

**To remove and reinstall the connecting link from drive arm, follow the steps below:**

1. Energize the motor briefly so that the drive arm and connecting link are in the top "12-o'clock" position. **Caution:** When energizing the motor, take care to keep fingers clear of all moving parts.
2. Disconnect the connecting link from the sweep angle plate and move the sweep angle plate counter-clockwise off to the side so it does not interfere with the connecting link.
3. Using a flat blade screwdriver, remove the "U" clip and washer attaching the connecting link to the drive arm.
4. Pull out and remove the connecting link from the drive arm.
5. Energize the motor so that the opposite end of the drive arm is now in the top "12-o'clock" position.
6. Re-insert the connecting link into the opposite end of the drive arm and re-install the washer and "U" clip. Take care to properly re-install and push the "U" clip all the way back on until it "snaps" back into place so it does not come off during normal operation of the motor.
7. Attach the other end of the connecting link back to the sweep angle plate using the connecting link bolt. Make sure to install the connecting link bolt back into the original sweep angle hole (otherwise the sweep angle will be changed).
8. After remounting wiper motor on the windshield, turn on motor and observe operation prior to reinstalling wiper arm. Verify that the wiper motor rotates through the correct number of degrees and parks in the correct position prior to installation of the wiper blade. Failure to do this could cause damage to the wiper motor.

### **This AFI 3.0 Wiper Motor comes with a full 3-Year Warranty**

This warranty does not extend to any product manufactured by AFI which has been subject to misuse, neglect, accident, improper installation or use in violation of instructions furnished by AFI.

This warranty does not extend to, or apply to, any unit which has been repaired or altered at any place other than at AFI's factory or by persons not expressly approved by AFI, nor to any unit from which the identification has been removed or altered.



### **AFI 3.0 Wiper Motor Installation Instructions**

This wiper motor has been designed to drive up to a 30" AFI Premier wiper arm and blade combination maximum. It should be installed in interior locations that are protected from moisture and water splashes.

#### **The AFI 3.0 Wiper Motor Offers the Following Features:**

- Tapered knurled drive shaft
- Adjustable wiping sweep angle settings of 45°, 60°, 80° or a maximum of 110°.
- Adjustable left (counter-clockwise to park-CCW) or right (clockwise to park-CW) self parking. The standard factory pre-set parking position for the AFI 3.0 is to the left. (Park position is defined with the motor mounted at the bottom of the windshield and with the motor shaft facing towards you.)
- Two speed wiper motor (can be wired as single speed using the slow speed).
- 12 or 24 Volt versions
- Full Three-Year Warranty

**NOTE:** Please read all of the instructions before beginning this project.

#### **Tools and Parts Needed**

- Drill
- 45/64" Drill bit (18mm)
- 1/2" Round file
- 6A Fuse and holder (included in retail packaging only)
- 1/4" size stainless steel round head self tapping screw (for mounting bracket)
- Safety glasses
- Phillips head screw driver
- 16 Gauge wire
- 1" Open end box wrench or adjustable wrench
- Multi-purpose grease
- 3-Position windshield wiper switch: Off/Park-Low-High (12 or 24 Volt rating depending on motor)
- Optional: 2-Position (On-Off) switch for single slow speed operation (12 or 24 Volt rating depending on motor).

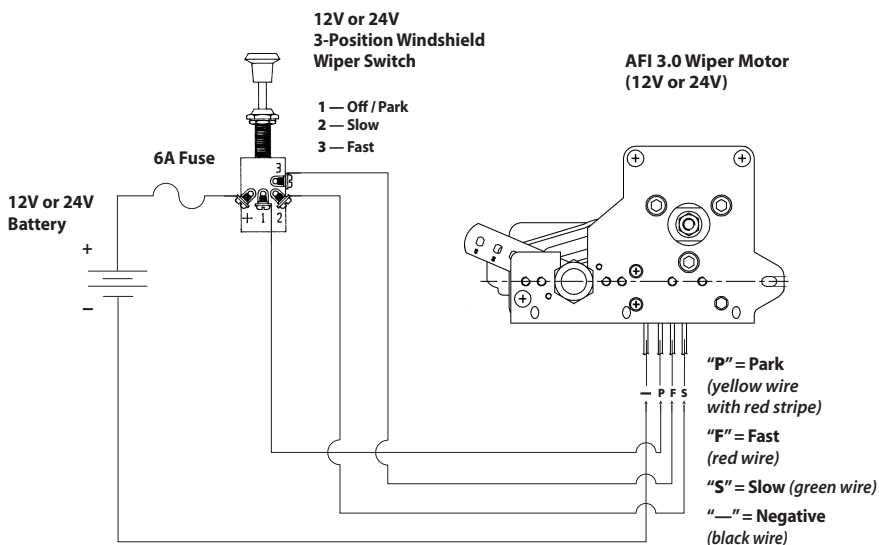
#### **Mounting Precautions**

1. Mount wiper motor on a flat surface.
2. For optimum performance, keep the wiper shaft 90° to the windshield.
3. Blade and arm should be installed approximately 1" (25.4mm) minimum away from windshield molding. Energize the motor for short intervals to make certain the wiper blade does not strike at either end of the wiping arc. If the blade strikes at both ends, it will be necessary to shorten the arm and blade length and/or reduce the sweep angle.

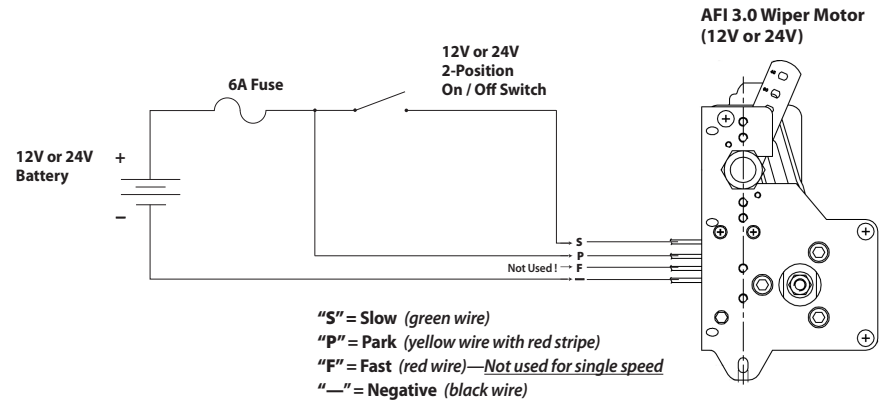
## MOUNTING AND WIRING

1. Locate proper mounting position of wiper assembly. Determine whether adequate space is available and see that the blade will wipe the desired area of the windshield. The AFI 3.0 wiper motor should be installed in interior locations that are protected from moisture and water splashes.
2. Distance between shaft hole and mounting bracket screw hole should be 5-1/4" (133mm) - see illustration under "Changing Wiping Angle".
3. Drill wiper shaft hole first, using a 45/64" (18mm) drill bit. It may also be necessary to slightly enlarge hole after drilling using a 1/2" round file to facilitate ease of installation.
4. The mounting bracket screw hole may now be drilled. If needed, use motor as a template to drill a hole for the mounting bracket screw. A 1/4" size, stainless steel, round head screw is required (not supplied).
5. The wiper motor may now be placed in position and the wiper shaft attaching nut and washers installed. This nut should be tightened to 30-50 in-lbs (35-58 kg-cm) using a 1" open end box wrench, or adjustable wrench. **Caution:** Do Not Over Tighten.
6. Attach the 1/4" size mounting bracket screw and fasten to about 15-20 in-lbs (17-23 kg-cm) until it is snug.
7. Once the motor is mounted in position, attach the wiper arm and blade onto end of wiper motor shaft. **Helpful tip:** Before attaching the wiper arm, apply some multi-purpose grease all around the tapered knurled nut located near the end of the wiper motor shaft. This will make the removal of the tapered knurled nut from the wiper arm easier if needed for adjusting the wiper arm into a different position.
8. Wire up the motor as shown in Diagram #1 or #2.

### Wiring Diagram #1 (for normal two-speed operation)



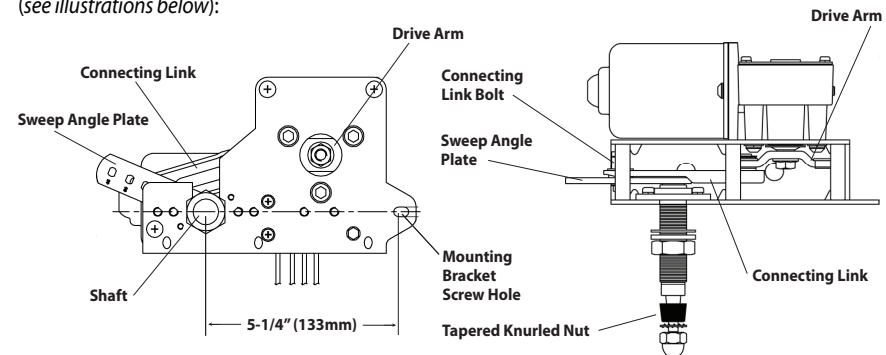
### Wiring Diagram #2 (for optional one-speed operation)



**Caution:** When wiring this two-speed motor as a single-speed you must use the slow speed as shown in the wiring diagram above and not the fast speed. Using the fast speed will ultimately cause the motor to over-heat and short out.

## CHANGING WIPING ANGLE

Should a change of wiping angle or parking position be necessary, it can be performed as follows (see illustrations below):



If you want to change the "wiping angle", simply remove the connecting link from its current position on the sweep angle plate and reconnect it into the desired sweep angle hole (the different sweep angles are stamped out on the sweep angle plate). **Note:** If needed, energize the motor briefly so that the connecting link bolt is accessible and can more easily be removed and re-installed into the desired sweep angle hole. **Caution:** When energizing the motor, take care to keep fingers clear of all moving parts.

## CHANGING PARKING POSITION

If you want to change the "parking position", remove the connecting link from its current position on the drive arm and re-install it into the opposite end of the drive arm (there are two bushings on the drive arm located 180° apart to which the connecting link can attach).

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