COMMITTED TO THE BUILD

Raingear

HIDDEN WIPER SYSTEM FOR YOUR CLASSIC CAR

ASSEMBLED IN ARIZONA USA RAINGEARWIPERS.COM

Installation Instructions

1964-1967 GM A-Body

(All including Chevelle, Tempest, Cutlass, Skylark)

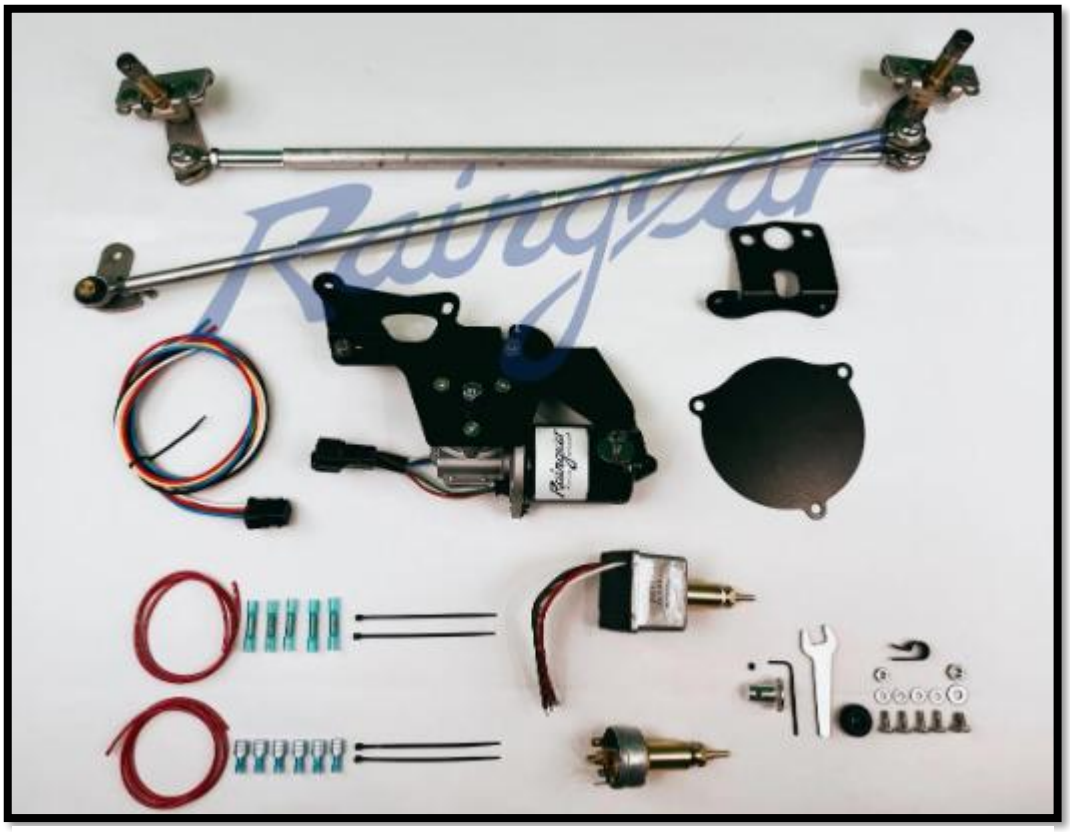


Figure 1

PLEASE TRY OUR WAY FIRST

This system is designed to fit your vehicle **without modification**.

For technical questions or troubleshooting, please contact us directly at **Sales@RaingearWipers.com**.

Your dealer does **not** have spare parts and is unlikely to be able to provide technical support.

Designer's Note

Developing this windshield wiper assembly was a challenge due to the limited space inside the GM A-body air box. As a result, the design is a **tight fit**. A couple of fasteners may test your patience—please take your time and follow the steps carefully.

Important Notes

- If your car is equipped with a later model GM steering column that includes an integrated wiper switch, that switch will not work with this system.
- The Raingear A-body Windshield Wiper System does not reuse any of the original GM parts except the arms and blades.
- You may reuse your original switch knob in place of the one supplied.

Important: You will be working in an area of the vehicle that contains a high concentration of electrical wiring.
Disconnect the battery before beginning installation.

Installation Steps

1. **Remove Original Wiring and Switch**
   As noted above, all original wires from the wiper switch to the wiper motor are not used in this installation.
   Remove the OEM switch and the entire OEM wiper harness to the motor and washer pump.
   (Optional: You may reuse the original switch knob with the new system.)
2. **Remove Wiper Arms and Blades**
   Remove the existing wiper arms and blades.
   You may reuse them or replace them with aftermarket components.
3. **Remove the Cowl Vent/Fresh Air Grille**
   Remove the cowl vent or fresh air grille located in front of the windshield.
   The windshield washer hoses and nozzles will come off with the cowl.
4. **Remove the OEM Wiper Motor**
   Detach and remove the original wiper motor assembly from the firewall.
5. **Remove OEM Wiper Pivot Shafts and Link Assembly**
   Carefully remove the factory wiper pivot shafts and linkage assembly.

Figure 2: Above – The fresh air grille and cowl area in front of the windshield opening. In this photo, the OEM wiper assembly has already been removed.

Installation

The Raingear A-Body Windshield Wiper System attaches to the same sheet metal "intercoastal" that held the original pivot shafts.
(See Fig. 3 – *Right and Left Intercostals.)*

Figure 3

1. Prepare the Driver-Side Pivot Shaft Assembly

- Orient the LH Pivot Shaft Assembly (B) with the Body Bracket (A).
  (See Fig. 4 – *Place the Body Bracket on top of the Pivot Shaft Assembly.)*

Figure 4

- Insert both components under the left (driver-side) intercostal.
  Raise the knurled head (at the tip of the brass pivot shaft) through the large hole.

- Use two 1/4-20 × 3/4” countersunk screws to attach these pieces to the intercostal.
  Run the bolts in, but leave them about one turn from tight.
  (See Fig. 5 – *Install the Body Bracket and Pivot Shaft Assembly under the driver-side intercostal.)*

Figure 5

2. Prepare the Cowl and Mounting Hole

Locate and remove the OEM plastic hole plug (approximately 3/4" in diameter, with a dimple in the center) directly adjacent to the fender bolt in the cowl.
This hole will be used later as a mounting point for the motor.
(See Fig. 6 – *Remove the OEM hole plug.)*

Figure 6

3. Prepare the Electric Motor

Remove and set aside the Spindle Nut (C2) from the Electric Motor output spindle (C1).

Note: If your vehicle has a smooth firewall, connect the wire harness (J) to the electric motor before installation.

4. Install the Motor Assembly

- Between the left and right intercostals, insert the Motor Assembly (C) into the cowl opening.
  Slide it under the intercostal and align the matching holes on the Body Bracket with those on the Motor Assembly.
  (Refer back to Fig. 2 for correct positioning.)

- Use a 1/4-28 × 1/2” hex bolt, washer, and nut to loosely hold these parts together.
  Do not tighten yet.
  (See Fig. 7 – *Insert the Motor Assembly into the air box.)*

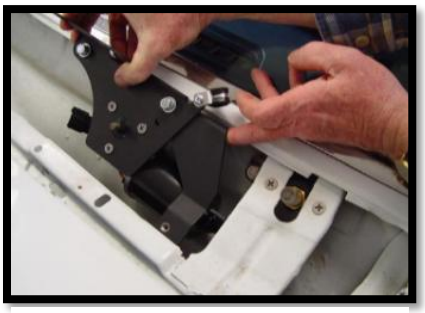


Figure 7

Note: This area of the car contains multiple spot-welded sheet-metal flanges and tabs. It may appear that something is blocking the motor assembly from sliding into place. Patience and persistence help here—although some cars may seem tight, we have yet to encounter one that requires trimming or grinding for clearance.

5. Loosen Motor Brace for Adjustment

(Refer to Nomenclature Fig. 1) – The frame of the Motor Assembly consists of two main parts: one holds the electric motor, and the other is the Motor Brace.

This brace is held in place with two 1/4" hex head bolts in slotted holes.
Temporarily loosen these bolts so that the brace can slide freely. (Tightening comes later.)

6. Attach the Motor Brace

Figure 8

- While holding the Motor Assembly, align the threaded hole in the Motor Brace tab (D) with the body hole (where the hole plug was previously removed).

- Use a 1/4-28 × 3/4" hex bolt and large washer at this position. Thread the bolt into the brace so that the tab contacts the body—but do not tighten yet.
  (See Fig. 8 – *Motor Brace bolt.)*

7. Secure the Hidden Motor Mount Bolt

Figure 9

- The final fastener joining the Motor Assembly (C) to the Body Bracket (A) is located under the driver-side intercostal—this "nasty little cuss" can be tricky to reach.

- Use a 1/4-28 × 1/2" bolt and flat washer (A2).
  Install but do not tighten yet.
  (See Fig. 9 – *Motor Mount bolt located under the intercostal.)*

Tip: You can access this bolt head with a 7/16" socket and extension through the vacant wiper motor hole on the firewall (if your firewall is not smooth).

8. Tighten All Fasteners

Now tighten the following:

- Two 1/4-20 × 3/4" countersunk bolts
- The 1/4-28 × 3/4" motor brace hex bolt
- The two 1/4" motor bracket bolts

9. Install the Passenger-Side Pivot Shaft and Links

Figure 10

- Insert the Passenger-Side Pivot Shaft and Links Assembly (E, F, H) into the air box.
  Orient the knurled head at the tip of the brass pivot shaft aft (toward the back of the car).
  (See Fig. 10 – *Orient the Pivot Shaft head aft.)*
- Slide the brass Pivot Shaft under the passenger-side intercostal, then rotate the knurled head upward through the intercostal.

Note: Before rotating the Pivot Shaft Assembly up into position, place the First Link (F) (the one with the Drive Arm (G) attached) on top of the flat horizontal surface of the Motor Assembly (C)—just rest it there for now.
The Cross Link (H) will naturally settle beneath the Motor Assembly. That's normal; we'll attach it shortly.

10. Secure the Passenger-Side Pivot Shaft

Figure 11

- Use two 1/4-20 × 3/4" countersunk bolts to secure the Pivot Shaft to the intercostal.

- Tighten both bolts.
  (See Fig. 11 – *Secure the passenger-side Pivot Shaft head to the intercostal.)*

11. Attach the Cross Link

Figure 12

A. Locate the free end of the Pivot Shaft Lever (B1) on the driver side (under the intercostal).
   (See Fig. 12 – *Locate the driver-side Pivot Shaft Lever.)*
B. Reach into the air box and find the free end of the Cross Link (H).
C. Place the Heim joint on the end of the Cross Link (H) over the Pivot Pin (B2) at the tip of the Pivot Shaft Lever (B1).
   Secure with a 1/4-28 × 1/2" hex bolt and a thin stainless washer. Tighten.
   (See Fig. 13 – *Attach the Cross Link to the driver-side Pivot Shaft Lever.)*
D. Locate the free end of the First Link (F) and the Drive Arm (G).
   Swing the open hole (G1) in the Drive Arm over the Motor Spindle (C1).
   Do not install the Spindle Nut (C2) yet.

Figure 13

12. Align and Tighten the Drive Arm

Figure 14

e. Find the Drive Arm (G) on the Motor Assembly (C).
f. Identify the "U"-shaped Park Slot (G2) on the Drive Arm.
g. Locate the corresponding 1/4" hole (C3) on the Motor Assembly.
Together, these form the Park Features.

h. Rotate the Drive Arm counterclockwise (CCW) until G2 and C3 align.
i. Insert a 1/4" diameter tool (such as a Phillips screwdriver) between the features to hold alignment.
j. Carefully thread the Spindle Nut (C2) onto the Motor Spindle (C1)—avoid dropping it into the air box.
(This is a tight area; the spindle sits beneath the drive arm and sheet metal.)
k. Use the supplied 13 mm wrench (K) to tighten the Spindle Nut while the Park Features remain aligned and held in place.

Figure 15

(See Fig. 14 – *Align the Parking Features and tighten the Spindle Nut (unit shown out of vehicle for clarity).*
(See Fig. 15 – *Same procedure shown installed, with intercostal sheet metal partially obscuring the view.)*

Wiring

15. Create a Wiring Access Hole (if necessary)

- Some later GM A-body models routed their wiper switch wires through a rubber grommet located beneath the power brake booster.
- If your vehicle does not have this feature, you will need to drill a 5/8" diameter hole through the floor of the air box to access the interior of the car.
- Use a step drill to carefully create the 5/8" opening.

Figure 16

16. Install the Rubber Grommet

Insert the supplied rubber grommet into the newly drilled hole.
(See **Fig. 16** – *Example of rubber grommet installation and location.)*

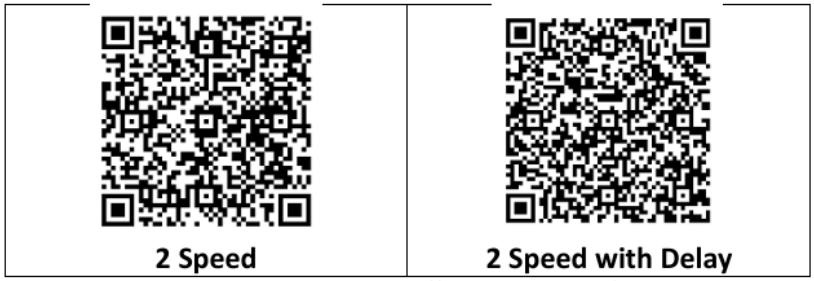
17. Route the Wiring Harness

- Plug the wire harness (I) into the socket coming from the wiper motor.
- Use a wire loop or zip tie to neatly secure the wires, and route them through the grommet into the vehicle's interior.
- Once wiring is complete and the system has been successfully tested, seal the grommet to prevent moisture intrusion.

18. Install the Firewall Cover Plate

- A Cover Plate (J) and three 10-24 × 1/2" machine screws with flat washers are provided to close off the hole left in your firewall from the original wiper motor.
- Attach this plate securely to seal the opening.

Important: Refer to the **wiring diagram** provided for your specific application.



https://raingearwipers.com/installation-instructions

⚠️ **Do not install your wiper arms or blades** until you have successfully test-run the system.

19. Final Fastener Check

Before proceeding, verify that all fasteners throughout the installation are properly tightened.

20. Connect the Switch

Install the wiper switch and attach the wiring harness according to the wiring diagram included with your kit.

21. Ground Connections

The black wire in the wiper motor harness must be grounded.
If you are using the optional 2-Speed/Variable Delay Switch, its black wire must also be grounded for the system to function correctly.

22. Power Source for Testing

- **Do not use a battery charger** to test the system when using the optional 2-Speed/Variable Delay Switch—this will cause the motor to **chatter** and malfunction.
  Use a **fully charged battery** to test-run the system.
- During testing, observe the **First Link** as it cycles.
  If it contacts any **body sheet metal** or **intercostal flanges**, carefully trim or relieve the interfering material.

23. Test Wiper Park Position

Before installing the wiper arms and blades:

1. Place **zip ties** around the **knurled heads** of both **Pivot Shafts**, leaving roughly **6-inch flaps** to act as simulated wiper arms.
2. Turn the system **on** using the **Wiper Switch**, then turn it **off using the switch** (not the ignition or battery disconnect).
3. Observe the motion — the "arms" should **stop at the end of their sweep**, just as the direction reverses.

If the flaps park correctly, you can proceed to **install the actual wiper arms and blades.**

Arm and Blade Installation

24. Install the Wiper Arms and Blades

With the **wipers turned off using the switch** (so the system is in the **park position**), install the **wiper arms and blades** in their proper parked position.
Important:
The original GM knurls were **die-cast with a slight taper at the top**, whereas the **Raingear knurls are straight**.
As a result, some wiper arms may be **tighter to start and seat** on the knurls.
To ensure proper installation:

- Make absolutely certain the **wiper arm is not cocked** against the knurl—if it is, it will not seat properly.
- Apply a **small amount of lubricant** to the knurls before installing the arms.
- Some arms may begin to tighten on the knurl about **three-quarters of the way down**.
- Use a **plastic-faced hammer** to gently tap the arms securely onto the knurls, if necessary.

If the wiper arms **do not park correctly** at the end of the sweep, **something in the installation is misaligned or incorrect.**

👉 **Do not force the arms or continue installation. Contact us at Sales@RaingearWipers.com** before proceeding.

Thank you for choosing Raingear Wiper Systems. We look forward to assisting you with your next project!