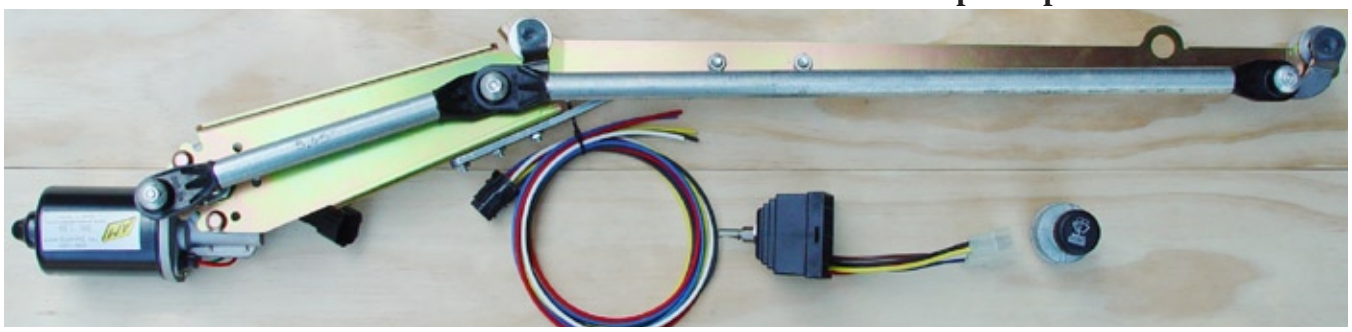
Installation instructions for 1953 to 1955 Ford F-100 pick-up trucks



Pacific Western Design's modern RAINGEAR lever and link electric windshield wiper system for 1953 to 1955 Ford F-100 pickups provides a direct mechanical link from the powerful 12 volt motor to the wipers, replacing the old tired vacuum motor and linkage. The result is a much more dependable and positive system.

This modern F-100 Raingear Kit installs under the dash and is designed with simple, built-in, adjustments. The new wiper pivot shaft installs in the original position and uses your original or reproduction escutcheons to maintain the stock look. The F-100 Raingear kit includes a 2-speed Wiper/Washer switch or an optional 2-speed Wiper/Washer/Intermittent switch.

Complete Instructions and illustrations can also be found on our web site: "pacificwesterndesign.com"

Getting started: Some recommendations:

PLEASE TRY OUR WAY FIRST

Note 1: This system is designed to fit your truck. If you think you need to modify the parts supplied you are doing something wrong. Please read the instructions or call us (1-800-686-1955) 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.

Note 2: This kit does not contain the outside chrome escutcheons (trim bezels) or gaskets, which cover the pivot shafts where they pass through the cowl. If you need the escutcheons, Dennis Carpenter stocks them.

Note 3: Please familiarize yourself with the photographs and figures included.

Fig 1: This is the kit as shipped. It is broken down for shipment and will need to be reassembled per the instructions on the following page.

Pre-Installation:

First disconnect your battery. You will be working under the dash in the area of your vehicle that contains the greatest concentration of electrical wiring.

Remove the stock dash insert (speedometer and gauges). Remove and retain the driver side defroster duct. It is not necessary to remove the glove box, radio, heater or passenger side defroster duct but it would make things a little easier if you made space available from the middle of the cab to the driver side wiper hole.

Remove and save your stock wiper arms and blades. Remove the stock control knob, wiper controls or switch and wiring from the dash panel. On the outside of the cowl, remove the stock escutcheon nuts and chrome escutcheons. Keep them for later. Remove the stock wiper system and vacuum hose or wiring. If you are keeping the original engine, be sure to cap the vacuum fitting at the intake manifold if you had vacuum wipers or you will have a good size vacuum leak.

Pre-installation assembly:
For shipping purposes the F-100 Raingear wiper system is disassembled into a right and a left side unit. The right has the right side pivot shaft assembly, the right hand bridge assembly and the cross link. The left is the drive unit which includes the left side pivot shaft, left side bridge assembly, the first link and the motor. See figure 1. The two sections must be reattached before installation into your F-100 cab.

Using two 1/4" nuts and washers, join the right side bridge assembly to the left side bridge assembly. See Figure 2.

Before attaching the cross link to the left side pivot shaft lever, make sure the right side pivot shaft lever is facing down, similar to the left side pivot shaft lever. This is extremely important. The cross link end should be below and slightly to the left of the pivot shaft. See figure 3.

With your fingers, remove the cup nut on the left side pivot shaft lever. Place the cupped plastic end from the cross link on the right side unit onto the top of the plastic link end on the left side pivot shaft lever. It must be installed with a lubricant such as white grease. Place the cup nut back on the left side pivot shaft lever and using a 3/8" wrench, snug the cup nut. See figure 4. The idea is to not tighten it too much. Pull up and down on the plastic cup bearing as you tighten the nut. You will feel the play diminish. Remove all play but do NOT tighten the nut any further. See figure 5. After some break-in, re-check to make sure it is still snug.

Put 2 round spacers and a washer on both threaded brass pivot shafts. See figure 6.

Now you are ready to install the Raingear windshield wiper assembly as a complete unit.

Installation:
Insert the brass pivot shafts through the stock wiper holes in the cowl. On the outside of the cowl, place one gasket, the chrome escutcheon and a chrome nut onto each brass pivot shaft. See figure 7. Tighten the chrome nut securely. See figure 8.

Fig 2: Below - The right and a left side units must be reattached before installation into your F-100 cab.

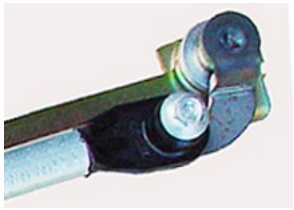


Fig 3: Above - Make sure the right side pivot shaft lever is facing down, similar to the left side pivot shaft lever. The cross link end should be below and slightly to the left of the pivot shaft.

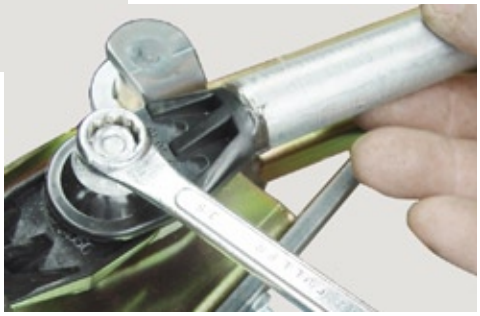


Fig 4: Right - Place the plastic end from the right side cross link onto the top of the first link end on the left side pivot shaft lever. Replace the cup nut on the left side pivot shaft lever.

Fig 5: Right - Do not tighten the cup nut too much. Pull up and down on the plastic cup bearing as you tighten the nut. You will feel the play diminish. Remove all play but do NOT tighten the nut any further.

Fig 6: Right- Place 2 of the 4 round spacers then a washer on each pivot shaft before inserting the brass pivot shafts through the stock wiper holes in the cowl.

Fig 7: Above- On the outside, place a gasket, chrome escutcheon and escutcheon nut onto each brass pivot shaft.

Fig 8: Above- Using the 3/4 open end wrench, tighten the chrome nut.

Reinstall the defroster ducts. See figure 10.

Install the wiper switch into the stock dash position using the supplied bezel nut. See figure 11. Install the knob. See figure 12.

Please wire the system according to the wiring diagram supplied with the switch you are using.

Fig 9: A view of the left pivot shaft, cross link and first link through the gauge cluster opening.

Fig 10: Replace the defroster ducts. The wiper assembly runs between the cowl and the left defroster duct.

Testing:
Do not install the wiper arms yet. You first must test to make sure the system functions properly.

You must use a good, charged 12 volt battery to test the system. A battery charger will not work. A battery with a charge below 11.5 volts will not work.

Test the wiper park position by wrapping tape around the shafts, leaving about 6" flaps. Turn on the wipers and make sure the arms will park in the proper position. The flap of tape should stop at the end of the rotation, just as the direction reverses.

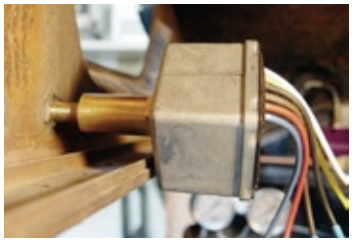


Fig 11: Right- The switches mount in the stock location. Due to the size, the optional variable/intermittant switch is provided with an extension so it will clear the bottom of the dash

Fig 12: Above- Install your knob.

Adjustments:
We make every effort to adjust the drive arm on the wiper motor so that it will park correctly at the end of the stroke. If after running your new wiper system the arms park early (before the end of travel, where the direction reverses) or late (the arm goes down, then comes back up again), you will need to remove the system and realign the wiper motor drive arm with the first link. See figure 13.

Point "A" is the center of the wiper motor spindle where the drive arm attaches. Point "B" is the lower end of the "first link". It rotates about point "A" as the drive arm rotates. Point "C" is the upper end of the "first link" and attaches to the left side pivot shaft lever. Note that in the park position, points B, A and C are all in line. See figure 13. To realign this geometry, hold the drive arm with a wrench or channel locks. Loosen the 13mm spindle nut at point "A" and realign per figure 13. Retighten the spindle nut to lock the drive arm to the motor output spindle. Retest to make sure the sweep is now correct.

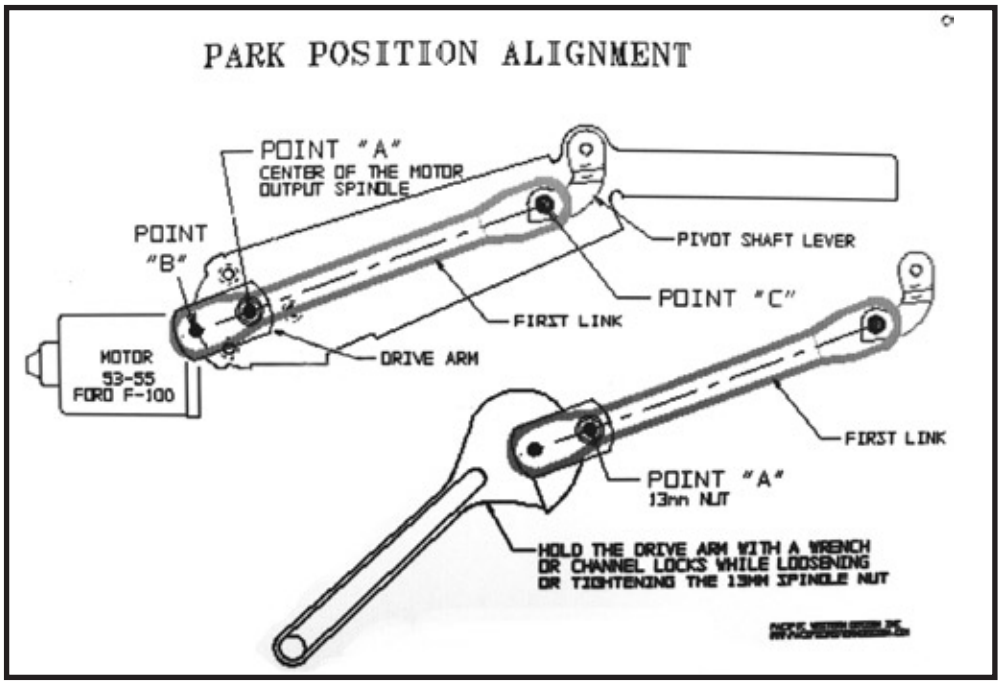


Fig 13: At the upper left is a diagram of the left side unit. The lower right shows the correct park position alignment and how to secure the drive arm with a wrench.

Installing the wiper arms and blades:
Remove the old flap of tape and reinstall a new flap where you want the wiper arms to park. Turn on the wipers and make sure they are now parking properly and the sweep is correct. When satisfied that both the park position and sweep are correct, remove the tape and install the arms and blades.