

TECHNICAL INFORMATION



No: 76/14/03/NAS
 Ref:
 Issue: 2
 Date: 10/31/03

3rd Row Seat Functionality Improvements

AFFECTED VEHICLE RANGE:

Discovery Series II (LT)

All with third row seating

SITUATION:

POOR FUNCTIONING OF 3RD ROW SEATS

The customer may complain of binding, incorrect latching, noise when the seats are stowed or other operational issues with the third row seats.

RESOLUTION:

ADJUST OR REPAIR THE SEAT COMPONENT CAUSING THE PROBLEM

Several areas have been identified as contributing to operating difficulties with third row seats. When a customer complaint has been verified and diagnosed, follow the applicable repair process.

PARTS INFORMATION:

4868L.....	Washer (per seat)	Qty 2	(Repair 1)
HWE100900.....	Seat latch – RH	Qty 1	(Repair 2)
HWE100910.....	Seat latch - LH non rear A/C	Qty 1	(Repair 2)
HWE000010PMA.....	Seat latch - LH black, w rear A/C	Qty 1	(Repair 2)
HXG100180	Twist grip – RH	Qty 1	(Repair 4)
HXG100190	Twist grip - LH	Qty 1	(Repair 4)
STC50546.....	Super-glue Plastic Adhesive		(Repair 4)
HHQ100210	Cable	Qty 2	(Repair 5)
HLD501380.....	Kit - Seat hook – RH	Qty 1	(Repair 6)
HLD501390.....	Kit - Seat hook – LH	Qty 1	(Repair 6)

WARRANTY CLAIMS:

78.80.89/32	Time 0.20 hrs.	Repair 1
	Adjust and clean striker. Includes check/lubricate seat latch and load space accessory mat R&R	
78.85.19	Time 0.30 hrs.	Repair 2
	Install replacement 3 rd row occasional seat latch	
78.85.89/56	Time 0.10 hrs.	Repair 3
	Adjust stowage latch and bump stop	
78.40.11	Time 0.40 hrs.	Repair 4
	Install replacement lever handle	
78.85.18	Time 0.30 hrs.	Repair 5
	Install replacement 3 rd row occasional seat release cable	
78.80.89/31	Time 0.30 hrs.	Repair 6
	Install replacement 3 rd row occasional seat hook	

FAULT CODE: Z

Normal warranty policy and procedures apply.

Material allowance is included in labor operation.

TIB 76/14/03/NAS	CIRCULATE: TO	Service Mgr X	Warranty X	Workshop X	Body Shop X	Parts X
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REPAIR PROCEDURE



NOTE: If the seat is not horizontal before latching it to the striker, the seat will not secure correctly, and the squab will not rise to the upright position. A firm action is required for the seat to latch properly. Ensure that there are no obstructions to the seat before operating. If necessary, advise the customer to refer to the Owners Handbook for the operating instructions.

REPAIR 1 - DIFFICULTY LATCHING THE SEAT TO THE FLOOR AND RAISING THE SEAT SQUAB



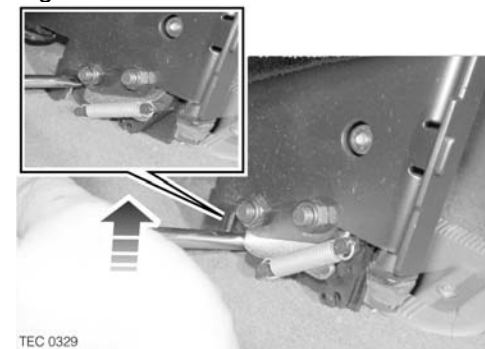
NOTE: The position of the floor striker and the accessory mat may inhibit seat deployment.

1. Inspect latch to determine if any of the following conditions exist:
 - Sticking or corroded latch mechanism
 - Faulty latch mechanism
 - Accessory mat installed
 - Debris around the floor striker
2. Protect vehicle carpet to protect against lubricant stains.
3. If sticking or corroded latch mechanism is determined perform the following:
 - Release the seat.
 - Pull the seat away from the side of the vehicle and let it rest on its side on the floor (Figure 1).
 - Manually rotate the latch (on the bottom edge of the seat) into the locked position (Figure 2).
 - Lubricate the mechanism protecting against over-spray.
 - Operate the twist-grip to unlock the latch.
 - Return the seat to the stowed position.
4. If the lubrication process is ineffective, perform Repair 2 and install a new seat latch.

Figure 1



Figure 2



5. If an accessory mat is installed, perform the following check:
 - Ensure that the mat does not foul the seat latch or the seat striker.
 - Deploy the seat.
 - If the seat is still difficult (an unreasonable amount of force is required) to latch, stow the seat and remove the accessory mat.
 - Deploy the seat.
 - If acceptable seat latching effort is obtain, stow the seat and reinstall the accessory mat.
6. If debris is observed around the floor striker, perform the following:
 - Remove two screws securing the floor finisher to the luggage floor carpet. (Arrowed in Figure 3)
 - Remove the floor finisher.
 - Clean floor finisher and the area around the seat striker.
 - Fit the floor finisher and secure with screws.
 - Operate the seat and check that the seat latches securely to the seat striker.
7. If the seat is still difficult to latch, perform the following:
 - Remove two screws securing the floor finisher.
 - Remove the floor finisher.
 - Move the carpet aside for access.
 - Remove two bolts securing the seat striker to the body. (Arrowed in Figure 4)
 - Remove seat striker and discard washers.
 - Fit two new washers (4868L) between the seat striker and the body,
 - Secure the seat striker with the bolts.
 - Adjust the seat striker as necessary and tighten bolts to **45 Nm (33 lbf.ft)**.
 - Install the floor finisher and secure with screws.
8. Operate the occasional rear seat and verify that the seat latches securely to the seat striker.
9. Return seat to the stowed position.

Figure 3

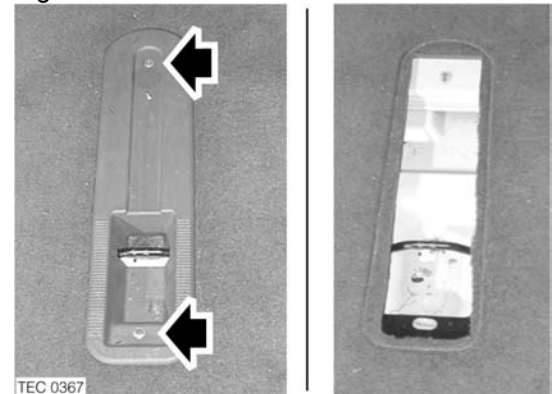
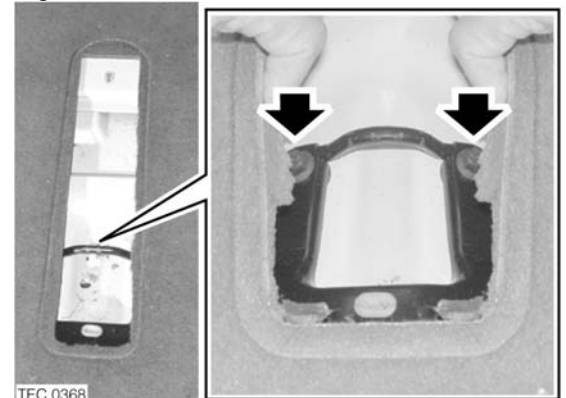


Figure 4





REPAIR 2 - INSTALL SEAT LATCH MECHANISM

1. If the inspection process or Repair 1 procedures indicated a seized latch assembly, Refer to RAVE section 78.10.45 and remove the affected occasional rear seat.
2. Invert the seat to expose underside and open the seat folding mechanism.
3. Carefully remove the star washer securing the link arm to the latch assembly.
4. Release the link arm from the latch assembly.
5. Remove the Allen bolt, spacer, spring washer and shim from the latch assembly pivot.
6. Remove the through-bolt from the latch assembly hinge pivot, and the latch release strap carrier.
7. Remove the latch assembly.
8. Remove the rubber bump stops from the latch assembly.
9. Install and secure the rubber bump stops to the replacement latch assembly.
10. Align the latch assembly to the seat frame.




CAUTION: It is important for the integrity of the latch that the bolt goes through the latch release strap carrier.

11. Install the through-bolt and tighten finger-tight.
12. Verify that the bolt is through the latch release strap carrier.
13. Install the Allen bolt, spacer, spring washer and shim to the latch assembly pivot.
14. Tighten the Allen bolt finger-tight.
15. Tighten the latch assembly pivot bolts to **25 Nm (18 lbf.ft)**.
16. Verify that the latch assembly is free to pivot.
17. Connect the link arm and secure with the star washer.
18. Install the repaired occasional rear seat following Workshop Manual repair section 78.10.45.

REPAIR 3 – CORRECT LATCH AND BUMP-STOP

 **NOTE:** Excess metal on the stowage latch hook can restrict the latching / unlatching action.

1. If the seat is difficult to latch or unlatch from the stowed position, perform the following:
 - Remove any burrs from around the latch (Arrowed in Figure 5).
 - Mark a 140° angle on the hook of the latch (Figure 6).
 - File the hook of the latch so an angle of $140^\circ \pm 5^\circ$ is achieved.

 **NOTE:** No contact between the seat rubber buffer and the rear quarter trim can result in a rattle or observable free-play.

2. If the seat rattles or there is free-play in the occasional rear seat when stowed, perform the following
 - Release the 3rd row seat from the stowed position.
 - Remove rubber buffer from its original orientation. (Arrowed 'A' in Figure 7)
 - Install the buffer in the reversed position (Arrowed 'B' in Figure 7).

Figure 5

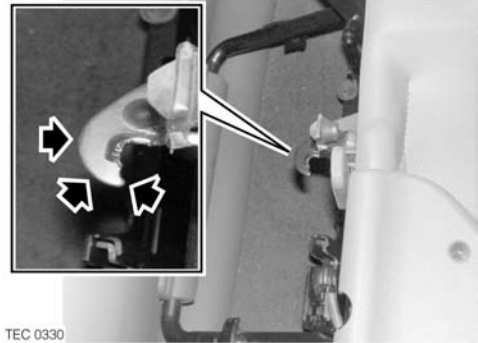


Figure 6

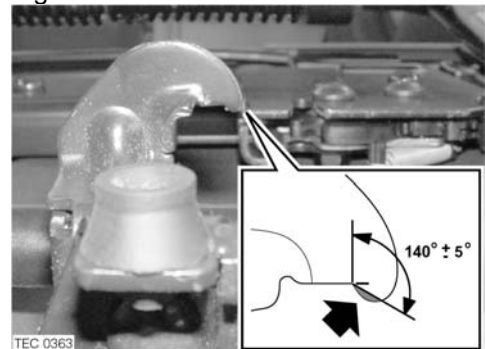
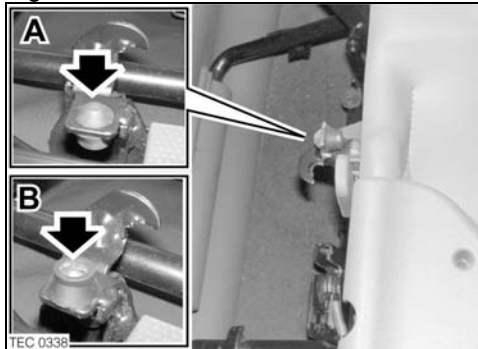


Figure 7



REPAIR 4 – TWIST GRIP JAMS, DOES NOT UNLATCH SEAT

NOTE: If the twist grip components fail it is not necessary to renew the occasional rear seat. The repair procedures below permit replacement of the twist grip or release cable.

1. If the seat release twist grip is determined to be the cause of the failure to release, disassemble the twist grip as follows:
 - Refer to RAVE section 78.10.45 and remove the 3rd row occasional rear seat.
 - Carefully release the retainers and remove the seat backboard. (Figure 8)
 - Remove the two Torx screws securing the seat release twist grip assembly. (Arrowed in Figure 9)
 - Release the twist grip assembly from between the frame brackets.
 - Remove the metal rod from the twist grip halves and set aside.

NOTE: The ferrule may be glued into position.

- Release the ferrule and remove the pin securing the release strap. (Inset in Figure 9)
2. Install a new release twist grip as follows:
 - Release the ferrule and remove the pin securing the release strap. (Inset in Figure 9)
 - Install the spring to the stationary half of the twistgrip (fitted with ferrule) and insert the metal shaft.
 - Position the rotating half of the twistgrip (without ferrule) onto the shaft.
 - Locate the spring into the positioning holes within the twistgrip halves. (Figure 10)

NOTE: When the spring is correctly positioned and the twistgrips are aligned on the shaft, the release strap locating lugs ('A' in Figure 10) will be aligned between the ferrule's cut-outs on the stationary half of the twistgrip ('B' in Figure 10).

- While holding the two halves of the twistgrip together, place the release strap in position ('B' in Figure 11) and secure with a new pin. ('A' Figure 11)

Figure 8



Figure 9

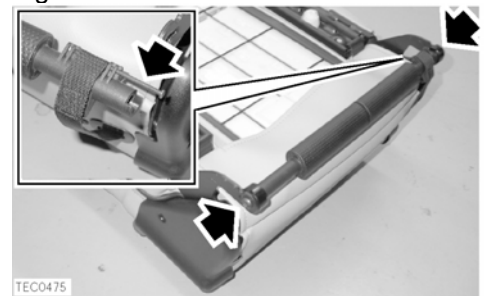


Figure 10

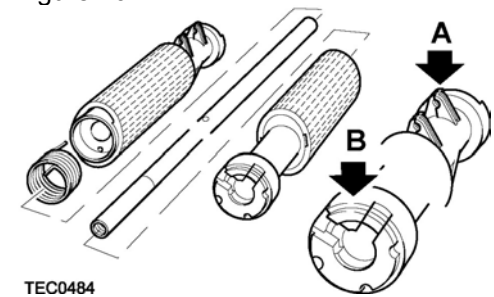
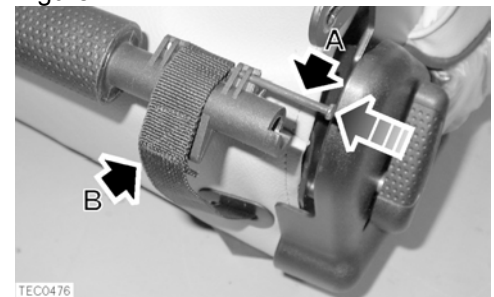


Figure 11



- Place the ferrule onto the rotating half of the twistgrip assembly. (Arrowed Figure 12).
 - Locate the twistgrip assembly to the frame brackets and secure with two Torx screws.
 - Place a 1.5mm feeler gauge between the stationary and rotating halves of the twistgrip.
 - Push the stationary half of the twistgrip against the frame bracket. (Arrowed Figure 13)
 - Push the rotating half of the twistgrip up against the stationary half of the twistgrip. (Arrowed Figure 14)
 - Verify there is a 1.5mm (0.060 inch) gap between the halves of the twistgrip.
 - Push the ferrule against the frame bracket while also pushing rotating half in opposite direction. (Inset Figure 14)
 - Apply adhesive between the ferrule and the rotating half of the twistgrip to fix the ferrule into position. (Figure 15)
 - Allow adhesive to cure and remove feeler gauge.
 - Check that the rotating half of twistgrip has a small amount of axial movement (approx. 0.5mm), and that the twistgrip can be operated without sticking and/or jamming.
3. Install the backboard onto the seat.
 4. Refer to RAVE section 78.10.45 and install the occasional rear seat.
 5. Stow the seat.

Figure 12

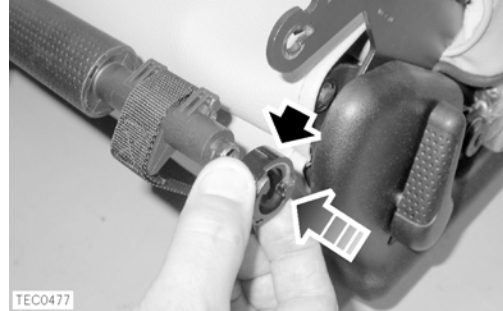


Figure 13

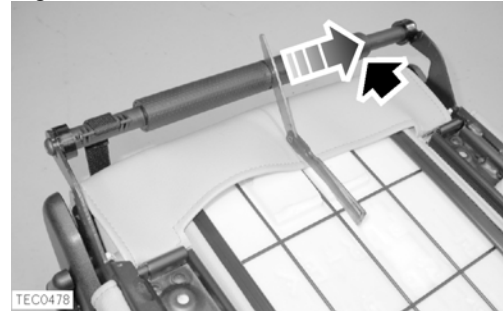


Figure 14

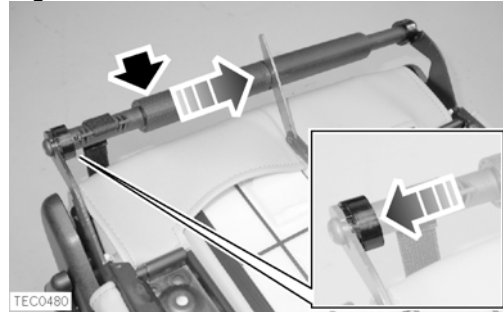
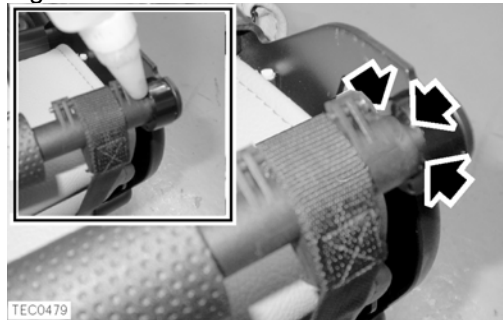



Figure 14



REPAIR 5 - SQUAB RELEASE CABLE REPLACEMENT:

 **NOTE:** If the twist grip components fail it is not necessary to renew the occasional rear seat. The repair procedures below permit replacement of the twist grip or release cable.

1. If the squab release cable is determined to be the cause of the failure to release, refer to RAVE section 78.10.45 and remove the 3rd row occasional rear seat.
2. Invert the seat to expose its underside, and open the seat folding mechanism.
3. Remove and discard the two cable ties securing the release cable to the seat base. (Inset in Figure 15)
4. Remove the star washer and return spring securing the release cable eye to the latch cable-mounting stud. ('A' in Figure 16)
5. Release the cable eye from the mounting stud.
6. Release the ends of the outer cable from the seat frame clips. ('B' in Figure 13 and 'A' in Figure 17)
7. Release the inner cable hook from the latch. ('B' in Figure 17)
8. Remove the cable from the seat.
9. Install and secure the new inner cable hook to the latch.
10. Fit and secure the outer cable ends into the seat frame clips.
11. Install the inner cable eye to the latch stud.
12. Install the return spring and star washer.
13. Position the release cable to the seat base and secure with new cable ties.
14. Operate the cable release and check for smooth operation.
15. Refer to RAVE section 78.10.45 and install the seat.

Figure 15

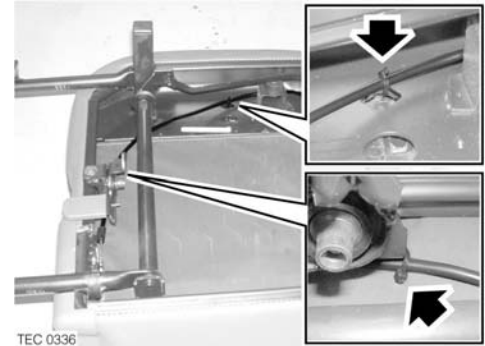


Figure 16

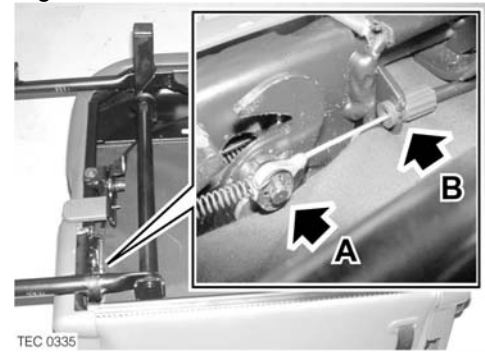
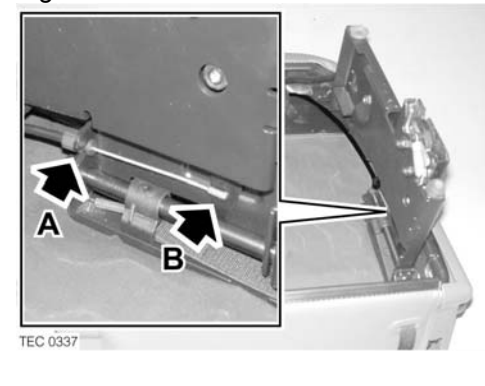


Figure 17



REPAIR 6 – SEAT SQUAB RELEASE HOOK REPAIR WHEN RAISING THE SEAT SQUAB IS DIFFICULT

1. Refer to RAVE section 78.10.45 and remove the 3rd row occasional rear seat.
2. Remove the screw securing the seat trim (Arrowed in Figure 18) and remove the trim piece.
3. Release the seat hook spring from the seat base. (Arrowed in Figure 19 Insert)
4. Release sufficient seat fabric to access the cable return spring. ('A' in Figure 20)
5. Release the cable return spring from the seat frame. ('B' in Figure 20)
6. Drill a 3 mm (1/8 inch) diameter pilot hole x12mm (1/2 inch) deep through the seat hook retaining rivet. (Arrowed in Figure 21)
7. Increase the diameter of the hole drilled in the rivet to 6mm (15/64 inch).
8. Remove the retaining rivet using a punch.
9. Remove filings and swarf with a magnet.
10. Remove and discard the star washer and spring securing the release cable to the seat hook.
11. Remove the hook assembly from the seat base and discard the complete hook assembly.
12. Connect release cable to the new seat hook.
13. Secure the release cable with a new star washer.
14. Install a new spring, ensuring that the return spring is in the correct fitted position prior to connection.

Figure 18

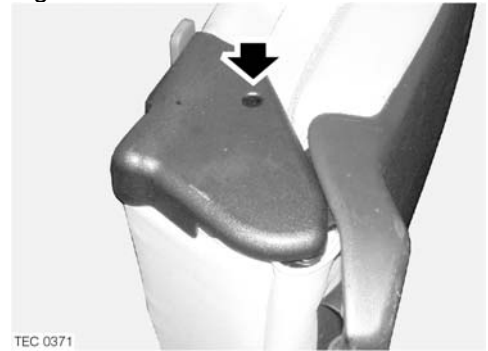


Figure 19

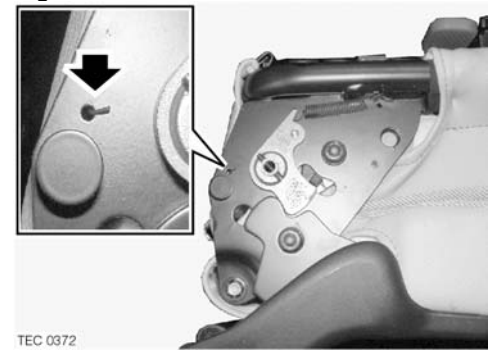


Figure 20

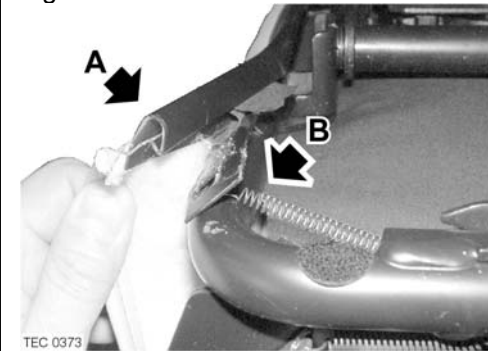
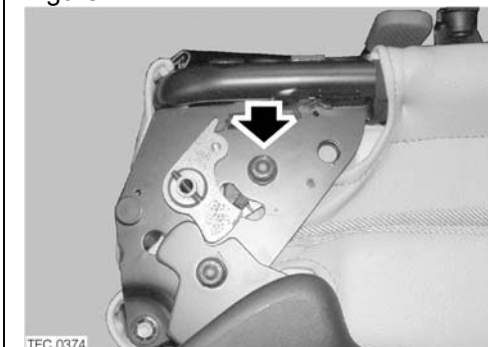


Figure 21



15. Refer to Figure 22 and install the new latch kit components as indicated below:

- Install the spacer 'B' to the bolt 'A'
- Position bolt 'A' through the seat hook 'C'
- Install nylon washer 'D' to the bolt
- Align the hook assembly to the seat frame 'F' and locate peg 'E' to the slot in the seat frame
- Start and finger tighten Nyloc nut onto bolt 'A'

16. Verify that the seat pad fabric is not trapped between the seat hook and seat frame.

17. Tighten bolt 'A' to **25 Nm (18 lbf.ft)**. (Figure23)

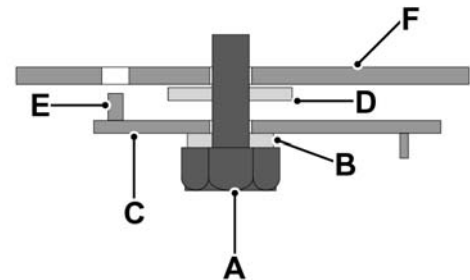
18. Connect the seat hook spring and the return spring to the seat frame.

19. Install and secure the seat fabric.

20. Install and secure the seat finisher.

21. Refer to RAVE section 78.10.45 and install the 3rd row occasional rear seat.

Figure 22



TEC 0375

Figure 23



TEC 0365