



Factory Five Racing, Inc.

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<i>Document Type (indicate):</i>			
<input type="checkbox"/> Bill of Material	<input type="checkbox"/> Drawing (may be attached)	<input type="checkbox"/> Specification	
<input checked="" type="checkbox"/> Assembly Instructions	<input type="checkbox"/> Operating Procedure	<input type="checkbox"/> Other	

Windshield Wiper Installation Instructions



I. Tools Necessary:

Tubing cutter
Tube flaring tool
Wire crimper
Volt meter
Ruler/tape measure
Drill
Marker
 $\frac{3}{8}$ " , $\frac{25}{64}$ " , $\frac{5}{8}$ " drill bits
Clamp
Masking tape
Wire cutter

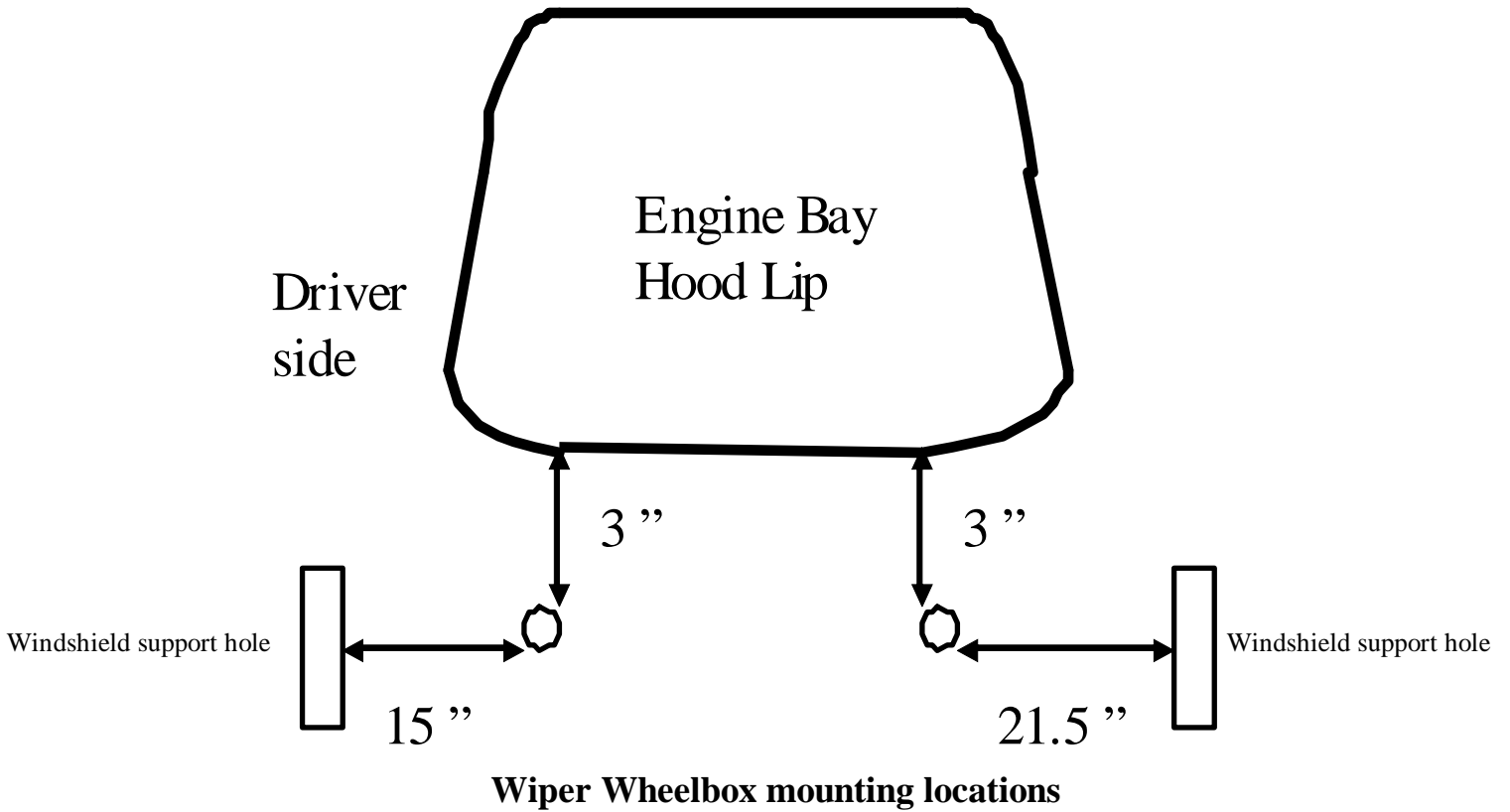
Flat head screwdriver

Note:

- If also installing the heater/defroster option, install the heater before installing the wipers. The motor location is then dictated by the heater and should be located to the outside of the heater.
- The Mk 4 differs in the location of the wheelbox holes only.

II. Installation Instructions

Place two strips of 2" Masking tape across the body in front of the windshield area.



Mk1, 2, 3

With the hood open, use the diagram above to locate the wiper drilling tool on the cowl from the hood lip and the inside of the windshield mount holes, the tool will go over the body hood lip.



Once located, clamp the tool in place.

Drill $\frac{5}{8}$ " holes using the Wiper hole tool as a guide for the angle necessary for the wheelboxes.

Mk 4

Mark the wiper tool $\frac{7}{8}$ " from the inside of the bend



With the hood open, use the wheelbox diagram above to locate the wiper drilling tool on the cowl from the windshield slots only, not from the engine bay. The tool will go over the body hood lip and get aligned with the marks just made.



Once located, clamp the tool in place.

Drill $\frac{5}{8}$ " holes using the Wiper hole tool as a guide for the angle necessary for the wheelboxes.

Bend the tubing slightly to match the curve of the cowl.

Test fit the wheelboxes

Slide the rubber sleeve onto the wheel box and then slide the wheelbox through the hole in the body. You may need to test fit this in the body a few times to ensure the proper angle.

Place the gasket down then the chrome base followed by the nut.

Locate the Wiper motor

Twist the wheel boxes so they are in line with each other and are pointing towards the wiper motor.

Using the wiper cable as a guide, locate the motor mounting location on the passenger side of the firewall.

Mark the firewall for the wiper motor (Try to have the cable pointing up toward the wheel boxes.)

Drill the holes in the firewall.

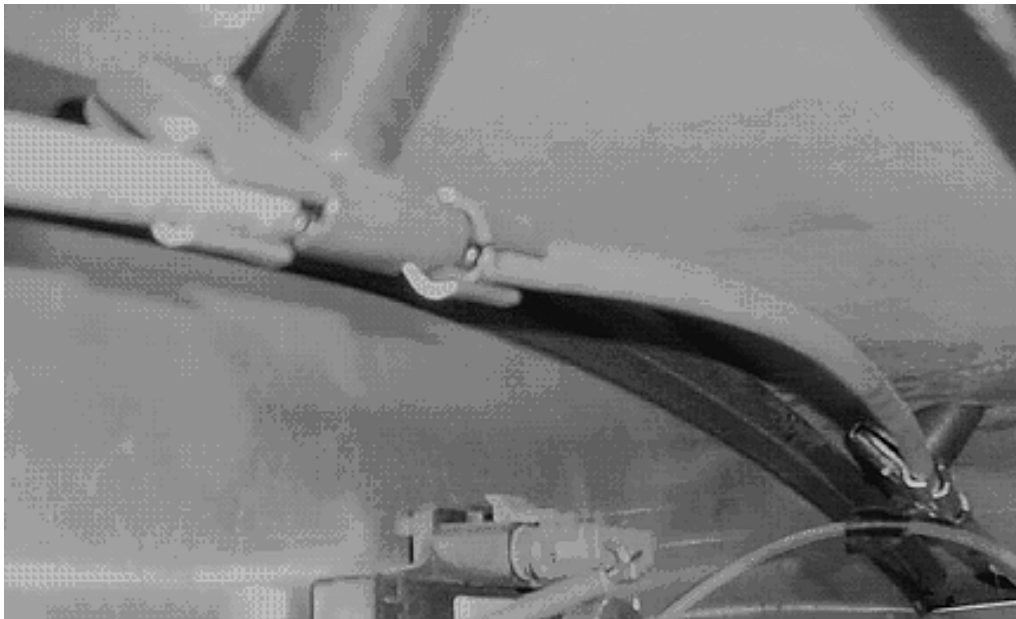
Mount the wiper motor with the clamp provided.

Note: To reduce wiper motor noise you can wrap the motor where it contacts the clamp and firewall with a piece of sheet rubber (available in the plumbing department of home depot and Lowes).

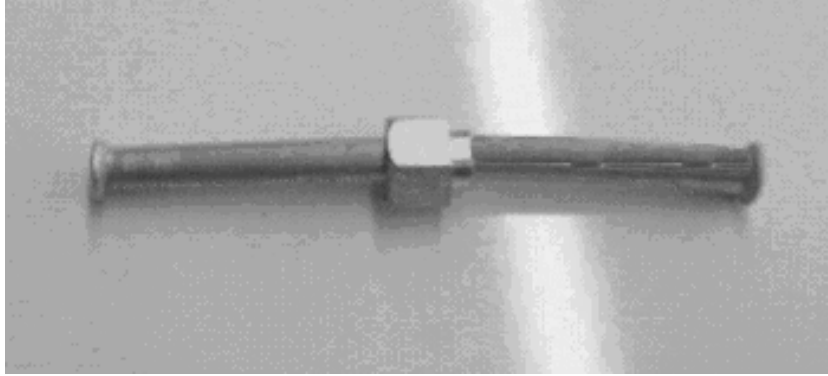


Wiper motor installed on firewall.

Cut the tubing to the lengths required to connect the motor and the wheelboxes together. The tubing will need to be cut a little long as you will be flaring the ends. (The tubing that we supply is longer than needed so it is ok if you make a mistake on the first cut. Save this piece and mount it on the end.)



(The tubes are not flared at this point this step is just for pre-fitment.)
Drill the ferrule nut to $\frac{25}{64}$ ". Go slow, the ferrule nut drills very easily.
Place the Ferrule nut on the tubing for the wiper motor.
Flair the ends of the tubing going into the wiper wheel boxes and the wiper motor.

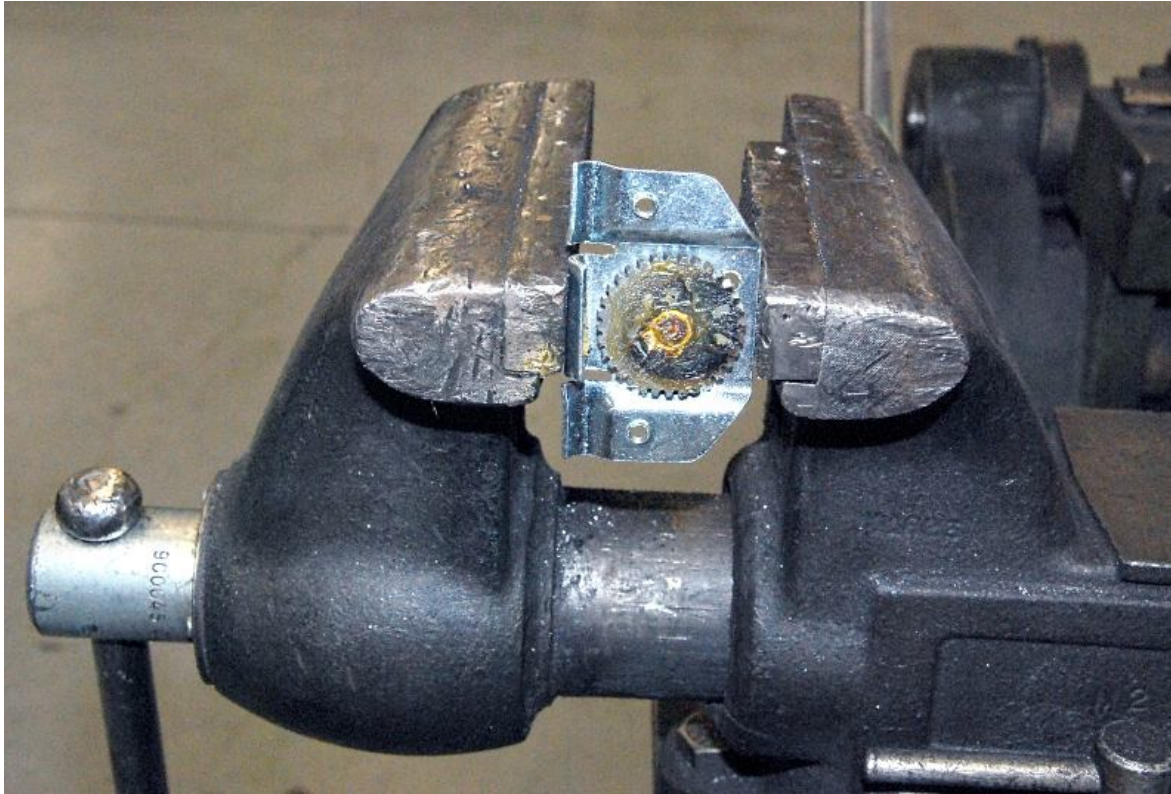


Remove the wheelboxes from the body.

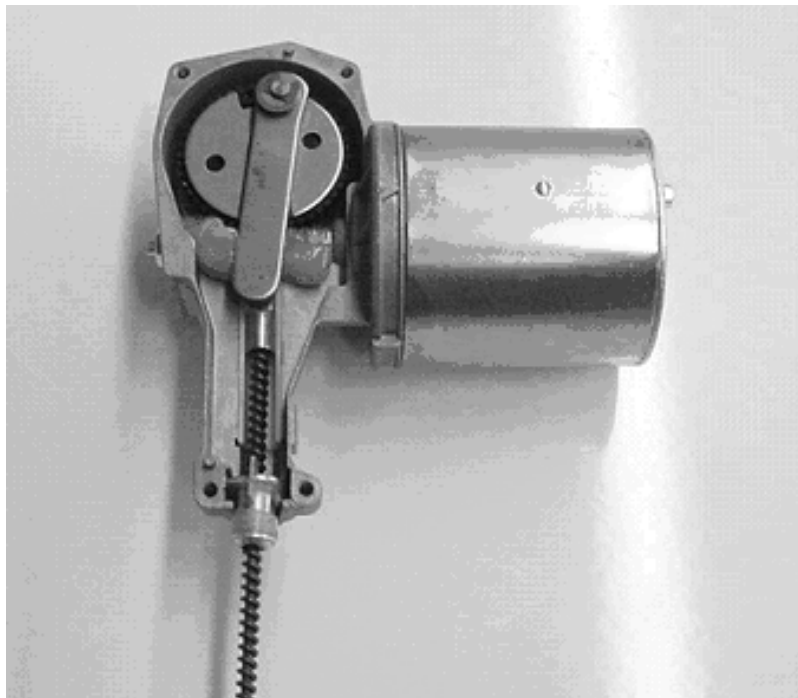
Test fit the tubing and wiper cable in the wheelbox by clamping the tubes in the wheelbox to see if the cable fully engages the wheelbox teeth and if there is a big gap between the cable and the bent wheelbox tab below the gear.



If the teeth and cable do not fully engage or if there is a large gap, greater than $\frac{1}{16}$ ", squeeze the wheelbox tab below the gear to reduce the gap. This will prevent the cable from jumping wheelbox teeth.

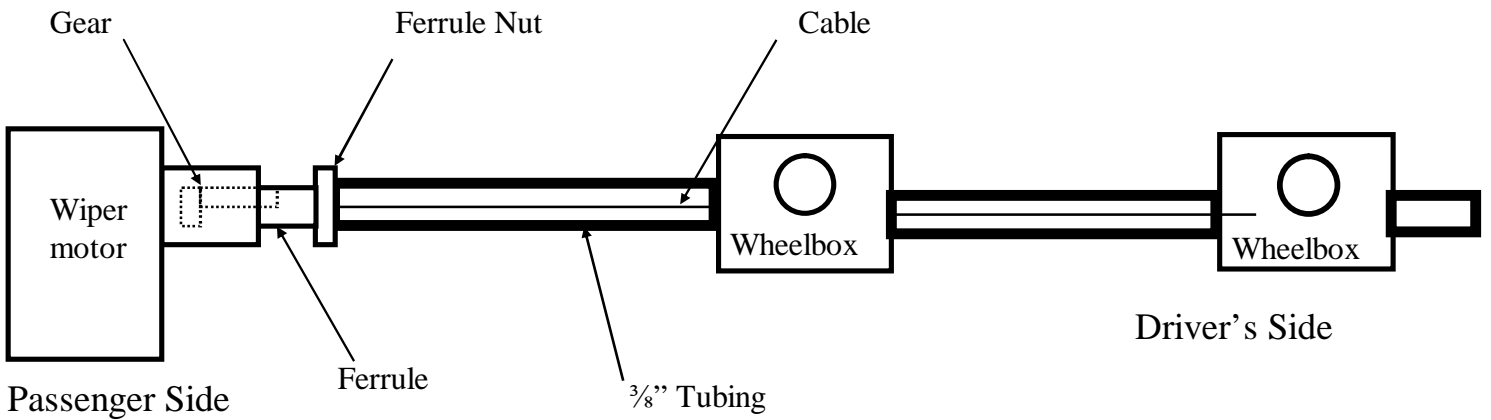


Once the wheelbox gaps are set, remount them on the body.
Loosen up the clamp and remove the wiper motor.
Open up the back of the motor and connect the cable to the wiper gear.



Slide the ferrule down the cable and into the end of the motor. (It only fits in one way.)
Replace the cover on the wiper motor.

Install the tubing as shown in the diagram below with a 4" section on the far side of the second wheelbox so that the cable is always covered.



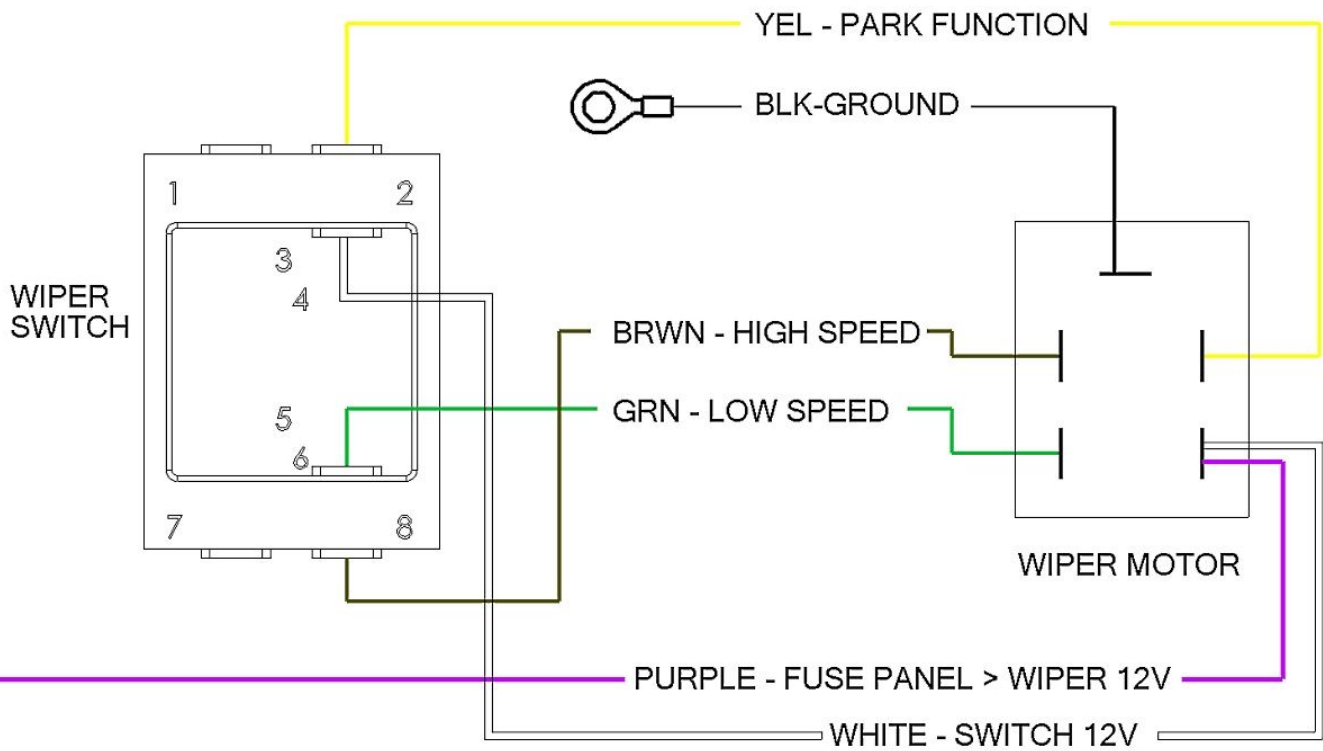
Lubricate the wiper cable with chassis grease and insert it into the tube and wheelboxes.

Note: The wiper cable is long and should be trimmed. Wait until after running the motor to trim the cable.

Mount the motor back on the firewall.

The wiper motor included in the kit has two speeds. Use the following wiring diagram to wire the switch and motor together. If using a Mustang harness, connect the "WIPER 12V" to the Mustang wiper power in the fuse panel. At 12 volts, the low speed uses 1.5 amps and the high speed uses 2.0 amps.

REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	10/19/10	



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UNLESS OTHERWISE SPECIFIED:		NAME	DATE
ROADSTER	DIMENSIONS ARE IN INCHES	J1	10/19/10
COUPE	TOLERANCES:		
HOT ROD	TWO PLACE DECIMAL ±0.01		
	THREE PLACE DECIMAL ±0.005		
	FOUR PLACE DECIMAL ±0.001		
	MATERIAL		
	FINISH		
USED ON			
APPLICATION	PRINTED		
WINDSHIELD WIPER	10/19/2010		

Factory Five Racing, Inc.

TITLE: WIPER SWITCH WIRING

SIZE: A **DWG. NO.:** Wiper Wiring **REV:** A

SCALE: 1:1 **WEIGHT:** **SHEET:** 1 OF 1

- Test run the motor without blades in low, high and park. Make sure the wheelboxes are turning the correct direction when starting from the parked position. If they are not, take the back cover off the wheelbox, remove the tubes and cable, loosen the wheelbox nut and turn the wheelbox around then reinstall the cable and tubes. Remove the cover of the left side wheelbox.
- With the motor parked, use a pair of wire cutters or a cut off wheel to cut the wiper cable so that it extends into the short tube section 0.50".
- Reattach the wheelbox cover.
- Attach the wiper blades to the wiper arms.
- With the motor in the park position, push the wiper arms onto the wheelboxes so the blades are just on the glass at the bottom.
- Spray some water on the windshield and on the slow speed, test the wipers.