Published: Feb 12, 2007

# **Specifications**

### **Torque specifications**

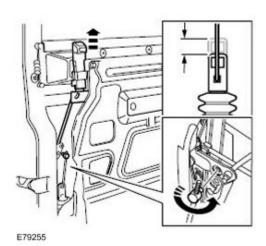
Discription	Nm	lb.ft
Taildoor latch	10	7

# **Latch Cable Adjustment**

- 1. Remove door trim panel. Front Door Trim Panel (76.34.01)
- 2. Carefully peel back plastic sheet to expose mechanism.
- 3. Release clip and detach solenoid link from latch.



- 4. Ensure sill button is fully raised.
- 5. Fully extend solenoid actuator then lower 3.5 mm  $\pm$  1.00 mm.
- 6. Whilst holding actuator in this position, adjust length of link, until link pin is aligned with hole in latch lever.
- 7. Connect link and secure with clip.



- 8. Secure plastic sheet.
- 9. Instal door trim panel.
  Front Door Trim Panel (76.34.01)

Published: Jul 19, 2006

## Handles, Locks, Latches and Entry Systems

### **CENTRAL DOOR LOCKING (CDL) FROM 2002 MY**

The Central Door Locking (CDL) system is a new feature for 2002MY Defender.

#### NOTE:

CDL operates all doors on Station Wagon and County Station Wagons. On all other Defender 2002MY variants, CDL operates on the driver and front and rear passenger doors only.

CDL operates on all doors, including the tail door and is operated by pressing the appropriate button on the remote handset, using the vehicle key in the drivers door lock or using the drivers door sill button.

The CDL system introduces electrically operated door latches which are controlled by the anti-theft alarm ECU, located behind the instrument pack. The anti-theft ECU receives a permanent power supply from fuse 6 in the passenger compartment fuse box. Each CDL latch motor is connected by two wires to the anti-theft ECU which alternately supplies power and earth connections to drive each motor to the lock or unlock positions.

If the latch motors are continually operated in a short period of time, the anti-theft ECU will suspend all CDL latch motor operation for 15 seconds to prevent the motors from overheating. Before suspension occurs the anti-theft ECU ensures that all the doors are left in the unlocked condition.

If the vehicle is locked, and the key is in the ignition switch or the ignition is on and the anti-theft alarm ECU inertia switch is tripped, all doors will be unlocked immediately and the hazard warning lamps will operate. To prevent accidental relocking, all latch motors will be inhibited until the anti-theft ECU senses that the drivers door is opened with the key removed from the ignition switch.

Locking of the vehicle using the remote handset is inhibited with the key in the ignition switch.

### Slam Locking

With the introduction of CDL, slam locking of the drivers door is disabled. If an attempt is made to slam lock the vehicle, the anti-theft alarm ECU will unlock all doors.

CDL Using the Drivers Door Sill Button

Each door has a sill button to allow that door to be individually locked from inside the vehicle. The drivers door sill button has additional functionality which allows all doors to be locked from inside the vehicle from this one button.

When the driver door sill lock button is depressed, the CDL system enters a sill locked state, where all doors are locked but immobilisation and perimetric and volumetric sensing is suspended. CDL using the drivers sill lock button can be achieved with or without the key in the ignition switch and without the ignition being on.

If the CDL is in the sill locked state and the lock button on the remote handset is pressed, the volumetric and perimetric functions of the alarm system will become active and active engine immobilisation will be invoked.

### **CDL** Using the Key

The driver and the passenger front doors are fitted with key barrel locks. Using the vehicle key in the passenger door will only lock or unlock that door. Using the key in the drivers door will operate the CDL system and lock or unlock all doors.

#### NOTE:

The passenger door key barrel is connected to the door latch and has no electrical input to the anti-theft alarm ECU. The driver door key barrel is also connected to the door latch and its operation is monitored by the ECU only via the latch motor and the two wires connected to it.

When the vehicle is locked using the key in the drivers door, only CDL and perimetric protection is invoked. Volumetric protection and active immobilisation is not initiated.

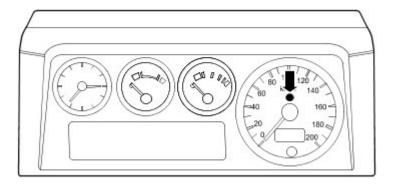
### **CDL Using the Remote Handset**

The remote handset has two buttons; lock and unlock. A single press on the lock button will lock all doors and invoke perimetric and volumetric protection and active immobilisation. Remote locking is inhibited if the transponder coil

senses that the key is in the ignition switch.

When the vehicle is locked, a single press of the unlock button will unlock all doors and disable perimetric and volumetric protection. Immobilisation is only disabled using the transponder coil and the remote handset or the EKA procedure.

### **Security LED**



M865555

In addition to the alarm system status indications, the security LED also displays CDL system status.

The system confirms that the drivers door is open by illuminating the LED for the 10 second confirmation period. If any other door or the hood is open, the LED remains unlit for the 10 second confirmation period. After the 10 second confirmation period the LED reverts to the slow flash deterrent mode if the alarm is armed.

### **Interior Lamp Functionality**

The anti-theft alarm ECU controls the interior lamp functionality. When the lamps are extinguished, they fade out to the off condition over a 2 second period.

The lamps are turned on by:

- Disarming the alarm using the remote handset
- Opening any door.

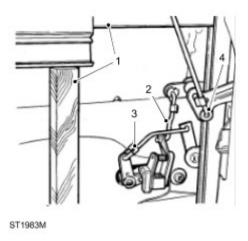
When the lamps are on, they will be extinguished by the following actions:

- If all doors are closed, the lamps will be extinguished after a 15 second delay period.
- If any door is left open, the lamps will be extinguished after an 8 minute delay period.
- If one of the above delay periods is active and the ignition is switched on or the alarm is armed, the lamps will be extinguished.

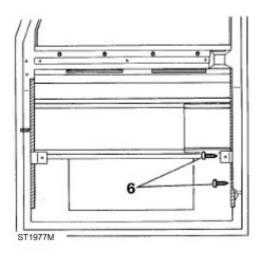
# Front Door Latch (76.37.12)

### Removal

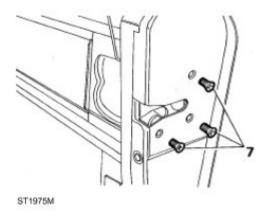
- 1 . Remove door reinforcing panel and support glass with timber. For additional information, refer to Front Door Reinforcement Panel
- 2. Disconnect control rod from handle operating lever.
- 3. Disconnect control rod from locking lever on handle.
- 4. Disconnect push button control rod and linkage from latch mechanism.



- 5 . Remove 2 screws and remove handle assembly from door.
- 6. Remove 2 self-tapping screws retaining lower end of window glass runner.



7. Remove 3 screws securing latch assembly to door.



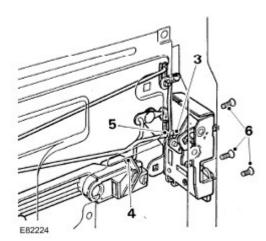
8 . Whilst taking care not to damage runner, ease runner away from latch and manoeuvre latch assembly from

- 1 . Carefully ease window runner away, sufficiently to enable latch to be located into position.
- 2 . Secure latch to door with 3 screws.
- 3. Secure window runner with 2 screws ensuring that packing strip is in position and that screw heads are below bottom of runner to prevent damage to glass.
- 4 . Install handle with 2 screws, ensuring that bezels are in position.
- ${\bf 5}$  . Connect control rod to handle operating lever and secure with spring clip.
- 6. Connect control rod to locking lever and retain with spring clip.
- 7. Connect push button control rod and linkage to latch lever and secure with spring clip.
- 8 . Install mounting panel.
  For additional information, refer to Front Door Reinforcement Panel

## **Rear Door Latch (76.37.13)**

### Removal

- Remove door trim panel.
   For additional information, refer to <u>Rear Door Trim Panel (76.34.04)</u>
- 2 . Peel-back sufficient of plastic sheet to reveal latch.
- 3. Release remote control lever rod from latch assembly.
- 4. Disconnect door outer handle control rod from latch assembly.
- 5 . Disconnect door locking button remote control rod from latch mechanism.
- 6 . Remove 3 retaining screws and withdraw latch assembly from door.

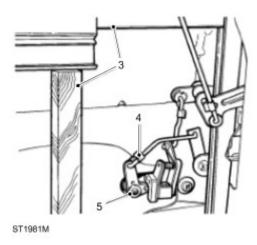


- 1 . Install latch assembly to door and secure with 3 screws, noting that uppermost screw is longer.
- ${\bf 2}$  . Connect remote control levers to latch mechanism reversing instructions 3, 4 and 5.
- 3 . Re-seal plastic sheet and install door trim panel. For additional information, refer to Rear Door Trim Panel (76.34.04)

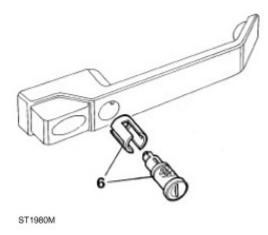
# Door Lock Cylinder (76.37.39)

### Removal

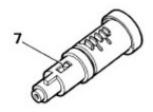
- Remove door trim panel and plastic sheet.
   For additional information, refer to <u>Front Door Trim Panel (76.34.01)</u>
- 2 . Remove reinforcement panel. For additional information, refer to <u>Front Door Reinforcement Panel</u>
- 3 . Raise and support glass to gain access to latch mechanism.
- 4. Release spring clip and disconnect rod from lock operating lever.
- 5. Remove single screw and withdraw lock lever assembly.



6. Withdraw lock barrel from exterior door handle complete with locking sleeve.



7. To remove barrel from plastic retaining sleeve, depress spring loaded button and withdraw sleeve.



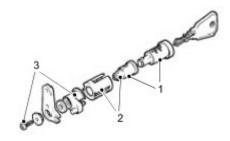
ST1979M

### Installation

#### NOTE:

If a new barrel is being installed, check that number on barrel coincides with number on accompanying key.

- 1 . Push plastic retaining sleeve over barrel until spring loaded peg locks it into position.
- 2 . Install barrel and plastic sleeve assembly to locking sleeve and insert into exterior handle reversing instruction 6.
- 3 . Assemble lock lever components as illustrated and from inside of door panel, install them to barrel assembly with single screw.



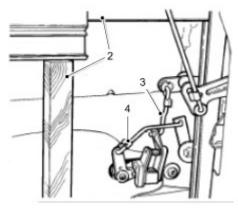
ST1978M

- 4. Connect operating rod to lock lever and secure with spring clip, reversing instruction 4.
- 5 . Install front door reinforcement panel.
  For additional information, refer to Front Door Reinforcement Panel
- 6. Install plastic sheet.
- 7 . Install door trim panel.
  For additional information, refer to Front Door Trim Panel (76.34.01)

## **Exterior Front Door Handle (76.58.07)**

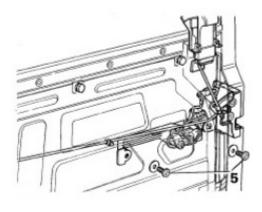
### Removal

- Remove door trim panel.
   For additional information, refer to <u>Front Door Trim Panel (76.34.01)</u>
- 2 . Remove door reinforcement panel and support glass with timber. For additional information, refer to <u>Front Door Reinforcement Panel</u>
- 3 . Disconnect operating rod from handle mechanism.
- 4. Disconnect rod from locking barrel lever.



ST1982M

5 . Remove 2 screws and withdraw handle assembly.



ST1970M

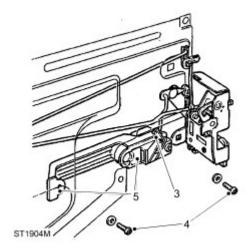
- Install handle to door ensuring that two bezels are in position flat faces towards door, and secure with 2 screws.
- 2 . Connect rod to handle operating lever and secure with spring clip.
- 3 . Connect rod to locking barrel lever and retain with spring clip.

4 . Install door reinforcement panel. For additional information, refer to Front Door Reinforcement Panel

# **Exterior Rear Door Handle (76.58.02)**

### Removal

- 1 . Remove door trim panel. For additional information, refer to Rear Door Trim Panel (76.34.04)
- 2 . Peel back sufficient of plastic sheet to gain access to handle mechanism.
- 3. Disconnect actuating rod from handle operating lever.
- 4 . Remove 2 screws and withdraw handle and bezels.



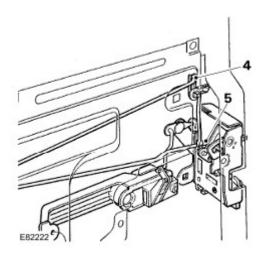
- 1 . Install handle to door ensuring that both bezels are in position flat faces towards door and secure with 2 screws.
- 2 . Connect actuating rod to handle operating lever and secure with spring clip.
- 3 . Re-seal plastic sheet.
- 4 . Install door trim panel.

  For additional information, refer to Rear Door Trim Panel (76.34.04).

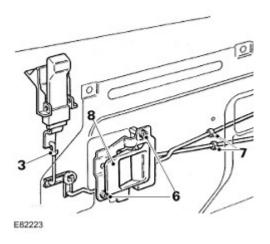
### **Interior Rear Door Handle**

### Removal

- Remove door trim panel.
   For additional information, refer to Rear Door Trim Panel (76.34.04)
- 2 . Peel-back sufficient of plastic sheet to gain access to remote lever.
- 3 . Remove spring clip and disconnect control rod from push button.
- 4. Release spring clip and disconnect short locking button control rod from latch mechanism.
- 5. Disconnect long remote control rod from latch assembly.



- 6. Remove 2 screws securing remote control lever to mounting panel.
- 7. Release control rods from plastic retaining clips located in mounting panel.
- 8. Withdraw remote control lever and rods from door.

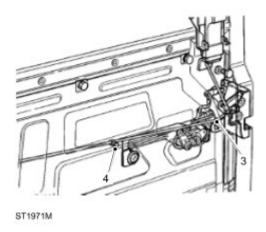


- 1 . Install plastic retaining clips to rod assembly into position and secure with 2 screws.
- 2. Connect control rods to latch assembly and secure with clips.
- 3 . Install plastic retaining rod clips to mounting panel.
- 4 . Connect control rod to push button and secure with clip.
- 5 . Re-seal plastic sheet and install door trim panel. For additional information, refer to Rear Door Trim Panel (76.34.04)

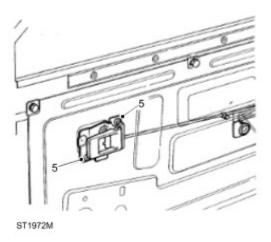
### **Interior Front Door Handle**

### Removal

- Remove door trim casing.
   For additional information, refer to <u>Front Door Trim Panel (76.34.01)</u>
- 2 . Peel back sufficient of plastic sheet to gain access to remote lever.
- 3 . Release spring clip and disconnect control rod from latch mechanism.
- 4. Release control rod from plastic clip in mounting panel.



5 . Remove 2 screws securing remote control lever to mounting panel and withdraw lever and control rod.



- 1 . Feed control rod into position and loosely secure lever to mounting panel with 2 screws.
- 2 . Connect control rod to latch mechanism and secure with spring clip.
- 3. Tighten control lever retaining screws.

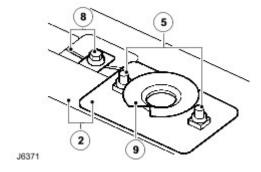
- 4 . Secure control rod to plastic clip in mounting panel.
- 5 . Secure plastic sheet.
- 6 . Install door trim casing. For additional information, refer to Front Door Trim Panel (76.34.01)

Published: Feb 13, 2006

# Hood Latch (76.16.21)

### Removal

- 1. Open hood.
- 2 . Mark position of guide plate and lock to hood platform.
- 3 . Remove 8 screws securing grille.
- 4. Remove grille.
- 5. Remove 2 bolts securing guide plate and lock.
- 6 . Remove guide plate.
- 7 . Release spring securing lock to hood platform.
- 8 . Slacken clamping bolt securing hood release cable.
- 9. Remove lock.



- 1 . Fit spring between lock and hood platform.
- 2 . Position lock and guide plate to hood platform and nip up bolts.
- 3 . Position guide plate and lock to position marks and tighten bolts to 10 Nm (7 lbf/ft).
- 4 . Fit cable to lock and tighten clamping bolt.
- 5 . Check operation of release cable and adjust if necessary.
- 6. Fit grille and tighten securing screws.
- 7. Close hood.

Published: Feb 14, 2006

## **Hood Latch Release Handle (76.16.30)**

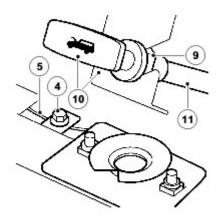
### Removal

### 1 . **NOTE**:

Hood release cable renew

Open hood.

- 2 . Remove 8 screws securing grille.
- 3 . Remove grille.
- 4 . Slacken clamping bolt securing hood release cable.
- 5. Remove cable from lock.
- 6. Release cable from clip on underside of hood platform.
- 7 . Feed cable through valance and collect grommet.
- 8 . Release cable from clip fixed to wheelarch under expansion tank.
- 9. Loosen clamping nut securing hood release handle to mounting bracket.
- 10 . Remove hood release handle from mounting bracket.
- 11. Withdraw cable through bulkhead.



J6372

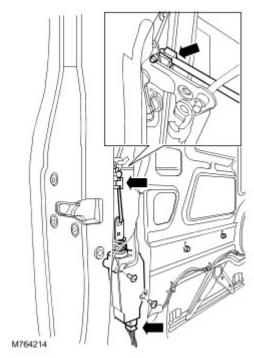
- 1 . Feed cable through bulkhead and fit hood release handle to mounting bracket. Tighten clamping nut.
- 2. Route cable behind expansion tank and fit to securing clip.

- 3 . Feed cable through valance.
- 4 . Fit grommet between cable and valance.
- ${\bf 5}$  . Fit cable to securing clip on underside of hood platform.
- 6 . Fit cable to lock and tighten clamping bolt.
- 7 . Check operation of release cable and hood lock and adjust if necessary.
- 8 . Fit grille and tighten screws.
- 9 . Close hood.

### **Front Door Lock Actuator**

### Removal

- 1 . Remove door trim panel. For additional information, refer to Front Door Trim Panel (76.34.01)
- 2. Carefully peel back plastic sheet to expose mechanism.
- 3 . Release clip, detach and remove lock solenoid link.
- 4 . Loosen 2 screws securing solenoid, release solenoid from mounting panel, disconnect multiplug and remove solenoid.

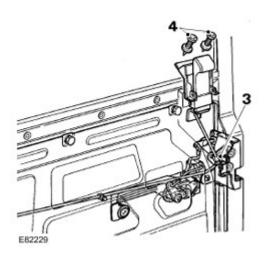


- 1 . Connect multiplug to solenoid, locate solenoid to mounting panel and tighten screws.
- 2. Instal and secure link.
- 3 . Adjust door latch cable. For additional information, refer to <u>Latch Cable Adjustment</u>
- 4 . |Refit plastic sheet.
- 5 . Fit door trim panel. For additional information, refer to Front Door Trim Panel (76.34.01)

## Front Door Push Button Rod and Linkage

### Removal

- Remove door trim panel.
   For additional information, refer to <u>Front Door Trim Panel (76.34.01)</u>
- 2 . Peel back sufficient of plastic sheet to expose mechanism.
- 3 . Release spring clip and disconnect operating rod from latch mechanism.
- 4. Remove 2 screws and withdraw push button rod and linkage.

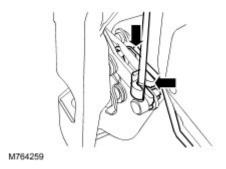


- 1 . Secure push button rod and linkage to door with 2 screws.
- 2 . Connect operating rod to latch mechanism and secure with spring clip.
- 3 . Re-seal plastic sheet and install door trim panel. For additional information, refer to Front Door Trim Panel (76.34.01)

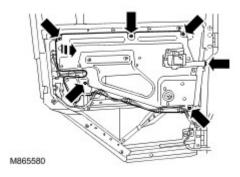
### **Rear Door Lock Actuator**

### Removal

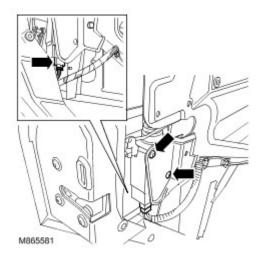
- Remove door trim panel.
   For additional information, refer to Rear Door Trim Panel (76.34.04)
- 2. Carefully peel back plastic sheet to expose mechanism
- 3. Release clip, detach and remove lock solenoid link.
- 4 . Release clip and disconnect interior handle link from latch mechanism.



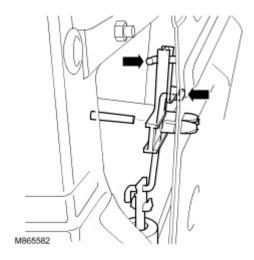
- 5. Remove 3 bolts securing mounting panel.
- 6 . Loosen remaining bolts and nut, ease mounting panel away from door and retain in this position for access.



- 7 . Disconnect multiplug from solenoid.
- 8 . Remove 2 screws securing solenoid.



- 9. Remove centre pin from bellcrank pivot and release pivot from mounting panel.
- 10 . Release bellcrank from sill button link and remove from lock solenoid link.



- 11 . Remove door lock solenoid.
- 12 . Remove link from solenoid.

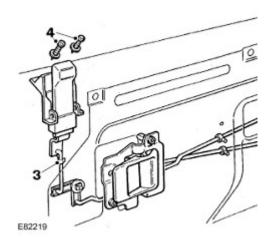
- 1 . Install link to solenoid, position solenoid, install bellcrank and connect to sill button link.
- 2 . Secure bellcrank to mounting panel and install centre pin.
- 3 . Align solenoid and install and tighten screws.
- 4. Connect multiplug to solenoid.
- 5. Install mounting panel bolts and tighten all bolts and nut to 10 Nm (7 lbf.ft).
- 6. Connect interior handle link to latch and secure with clip.
- 7 . Install and secure solenoid link.
- 8 . Install plastic sheet.

9 . Install door trim panel. For additional information, refer to Rear Door Trim Panel (76.34.04)

## Rear Door Push Button Rod and Linkage

### Removal

- Remove door trim panel.
   For additional information, refer to Rear Door Trim Panel (76.34.04)
- 2 . Peel back sufficient of plastic sheet to reveal mechanism.
- 3 . Release spring clip securing button to operating rod and withdraw rod from button.
- 4 . Remove 2 screws securing button to door panel and remove button.



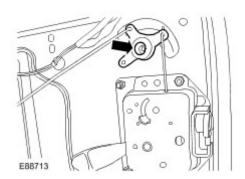
- 1 . Secure locking button assembly to door panel with 2 screws.
- 2 . Install operating rod to button assembly and secure with spring clip.
- 3 . Re-seal plastic sheet and install door trim panel. For additional information, refer to Rear Door Trim Panel (76.34.04)

Published: Jan 23, 2007

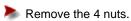
# Taildoor Latch (76.37.16)

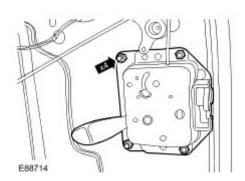
### Removal

- 1 . Remove the taildoor trim panel. For additional information, refer to <u>Taildoor Trim Panel (76.34.09)</u>
- 2. Release the central locking control rod pivot.
  - Remove the screw.



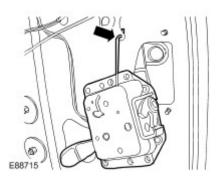
3. Release the taildoor latch.





4. Remove the taildoor latch.





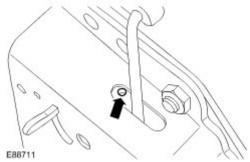
5 . **NOTE:** 

Do not carry out further dismantling if component is removed for access only.

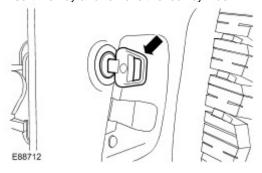
NOTE:

Make sure the latch is in the locked position.

Using a suitable tool release the lock cylinder.



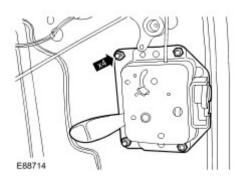
 $\boldsymbol{6}$  . Insert the key and remove the lock cylinder.



## Installation

1 . To install, reverse the removal procedure.





Published: Jan 23, 2007

# **Taildoor Lock Cylinder**

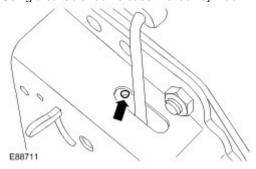
### Removal

1 . Remove the taildoor trim panel. For additional information, refer to <u>Taildoor Trim Panel (76.34.09)</u>

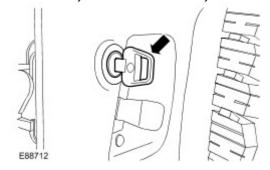
### 2 . **NOTE:**

Make sure the latch is in the locked position.

Using a suitable tool release the lock cylinder.



3 . Insert the key and remove the lock cylinder.



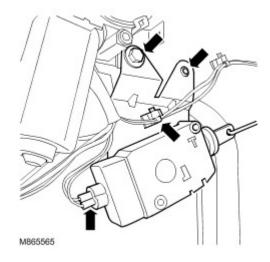
### Installation

1 . To install, reverse the removal procedure.

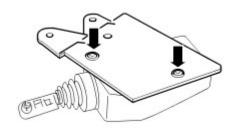
### **Taildoor Lock Motor**

### Removal

- 1 . Remove tail door trim panel. For additional information, refer to <u>Taildoor Trim Panel (76.34.09)</u>
- 2 . Disconnect multiplug from taildoor lock motor.
- 3 . Remove bolt and screw securing taildoor lock motor to taildoor.
- 4 . Release clip securing harness to taildoor lock motor mounting bracket.
- 5. Remove taildoor lock motor assembly from operating rod.



6. Remove 2 screws securing taildoor lock motor to mounting bracket.



M865566

- 1 . Install taildoor lock motor to mounting bracket and secure with screws.
- 2 . Connect operating rod to taildoor lock motor.
- 3 . Install taildoor lock motor to door, fit screw and tighten bolt to 6 Nm (4 lbf.ft).
- ${\bf 4}$  . Position harness to tail door lock motor mounting bracket and secure with clip.
- 5. Connect multiplug to taildoor lock motor.

6 . Install taildoor trim panel. For additional information, refer to <u>Taildoor Trim Panel (76.34.09)</u>