COMMITTED TO THE BUILD

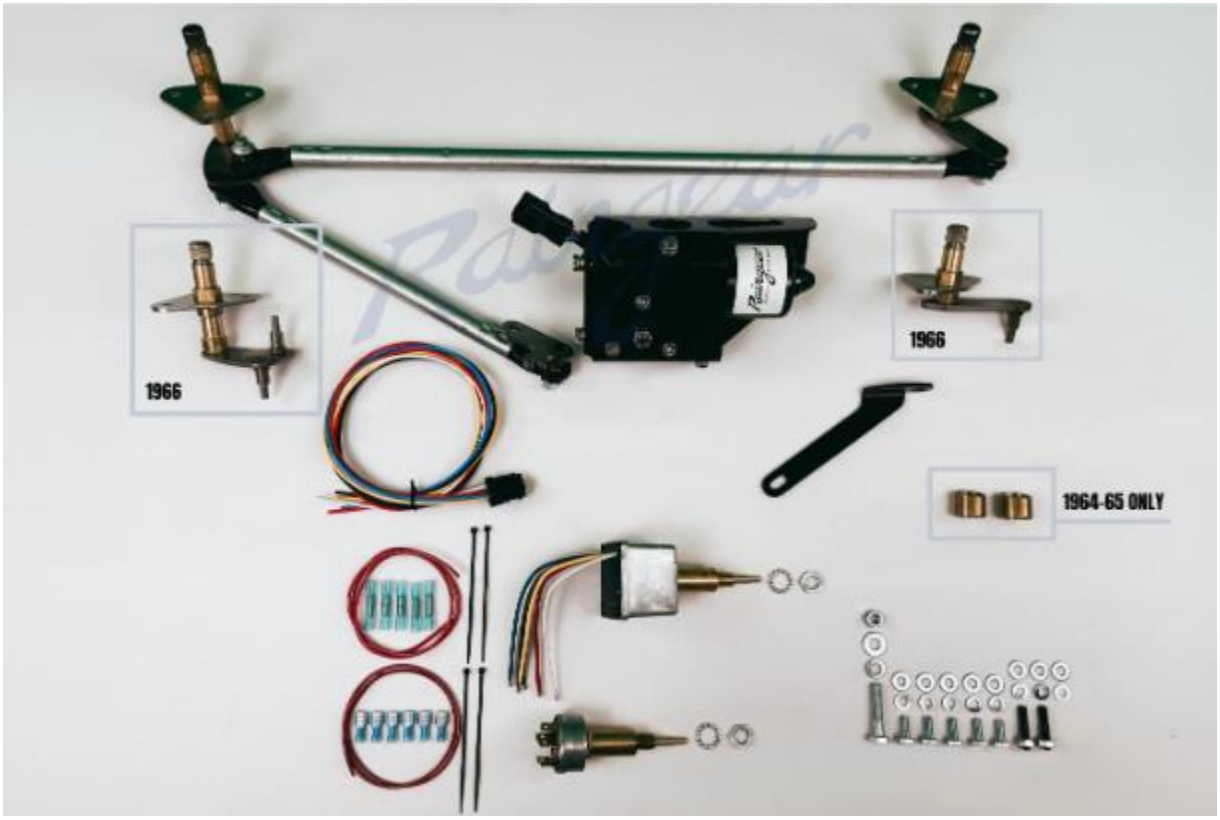
Raingear

HIDDEN WIPER SYSTEM FOR YOUR CLASSIC CAR

ASSEMBLED IN ARIZONA USA RAINGEARWIPERS.COM

Installation Instructions

1964-1966 Mustang



Displays the components included in your purchased kit. The contents may vary depending on your vehicle's year, model, and switch option, as shown in the labeled boxes.

Original radios cannot be used with our system
Custom Auto Sound manufactures replacement radios designed specifically for these vehicles.

Getting Started: Important Recommendations

PLEASE TRY OUR WAY FIRST!

This system is designed to fit your 1964–1965 Mustang with only one required modification to the car: you will need to cut the bracket as shown in the instructions below.

If you believe additional modifications to our system are necessary, please contact us first at **Sales@RaingearWipers.com** before proceeding.

For technical questions or troubleshooting, contact us directly.

Please note that dealers do not stock spare parts and may not be able to assist with technical support.

Important Notes:

- The Raingear Windshield Wiper System does not reuse any original parts except the following:
  - Wiper arms and blades
  - Wiper switch cup spacer
  - Exterior bezels and nuts
  - Interior trim pieces
- The Drive Unit (A) is shipped assembled.
  You will need to separate the two components before beginning installation.

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.

Remove the OEM Wiper System

To begin installation, the original wiper system must be completely removed.

1. **Access the wiper system components:**
   Remove the dash gauge panel for easier access. It is also recommended to remove the radio and disconnect the defroster duct cable. Detach the defroster ducts at the heater to create additional working space.
2. **Remove the wiper motor and pivot shafts:**
   - Detach the linkage arms from the wiper motor.
   - Remove the original wiper motor and mounting bracket.
   - From underneath the dash, reach up and remove the three bolts securing the left and right wiper pivot shafts (sometimes referred to as “transmissions”).
3. **Inspect and retain the leather gaskets:**
   Ford originally used leather gaskets to seal the pivot shafts (transmissions) against the inner cowl. These were installed with a heavy adhesive, so in most cases, they can be left in place.
   - Refer to Figure 9 for gasket location.
   - If replacement gaskets are needed, they are available from various dealers and online sources.

Remove the Wiper Switch

1. **Remove the wiper knob**
   - Use an Allen wrench to loosen and remove the knob from the switch shaft.
2. **Remove the wiper bezel nut**
   - Unscrew and remove the bezel nut securing the switch to the dash.
3. **Retain and reuse the spacer and trim components**
   - With the bezel nut and OEM switch removed, you will notice a small cupped spacer located inside the dash.
   - **Save and reuse this spacer, along with all outer chrome trim pieces and the original knob.**

Required Modification

The only modification required is shown in Figure 1:

- Cut the gusset as indicated to provide clearance for the new drive unit.

Bracket Modification

Before beginning installation, you must cut the bracket.

- Refer to **Figures 1, 2, and 3** for the exact location and method of cutting.

Figure 1

Figure 2

Figure 3:

Install 1/4" Studs in the Bracket

1. After cutting the bracket, install 1/4" studs in the locations originally used by the Ford wiper motor.
2. Test-fit the drive unit bracket to ensure proper alignment.
3. Once aligned, screw the studs in completely.
4. Apply Loctite to secure the studs in place.

Position the Drive Unit

- Raise the drive unit motor and motor plate up into the outer housing.
- Ensure the components align properly before proceeding to the next step.

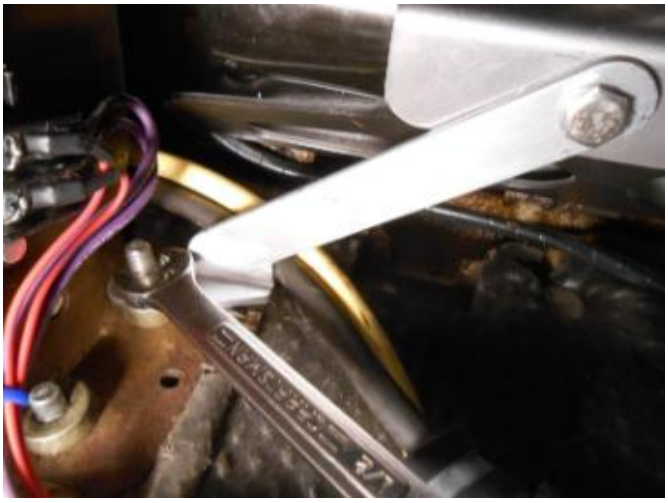
Figure 4:

Secure the Drive Unit Plate

1. **Route the wiring**
   - Guide the **wires and female connector (D)** through the openings located to the right of the drive unit housing.
2. **Attach the plate to the housing**
   - Use **four 1/4-28 × 1/2" hex bolts** with **flat washers** to secure the plate to the housing (**see Figure 4**).
3. **Bolt sequence**
   - Begin with the **#1 position**—this is where the **motor support** will attach.
   - Continue to **#2** and **#3**, then install the final bolt.
   - **Leave the #1 bolt loose** initially, as the **Motor Brace** will be bolted to this position later.

Figure 5:

Install the Motor Brace (C)



1. The Motor Brace (C) spans from the bottom 1/4" bolt of the motor plate to the upper, inboard master cylinder bolt.
2. **Prepare the master cylinder bolt location:**
    - Open the hood and remove the upper, inboard master cylinder bolt.
    - Replace it with a single 5/16-24 × 1 1/2" hex head bolt.
3. **Attach the motor brace:**
    - On the inside of the vehicle, secure the formed end of the motor brace (C) to the new master cylinder bolt.
    - Secure the other end of the brace to the bottom 1/4" bolt at the #1 position on the motor plate.
4. **Tighten all bolts** to complete the installation of the brace (**see Figure 5**).

Figure 6:

Install the Pivot Shafts and Links Assembly

The next step is the Pivot Shafts and Links Assembly.

- Refer to Figure 6 for a visual guide.

Figure 7:

Pivot Shaft Angle Spacers

- **Figure 7** shows the position of the angle spacer that must be installed on each pivot shaft before installing it in the car.
- There are two spacers, one for the driver side and one for the passenger side.
- The photo shows an angle spacer installed for reference.
- **Note:** These angle spacers are **not shown** in the Nomenclature photo.

Figure 8:

Install the Driver Side Pivot Shaft (I)

1. With the **radio removed** and the **heater cable disconnected**, you can begin installing the **driver side pivot shaft (I)**.
2. **Position the pivot shaft:**
   - Insert the pivot shaft from the **passenger side**.
   - Raise the **driver side pivot shaft** over the **steering column** and **forward wiring** under the dash.
   - Rotate the tip of the pivot shaft through the **wiper hole in the cowl**.
3. **Secure temporarily:**
   - Use **one 1/4-20 × 5/8" hex bolt** through the **mounting plate (J)** to prevent the pivot shaft from falling back out (**see Figure 8**).
4. **Orientation check:**
   - The **free end of the driver side pivot shaft lever** should be positioned at approximately **6 o'clock** (**see Figure 8**).
   - Ensure the **free end of the first link (F)** hangs freely near the **new wiper motor**.

Figure 9:

Install the Passenger Side Pivot Shaft (G)

1. **Position the pivot shaft:**
   - Insert the tip of the passenger side pivot shaft (G) into its mounting hole **(see Figure 9).**
2. **Secure the pivot shafts:**
   - Thread three 1/4-20 × 5/8" hex bolts through the passenger side mounting plate and into the cowl.
   - Add two additional 1/4-20 × 5/8" hex bolts to secure the driver side pivot shaft.
3. **Tighten all bolts to fully secure both pivot shafts.**

Figure 10:

Install the Drive Arm (E) onto the First Link (F)

1. **Position the drive arm:**
   - Locate the drive arm (E) on the free end of the first link (F).
   - Remove the spindle nut from the motor spindle.
   - Place the tapered hole of the drive arm onto the motor spindle.
   - Reinstall the spindle nut onto the motor spindle **(see Figure 10).**

Important: Do **not tighten** the spindle nut yet.

Figure 10

Figure 11

Figure 11:

Set the Drive Arm to the Park Position

To ensure proper orientation of the drive arm in its parked position, observe the following:

1. **Identify reference points:**
    - **Park Hole:** Open hole on the face of the motor plate **(see Figure 11).**
    - **Park Slot:** Slot on the drive arm **(see Figure 10).**
2. **Align and tighten:**
    - Use a Phillips screwdriver to align the Park Hole and Park Slot.
    - While holding the alignment, use a 13 mm open-end wrench to tighten the spindle nut **(see Figures 10 and 11).**

Figure 12:

Install the Wiper Switch

1. **Prepare the switch wiring:**
    - Before attaching the switch, **connect the wires** according to the **supplied wiring diagrams**.

Wire lengths:

- **Delay or intermittent switch:** Cut the **red, black, blue, white, and yellow wires** to **27"** from the connector.
- **Simple two-speed switch:** Cut the **red, blue, white, and yellow wires** to **27"** from the connector.
- Leave the **black wire** long enough to locate a **solid ground** on the vehicle's structure.

2. **Mount the switch:**
    - With the wires connected, **thread the slim panel nut** fully down the **brass switch extension** (**see Figure 12**).

Figure 13:

Mount the Wiper Switch in the Dash

1. **Install the spacer:**
    - Place the cupped spacer from the OEM switch onto the brass switch extension.
2. **Insert the switch:**
    - Carefully insert the switch into the dash opening of the Mustang **(see Figure 13).**

Figure 14:

Secure the Wiper Switch and Complete Wiring

1. **Install the chrome bezel:**
   - Place the chrome bezel over the switch.
   - Thread the chrome bezel nut onto the brass extension.
   - Align the small tab on the bezel with the key at the 6 o'clock position on the cupped spacer (**see Figure 14**).
2. **Attach the original wiper knob:**
   - Use a small Allen wrench to secure the original chrome wiper knob to the switch spindle.
3. **Connect the wiring harness:**
   - Plug the male end of the wire harness into the female connector from the wiper motor.
   - Complete the wiring sequence according to the supplied wiring diagram.

Important Note: Test the System Before Installing Wiper Arms

- After installing the wiper system and wiper switch, and connecting all wiring, test-run the system **before** attaching the wiper arms to the pivot shafts.
- While observing under the dash, recheck the **park position** alignment.
- **If the park position has shifted:**
  1. Hold the drive arm (E) firmly.
  2. Loosen the spindle nut.
  3. Reconfirm the correct park alignment.
  4. Retighten the spindle nut securely.

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