

Model: Model X

Vehicle System: 11 - Closures

Region: All

Tech Note: Preventing Model X Front Door Damage

Tech Notes are announcements that help to communicate and track new information about Tesla Service concerns. Such concerns may or may not be VIN specific. These instructions assume knowledge of motor vehicle and high voltage electrical component repairs, and should only be executed by trained professionals. Tesla Motors assumes no liability for injury or property damage due to a failure to properly follow these instructions or for repairs attempted by unqualified individuals.

Any time a Model X is in the workshop, damage might occur to a powered front door if the door opens unexpectedly or attempts to move when the linkage is disconnected.

The auto-present feature automatically opens the front door when someone approaches a front door carrying the key fob. Turn off the Auto-Present feature to prevent powered front doors from opening unexpectedly in the workshop (from the vehicle touchscreen: **Settings > Vehicle > Auto-Present > OFF**).

During front door repairs, damage might occur to the vehicle if the powered front door system is not disconnected.

The Powered Front Door System

The powered front doors on Model X are designed to open and close automatically in several situations (refer to “Conditions for Opening and Closing”). Model X also has a conventional interior mechanical release to unlatch the door from inside the vehicle.

The powered front door system is comprised of a front door controller (Figure 1, Item 1) that receives input from sensors and gives output to the front door drive unit (Figure 1, Item 4), and a standard door mounted on a free-moving hinge. The front door drive unit rotates the linkage to open and close the front door. One end of the linkage is attached to the ball stud (Figure 1, Item 3) near the upper door hinge and the other end is attached to the front door drive unit (Figure 1, Item 2).



Figure 1

- | | |
|--|----------------------------|
| 1. Front door controller | 3. Linkage (ball stud end) |
| 2. Linkage (front door drive unit end) | 4. Front door drive unit |

Conditions for Opening and Closing

The front door controller commands the front door drive unit to open a front door when:

- **OPEN** is selected on the touchscreen
- An exterior door handle is pushed
- An interior door handle is pulled
- The door senses an operator trying to manually open the door

The front door controller commands the front door drive unit to close a front door when:

- The brake pedal is pressed and the vehicle is in Park
- **CLOSE** or **LOCK** is selected on the touchscreen
- An exterior door handle is pushed
- An interior door handle is pulled
- The lock button on the key fob is pressed
- The door senses an operator trying to manually close the door

Damage Caused by the Front Door Drive Unit

If the front door drive unit attempts to open or close the front door while the linkage is disconnected, the linkage (ball stud end) might move rapidly and damage the A-Pillar (Figure 2). Additionally, the linkage (front door drive unit end) might rotate inside the door, and dent the door shell (Figure 3).



Figure 2



Figure 3

Disconnect the wiring harness (electrical connection) of the front door drive unit before disconnecting the linkage (mechanical connection) of the front door drive unit to avoid damage to the vehicle and unintentional opening of a front door.

Disconnecting the Front Door Drive Unit

1. Fully open the driver's side window to prevent lockout.
2. Disconnect 12V power (Refer to Service Manual procedure [17010200](#)).
3. Remove the rear sill panel trim (Refer to Service Manual procedure [15180502](#)).
4. Remove the A-Pillar lower trim (Refer to Service Manual Procedure [15182402](#)).

5. Disconnect the gray wiring harness connector and the white wiring harness connector (Figure 4).

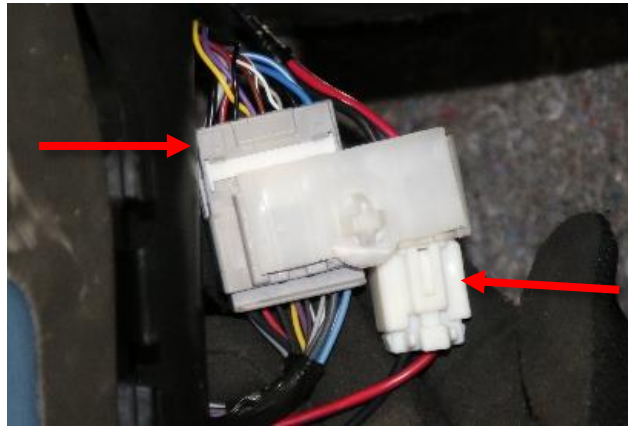


Figure 4

6. Use a small pry bar to push the linkage down and disconnect it from the ball stud (Figure 5).

⚠ CAUTION: Make sure the electrical connection is disconnected before disconnecting the linkage and ball stud.

NOTE: If the front door will be closed during the repair, put the linkage behind the ball stud (Figure 6) and slowly close the door. Make sure that the linkage is behind the ball stud and the power to the front door drive unit is disconnected.



Figure 5

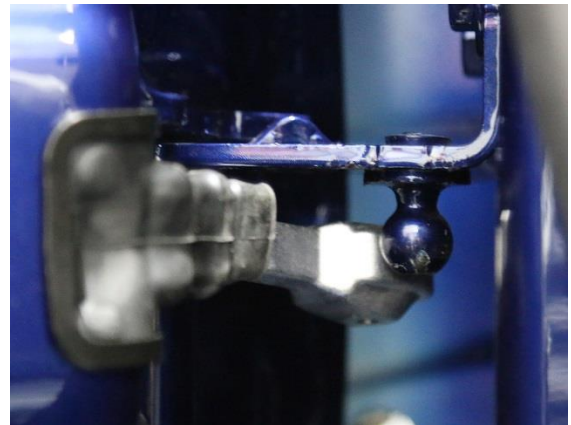


Figure 6

Installation is the reverse of the removal, except for the following:

Use pliers to reattach the linkage to the ball stud.

⚠ CAUTION: Use a cloth or other soft material between the hinge and the pliers to protect the painted surface of the hinge.

⚠ CAUTION: Make sure the linkage is connected to the ball stud before connecting the electrical harness.

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