

Published: 11-May-2011

Glass, Frames and Mechanisms -

Torque Specifications

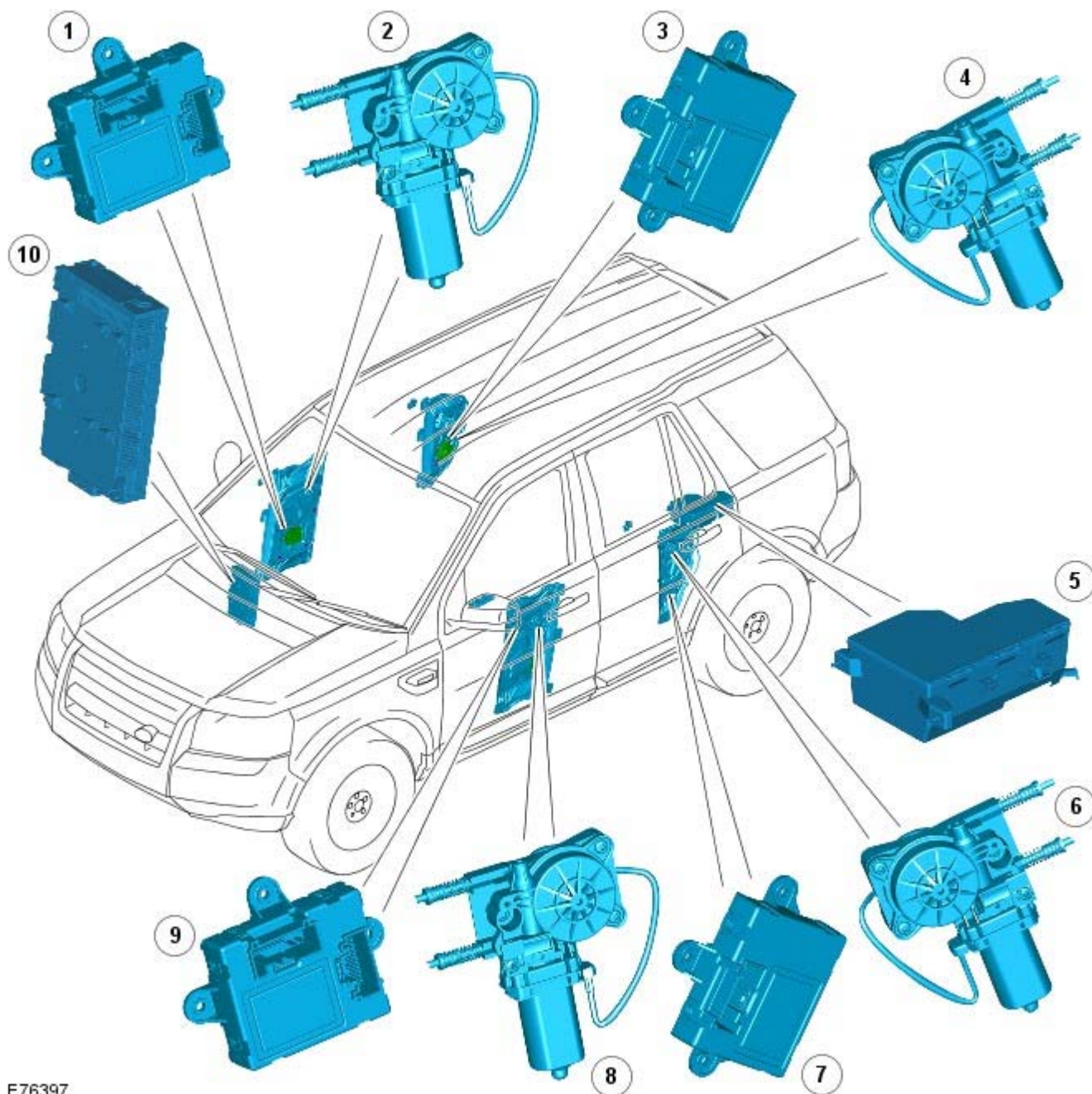
| Description | Nm | lb-ft |
|--|----|-------|
| Front door window glass guide channel bolt | 10 | 7 |
| Front door window motor and regulator to door nuts and bolts | 10 | 7 |
| Rear door window fixed glass Torx screw | 5 | 4 |
| Rear door window motor and regulator to door nuts and bolts | 10 | 7 |

Part Number

Published: 11-May-2011

Glass, Frames and Mechanisms - Glass, Frames and Mechanisms

Description and Operation

COMPONENT LOCATION

E76397

| Item | Part Number | Description |
|------|-------------|------------------------------|
| 1 | - | Passenger door module |
| 2 | - | Passenger door glass motor |
| 3 | - | Rear door module |
| 4 | - | Rear door glass motor |
| 5 | - | Auxiliary Junction Box (AJB) |
| 6 | - | Rear door glass motor |
| 7 | - | Rear door module |
| 8 | - | Driver door glass motor |
| 9 | - | Driver door module |
| 10 | - | Central Junction Box (CJB) |

OVERVIEW

The laminated windshield is bonded and sealed to the body aperture using Polyurethane (PU) adhesive. Bonded to the inner surface of the windshield is the mounting boss for the interior mirror. Dependent on vehicle specification, the windshield may contain 2 heating elements between the windshield laminations.

The toughened rear screen is also bonded and sealed to the body aperture using PU adhesive. A single heating element is printed on the inner surface of the rear screen.

Operation of the window lift system is controlled by the CJB in conjunction with the driver door module and the front passenger door module. The door modules are mounted on the regulators of their respective front windows. Door modules are also mounted on both rear window regulators, and communicate with the front door modules over the Local Interconnect Network (LIN) bus.

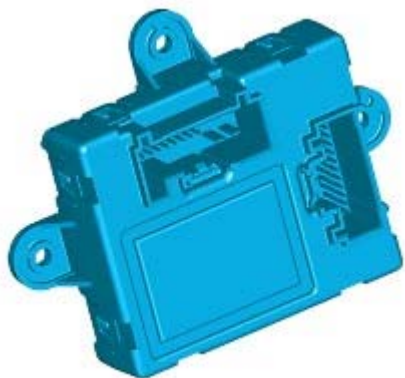
The window lift system features one shot up and down operation, plus an anti-trap feature for all door windows.

If the battery is disconnected, the window lift system will require calibrating on battery re-connection. To calibrate the system the following routine must be carried out.

With the ignition on:

- Fully close the door glass and release the switch.
- Re-apply the switch to close the door glass and hold for approximately 2 seconds.
- Fully open the door glass and release the switch.
- Re-apply the switch to open the door glass and hold for approximately 2 seconds.
- Repeat for all remaining windows.

DOOR MODULES



E85031

In addition to controlling the window lift system, the front door modules also control:

- Door locking.
For additional information, refer to: [Handles, Locks, Latches and Entry Systems](#) (501-14 Handles, Locks, Latches and Entry Systems, Description and Operation).
- Door mirror adjustment and heating. For additional information, refer to:
[Rear View Mirrors](#) (501-09 Rear View Mirrors, Description and Operation),
[Control Components](#) (412-01 Climate Control, Description and Operation).
- Door mirror lamps.
For additional information, refer to: [Interior Lighting](#) (417-02 Interior Lighting, Description and Operation).

The rear door modules control window lift and door locking only.

The door modules are color coded for position on the vehicle. The driver door module and both rear door modules are black. The passenger door module is gray. The electrical wiring harness connectors are also color coded to match the door modules.

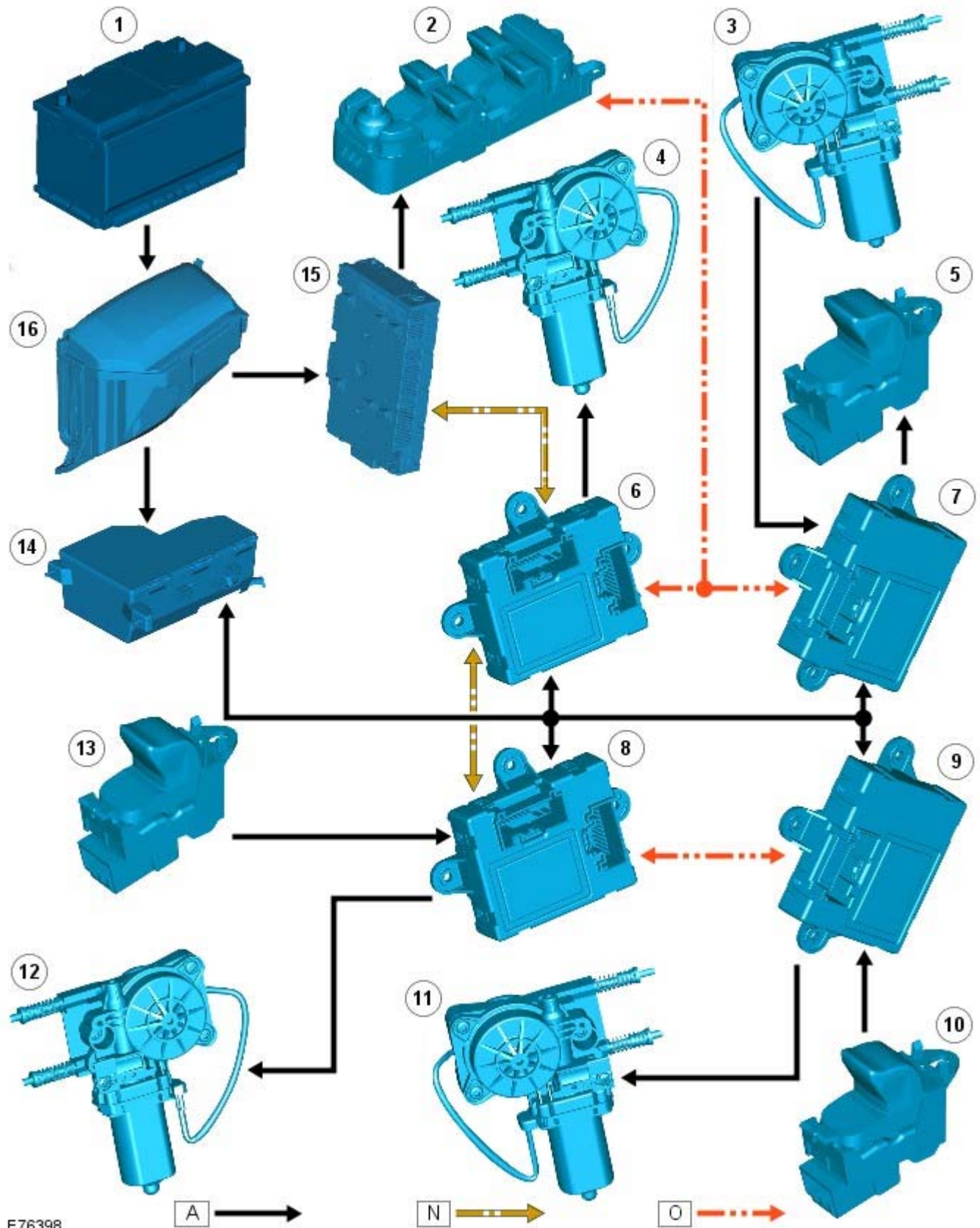
NOTE: Both rear door modules are identical.

If a front door module develops a fault, a Diagnostic Trouble Code (DTC) is stored in its memory. The DTC can be read using the Land Rover approved diagnostic system. If either of the rear door modules develop a fault, the DTC is stored in the respective front door module.

For additional information, refer to: [Glass, Frames and Mechanisms](#) (501-11 Glass, Frames and Mechanisms, Diagnosis and Testing).

CONTROL DIAGRAM

NOTE: **A** = Hardwired; **N** = Medium speed Controller Area Network (CAN) bus; **O** = LIN bus



E76398

| Item | Description |
|------|------------------------------|
| 1 | Battery |
| 2 | Driver door switch pack |
| 3 | Rear door glass motor |
| 4 | Driver door glass motor |
| 5 | Rear door window lift switch |
| 6 | Driver door module |
| 7 | Rear door module |

| | | |
|----|--|-----------------------------------|
| 8 | | Passenger door module |
| 9 | | Rear door module |
| 10 | | Rear door window lift switch |
| 11 | | Rear door glass motor |
| 12 | | Passenger door glass motor |
| 13 | | Passenger door window lift switch |
| 14 | | AJB |
| 15 | | CJB |
| 16 | | Battery Junction Box (BJB) |

PRINCIPLES OF OPERATION

The CJB provides a power supply to the driver door switch pack when the vehicle is in power mode 6 (ignition on). Switch requests made using the driver door switch pack are then delivered to the driver door module over the LIN bus.

The driver door module interprets the request made using the switch pack and responds as follows:

- If the request is for drivers side rear window operation, a request is transmitted over the LIN bus to the driver side rear door module.
- If the request is for front passenger window operation, a request is transmitted over the medium speed CAN bus to the passenger door module.
- If the request is for passenger side rear window operation, a request is transmitted over the medium speed CAN bus to the passenger door module. This request is then forwarded over the LIN bus to the passenger side rear door module.

Door Glass Opening and Closing

Each door module provides 2 signal feeds to its window lift switch. When a switch request is made, a ground path is created on one of the lines via the door module. From this the door module can determine which direction of travel has been requested.

The door modules power the door glass motors on receipt of a switch request or a request for Global Closing (see below). The door modules provide feed and return paths to their respective motor, which can switch depending on the direction of travel requested.

The door glass motor assemblies also contain a Hall effect sensor. The Hall effect sensor allows the door module to determine the position of the door glass and if a motor stall condition has taken place.

Global Closing

The AJB provides a constant battery feed to the 4 door modules. This feed is used operate the 'Global Closing' feature. Global Closing allows all 4 windows to be closed using the Radio Frequency (RF) handset.

NOTE: The roof opening panel is not part of the Global Closing feature.

The Global Closing feature is activated by pressing and holding the 'lock' button on the RF handset for 3 seconds. The request for Global Closing is provided to the CJB by the RF receiver. The CJB then transmits this request to the driver and passenger door modules over the medium speed CAN bus.

Initialization

When the vehicle is delivered from the factory the window lift system will operate slowly until it has been initialized. The initialization process should be carried out using the Pre-Delivery Inspection (PDI) feature contained within the Land Rover approved diagnostic system. For more information, refer to the PDI manual.

Similarly, if a door module is replaced, the new module will require initialization before handover to the customer. The initialization process for a new module is carried out using the 'New Module' feature contained within the Land Rover approved diagnostic system.

NOTE: If a driver door or passenger door module is replaced, both will require initialization. This ensures both front controlling modules contain the same level of software.

Glass, Frames and Mechanisms - Glass, Frames and Mechanisms

Diagnosis and Testing

Principles of Operation

For a detailed description of the glass, frames and mechanisms, refer to the relevant Description and Operation section in the workshop manual.

REFER to: [Glass, Frames and Mechanisms](#) (501-11 Glass, Frames and Mechanisms, Description and Operation).

Inspection and Verification



CAUTION: Diagnosis by substitution from a donor vehicle is **NOT** acceptable. Substitution of control modules does not guarantee confirmation of a fault, and may also cause additional faults in the vehicle being tested and/or the donor vehicle.

1. Verify the customer concern.
2. Visually inspect for obvious signs of mechanical or electrical damage.

Visual Inspection

| Mechanical | Electrical |
|--|--|
| <ul style="list-style-type: none"> ● Window glass ● Window regulator | <ul style="list-style-type: none"> ● Fuses/relays (refer to electrical guide) ● Wiring harness ● Correct engagement of electrical connectors ● Loose or corroded connections |

3. If an obvious cause for an observed or reported concern is found, correct the cause (if possible) before proceeding to the next step.
4. If the cause is not visually evident, check for Diagnostic Trouble Codes (DTCs) and refer to the DTC Index.

DTC Index

NOTE: If the control module or a component is suspect and the vehicle remains under manufacturer warranty, refer to the Warranty Policy and Procedures manual (section B1.2), or determine if any prior approval programme is in operation, prior to the installation of a new module/component.

NOTE: Generic scan tools may not read the codes listed, or may read only five digit codes. Match the five digits from the scan tool to the first five digits of the seven digit code listed to identify the fault (the last two digits give extra information read by the manufacturer-approved diagnostic system).

NOTE: When performing voltage or resistance tests, always use a digital multimeter (DMM) accurate to three decimal places and with a current calibration certificate. When testing resistance, always take the resistance of the DMM leads into account.

NOTE: Check and rectify basic faults before beginning diagnostic routines involving pinpoint tests.

NOTE: If DTCs are recorded and, after performing the pinpoint tests, a fault is not present, an intermittent concern may be the cause. Always check for loose connections and corroded terminals.

| DTC | Description | Possible Cause | Action |
|---------|------------------------|--|--|
| B117C07 | Rear Power Window up | <ul style="list-style-type: none"> ● Mechanical Failure | Check for mechanical failure of rear window mechanism |
| B117C72 | Rear Power Window up | <ul style="list-style-type: none"> ● Actuator Stuck Open | Clear DTC and re-test. If DTC returns, install a new rear door module, refer to the new module installation note at the top of the DTC Index |
| B117C73 | Rear Power Window up | <ul style="list-style-type: none"> ● Actuator Stuck Closed | Clear DTC and re-test. If DTC returns, install a new rear door module, refer to the new module installation note at the top of the DTC Index |
| B117C92 | Rear Power Window up | <ul style="list-style-type: none"> ● Performance or incorrect operation | Refer to electrical circuit diagrams and check power and ground supplies to rear door module |
| B117D72 | Rear Power Window down | <ul style="list-style-type: none"> ● Actuator Stuck Open | Clear DTC and re-test. If DTC returns, install a new rear door module, refer to the new module installation note at the top of the DTC Index |
| B117D73 | Rear Power Window down | <ul style="list-style-type: none"> ● Actuator Stuck Closed | Clear DTC and re-test. If DTC returns, install a new rear door module, refer to the new module installation note at the top of the DTC Index |
| B117E07 | Front Power Window up | <ul style="list-style-type: none"> ● Mechanical failure | Check for mechanical failure of front window mechanism |
| B117E72 | Front Power Window up | <ul style="list-style-type: none"> ● Actuator stuck open | Clear DTC and re-test. If DTC returns, install a new DDM/PDM, refer to the new module installation note at the top of the DTC Index |


| DTC | Description | Possible Cause | Action |
|---------|--|--|--|
| B117E73 | Front Power Window up | <ul style="list-style-type: none"> ● Actuator stuck closed | Clear DTC and re-test. If DTC returns, install a new DDM/PDM, refer to the new module installation note at the top of the DTC Index |
| B117F72 | Front Power Window down | <ul style="list-style-type: none"> ● Actuator stuck open | Clear DTC and re-test. If DTC returns, install a new DDM/PDM, refer to the new module installation note at the top of the DTC Index |
| B117F73 | Front Power Window down | <ul style="list-style-type: none"> ● Actuator stuck closed | Clear DTC and re-test. If DTC returns, install a new DDM/PDM, refer to the new module installation note at the top of the DTC Index |
| B118929 | Front Window Position Sensor | <ul style="list-style-type: none"> ● Signal invalid | Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system |
| B118A29 | Rear Window Position Sensor | <ul style="list-style-type: none"> ● Signal invalid | Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system |
| B11D183 | LIN Bus Circuit "C" | <ul style="list-style-type: none"> ● Value of signal protection calculation incorrect | Refer to the electrical circuit diagrams and test LIN circuit between driver switch pack and DDM for short/open circuits, clear DTC and re-test. If DTC remains install a new switch pack. REFER to: Driver Door Window Control Switch (501-11 Glass, Frames and Mechanisms, Removal and Installation). |
| B11D186 | LIN Bus Circuit "C" | <ul style="list-style-type: none"> ● Signal Invalid | Refer to the electrical circuit diagrams and test LIN circuit between driver switch pack and DDM for short/open circuits, clear DTC and re-test. If DTC remains install a new switch pack. REFER to: Driver Door Window Control Switch (501-11 Glass, Frames and Mechanisms, Removal and Installation). |
| B11D187 | LIN Bus Circuit "C" | <ul style="list-style-type: none"> ● Missing Message | Refer to the electrical circuit diagrams and test LIN circuit between driver switch pack and DDM for short/open circuits, clear DTC and re-test. If DTC remains install a new switch pack. REFER to: Driver Door Window Control Switch (501-11 Glass, Frames and Mechanisms, Removal and Installation). |
| B1A9883 | LIN Bus Circuit #1 | <ul style="list-style-type: none"> ● Value of signal protection calculation incorrect | Carry out the pinpoint test associated with this DTC using the manufacturer approved diagnostic system. Refer to the electrical circuit diagrams and test LIN circuit between driver side rear door module and DDM for short/open circuits, clear DTC and re-test. If DTC remains install a new switch pack. REFER to: Driver Door Window Control Switch (501-11 Glass, Frames and Mechanisms, Removal and Installation). |
| B1A9886 | LIN Bus Circuit #1 | <ul style="list-style-type: none"> ● Signal Invalid | Refer to the electrical circuit diagrams and test LIN circuit between driver side rear door module and DDM for short/open circuits, clear DTC and re-test. If DTC remains install a new switch pack. REFER to: Driver Door Window Control Switch (501-11 Glass, Frames and Mechanisms, Removal and Installation). |
| B1A9887 | LIN Bus Circuit #1 | <ul style="list-style-type: none"> ● Missing Message | Refer to the electrical circuit diagrams and test LIN circuit between driver side rear door module and DDM for short/open circuits, clear DTC and re-test. If DTC remains install a new switch pack. REFER to: Driver Door Window Control Switch (501-11 Glass, Frames and Mechanisms, Removal and Installation). |
| C1B1411 | Sensor Supply #1 | <ul style="list-style-type: none"> ● Short to ground | Refer to the electrical circuit diagrams and test front window sensor supply circuit for short to ground |
| C1B1415 | Sensor Supply #1 | <ul style="list-style-type: none"> ● Short to power or open circuit | Refer to the electrical circuit diagrams and test front window sensor supply circuit for short to power or open circuit |
| C1B1511 | Sensor Supply #2 | <ul style="list-style-type: none"> ● Short to ground | Refer to the electrical circuit diagrams and test rear window sensor supply circuit for short to ground |
| C1B1515 | Sensor Supply #2 | <ul style="list-style-type: none"> ● Short to power or open circuit | Refer to the electrical circuit diagrams and test rear window sensor supply circuit for short to power or open circuit |
| U030000 | Internal control module software incompatibility | <ul style="list-style-type: none"> ● Invalid configuration message is received | Re-configure the CJB using the manufacturer approved diagnostic system. Clear the DTC and retest. If the DTC is still logged suspect the DDM/PDM, refer to the new module installation note at the top of the DTC Index |
| U201324 | Switch Pack | <ul style="list-style-type: none"> ● Signal stuck high | Carry out the pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Clear DTC and re-test. If DTC remains, install a new driver side window switch pack. REFER to: Driver Door Window Control Switch (501-11 Glass, Frames and Mechanisms, Removal and Installation). |
| U201444 | Control module hardware | <ul style="list-style-type: none"> ● Data Memory Failure | Install a new DDM/PDM, refer to the new module installation note at the top of the DTC Index |
| U210000 | Initial configuration not complete | <ul style="list-style-type: none"> ● No sub type information | Re-configure the DDM/PDM using the manufacturer approved diagnostic system |

| DTC | Description | Possible Cause | Action |
|---------|----------------|---|--|
| U300049 | Control module | <ul style="list-style-type: none">● Internal electronic failure | Install a new DDM/PDM, refer to the new module installation note at the top of the DTC Index |

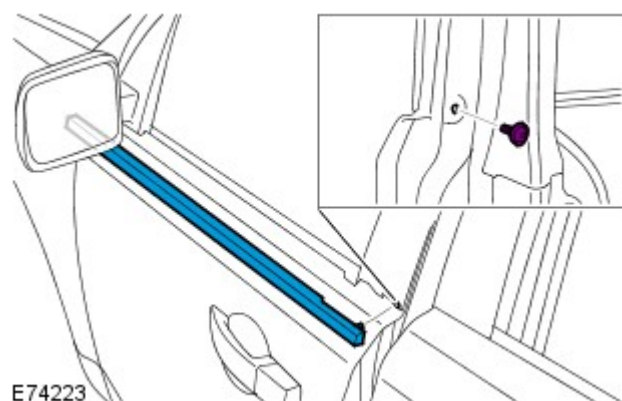
Glass, Frames and Mechanisms - Front Door Window Glass

Removal and Installation

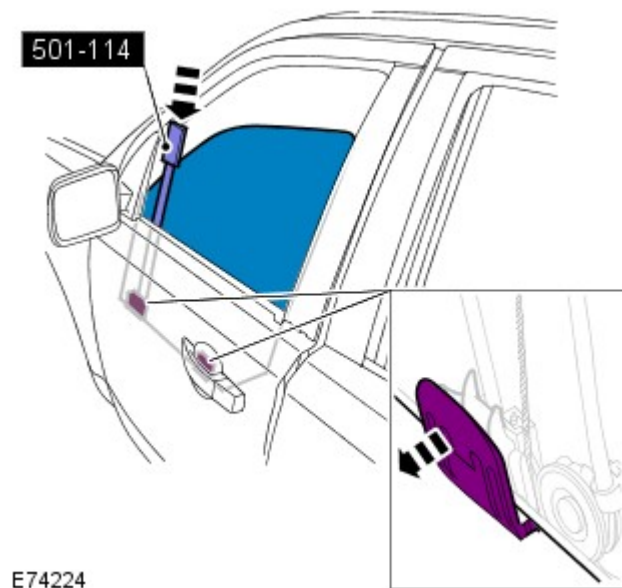
Special Tool(s)

| | |
|--|--------------------------------------|
|  <p>501-114</p> <p>E54200</p> | 501-114 Release Lever, Door Glass |
|--|--------------------------------------|

Removal

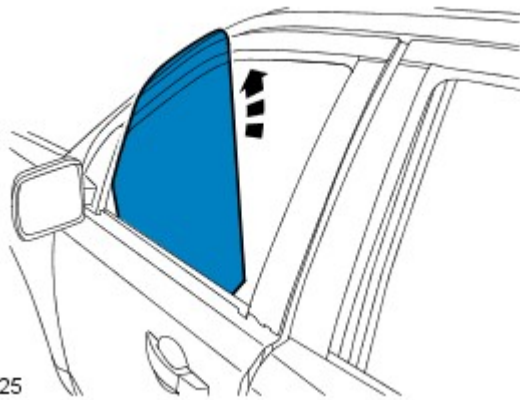


1.



2. Release the door window glass.

Special Tool(s): [501-114](#)

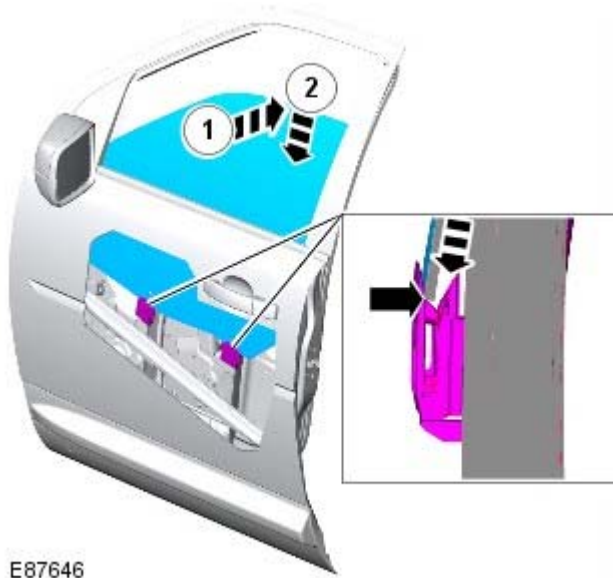


3.

Installation

1. To install, reverse the removal procedure.

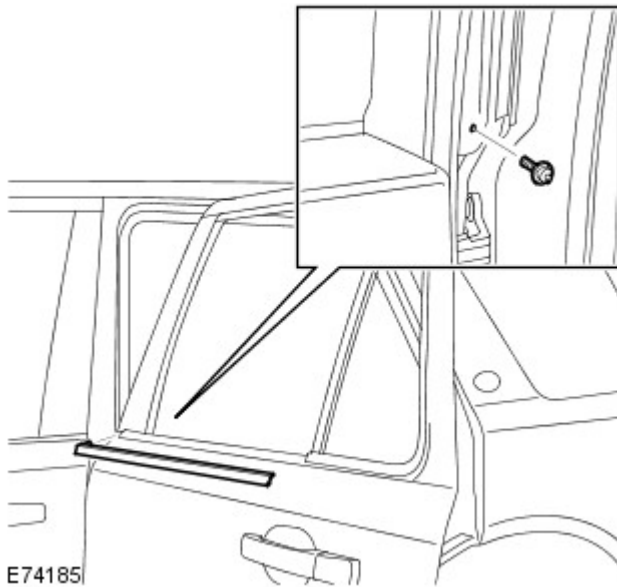
2. To secure the door glass to the door glass mechanism, lower the glass squarely to rest within the latches. With slight pressure applied to top of glass as shown, push the glass down to fully engage.



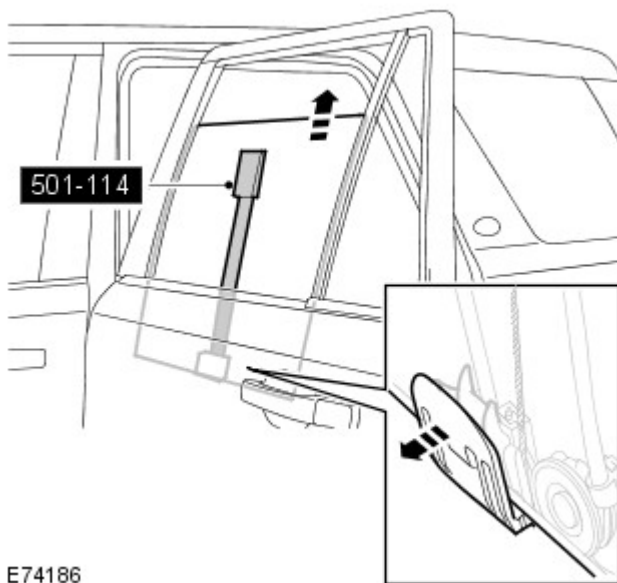
Glass, Frames and Mechanisms - Rear Door Window Glass

Removal and Installation

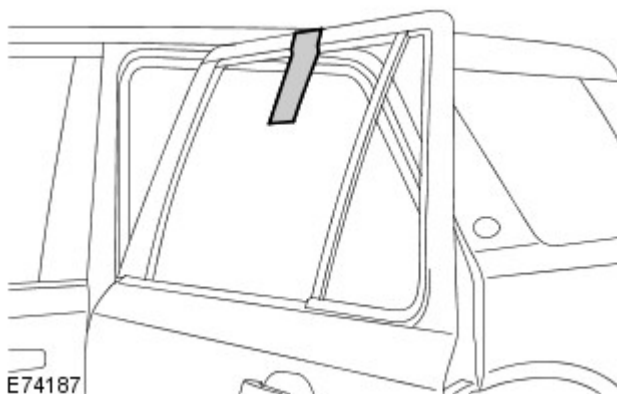
Removal



1. Carefully remove the outer waist seal.

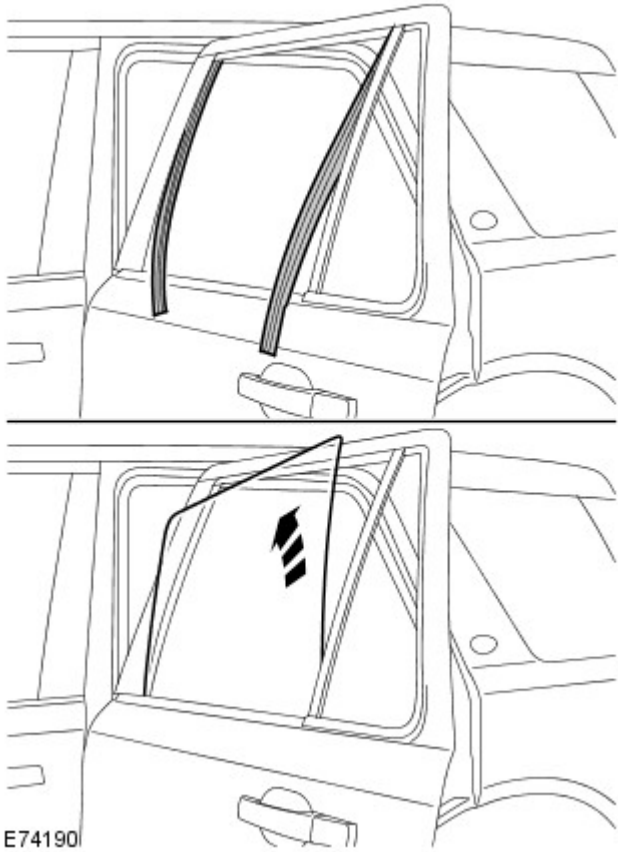


2.
 - If possible, lower the window glass by approximately one third of its travel.
 - Using the special tool, release the door window glass from the window lift mechanism and raise the glass to the top of the door frame.



3. Secure the glass to the top of the frame.

4. Lower the window lift mechanism.



5.

- Lower the door glass to the bottom of the door.
- Release the lining from both guide channels.

Installation

1.

- Install the rear door window glass.
- Install the guide channel lining.
- Secure the glass to the top of the frame.

2. Raise the window lift mechanism.

3. Secure the door window glass to the window lift mechanism.

4. Install the outer waist seal and secure with the Torx screw.

Glass, Frames and Mechanisms - Rear Quarter Window Glass

Removal and Installation

Removal

1. Remove the rear quarter trim panel.

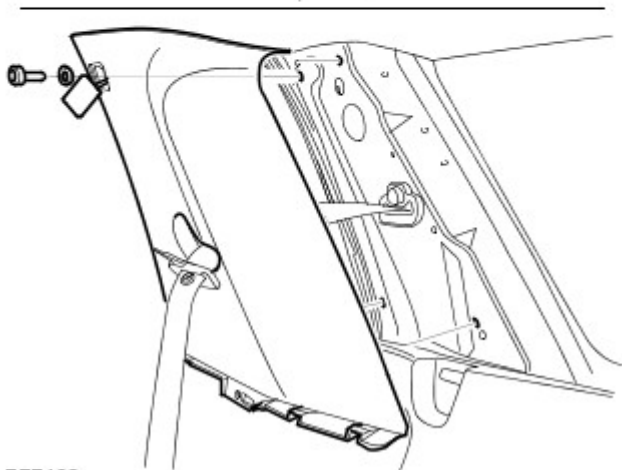
Refer to: [Rear Quarter Trim Panel](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).



2.  **WARNING:** Make sure that a new bolt is installed.

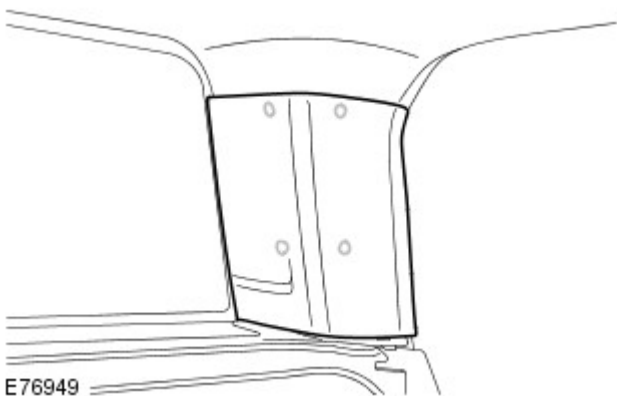
Remove the C-pillar trim panel.

Torque: 3 Nm



E77462

3. Remove the D-pillar trim panel.

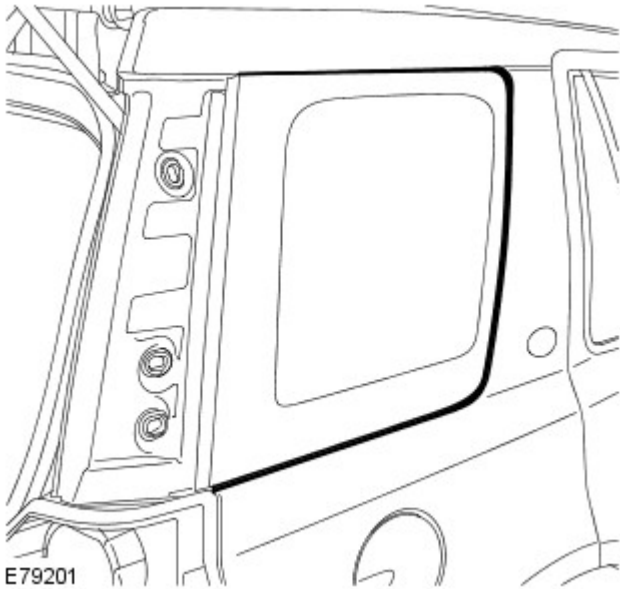


E76949

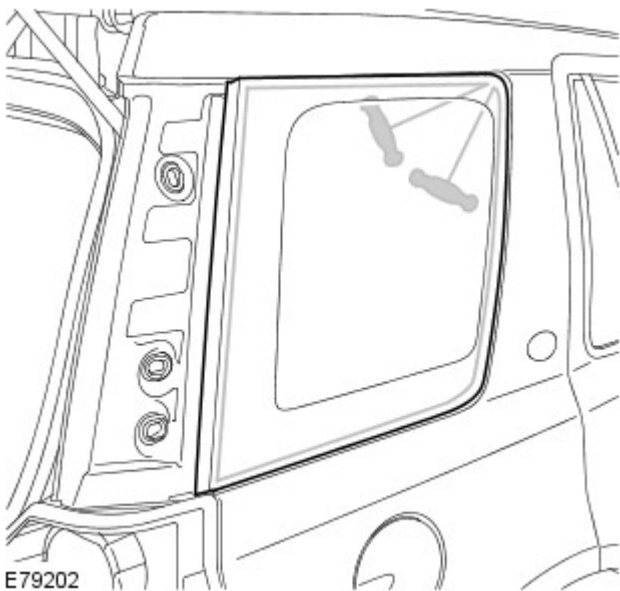
4. Remove the rear quarter panel moulding.

Refer to: [Rear Quarter Panel Moulding](#) (501-08 Exterior Trim and Ornamentation, Removal and Installation).

5. Cut the seal from the rear quarter glass.



- 6.
- Feed the glazing cutting wire around all the glass.
 - Pull glazing wire through windshield sealant to the inside of the vehicle.



7.  **WARNING:** Wear safety goggles and protective gloves.

 **CAUTION:** Protect the surrounding paintwork to avoid damage.

Use the glazing cutting wire to cut the sealant.

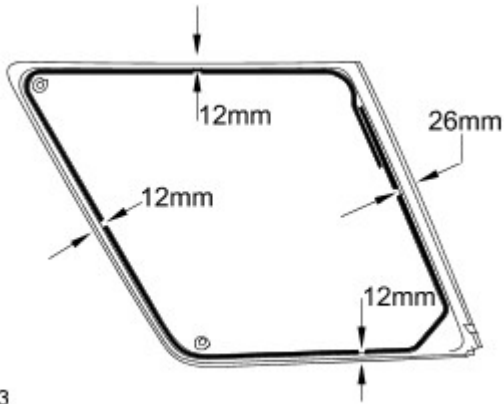
Installation

1. Apply etch primer to any bare metal.
2. Apply primer over the etch primer.
3. Apply glass primer to the sealant face on the rear quarter window glass and allow to cure.
4. Apply activator over the old sealant on the rear quarter window glass and allow to cure.

5.

- Fit a pre-cut nozzle to the sealer cartridge, remove the lid, shake out the crystals and fit the cartridge to the applicator gun.
- Modify the nozzle to achieve a bead section in the shape of a right angle triangle with a base of 8 mm and a vertical height of 12 mm.

6. Apply a continuous bead of sealant to the glass.



E79203

7.

- With assistance, install the window glass.
- Lightly press the window glass to seat the sealer.
- Secure the rear quarter window glass in position using tape.

8. Test the sealer for leaks, apply additional sealer if necessary. If water is used, allow sealer to dry before testing. Spray water around the glass and check for leaks. Mark any area that leaks. Dry the glass and sealer then apply additional sealer.

9. Install the rear quarter panel moulding.

Refer to: [Rear Quarter Panel Moulding](#) (501-08 Exterior Trim and Ornamentation, Removal and Installation).

10.  **WARNING:** Make sure that a new bolt is installed.

Install the C-Pillar trim panel.

11. Install the D-pillar trim panel.

12. Install the rear quarter trim panel.

Refer to: [Rear Quarter Trim Panel](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).

Glass, Frames and Mechanisms - Liftgate Window Glass

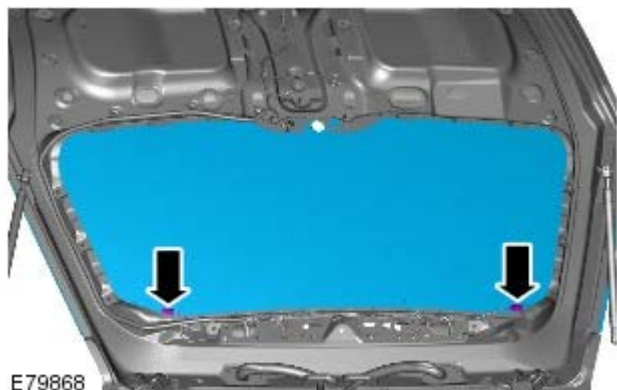
Removal and Installation

Removal

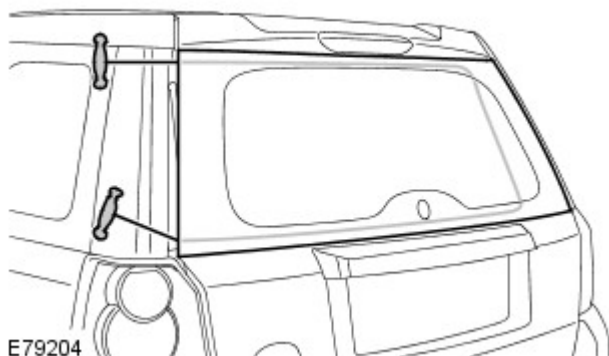
1. Remove the rear window wiper motor.

Refer to: [Rear Window Wiper Motor](#) (501-16 Wipers and Washers, Removal and Installation).

2. Disconnect the heated rear window electrical connectors.



3. Feed the glazing cutting wire around the glass.



4.  **WARNING:** Wear safety goggles and protective gloves.

 **CAUTION:** Protect the surrounding paintwork to avoid damage.

Use the glazing cutting wire to cut the sealant.

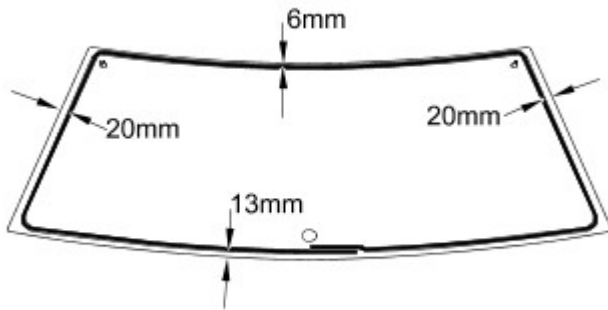
Installation

1. Apply etch primer to any bare metal.
2. Apply primer over the etch primer.
3. Apply glass primer to the sealant face on the liftgate window glass and allow to cure.
4. Apply activator over the old sealant on the liftgate window glass and allow to cure.

5.

- Fit a pre-cut nozzle to the sealer cartridge, remove the lid, shake out the crystals and fit the cartridge to the applicator gun.
- Modify the nozzle to achieve a bead section in the shape of a right angle triangle with a base of 8 mm and a vertical height of 12 mm.

6. Apply a continuous bead of sealant to the glass.



E79205

7.

- With assistance, install the window glass.
- Lightly press the window glass to seat the sealer.
- Secure the rear quarter window glass in position using tape.

8. Test the sealer for leaks, apply additional sealer if necessary. If water is used, allow sealer to dry before testing. Spray water around the glass and check for leaks. Mark any area that leaks. Dry the glass and sealer then apply additional sealer.

9. Connect the heated rear window electrical connectors.

10. Install the rear window wiper motor.

Refer to: [Rear Window Wiper Motor](#) (501-16 Wipers and Washers, Removal and Installation).

Glass, Frames and Mechanisms - Windshield Glass

Removal and Installation

Removal

1. Remove the interior mirror.

Refer to: [Interior Rear View Mirror](#) (501-09 Rear View Mirrors, Removal and Installation).

2. Remove the A-pillar trim panels.

Refer to: [A-Pillar Trim Panel](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).

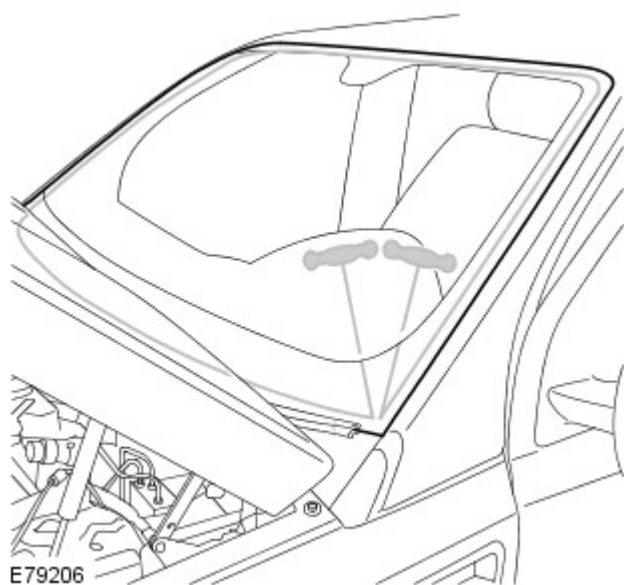
3. Remove the plenum chamber panel.

Refer to: [Plenum Chamber](#) (412-01 Climate Control, Removal and Installation).

4. Disconnect the heated front screen electrical connectors, if installed.

- 5.

- Feed the glazing cutting wire around the windshield under the waist seal.
- Pull glazing wire through windshield sealant to the inside of the vehicle.



6.  **WARNING:** Wear safety goggles and protective gloves.



- CAUTION:** Protect the surrounding paintwork to avoid damage.

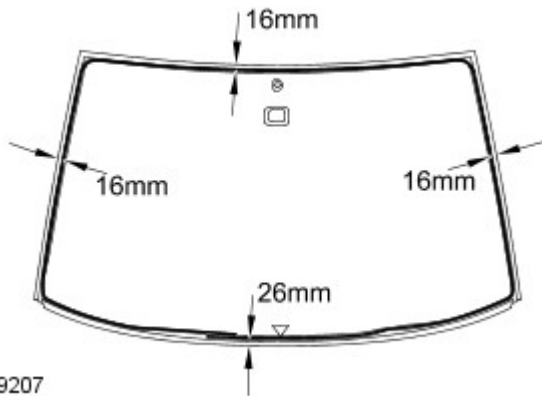
From inside the vehicle, cut the windshield sealant using the glazing cutting wire.

Installation

1. Apply etch primer to any bare metal.
2. Apply primer over the etch primer.
3. Apply glass primer to the sealant face on the windshield glass and

allow to cure.

4. Apply activator over the old sealant on the windshield glass and allow to cure.
5.
 - Fit a pre-cut nozzle to the sealer cartridge, remove the lid, shake out the crystals and fit the cartridge to the applicator gun.
 - Modify the nozzle to achieve a bead section in the shape of a right angle triangle with a base of 8 mm and a vertical height of 12 mm.



6.
 - Apply a continuous bead of sealant to the windshield glass.



CAUTION: Make sure the heated front screen foil electrical connectors are tucked underneath the body plenum panel. This will avoid contact with the windscreen wiper arm linkage.

7.
 - With assistance, install the window glass.
 - Lightly press the window glass to seat the sealer.
 - Secure the windshield glass in position using tape.
 - Connect the heated front screen electrical connectors, if installed.
8.
 - Test the sealer for leaks, apply additional sealer if necessary. If water is used, allow sealer to dry before testing. Spray water around the glass and check for leaks. Mark any area that leaks. Dry the glass and sealer then apply additional sealer.

9. Install the plenum chamber panel.

Refer to: [Plenum Chamber](#) (412-01 Climate Control, Removal and Installation).

10. Install the A-pillar trim panels.

Refer to: [A-Pillar Trim Panel](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).


11. Install the interior mirror.

Refer to: [Interior Rear View Mirror](#) (501-09 Rear View Mirrors, Removal and Installation).

Glass, Frames and Mechanisms - Front Door Window Regulator and Motor

Removal and Installation

Special Tool(s)

| | |
|---|--|
|  <p>501-114</p> <p>E54200</p> | <p>501-114 Release Lever, Door Glass</p> |
|---|--|

Removal

NOTE: If possible, lower the window glass by approximately one third of its travel.

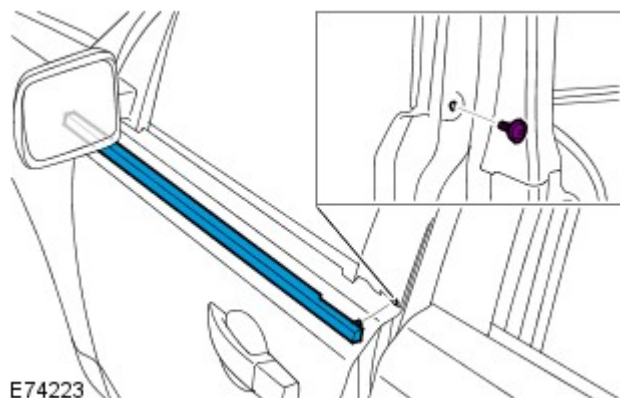
1. Disconnect the battery ground cable.

Refer to: [Specifications](#) (414-00 Battery and Charging System - General Information, Specifications).

2. Remove the front door speaker.

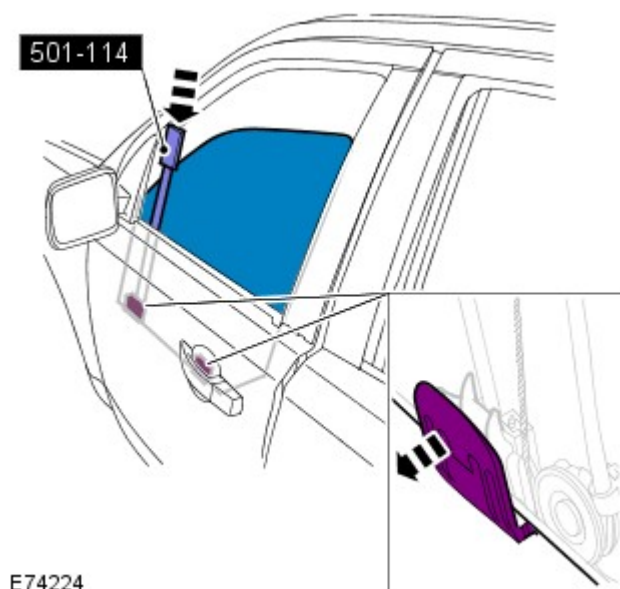
Refer to: [Front Door Speaker](#) (415-01 Information and Entertainment System, Removal and Installation).

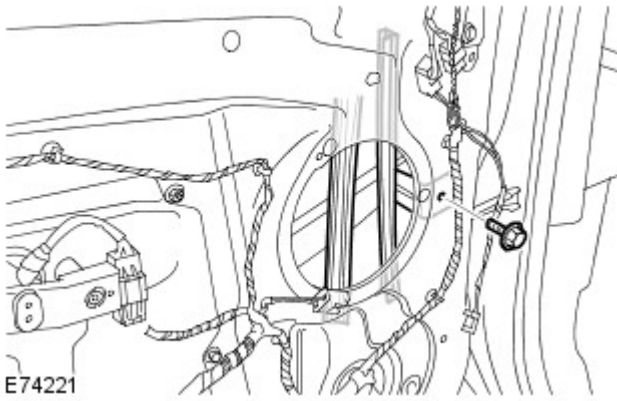
3. Carefully remove the outer waist seal.



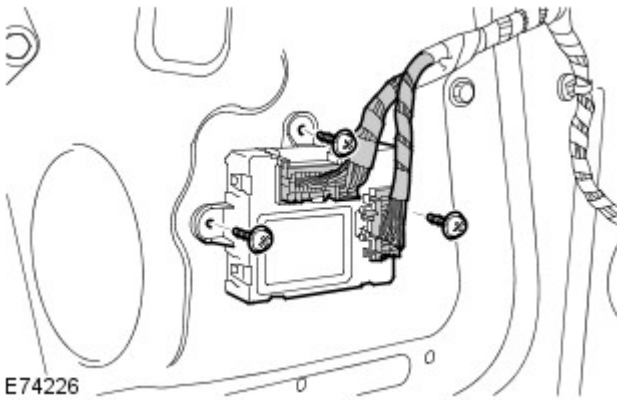
4. Release the door window glass from the window lift mechanism. Raise the glass and secure it to the top of the door frame.

Special Tool(s): [501-114](#)

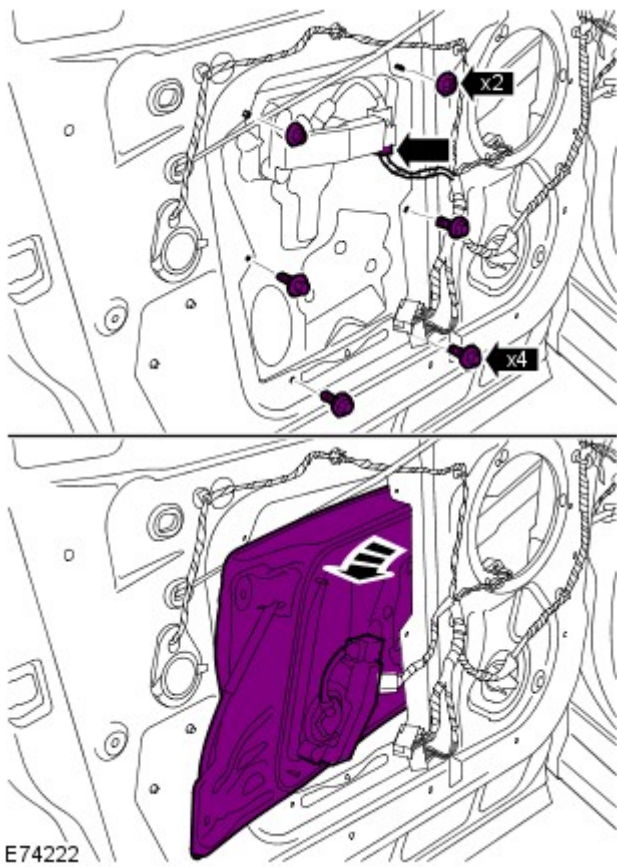




5. Remove the glass guide channel.



6. Remove the front door control module.



7. Remove the window motor and regulator assembly.

Installation

1. Install the window motor and regulator assembly. Tighten the nuts

and the bolts.

Torque: 10 Nm

2. Install the door control module.

3. Install the glass guide channel and lining. Tighten the bolt.

Torque: 10 Nm

4. Secure the door window glass to the window lift mechanism.

5. Install the outer waist seal and secure with the Torx screw.

6. Install the front door speaker.

Refer to: [Front Door Speaker](#) (415-01 Information and Entertainment System, Removal and Installation).


7. Connect the battery ground cable.

Refer to: [Specifications](#) (414-00 Battery and Charging System - General Information, Specifications).

Glass, Frames and Mechanisms - Rear Door Window Regulator and Motor

Removal and Installation

Special Tool(s)

| | |
|---|--------------------------------------|
|  501-114 Release Lever, Door Glass E54200 | 501-114 Release Lever, Door Glass |
|---|--------------------------------------|

Removal

NOTE: If possible, lower the window glass by approximately one third of its travel.

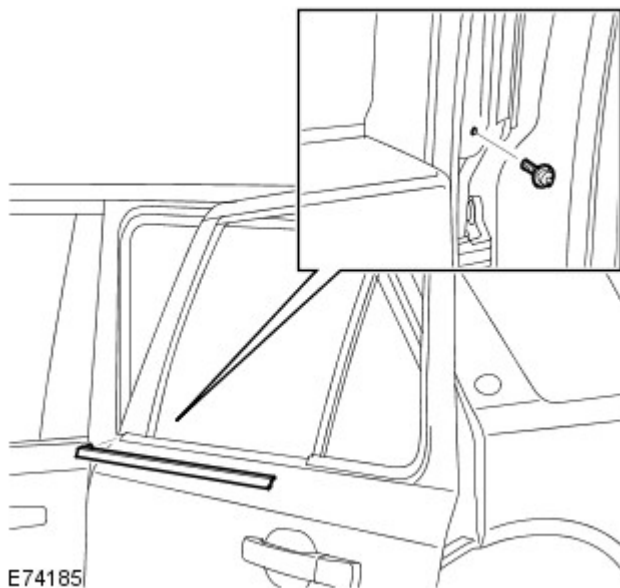
1. Disconnect the battery ground cable.

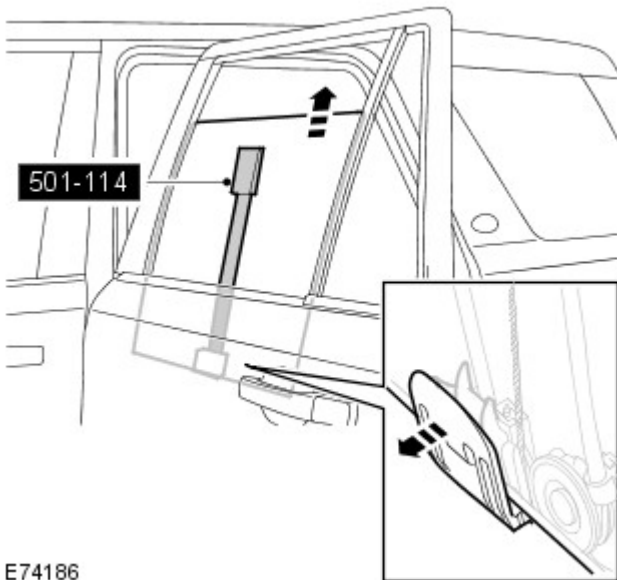
Refer to: [Specifications](#) (414-00 Battery and Charging System - General Information, Specifications).

2. Remove the rear door module.

Refer to: [Rear Door Module \(RDM\)](#) (419-10 Multifunction Electronic Modules, Removal and Installation).

3. Carefully remove the outer waist seal.



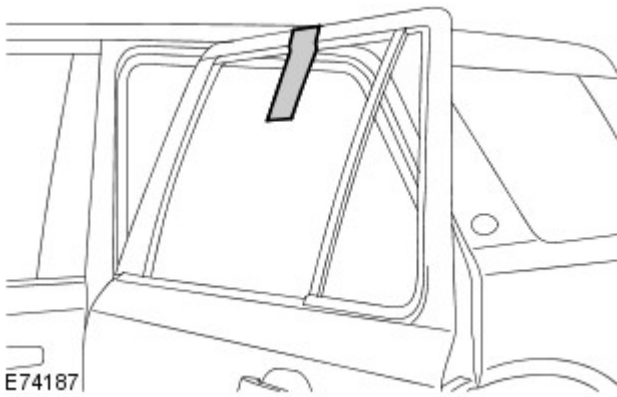


E74186

4.

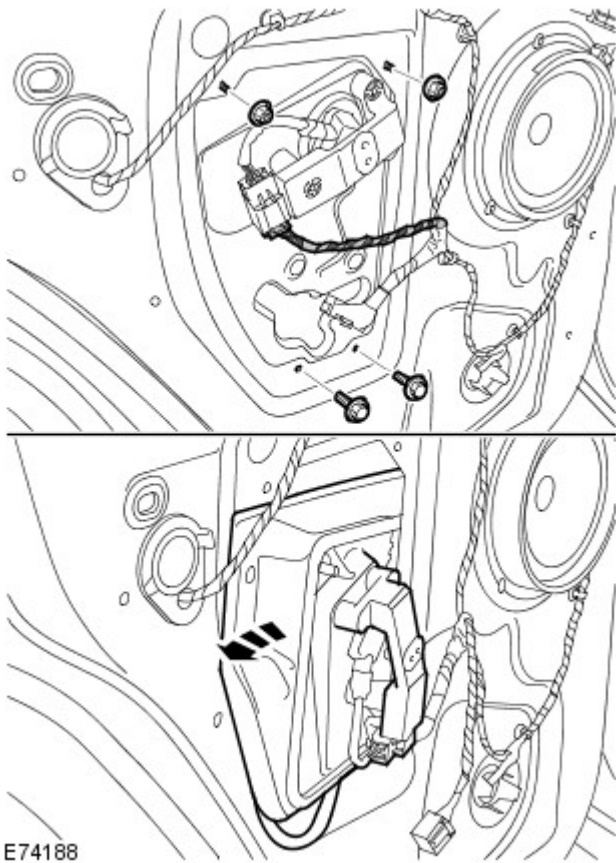
- Release the door window glass from the window lift mechanism. Raise the glass and secure it to the top of the door frame.

Special Tool(s): [501-114](#)



E74187

5. Secure the glass to the top of the frame.



6.

- Remove the window motor and regulator assembly.
- Rotate the assembly within the door through 90 degrees and remove the upper edge from the aperture first.

Installation

1. Install the window motor and regulator assembly. Tighten the nuts and the bolts.

Torque: 10 Nm

2. Secure the door window glass to the window lift mechanism.
3. Install the outer waist seal and secure with the Torx screw.
4. Install the rear door module.

Refer to: [Rear Door Module \(RDM\)](#) (419-10 Multifunction Electronic Modules, Removal and Installation).

5. Connect the battery ground cable.

Refer to: [Specifications](#) (414-00 Battery and Charging System - General Information, Specifications).

Glass, Frames and Mechanisms - Driver Door Window Control Switch

Removal and Installation

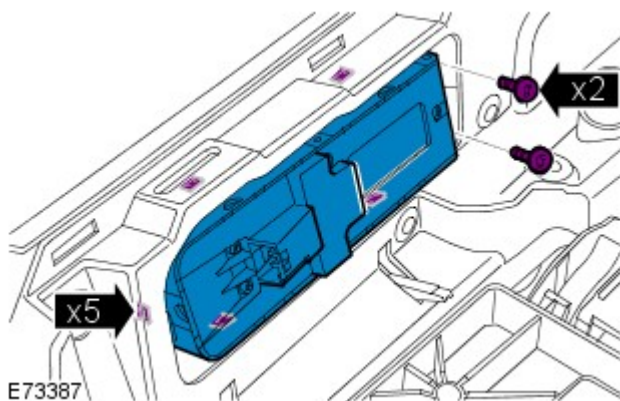
Removal

1. Disconnect the battery ground cable.

Refer to: [Specifications](#) (414-00 Battery and Charging System - General Information, Specifications).

2. Remove the front door trim panel.

Refer to: [Front Door Trim Panel](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).



3.
 - Remove the 2 screws.
 - Release the 5 clips.

Installation

1. To install, reverse the removal procedure.

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Glass, Frames and Mechanisms - Passenger Door Window Control Switch

Removal and Installation

Removal

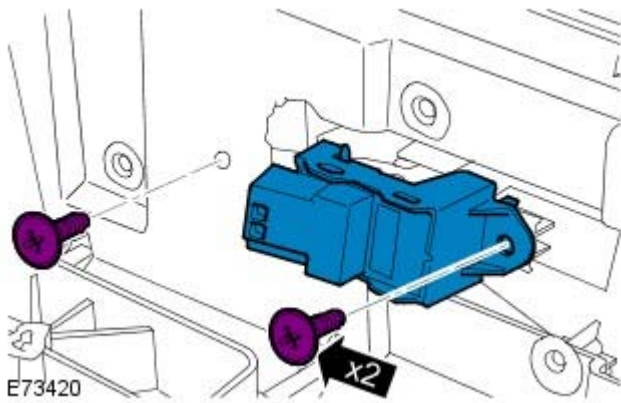
1. Disconnect the battery ground cable.

Refer to: [Specifications](#) (414-00 Battery and Charging System - General Information, Specifications).

2. Remove the rear door trim panel.

Refer to: [Rear Door Trim Panel](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).

- 3.



Installation

1. To install, reverse the removal procedure.

Glass, Frames and Mechanisms - Rear Door Fixed Window Glass

Removal and Installation

Removal

1. Lower the door glass to the bottom of the door.

2. Disconnect the battery ground cable.

Refer to: [Specifications](#) (414-00 Battery and Charging System - General Information, Specifications).

3. Remove the rear door trim panel.

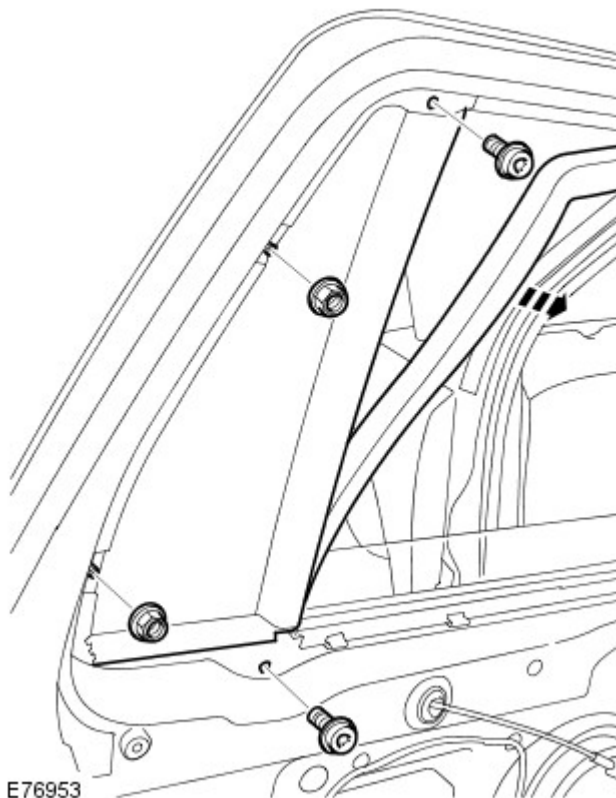
Refer to: [Rear Door Trim Panel](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).

4. Remove the rear door frame trim.



5.

- Remove the 2 nuts.
- Remove the 2 Torx screws.
- Release the glass channel lining.



Installation

1. Install the rear door window fixed glass and tighten the nuts and Torx screws evenly.

Torque: 5 Nm

2. Install the door frame trim.

3. Install the rear door trim panel.

Refer to: [Rear Door Trim Panel](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).

4. Connect the battery ground cable.

Refer to: [Specifications](#) (414-00 Battery and Charging System - General Information, Specifications).