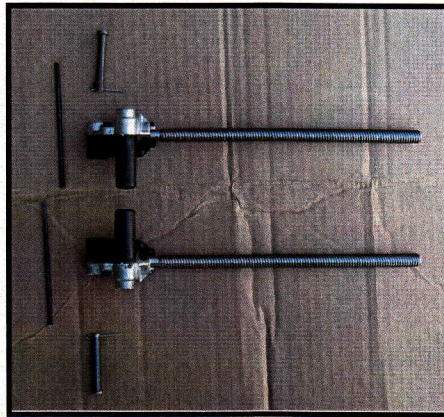


Two Men One Garage

Mustang Forward/Backward Gear Set Installation

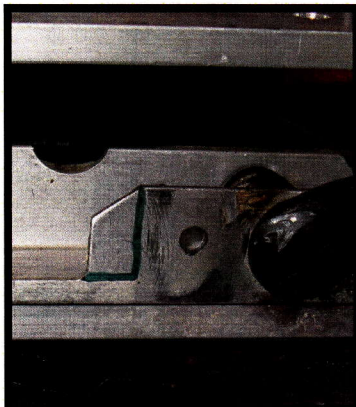
Instructions



Kit components

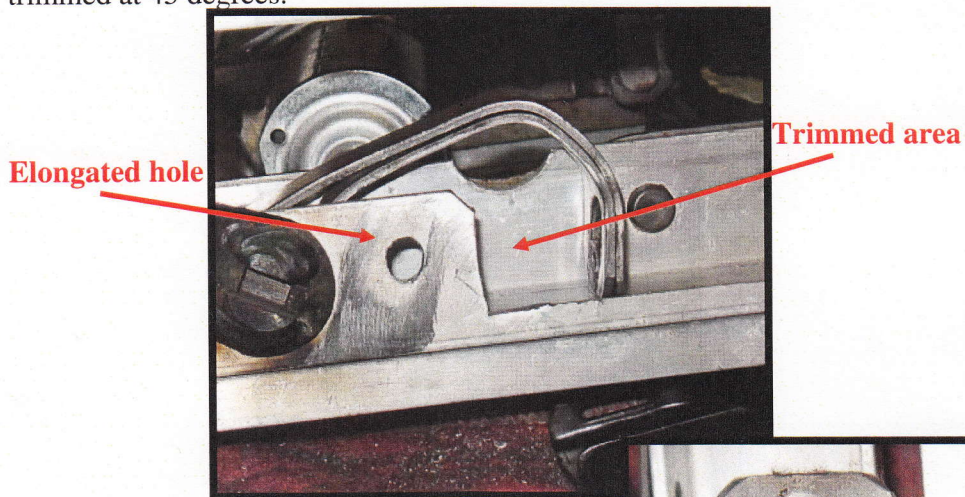
- 1 Left gear assembly*
- 1 Right gear assembly*
- 2 Flexible drive shafts*
- 2 Clevis pins*
- 2 Cotter pins*
- 4 Washers (not pictured)*

1. Remove the power seat assembly from the car. If possible, make sure the seat is raised all the way up. This makes removing and repairing the assembly easier.
2. Use a torx bit to remove each torx bolt, which is holding the gear screw block to the seat slider assembly. Once the torx bolts are removed, unscrew the block off the threaded gear shaft.
3. Use an air grinder or some type of saw to grind/cut off the mushroomed end of the pin holding each drive gear assembly to the seat frame. Use a punch or similar tool to push the pin assembly out. You can now lift the gear assembly out of the frame channel and maneuver it from the metal straps. Remove the forward/backward motor; this will help disengage the flexible drive shafts from the input side of the gears. You don't need to remove the electrical wires from the connector. Once both gear assemblies are removed, temporarily reattach the motor to prevent damage to the wires while you make the needed modifications to the frame. See the last part of the instructions for sticking slides.



4. Some minor trimming is required to the outside of the frame. Draw a similar cut line as seen in the picture below and remove unneeded metal.

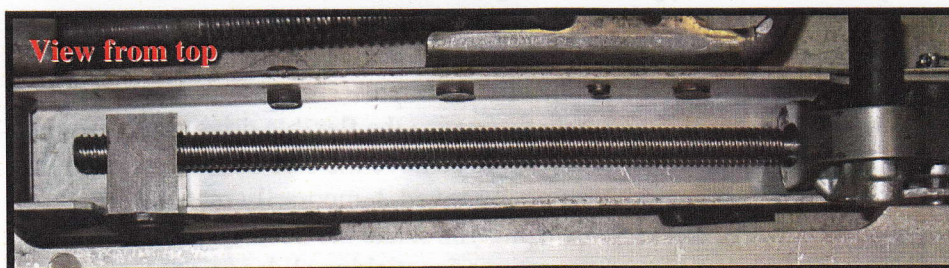
5. Because the replacement gears are over-sized compared to the factory units, the mounting holes need to be slightly vertically elongated. Take small steps and periodically test fit the new gears into the frame. Below is a picture of the side trimmed off and the hole vertically elongated. Notice the top corner is also trimmed at 45 degrees.



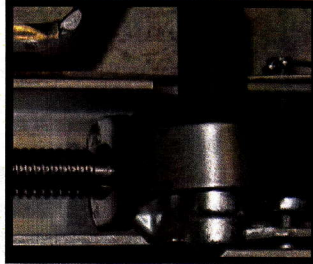
6. The metal straps that go over the gearbox portion need to be bent out slightly. However, if you bend them too much, the strap will come in contact with the threads on the shaft and rub. Bend the strap outwards some like shown in the picture and test fit. These straps prevent the shaft block from hitting the gear housing and act as a safety restraint, so don't just cut them off.



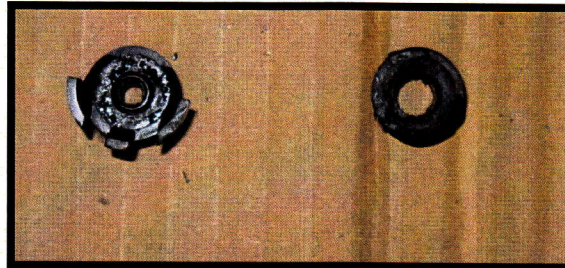
7. When finished, the threaded screw shaft should be parallel to the frame channel. If the shaft is not parallel, the shaft will bind and strain your electrical motor.



8. Keep test fitting everything until it all fits just right. When the shaft is parallel with the bottom of the frame and parallel with the inside of the frame, you are done making adjustments.
9. Install the gears in the frame and slide the provided clevis pin through the frame and gear assembly. Use a provided washer at each end of each clevis pin and secure with a cotter pin.



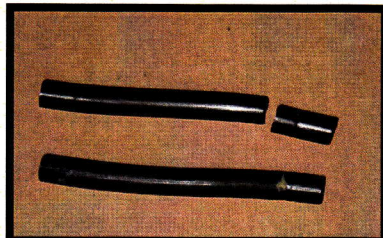
10. Thread the shaft block assembly back onto the new shaft. Mate the track slide and the block assembly back together at the fully extended position. Try to get each side installed at the fully extended position. If both sides are not relatively the same length, your seat could feel a little off center when installed. When both are attached and the torx bolt is tightened, apply a light coat of white lithium grease to the shafts.
11. This step is optional, but makes for a cleaner install. Take off the small plastic end cap from the old gear assembly input shaft and trim the 3 small prongs off. Use a drill bit, knife, or round file to open the small hole up to the same size as the other end. The rubber hose covering the flexible drive shafts will slide into this new opening. Then the plastic piece will slide into the new gear input housing, making for a clean fit. Before sliding the plastic end cap into place, coat it with some grease, this will help it seal the cap to the housing, keeping dirt from getting inside the hose. See the picture for reference.



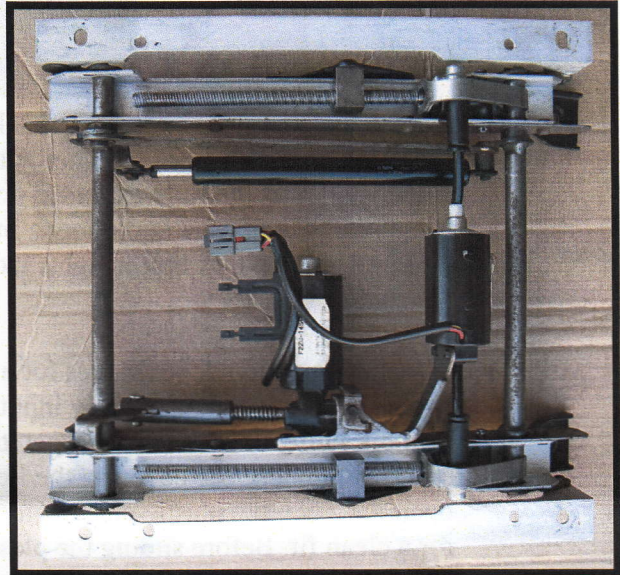
Before trimming

After trimming

12. Trim ½ inch off the rubber hose which shields the flexible drive shafts. See the attached picture. When in doubt, remove less material and keep test fitting until the rubber hose is the correct length between the motor and the gear housing. A good reference point is the old crease in the hose. I always cut the hose at the crease.



13. I've found it easiest to install the new flexible drive shafts into the gear assembly first, then sliding the rubber hose with plastic end cap over the drive shaft. Make sure to lightly grease the flexible drive shafts so the shafts have lubrication while turning in the rubber hose. The shafts will rotate inside the hose and contact with the inside of the hose is certain.
14. Unbolt the electrical motor and slide one side onto the flexible drive shaft. Then install the other side by maneuvering the motor out and around until the other drive shaft engages into the motor. Don't worry about bending the shaft assemblies. These are like speedometer cables and are made to flex and bend. Once you have both sides engaged, bolt the motor back up to the bracket.
15. Put the seat assembly back into your car and hook up the wiring before mounting the seat. Test the seat assembly to make sure it operates correctly before mounting the seat to the frame.
16. If you have any install problems, please contact me at humrich@comcast.net.
17. Enjoy your newly repaired seat assembly. Remember, the gears are warranted for life. If they fail, just contact me for a replacement.

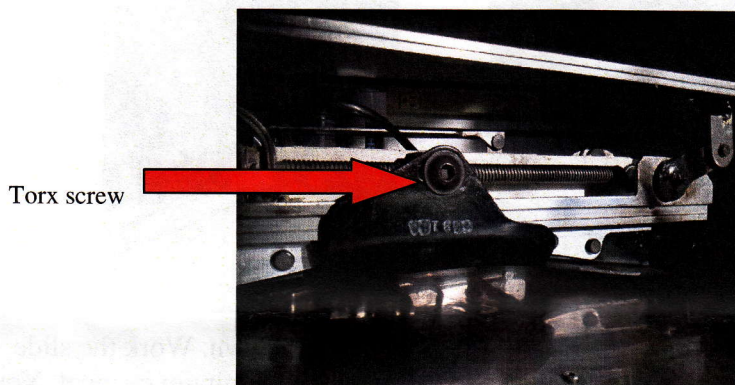


Cleaning 87-98 Mustang Power Seat Slides

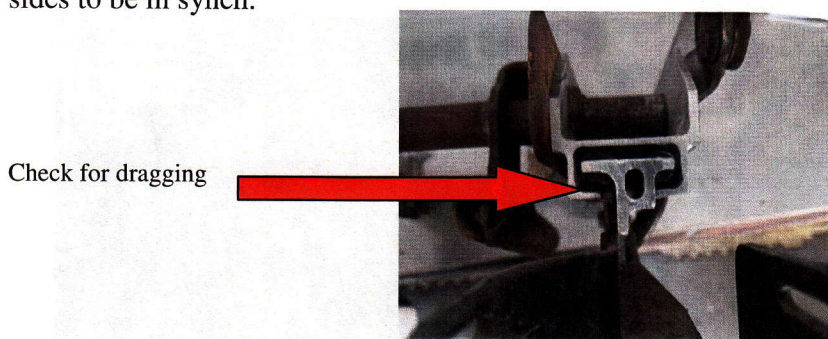
www.2men1garage.net

The Mustang power seat assemblies are over 20 years old, so it's understandable why the seat slides are often difficult to move. Gummed up seat slides can cause the forward/backward motor to seem under powered as well as cause excessive strain on the forward/backward gear assemblies. I believe the increased resistance contributes to broken gears.

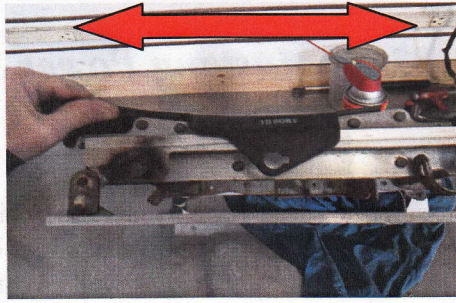
When replacing the forward/backward motor or forward/backward gear assemblies, check the slides for proper operation. Follow these steps in order to free up the slides. All the steps don't have to be completed to fix your problem. Perform them in order until you get satisfactory movement from the slides.



1. To check the slides, you will have to disconnect the lower slide from the gear assembly. Remove the T45 Torx head screw. Once the screw is out, the traveling block will be loose and could rotate on the screw. When you reassemble, make sure it is at the same distance on the screw as the opposite side. You want both sides to be in synch.



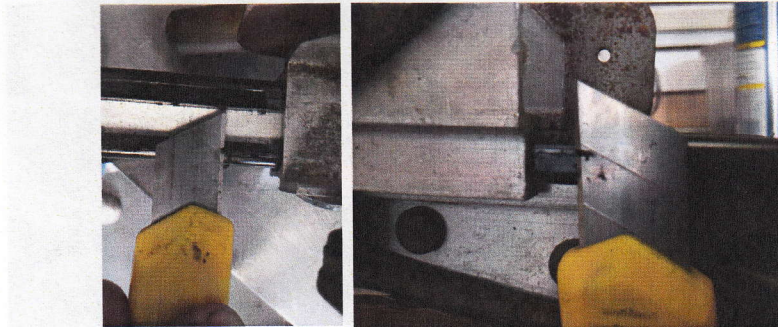
2. Check the mounting bracket to make sure it's not bent, which causes it to drag on the aluminum frame. If it's bent, carefully straighten it out.



3. You should be able to move the disconnected slides with one hand grasping the frame and the other hand holding the slide. If you cannot move the slide this way, it's too tight.



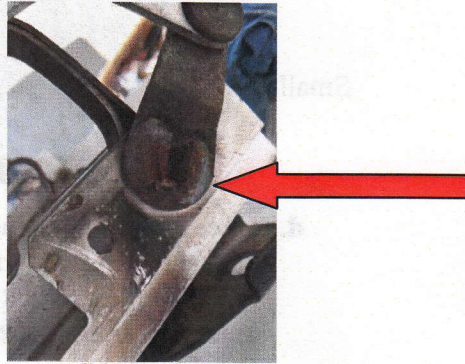
4. If the slide is difficult to move, spray WD40 in the rail as shown. Work the slide back and forth which will loosen up dirt and debris in the aluminum channel. You will see a black film in the channel after moving the slide. Wipe it out the best you can, and repeat the procedure numerous times. Most of the time, I can get the slide cleaned out enough to improve the movement.



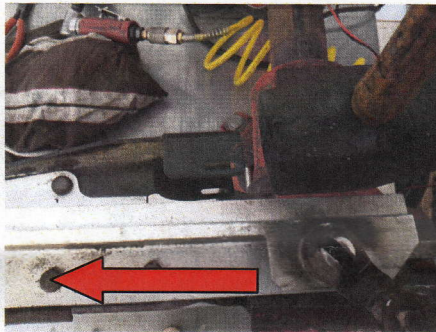
5. If the slide is still hard to move, you can trim the ridges on the black nylon slides with a razor. On the top and sides of each slide is a ridge about 1/16 tall and wide. Sometimes the ridge is all ready worn off, but if not, trim it off to decrease slider drag. Try to determine what side is dragging by looking for wear marks and carefully trim it off as shown.

6. The last step can be difficult and could result in breaking the nylon slides. **Do so at your own risk.** The slides can be removed from the aluminum channels. If you want to proceed, do the following steps.

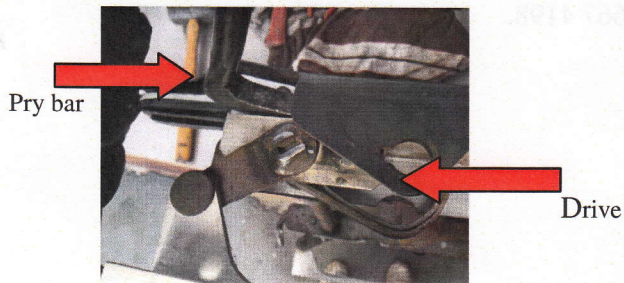
- a. Grind down the sharp edges on both rotating assemblies for the side you plan on removing. This helps the bracket slide over it. **Important: The seat must be in the fully upright position.**



Grind both levers



- b. You will drive the slide out, hitting the large end of the slide. Do not hit the front brackets. They are smaller and very weak. Only hit on the larger back mounting bracket. Move the slide until it contacts the rotating assembly you dressed up in step "a".

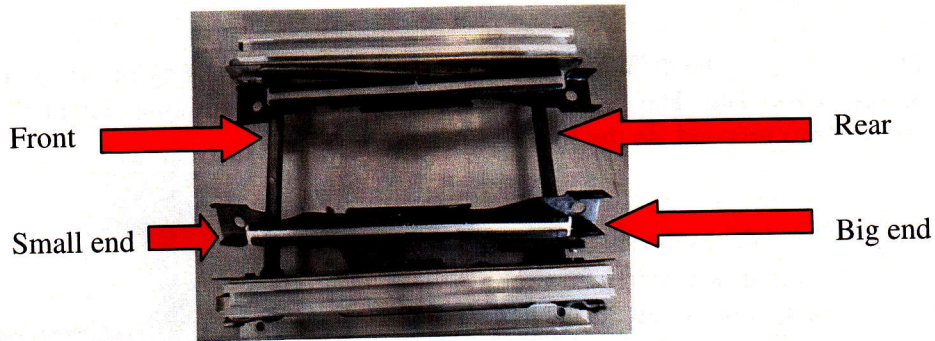


Pry bar

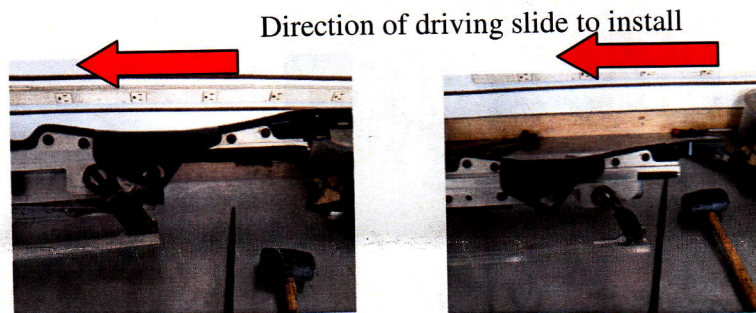
Drive



- c. Use a pry bar to lift up the black bracket and drive the slide over the rotating lever. Make sure you pry in the location shown. If you pry in another place, you could bend the aluminum. Be patient and drive the slide out, over the rotating lever.



- d. Once the slide is removed, clean the aluminum channel and black nylon slides. Finish removing any remaining ridges that you trimmed up in step 5. Take note on what end of the slide goes towards the front of the seat assembly. Putting them in backwards will result in a seat angled the wrong way in the car.



- e. The slide is installed into the aluminum channel from the opposite end you removed it. Installing this way ensures you are driving it back in by hitting the strong end of the slide. Make sure the sharp edges on the rotating lever are dressed up and the seat frame is in the fully up position. Remember, you are driving the slide in by striking the big bracket. Once the slide is up against the rotating lever, use the pry bar again to lift the black bracket up as you drive the slide in with a rubber mallet. Call me with any questions: 912 667 4198.