatic activation. (VIOLET terminal/wire)

Note: Since this switch is connected to a powered continuously location on the fuse panel, there is 0.004 Amps current that is be consumed even when the Pantera ignition switch is "OFF". While this is very little current it may have an effect over long term battery consumption with disuse of the Pantera. Consider a battery trickle charger if there are long periods of disuse.

Press for once for "High Speed Wipers", press again for "OFF"

High speed operation

Press once for "Low Speed Wipers" only, press again for "OFF"

Low speed operation

Low speed internal adjustment to compensate for wiper load.

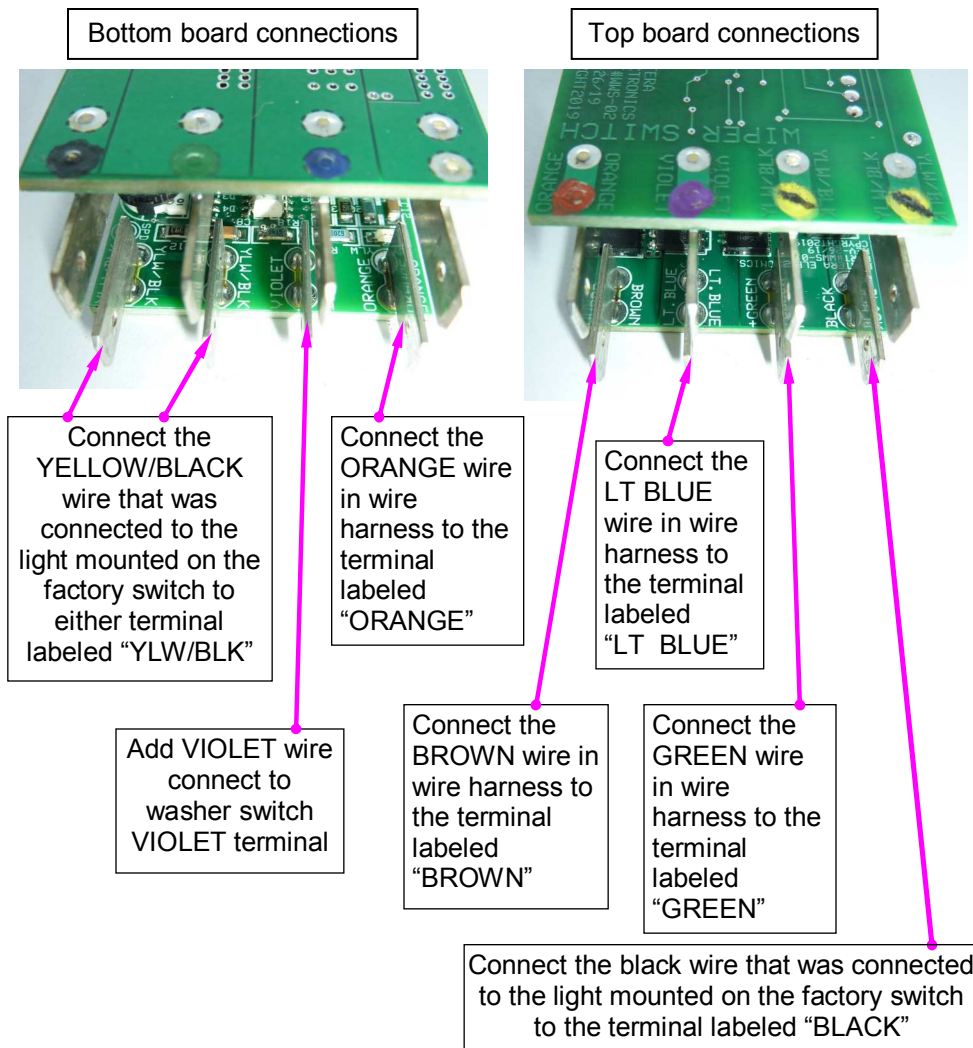Yellow indicator for the wiper parking position.

Wiper Switch Connections Continued

1. The factory wires by color to the wiper switch.

2. Add a VIOLET wire from the wiper switch to the washer switch "VIOLET" terminal.

3. Move the YELLOW/BLACK wire that was connected to the light mounted on the factory switch to the "YLW/BLK" switch terminal.
Note:
Only (1) YELLOW/BLACK wire needs to be connected.
The terminals on the YELLOW/BLACK and BLACK wires will need to change the terminals to quick disconnects to match the PE switch terminals.

Bottom board connections

Top board connections

Connect the YELLOW/BLACK wire that was connected to the light mounted on the factory switch to either terminal labeled "YLW/BLK"

Connect the ORANGE wire in wire harness to the terminal labeled "ORANGE"

Connect the LT BLUE wire in wire harness to the terminal labeled "LT BLUE"

Add VIOLET wire connect to washer switch VIOLET terminal

Connect the BROWN wire in wire harness to the terminal labeled "BROWN"

Connect the GREEN wire in wire harness to the terminal labeled "GREEN"

Connect the black wire that was connected to the light mounted on the factory switch to the terminal labeled "BLACK"

Adjusting Wiper Low Speed

There is an internal adjustment range of speed for the LOW wiper speed, this can be adjusted to compensate for wiper blade loading. *The setting for this speed should be done with a wet windshield. Use water or Windex as a wetting agent to set the low speed.*

This should be set after connections are complete but before installing in the dash.
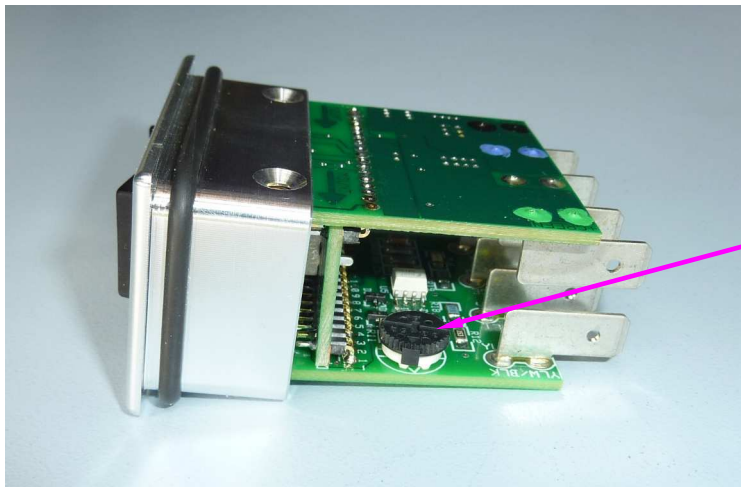
Low speed internal adjustment to compensate for wiper load.
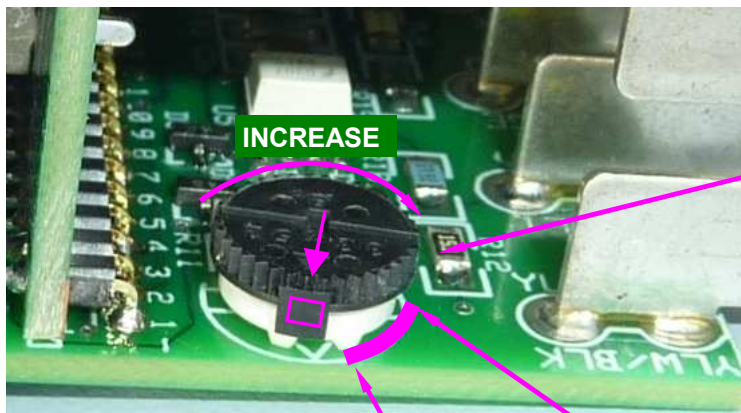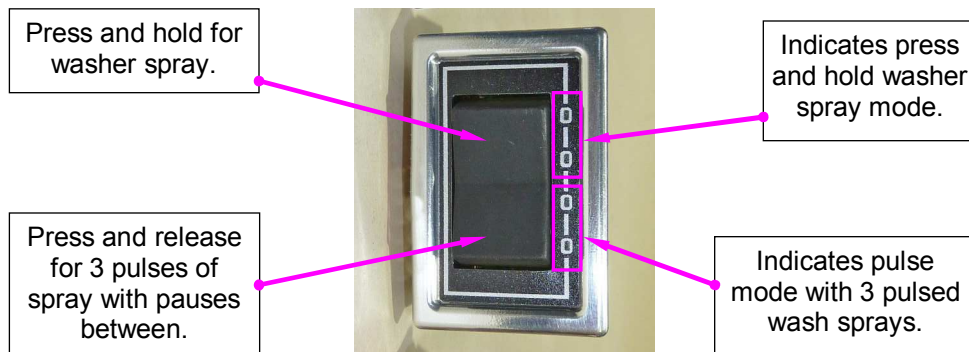

INCREASE

Turn clockwise to increase speed, turn counter-clockwise to decrease the speed.

This is the typical setting range for low speed. Adjust for desired low speed operation.

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Washer Switch Indicators

> Upper status indicators for press and hold washer spray, lower indicators for pulsed washer spray.

> Washer will activate wiper switch in either washer mode and

> The wiper parking position switch that is internal to the motor drive unit still needs to be functional and in reliable operating condition.

> A delay to maintain the wipers active for a short time to complete the windshield cleaning after the washer cycle has stopped.

> Input for wiper switch for automatic activation. (Violet terminal/wire)

Note: Since this switch is connected to a powered continuously location on the fuse panel, there is 0.001 Amps current that is be consumed even when the Pantera ignition switch is "OFF". While this is very little current it may have an effect over long term battery consumption if the Pantera is not used for long periods of time.

Press and hold for washer spray.

Indicates press and hold washer spray mode.

Press and release for 3 pulses of spray with pauses between.
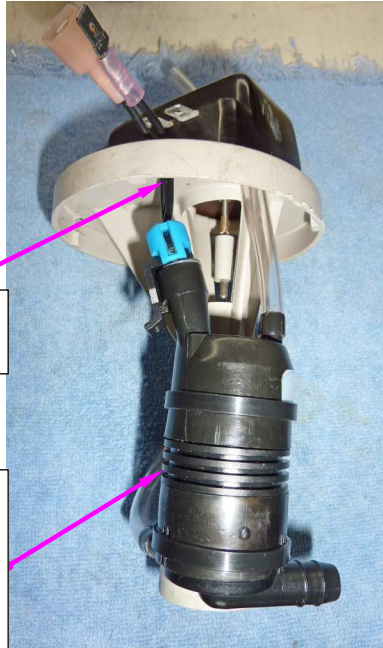
Indicates pulse mode with 3 pulsed wash sprays.

*Note: The factory washer pump is not designed to make pulse sprays in 3 short intervals (mode 2). In order to use mode 2, a modern washer pump must be used such as a AC Delco washer pump, P/N: **AC Delco 12487643** .*

Installing High Pressure Washer Pump.

Small hole drilled for wires

High pressure washer pump.

AC Delco 12487643 or equivalent washer pump.

Simple tie-rap mounting

Washer fluid outlet

Washer fluid inlet

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Use the proper connector to
plug into the pump.
See blue connector, page 8

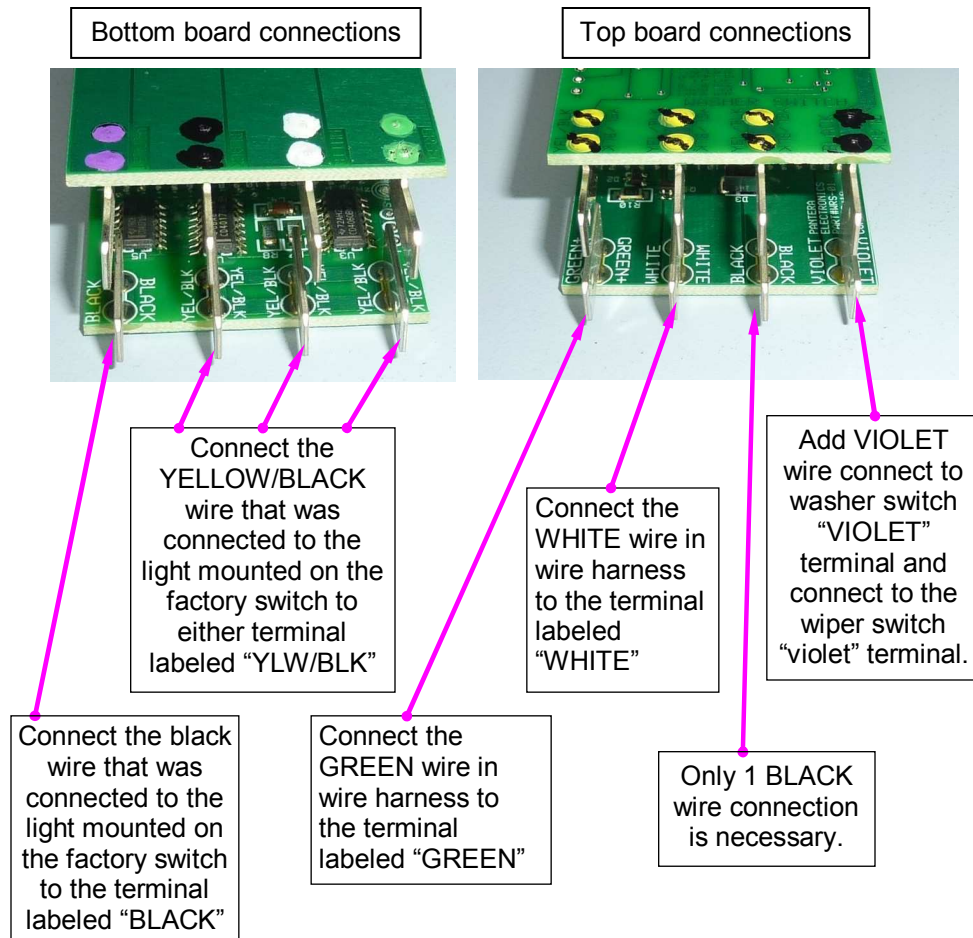This is the positive terminal,
connect it to the WHITE wire.

A restriction in the outlet hose might be necessary to limit the pressure. Use trial
and error to find the proper hole size. A brass screw can be used to fabricate a
restrictor.
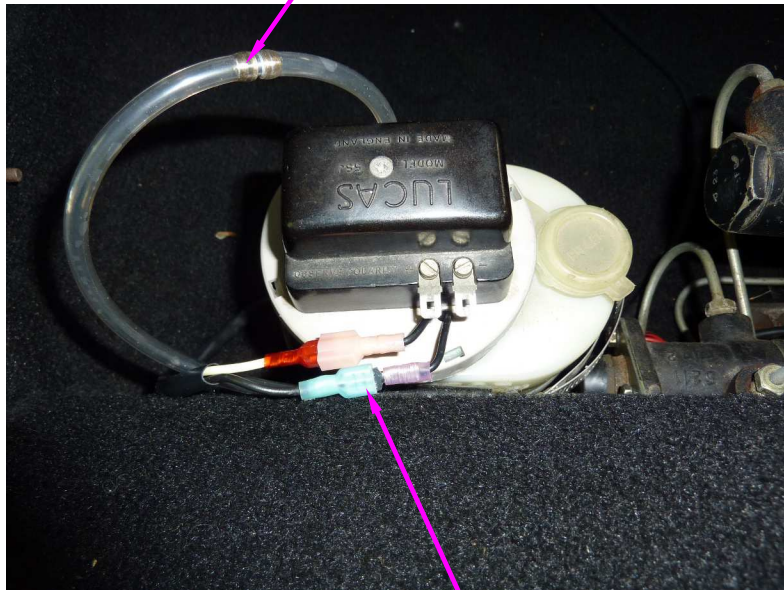
Terminals from factory wire harness to
high pressure washer pump.
Test to make sure the electrical polarity
is correct.

Washer Switch Connections

1. The factory wires by color to the washer switch.

2. Add a VIOLET wire from the washer switch to the wiper switch. (if not done during the wiper switch installation)

3. Add a YELLOW wire with female terminals to a factory YELLOW/BLACK wire on a gauge light that is in close proximity. *Note only (1) YELLOW/BLACK wire needs to be connected, the additional tabs are for convenience.*

Bottom board connections

Top board connections

Connect the YELLOW/BLACK wire that was connected to the light mounted on the factory switch to either terminal labeled "YLW/BLK"

Connect the WHITE wire in wire harness to the terminal labeled "WHITE"

Add VIOLET wire connect to washer switch "VIOLET" terminal and connect to the wiper switch "violet" terminal.

Connect the black wire that was connected to the light mounted on the factory switch to the terminal labeled "BLACK"

Connect the GREEN wire in wire harness to the terminal labeled "GREEN"

Only 1 BLACK wire connection is necessary.

Illumination wiring for wiper and washer rocker switches

1. Each switch MUST have the BLACK wire connected to the terminal labeled "BLACK".

2. Add a VIOLET wire from the washer switch to the wiper switch "VIOLET" terminal.

3. Move the YELLOW/BLACK wire that was connected to the light mounted on the factory switch to the "YLW/BLK" switch terminal.
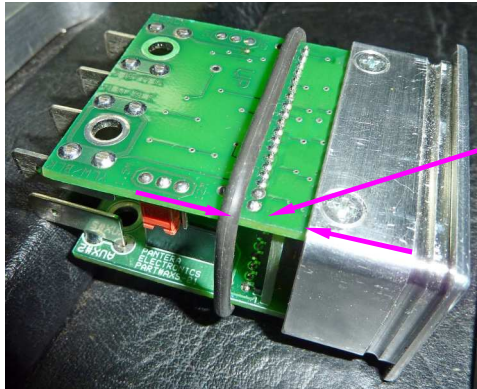*Note:*
Only (1) YELLOW/BLACK wire needs to be connected.
The terminals on the YELLOW/BLACK and BLACK wires will need to change the terminals to quick disconnects to match the PE switch terminals.

Connect the YELLOW/BLACK wires that was connected to the light mounted on the factory switch.
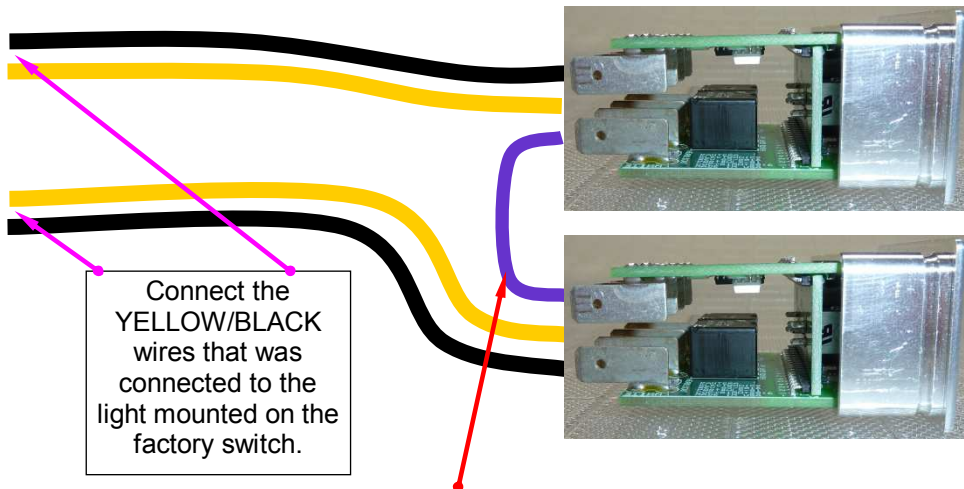
Automatic wiper switch operation wiring for wiper and washer rocker switches.

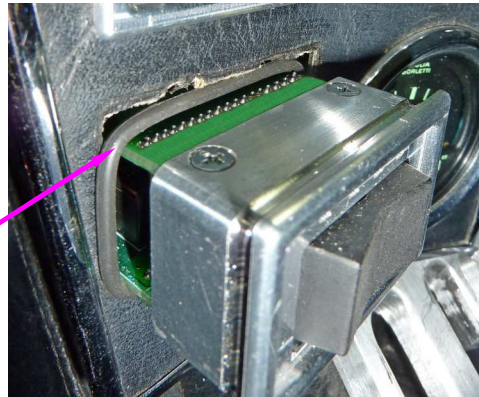1. Add a violet wire from the wiper switch to the washer switch to the tabs labeled "VIOLET".

The Rocker Switches may be warm to the touch, this is normal during operation.
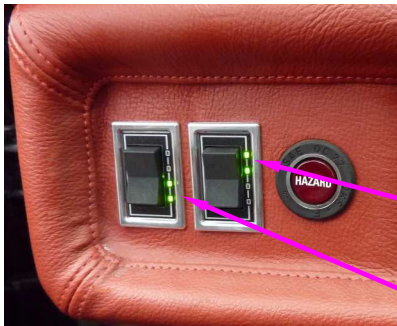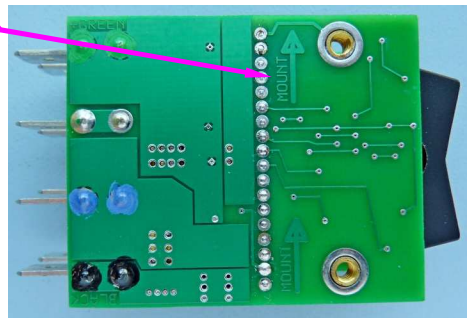
Installing the Replacement Switches

Move the O-ring to this position for installation. Approximately 3/8" space

Tilt switch up and down directions to pass the O-ring through.

Note there is an arrow on the side of the switch. This indicates UP so that the indicators are on the right hand side when installed.
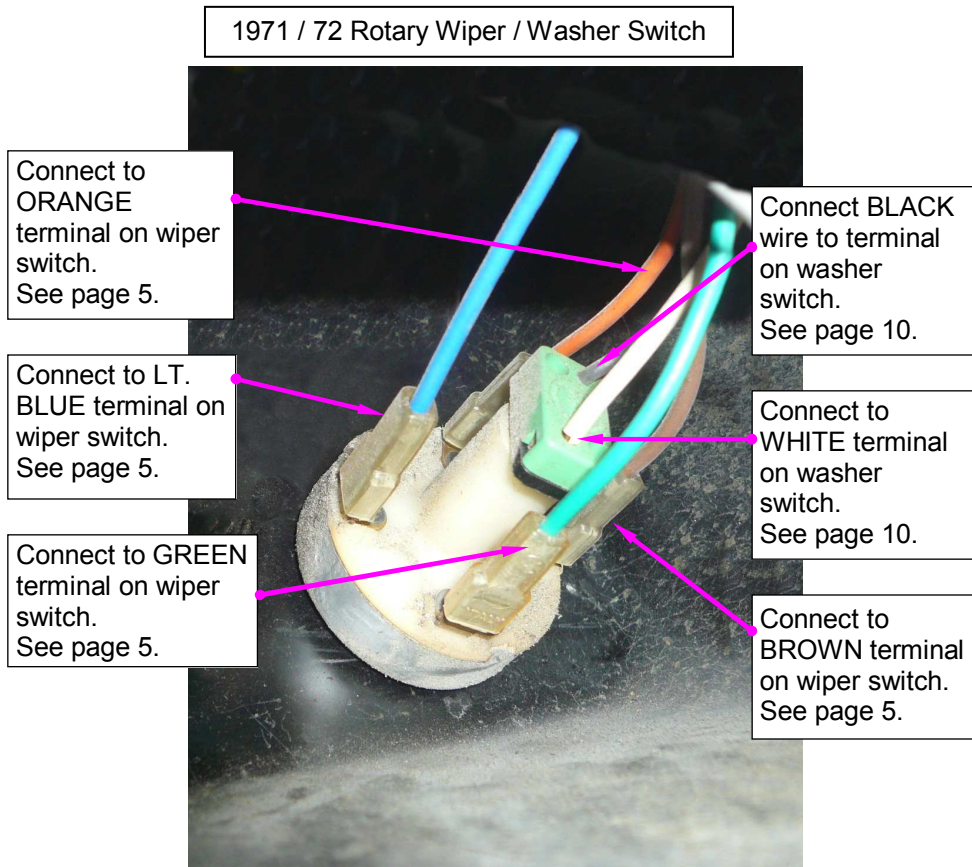
If the indicators are on the left hand side of the rocker the function of the rockers will be reversed and the indicators will be obscured by the rocker part of the switch.

Important to note:

The factory wiper and washer switches could be installed and removed from the front of the dash.
The Pantera Electronics wiper and washer switches can be installed from the front of the dash BUT the retaining O-rings MUST be installed from the back side of the dash. This is difficult due to the small area and the hazard switch near by. The dash pad can be pulled out lowering the steering wheel and removing approximately 4 screws retaining the dash pad. Then installing the O-ring is not difficult.

Converting 1971 / 1972 Rotary Wiper / Washer Switch Connections

1. The factory wire colors are the same for the 1971 / 72 wiper and washer switch with the exception there isn't a BLACK ground wire and a YELLOW/ BLACK stripe wire for lighting the switches.

2. Add a BLACK wire from the "BLACK" terminals of the wiper and washer switches to the BLACK ground wire on the speedometer. This can be done by using a piggy-back terminal on the housing of the speedometer.

3. Add a YELLOW wire from the "YLW/BLK" terminals from the wiper and washer switches to the YELLOW/BLACK wire on the gauge light of the speedometer. This can be done by using a piggy-back terminal on the gauge light socket of the speedometer. The wiring can be daisy-chained to the switches by using the "YLW/BLK" terminals on the washer and wiper switches.

1971 / 72 Rotary Wiper / Washer Switch

Connect to ORANGE terminal on wiper switch. See page 5.

Connect to LT. BLUE terminal on wiper switch. See page 5.

Connect to GREEN terminal on wiper switch. See page 5.

Connect BLACK wire to terminal on washer switch. See page 10.

Connect to WHITE terminal on washer switch. See page 10.

Connect to BROWN terminal on wiper switch. See page 5.

Piggy-back terminal

Finishing the Bezel   [to achieve a anodized appearance with paint]

1. Remove the 4 screws that retain the housing to the internal electronics.

2. Polish the bezel to the desired surface finish.

3. Use a motorized buffing wheel with rouge. Several grades of rouge may be required.

4. Clean well with lacquer thinner and do not touch the surface.

5. Use masking tape on all surfaces except the bezel contour edge.

6. Paint the bezel with DupliColor Metalcast paint, use several thin coats.

7. Allow paint to dry thoroughly before removing the masking tape.

8. Assemble electronics into the housing, make sure to aligned the rocker through the opening in the housing. It can only fit properly one way and install the 4 screws.

9. Remove the backing from the label, note where the indicator windows are and match to the bezel and insert the label.

Dupli-Color METALCAST Paint Colors

Red - MC200
Blue - MC201
Yellow - MC202
Green - MC203
Purple - MC204
Orange - MC205
Smoke - MC206

Disclaimer

The products from Pantera Electronics have been design and manufactured with the best quality components known to the engineer. The installation instructions have been written to assist the owner in the proper use and installation of the products. Pantera Electronics can not be held responsible or held liable for the interpretation or incorrect implementation of the products.

NOTE: It's important to keep this installation manual for future reference since revisions to this product change the contents of the installation manual.

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