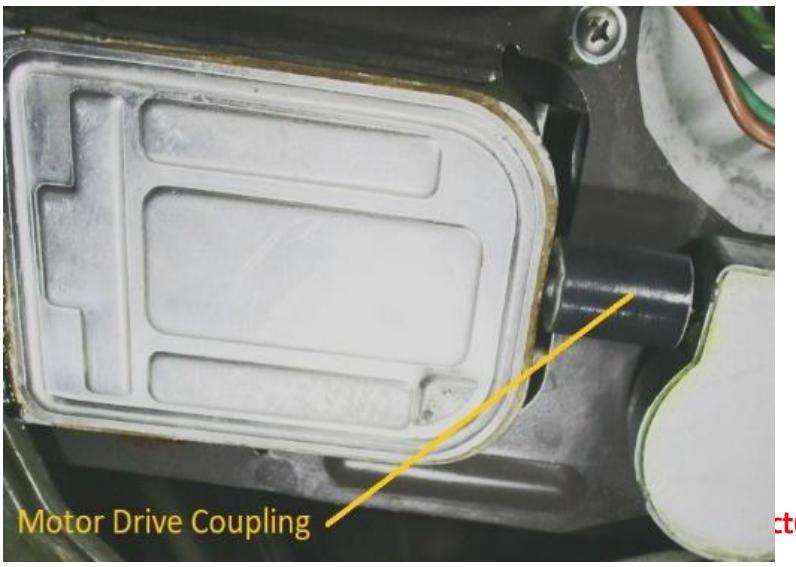
Mercedes Power Window Motor Coupling

(Early Style up to mid-1969)

Installation Instructions

12/4/21

The drive coupling for the early Mercedes power window and sunroof systems is positioned between the electric motor and the gear head. See picture #1.



cture #1

The coupling is designed to be flexible for smooth operation and also to account for minor motor/gear head misalignment. This coupling fits on all early three wire power window motors with the separate gear head.

If the regulator or gear head are binding, increased loads will occur on the motor and the coupling. In the situation of extreme binding, the coupling is designed to fail to save the more valuable components such as the motor and gear head. The secret to longevity for the motor coupling, as well as for the other components, is good preparation of the window regulator mechanism.

The window guides and channels must be adjusted correctly so that the glass slides with minimal effort. The regulator should be cleaned of all old grease and all pivot points be lubricated for smooth operation. Removal of the regulator is the best and easiest way to accomplish this task. In addition, replacement of plastic slides and rollers will also reduce the loads on the motor and coupling. Also be sure the gear head is not damaged and spins easily with no binding.

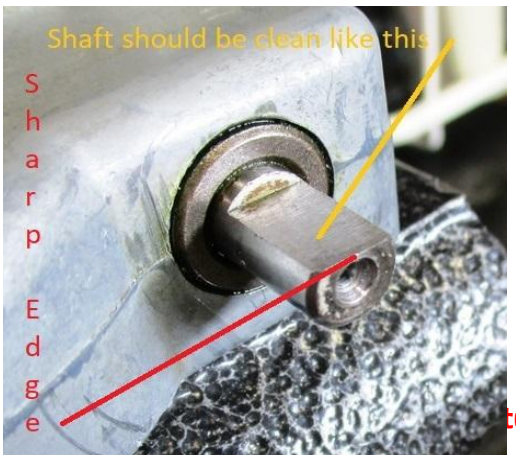
After refurbishing the window mechanisms, it is important to first manually lower the window glass instead of using the electric motor. This can be done by means of turning the gear head shaft before the motor is installed. See picture #2.

Picture #2

This will confirm that the mechanism is not binding and has a smooth operation throughout the entire travel. You can also easily check the various adjustment points along the way using this method. The fit of the coupling on the motor or gear head "D" shaft is critical to its longevity. For a proper fit, both the motor and gear head shafts must be perfectly clean and free of any debris or rust. See picture #3.

ture #3

From the factory, the flat on the shaft's leading edge is sharp and will cut the adapter. See picture #4.

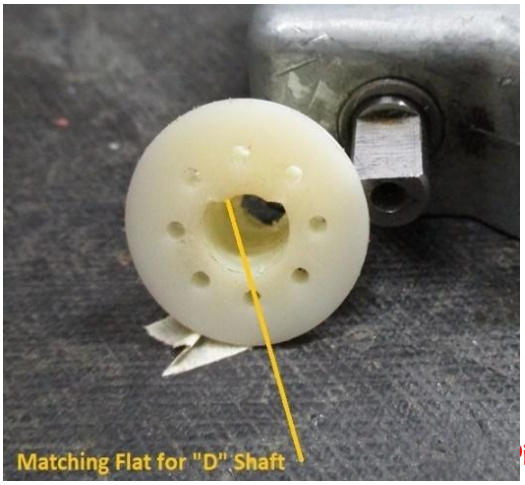


ture #4

This edge on the shaft MUST be chamfered or damage to the coupling adapter could result. See picture #5.

Picture #5

The coupling has two adapters at each end with a "D" shaped cavity in each to match up with the "D" type shafts used on both motor and gear head. See picture#6.

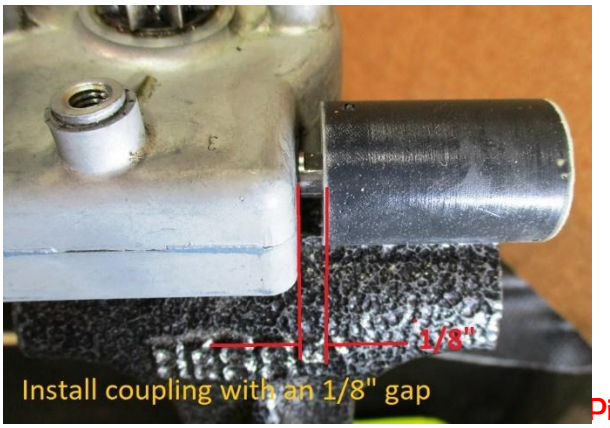


Picture #6

The coupling adapters are the same and will fit on either motor or gear head. It is imperative to test fit the coupling onto the motor and gear head "D" shafts prior to final installation. The fit of the coupling to the shaft should be a snug hand fit and no tools should be needed. A lubricant should not be needed but a very light film of grease can be used. If the coupling cannot be pressed onto the motor or gear shaft by hand, carefully inspect to see where the binding is occurring and address that before proceeding. Use a "Sharpie" ink pen on the D shaft and install the adapter. The tights spots will be obvious where the ink has been rubbed off. Dress these areas to achieve the correct fit. Do not be too aggressive however, as a loose fit of the coupling on the shafts is likewise not ideal.

The coupling is molded so that both flats in the "D" shaft cavity should be oriented in the same direction. A black mark on the face of the adapter identifies where the flat is in the cavity. Install the coupling first on the gear head that is mounted on the window regulator. Note the position of the flat on the shaft. Before installing the motor, be sure the motor mounting rails are just loose enough to allow for the motor to be adjusted back and forth.

Position the motor in its holding bracket and orient the flat on the motor shaft to that of the flat in the coupling cavity. Move the motor in so that the shaft engages into the coupling adapter. Install motor mounting screws loosely. Now position the motor so that there is a 1/8" gap between the motor or gear head case and the end of the coupling. See picture #7.



Picture #7

Do not compress the coupling. With the screws loose, rotate the coupling by hand several turns allowing the coupling to center and align itself while maintaining the 1/8" clearance on each end.

Now tighten the motor mounting screws and check to see that the coupling is basically parallel to the motor and gear head shafts and is not distorted. Some very minor misalignment can be tolerated, but much more than that will create excessive wear on the coupling. Finally reconnect the motor's electrical connections. Test window function several times before installing door panels.