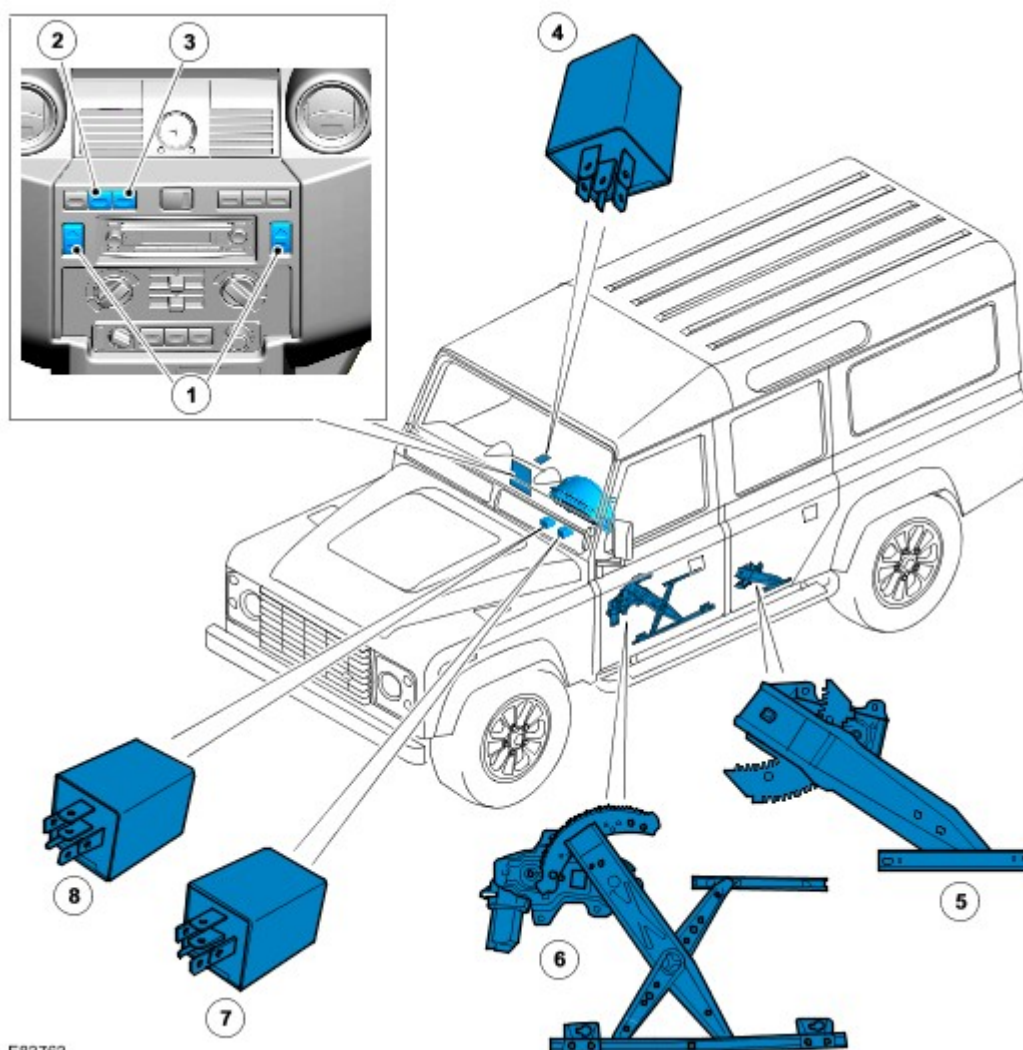


## Glass, Frames and Mechanisms

### COMPONENT LOCATION



E83763

Item	Part Number	Description
1		Window lift switches
2		Heated windshield switch
3		Heated rear window switch
4		Heated windshield module
5		Rear door window regulator (if fitted)
6		Front door window regulator and motor assembly
7		Heated rear window relay
8		Window lift relay

## OVERVIEW

### Window Lift

The front window lift system comprises a motor in each front door and 2 rocker switches mounted in the center console. The window lift system will only operate when the ignition switch is in position II (ignition on) and features anti-trap functionality.

The rear window lift system (if fitted) comprises a handle and manually operated door window regulator in each rear door.

## **Heated Windshield and Rear Window**

The heated windshield contains a single heating element which is powered for up to a maximum of 8 minutes when selected. The system is only operational when the engine is running.

The heated rear window also contains a single heating element and will operate with the ignition switch in position II (ignition on). The heated rear window isn't constrained to an operational time limit.

## **PRINCIPLES OF OPERATION**

### **Window Lift**

The window lift relay coil is energized by an ignition feed from the CJB (central junction box) . The energized relay provides a battery voltage feed to the LH (left-hand) and RH (right-hand) window lift switches.

Each window lift switch has 2 connections with its respective window lift motor; feed and return. These lines switch depending on the direction of travel requested using the switch. In each case, the motor is provided a ground path through its switch.

Each motor has thermal cut-out protection. If the window reaches the top or bottom of its travel, or hits an obstruction, the thermal cut-out will sense the increased load on the motor and cut the power supply to the motor brush contacts. Thermal cut-out time is between 3.5 to 5 seconds, with a re-start time of between 1 to 10 seconds.

### **Heated Windshield**

Operation of the heated windshield is controlled by the heated windshield module. The heated windshield module is located behind the instrument cluster and receives an engine running signal from the ECM (engine control module) . The heated windshield module also monitors the condition of the heated windshield switch. If the switch is pressed, a ground path is created. If both these signals are in place, the heated windshield module provides a feed to the heated windshield element until either;

- the switch is pressed a second time
- 8 minutes elapses
- or the engine is stopped.

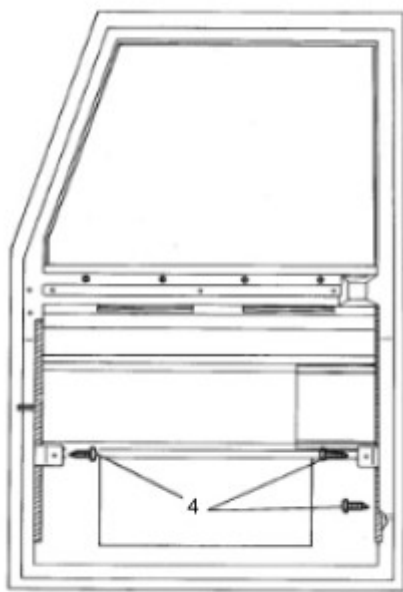
### **Heated Rear Window**

The heated rear window switch is located in the center console and is provided an ignition feed from the CJB (central junction box) . When the switch is pressed, a feed is provided to the heated rear window relay coil. The now energized heated rear window relay provides a battery voltage feed from the CJB (central junction box) to the heated rear window element.

## Front Door Window Glass (76.31.01)

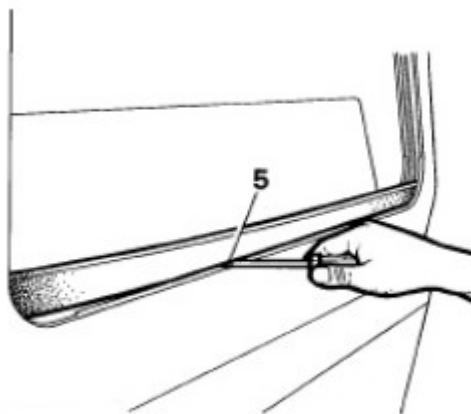
### Removal

- 1 . Remove front door reinforcement panel.  
For additional information, refer to [Front Door Reinforcement Panel](#)
- 2 . Remove window regulator.  
For additional information, refer to [Front Door Window Regulator and Motor \(86.25.03\)](#)
- 3 . Push glass up to top of its travel and support with a suitable length of timber.
- 4 . Remove 2 self tapping screws securing window glass runner on latch side of door and single screw from hinge side.



ST1976M

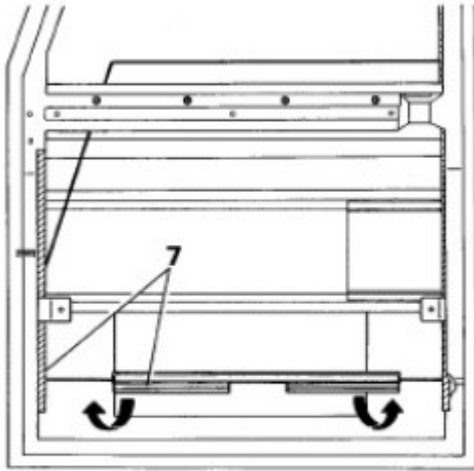
- 5 . Taking care not to damage paint, prise exterior waist weather strip from door.



ST1966M

- 6 . Remove timber support and lower glass to bottom of door.

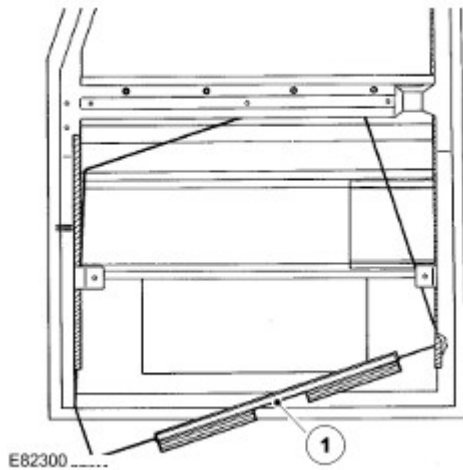
- 7 . Ease runner from glass at hinge side of door, lift glass over bottom edge of door and withdraw.



ST1968M

## Installation

- 1 . Insert glass into runners at an angle as illustrated.



- 2 . Whilst lifting glass, position it squarely in runners, raise to top of travel and insert timber support.
- 3 . Secure hinge side runner with single screw ensuring that packing strip is in position.
- 4 . Locate packing strip and secure opposite runner with 2 screws. Ensure that all 3 screw heads are well below bottom of runners to prevent damage to glass.
- 5 . Locate regulator in window lift channels.
- 6 . Install window regulator.  
For additional information, refer to [Front Door Window Regulator and Motor \(86.25.03\)](#)

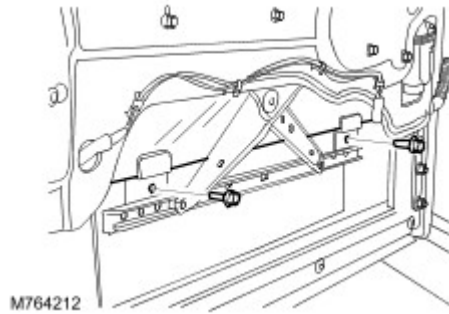
7 . Install front door reinforcement panel.

For additional information, refer to [Front Door Reinforcement Panel](#)

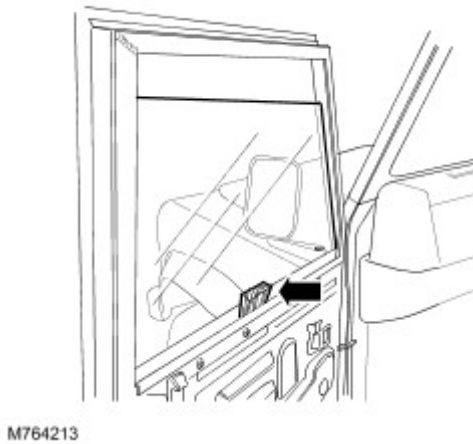
## Front Door Window Regulator and Motor (86.25.03)

### Removal

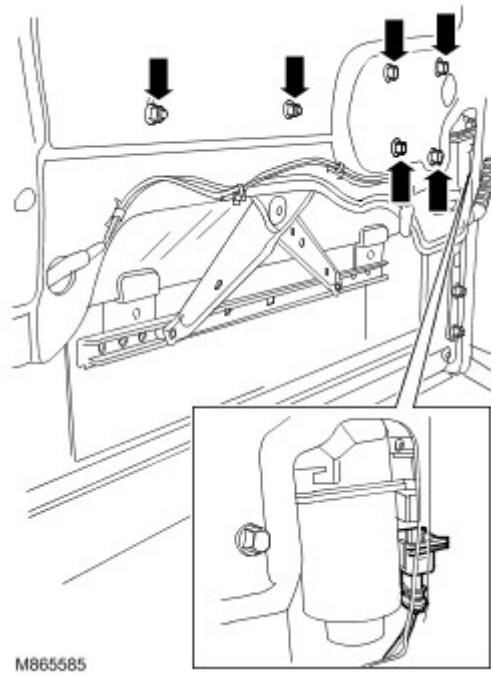
- 1 . Remove door trim panel.  
For additional information, refer to [Front Door Trim Panel \(76.34.01\)](#)
- 2 . Remove plastic sheet.
- 3 . Lower glass and remove 2 bolts securing door glass to regulator.



- 4 . Release glass from regulator, raise and wedge in raised position.



- 5 . Disconnect multiplug from motor.
- 6 . Remove 4 bolts and 2 nuts securing motor and regulator assembly.



- 7 . Release and remove motor and regulator assembly.

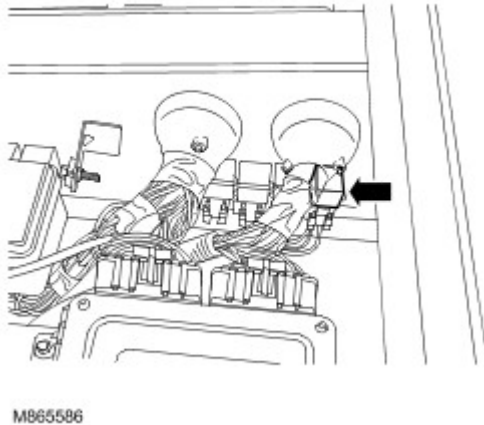
## Installation

- 1 . Install motor and regulator assembly, install nuts and bolts and tighten to 10 Nm (7 lbf.ft).
- 2 . Connect multiplug to motor.
- 3 . Remove wedges, lower glass and locate to regulator. Install bolts and tighten to 6 Nm (4 lbf.ft).
- 4 . Raise and lower glass to check operation.
- 5 . Install plastic sheet.
- 6 . Install door trim panel.  
For additional information, refer to [Front Door Trim Panel \(76.34.01\)](#)

## Heated Windshield Relay

### Removal

- 1 . Remove front seat cushion.
- 2 . Release clip and remove compartment cover.
- 3 . Locate and release heated windshield relay from bracket.



- 4 . Remove heated windshield relay.

### Installation

- 1 . Fit heated windshield relay.
- 2 . Fit heated windshield relay to mounting bracket.
- 3 . Fit and secure cover.
- 4 . Fit seat cushion.



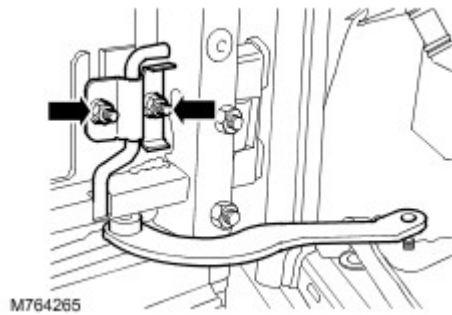
## Rear Door Window Glass (76.31.02)

### Removal

- 1 . Remove rear door reinforcement panel.

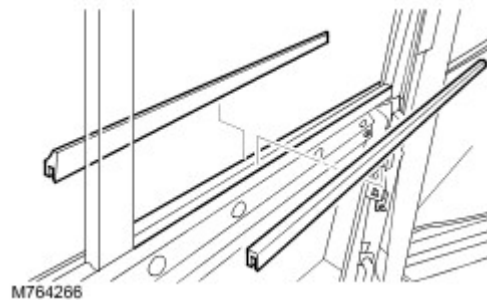
For additional information, refer to

- 2 . Loosen 2 nuts and remove door check strap torsion bar and plate.

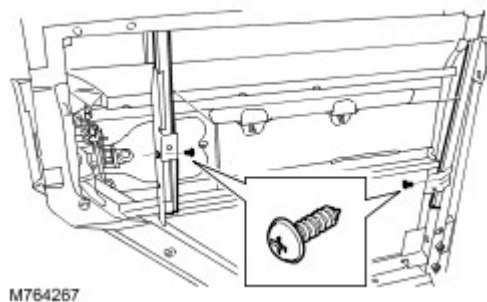


- 3 . Remove check strap.

- 4 . Remove inner and outer waist seal.



- 5 . Remove screw from each glass channel.



- 6 . Lower glass to bottom of door, lift over lower edge and withdraw from door.

### Installation

- 1 . Insert glass into channels and carefully push to top of frame.

- 2 . Secure glass channels with screws. Ensure screw heads are down below bottom of channels to prevent

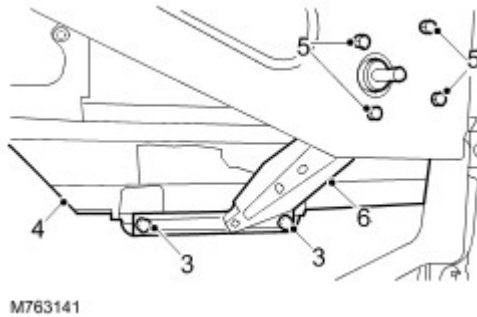
damage to glass.

- 3 . Install inner and outer waist seal to door.
- 4 . Install check strap.
- 5 . Install check strap torsion bar and tighten nuts to 10 Nm (7 lbf.ft) .
- 6 . Instal rear door mounting panel.  
For additional information, refer to

## Rear Door Window Regulator and Motor (86.25.05)

### Removal

- 1 . Remove rear door trim casing.  
For additional information, refer to [Rear Door Trim Panel \(76.34.04\)](#)
- 2 . Carefully release plastic sheet from rear door.
- 3 . Remove 2 bolts securing door glass to regulator.
- 4 . Raise glass and secure with a suitable wedge.
- 5 . Remove 4 bolts securing glass regulator assembly to door.
- 6 . Manoeuvre regulator through access hole at bottom of the door.



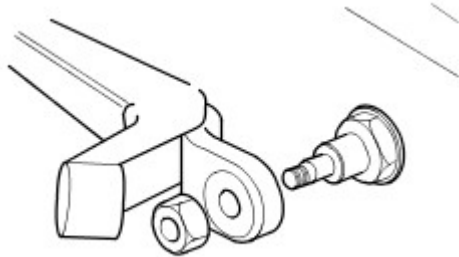
### Installation

- 1 . Clean mating face of regulator and door glass.
- 2 . Lubricate regulator with grease.
- 3 . Position regulator in door and secure with bolts.
- 4 . Remove wedge holding glass and align glass to regulator.
- 5 . Secure glass to regulator and install and tighten bolts.
- 6 . Install plastic sheet to rear door.
- 7 . Install rear door trim casing.  
For additional information, refer to [Rear Door Trim Panel \(76.34.04\)](#)

## Taildoor Window Glass

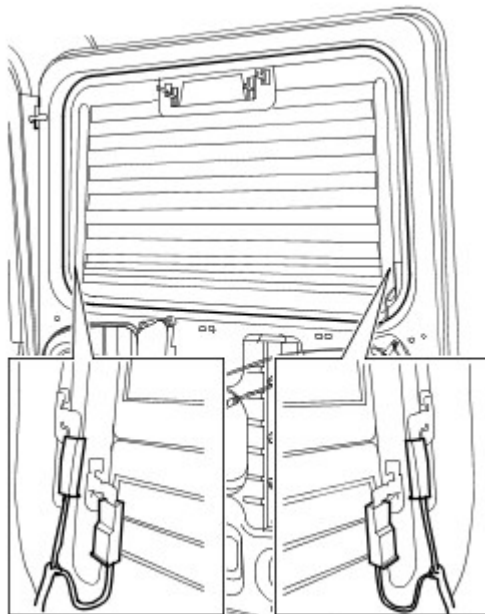
### Removal

- 1 . Remove spare wheel from taildoor.
- 2 . Raise nut cover, remove nut and release wiper arm.



M764252

- 3 . Open taildoor.
- 4 . Remove high mounted stop lamp.  
For additional information, refer to [High Mounted Stoplamp \(86.41.32\)](#)
- 5 . Remove 4 connectors from heated rear window.



M764253

- 6 .  **WARNING: Wear suitable eye protection when removing and refitting glass.**

With assistance, from inside of vehicle apply pressure to glass, relieve seal lip and carefully remove glass.

- 7 .



**CAUTION:** Lay glass on felt covered supports and be careful not to damage the obscuration band. Do not stand on edge as this can cause chips which subsequently develop into cracks.

Remove seal from glass.

## Installation

- 1 . Clean glass and install seal. Ensure seal is fully located on glass.
- 2 . Thoroughly clean the taildoor window mounting flange.
- 3 . Install drawstring to seal.
- 4 . Lubricate seal.
- 5 . With assistance, position glass and seal to taildoor window aperture, locate lower edge and instal seal using drawstring.
- 6 . Clean glass and check seal fit.
- 7 . Fit connectors to heated rear window.
- 8 . Install high mounted stop lamp.  
For additional information, refer to [High Mounted Stoplamp \(86.41.32\)](#)
- 9 . Install wiper arm to spindle, align blade to window and tighten nut to 18 Nm (13 lbf.ft).
- 10 . Install spare wheel and tighten nuts to 45 Nm (33 lbf.ft).

## Window Control Switch (86.25.08)

### Removal

- 1 . Disconnect the battery ground cable.  
For additional information, refer to [Battery Disconnect and Connect](#)
- 2 . Remove the audio unit.  
For additional information, refer to [Audio Unit \(86.50.81\)](#)
- 3 . **NOTE:**  
RH shown, LH similar.

Release the window control switch.



- 4 . Remove the window control switch.  
▶ Disconnect the electrical connector.



### Installation

- 1 . To install, reverse the removal procedure.
- 2 . Connect the battery ground cable.  
For additional information, refer to [Battery Connect](#)