

# **SECTION : 501-10 Seating**

**VEHICLE APPLICATION : 2008.0 Falcon**

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## SPECIFICATIONS

### General Specifications

Description	Specification (mm)
Front seat track travel fore/aft	264
Front seat front height travel	55
Front seat rear height travel	55
Headrest height travel	50

### Torque Specifications

Description	Nm
Cushion to tracks	28 ± 4
Front seat back to cushion	32 ± 5
Pre-tensioner bolt	33 ± 3
SIAB nut to FSB frame	5.4 ± 0.9
Front seat to floor bolt	35 ± 5



## DESCRIPTION AND OPERATION

### Seating

#### Seats

The front seats are of a steel frame construction and have a sprung suspension mat in the seat cushion and a sprung mat with an adjustable lumbar section in the seat back (where applicable).

Seat adjustments improve occupant comfort and the key features are summarized below:

- \* Pull up towel bar at front of seat cushion to facilitate fore/aft manual travel adjustment (except G6E)
- \* Raise/Lower switch knob at side of seat cushion to raise/lower seat height (independent front & rear) (Drivers Side Only)
- \* Slide fore/aft switch knob at side of seat cushion for fore/aft electrical travel 8 way power seat (G6E Driver Only)
- \* Rotate knob at side of seat for recline adjustment (except G6E Driver)
- \* Rotate knob at side of seat for lumbar adjustment (except XT, XL Passenger)
- \* Push switch button forward or back for power recliner (G6E Driver)
- \* Push handle at side of seat for dump forward of seat back (utility only)
- \* Vertically adjustable head rest.

Seat movement is achieved with 3 motors for the 6-way track assembly used on the G6E and 2 motors for the 4-way track system.

The height adjustment motors drive a screw nut which then operates a lever arm connected to a common shaft which connects the left and right track rail, there is a separate motor for the rear and the front of the seat.

Forward and rearward motor drives a common shaft which in turn drives a pinion gear wheel on each track rail on G6E vehicles on the drivers side only.

Memory seats are fitted with Hall effect sensors internal to the motors, these tracks also have cable trays to secure the wiring harness, and the memory module is fixed to the cable tray with rivets.

Service kits are available to service the cable tray and the memory module separately.

When specified, a side impact bag is packaged in the seat back to maximize occupant protection.

Deployment of the air bag is through the outer seam of the seat trim and is triggered by the vehicle impact detection system.

The driver seat is also fitted with a sensor that determines the position of the seat relative to the steering wheel, and air bag deployment is adjusted accordingly.



## DIAGNOSIS AND TESTING

### Seats

#### Inspection and Verification

1. Verify the customer concern by operating the system.
2. Visually inspect for obvious signs of mechanical or electrical damage.
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 concern is not visually evident, verify the Symptom Chart.

#### Visual Inspection Chart

Mechanical	Electrical
*Seat tracks obstructed or damaged	*Fuse(s)
*Seat base track alignment	*Wiring harness
*Mechanical linkage(s) obstructed or damaged	*Loose or corroded connector(s)
*Seat frame alignment	*Motor(s)
*Internal operating cables obstructed, damaged or broken	*Multifunction switch
	*Damaged connector(s)
	*Memory button(s)
	*LED

#### Symptom Chart

Condition	Possible Sources	Action
The power seat is inoperative	*Connector(s) *Circuit	*GO to Pinpoint Test <u>A</u> .
The power seat moves but is noisy	*Seat base assembly *Motor(s)	*GO to Pinpoint Test <u>B</u> .
The power seat moves but is loose	*Seat track(s) *Seat base assembly	*GO to Pinpoint Test <u>C</u> .
The power seat does not make full travel	*Fastening hardware *Seat base assembly *Circuit	*Check Diagnostics then GO to Pinpoint Test <u>D</u> .
The pedal does not remember stored positions	*Circuit *Potentiometer	*GO to Pinpoint Test <u>E</u> .
Track or Lift Motor Does Not Move	*Motor(s) *Connector(s) *Switch pack *Module	*Check diagnostics then GO to Pinpoint Test <u>F</u> .
The power recliner is inoperative (8 way seats only)	*Motor *Connector(s) *Switch pack *Module	*Check diagnostics then GO to Pinpoint Test <u>G</u>
Memory recall is inoperative	*Connector(s) *Memory buttons *Module	*Check diagnostics then GO to Pinpoint Test <u>I</u> .
Priority recall is inoperative	*Connector(s) *Circuit *Module	*Check diagnostics then GO to Pinpoint Test <u>J</u> .
Mirror dip is inoperative	*Connector(s) *Circuit *Module	*Check diagnostics then GO to Pinpoint Test <u>K</u> .

NOTE: Put the seat into Diagnostic mode:



**Checking Diagnostic Trouble Codes**

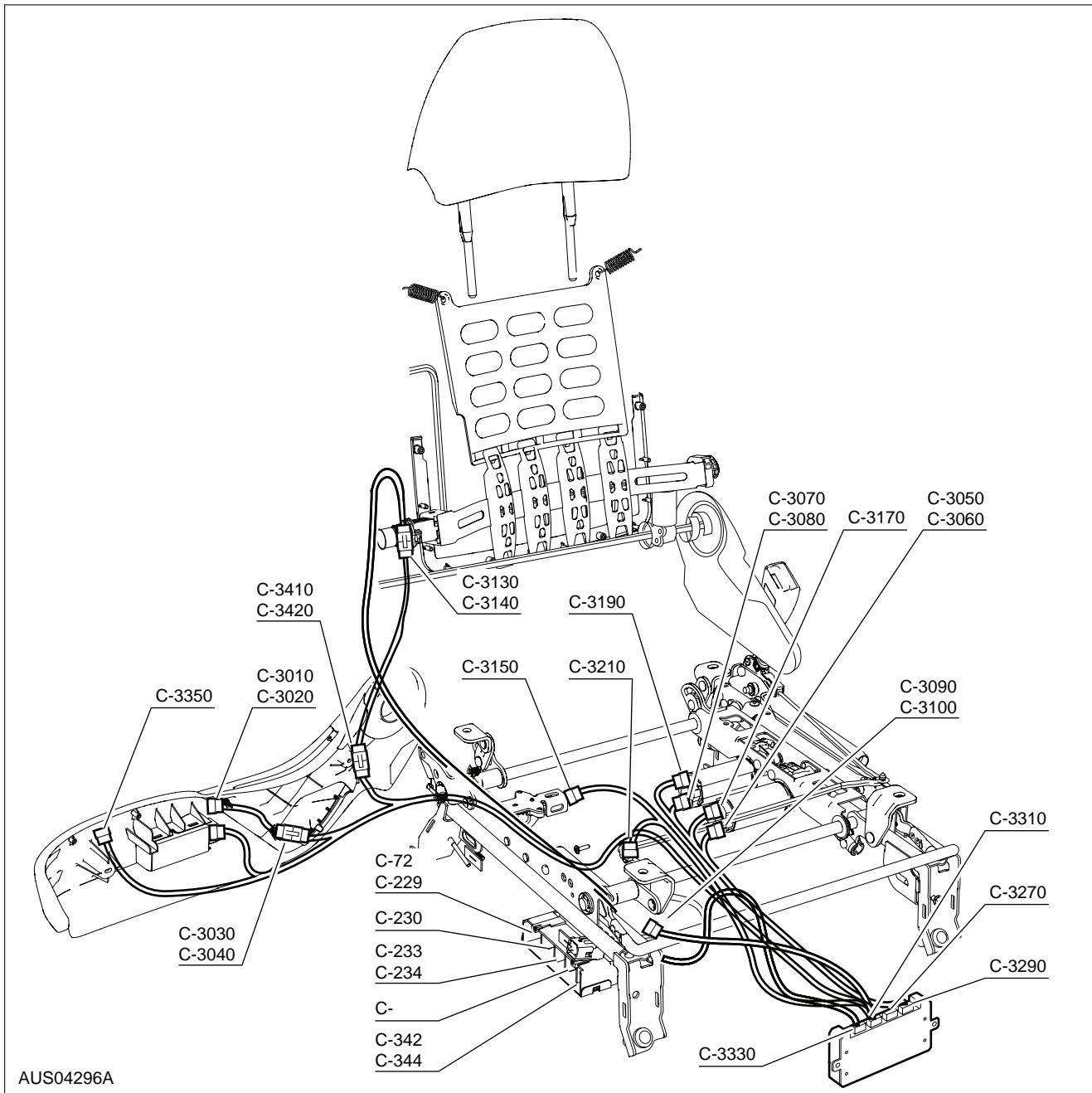
Entering Diagnostics		
Step	Do	Seat does
1	Ignition on	No change from previous state
2	Using the Ford service tool, select to enter plant mode	Seat will flash out DTC
Diagnostic Flash Code Phases		
Phase	Seat does	
1	Flash out high value (count number of times light turns ON).	
2	Green light OFF for about 1 second.	
3	Flash out low value (count number of times light turns ON).	
4	Green light OFF for about 3 seconds.	
5	Pressing memory button '2' will go to the next DTC.	
Return to phase 1 and start again		

**NOTE:** Check codes against table.

Diagnostic Test Codes			
Flash Codes		Code	Action
First group	Second group		
1	1	8 way seat	Ensure seat is 8 way.
1	3	No Priority Data	Go to <b>J1</b> .
1	4	No Priority Frame Synchronisation	Go to <b>J1</b> .
1	5	No Ignition	Go to <b>K1</b> .
1	6	No Reverse	Go to <b>K1</b> .
2	1	No Fore lift motor sensor	Go to <b>I1</b> .
2	2	No Aft lift motor sensor	Go to <b>I1</b> .
2	3	No Track motor sensor	Go to <b>D3&amp;I1</b> .
2	4	No Pedal motor sensor	Go to <b>E</b>
2	5	No Recliner motor sensor	Go to <b>I1</b> .
3	1	Button stuck (Memory)	Replace button/board which ever is at fault.
3	2	Button stuck (Position, including lumbar)	Replace switch pack.
3	3	Button stuck (Pedals)	Replace button.
3	4	LH mirror not responding or faulty	Replace Mirror.
3	5	RH mirror not responding or faulty	Replace Mirror.
3	6	Mirror button pack not responding or faulty	Replace Mirror button pack.
6	3	Internal error	Replace Module.
6	6	End of errors	No Action

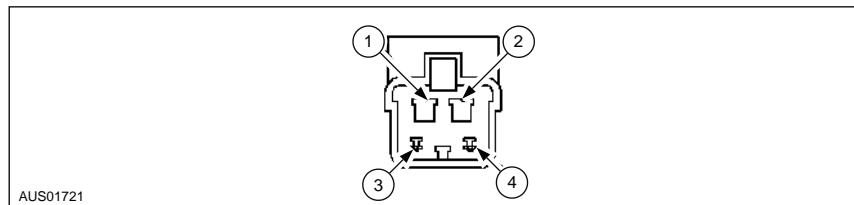
**NOTE:** After finishing repeat to ensure DTC is current fault code.





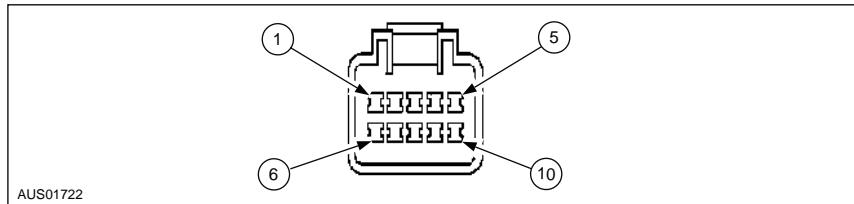
## Connector Circuit Reference

### Seat Power (Connector No. C-72)

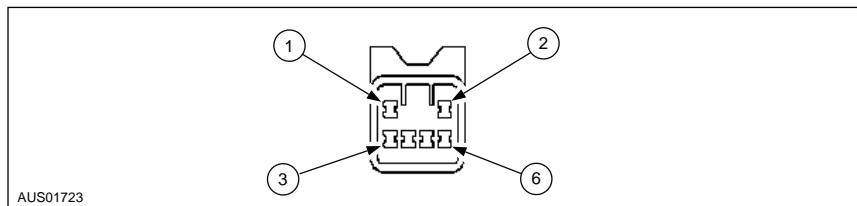


Pin Number(s)	Circuit Designation/Description	Normal Condition/Measurement
1	Circuit 4001 (Black) Ground	~0V
2	Circuit 4000 (Red) Power	>10V
3	Circuit 8000 (Green/Pink) Polack	
4	Circuit 8001 (pink/Orange) Polack	

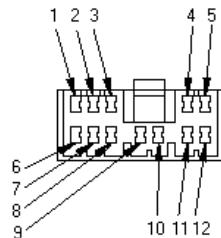
### Vehicle Inputs (Connector No.C-230A)



Pin Number(s)	Circuit Designation/Description	Normal Condition/Measurement
1	Circuit 6004 (LtGreen/Black) XDE Comms	
2	Circuit 6002 (Red/Blue) Ignition	>10V if ignition on
3	Circuit 6003 (Yellow/Green) Reverse	>10V if in Reverse
4	Circuit 2001 (Black/Grey) Mirror Ground	~0V
5	Circuit 2000 (Red/Orange) Mirror Power Circuit 2000A (Red/Orange) Pedal Position B	>0V when seat LED on
6	Circuit 4003 (Black/Orange) Electronics Ground	~0V
7	Circuit 7 Not Connected	
8	Circuit 6001 (White/Pink) Priority Data	Refer to DTC
9	Circuit 6000 (Yellow/Pink) Priority FS	Refer to DTC
10	Circuit 2003 (Yellow/Grey) Mirror Data	Refer to DTC

**Pedal Memory (Connector No.C-230B)**

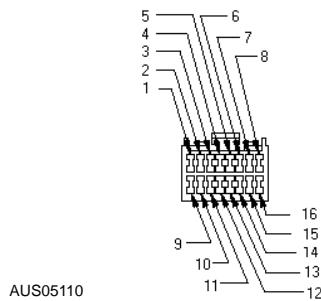
<b>Pin Number(s)</b>	<b>Circuit Designation/Description</b>	<b>Normal Condition/Measurement</b>
1	Circuit 3016 (Black/White) Switch – Pedal Far	12V if selected
2	Circuit 3017 (Brown/White) Switch – Pedal Near	12V if selected
3	Circuit 2000A (Red/Orange) Pedal Position B	Supply 9V to 10V
4	Circuit 7010 (Red/Green) Pedal Position A	6V to 16V
5	Circuit 1501 (White/Red) Pedal Motor Far	Motor Off =0V Motor On = 12V
6	Circuit 1500 (Orange/Black) Pedal Motor Near	Motor Off =0V Motor On = 12V

**Module Power Connector A (Connector No.C-3290)**

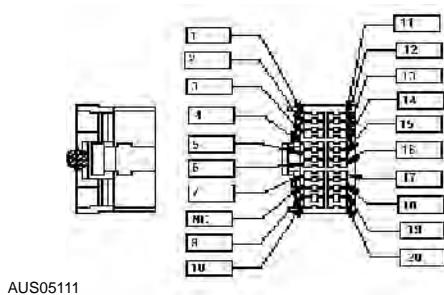
AUS05109

<b>Pin Number(s)</b>	<b>Circuit Designation/Description</b>	<b>Normal Condition/Measurement</b>
1	Circuit 4000 (Red) Motor Power	>10V
2	Circuit 1001 (Green/Yellow) Aft Motor Up	Motor Off =0V Motor On = 12V
3	Circuit 1000 (Blue) Aft Motor Down	Motor Off =0V Motor On = 12V
4	Circuit 1200 (Grey/Red) Tack Motor Forward	0v
5	Circuit 1500 (Orange/Black) Pedal Motor Near	Motor Off =0V Motor On = 12V
6	Circuit 3101 (Brown/Black) Manual Position Switch Common	+12v
7	Circuit 4001 (Black) Motor Ground	~ 0V
8	Circuit 4003A (Black/Orange) Electronics Ground	~ 0V
9	Circuit 1201 (Grey) Track Motor Backward	Motor Off =0V Motor On = 12V
10	Circuit 1100 (Brown) Fore Motor Down	Motor Off =0V Motor On = 12V
11	Circuit 1101 (Blue/Red) Fore Motor Up	Motor Off =0V Motor On = 12V
12	Circuit 1501 (White/Red) Pedal Motor Far	Motor Off =0V Motor On = 12V

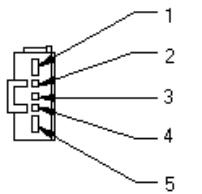
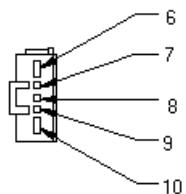


**Module Power Connector B (Connector No.C-3310)**

<b>Pin Number(s)</b>	<b>Circuit Designation/Description</b>	<b>Normal Condition/Measurement</b>
1	Circuit 7001 (Brown) Fore Position Supply	12V
2	Circuit 7003 (Green/Violet) Aft Position Supply	12V
3	Circuit 6003 (Yellow/Green) Reverse	When reverse selected 12V When reverse not selected 0V
4	Circuit 7005 (Black/White) Track Stroke Position	6V to 10V
5	Circuit 5 Not Connected	
6	Circuit 3100 (Blue) Memory Button PCB & Supply	12V
7	Circuit 8001 (White/Pink) Priority Data	Refer to DTC
8	Circuit 8 Not Connected	
9	Circuit 2001 (Black/Grey) Mirror Ground	0V
10	Circuit 6000 (Yellow/Pink) Priority FS	Refer to DTC
11	Circuit 7010 (Red/Green) Pedal Position A	6 to 16V
12	Circuit 3001 (Blue/Lt.Green) LED	0V LED ON
13	Circuit 13 Not Connected	
14	Circuit 7011 (Red/Blue) Pedal Position B	Not Connected
15	Circuit 7000 (Brown/Blue) Fore Lift Motor Position	0V to 16V AC Pulse when motor is running
16	Circuit 7002 (Green/Red) Aft Lift Motor Position	0V to 16V AC Pulse when motor is running

**Module connector (Connector Number C-3330)**

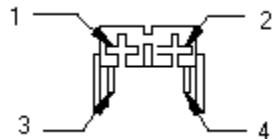
<b>Pin Number(s)</b>	<b>Circuit Designation/Description</b>	<b>Normal Condition/Measurement</b>
1	Circuit 2000 RED/Mirror Power	12V if LED On 0V if LED Off
2	Circuit 3013 Brown/White Recliner back	12V
3	Circuit 3011 Tan Track backward	12V
4	Circuit 3010 Green/Blue Track Forward	12V
5	Circuit 3009 Black/Blue Front Up	12V
6	Circuit 3014 Orange/Brown Lumbar harder	12V
7	Circuit 3008 Blue/Red Front Down	12V
8	Circuit 3004 Yellow/White Memory 2	12V
9	Circuit 3003 Violet Memory 1	12V
10	Circuit 6002 Red/Blue Ignition	12V
11	Circuit 2003 Black/Orange Electronics Ground	0V
12	Circuit 3015 Blue/Black Lumbar Softer	12V
13	Circuit 3006 Yellow/Blue Rear Down	12V
14	Circuit 3012 Brown/Red Recline Forward	12V
15	Circuit 3016 Black/White Pedal Far	12V
16	Circuit 3007 Pink Rear Up	12V
17	Circuit 3017 Brown/White Pedal Near	12V
18	Circuit 3002 White/Black Mirror Dip	12V
19	Circuit 3005 Blue/Orange Memory 3	12V
20	Circuit 6004 Lt Green/Black XDE Comms	NC

**Lift Motor Connectors (Connector Numbers C-3050 and C-3070)**Fore Lift Motor (White)  
C-3050Aft Lift Motor (Black)  
C-3070

AUS05112

AUS05113

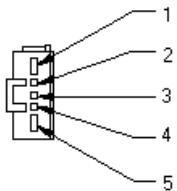
<b>Pin Number(s)</b>	<b>Circuit Designation/Description</b>	<b>Normal Condition/Measurement</b>
1	Circuit 1100 (Brown) Fore Motor Down	Motor Off =0V Motor On = 12V
2	Circuit 4003C (Black/Orange) Electronics Ground	0V
3	Circuit 7000 (Brown/Blue) Fore Position	0V to 16V AC Pulse when motor is running
4	Circuit 7001 (Brown) Fore Position Supply	9V to 16V
5	Circuit 1101 (Blue/Red) Fore Motor Up	Motor Off =0V Motor On = 12V
6	Circuit 1001 (Green/Yellow) Aft Motor Up	Motor Off =0V Motor On = 12V
7	Circuit 4003D (Black/Orange) Electronics Ground	0V
8	Circuit 7002 (Green/Red) Aft Position	0V to 16V AC Pulse when motor is running
9	Circuit 7003 (Green/Violet) Aft Position Supply	9V to 16V
10	Circuit 1000 (Blue) Aft Motor Down	Motor Off =0V Motor On = 12V

**Track Motor Connector (Connector No.C-3090)**

AUS05114

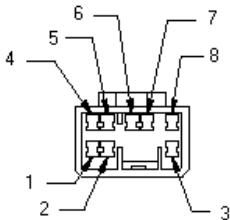
<b>Pin Number(s)</b>	<b>Circuit Designation/Description</b>	<b>Normal Condition/Measurement</b>
1	Circuit 1201 (Grey) Track Motor Backward	Motor Off =0V Motor On = 12V
2	Circuit 1200 (Grey/Red) Track Motor Forward	Motor Off =0V Motor On = 12V
3	Circuit 4003B (Black/Orange) Electronics Ground	0v
4	Circuit 7005 (Black/White) Track Stroke Position	0V to 16V AC Pulse when motor is running



**Recliner Motor Connector (Connector C3110)**

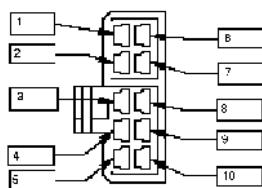
AUS05335

Pin Number(s)	Circuit Designation/Description	Normal Condition/Measurement
1	Circuit 1300 Pink/Yellow Recline Motor Forward	12V When Active
2	Circuit 4003E Black/Orange Electronics Ground	Min 2 V AC when motor running
3	NC	
4	Circuit 7007 Green/Brown Recline Ref Supply	Min 2 V AC when motor running
5	Circuit 1301 Violet/Green Recline Motor Backwards	12V When Active

**Lumbar & Recliner Connector (Connector Number C-3410)**

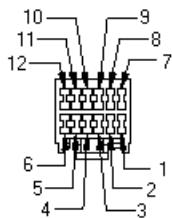
AUS05336

Pin Number(s)	Circuit Designation/Description	Normal Condition/Measurement
1	Circuit 1301 (Violet/Green) Recline Motor Backward	Motor Off =0V Motor On = 12V
2	Circuit 1300 (Pink/Yellow) Recline Motor Forward	Motor Off =0V Motor On = 12V
3	Circuit 1401 (Red/Yellow) Lumbar Motor Softer	Motor Off =0V Motor On = 12V
4	Circuit 7007 (Green/Brown) Recliner Ref Supply	6V to 9V
5	Circuit 4003E (Black/Orange) Electronics Ground	0v

**Manual Switch Connector (Connector Number C-3010)**

AUS05338

Pin Number(s)	Circuit Designation/Description	Normal Condition/Measurement
1	Circuit 3101/3101A Brown/Black Common	12V
2	Circuit 3013 Brown/White Recline Backward	12V when Switch Closed
3	Circuit 3011 Tan Track Backward	12V when Switch Closed
4	Circuit 3012 Brown/Red Recline Forward	12V when Switch Closed
5	NC	
6	Circuit 3009 Black/Blue Fore Up	12V when Switch Closed
7	Circuit 3007 Pink Aft Up	12V when Switch Closed
8	Circuit 3006 Yellow/Blue Aft Down	12V when Switch Closed
9	Circuit 3008 Blue/Red Fore Down	12V when Switch Closed
10	Circuit 3010 Green/Blue Track Forward	12V when Switch Closed

**Recliner Module Connector (Connector Number C-3270)**

AUS05339

Pin Number(s)	Circuit Designation/Description	Normal Condition/Measurement
1	Circuit 1300 (Pink/Yellow) Recline Motor Forward	Motor Off =0V Motor On = 12V
2	Circuit 1400 (Green/Red) Lumbar Motor Harder	Motor Off =0V Motor On = 12V
3	Circuit 7008 (Violet/Blue) Lumbar Position A	2.5V to 5V
4	Circuit 4 Not Connected	
5	Circuit 5 Not Connected	
6	Circuit 7007 (Green/Brown) Recline Ref Supply	6V to 9V
7	Circuit 1401 (Red/Yellow) Lumbar Motor Softer	Motor Off =0V Motor On = 12V
8	Circuit 1301 (Violet/Green) Recline Motor Backward	Motor Off =0V Motor On = 12V
9	Circuit 7009 (Blue/Yellow) Lumbar Position B	5V
10	Circuit 10 Not Connected	
11	Circuit 11 Not Connected	
12	Circuit 12 Not Connected	

## Pinpoint Tests

<b>PINPOINT TEST A : THE POWER SEAT IS INOPERATIVE</b>	
<b>CONDITIONS</b>	<b>DETAILS/RESULTS/ACTIONS</b>
<b>A1 : CHECK FOR POWER AT SEAT</b>	
	1. Measure the voltage between the power pins on connectors CON C-72 pins 1 and 2, and CON C-72 and CON C230A pin 6.
	Is the voltage greater than 10 volts?
<b>Yes</b>	GO to A2
<b>No</b>	Replace the fuse if CON C-72 problem. Check BEM if CON C-230A problem.
<b>A2 : CHECK CONNECTION AND CIRCUIT CONTINUITY</b>	
	1. Measure voltage between the power and grounds on the module connector C-3290 pins 1 and 7 also 1 and 8.
	Is the voltage within 0.5 of a volt of that measured in <b>A1</b> ?
<b>Yes</b>	Replace the harness. Refer to removal and installation instructions in this chapter.
<b>No</b>	Replace seat module. Refer to removal and installation instructions in this chapter.

<b>PINPOINT TEST B : THE POWER SEAT MOVES BUT IS NOISY</b>	
<b>CONDITIONS</b>	<b>DETAILS/RESULTS/ACTIONS</b>
<b>B1 : VISUAL INSPECTION FOR OBSTRUCTION IN SEAT TRACKS</b>	
	1. Inspect upper and lower seat track area for any foreign matter such as biros, coins, etc.
	Was foreign matter or debris found in the seat tracks?
<b>Yes</b>	Remove any obstructions from the seat tracks that could affect seat movement.
<b>No</b>	GO to B2
<b>B2 : VISUAL INSPECTION FOR POWER SEAT MOVEMENT OBSTRUCTION</b>	
	1. Check under the seat for anything that could affect seat movement, such as accessory floor mats, etc.
	Was an obstruction found?
<b>Yes</b>	Remove all obstructions.
<b>No</b>	Apply Grease, "SHELL ALVANIA RL2" onto the sliding areas of the seat tracks. <b>NOTE:</b> Care should be taken not to apply excess grease to the tracks as excessive grease could transfer to the carpet.



<b>PINPOINT TEST C : THE POWER SEAT MOVES BUT IS LOOSE</b>	
<b>CONDITIONS</b>	<b>DETAILS/RESULTS/ACTIONS</b>
<b>C1 : SEAT LOWER TRACK TO FLOOR</b>	
	1. Check tightness of the bolts used to retain the seat tracks to the vehicle floor.
	Were the bolts tight?
<b>Yes</b>	
	GO to C2
<b>No</b>	
	Tighten the seat mounting bolts to $35 \pm 5$ NM.
<b>C2 : SEAT UPPER TRACK TO SEAT</b>	
	1. Check the tightness of the nuts used to retain the seat tracks to the seat cushion frame.
	Were the nuts tight?
<b>Yes</b>	
	GO to C3
<b>No</b>	
	Tighten the nuts to $28 \pm 4$ NM.
<b>C3 : SEAT TRACK CONDITION</b>	
	1. Carry out a visual inspection using a torch of the seat track assembly for any physical damage.
	Is damage evident?
<b>Yes</b>	
	Remove the seat assembly and replace the seat track assembly. Refer to removal and installation instructions in this chapter .
<b>No</b>	
	GO to C4
<b>C4 : SEAT TRACK BALL BEARING CHECK</b>	
	1. Using an assistant, grasp the seat backrest and move backwards and forwards by hand to check for excessive movement.
	2. While the assistant is moving the seat backrest, use a torch to view the seat tracks look for excessive movement between the upper and lower rail.
	<b>NOTE:</b> Carry out this test in 3 positions of the seat, fully forward - mid - fully back.
	Did you see or feel excessive track movement in any of the 3 positions?
<b>Yes</b>	
	Replace the track assembly. Refer to removal and installation instructions in this chapter.
<b>No</b>	
	GO to C5
<b>C5 : SEAT ASSEMBLY GENERAL MOVEMENT - PART 1</b>	
	1. Grasp the seat backrest and move backwards and forwards by hand to check for excessive movement.
	Is the recliner mechanism loose at the cushion frame?
<b>Yes</b>	
	Remove the Two (2) plastic side covers and tighten the bolts retaining the seat recliner to the cushion frame. $32 \pm 5$ Nm.
<b>No</b>	
	GO to C6

<b>C6 : SEAT ASSEMBLY GENERAL MOVEMENT - PART 2</b>	
	1. Using an assistant, grasp the seat backrest and move backwards and forwards by hand to check for excessive movement.
	2. While the assistant is moving the seat backrest, using a torch to view the under side of the seat to establish at what point the seat movement is happening.
	3. Once the movement point is established check for signs of metal fatigue.
	Did you find any signs of metal fatigue?
<b>Yes</b>	Replace the fatigue affected assembly.
<b>No</b>	The seat, frame and tracks appear to be Okay.

<b>PINPOINT TEST D : THE POWER SEAT DOES NOT MAKE FULL TRAVEL</b>	
<b>CONDITIONS</b>	<b>DETAILS/RESULTS/ACTIONS</b>
<b>D1 : UNDER SEAT OBSTRUCTION</b>	
	1. Check under the seat for an obstruction, such as floor mats, umbrella, first aid kit etc.
	Did you find an obstruction that could cause the seat not to travel the full movement?
<b>Yes</b>	
	Remove the obstruction and recheck seat movement.
<b>No</b>	
	GO to D2
<b>D2 : SEAT TRACK OBSTRUCTION</b>	
	1. Check in the seat tracks for an obstruction, such as a pen, pencil, coins etc.
	Did you find an obstruction that could cause the seat tracks not to travel the full movement?
<b>Yes</b>	
	Remove the obstruction and recheck seat movement.
<b>No</b>	
	GO to D3
<b>D3 : CHECK CIRCUIT CONTINUITY</b>	
	1. Check the harness circuit resistance for the effected motor, for manual seat tracks check between the switch and the motor. For memory seats check all circuits from switch to module and from module to motor.
	Is the measurement less than 5 ohms? For all the circuits
<b>Yes</b>	
	If a DTC is active for the effected motor (Refer to diagnostic trouble code chart) replace Track assembly. If no DTC replace seat module.
<b>No</b>	
	Replace Harness. Refer to removal and installation instructions in this chapter.

<b>PINPOINT TEST E : THE PEDAL DOES NOT REMEMBER STORED POSITIONS</b>	
<b>CONDITIONS</b>	<b>DETAILS/RESULTS/ACTIONS</b>
<b>E1 : MEASURE POTENTIOMETER CHANGE AT TWO DIFFERENT PEDAL POSITIONS</b>	
	1. Remove connector CON C-230B and measure the potentiometer resistance at CON C-230B between pin 3 and pin 4. Reconnect the connector and move the pedal then remove connector and re-measure.
	Is the difference in resistance less than 20 ohms?
<b>Yes</b>	Replace APM. REFER to Section 206-06.
<b>No</b>	Replace Module. Refer to removal and installation instructions in this chapter.

<b>PINPOINT TEST F : THE POWER SEAT DOES NOT MOVE HORIZONTALLY/VERTICALLY</b>	
<b>CONDITIONS</b>	<b>DETAILS/RESULTS/ACTIONS</b>
<b>F1 : MOVEMENT CHECK FOR GOOD SWITCH PACK</b>	
	1. Replace the switch pack with a known good switch and test if effected motor still does not operate.
	Did the motor move?
<b>Yes</b>	Replace Switch Pack.
<b>No</b>	GO to F2
<b>F2 : CONTINUITY MOTOR TO MODULE</b>	
	1. Check the harness circuit resistance for the effected motor, for manual seat tracks check between the switch and the motor. For memory seats check all circuits from switch to module and from module to motor.
	Is the resistance less than 5 ohms?
<b>Yes</b>	GO to F3
<b>No</b>	Replace Harness. Refer to removal and installation instructions in this chapter.
<b>F3 : MEASURE MOTOR OUTPUT VOLTAGES</b>	
	1. Check the voltage at the motor while pushing appropriate switch. <b>NOTE:</b> Measurement must be done by back probing the connectors, disconnecting the plug will stop the hall effect signal which in turn will stop the motor drive voltage.
	Is the voltage more than 10 volts?
<b>Yes</b>	Replace seat Track Assembly. Refer to removal and installation instructions in this chapter.
<b>No</b>	Replace Memory Module if applicable (Memory seats Only)



<b>PINPOINT TEST G: THE POWER RECLINER IS INOPERATIVE</b>	
<b>CONDITIONS</b>	<b>DETAILS/RESULTS/ACTIONS</b>
<b>G1: MOVEMENT CHECK FOR GOOD SWITCH PACK</b>	
	1. Replace the switch pack with a known good switch and test if seat still doesn't recline.
	Did the recliner move?
<b>Yes</b>	
	Replace Switch pack
<b>No</b>	
	GO to G2.
<b>G2 : VOLTAGE CHECK FOR MOTOR</b>	
	1. Measuring voltage on the motor pins in the backrest connector while pushing the appropriate switch. Measure between connector C-3110 pin 1 and 5. <b>NOTE:</b> Measurement must be conducted by back probing the connectors, disconnecting the plug will stop the hall effect signal which in turn will stop the motor drive voltage.
	Is the voltage more than 10 volts? <b>NOTE:</b> Probes may need to be reversed depending on forward or rearward motor direction.
<b>Yes</b>	
	Replace seat back frame assembly
<b>No</b>	
	GO to G3
<b>G3 : CHECK PATCH HARNESS CONTINUITY</b>	
	1. Measure continuity between: Connector C-3110 pin 1 and connector C-3410 pin 2 Connector C-3110 pin 5 and connector C-3410 pin 1 Connector C-3110 pin 2 and connector C-3410 pin 5 Connector C-3110 pin 4 and connector C-3410 pin 4
	Is the resistance less than 5 ohm's for all the circuits tested?
<b>Yes</b>	
	GO to G4
<b>No</b>	
	Replace patch harness
<b>G4 : CHECK MAIN HARNESS CONTINUITY</b>	
	1. Measure continuity between Connector C-3010 pin 1 and connector C-3290 pin 6 Connector C-3010 pin 2 and connector C-3330 pin 2 Connector C-3010 pin 4 and connector C-3330 pin 14 Connector C-3270 pin 1 and connector C-3410 pin 2 Connector C-3270 pin 8 and connector C-3410 pin 1 Connector C-3270 pin 6 and connector C-3410 pin 4
	Is the resistance less than 5 ohm's for all the circuits tested?
<b>Yes</b>	
	Replace seat memory module.
<b>No</b>	
	Replace cable tray assembly.



<b>PINPOINT TEST H : THE POWER LUMBAR IS INOPERATIVE</b>	
<b>CONDITIONS</b>	<b>DETAILS/RESULTS/ACTIONS</b>
<b>H1 : CHECK SWITCH OPERATION</b>	
	1. Replace switch with known good switch and check operation.
	Does lumbar motor operate?
<b>Yes</b>	
	Replace switch
<b>No</b>	
	GO to H2
<b>H2 : CHECK MOTOR VOLTAGE</b>	
	1. Measuring voltage on the motor pins in the lumbar motor connector while pushing the appropriate switch. CON C-3130 Pins 3 and 4
	Is the voltage more than 10 volts? <b>NOTE:</b> Probes may need to be reversed depending on forward or rearward motor direction.
<b>Yes</b>	
	Replace lumbar assembly
<b>No</b>	
	Go to H3
<b>H3 : CHECK PATCH HARNESS CONTINUITY</b>	
	1. Measure continuity between Connector C-3130 pin 3 and connector C-3410 pin 3 Connector C-3130 pin 4 and connector C-3410 pin 8 Connector C-3130 pin 2 and connector C-3410 pin 7 Connector C-3130 pin 1 and connector C-3410 pin 6
	Is the resistance less than 5 ohm's for all the circuits tested?
<b>Yes</b>	
	Go to H4
<b>No</b>	
	Replace patch harness
<b>H4 : CHECK MAIN HARNESS CONTINUITY</b>	
	1. Measure continuity between: Connector C-3030 pin 3 and connector C-3330 pin 12 Connector C-3030 pin 5 and connector C-3330 pin 6 Connector C-3030 pin 6 and connector C-3290 pin 6 Connector C-3270 pin 2 and connector C-3410 pin 8 Connector C-3270 pin 3 and connector C-3410 pin 7 Connector C-3270 pin 7 and connector C-3410 pin 3 Connector C-3290 pin 9and connector C-3410 pin 6
	Is the resistance less than 5 ohm's for all the circuits tested?
<b>Yes</b>	
	Replace seat memory module
<b>No</b>	
	Replace cable tray harness assembly



<b>PINPOINT TEST I : MEMORY RECALL IS INOPERATIVE</b>	
<b>CONDITIONS</b>	<b>DETAILS/RESULTS/ACTIONS</b>
<b>I1 : CHECKING HALL EFFECT SIGNAL</b>	
	1. Using the IDS put the vehicle into plant mode.
	Is the seat flashing a fault code?
<b>Yes</b>	
	Check the hall effect signal on the effected motor indicated by the fault code. And replace the motor if the fault is confirmed. Refer to the procedure checking hall effect sensor signal by going to Pin Point test L
	If signal check is OK then go to I2
<b>No</b>	
	GO to I2
<b>I2 : CHECK HARNESS CONTINUITY FOR MOTOR SENSORS</b>	
	1. Measure the resistance between the motor and memory module for all the motor sensor circuits.
	Refer to connector circuit reference charts.
	Is the resistance less than 5 ohms?
<b>Yes</b>	
	GO to I3
<b>No</b>	
	Replace harness cable tray assembly.
<b>I3 : CHECK BUTTON BOARD CONTINUITY</b>	
	1. Measure the harness resistance between the button board connector C- 3350 and the memory module connector C-3330.
	Is the resistance less than 5 ohms?
<b>Yes</b>	
	GO to I4
<b>No</b>	
	Replace harness cable tray assembly.
<b>I4 : CHECK BUTTON BOARD</b>	
	1. Set all three-memory buttons one at a time by pressing and holding until the double chime is heard. Then move the seat manually to a new position
	2. Push all 3 memory buttons one at a time.
	Did chime sound and seat NOT move?
<b>Yes</b>	
	Replace seat module. Refer to removal and installation instructions in this chapter.
<b>No</b>	
	Replace button board. Refer to removal and installation instructions in this chapter.



<b>PINPOINT TEST J : PRIORITY RECALL INOPERATIVE</b>	
<b>CONDITIONS</b>	<b>DETAILS/RESULTS/ACTIONS</b>
<b>J1 : CONTINUITY FROM BODY INTERFACE TO MODULE</b>	
	1. Measure the harness resistance between connector: C-230A pin 8 and C-3310 pin 7. C-230A pin 9 and C-3310 pin 10.
	Is the resistance less than 5 ohms?
<b>Yes</b>	If DTC 13 or 14 is set problem is with the BEM (Refer to section 419-10) else replace seat module. Refer to removal and installation instructions in this chapter.
<b>No</b>	Replace harness. Refer to removal and installation instructions in this chapter.



<b>PINPOINT TEST K : MIRROR DIP IS INOPERATIVE</b>	
<b>CONDITIONS</b>	<b>DETAILS/RESULTS/ACTIONS</b>
<b>K1 : CHECK FOR IGNITION FUNCTION</b>	
	1. Perform a seat recall and activate ignition before recall is complete.
	Did the seat stop short of the recall position?
<b>Yes</b>	
	GO to K3
<b>No</b>	
	GO to K2
<b>K2 : CHECK FOR IGNITION AT THE SEAT CONNECTOR</b>	
	1. Measure the harness voltage at Connector C-230A pin 2.
	Is the Voltage >10V?
<b>Yes</b>	
	If DTC 15 is set, problem is with the Harness, else replace seat module.
<b>No</b>	
	Ignition circuit to seat faulty, trace circuit and rectify problem before continuing.
<b>K3 : CHECK FOR REVERSE FUNCTION</b>	
	1. With Ignition on and PRNDL in Reverse activate the Mirror Dip button, hold the button for 2 seconds to ensure chime will happen even if the function is currently enabled.
	Did the seat chime?
<b>Yes</b>	
	GO to K5
<b>No</b>	
	GO to K4
<b>K4 : CHECK FOR REVERSE AT THE SEAT CONNECTOR</b>	
	1. Measure the harness voltage at Connector C-230A pin 3.
	Is the Voltage >10V?
<b>Yes</b>	
	If DTC 16 is set, problem is with the harness, else replace seat module.
<b>No</b>	
	Refer to PCM section 303-14.
<b>K5 : CHECK FOR MIRROR OPERATION</b>	
	1. Program different mirror locations into the memory buttons and then recall each memory position.
	Did the mirrors move to the correct location?
<b>Yes</b>	
	Replace harness. Refer to removal and installation instructions in this chapter.
<b>No</b>	
	Refer to the mirror section 501-09.



<b>PINPOINT TEST L : HALL EFFECT SIGNAL TEST</b>	
<b>CONDITIONS</b>	<b>DETAILS/RESULTS/ACTIONS</b>
<b>L1 : CHECK AC PULSE SIGNAL AT MOTOR CONNECTOR</b>	
	<p>1. Using a multi meter set to measure AC signal connect to the electronics ground and the signal or Reference Pins as shown on the table below for the effected motor.\</p> <p>Track Motor connector C-3090 Pins 3 and 4  Front lift motor connector C-3050 Pins 2 and 3  Rear lift motor connector C-3070 Pins 7 and 8  Recliner Motor connector C-3110 Pins 2 and 31  Lumbar does not use hall effect motor refer to pin point test H.</p>
	2. While operating motor measure the voltage across the terminals listed.
	<p>Was a voltage signal measured with the motor running, and 0 Volts with motor stopped?</p> <p><b>NOTE:</b> The track and recliner motors should have approximately 2 Volts AC  The lift motors should show approximately 6 Volts AC</p>
<b>Yes</b>	Motor is OK
<b>No</b>	Replace effected motor, if track or lift motor replace track assembly, if the recliner motor replace the back frame assembly.



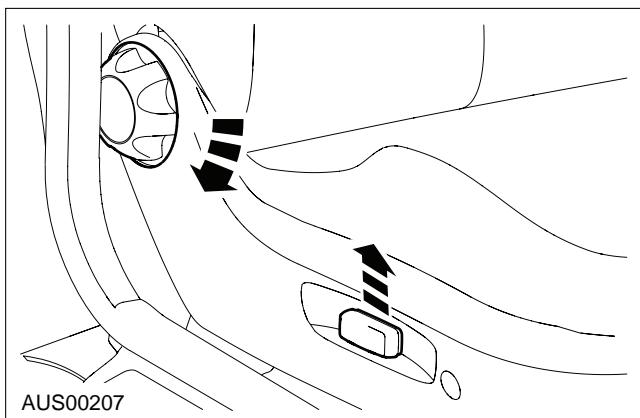
## REMOVAL AND INSTALLATION

### Front Seat Assembly

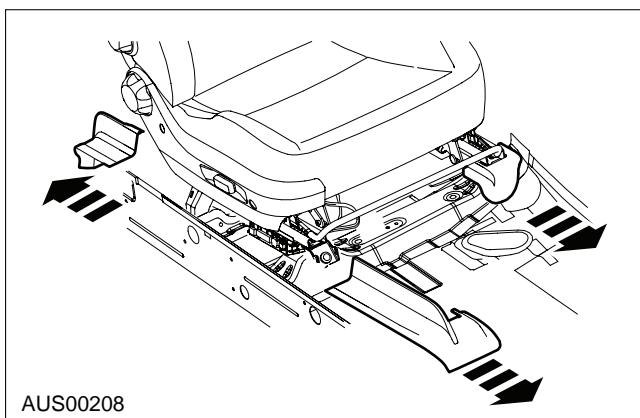
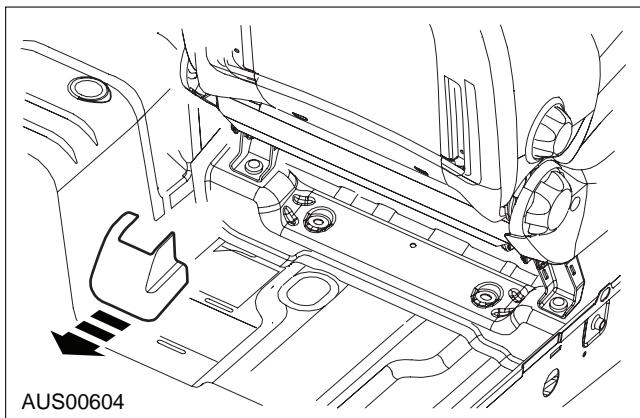
#### Removal

- Set seat back angle to vertical position and set height adjustment to full up position.
- Disconnect the battery.

**WARNING:**  Wait at least one minute after disconnecting the battery ground cable before disconnecting any supplemental restraint system electrical connector. Failure to follow this warning could cause premature deployment and may result in personal injury.

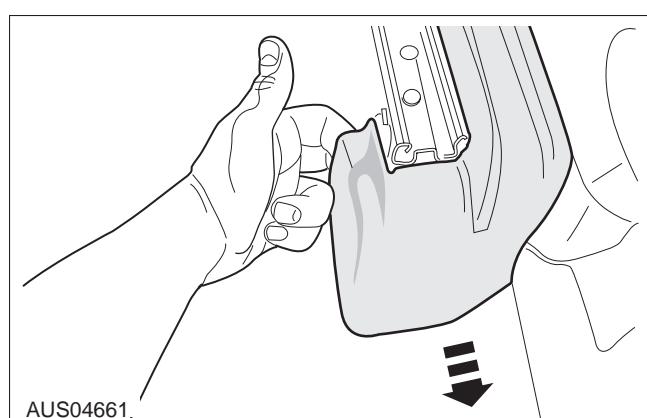
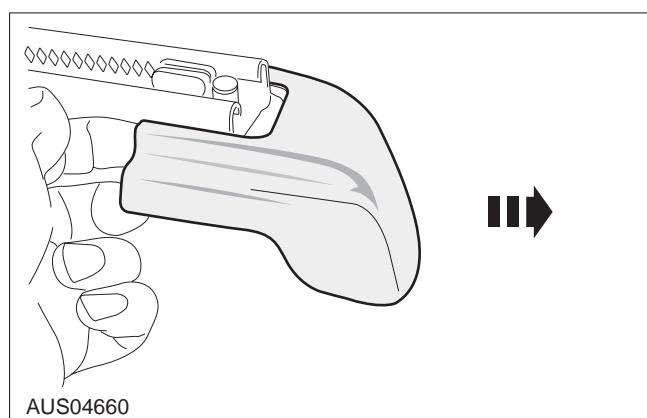
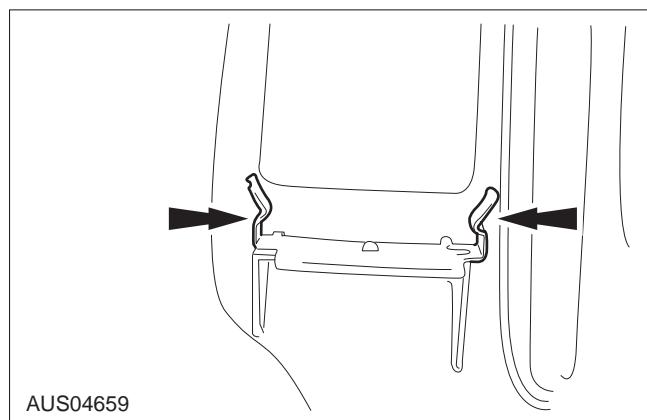


- Remove front and rear plastic track cover by releasing metal spring.



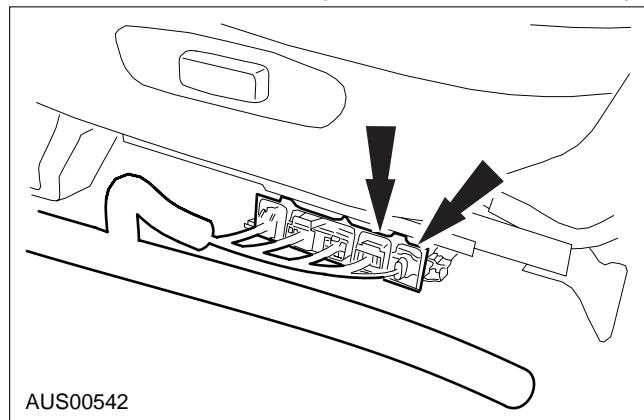
The images below indicates the attachment method. This is the same for all track covers.

- Place fingers behind cover as shown and gently pull away and forward to disengage clip
- As shown the clip can be felt behind the cover and released by placing fingers behind the clip and disengaging from the seat track

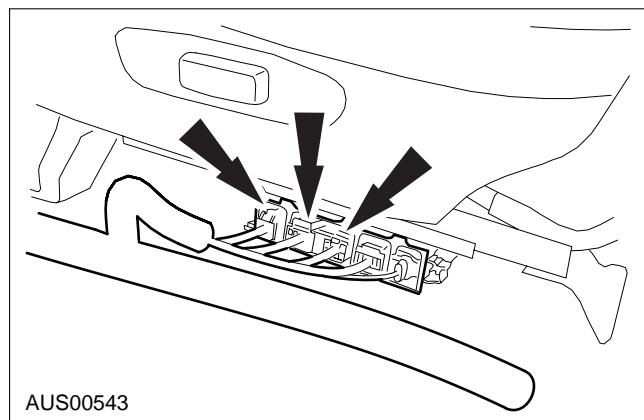


4. Unplug all electrical connectors from outboard underside of seat.

**NOTE:** Number of connectors depend on seat option and may include seat belt pretensioner, side airbag, memory and power connectors on outboard side of seat (Refer to Section 501-20a).



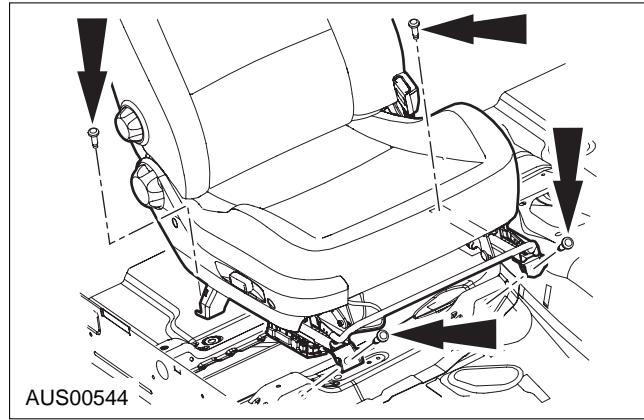
AUS00542



AUS00543

5. Remove four seat mounting bolts.

**CAUTION:** Seat Mounting hardware should not be reused.



6. Carefully remove the seat from the vehicle.

#### Installation

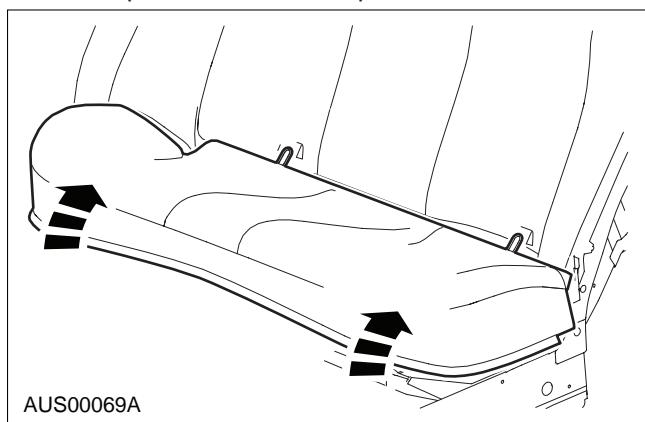
1. To install front seat, reverse the removal procedure.

**CAUTION:** Seat Mounting hardware should not be reused.

## Rear Seat Cushion

### Removal

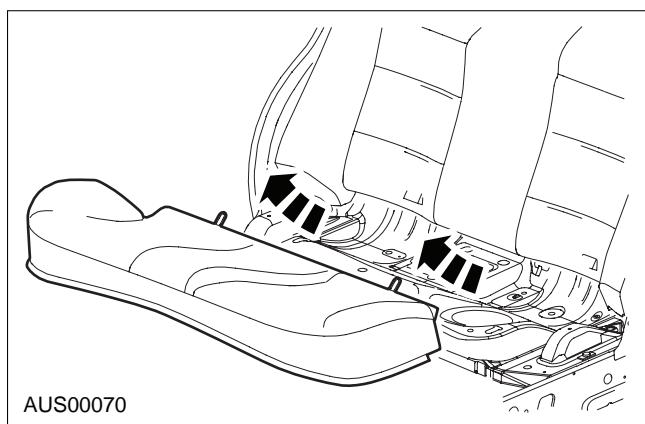
1. To remove rear seat cushion push each side back and up to release floor clips.



AUS00069A

### Installation

1. Ensure that rear metal loop is engaged in sheet metal as shown and push each side down to engage floor clip.

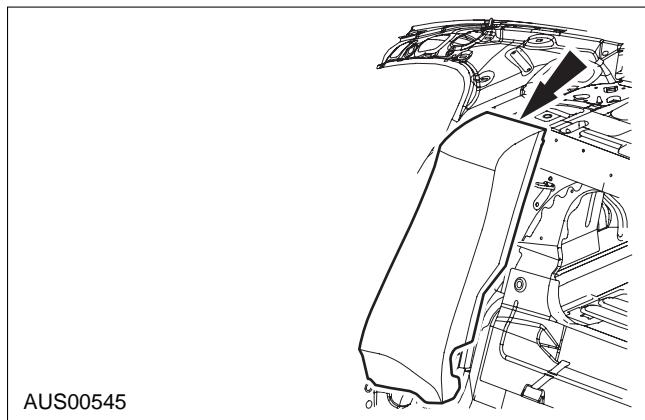


AUS00070

## Rear Seat Bolster

### Removal

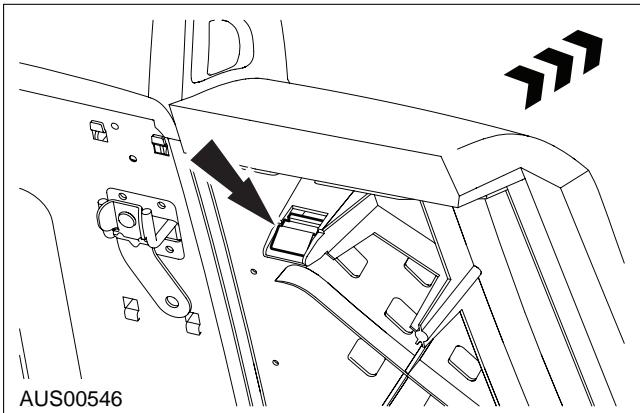
1. Insert screw driver down back of bolster.



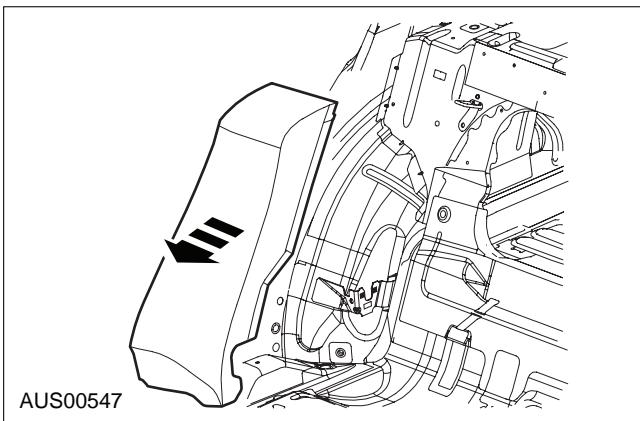
AUS00545



2. Press spring clip down to release.



3. Pull bolster forward to remove, disengage plastic hook at bottom.



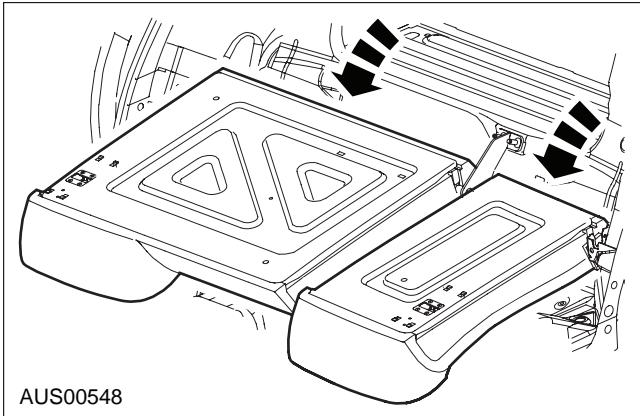
### Installation

1. To install, reverse the removal procedure.
2. Ensure the plastic hook at the bottom is properly engaged in the wheelhouse bracket.

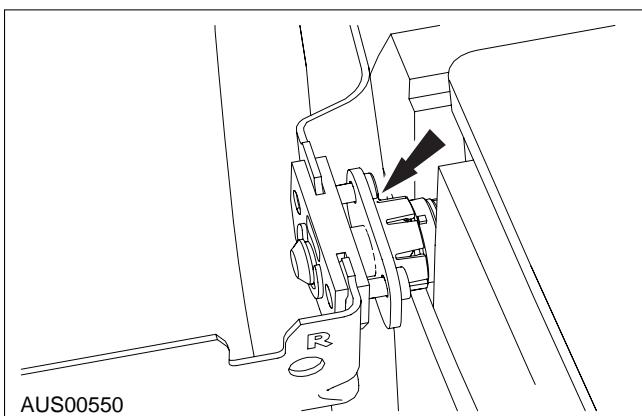
## Rear Seat Back

### Removal

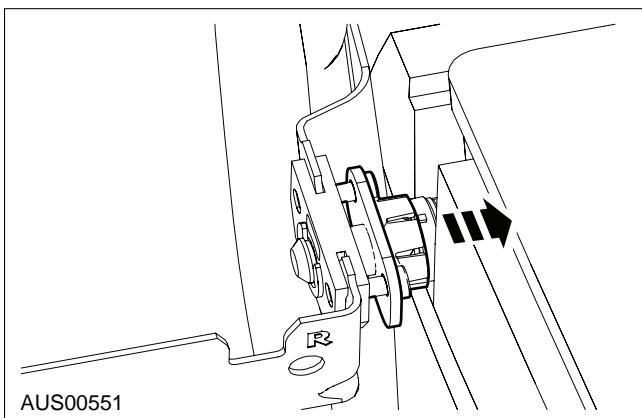
1. Remove seat bolster. Refer to Rear Seat Bolster in this section.
2. Detach seat back and fold forward.



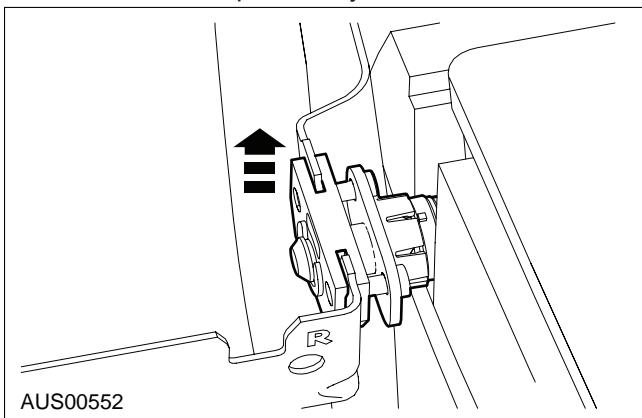
3. Place narrow screw driver between white cam and metal bearing.



4. Disengage cam from bearing by levering outboard.



5. Lift seat back up vertically.

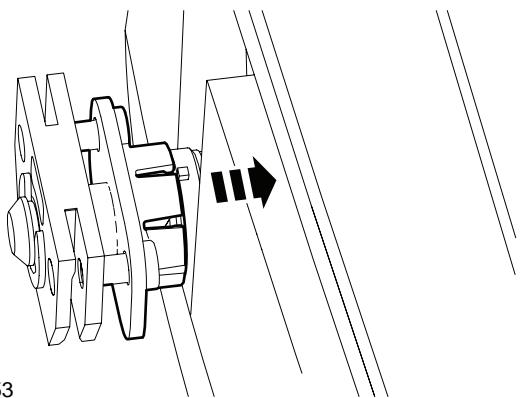


6. Remove Rear Seat Back.



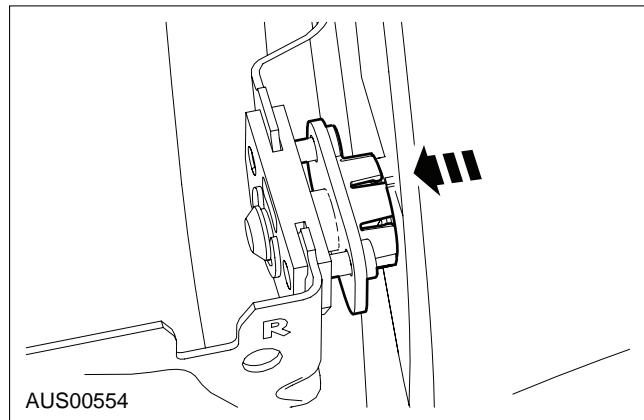
**Installation**

1. Ensure white cam is in disengaged position and seat back is lying flat.



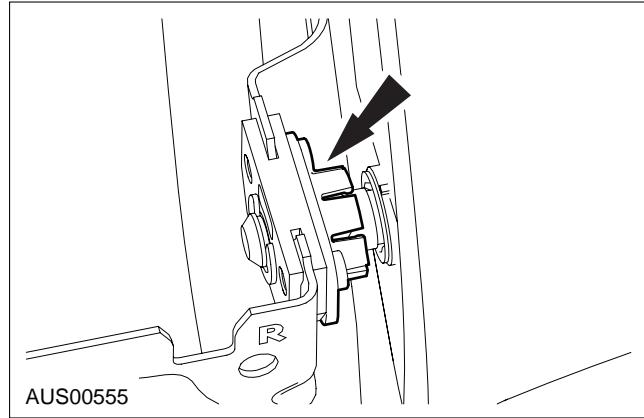
AUS00553

2. Place bearing and bracket and raise seat back to engage.



AUS00554

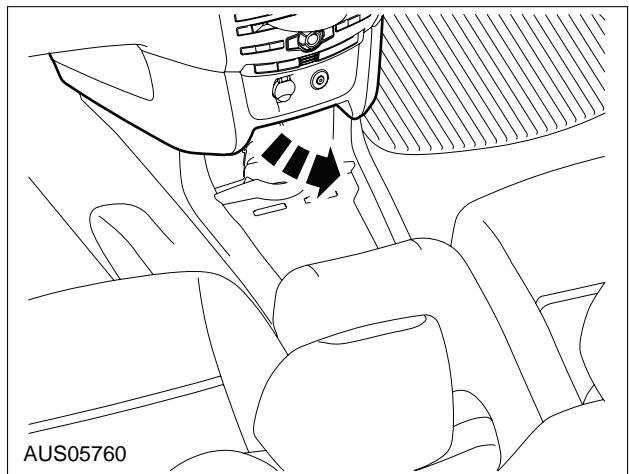
3. Check that the cam has engaged properly.



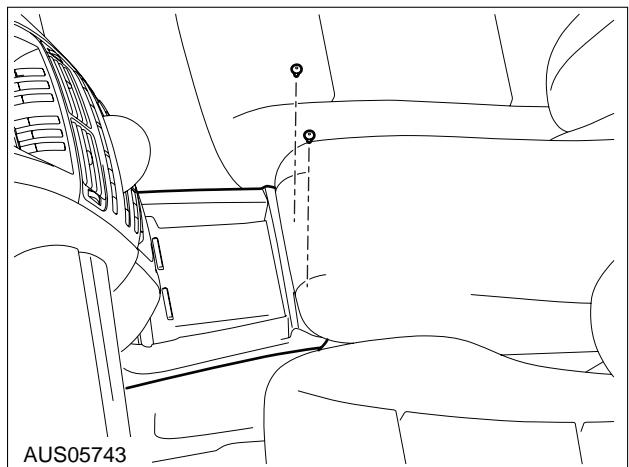
AUS00555

**Ute Centre Scuff Plate  
(Bench Seat Ute only)****Removal**

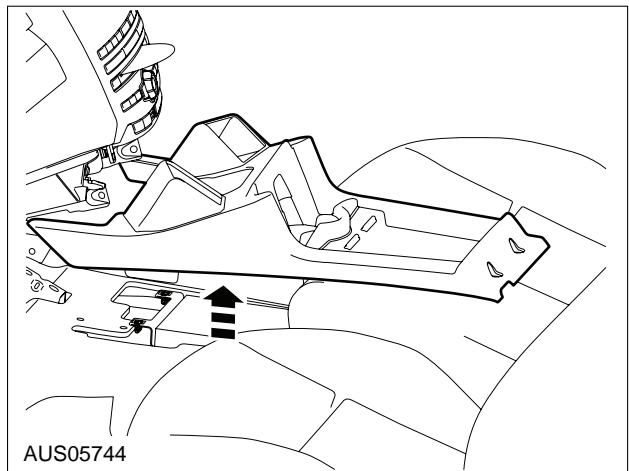
1. Remove IP lower finisher



2. Remove 2 screws which are hidden under centre seat cushion



3. Unclip scuff from transmission cover plate

**Installation**

1. Reverse removal procedure.

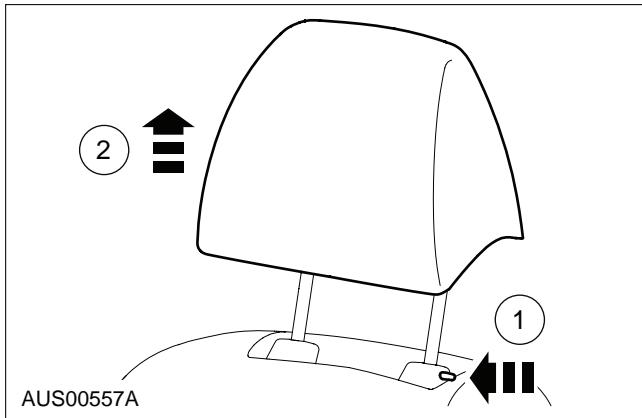


## DISASSEMBLY AND ASSEMBLY

### Front Head Restraint

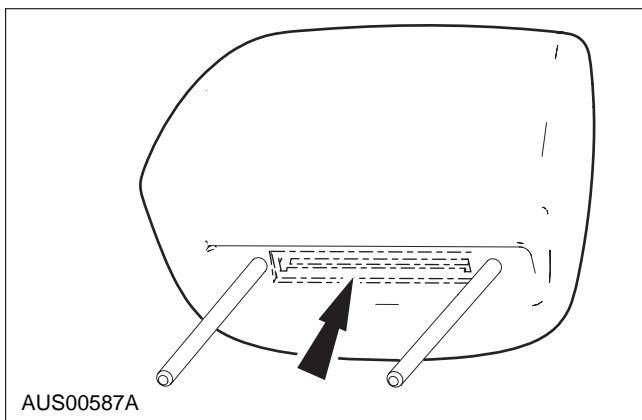
#### Disassembly and Assembly

1. Press locking button next to headrest guide and lift in direction shown.



Item	Description
1	Press locking button
2	Lift headrest

2. Detach the trim cover retaining strip by prying out the 2 J retainers using a suitable tool.



3. Peel back the trim cover up and away to remove from head restraint pad.
4. Retain fine fabric draped over the headrest to aid installation.

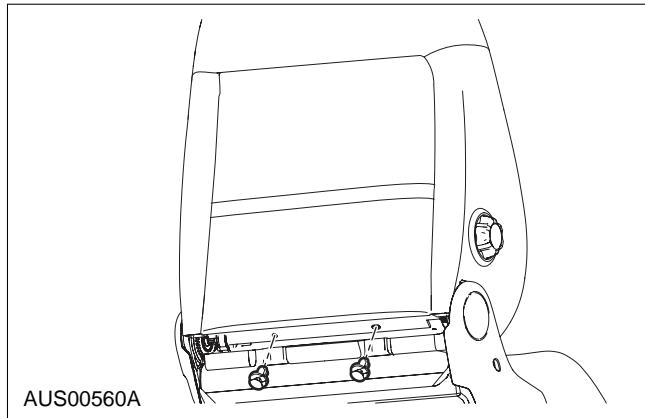
#### Installation

1. Reverse the removal procedure.

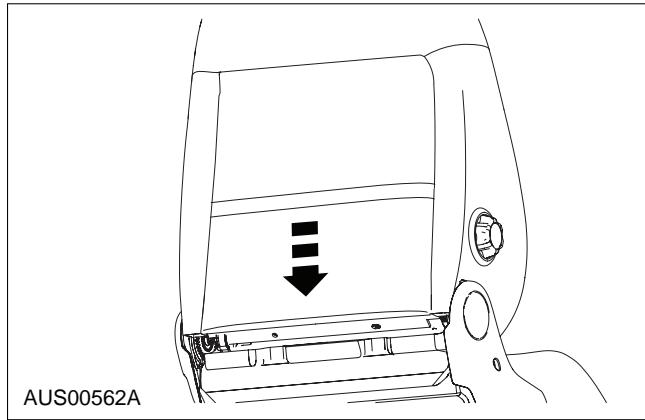
### Back Cover

#### Disassembly

1. Remove two scrivets located at bottom edge of back cover.

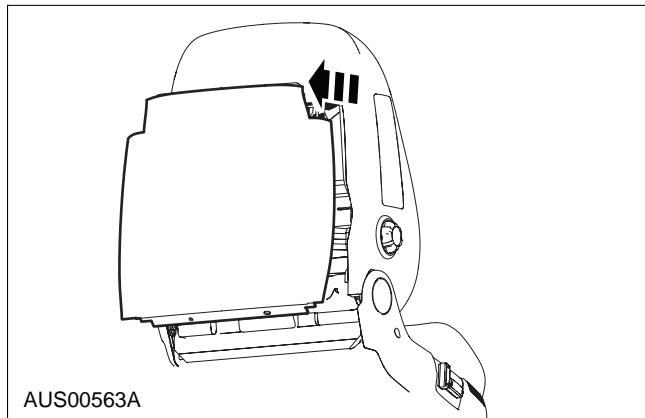


2. Slide cover down until hooks located at the side are released.



3. Carefully disengage the retainers along the sides and top of the back cover. Start at one end of the retainer and work along the retainer.

**CAUTION:** Failure to follow procedure can result in damage to the side retention clip or back cover substrate.

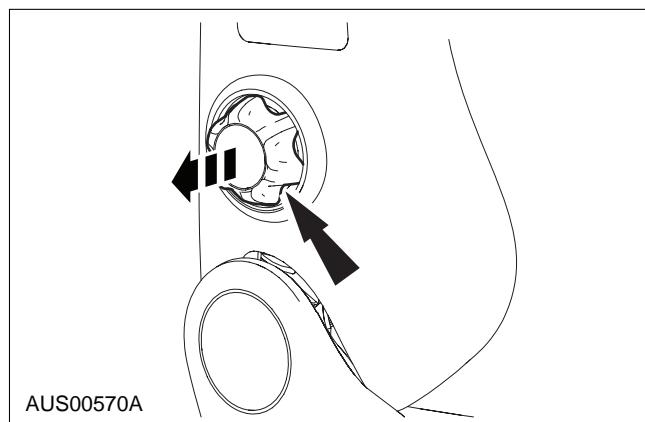


## Assembly

1. Insert the top of the back cover under the top foam flap and slide cover upwards.
2. Locate and snap in the side clips.
3. Replace the 2 lower edge scrivets.
4. Engage the 2 side and the top retaining clips into the back cover.

**CAUTION:**  Failure to follow procedure can result in damage to the side retention clip.

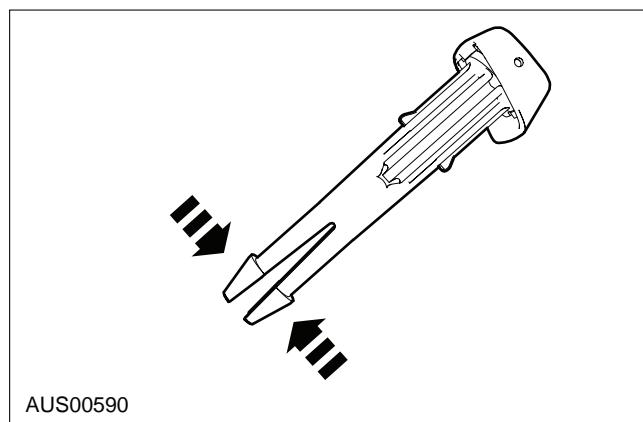
2. Place hands or fingers behind bezel/knob.
3. Pull to remove knob and bezel together.



## Headrest Guides

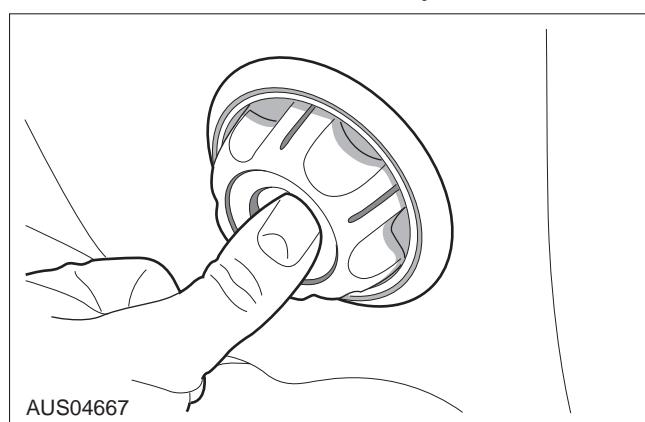
### Disassembly and Assembly

1. Remove headrest (Refer to Headrest in this section).
2. Remove back cover (Refer to Back Cover in this section).
3. Insert your hand between the back rest foam pad and the frame. With your fingers squeeze the head rest guide ends and push upwards.

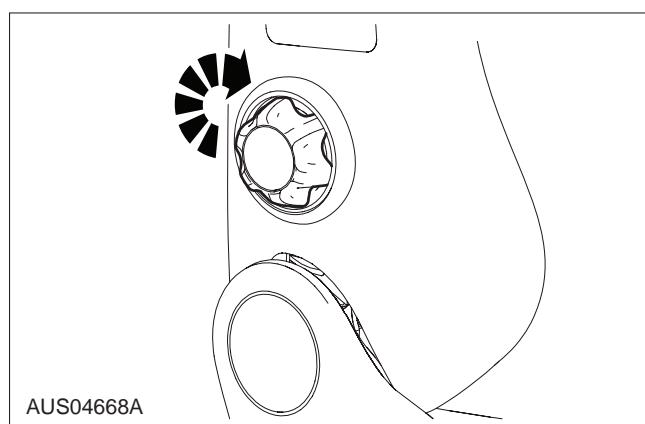


## Assembly

1. Push the bezel onto lumbar adjustment shaft.



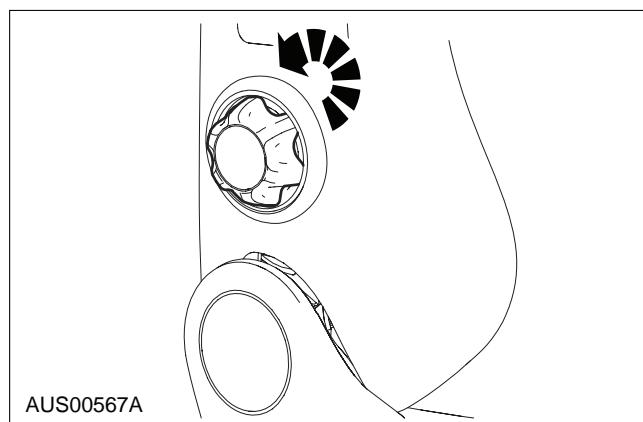
2. Rotate the lumbar bezel 30° clockwise (driver) and 30° anticlockwise (passenger) until it locates into position.
3. Push on the lumbar to ensure that the lumbar handwheel has snapped on.



## Lumbar Knob

### Disassembly

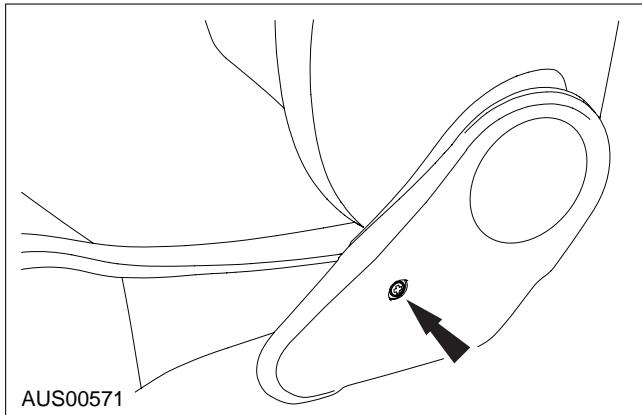
1. Rotate the lumbar bezel 30° anticlockwise (driver) or 30° clockwise (passenger).



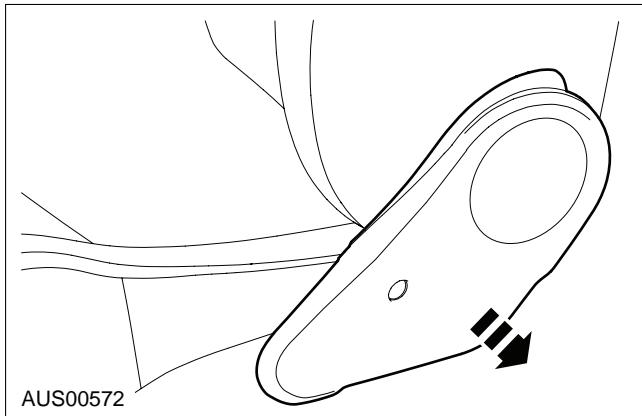
## Inner Side Cover

### Disassembly and Assembly

1. Undo screw from inner side cover.

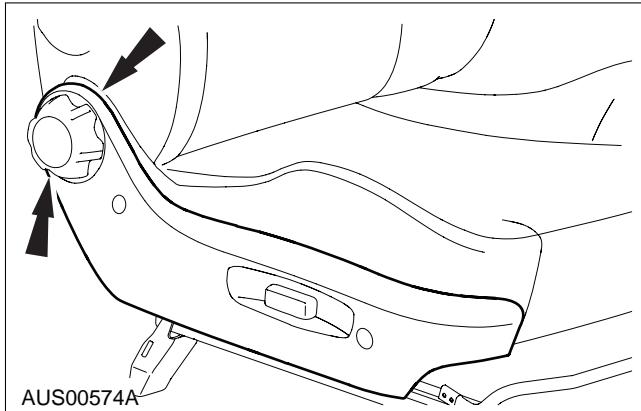


2. Remove inner side cover.

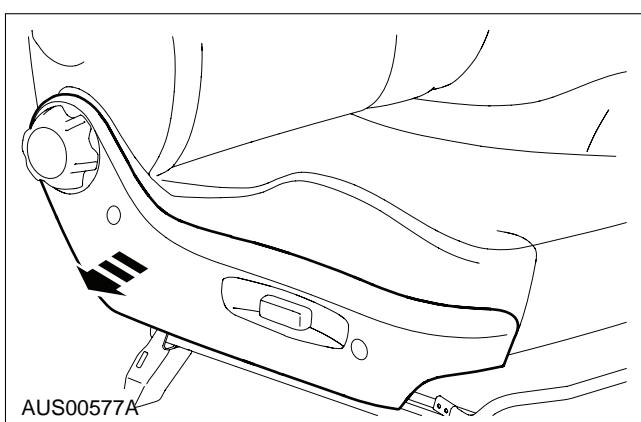


3. Reverse these steps to assemble.

2. Place hands either side of the handwheel.



3. Pull side cover at the back only away from seat base to remove the reclining knob and side cover together.



4. Where applicable, disconnect plugs from switch and/or memory buttons.

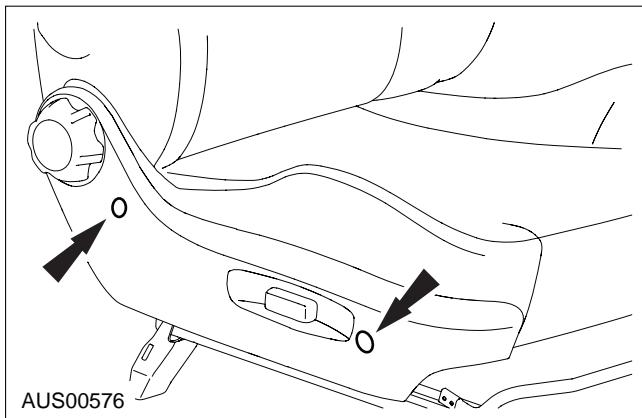
5. Assembly is the reverse of disassembly.

## Recliner Knob and Outer Side Cover

### Disassembly and Assembly

1. Remove 2 mounting screws from the outer side cover.

**CAUTION:** Failure to do so may cause cover to crack around cover mounting boss.



## Front Seat Back Frame

### Disassembly and Assembly

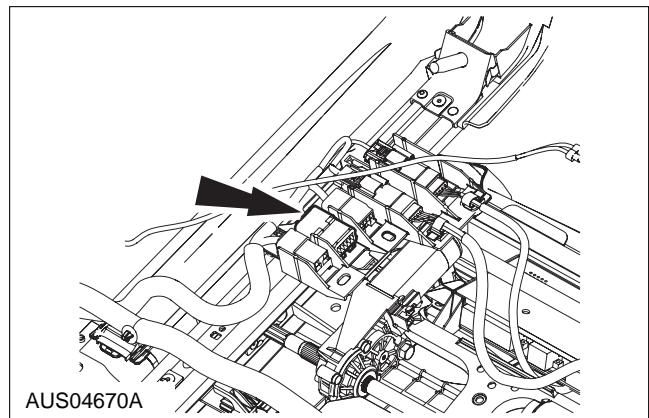
1. Remove seat out of vehicle (Refer to Seats in this section).

**WARNING:** Wait at least one minute after disconnecting the battery ground cable before disconnecting any supplemental restraint system electrical connector. Failure to follow this warning could cause premature deployment and may result in personal injury.

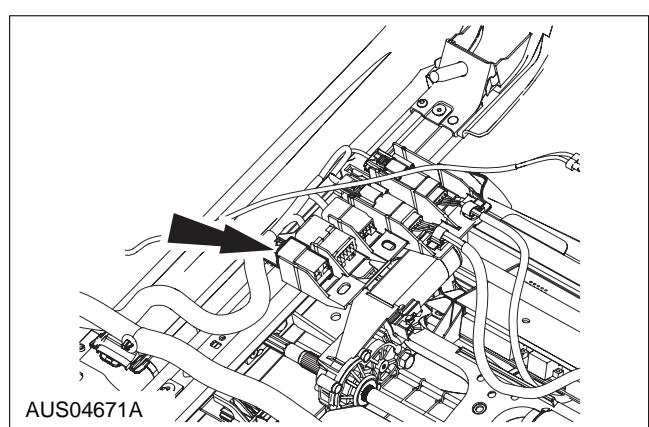
2. Remove head rest (Refer to Headrest in this section). Remove head rest guides (Refer to Headrest Guides in this section).
3. Remove back cover (Refer to Back Cover in this section).
4. Remove lumbar knob (Refer to Lumbar Knob in this section).
5. Remove recliner knob and outer side cover (Refer to Recliner Knob and Outer Side Cover in this section).

6. Remove inner side cover (Refer to Inner Side Cover in this section).
7. Unplug black plug from connector cradle.

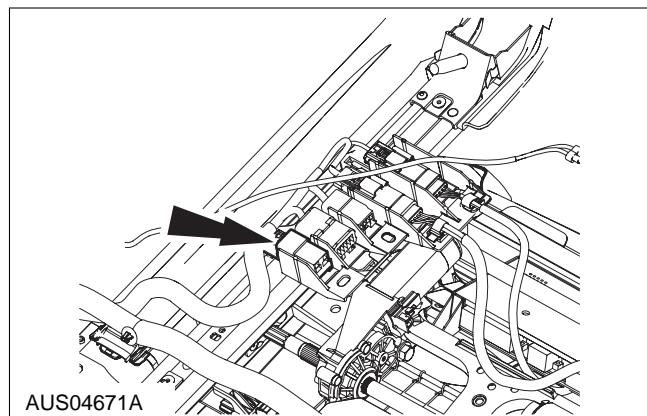
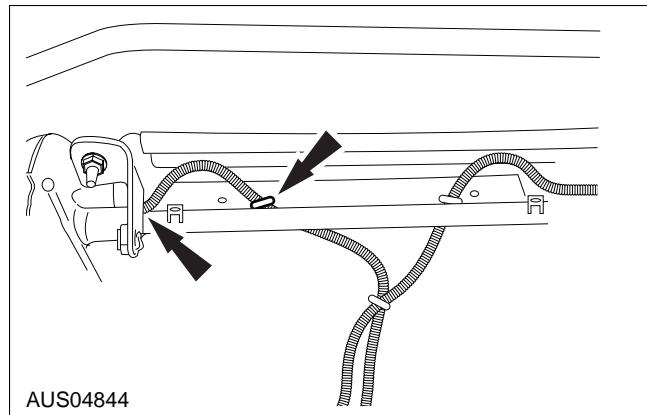
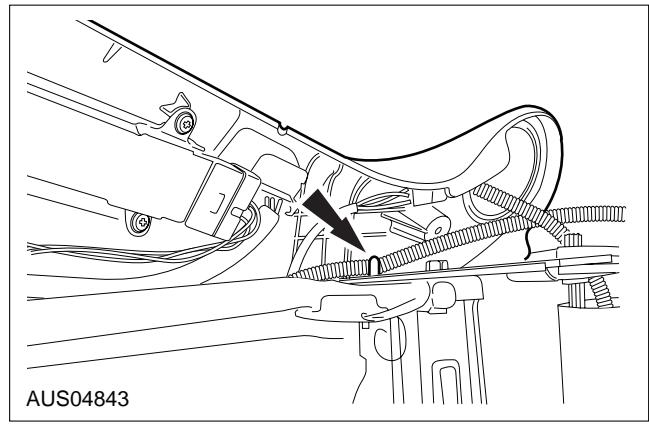
**WARNING:**  Never probe the connectors on the air bag module. Doing so can result in air bag deployment, which can result in personal injury.



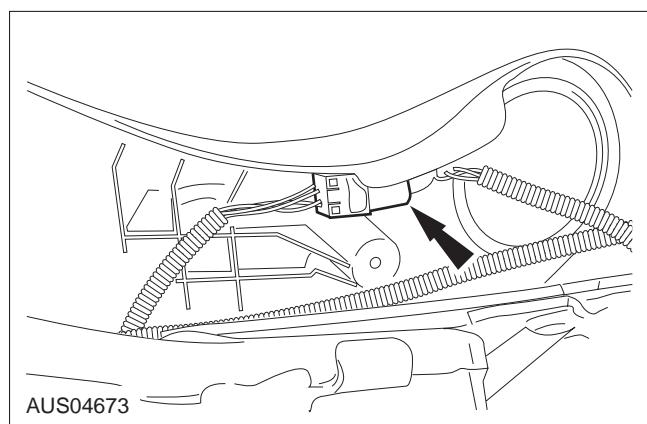
8. Unclip green or black plug from connector cradle (where side air bag is fitted).



9. Remove 4 clips (where side air bag is fitted). Retaining SIAB wiring to seat assembly.  
Clip 1 at recliner pivot  
Clip 2 at front right hand of cushion frame  
Clip 3 At front of cable tray  
Clip 4 at connector housing (should have already been removed at step 8)

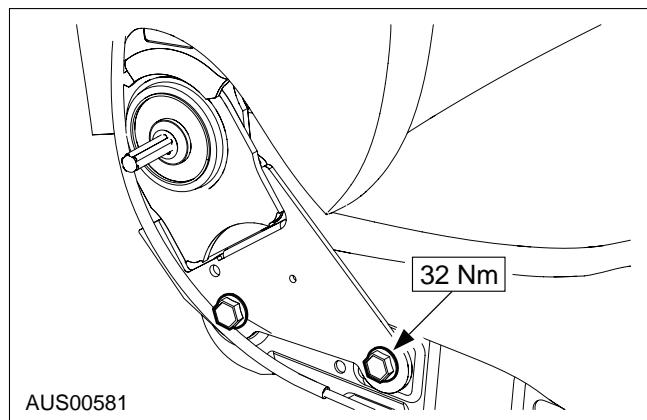


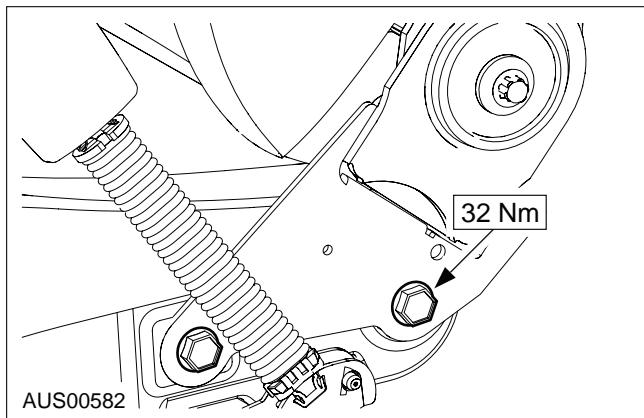
10. Disconnect recliner harness connector C- 3410



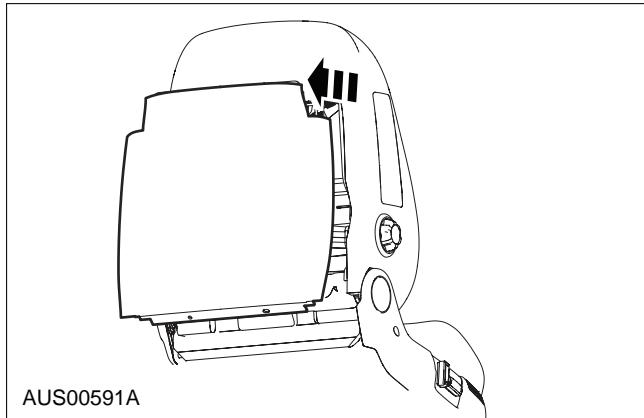
11. Undo four M10 bolts as shown and remove the back frame.

#### Outside



**Inside**

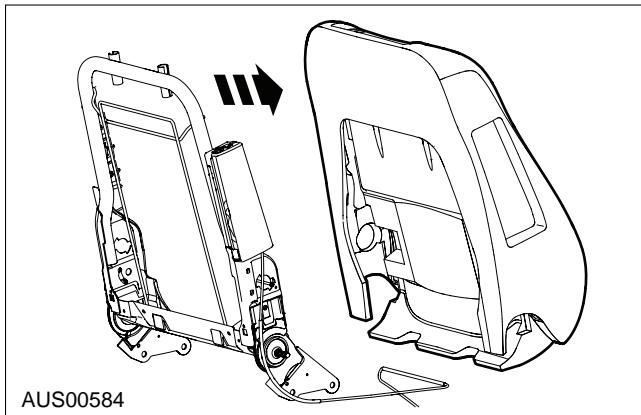
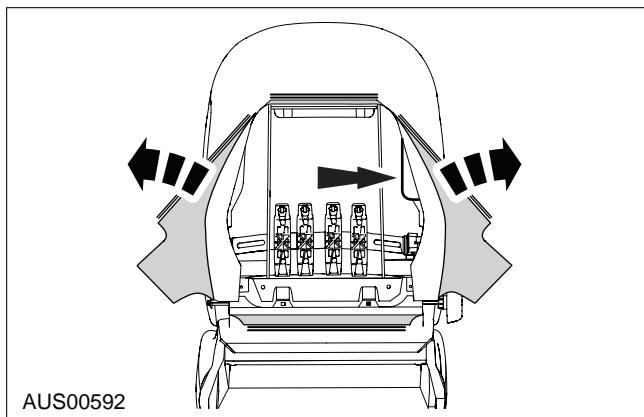
12. Place seat back face down on clean work bench.



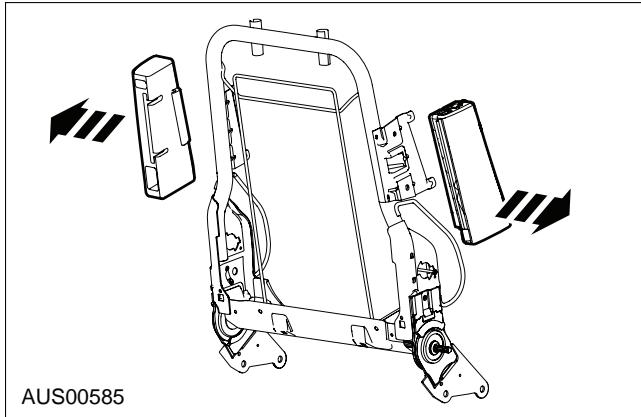
13. Unzip side airbag cover (where fitted) and remove it with the foam assembly.

**WARNING:** Never probe the connectors on the air bag module. Doing so can result in air bag deployment, which can result in personal injury.

**WARNING:** After deployment, the air bag surface can contain deposits of sodium hydroxide, a product of the gas generant combustion that is irritating to the skin. Wash your hands with soap and water afterward.



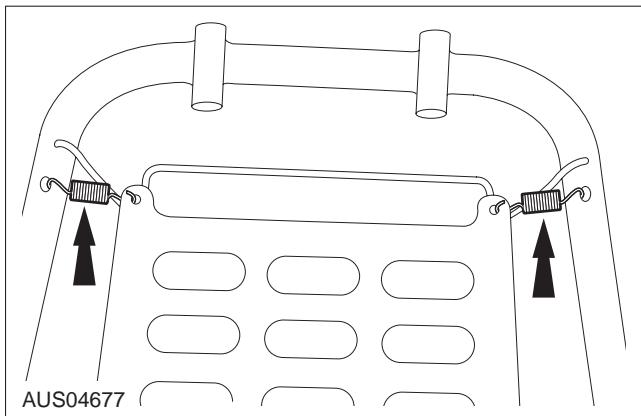
14. Remove the inboard dummy block where fitted.



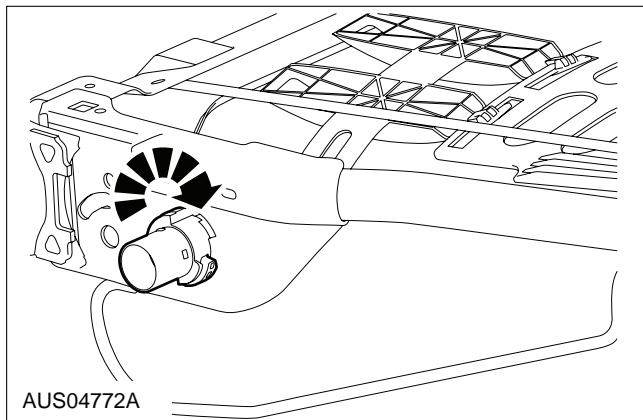
15. Assembly is the reverse of disassembly. For wire routing refer to cable tray and memory module replacement procedure.

**Manual Lumbar****Disassembly**

1. Remove front seat back (Refer to Front Seat Back in this section.)
2. Unhook springs from frame and lumbar assembly.



3. Rotate the bayonet fittings of the lumbar strap that attach through the holes in the side members forward 30°.



4. Remove Lumbar assembly from frame

## Assembly

1. Assembly is a reversal of the disassembly procedure.

## Airbag

### Disassembly

1. Remove front seat (Refer to Seats in this section).
- WARNING:** **△ Wait at least one minute after disconnecting the battery ground cable before disconnecting any supplemental restraint system electrical connector. Failure to follow this warning could cause premature deployment and may result in personal injury.**
2. Remove plastic outboard side cover (Refer to Outer Side Cover in this section).
3. Remove seat back from seat (Refer to Front Seat Back in this section).
4. Remove trim cover and foam pad from seat back assembly (Refer to Front Seat Back in this section).
5. Read warnings below and then remove two M5 nyloc nuts from airbag module.

**WARNING:** **△ Always wear safety glasses when repairing an air bag supplemental restraint system (SRS) vehicle and when handling an air bag module. This will reduce the risk of injury in the event of an accidental deployment.**

**WARNING:** **△ Carry a live side air bag module with the air bag and tear seam pointed away from your body. This will reduce the risk of injury in the event of an accidental deployment.**

**WARNING:** **△ Do not set a live side air bag module down on the cover tear seam. This will increase the risk of injury in the event of an accidental deployment.**

**WARNING:** **△ After deployment, the air bag surface can contain deposits of sodium hydroxide, a product of the gas generant combustion that is irritating to the skin. Wash your hands with soap and water afterward.**

**WARNING:** **△ Never probe the connectors on the air bag module. Doing so can result in air bag deployment, which can result in personal injury.**

**WARNING:** **△ Vehicle sensor orientation is critical for correct system operation. If a vehicle equipped with an air bag supplemental restraint system (SRS) is involved in a collision, inspect the sensor mounting bracket and wiring pigtail for deformation.**

Install and correctly position the new sensor or any other damaged supplemental restraint system (SRS) components whether or not the air bag is deployed.

To avoid accidental deployment and possible personal injury, the backup power supply must be depleted before repairing or installing a new front or side supplemental restraint system (SRS) components and before repairing, installing new, adjusting or striking components near the front or side air bag sensors, such as doors, instrument panel, console, door latches, strikers, seats and hood latches.

Please refer to the appropriate workshop manual to determine the location of the front air bag sensors.

The side air bag sensors are located at or near the base of the B-pillar.

To deplete the backup power supply energy, disconnect the battery ground cable and wait at least one minute. Be sure to disconnect auxiliary batteries and power supplies (if equipped).

**WARNING:** **△ The restraint system diagnostic tool is for restraint system repair only. Remove from vehicle prior to road use. Failure to remove could result in injury and possible violation of vehicle safety standards.**

**WARNING:** **△ Never power up a seat inside or out of the vehicle except using the in-car connector dedicated to power supply.**



**NOTE:** If a seat equipped with a seat mounted side air bag system is being repaired, the air bag system must be deactivated per the deactivation procedure contained in Section 501-20b of the appropriate workshop manual.

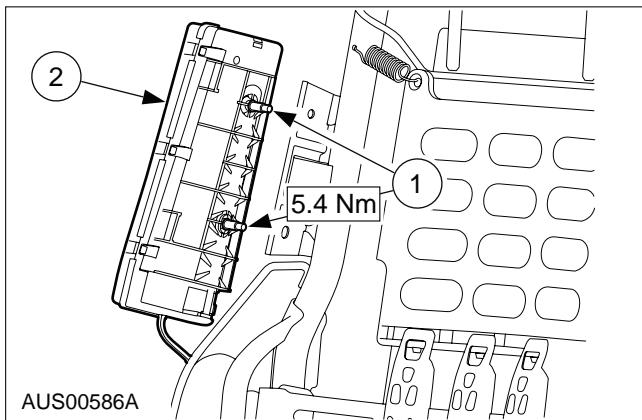
**NOTE:** Restraint system diagnostic tools must be installed under the seats in the side air bag to floor connector.

**NOTE:** Diagnostics or repairs are not to be carried out on a side air bag system or a safety belt pretensioner (if equipped) with the seat in the vehicle.

Prior to attempting to diagnose/repair the side air bag system or a safety belt pretensioner (if equipped) the seat must be removed from the vehicle and the restraint system diagnostic tool must be installed in side air bag connector at the floor connector. The restraint system diagnostic tool must be removed prior to operating the vehicle.

**NOTE:** After diagnosing/repairing a seat system the restraint system diagnostic tool must be removed before operating the vehicle.

#### 6. Carefully remove airbag.



Item	Description
1	Nut
2	Side Airbag

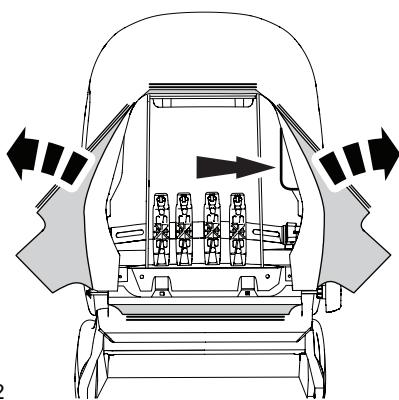
#### Assembly

1. Assemble Airbag module to seat frame ensuring front plastic retaining features are located over metal bracket tabs.
2. Install the two M5 nyloc nuts.
3. Check and fit dummy module to inboard side of seat, if required.
4. Fit foam and trim to frame.
5. Pull SIAB covering material ("chute") through and around SIAB module.

#### 6. Close zip around seat frame.

**CAUTION:** Ensure that the zip is closed properly. Failure to do so may result in a side airbag deployment failure, which may cause severe or fatal injury to occupant.

**CAUTION:** Trim cover hook and loop must be securely engaged and the trim cover must be aligned in its proper orientation.



#### 7. Reverse installation procedures 4, 3, 2 and 1. for wire routing refer to cable tray or memory module replacement procedure

**NOTE:** A repair is made by installing new components only. If a new part is installed and the new part does not correct the condition, install the original part and carry out the diagnostic procedure again.

**NOTE:** If a side air bag deployment took place, new seatback pad, trim cover, and side air bag module must be installed. A new seatback frame must be installed.

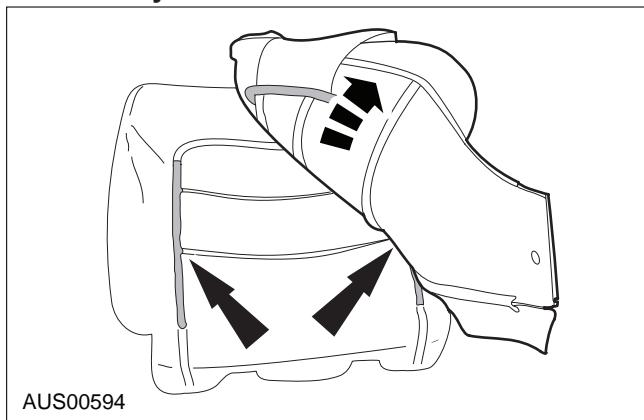
## Front Seat Back Trim Cover

### Disassembly

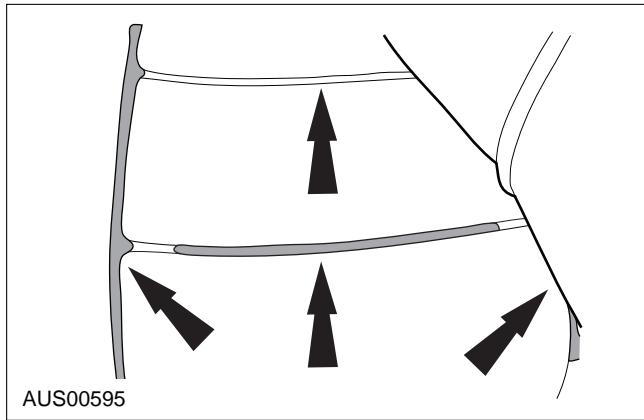
- Follow instructions for front seat back disassembly (Refer to Front Seat back in this section).
- Carefully remove cover from foam by placing one finger on the blue or black hook cover retaining strip and peeling cover from the foam pad, making sure not to pull the blue or black hook retaining strip off the foam pad.

**WARNING:**  After deployment, the air bag surface can contain deposits of sodium hydroxide, a product of the gas generant combustion that is irritating to the skin. Wash your hands with soap and water afterward.

**CAUTION:**  Failure to do so may result in retaining strip not being held in place securely.



- Pull cover and loop (white seam on trim cover) carefully so the blue or black hook assembly is not pulled out of foam.



- Repeat for each section of hook and loop strip.

### Assembly

- Make sure that you are installing the correct front seat back cover onto the foam seat back. A side airbag cover can be identified by a tag with the words "AIRBAG" sewn into the seam on the outboard side of each seat cover. In addition on the inside of the cover where the "AIRBAG" tag is attached a white airbag chute and trim cover ID bar code will be sewn into the seam.

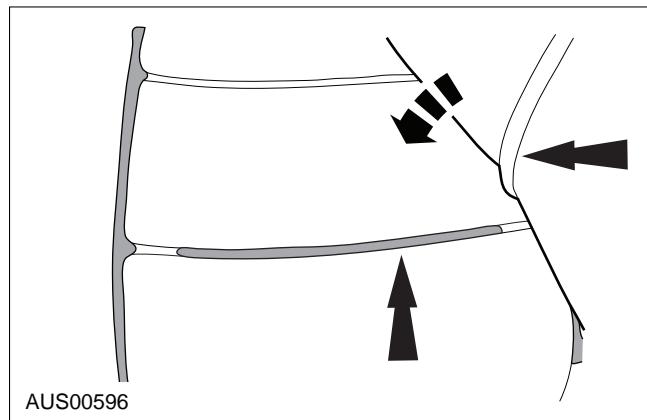
**CAUTION:**  Do not fit a non airbag front seat back cover to a seat that has a side airbag fitted. Doing so may result in a side airbag deployment failure, which may cause severe or fatal injury to the occupant.

**NOTE:** If a side airbag deployment took place, new seatback pad, trim cover, and side airbag module must be installed. A new seatback frame should be installed always.

**NOTE:** Do not fit an airbag front seat back cover to a seat that does not have a side airbag fitted.

- Push the cover loop (white seam on trim cover) onto the blue or black hook in the foam seat back. The cover loop must be engage along the entire length of the seat back blue or black hook.

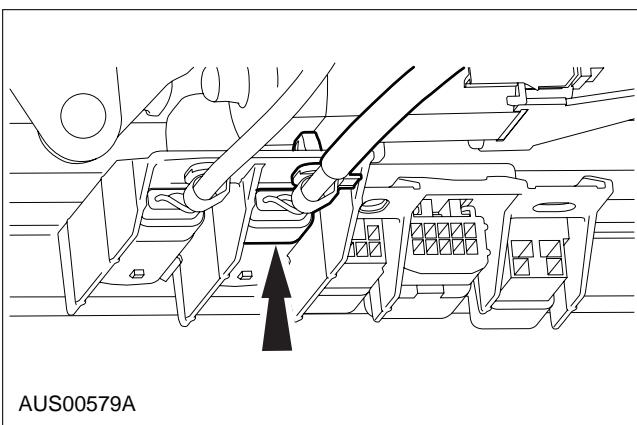
**CAUTION:**  Failure to secure the cover loop with the seat back foam blue hook may result in a side airbag deployment failure, which may cause severe or fatal injury to the occupant.



## Pre-tensioner Replacement

### Disassembly

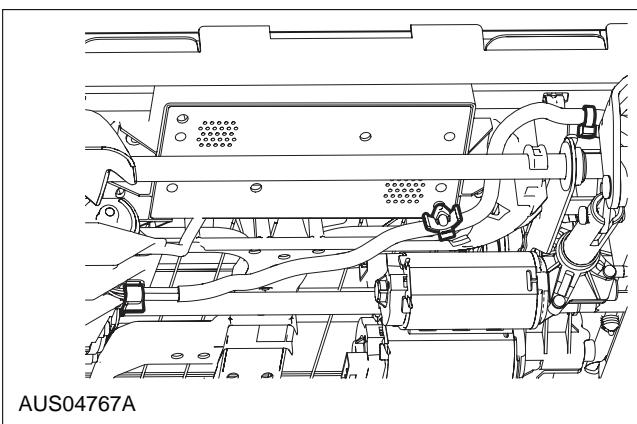
- Where applicable, raise seat electrically to full upright position.
- Remove seat from vehicle (Refer to Seats in this section).
- Turn seat upside down on a clean bench to begin work on under seat.
- Unplug black plug from connector cradle.



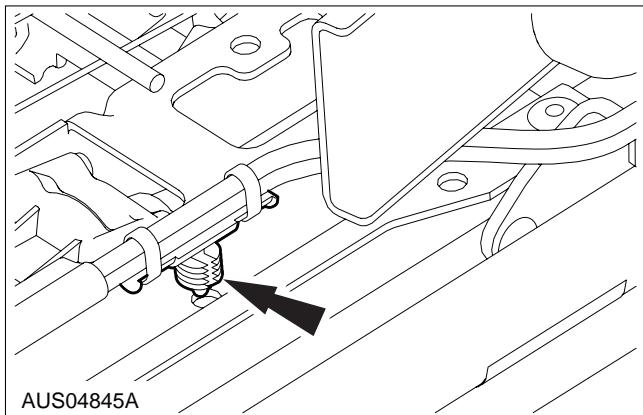
AUS00579A

- Remove three fintree clips retaining wiring to seat frame.
  - In seat rail near pretensioner
  - Under front inboard side of cushion frame
  - At front of cable tray
  - At connector housing (should be disconnected at step 5)

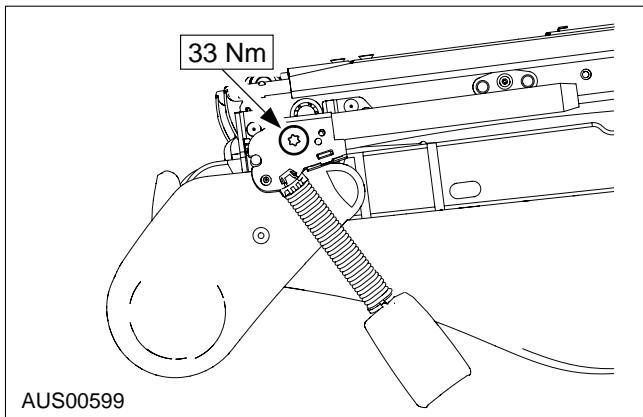
**CAUTION:**  $\Delta$  Take note of clip positions as there is variation between models.



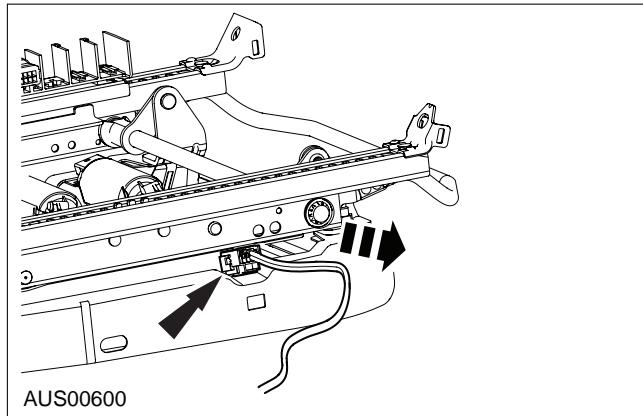
AUS04767A



- Undo the pretensioner mounting bolt.



- Remove pre-tensioner wiring loom connector through space on top of seat track.



- Remove pre-tensioner assembly.

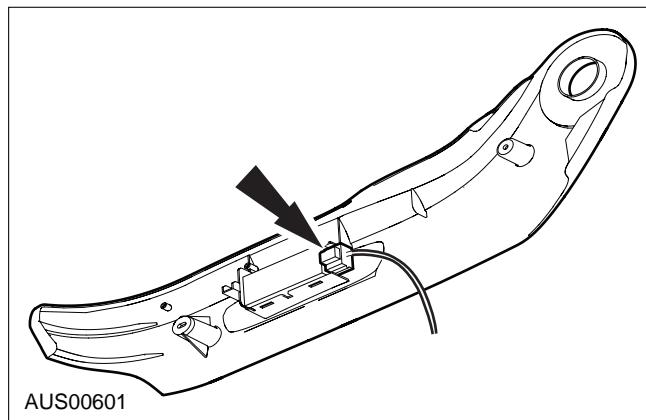
### Assembly

- Reverse procedure for installation.

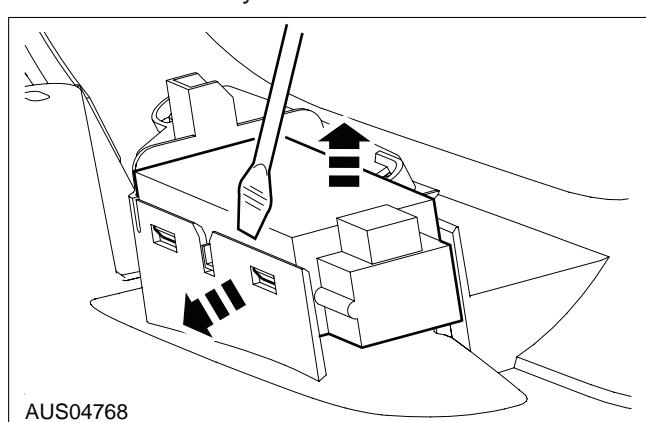
## Seat Operating Switch/Switches

### Disassembly and Assembly

1. Remove outer side cover (Refer to Outer Side Cover in this section).
2. Disconnect wiring plug(s) and pull off switch button.  
Where fitted the recliner switch is part of main switch block.



3. Remove switch assembly from side cover housing.  
**NOTE:** For the 4 way seat, use a flat bladed instrument to dislodge the switch assembly. For the 8 way seat, remove the 4 screws retaining the switch assembly.

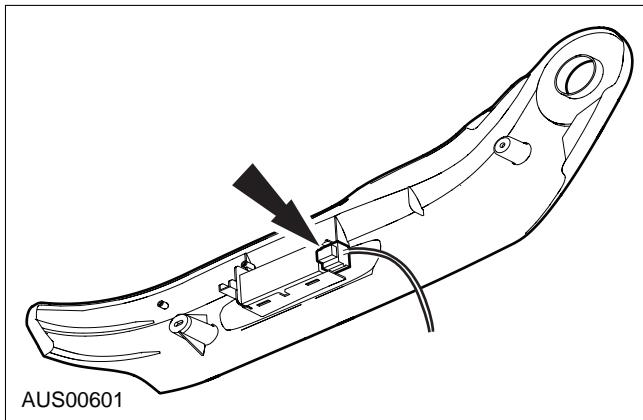


4. Reverse procedure for installation.

## Cable Tray Assembly

### Disassembly

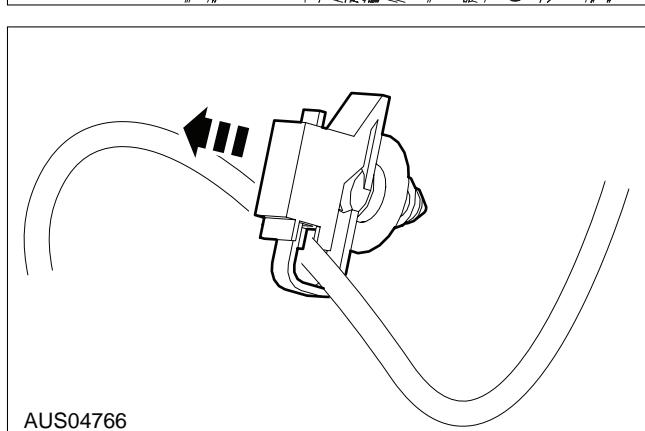
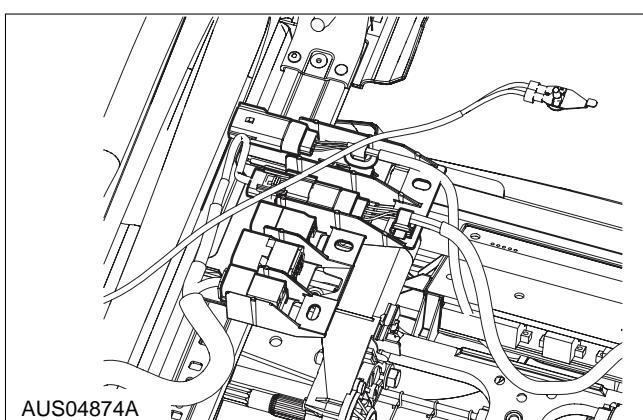
1. Remove Seat from vehicle (Refer to Seats in this section).
2. Remove side cover and disconnect the switch connectors. For 8 way seat the patch harness plug C-3410 must be disconnected.



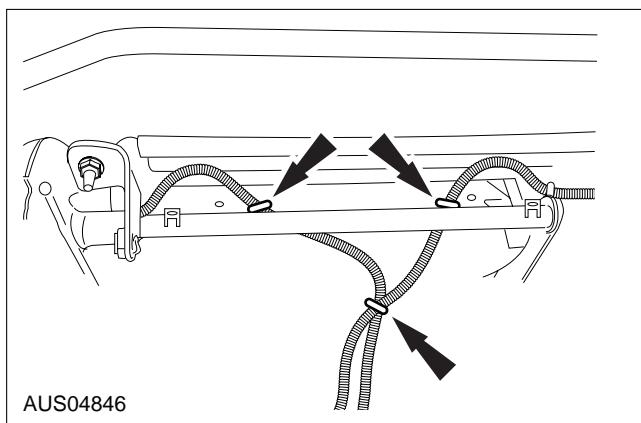
3. Remove all the connector plugs from the connector housing located under the outboard seat rail by releasing the clip and sliding the plug from the housing.

**NOTE:** Also unclip the wire strain relief clip from the connector housing.  
The number of connectors will vary depending on level of vehicle options.

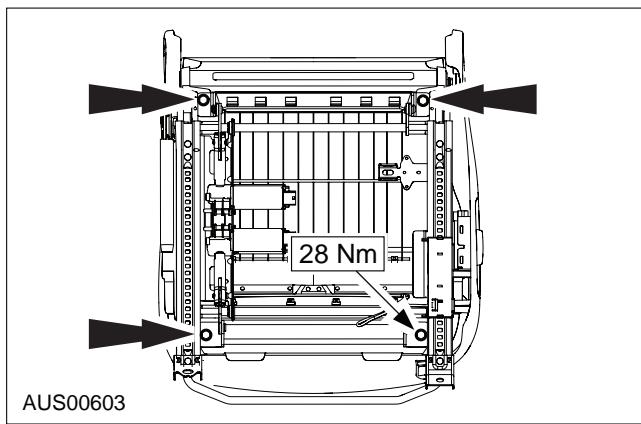
**CAUTION:** Take note of clip positions as there is variation between models.



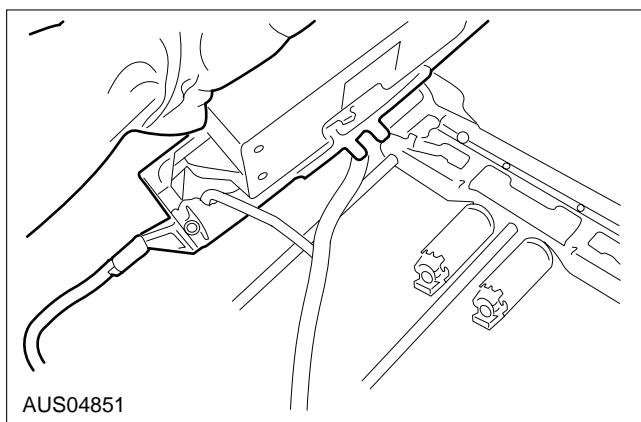
- Unclip the pre-tensioner and SIAB cable clips from the cable tray. And unclip the white clip from the centre of the cable tray.



- Remove the cushion and back frame assembly from the track by removing the 4 retaining nuts. Be careful to assist the SIAB wire out of the cable tray assembly.



- Unplug all the motor connectors and the POLAC (seat position sensor)
- Cable tray assembly can now be removed from the seat track by unclipping from the seat cross shafts.



## Refit Cable Tray Assembly

- If replacing an 8 way cable tray assembly with memory module, the memory module may be need to be removed from the old cable tray and fitted to the new cable tray, if so refer to memory module replacement.
  - Fit cable tray assembly to the track by clipping the rear clips then the front clips to the track cross shafts.
- NOTE:** The main harness cable is routed behind (to the rear of the track drive shaft. And the cable to the main switch and recliner if fitted pass over the top of the track rails.
- Connect all the motor plugs and POLAC sensor.
  - Refit the cushion/Back frame assembly to the track and tighten the 4 bolts to 28Nm
  - Refit all the cable in the same locations noted in the removal procedure.

**CAUTION:** Seat operation should be tested after fitment to vehicle to ensure full travel can be obtained without damaging the wiring.

## Setting the Seat Travel Stops

- Reset the memory module by cycling the ignition on and off three times.
- NOTE:** Pause at the on position and the off position for 5 seconds.
- Using the seat manual control switch drive the seat all the way forward and hold the switch on until a click can be heard after approximately 3 sec.
  - Using the seat manual control switch drive the seat all the way rearward and hold the switch on until a click can be heard after approximately 3 sec.

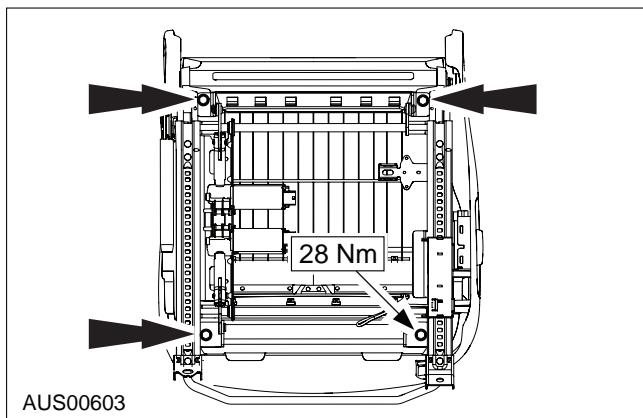
The track travel positions are now reset in the memory module and no further adjustment is required.

## Front Seat Cushion

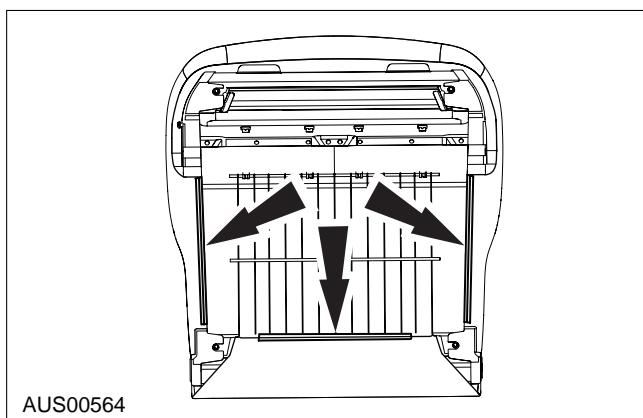
### Disassembly and Assembly

- Remove seat from vehicle (Refer to Seats in this section).
- WARNING:** Wait at least one minute after disconnecting the battery ground cable before disconnecting any supplemental restraint system electrical connector. Failure to follow this warning could cause premature deployment and may result in personal injury.
- Remove pre-tensioner cable fir tree clips.
- NOTE:** Leave pretensioner fitted to track.
- Remove front seat back (Refer to Front Seat Back in this section).

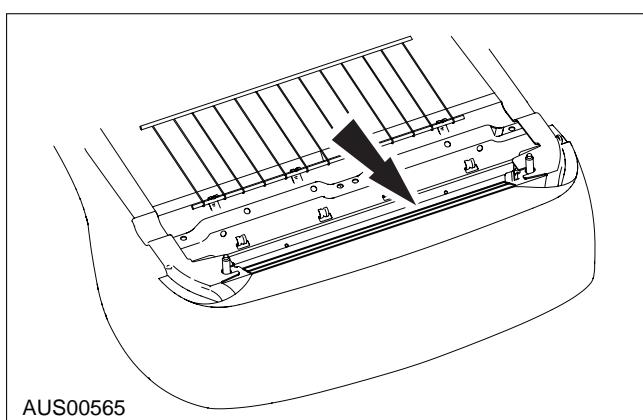
4. Turn seat over and undo four cushion retaining nuts.



5. Remove front seat cushion from track.  
6. Undo three black J clips (rear and sides).



7. Undo the front white J clip.  
**NOTE:** White clip is glued to seat.



8. Remove cover from foam as per seat back foam disassembly instructions.

## Front Seat Track

### Disassembly and Assembly

- Follow procedure for Cable tray removal and installation Procedure
- Reassemble seat, and install into the vehicle with the new track in the reverse sequence.
- For memory seats the travel stops must be reset, follow the procedure setting the seat travel stops.

