

Retro Fit Windshield Washer Kit For AFI Deluxe Style Wiper Arms

INSTALLATION INSTRUCTIONS

PLEASE READ THROUGH ALL INSTRUCTIONS AND REFER TO INSTALLATION DIAGRAM PRIOR TO INSTALLATION

COMPONENT LIST

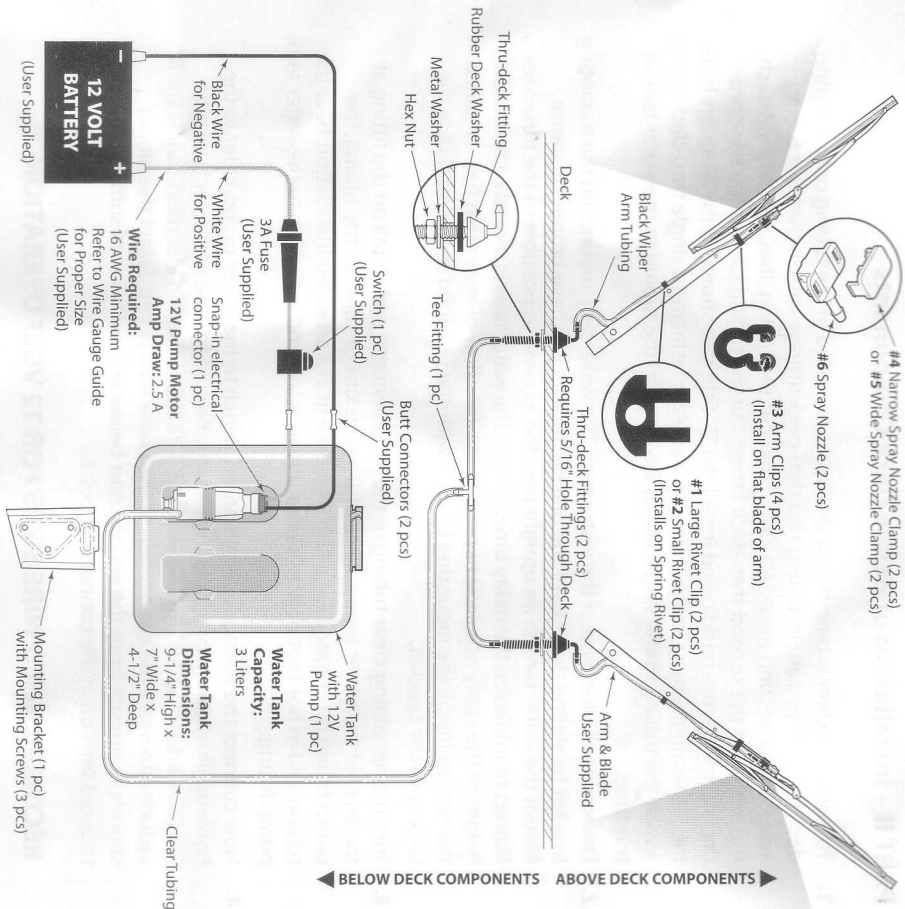
- Water tank reservoir with snap-on cap
- Reservoir pump with snap-in electrical connector (1 piece)
- Mounting bracket with 3 #12 x 5/8" long stainless steel Phillips-head mounting screws
- Clear plastic tubing (16 ft.)
- Tee fitting
- Thru-deck fittings (2 pieces) with metal washers (2 pieces), rubber deck washers (2 pieces) and hex nuts (2 pieces)
- Black wiper arm tubing (6 ft.)
- #1 Large rivet clip (2 pieces)
- #2 Small rivet clip (2 pieces)
- #3 Arm clips (4 pieces)
- #4 Narrow spray nozzle clamp (2 pieces)
- #5 Wide spray nozzle clamp (2 pieces)
- #6 Spray nozzle (2 pieces)

REQUIRED FOR INSTALLATION AND NOT INCLUDED WITH THIS KIT

- Black stranded wire for negative (see Wire Sizes Chart for proper gauge)
- White stranded wire for positive (see Wire Sizes Chart for proper gauge)
- 3 amp fuse and fuse carrier
- Momentary on/off switch or button rated for 3 amps minimum
- Butt connectors (2 pieces) for wire gauge you are using
- AFI wiper arms & blades
- (Must have AFI deluxe style wiper arms and blades to ensure compatibility)
- 12 volt battery

BASIC TOOLS REQUIRED FOR INSTALLATION

- Phillips-head screwdriver
- 5/16" drill bit
- Electric drill
- Adjustable wrench, 12 mm open end wrench or 12 mm deep socket wrench
- Crimping/cutting pliers
- Needle nose pliers (optional)
- Small pan with hot water (optional)



◀ BELOW DECK COMPONENTS ABOVE DECK COMPONENTS ▶

TROUBLESHOOTING

If the washer system does not operate, check the following:

1. Make sure there is water or windshield washer fluid in the water tank. Allow a few moments of initial operation to let the water flow through all the tubing.
2. Check the fuse to make sure it has not blown.
3. Check to make sure there are no clogs or kinks in the black above deck tubing and the clear below deck tubing. The below deck tubing is clear to help locate any clogs.
4. Check all wiring connections. Check that the water pump is functioning by making sure there is 12 volts at the pump while the switch is in the on position.
5. Determine that the on/off switch is functioning properly and has not been damaged. Switch should be rated for 3 amps minimum.

For additional information or answers to installation questions, please contact AFI Customer Service at: 707-226-9600



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PART I – Installation of Above Deck Components

- Determine the location of the thru-deck fittings. They should be positioned close to the wiper arm, about 1" to 2" away from the wiper motor shaft. Be sure you have plenty of clearance so that the wiper motor does not interfere with the installation. The thru-deck fittings are long enough that they can be installed in a deck up to 1-3/4" thick. For a thicker deck, counter-bore the installation hole from below to accommodate the washer and hex nut. Drill a 5/16" diameter hole for each thru-deck fitting to be installed.
- Insert the thru-deck fitting(s) through the installation hole(s). The rubber washer should be positioned on top of the deck with the square flange pointing up so that the thru-deck fitting nests inside the rubber washer. Secure the thru-deck fitting from below with the metal washer(s) and hex nut(s). Avoid over-tightening the nuts.
- Next, install the clamp-on spray nozzles (part # 6) onto the tip of the wiper arm(s). Position the spray nozzle on the underside of the flat portion of the wiper arm just below the wiper arm baton tip screw. Determine which of the two sizes of clamps you need to use, #4 narrow clamp or #5 wide clamp, based on the width of the flat portion of the wiper arm. Snap the clamp over the arm onto the spray nozzle.
Note: Repeated snapping and unsnapping of the clamp can cause damage that may prevent it from holding the spray nozzle in place. Use the #4 narrow clamp with the following AFI Deluxe Wiper Arms: 33007A/33107A, 33010A/33110A, 33006A/33106A, 33007A/33107A, 33012A/33112A, 33014A/33114A, 33032A/33132A, or 33037A/33137A. Use the #5 wide clamp with the following AFI Deluxe Wiper Arms: 33070A/33170A.
- After the spray nozzle(s) have been installed onto the tip of the wiper arm(s), measure the distance from the spray nozzle to the thru-deck fitting and cut the black rubber tubing to the appropriate length.
- Determine the number of #3 arm clips needed to install the black rubber tubing on the wiper arm(s). Short arms require one clip and long arms will need two clips. Slide the rubber tubing through the hole in the arm clip(s). Insert the tubing into the spray nozzle fitting. Snap the arm clip(s) onto the flat portion of the wiper arm. When using two clips, space them apart so that they are located at opposite ends of the flat portion of the wiper arm.
- To secure the rubber tubing to the lower wiper arm assembly, install the optional rivet clip or feed through spring rivet. To install the rivet clip, determine the size rivet clip for your wiper arm. Slide the rubber tubing through the hole in the rivet clip and snap the clip onto the wiper arm spring rivet. Use the large #1 rivet clip with the following AFI Deluxe Wiper Arms: 33010A/33110A, 33014A/33114A, 33070A/33170A, 33032A/33132A or 33037A/33137A. Use the small #2 rivet clip with the following AFI Deluxe Wiper Arms: 33006A/33106A, 33007A/33107A, 33012A/33112A, 33006A/33106A, 33007A/33107A, or 33012A/33112A. To secure the rubber tubing without using the rivet clip, feed the tubing under the wiper arm spring rivet, behind the spring and back out through the side of the wiper arm. Needle-nose pliers may be needed to perform this operation.
- To complete the above deck installation, attach the end of the remaining black rubber tubing onto the thru-deck fitting(s)

PART II – Installation of Below Deck Components

- To install the clear tubing below deck, press one end of the tubing onto the thru-deck fitting. If you are installing two thru-deck fittings, stretch the clear tubing across to the second thru-deck fitting and cut the tubing about 1" longer. Attach the tubing to the second thru-deck fitting. Cut the tubing joining the two thru-deck fittings in the middle and install the "T" fitting as shown in the diagram. Install the remaining tubing to the "T" fitting. If you are installing a single thru-deck fitting attach the tubing to the single fitting. Do not trim the tubing to the water tank at this time.
- Determine the location of the water tank. The water tank mounts on the mounting bracket by sliding down over the bracket. Be sure you have proper clearance. Mount the water tank in an upright position as close as possible to the thru-deck fittings to minimize the delay time. Be sure the water tank is mounted below the height of the spray nozzle(s) to prevent the free-flow of water that has remained in the tubing. Install the mounting bracket with the provided screws and slide the tank onto the bracket.
- Trim the remaining clear tubing to the proper length and install on the fitting at the base of the water pump. Be careful not to kink or squeeze the tubing. The pump fitting is designed for a firm one-time fit. For an easier installation, heat the tubing end in hot (not boiling) water until it is soft and slide it on to the water tank pump fitting.
- Now connect the wiring, fuse and on/off switch to the water pump. Refer to the hook-up illustration for proper installation. Be sure to observe correct polarity (positive and negative) for the water tank pump. A snap-in electrical connector is included to make the connection to the water tank pump. Select the proper stranded wire size from the wiring chart below and cut wires of sufficient length to avoid tension at the connecting points.

RECOMMENDED WIRE SIZES FOR 12 VOLT OPERATION

Wire Length*	Wire Size	Wire Length*	Wire Size
0-50 feet	16 AWG	0-15 meters	1.5 mm
51-80 feet	14 AWG	16-24 meters	1.9 mm
over 80 feet	12 AWG	over 24 meters	2.3 mm

AWG: American Wire Gauge

*As measured from the battery to the water tank pump and back to the battery (round trip)

ADJUST SPRAY HEADS

To adjust the four spray heads on each nozzle, insert a small pin into the spray nozzle orifice and carefully rotate the nozzle to spray in the desired direction.

One Year Warranty

This AFI product is covered by a warranty against defects for a period of one year from the date of purchase. For more information or to make a claim on this limited warranty, contact AFI customer service @ 707-226-9600.