

1958 -1962 CORVETTE RAINGEAR INSTALLATION INSTRUCTIONS

Designer's Note: The 1958-1962 Corvette RainGear wiper system that you have purchased is complex and will require patient fitting. Complete Instructions and illustrations can also be found on our web site: "www.raingearwipers.com"

GETTING STARTED - SOME RECOMMENDATIONS:

PLEASE TRY OUR WAY FIRST.

We have found that because Corvettes were virtually hand made there are many subtle differences between each car. This system is designed to accommodate those differences. As you will see, some of the differences are pointed out in the instructions. Because of this we have taken a great deal of effort to make this system adjustable enough to accommodate the differences between the original Corvettes as well as most aftermarket bodies. If, as you are installing it, you think you need to modify the parts supplied, you are probably doing something wrong. Please reread the instructions or call us (1-541-895-2566) before proceeding.

For technical questions etc. please contact us directly! Your dealer does not stock replacement parts and is unlikely to be able to troubleshoot problems.

Another Note: This kit does not contain the outside, chrome escutcheons (trim bezels) which cover the pivot shafts where they pass through the cowl. It also does not include wiper arms and blades and an original switch knob.

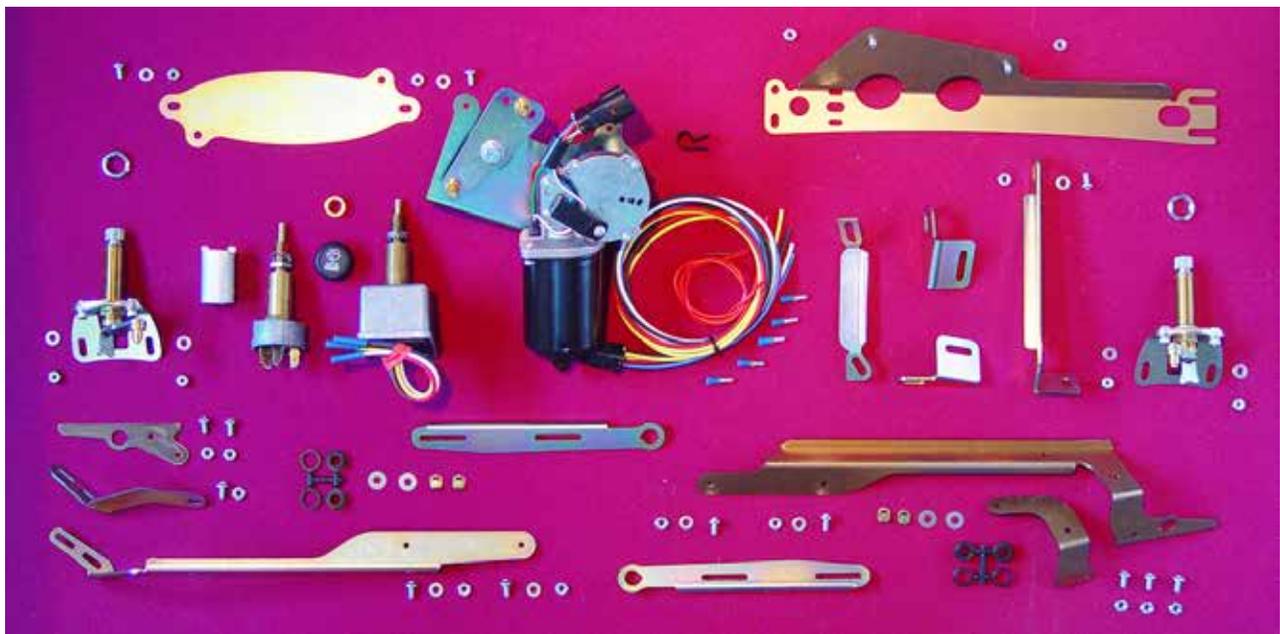


Photo shows kit components and both the 2 speed switch and the optional 2 speed delay switch. (53-57 Cover Plate shown)

Instructions

Removing the stock windshield wiper system.

1. You will be working under the dash in the area of your vehicle that contains the greatest concentration of electrical wiring so first disconnect your battery. Remove and save your stock wiper arms and blades, chrome escutcheons, and stock wiper control knob. Remove the wiper control switch. Be sure to cap any vacuum lines. You will make the installation easier if you remove the instrument cluster, radio and other items that might hinder access to the under dash area.

2. Corvette began using a windshield support structure sometime in 1956. It's usually made of aluminum but some are steel. On 1958-62 models with sculpted dashboards, removal of the driver side stock pivot shaft can be particularly difficult. To help, remove the three bolts that attach the windshield support structure at the kick panel. Undo the emergency brake bolts at the dash panel. This will loosen the metal structure and allow removal of the pivot shaft.

3. Remove the radio support (Fig 02-01). Remove the pivot shaft, spool and cable assembly. (Fig 02-02) Remove the right, or passenger side windshield brace rod. (Fig 02-03) You'll find the 1/4" passenger side windshield brace rod bolt in the engine compartment. (Fig 02-04)



(Fig 02-01) Remove the radio support.



(Fig 02-02) Remove the spool and cable assembly.



(Fig 02-03) Remove the right, or passenger side windshield brace rod.

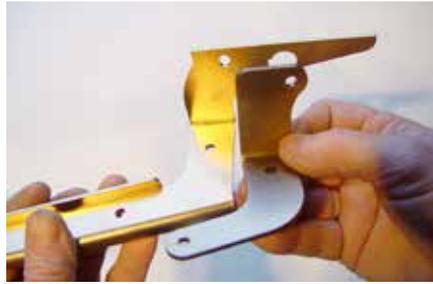


(Fig 02-04) See the pass side 1/4" bolt in the engine compartment.

2. Link Assemblies

The passenger side Link Assembly consists of a shorter Link and a longer Link and a Corner Stiffener.

2a. Attach the Corner Stiffener to the longer Link. (Fig 03-01 & 03-02). Use three 10-32x3/8" phillips head screws, no washers and 3 hex nuts to attach the Corner Stiffener. Tighten the screws.



(Fig 03-01) Attaching the Corner Stiffener to the passenger side Link.



(Fig 03-02) The installed Corner Stiffener

2b. Attach the short Link to the other end of the longer Link. Use two 10-32x1/2" phillips head screws, washers and hex nuts, slip the screws through the long slots of the shorter Link at about mid slot. Leave the screws loose or finger tight so the length of the link can be adjusted later. (Fig 03-03)



(Fig 03-03) The complete passenger side Link assembly with the longer and shorter links attached.

The driver side Link Assembly is comprised of 4 components; a shorter Link, same as the passenger side and a different longer Link, a Link Tip that attaches to the end of the longer Link, and a link corner Stiffener.

2c. Match the outer end of the longer Link to the Link End Stiffener. (Fig 03-04) Using a 10-32x 3/8" phillips head screw, and hex nut, attach the stiffener to the Link at the hole in the stiffener at the opposite end from the two slotted holes.



(Fig 03-04) Match the outer end of the longer Link to the Link End Stiffener.



(Fig 03-05) Sandwich the Link Tip between the Link and the Link End Stiffener.

2d. Sandwich the Link Tip between the Link and the Link End Stiffener. Using two 10-32x1/2" phillips head screws, fasten these three parts together using the slotted holes. Leave the fasteners finger tight for later adjustment. (Fig 03-05 & 03-06)



(Fig 03-06) Attach the 3 together.

2e. In the same way you attached the short Link on the passenger side, install the other short Link to the end of the driver side longer Link assembly. (Fig 03-07)



(Fig 03-07) Attach the short Link to the other end of the longer Link assembly.

3. Plastic Bushing Installation

Refer to (Fig 04-01, 04-02 & 04-03) to see how the Plastic Bushings fit into the keyed holes in the Link Tips.

3a. Orient the tabs on the plastic bushings with the slots in the Link Tip keyed holes. Push the Plastic Bushing into the keyed hole as far as it will go. They are a very tight fit. (Fig 04-04)

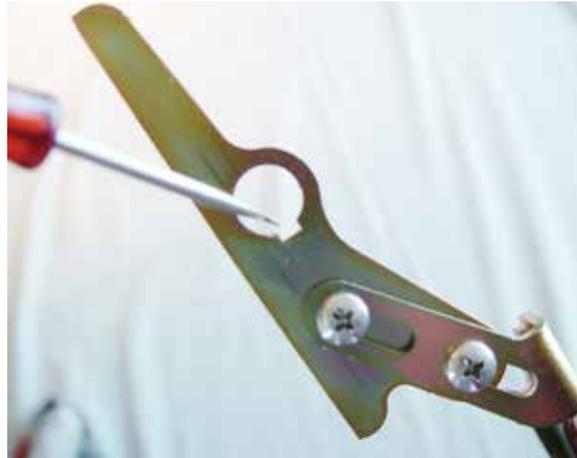
3b. On the opposite side, attach the Plastic Ring over the portion of the bushing extending through the keyed hole. (Fig 04-05) It's not necessary, but we recommend using a very thin bead of super glue to secure the Plastic Ring to the Plastic Bushing. Be sure to keep the glue out of the keyed hole. (Fig 04-06) Do the same for the keyed holes in the opposite ends of the Links.



(Fig 04-01) The Plastic Bushings that fit into the keyed holes in the Link Tips & opposite Link ends.



(Fig 04-02) The Plastic Bushing tab.



(Fig 04-03) This shows the keyed hole in the Link Tip.



(Fig 04-04) Push the Plastic Bushing into the keyed hole as far as it will go.



(Fig 04-05) The Plastic Bushings that fit into the keyed holes in the Link Tips have a plastic ring that fits on the side that extends through the keyed hole.



(Fig 04-06) Use a very thin bead of super glue to secure the Plastic Ring to the Plastic Bushing.

Installation:

1. Wiper Motor Mount and Brace Installation

1a. Using two 10-32x1/2" phillips head screws, nuts and washers, attach the motor to the motor mount bracket as shown. (Fig 05-01)



(Fig 05-01) Using two 10-32x3/8 screws, nuts and washers, attach the motor to the motor mount bracket.

1b. Use a 10mm wrench to remove the motor mounting screw as shown (Fig 05-02). Attach the Motor Brace. (Fig 05-03)



(Fig 05-02) Use a 10mm wrench to remove the motor mounting screw as shown

2. Main Drive Unit Installation

2a. Remove four 1/4-20 hex bolts holding the cowl vent hinge brackets to the under side of the cowl. (Fig 05-04)



(Fig 05-03) Attach the Motor Brace.

2b. Using the same 1/4" threaded holes as guides, place the Main Drive Unit of the PWD wiper system up against the underside of the cowl, between the cowl vent hinge brackets. Use four 1/4-20x5/8" hex bolts and 1/4" flat washers to hold the cowl vent hinge brackets and Main Drive Unit in place. (Fig 05-05)



(Fig 05-04) Remove 4 1/4-20 hex bolts holding the cowl vent hinge brackets to the under side of the cowl.

2c. The opposite end of the Motor Brace goes up against the underside of the firewall where the left side of the old (OEM) wiper motor was attached. Attach the Brace using a 10-32x 3/4" phillips, washer, and nut. This same fastener holds one side of the new Cover Plate. (Fig 05-06)



(Fig 05-05) Place the Main Drive Unit up against the underside of the cowl, between the cowl vent hinge brackets. Use four 1/4-20x3/8" hex bolts and 1/4" flat washers to hold the Main Drive Unit and cowl vent brackets in place.

2d. A new Radio Support Tab can be placed on the new Motor Mount Bracket. Use a 1/4-20x5/8" hex bolt and flat washer to attach it. (Fig 05-07)



(Fig 05-06) The opposite end of the Motor Brace goes up against the underside of the firewall where the left side of the old (OEM) wiper motor was attached. Attach the Brace using a 10-32x3/4" phillips, washer, and nut. This same fastener holds one side of the new Cover Plate.

(Fig 05-07) A new Radio Support Tab can be placed on the new Motor Mount Bracket. Use a 1/4-20x5/8" hex bolt and flat washer to attach it.



3. PIVOT SHAFT INSTALLATION

Installation and adjustments can be difficult. Just lying on your back, looking upward past the clutch and brake pedals, steering column, windshield support structure, emergency brake and the electrical wiring can be a real challenge. Remove as much of the above as practical

BEGIN AT THE PASSENGER SIDE> IT'S EASIER

3a. Before installing the Pivot Shaft Assemblies be certain that the allen head screws are loose enough that the two sheetmetal pieces move freely.

3b. Lay on your back looking up under the dash. Locate the same 10-24 studs the original pivot shaft brackets were attached to. See (Fig. 06-01). Raise and insert the tip of the brass Pivot Shaft through the wiper hole in the body. Orient and place the two shotted holes onto the 10-24 studs. See (Fig. 06-02) . Use two 3/16" flat washers and two 10-24 lock nuts to secure the Pivot Shaft Bracket to the body. See (Fig. 06-03)

3c. Because the two allen head screws are loose the brass pivot shaft should have orientated itself in the wiper hole. Tighten the two allen head screws. See (Fig. 06-04)

3d. On the outside place a fibre gasket over the brass pivot shaft. Add the passenger side Chrome Escutcheon and chrome Escutcheon Nut. See Fig. (06-05). If you are satisfied with the fit use some sealant on the gasket and tighten the Chrome Escutcheon Nut with the Aluminum Escutcheon Nut Wrench. See (Fig. 06-06).



(Fig 06-01) Locate the original pivot shaft bracket studs.



(Fig 06-02) Place the two shotted holes onto the 10-24 studs.



(Fig 06-03) Secure the Pivot Shaft Bracket to the body.



(Fig 06-04) Tighten the two allen head screws.



(Fig 06-05) Add the passenger side Chrome Escutcheon and chrome Escutcheon Nut.



(Fig 06-06) When you are satisfied with the fit of the Pivot Shaft and chrome escutcheon fit on the outside of the car, tighten all interior screws before installing the chrome escutcheon nut with the aluminum Escutcheon Wrench supplied in the kit. Overtightening can damage the fiberglass.

4. PIVOT SHAFT ADJUSTMENT

Once installed If you feel too much Brass Pivot Shaft shows past the Chrome Escutcheon Nut OR the Chrome Escutcheon Nut isn't catching enough threads this can be corrected.

4a. Crawl back under the dash and remove the Pivot Shaft Assembly.
4b. Two brass hex nuts secure the brass Pivot Shaft to the Pivot Shaft Bracket. Use two 3/4" open end wrenches to loosen them and adjust the Pivot Shaft as needed. Reinstall. See (Fig. 06-07)



(Fig 06-07) Adjust the Pivot Shaft as needed.

5. Installing the Cross Links

Passenger side: The Passenger Side Cross Link does not have adjustment slots at the outer end, only between the short and long link.

5a. Place the black bushing, in the short link end of the Passenger Side Cross Link, on the upper brass pivot pin on the Drive Unit in the middle of the car. Place the black bushing on the other end of the Passenger Side Cross Link onto the brass pivot pin on the passenger side Pivot Shaft arm. (Lubricating the plastic bushing with oil or grease is not necessary but is recommended to extend its life.)

5b. Put a dab of thick axle grease on the exposed side of the plastic bushing. Place a very thin flat washer onto the exposed brass pivot pin, sticking it to the grease on the plastic bushing Fig. 07-01. (Without doing this step, the thin washer can either fall off or drop into the small groove in the brass pivot pin making it very difficult to install the spring clip.) Grab a spring clip with a pair of needle nose pliers as shown in Fig 07-02. Slide the spring clip onto the brass pivot pin, press towards the thin washer/plastic bushing until the clip slips into the small groove in the brass pivot pin, securing the Cross Link to the Pivot Shaft. Install the very thin washer and spring clip on the passenger side in the same way.

5c. To adjust the Passenger Side Cross Link length, loosen the two phillips head screws that attach the long and short link halves of the Passenger Side Cross Link. The slots in the short link allow for adjustment. (Fig 07-03)

5d. At the Pivot Shaft, there should be between a 1/4" to 3/16" gap between the flat in the Cross Link end and the stop tab on the Pivot Shaft when it is in the parked position. (Fig 07-04) Extend or retract the Cross Link until the gap is within the 1/4" to 3/16" requirements. Extending the cross



(Fig 07-01) Put a dab of thick axle grease on the exposed side of the plastic bushing before placing the very thin flat washer onto the exposed brass pivot pin, sticking it to the grease on the plastic bushing.



(Fig 07-02) Grab a spring clip with a pair of needle nose pliers. Slip the spring clip over the brass pivot pin, press towards the thin washer/plastic bushing and secure the clip into the groove in the shaft.



(Fig 07-03) Passenger side Link length adjustment. Loosen the two phillips head screws that attach the long and short Link halves. Slide them apart or together to adjust the length.



(Fig 07-04) When the Pivot Shaft is in the parked position, there should be between a 1/4" to 3/16" gap between the flat in the Cross Link end and the stop tab on the Pivot Shaft.

link reduces the gap. Tighten the two phillips head screws to fix the Cross Link length.

Driver side: Adjustment starts at the outer end of the driver side Cross Link assembly near the driver side wiper arm Pivot Shaft.

5e. Attach the driver side Cross Link assembly to the remaining pivot pins in a like manner as the passenger side. The short link end of the driver side Cross Link assembly is installed on the remaining brass pivot pin on the Drive Unit. The outer end attaches to the driver side wiper arm Pivot Shaft.

5f. To clear both the defroster duct and the brake pedal/clutch pedal bracket, the tip of the driver side Cross Link can be extended away from the cowl or drawn closer to the cowl to



(Fig 07-05) On the driver side loosen the two phillips head screws, extend or retract the Link Tip as needed clear both the defroster duct and the brake pedal/clutch pedal bracket. Retighten the screws.

accommodate clearance. Loosen the two phillips head screws, extend or retract the Link Tip as needed and retighten the screws. (Fig 07-05)

5g. Adjusting the park position of the Pivot Shaft is done in the same way as the passenger side by extending or retracting the driver side Cross Link in the center, where the short and long links are attached with two phillips head screws. (Fig 08-01) The gap between the flat in the Cross Link Tip and the stop tab on the Pivot Shaft, when it is in the parked position, should be within the 1/4" to 3/16" requirements. (Fig 08-02)



(Fig 08-01) Driver side Link length adjustment.



(Fig 08-02) Adjusting the parked position of the Pivot Shaft is done in the same way as the Passenger side.

6. Installing the Motor Cover Plate and Windshield Brace.

A Cover Plate is supplied to cover the hole left in the firewall from the old wiper motor spool. (Fig 08-03)



(Fig 08-04) The Motor Brace was attached to the cowl so the wiper unit could be installed and adjusted. The Windshield Brace Mounting Bracket will be added at that location. (53-57 shown)



(Fig 08-03) A Cover Plate is supplied to cover the hole left in the firewall from the old wiper motor. 58-62 shown



(Fig 08-05) The Cover Plate goes where the old motor was mounted. (53-57 Cover Plate shown.)

6b. Attach the Windshield Brace on the middle right hand windshield attachment bolts. (Fig 09-01 & 09-02) Attach the other end of the to the Windshield Brace to the Windshield Brace Mounting Bracket mounted under the Cover Plate.

6c. Install the remaining 10-32x 3/4 phillips head screws in the Cover Plate.



(Fig 09-01) Attach the Windshield Brace on the middle right hand windshield attachment bolts.



(Fig 09-02) Attach the other end of the Windshield Brace to the Windshield Brace Mounting Bracket mounted under the Cover Plate.

7. Installing the Switch

7a. Make certain the switch is in the off position, all the way counterclockwise.

7b. If your application is using the standard 2-speed switch, install the switch so the flat spot in the shaft is at the bottom, 6 o'clock position. This will align the shaft with the set screw in the bottom of the stock switch knob.

7c. If your application is using the optional 2-speed switch with intermittent delay, install the switch in the dashboard in the manner you like best. File a flat spot in the shaft at the bottom, 6 o'clock position, for the switch knob's set screw. (Fig 09-03) File enough to allow the set screw to securely clamp the knob to the shaft. (Fig 09-04)



(Fig 09-03) File a flat spot in the shaft at the 6 o'clock position for the switch knob's set screw.



(Fig 09-04) File enough to allow the set screw to securely clamp the knob to the shaft.

8. Wiring

8a. Please wire the system according to the wiring diagram supplied. **NOTE: with an intermittent switch, you cannot test run this system using power from a battery charger.** Test with a fully charged 12 volt automotive battery.

9. Testing & installing wiper arms and blades.

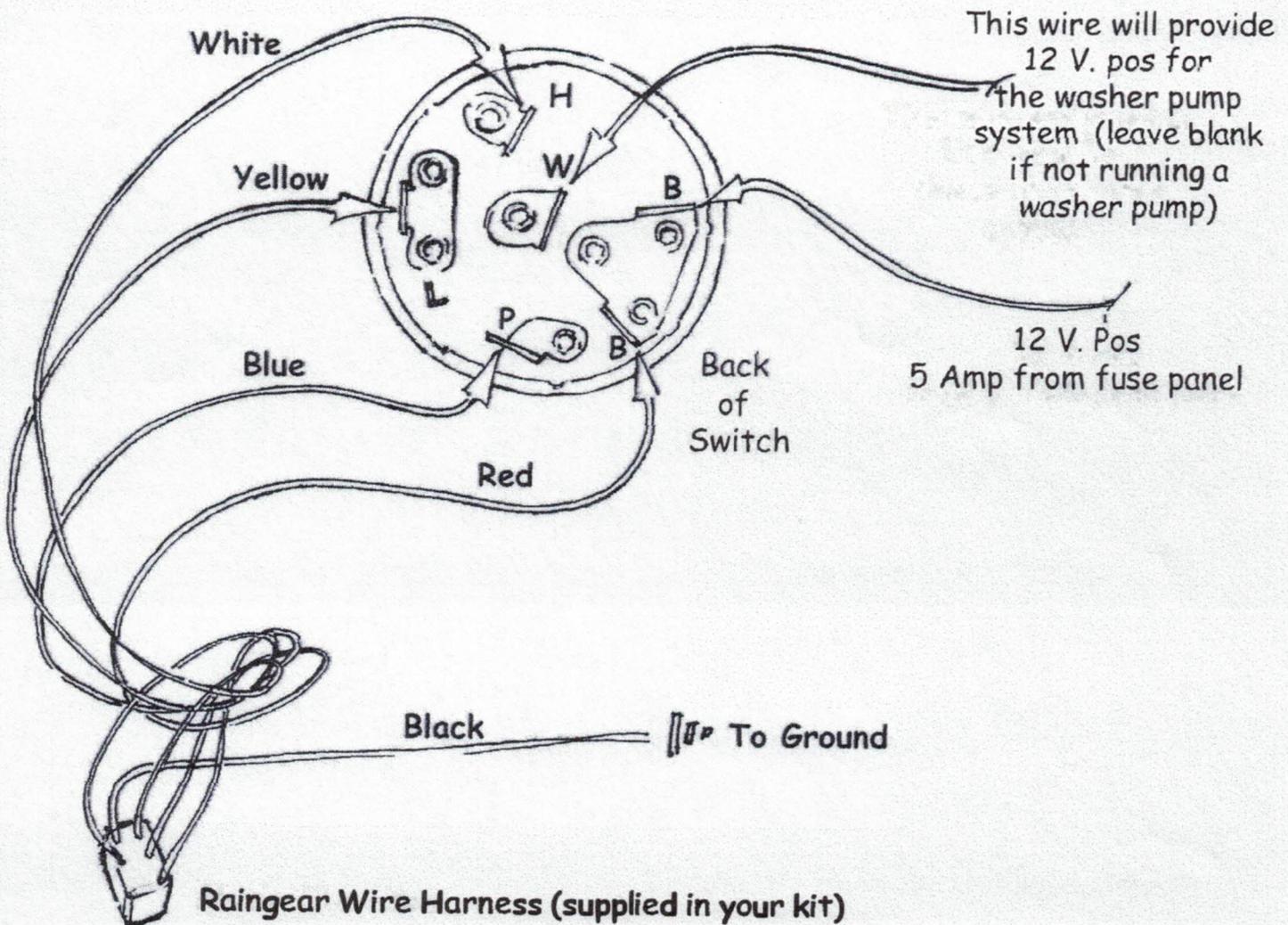
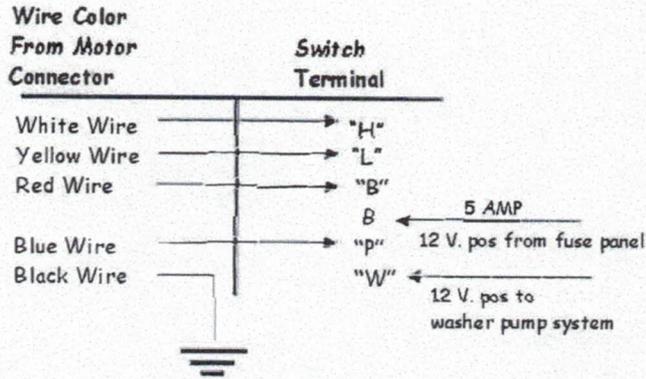
9a. Before installing the wiper arms and blades, test the wiper sweep by wrapping tape around the shaft, leaving about a 6" flap. Turn on the wipers and make sure the sweep is correct and the arms will park in the proper position. When satisfied that the sweep is correct, remove the tape and install the arms and blades.

RAINGEAR

Wiring Diagram

2 Speed Switch

Turn knob to activate wipers.
 If running a washer system, push knob to squirt washers. The wiper blades will cycle twice.

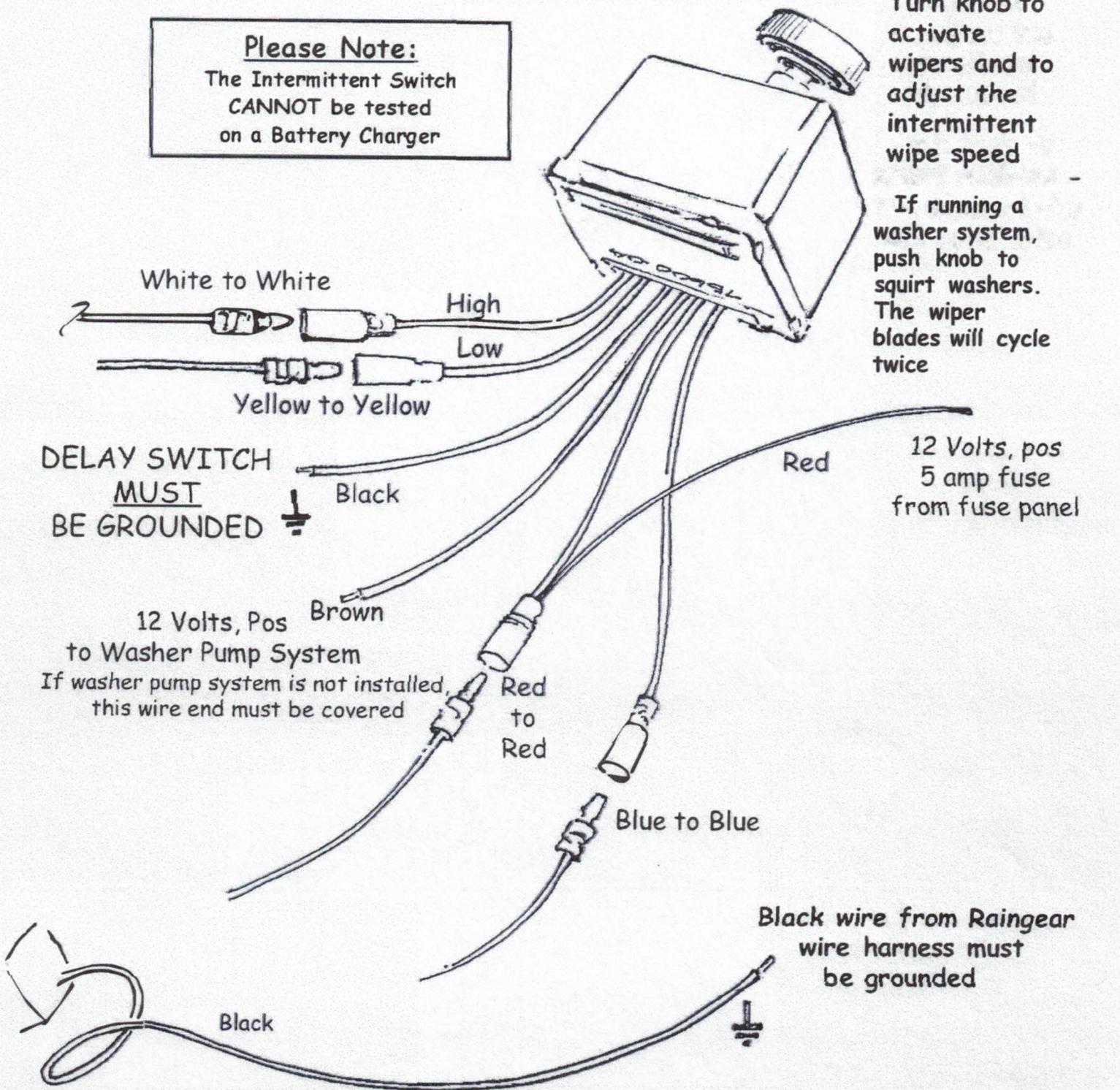


RAINGEAR Wiring Diagram 2 Speed/Intermittent Switch

Please Note:
The Intermittent Switch
CANNOT be tested
on a Battery Charger

Turn knob to activate wipers and to adjust the intermittent wipe speed

If running a washer system, push knob to squirt washers. The wiper blades will cycle twice



NOTE: The colors of the wires from the wiper motor and the colors of the wires on the harness do not match. This is correct.