Body System (01.00)

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Body System (01.00)

Body Structure (01.01)

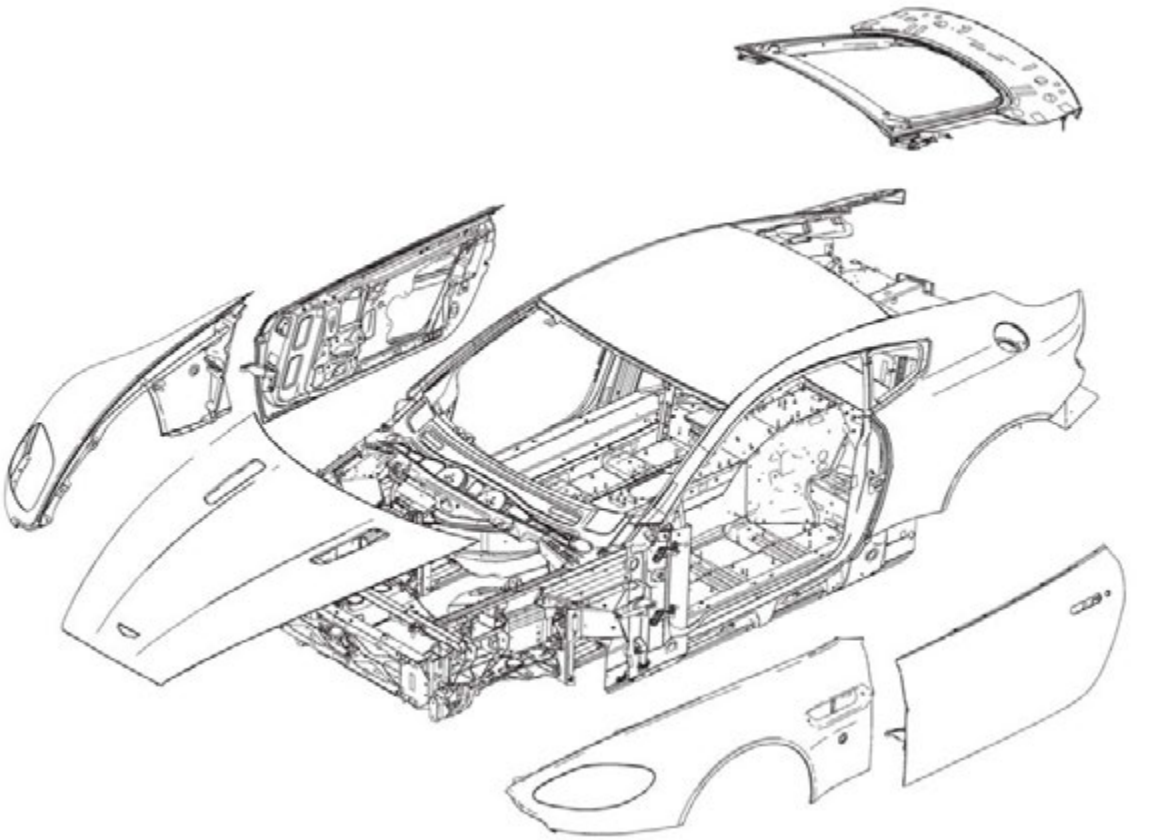
Overview

The all aluminium body underframe is bonded using an immensely strong hot-cured XD4600 red adhesive.

The rear quarter panels, roof and side mouldings are bonded to the structure using cold-cured 2810 MV adhesive. The curing cycle is improved by using a hot air impingement system.

The composite front wings are bolted to the structure.

At no time should the body structure be subjected to temperatures in excess of 120°C (248°F).



01-01-001

Specifications

Torque Figures	
Description	Nm.
Crush Brace	
Crush Bar (Left and Right)	

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Maintenance

Right Side Front Crush Bar for the Body Reinforcement - Remove and Install

Repair Operation Time (ROT)	
Item	**Code**
Right Side Front Crush Bar for the Body Reinforcement - Remove and Install	**01.01.AB**

Removal

1. Remove the two nuts that attach the washer bottle neck and bracket to the crush bar.
2. Release the washer bottle neck and bracket from the crush bar.
3. Remove the four Torx screws and two nuts that attach the crush bar to the body.
4. Remove the crush bar.

Install

1. Put the crush bar into position.
2. Install and torque tighten the four Torx screws and two nuts that attach the crush bar to the body.
3. Install the washer bottle neck and bracket to the crush bar.
4. Install and tighten the two nuts that attach the washer bottle neck and bracket to the crush bar.

Left Side Front Crush Bar for the Body Reinforcement - Remove and Install

Repair Operation Time (ROT)	
Item	**Code**
Left Side Front Crush Bar for the Body Reinforcement - Remove and Install	**01.01.AC**

Removal

1. Remove the four Torx screws and two nuts that attach the crush bar to the body.
2. Remove the crush bar.

Install

1. Put the crush bar into position.
2. Install and torque tighten the four Torx screws and two nuts that attach the crush bar to the body.

Front Crush Brace - Remove and Install

Repair Operation Time (ROT)	
Item	**Code**
Front Crush Brace - Remove and Install	**01.01.LC**

Removal

1. Remove the four Torx screws that attach the crush brace to the left side and right side crush brace brackets.
2. Remove the crush brace.

Install

1. Put the crush brace in position.
2. Install and torque tighten the four Torx screws that attach the crush brace to the left side and right side crush brace brackets.

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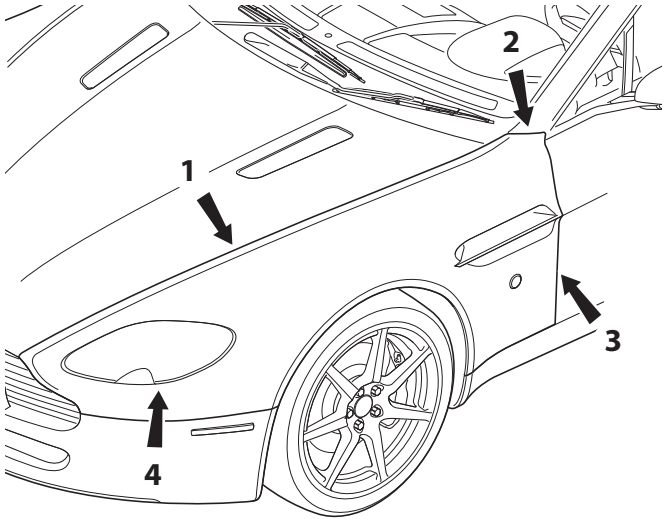
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Body System (01.00)

Front End (01.02)

Front Wings

Specifications



01-01-002

Wing Standard (mm)				
Item	1	2	3	4
Nominal gap	3.5	2.0	3.75	3.0
Tolerance	±0.75	+0.5 / -0.0	± 0.75	±0.5
Flush	-0.0	0.0	0.0	-0.5
Tolerance	±1.5	+0.0 / -0.5	±1.5	±0.5
Taper	N/A			
Symmetry	N/A			

Torque Figures	
Description	Nm
Wing Top	8
Wing Top Single nut	Tight with 'Threadlock'
Lower Rear	8
Slam panel	8
PCM Bracket	10
Bonnet Damper	25

Maintenance

Radiator Closing Panel - Remove and Install

Repair Operation Time (ROT)	
Item	**Code**
Radiator Closing Panel - Remove and Install	**01.02.AA**

Removal

1. Remove the 12 Torx screws that attach the radiator closing panel.

   S-01-02-AA-01
2. Remove the radiator closing panel.

   S-01-02-AA-02

Install

1. Install the radiator closing panel (refer to Figure S-01-02-AA-01).
2. Install and tighten the 12 Torx screws that attach the radiator closing panel.

Centre Undertray - Remove and Install (Roadster Only)

Repair Operation Time (ROT)	
Item	**Code**
Centre Undertray - Remove and Install	**01.02.MB**

Removal

1. Use the applicable equipment to lift the vehicle and make it safe.

WARNING
THE CENTRE UNDERTRAY IS HEAVY. GET THE HELP OF ANOTHER PERSON WHEN YOU MOVE THE REAR UNDERTRAY. IF YOU DO NOT YOU CAN BE INJURED.

2. Remove the 17 screws that attach the centre undertray to the body.
3. Remove the centre undertray.

Install

WARNING
THE CENTRE UNDERTRAY IS HEAVY. GET THE HELP OF ANOTHER PERSON WHEN YOU MOVE THE REAR UNDERTRAY. IF YOU DO NOT YOU CAN BE INJURED.

1. Put the rear undertray in positon.
2. Install and torque the 17 Torx screws that attach the rear undertray.

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Front Undertray-Remove and Install

Repair Operation Time (ROT)	
Item	Code
Front Undertray - Remove and Install	01.02.NB

Removal

1. Use the applicable equipment to lift the vehicle and make it safe.
2. Remove the 14 Torx screws that attach the front undertray to the body.
3. Remove the front undertray.

Install

1. Put the front undertray in position.
2. Install and torque tighen the 14 Torx screws trhat attach the front undertray to the vehicle.
3. Lower the vehicle.

Rear Undertray - Renew (Coupe only)

Repair Operation Time (ROT)	
Item	Code
Rear Undertray - Renew	01.02.PB

Removal

1. Raise the vehicle and make it safe.
2. Remove the 10 screws that attach the rear undertray to the body.

S-01-02-PB-01

3. Remove rear undertray.

S-01-02-PB-02

Installation

1. Put the rear undertray in posiiton.
2. Install and tighten the 10 screws that attach the rear undertray to the vehicle.

S-01-02-PB-01

3. Lower the vehicle.

Rear Undertray - Renew (Roadster only)

Repair Operation Time (ROT)	
Item	Code
Rear Undertray - Renew	01.02.PB

Removal

1. Use the applicable equipment to lift the vehicle and make it safe.
2. Remove the 18 of the 21 screws that attach the rear undertray to the body.
3. Lower the vehicle wheels onto blocks to get access to the remaining screws that attach the rear undertray to the body.

WARNING
THE REAR UNDERTRAY IS HEAVY. GET THE HELP OF ANOTHER PERSON WHEN YOU MOVE THE REAR UNDERTRAY. IF YOU DO NOT YOU CAN BE INJURED.

4. Remove the remaining three screws that attach the rear undertray to the body.
5. Remove the rear undertray.

Install

WARNING
THE REAR UNDERTRAY IS HEAVY. GET THE HELP OF ANOTHER PERSON WHEN YOU MOVE THE REAR UNDERTRAY. IF YOU DO NOT YOU CAN BE INJURED.

1. Put the rear undertray in position.
2. Install and tighten the 21 scrwes that attach the rear undertray to the body.
3. Lift the vehicle.
4. Remove the blocks.
5. Lower the vehicle.

Undertray, Vehicle Set - Renew

Repair Operation Time (ROT)	
Item	Code
Undertray Vehicle Set-Renew	01.02.PD

Removal

1. Raise vehicle on ramp.
2. Remove front undertray (see Workshop Manual 01.02.NB - Front undertray - Renew).
3. Remove rear undertray (see Workshop Manual 01.02.PB - Rear undertray - Renew).
4. Remove centre undertray (see Workshop Manual 01.02.MB - Centre undertray - Renew).

Installation

1. With assistance, install centre undertray (see Workshop Manual 01.02.MB - Centre undertray - Renew).
2. With assistance, install front undertray (see Workshop Manual 01.02.NB - Front undertray - Renew).
3. With assistance, install rear undertray (see Workshop Manual 01.02.PB - Rear undertray - Renew).
4. Lower vehicle on ramp.

RH/LH Front Wheel Arch Liner - Renew

Repair Operation Time (ROT)		
Item		Code
Wheel Arch Liner-Renew	RH	01.02.GB
Wheel Arch Liner-Renew	LH	01.02.FB

Removal

1. Remove centre undertray, **Roadster only** (see Workshop Manual procedure 01.02.MB Undertray - Centre - Renew).
2. Raise vehicle on ramp.
3. Remove road wheel(s).

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4. Remove screws (x23), wheel arch liner to body (see Figure 1).

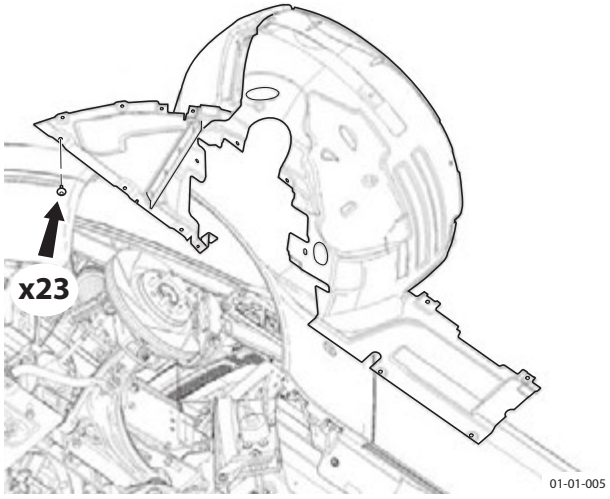


Figure 1

5. Release and remove wheel arch liner.
6. Remove inner pad from liner.

Installation

1. Install inner pad to wheel arch liner.
2. Install wheel arch liner, fit and tighten screws (x23).
3. Install road wheel(s).
4. Install centre undertray, **Roadster only** (see Workshop Manual procedure 01.02.MB Undertray - Centre - Renew)
5. Lower vehicle on ramp.

RH/LH Rear Wheel Arch Liner - Renew

Repair Operation Time (ROT)		
Item		**Code**
Rear Wheel Arch Liner-Renew	RH	**01.02.HB**
Rear Wheel Arch Liner-Renew	LH	**01.02.JB**

Removal

1. Raise vehicle on ramp.
2. Remove rear undertray, **Roadster only** (see Workshop Manual procedure 01.02.PB Undertray - Centre - Renew).
3. Remove road wheel(s).
4. Release vent pipe clips (x2) - Right-hand side only.
5. Remove screws (11), wheel arch liner to body (see Figure 1).

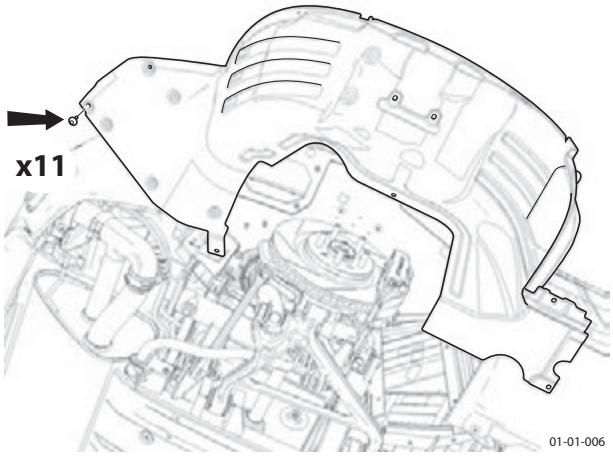


Figure 1

6. Release fuel filler aperture drain hose from clips (x2) (see Figure 2).

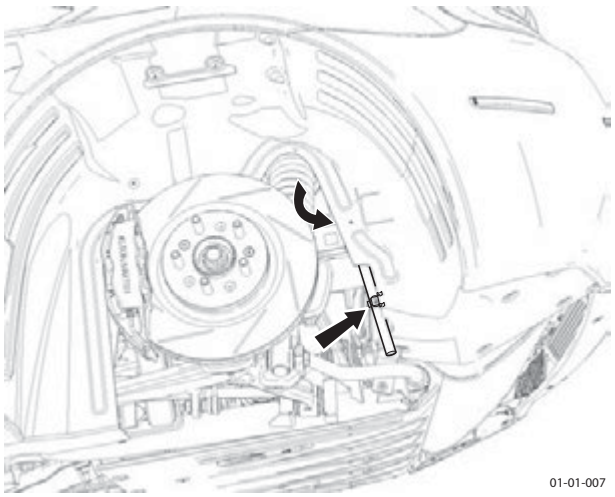


Figure 2

7. Release and remove wheel arch liner, remove inner pad from liner.

Installation

1. Install inner pad to wheel arch liner.
2. Install wheel arch liner, fit and tighten screws (x11).
3. Install fuel filler aperture drain hose in clips (x2).
4. Install vent pipe to liner, clips (x2) - Right-hand side only.
5. Install road wheel(s).
6. Install rear undertray, **Roadster only** (see Workshop Manual procedure 01.02.PB Undertray - Centre - Renew).
7. Lower vehicle on ramp.

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RH Front Wing Panel Assembly - Renew

Repair Operation Time (ROT)		
Item		**Code**
Front Wing Panel Assembly-Renew	RH	**01.02.KB**

Removal

1. Remove Cover Assembly - Front Bumper (see Workshop Manual procedure 01.19.AA Cover Assembly - Front Bumper - Renew).
2. Remove door (see Workshop Manual procedure 01.03.EA Door Assembly - RH - Remove for Access and Refit).
3. Remove slam panel (screws x12) (Figure 1).

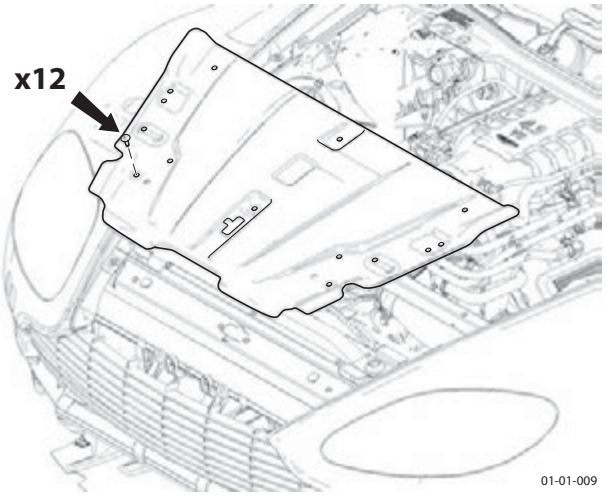


Figure 1

4. Remove bolts and spacers (x4) wing to body-top fixings (see Figure 2).



Figure 2

5. Remove bolt and spacer (A-post top) (see Figure 3).



Figure 3

6. Disconnect side repeater lamp multiplug (see Figure 4).

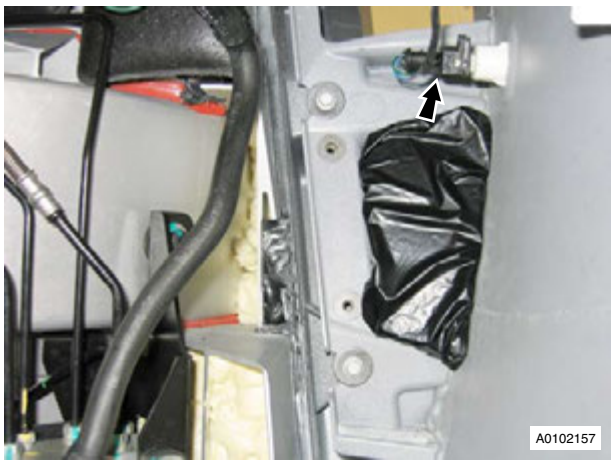


Figure 4

7. Remove bolts and spacers (x2) under wing (see Figure 5).

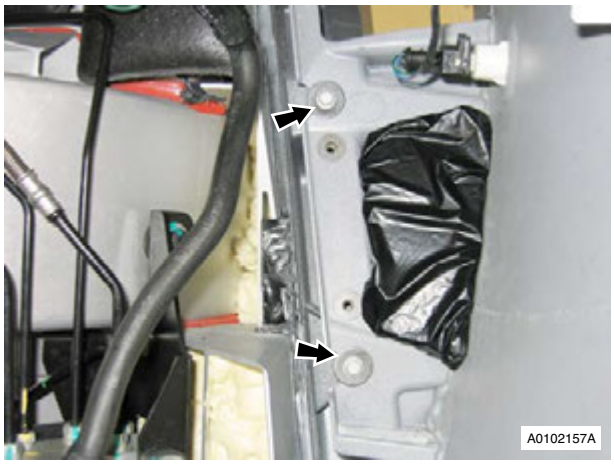


Figure 5

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8. Remove nut and bolt, wing to sill (see Figure 6).

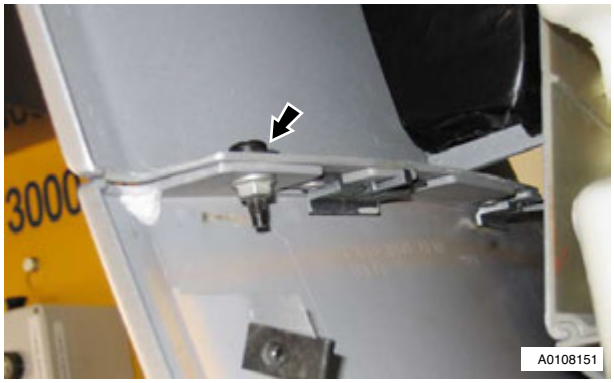


Figure 6

9. Remove screw, wing to sill (see Figure 7).

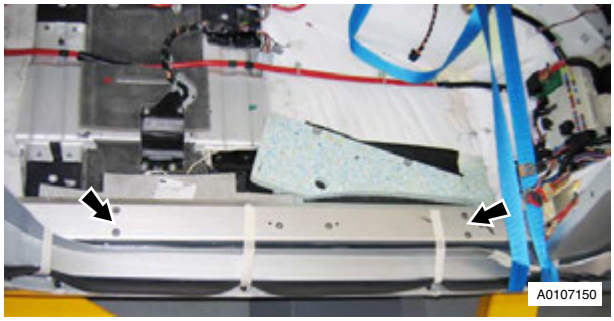


Figure 7

10. Release clips (x2) wing to sill and remove wing (see Figure 8).

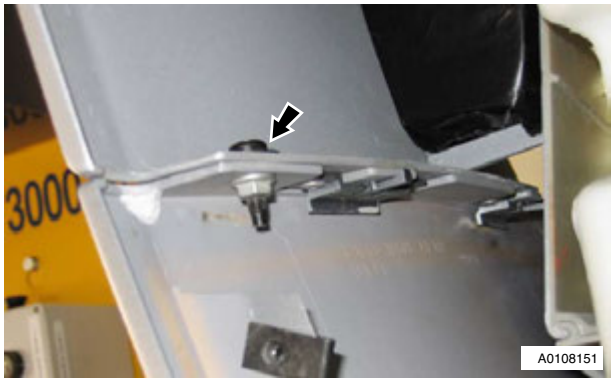


Figure 8

11. Remove side repeater lamp body from wing.

12. Remove side strake screw (x1) A-post (see Figure 9).



Figure 9

13. Remove vent mesh (nuts x3) (see Figure 10)).

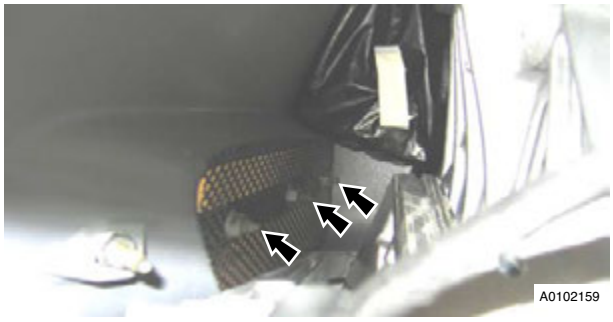


Figure 10

14. Remove side strake (nut x1) glued (see Figure 11).

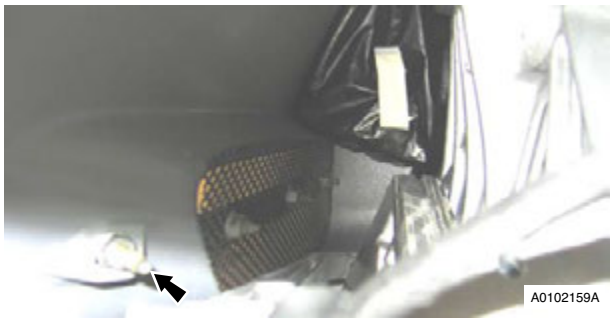


Figure 11

15. Remove sound deadening pads (x2).

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16. Remove hood/wing weatherstrip (see Figure 12).

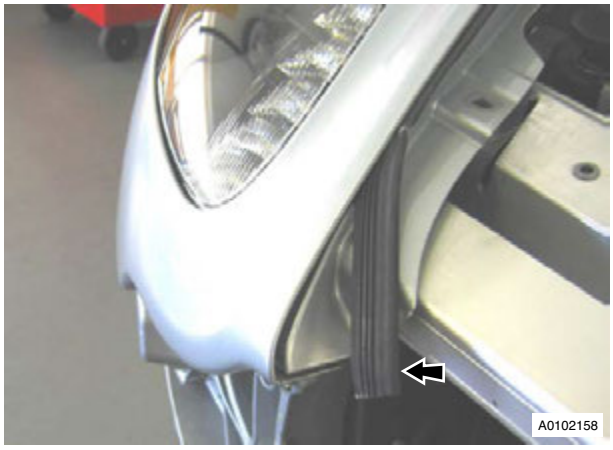


Figure 12

Installation

1. Install hood/wing weatherstrip.
2. Install sound deadening pads.
3. Install side strake (screw x1, nut x1) - glued.
4. Install vent mesh (nuts x3).
5. Install side repeater lamp body.
6. Install wing and refit clips (x2) wing to sill.
7. Install screw, wing to sill.
8. Install nut and bolt, wing to sill.
9. Install bolts and spacers (x2) under wing.
10. Connect side repeater lamp.
11. Install bolt and spacer (A-post top).
12. Install bolts and spacers (x4) wing to body top fixings.
13. Install slam panel (screws x12).
14. Install door (see Workshop Manual procedure 01.03.EA Door Assembly - RH - Remove for Access and Refit).
15. Install Cover Assembly - Front Bumper (see Workshop Manual procedure 01.19.AA Cover Assembly - Front Bumper - Renew).

LH Front Wing Panel Assembly - Renew

Repair Operation Time (ROT)		
Item		**Code**
Front Wing Panel Assembly-Renew	LH	**01.02.LB**

Removal

1. Remove Cover Assembly - Front Bumper (see Workshop Manual procedure 01.19.AA Cover Assembly - Front Bumper - Renew).
2. Remove door (see Workshop Manual procedure 01.03.FA Door Assembly - LH - Remove for Access and Refit).
3. Remove slam panel (screws x12).
4. Unclip hood ground lead (clips x2).
5. Remove bolts and spacers (x4) wing to body top fixings (see Figure 1).



Figure 1

6. Remove bolt and spacer (A-post top) (see Figure 2).



Figure 2

7. Move coolant catch tank aside (bolts x2 and sound deadening) (see Figure 3).

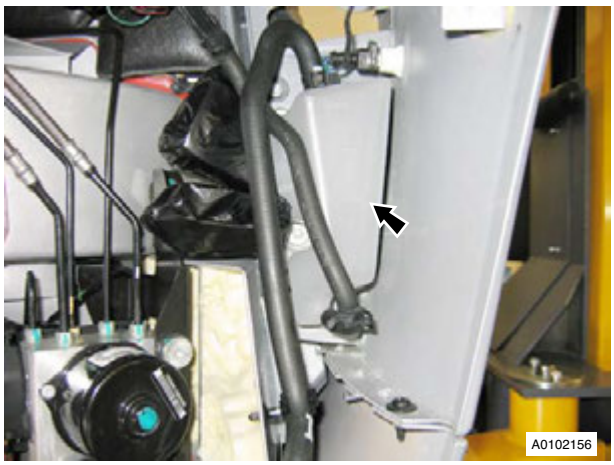


Figure 3

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8. Disconnect side repeater lamp multiplug (see Figure 4).



Figure 4

9. Remove bolts and spacers (x2) under wing (see Figure 5).

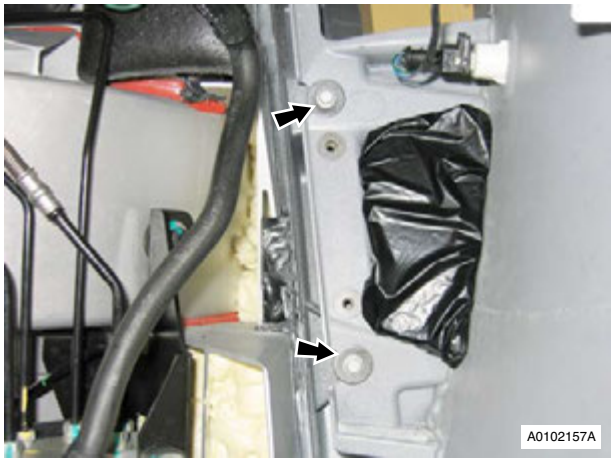


Figure 5

10. Remove nut and bolt, wing to sill (see Figure 6).

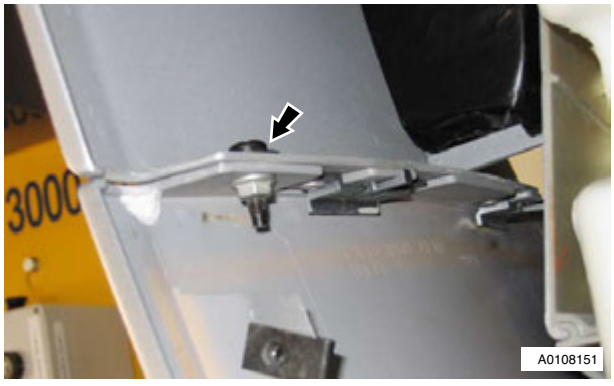


Figure 6

11. Remove screw, wing to sill (see Figure 7).

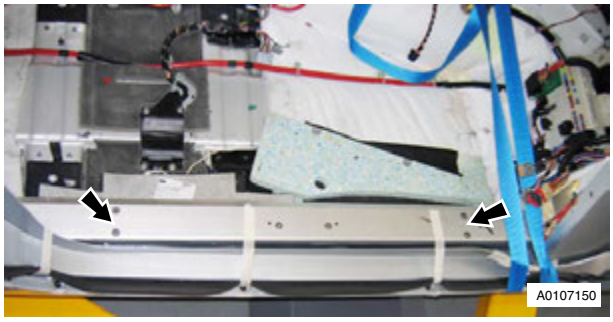


Figure 7

12. Release clips (x2) wing to sill and remove wing (see Figure 8).

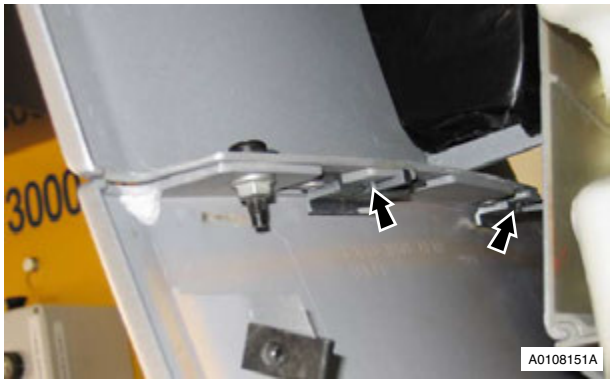


Figure 8

13. Remove side repeater lamp body from wing.
14. Remove side strake screw (x1) A-post (see Figure 9).

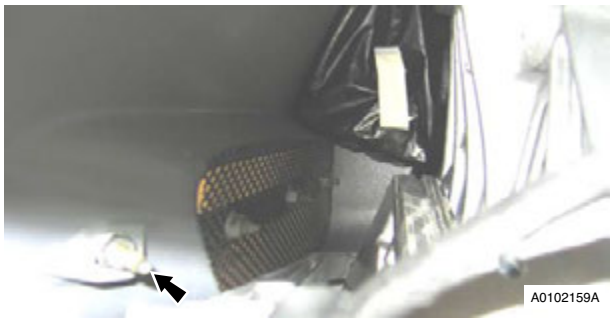


Figure 9

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15. Remove vent mesh (nuts x3) (see Figure 10).

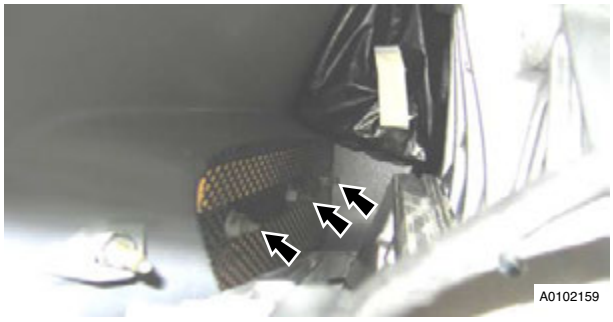


Figure 10

16. Remove side strake (nut x1) glued (see Figure 11).

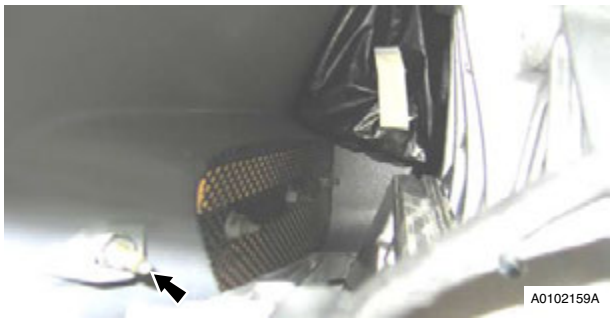


Figure 11

17. Remove sound deadening pads (x2).
18. Remove hood/wing weatherstrip (see Figure 12).

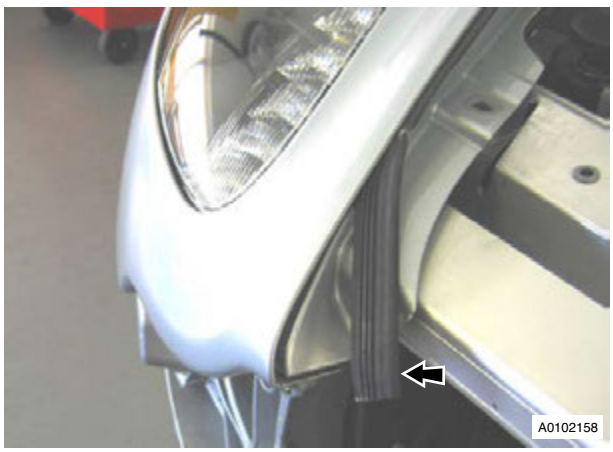


Figure 12

Installation

1. Install hood/wing weatherstrip.
2. Install sound deadening pads.
3. Install side strake (screw x1, nut x1) - glued.
4. Install vent mesh (nuts x3).
5. Install side repeater lamp body.
6. Install wing and refit clips (x2) wing to sill.
7. Install screw, wing to sill.
8. Install nut and bolt, wing to sill.
9. Install bolts and spacers (x2) under wing.
10. Connect side repeater lamp.
11. Install coolant catch tank (bolts x2 and sound deadening).
12. Install bolt and spacer (A-post top).
13. Install bolts and spacers (x4) wing to body top fixings.
14. Clip hood ground lead.
15. Install slam panel (screws x12).
16. Install door (see Workshop Manual procedure 01.03.FA Door Assembly - LH - Remove for Access and Refit).
17. Install Cover Assembly - Front Bumper (see Workshop Manual procedure 01.19.AA Cover Assembly - Front Bumper - Renew).

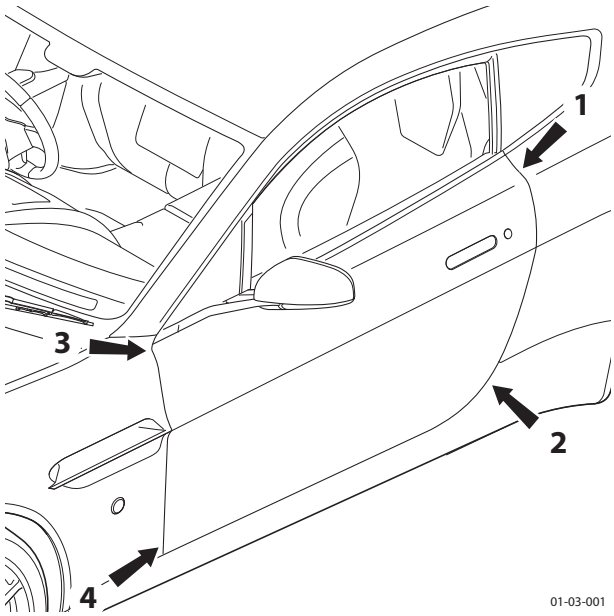
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Body System (01.00)

Body Closures (01.03)

Specifications

Doors



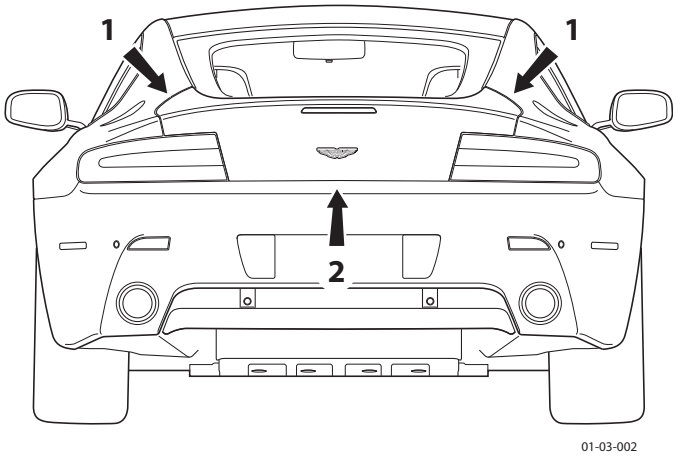
Door Standard (mm)				
Item	1	*2	3	4
Nominal gap	3.5	3.00	3.00	3.75
Tolerance	±0.75	±1.0	±1.0	± 0.75
Flush	0.0	-1.0	-1.0	0.0
Tolerance	±1.5 / 0.0	+0.0 / -1.0	±1.0	±1.5

* Flushness blends to 0.0 at the rear quarter

* Gap blends to 3.5 at rear quarter

Torque Figures	
Description	Nm.
Hinge to Door	47.5
Hinge to Body	36

Tailgate

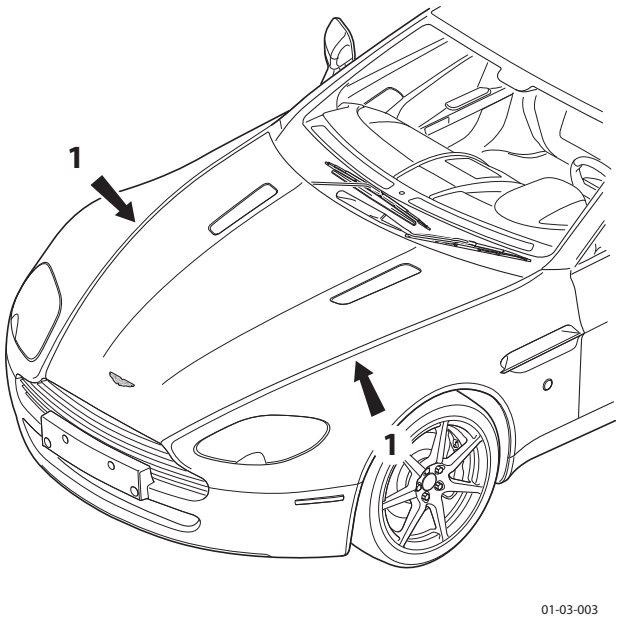


Tailgate Standard (mm)		
Item	1	2
Nominal gap	3.5	3.5
Tolerance	±0.75	±1.0
Flush	-0.5	N/A
Tolerance	+0.5 / -1.0	N/A
Taper	1 mm Max. across the length	
Symmetry	1 mm Max. difference LH to RH	

Torque Figures	
Description	Nm
Hinge to Body	25

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Bonnet



Bonnet Standard (mm)	
Item	1
Nominal gap	3.5
Tolerance	±0.75
Flush	-0.0
Tolerance	±1.5

Torque Figures	
Description	Nm.
Hinge to Body	25

Maintenance

LH/RH Door Assembly-Renew

Repair Operation Time (ROT)		
Item		**Code**
Door Assembly-Renew	LH	**01.03.DB**
Door Assembly-Renew	RH	**01.03.CB**

Removal

1. Battery isolation switch 'OFF'.
2. Remove LH door assembly (see Workshop Manual procedure 01.03.FA Door Assembly - LH - Remove for Access and Refit).
3. Remove bolts (x2) securing door handle assembly to door panel (see Figure 1).



Figure 1

4. Remove door handle trim plate, disconnect door catch inner release cable from handle and outer cable from retaining plate.
5. Remove handle assembly.
6. Remove access plugs from door frame.
7. Remove screw securing trimboard to upper front of door frame.
8. Remove bolts (x5) securing trimboard to door frame.
9. Raise trimboard out and up to release from door frame clips, disconnect multiplugs (x2).

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10. Disconnect door speaker multiplug (see Figure 2).

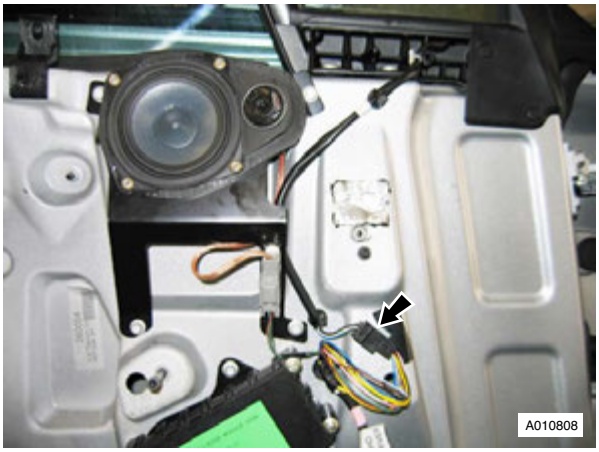


Figure 2

11. Remove bolts (x3), remove door speaker assembly.
12. Remove bolts (x4) securing door control module to door panel (see Figure 3).



Figure 3

13. Disconnect multiplugs (x3), remove door control module.
14. Remove bolts (x3) securing side impact sensor mounting plate, disconnect multiplug, remove plate assembly (see Figure 4).

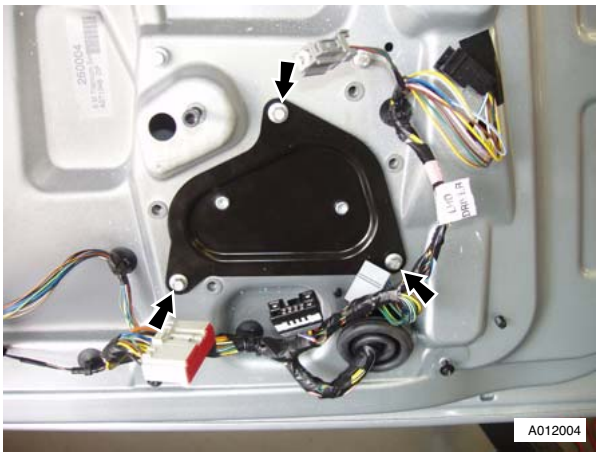


Figure 4

15. Pull fixed glass upwards and away from cheater panel, releasing rubber surround at top. Remove fixed glass.
16. Mark door glass around rear glass clamp.
17. Remove glass clamp bolts (x2), raise and remove door glass from door frame.
18. Disconnect multiplug from door glass regulator motor (see Figure 5).



Figure 5

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19. Remove nuts (x4) and Torx screws (x3) securing door glass regulator to door frame (see Figure 6).

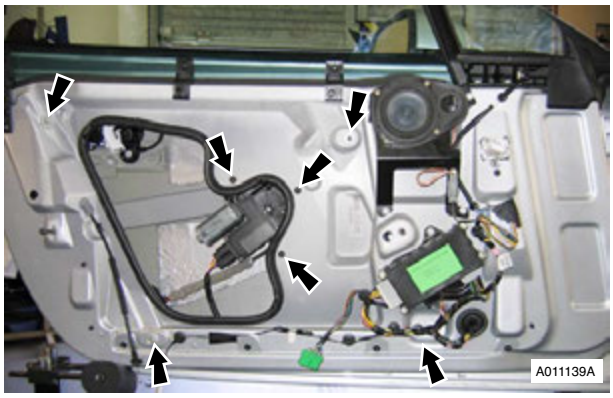


Figure 6

20. Carefully remove regulator mechanism through the larger door frame aperture.
21. Remove door mirror rubber cheater (see Figure 7).



Figure 7

22. Disconnect door mirror multiplug, release harness fir tree clips (x2) and self adhesive clip (see Figure 8).



Figure 8

23. Remove Torx Bolts (x3) and screw from door glass channel. Remove door mirror assembly.
24. Remove aperture seal from inner door frame.
25. Remove fir tree trim pins (x3), release/remove rear weatherstrip from door frame/glass channel.
26. Disconnect door latch multiplug.
27. Release inner and outer cable from external door handle (see Figure 9).

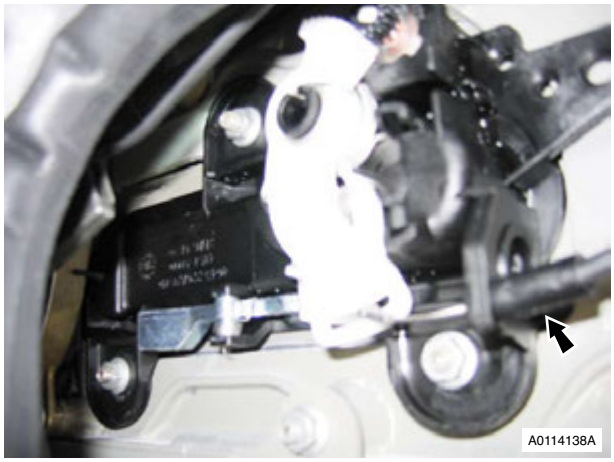


Figure 9

28. Remove nuts (x3) securing external door handle, remove door handle (see Figure 10).



Figure 10

29. Loosen upper nut, remove lower nut securing keylock mechanism to door frame.

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30. Remove Torx screws (x3) securing latch assembly to door frame (see Figure 11).

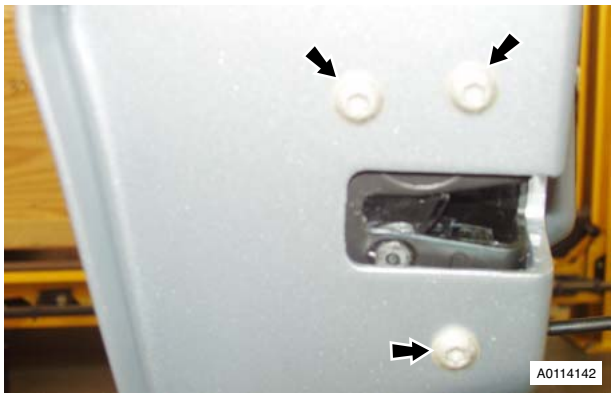


Figure 11

31. Manoeuvre internal latch handle cable through inner door skin into door aperture.
32. Carefully remove latch and keylock mechanisms through door aperture.
33. Remove Torx screws (x4) securing trimboard support brackets to door frame, remove brackets.
34. Drill out pop rivets (x2) securing rear trimboard support bracket, remove bracket.
35. Release door harness from inner door casing clips (x10) (see Figure 12).



Figure 12

36. Release door harness from outer door casing clips (x8) (see Figure 13).



Figure 13

37. Release harness grommets (x2) from door casing.
38. Manoeuvre and remove harness from door casing.
39. With assistance, remove door from trolley (501 - F111).
40. Remove bolts (x2) securing hinges to door, remove hinges (x2). Note fitted positions of shims (if fitted).

Installation

1. Carry out preliminary hinge setup.
2. Install hinges and shims (if fitted) on door, install bolts (x2). Do not torque tighten at this stage.
3. With assistance, install door on vehicle.
4. Place a weight of 16 kg (to compensate weight of door fixings) hanging from inner door skin as illustrated.
5. Gently close door and check for an acceptable initial installation.
6. Align the door, manoeuvre the door to achieve correct gaps and flush fit (add / remove shims as required). Open door, tighten bolts. Do not torque tighten bolts at this stage.
7. Close door, re-check fitment and alignment.
8. Open door, torque tighten hinge bolts. Remove the door weight.
9. With assistance, remove door and install on door trolley (501 - F111).
10. Manoeuvre and install harness in door, install grommets (x2).
11. Secure harness in door casing with clips (x18).
12. Position rear trimboard support bracket, secure with pop rivets (x2).
13. Position trimboard support brackets (x2), install and tighten Torx screws (x4).
14. Install latch and keylock mechanisms in door.
15. Manoeuvre internal latch handle cable into position
16. Install and torque tighten latch Torx screws (x3).
17. Position keylock mechanism to door frame, install lower nut, torque tighten nuts (x2).
18. Install external door handle, install and torque tighten nuts (x3).

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19. Install inner and outer cable to external door handle.
20. Connect multiplug to door latch.
21. Install rear weatherstrip to glass channel and door frame. Install fir tree trim pins (x3)
22. Install seal to inner door aperture.
23. Position door mirror, install and torque tighten Torx bolts (x3) and screw (glass channel).
24. Connect door mirror multiplug, secure harness with fir tree clips (x2) and adhesive clip.
25. Install rubber cheater to door frame, secure with fir tree trim pins (x3).
26. Install glass regulator assembly into door frame.
27. Install and torque tighten nuts (x4) and Torx screws (x3) securing regulator assembly to door frame.
28. Connect multiplug to glass regulator.
29. Install door glass, install clamp bolts (x2), align marks on glass to rear clamp. Do not torque tighten at this stage.
30. Install fixed glass, ensure rubber surround is correctly installed.
31. Connect multiplug to side impact sensor, position mounting plate, install and torque bolts (x3).
32. Position door control module, connect multiplugs (x3). Install and torque tighten bolts (x4).
33. Position door speaker, install and torque tighten screws (x3). Connect multiplug to speaker.
34. Position door trimboard, connect multiplugs (x2).
35. Install trimboard to door frame, secure in clips.
36. Install and tighten screws (x5).
37. Install LH door assembly (see Workshop Manual procedure 01.03.FA Door Assembly - LH - Remove for Access and Refit).
38. Battery isolation switch 'ON'.
39. Glass front door - LH - Adjust and reset (see Workshop Manual procedure 01.11.BD Glass - Front Door - LH - Adjust and Reset).

RH/LH Door Assembly-Remove/Refit

Repair Operation Time (ROT)		
Item		**Code**
Door Assembly-Remove/Refit	RH	**01.03.EA**
Door Assembly-Remove/Refit	LH	**01.03.FA**

Removal

1. Switch on ignition, set door glass to half-way down position (this is to access door glass screw clamps on door renew - 01.05.CB).
2. Battery isolation switch 'OFF'.
3. Raise vehicle on ramp.
4. Remove road wheel(s),
5. Release rear part of wheel arch liner, screws (x7), disconnect door check rod.
6. Pull back sealing boot and disconnect door multiplug.
7. Loosen the door hinge Torx screws (x2).
8. With assistance, lift door off support studs.
9. Withdraw the door from the vehicle and install on Door Service Trolley (501 - F111).
10. Remove and discard hinge Torx screws (Patchlok).

Installation

1. Protect vehicle bodywork.
2. Install new hinge Torx screws.
3. With assistance, remove door from trolley (501 - F111), position door to vehicle.
4. Align door to upper and lower hinges and install on hinge studs.
5. Connect the door check rod and install wheel arch liner, screws (x7).
6. Tighten hinge Torx screws (x2) (torque).
7. Connect multiplug and install boot.
8. Battery isolation switch 'ON'.
9. Install road wheel(s).
10. Lower vehicle on ramp.

Front Door Hinge (One Side) - Renew

Repair Operation Time (ROT)	
Item	**Code**
Front Door Hinge (One Side) Renew	**01.03.FB**

Removal

1. Remove LH/RH door assembly (see Workshop Manual procedure 01.03.FA/01.03.EA Door Assembly - LH/RH - Remove for Access and Refit).
2. Remove bolts (x4) securing upper and lower door hinges to body.
3. Remove hinges, note position of shims (if fitted) collect rubber seals (x2).
4. Remove bolts (x2) securing upper and lower hinges to door, remove hinges (x2). Note fitted position of shims (if fitted).

Installation

1. Position hinges to body, install rubber seals (x2) and shims (if fitted).
2. Install bolts (x4) securing hinges to body. Do not torque tighten bolts at this stage.
3. Position hinges (x2) to door. Install bolts (x2). Do not torque tighten at this stage.
4. Install LH/RH door assembly (see Workshop Manual procedure 01.03.FA/01.03.EA Door Assembly - LH/RH - Remove for Access and Refit).
5. Carry out preliminary hinge set-up.
6. Gently close door and check for acceptable initial installation.
7. Align the door, manoeuvre the door to achieve correct gaps and flush fit; (add/remove shims as required).
8. Open door, tighten bolts. Do not torque tighten at this stage.
9. Close door, re-check fitment and alignment.

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10. Open door, torque tighten bolts.

Front Door Check Arm Assembly - Renew

Repair Operation Time (ROT)	
Item	**Code**
Front Door Check Arm Assembly-Renew	01.03.FC

Removal

1. Remove door assembly (see Workshop Manual procedure 01.03.EA/01.03.FA Door Assembly - RH/LH - Remove for Access and Refit).
2. Disconnect door check arm from door.

Installation

1. Connect door check strap to door.
2. Install door assembly (see Workshop Manual procedure 01.03.EA/01.03.FA Door Assembly - RH/LH - Remove for Access and Refit).

Boot Lid Assembly - Renew (Roadster Only)

Repair Operation Time (ROT)	
Item	**Code**
Boot Lid Assembly-Renew	01.03.GA

Removal

1. Open boot lid.
2. Remove bolt securing strap to boot lid and remove strap (see Figure 1).



Figure 1

3. Remove clip securing cable to release lever and remove cable.
4. Release clips (x8) and remove boot lid trim panel.
5. Release clip securing harness to interior panel (see Figure 2).

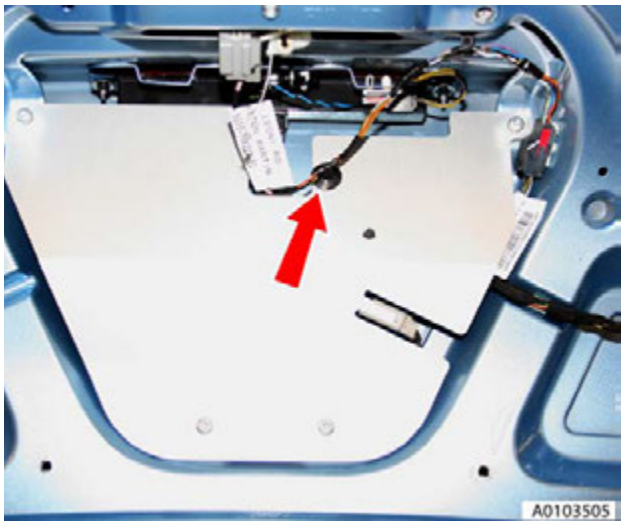


Figure 2

6. Remove bolts (x4) securing panel to boot lid.
7. Release multiplug from panel, disconnect multiplug from antenna and remove panel (see Figure 3).



Figure 3

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8. Disconnect multiplugs from latch, boot lid release switch, release solenoid and stop light (see Figure 4).

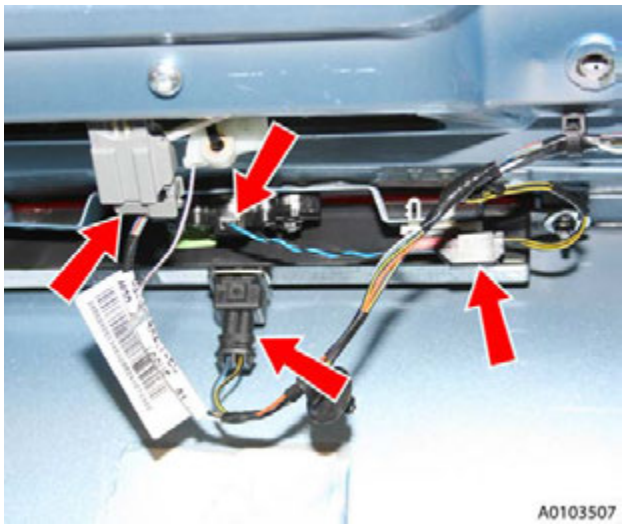


Figure 4

9. Release clips securing harness to boot lid, release grommet and remove harness (see Figure 5).

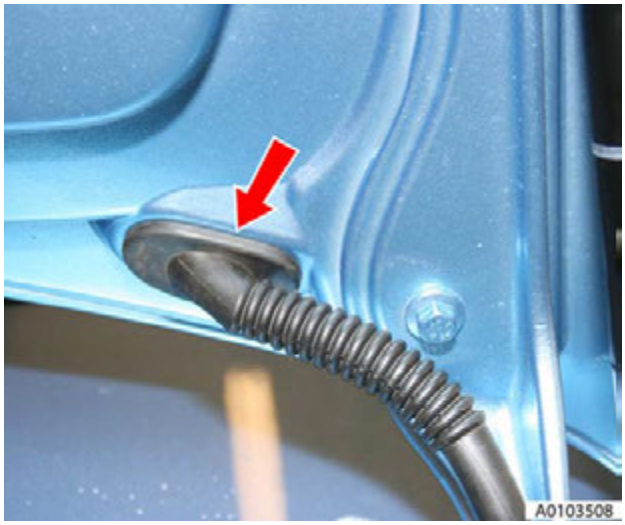


Figure 5

10. Remove bolts (x2) securing harness to hinge and release harness (see Figure 6).

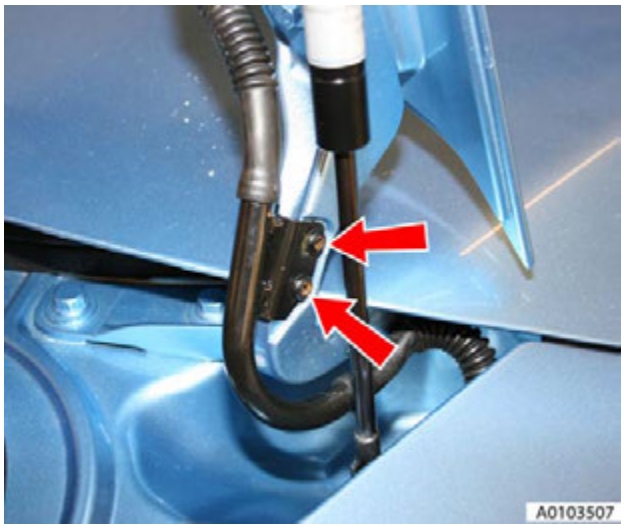


Figure 6

11. Remove cable tie, remove bolts (x3) securing latch to boot lid and remove latch (see Figure 7).



Figure 7

12. Remove nuts (x2) securing stop light to boot lid and remove stop light and recover washers (x2).

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13. Remove nuts (x2) securing release switch to boot lid and remove switch (see Figure 8).

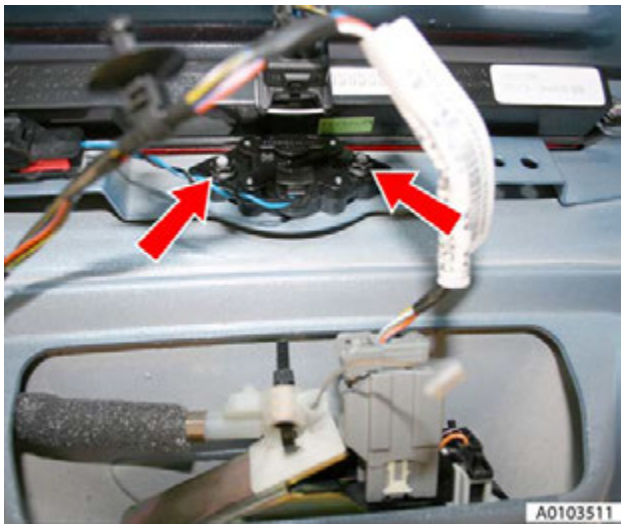


Figure 8

14. Remove boot lid buffers (x2) from boot lid (see Figure 9).



Figure 9

15. Remove badge from boot lid.

Caution
Protect surrounding paintwork using suitable tape.

16. Mark outline of hinges on boot lid using a suitable marker to aid installation (see Figure 10).



Figure 10

17. Release clips (x2) securing gas struts to boot lid, release struts and support boot lid (see Figure 11).

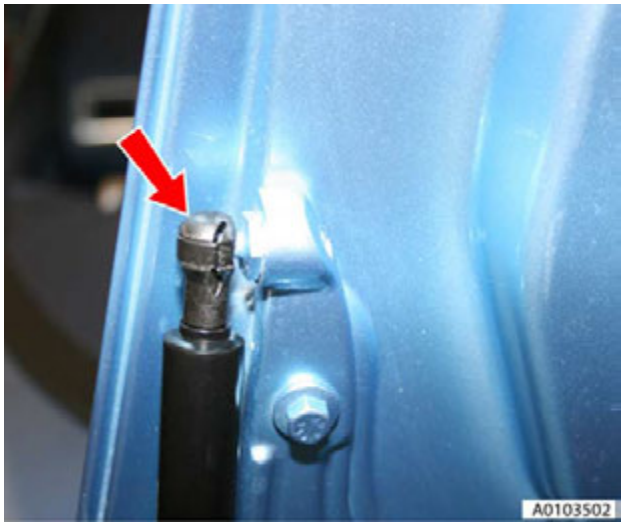


Figure 11

18. Using assistance, support boot lid, remove bolts (x4) securing hinges to boot lid and remove.

Installation

1. Using assistance, position trunk lid to body, fit bolts (x4) securing hinges to boot lid.
2. Position gas struts to boot lid and secure with clips.
3. Install tailgate buffers (x2) to boot lid.
4. Install release switch and secure with nuts.
5. Install stop light and secure with nuts and washers.
6. Install latch and secure with bolts and cable tie.
7. Position harness to hinge and secure with bolts.
8. Install harness in boot lid, secure grommet and clips.

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9. Connect multiplugs to boot lid latch, boot lid release switch, release solenoid and stop light.
10. Connect multiplug to antenna and fit to panel.
11. Install interior panel and secure with bolts.
12. Secure harness to interior panel using clip.
13. Install boot lid trim panel and secure with clips.
14. Connect cable to release lever and secure with clip.
15. Install strap and secure with bolt.
16. Close boot lid and check profile against body, adjust buffers as necessary.
17. Fit boot lid badge.

Boot Lid Hinge Assembly (Pair) - Renew (Roadster Only)

Repair Operation Time (ROT)	
Item	**Code**
Boot Lid Hinge Assembly (Pair)-Renew	**01.03.GB**

Removal

1. Open boot lid.
2. Mark outline of hinge on boot lid using a suitable marker (see Figure 1).



Figure 1

3. Mark outline of hinge on body using a suitable marker (see Figure 2).

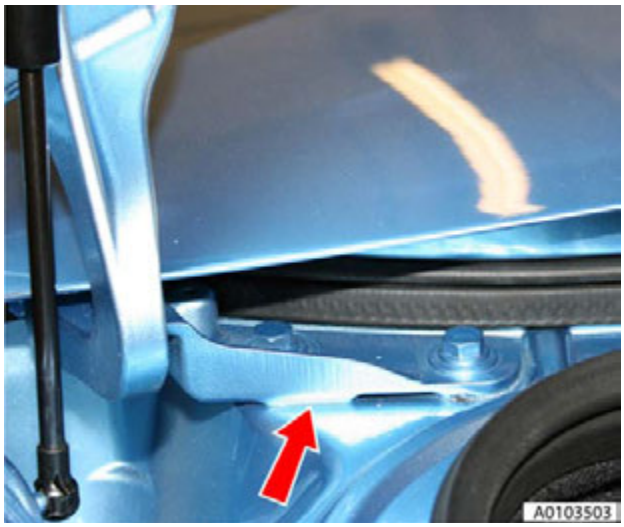


Figure 2

4. Using assistance, support boot lid and remove bolts (x2) securing hinge to boot lid and bolts (x2) securing hinge to body and remove hinge.

Installation

1. Install hinge, align to marked outline and secure to body and boot lid with bolts.
2. Open boot lid.
3. Mark outline of hinge on boot lid using a suitable marker.
4. Mark outline of hinge on body using a suitable marker.
5. Remove clip securing gas strut to boot lid and release gas strut.
6. Using assistance, support boot lid and remove bolts (x2) securing hinge to boot lid and bolts (x2) securing hinge to body and remove hinge.
7. Install hinge, align to marked outline and secure to body and boot lid with bolts.
8. Close boot lid.

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Boot Gas Strut (Pair) - Renew (Roadster Only)

Repair Operation Time (ROT)	
Item	Code
Boot Gas Strut (Pair)-Renew	01.03.GD

Removal

1. Open boot lid.
2. Release clip securing LH gas strut to boot lid and release gas strut (see Figure 1).

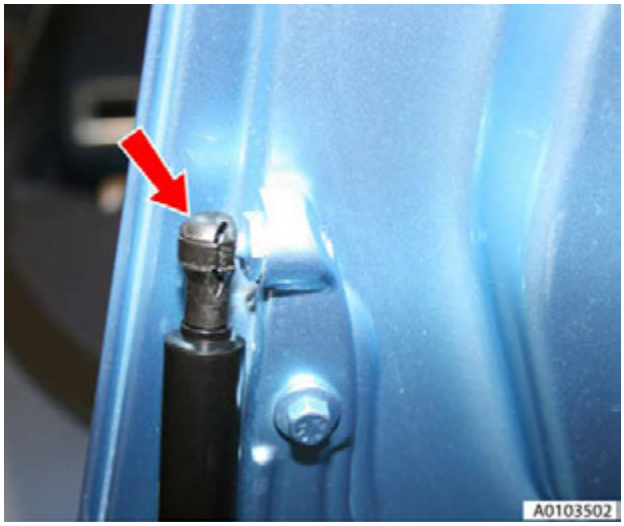


Figure 1

3. Release clip securing LH gas strut to body and remove gas strut (see Figure 2).

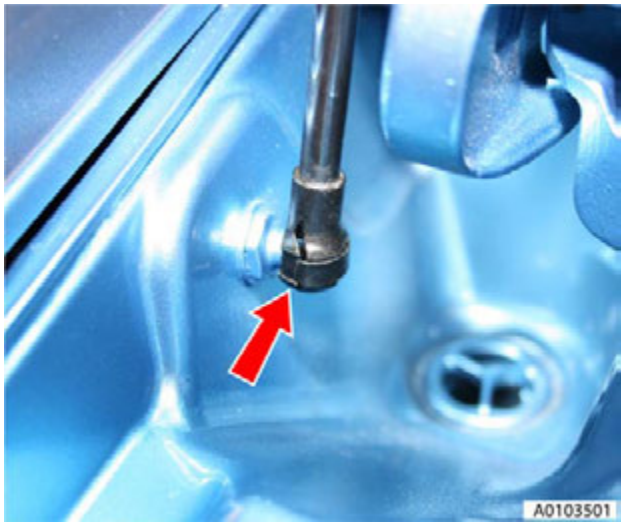


Figure 2

Installation

1. Clean gas strut, install and secure with clips.
2. Release clip securing RH gas strut to boot lid and release gas strut.
3. Release clip securing RH gas strut to body and remove gas strut.
4. Clean gas strut, install and secure with clips.
5. Close boot lid.

Boot Lid Striker Assembly - Renew (Roadster Only)

Repair Operation Time (ROT)	
Item	Code
Boot Lid Striker Assembly-Renew	01.03.GE

Removal

1. Access luggage compartment and remove floor carpet.
2. Release clips securing warning triangle in place and remove (see Figure 1).

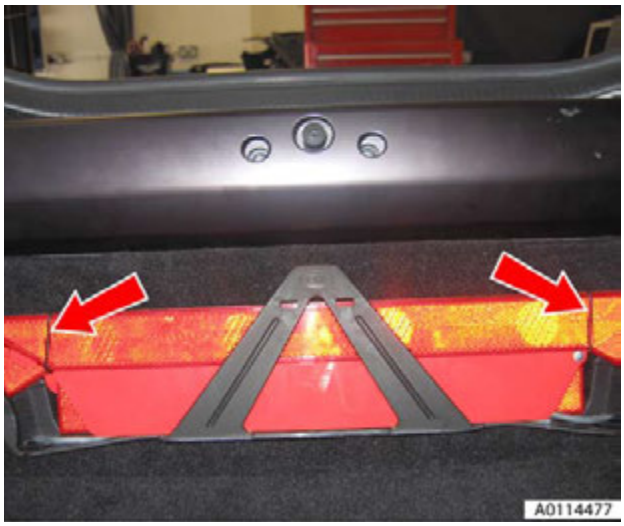


Figure 1

3. Remove 2 bolts securing warning triangle bracket to body and remove (see Figure 2).

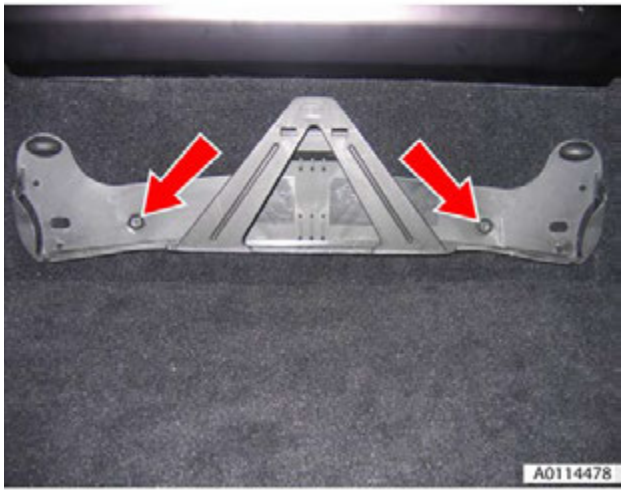


Figure 2

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4. Remove 2 bolts either side of striker pin securing striker panel to body.
5. Pull up rear carpet and secure in place.
6. Remove 2 lower bolts securing striker panel to body (see Figure 3).

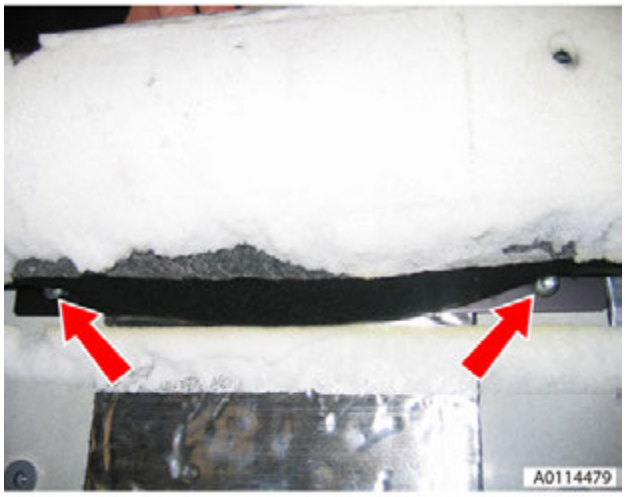


Figure 3

7. Release centre of luggage compartment seal, remove striker panel and rear carpet (see Figure 4).



Figure 4

8. Release striker assembly from rear carpet and remove.

Installation

1. Attach rear carpet to striker panel and install, secure with lower bolts.
2. Release and install rear carpet.
3. Secure striker panel with upper bolts.
4. Install luggage compartment seal.
5. Install warning triangle bracket and secure with bolts.
6. Install warning triangle and secure with clips.
7. Install floor carpet and close luggage compartment.

Exterior Boot Lid Switch Release - Renew (Roadster Only)

Repair Operation Time (ROT)	
Item	**Code**
Exterior Boot Lid Release Switch-Renew	01.03.GF

Removal

1. Open boot lid.
2. Remove bolt securing strap to boot lid and remove strap.
3. Remove clip securing cable to release lever and remove cable.
4. Release 8 clips and remove boot lid trim panel.
5. Disconnect multiplug release switch.
6. Remove nuts (x2) securing release switch to boot lid and remove switch (see Figure 1).

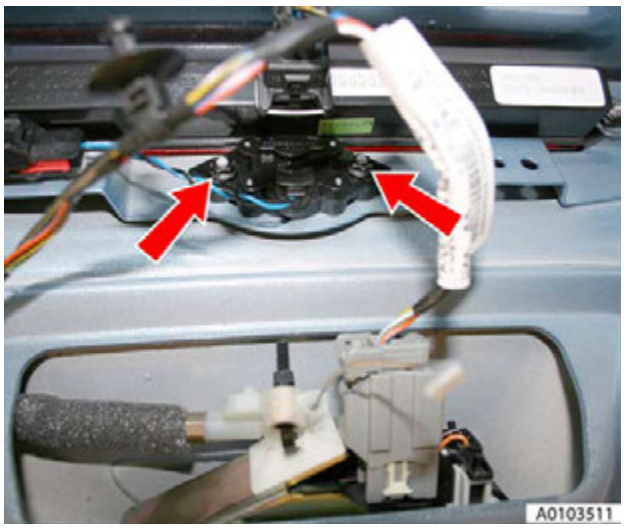


Figure 1

Installation

1. Install release switch and secure with nuts.
2. Connect multiplug release switch.
3. Install boot lid trim panel and secure with clips.
4. Connect cable to release lever and secure with clip.
5. Install strap and secure with bolt.
6. Close boot lid.

Tailgate Assembly - Renew

Repair Operation Time (ROT)	
Item	**Code**
Tailgate Assembly-Renew	01.03.GG

Removal

1. Battery isolation switch 'OFF'.
2. Remove RH quarter upper trim panel (see Workshop Manual procedure 01.05.CX Moulding Assembly - Quarter Trim Upper - RH - Renew).

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3. Remove LH quarter upper trim panel (see Workshop Manual procedure 01.05.CY Moulding Assembly - Quarter Trim Upper - LH - Renew).
4. Remove rear header trim panel (see Workshop Manual procedure 01.05.BK Panel Assembly - Rear Header - Renew).
5. Disconnect LH and RH tailgate harnesses in cabin
6. Remove LH and RH harness grommets from body.
7. Remove tailgate trim panel (see Workshop Manual procedure 01.05.EF Trim - Tailgate Lid Assembly - Renew).
8. Disconnect GPS antenna multiplug, remove bolts (x3), remove GPS antenna.
9. Disconnect multiplug form central high stop lamp, remove nuts (x2), remove central high stop lamp.
10. Disconnect multiplug from tailgate release switch, remove nuts (x2), remove tailgate release switch.
11. Remove tailgate buffer stops (x2).
12. Install protection between tailgate corners and bodywork.
13. Release clips, disconnect gas struts (x2) from tailgate.
14. With assistance, remove bolts (x4) securing tailgate to hinges, remove tailgate assembly.

Installation

1. With assistance, install and align tailgate to hinges, install bolts (x4). Do not torque tighten at this stage.
2. Adjust alignment of tailgate and torque tighten hinge bolts.
3. Connect gas struts to tailgate and secure with clips.
4. Install tailgate buffers and adjust height as necessary
5. Install tailgate release switch, install and tighten nuts (x2), connect multiplug.
6. Install central high level stop lamp assembly, install and tighten nuts (x2), connect multiplug.
7. Install GPS antenna, install and tighten bolts (x3), connect multiplug.
8. Install tailgate trim panel (see Workshop Manual procedure 01.05.EF Trim - Tailgate Lid Assembly - Renew).
9. Install rear header trim panel (see Workshop Manual procedure 01.05.BK Panel Assembly - Rear Header - Renew).
10. Install LH upper quarter trim panel (see Workshop Manual procedure 01.05.CY Moulding Assembly - Quarter Trim Upper - LH - Renew).
11. Install RH upper quarter trim panel (see Workshop Manual procedure 01.05.CX Moulding Assembly - Quarter Trim Upper - RH - Renew).
12. Remove protection from tailgate and body.
13. Battery isolation switch 'ON'.

Tailgate Hinge Assembly (Pair) - Renew

Repair Operation Time (ROT)	
Item	**Code**
Tailgate Hinge Assembly (Pair)-Renew	01.03.GK

Removal

1. Protect bodywork.
2. Mark position of hinges.
3. With assistance support and hold tailgate.
4. Disconnect tailgate gas strut to hinge (see Figure 1).



Figure 1

5. Remove torx screws hinge to tailgate (x2) and body (x2) and remove hinge (see Figure 2).



Figure 2

Installation

1. Install hinge, but do not fully tighten screws.
2. Connect tailgate gas strut.

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3. Repeat remove and installation procedure for opposite hinge (see Figure 1).



Figure 1

4. Check alignment of tailgate and adjust as necessary.
5. Fully tighten screws (x8) tailgate hinges.
6. Remove bodywork protection.

Hood Assembly - Renew

Repair Operation Time (ROT)	
Item	**Code**
Hood Assembly-Renew	**01.03.AB**

Removal

1. Open hood.
2. Disconnect windscreen wash pipe.
3. Remove cap nut, nut and release earth lead from hood.
4. Remove buffers from hood.
5. Remove Torx screws (x2) securing striker plate to hood, remove striker plate.
6. Remove Torx screws (x2) securing safety catch to hood, remove safety catch.
7. Remove hood sound insulation.
8. Remove cap nuts (x12) securing air intake grilles (x2) to hood, remove grilles.
9. Disconnect screen washer hose, reservoir to non-return valve.
10. Loosen hood hinge bolts (4).
11. Disconnect gas struts and remove hinge bolts
12. With assistance, remove bolts (x4) and hood.
13. Remove ball studs from bonnet.
14. Remove screen washer jets (x2) and hoses from hood.

Installation

1. Install and torque tighten ball studs (x2).
2. Install screen washer hoses and jets (x2).
3. With assistance, position hood to hinges, install bolts (x4). Do not torque tighten at this stage.
4. Install safety catch, install and torque tighten Torx screws (x2).
5. Install striker plate, install and torque tighten Torx screws (x2).
6. Install air intake grilles (x2), install and tighten cap nuts (x12).
7. Install Buffers to hood.
8. Install sound insulation.
9. Align hood to aperture.
10. Raise hood and tighten up one hinge bolt either side.
11. Lower hood and check alignment
12. Raise hood and torque tighten hinge bolts (x4).
13. Install gas struts.
14. Install earth lead to hood, install and tighten nut and cap nut.
15. Connect screen washer hose.
16. Close hood to check engagement of latch assembly, adjust if necessary
17. Close hood and check operation of hood release lever.

Hood Hinge Assembly (Vehicle Set) - Renew

Repair Operation Time (ROT)	
Item	**Code**
Hood Hinge Assembly (Vehicle Set)-Renew	**01.03.AE**

Removal

1. Remove LH wing (see Workshop Manual procedure 01.02.LB Panel Assembly - Front Wing - LH - Renew).
2. Remove RH wing (see Workshop Manual procedure 01.02.KB Panel Assembly - Front Wing - RH - Renew).
3. Protect bodywork.
4. Mark position of hinges (see Figure 1).



Figure 1

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5. Remove hood ground strap (see Figure 2).



Figure 2

6. With assistance support and hold hood.
7. Remove bolts hinge to hood (x2) and body (x2) and remove hinge and collect shims (see Figure 3).

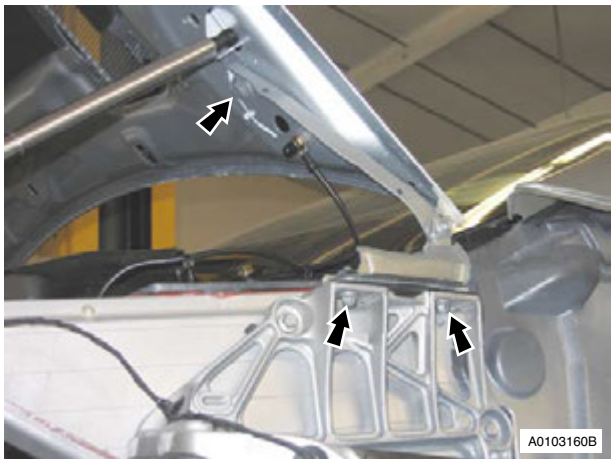


Figure 3

Installation

1. Install hinge (to markings) and shims (quantity as removed), but do not fully tighten bolts.
2. Repeat remove and installation procedure for opposite hinge.
3. Install LH wing (see Workshop Manual procedure 01.02.LB Panel Assembly - Front Wing - LH - Renew).
4. Install RH wing (see Workshop Manual procedure 01.02.KB Panel Assembly - Front Wing - RH - Renew).
5. Check alignment of hood and adjust installing or removing shims as necessary.
6. Fully tighten bolts (x8) on hinges.
7. Install hood ground strap
8. Remove bodywork protection.

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Body System (01.00)

Interior Trim (01.05)

This section covers removal and installation of the interior mouldings and trim panels. In many instances, one component overlaps another component. If this condition is found, it will be necessary to loosen or remove the overlapping component before removal, to prevent damage to either component.

Maintenance

Rear Centre Console - Renew

Repair Operation Time (ROT)	
Item	**Code**
Rear Centre Console-Renew	**01.04.BB**

Removal

1. Battery isolation switch 'OFF'.
1. Remove storage compartment door.
2. Remove bolt and screws (x5) from support rail to body and remove support rail.
3. Remove screw (x1) centre arm rest to rear console panel assembly and remove arm rest (see Figure 1).



Figure 1

4. Remove nuts (x3), screws (x4) from panel assembly rear console (see Figure 2).

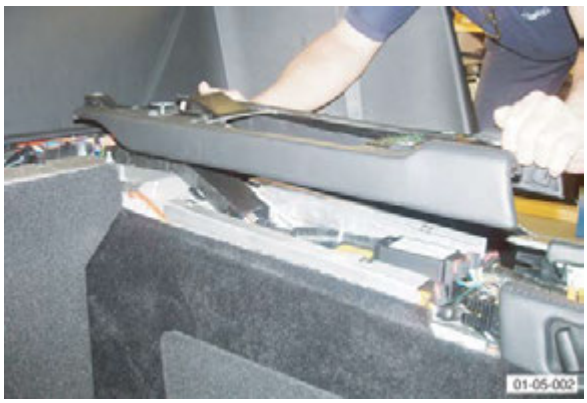


Figure 2

5. Remove screws (x2) ashtray console panel assembly to floor.
6. Remove rear console panel assembly.

Installation

1. Position rear console panel, install and tighten nuts (x3) and screws (x4).
2. Install screws (x2) ashtray console panel to floor.
3. Install centre arm rest.
4. Install support rail, install and tighten screws (x5) and bolt.
5. Install stowage compartment door.

Headlining - Renew (Roadster Only)

Repair Operation Time (ROT)	
Item	**Code**
Headlining-Renew	**01.05.BA**

Removal

1. Remove header trim (see Workshop Manual procedure 01.05.BB Panel Assembly - Header - Renew).
2. Remove screws (x28) securing rear seal to tension bow, release seal and springs, collect brackets and rest seal on tonneau (see Figure 1).



Figure 1

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3. Release headlining from double sided tape secured to tension bow (see Figure 2).



Figure 2

4. Disconnect heated rear screen connectors (x2) (see Figure 3).



Figure 3

5. Pass connectors through securing loops (see Figure 4).

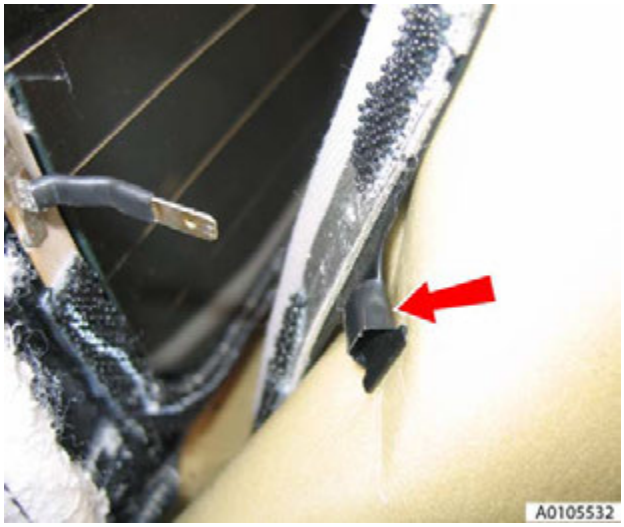


Figure 4

6. Release water pockets from B-post seal (see Figure 5).



Figure 5

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7. Release rear of canopy cover from tension bow and release velcro securing rear screen to headlining to gain access to headlining screws (see Figure 6).



Figure 6

8. Position seat back rests in forward position.
9. Remove screws (x5) securing headlining to third cross bar and release headlining (see Figure 7).

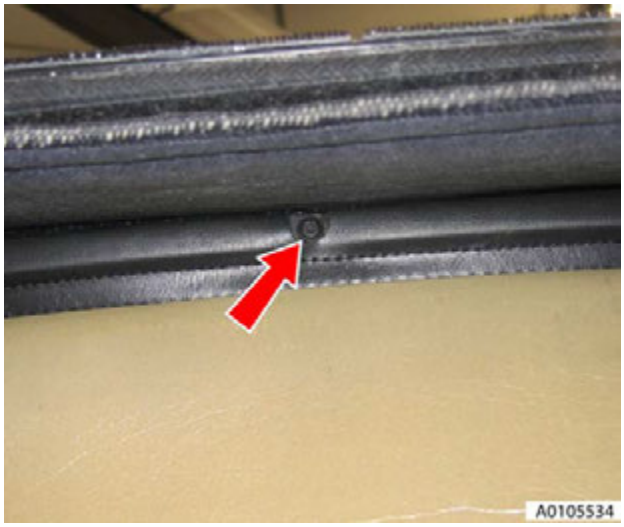


Figure 7

10. Remove screw securing tension string to front of third cross bar (see Figure 8).



Figure 8

11. Remove screws (x2) securing tension strings underside of third cross bar (see Figure 9).



Figure 9

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12. Remove screws (x2) securing tension strings to hinges (see Figure 10).



Figure 10

13. Position hood to gain access to B-post fixing screws.
14. Mark position of screws (x4) to aid installation.
15. Remove screws (x4) securing trims to hood mechanism and release trims (see Figure 11).



Figure 11

16. Un-hook B-post tension springs from hood mechanism (see Figure 12).



Figure 12

17. Remove screws (x2) securing straps to hood mechanism and remove trims (see Figure 13).



Figure 13

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18. Remove screws (x5) securing headlining to second cross bar (see Figure 14).



Figure 14

19. Remove screws (x2) securing headlining straps and tension strings to hood mechanism (see Figure 15).



Figure 15

20. Remove screws (x5) securing headlining to first cross bar.
21. Remove screws (x2) securing tension strings to underside of header rail (see Figure 16).



Figure 16

22. Release front of headlining from mounting rail and remove headlining (see Figure 17).

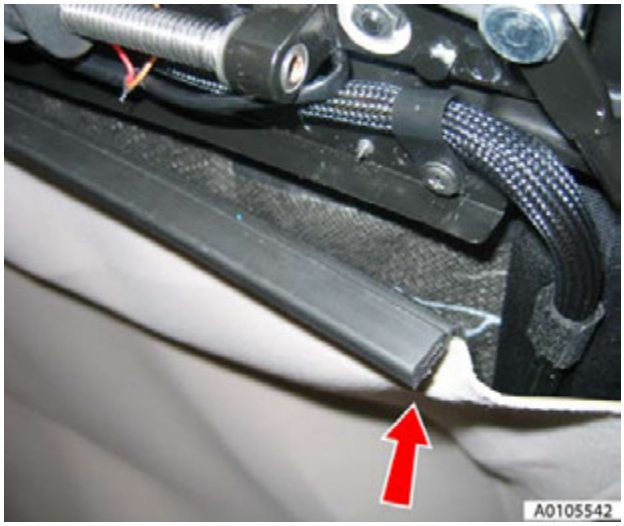


Figure 17

23. Remove headlining bows from pockets.

Installation

1. Install headlining bows to pockets.
2. Install headlining and mount to front rail. Ensure an equal amount of overhang on each side.
3. Secure tension strings to underside of header rail using screws.
4. Secure headlining to first cross bar using screws (start with the middle screw and work outboard).
5. Secure headlining straps and tension strings to hood mechanism with screws.
6. Secure headlining to second cross bar using screws (start with the middle screw and work outboard).

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7. Position B-post trims, pass straps through and secure to hood mechanism using screws.
8. Pass tension springs through B-post trims and secure to hood mechanism using hooks.
9. Position hood to gain access to B-post fixing locations.
10. Install B-post trims to hood mechanism, align using marks and secure with screws.
11. Position tension strings and secure to hinges using screws.
12. Position tension strings underside of third cross bar and secure with screws.
13. Position tension string to front of third cross bar and secure with screw.
14. Secure headlining to third cross bar and secure with screws (start with the middle screw and work outboard).
15. Position seat back rests in upright position.
16. Install rear of canopy cover to tension bow and secure headlining velcro to rear screen surround (centre velcro on top and bottom of screen and continue to corners pressing outer canopy and headlining together).
17. Ensure headlining velcro is installed centrally to rear screen.
18. Feed heated rear screen connectors through securing loops.
19. Connect heated rear screen Lucars.
20. Insert water pocket to seal, place a drop of super glue at each end of water pockets.
21. Crimp seal to secure water pocket in place.
22. Secure headlining to tension bow using double sided tape.
23. Position rear seal to tension bow, fit brackets, springs and secure with screws. Ensure carrier ends are flush with tension bow.
24. Fit header trim (see Workshop Manual procedure 01.05.BB Panel Assembly - Header - Renew).

Header Panel Assembly - Renew (Excluding Roadster)

Repair Operation Time (ROT)	
Item	**Code**
Header Panel Assembly-Renew	**01.05.BB**

Removal

1. Remove front header console assembly (see Workshop Manual procedure 01.05.BC Console Assembly - Front Header - Renew).
2. Remove RH front pillar upper trim panel (see Workshop Manual procedure 01.05.BD Trim - Upper Panel - Front Pillar - RH - Renew).
3. Remove LH front pillar upper trim panel (see Workshop Manual procedure 01.05.BE Trim - Upper Panel - Front Pillar - LH - Renew).
4. Remove sun visor Allen screws (x2 (see Figure 1).



Figure 1

5. Remove sunvisor (see Figure 2).



Figure 2

6. Remove screws (x2) front header to body.
7. Remove front header panel.
8. Remove mass movement sensor from front header.

Installation

1. Install mass movement sensor.
2. Install front header panel.
3. Position sun visors and install screws (x4).
4. Install RH front pillar upper trim panel (see Workshop Manual procedure 01.05.BD Trim - Upper Panel - Front Pillar - RH - Renew).
5. Install LH front pillar upper trim panel (see Workshop Manual procedure 01.05.BE Trim - Upper Panel - Front Pillar - LH - Renew).
6. Install front header console assembly (see Workshop Manual procedure 01.05.BC Console Assembly - Front Header - Renew).

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Header Panel Assembly - Renew (Roadster Only)

Repair Operation Time (ROT)	
Item	Code
Header Panel Assembly-Renew	01.05.BB

Removal

1. Operate roof to halfway position.
2. Support roof when hydraulic pressure drops with suitable straps (see Figure 1).

WARNING

APPROXIMATELY 20 SECONDS AFTER THE OPEN/ CLOSE OPERATION HAS BEEN INTERRUPTED THE ROOF MAY SUDDENLY DROP DUE TO LOSS OF HYDRAULIC PRESSURE. IF THIS HAPPENS ENSURE NO BODY PARTS ARE CLOSE TO THE ROOF MECHANISM. IF THE ROOF REQUIRES MAINTENANCE, SUPPORT PROPERLY USING SUITABLE PROPS AND STRAPS.



Figure 1

3. Remove 8 screws securing front of header assembly to roof (see Figure 2).

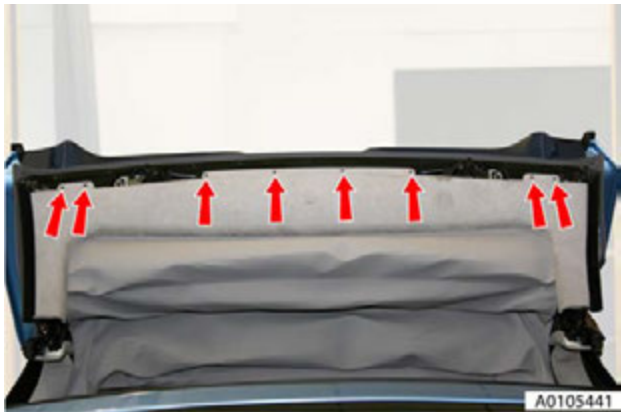


Figure 2

4. Remove 2 screws securing rear of header assembly to roof (see Figure 3).

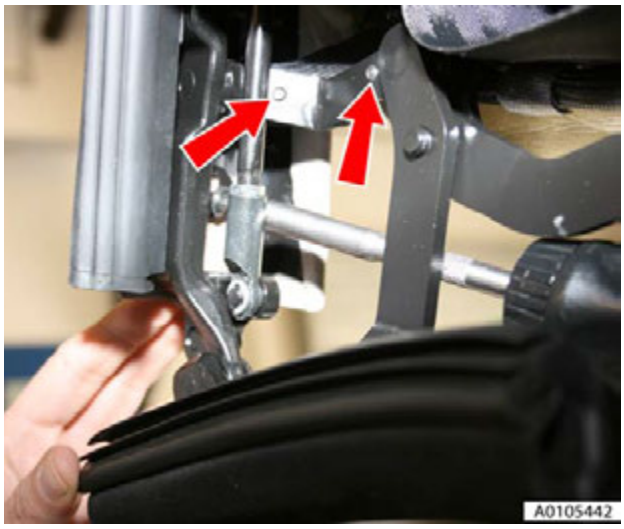


Figure 3

5. Release 4 clips securing header assembly to roof and remove.

Installation

1. Install header assembly to roof and secure with clips.
2. Secure rear of header assembly to roof with screws.
3. Secure front of header assembly to roof with screws.
4. Return roof to original position.

Front Header Console Assembly - Renew

Repair Operation Time (ROT)	
Item	Code
Front Header Console Assembly-Renew	01.05.BC

Removal

1. Remove rear view mirror (see Workshop Manual procedure 01.08.FA Mirror Assembly - Rear Dipping - Renew).
2. Remove grille from front header map lamp console.
3. Remove screw securing map lamp console to header.
4. Release map lamp console from header.
5. Turn bulb holders anticlockwise and release bulb holders. Remove console.
6. Depress clips and press out map lamps.

Installation

1. Install map lamps.
2. Position console, install bulb holders.
3. Install map lamp console, install and tighten screw.
4. Install grille.
5. Install interior mirror (see Workshop Manual procedure 01.08.FA Mirror Assembly - Rear Dipping - Renew).

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RH/LH Upper Rear Pillar Panel Assembly - Renew

Repair Operation Time (ROT)		
Item		**Code**
Upper Rear Pillar Panel Assembly-Renew	RH	**01.05.BF**
Upper Rear Pillar Panel Assembly-Renew	LH	**01.05.BG**

Removal

1. Open tailgate.
2. Remove rear header.
3. Release boot compartment lamp from rear pillar panel. Disconnect multiplug (see Figure 1).



Figure 1

4. Remove nut securing rear pillar panel assembly to body.
5. Release panel from fir tree clip.
6. Remove panel.
7. Remove fir tree clip from panel.

Installation

1. Install fir tree clip in panel.
2. Install panel and secure with nut and fir tree clip.
3. Connect multiplug, install boot compartment lamp in panel.
4. Install rear header.
5. Close tailgate.

RH Sun Visor - Renew

Repair Operation Time (ROT)		
Item		**Code**
Sun Visor-Renew	RH	**01.05.BH**

Removal

1. Remove rear view mirror (see Workshop Manual procedure 01.08.FA Mirror Assembly - Rear Dipping - Renew).
2. Remove grill from front header courtesy light console
3. Remove screw (x1) courtesy light console to front header.
4. Remove courtesy light console from header.
5. Remove sun visor Allen screws (x2)
6. Remove sun visor.

Installation

1. Position sun visor and install screws (x2).
2. Install courtesy light console.
3. Install grill.
4. Install rear view mirror (see Workshop Manual procedure 01.08.FA Mirror Assembly - Rear Dipping - Renew).

LH Sun Visor - Renew

Repair Operation Time (ROT)		
Item		**Code**
Sun Visor-Renew	LH	**01.05.BJ**

Removal

1. Remove rear view mirror (see Workshop Manual procedure 01.08.FA Mirror Assembly - Rear Dipping - Renew).
2. Remove grill from front header courtesy light console.
3. Remove screw securing courtesy light console to header (see Figure 1).

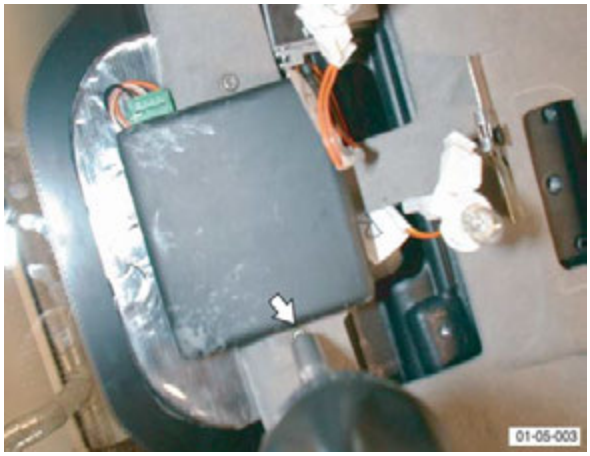


Figure 1

4. Remove courtesy light console from header.

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5. Remove sun visor allen screws (x2) (see Figure 2).



Figure 2

6. Remove sunvisor.

Installation

1. Position sun visor and install screws (x2).
2. Install courtesy light console.
3. Install grille.
4. Install rear view mirror (see Workshop Manual procedure 01.08.FA Mirror Assembly - Rear Dipping - Renew).

Door Trimboard Assembly - Renew

Repair Operation Time (ROT)	
Item	**Code**
Door Trimboard Assembly-Renew	**01.05.CA**

Removal

1. Remove trimboard (see Workshop Manual procedure 01.05.CB Trimboard Assembly - Door - Remove for Access and Refit).
2. Remove switch pack (screws x4).
3. Remove puddle lamp.
4. Remove door pocket (nuts x10).
5. Remove centre trim (velcro x6).
6. Remove top trim and speaker grille (screws x12).
7. Remove demist duct (screws x3).

Installation

1. Install demist duct.
2. Install top trim and speaker grille.
3. Install centre trim (velcro x6).
4. Install door pocket.
5. Install puddle lamp.
6. Install switch pack.
7. Install trimboard (see Workshop Manual procedure 01.05.CB Trimboard Assembly - Door - Remove for Access and Refit).

Door Trimboard Assembly - Remove for Access/Refit

Repair Operation Time (ROT)	
Item	**Code**
Door Trimboard Assembly-Remove/ Refit	**01.05.CB**

Removal

1. Lower door glass fully.
2. Battery isolation switch 'OFF'.
3. Remove Allen bolts (x2) securing door handle assembly to door panel.
4. Remove trim insert, disconnect door catch inner and outer cable from handle and retaining plate. Remove handle assembly.
5. Remove screw securing trimboard to upper front of door frame.
6. Remove screws (x4) securing trimboard to door frame.
7. Raise trimboard out and up to release from door frame clips, disconnect multiplugs (x2).

Installation

1. Position door trim panel, connect multiplugs (x2). Place trimboard over top of retaining clips and pull out and down to install trimboard.
2. Install and tighten trimboard screws (x4).
3. Install and tighten screw, trimboard to upper front of door frame.
4. Position handle assembly, connect release cable, install handle trim insert.
5. Install and tighten Allen bolts (x2), handle assembly to door frame.
6. Battery isolation switch 'ON'.

Lower Quarter Trim Panel Assembly - Renew (Roadster Only)

Repair Operation Time (ROT)		
Item		**Code**
Lower Quarter Trim Panel Assembly-Renew	RH	**01.05.CR**
Lower Quarter Trim Panel Assembly-Renew	LH	**01.05.CS**

Removal

1. Remove Wind deflector (see Workshop Manual procedure 01.17.DA Wind Deflector - Renew).
2. Remove Panel centre (see Workshop Manual procedure 01.05.FS/01.05.FR Panel Assembly - Centre - Rear Bulkhead - RH/LH - Renew).
3. Remove Speaker grille (see Workshop Manual procedure 01.05.CN/01.05.CP Grille - Speaker Rear Quarter - RH/LH - Renew).

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4. Remove screw (x1) securing quarter trim to body (under speaker grille) (see Figure 1).



Figure 1

5. Remove screw (x1) securing bottom centre of quarter trim (see Figure 2).



Figure 2

6. Remove bolt securing body side trim to quarter panel via B-post roof aperture (see Figure 3).



Figure 3

7. Remove nuts (x2) securing panel quarter trim to body side trim (see Figure 4).

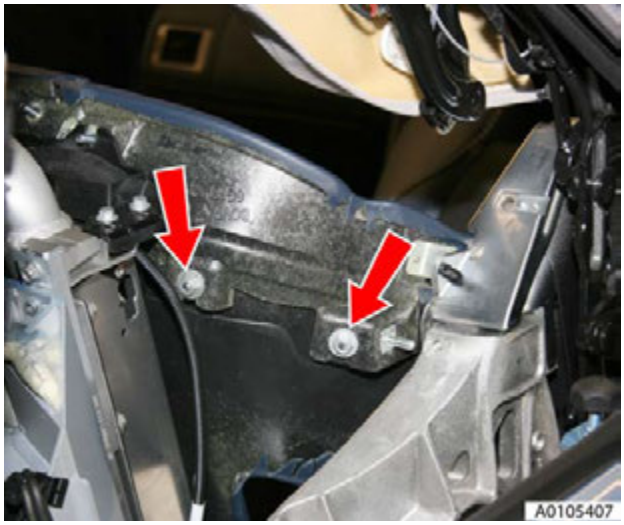


Figure 4

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8. Release fir tree clip securing quarter trim to body (see Figure 5).

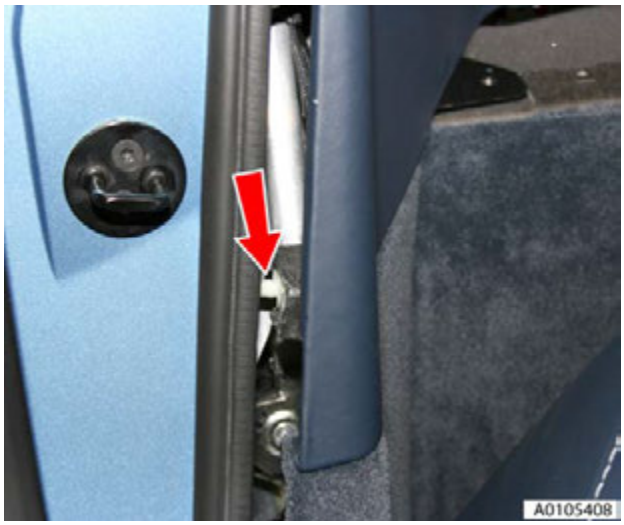


Figure 5

9. Release quarter trim from heal board and remove quarter trim (see Figure 6).



Figure 6

10. Remove nut (x2) securing lower panel to quarter panel.

Removal

1. Install nut (x2) securing lower panel to quarter panel.
2. Install quarter trim and secure under heal board.
3. Install fir tree clip securing quarter trim to body.
4. Install nuts (x2) securing panel quarter trim to body side trim.
5. Install bolt securing body side trim to quarter panel via B-post roof aperture.
6. Install screw (x1) securing bottom centre of quarter trim.
7. Install screw (x1) securing quarter trim to body (under speaker grille)
8. Remove Speaker grille (see Workshop Manual procedure 01.05.CN/01.05.CP Grille - Speaker Rear Quarter - RH/LH - Renew).
9. Remove Panel centre (see Workshop Manual procedure 01.05.FS/01.05.FR Panel Assembly - Centre - Rear Bulkhead - RH/LH - Renew).
10. Install Wind deflector (see Workshop Manual procedure 01.17.DA Wind Deflector - Renew).

Side Carpet Kit (RHD) - Renew

Repair Operation Time (ROT)	
Item	**Code**
Side Carpet Kit (RHD)-Renew	01.05.DL

Removal

1. Remove handbrake gaiter (see Workshop Manual procedure 01.05.DK Gaiter - Handbrake - Renew).
2. Remove passenger seat (see Workshop Manual procedure 01.10.AA Seat Assembly - Front - RH - Remove for Access and Refit
3. Remove drivers seat (see Workshop Manual procedure 01.10.AB Seat Assembly - Front - LH - Remove for Access and Refit).
4. Remove LH quarter panel assembly (see Workshop Manual procedure 01.05.CM Panel Assembly - Quarter - LH - Remove for Access and Refit).
5. Remove RH quarter panel assembly (see Workshop Manual procedure 01.05.CL Panel Assembly - Quarter - RH - Remove for Access and Refit).
6. Pull back RH front centre carpet for access (press stud x1).
7. Remove LH rear centre (press stud x2) and seat runner carpets for access.
8. Remove RH sill carpet, pull from around, handbrake lever and A-post trim.
9. Remove LH tunnel carpet, pull from under centre console and footrest.
10. Pull back LH front centre carpet for access.
11. Remove RH rear centre (press stud x2) and seat runner carpets for access.
12. Remove LH sill carpet, pull from around A-post trim.
13. Remove RH tunnel carpet, pull from under centre console.

Installation

1. Install RH sill carpet around handbrake lever and A-post trim.
2. Install LH tunnel carpet, push under centre console and footrest.
3. Install RH front centre carpet (ensure good fit around pedals).
4. Install LH rear centre (ensure end tucked into sub woofer) and seat runner carpets.
5. Install LH sill carpet, ensure fit around A-post trim.
6. Install RH tunnel carpet, push under centre console.

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7. Install LH front centre carpet.
8. Install RH rear centre (ensure end tucked into heel board) and seat runner carpets.
9. Install LH quarter panel assembly (see Workshop Manual procedure 01.05.CM Panel Assembly - Quarter - LH - Remove for Access and Refit).
10. Install RH quarter panel assembly (see Workshop Manual procedure 01.05.CL Panel Assembly - Quarter - RH - Remove for Access and Refit).
11. Install passenger seat (see Workshop Manual procedure 01.10.AA Seat Assembly - Front - RH - Remove for Access and Refit).
12. Install drivers seat (see Workshop Manual procedure 01.10.AB Seat Assembly - Front - LH - Remove for Access and Refit).
13. Install handbrake gaiter (see Workshop Manual procedure 01.05.DK Gaiter - Handbrake - Renew).

Side Carpet Kit (LHD) - Renew

Repair Operation Time (ROT)	
Item	**Code**
Side Carpet Kit (LHD)-Renew	**01.05.DM**

Removal

1. Remove handbrake gaiter (see Workshop Manual procedure 01.05.DK Gaiter - Handbrake - Renew).
2. Remove passenger seat (see Workshop Manual procedure 01.10.AA Seat Assembly - Front - RH - Remove for Access and Refit).
3. Remove drivers seat (see Workshop Manual procedure 01.10.AB Seat Assembly - Front - LH - Remove for Access and Refit).
4. Remove LH quarter panel assembly (see Workshop Manual procedure 01.05.CM Panel Assembly - Quarter - LH - Remove for Access and Refit).
5. Remove RH quarter panel assembly (see Workshop Manual procedure 01.05.CL Panel Assembly - Quarter - RH - Remove for Access and Refit).
6. Pull back LH front centre carpet for access (press stud x1) (see Figure 1).



Figure 1

7. Remove LH rear centre (press stud x2) and seat runner carpets for access (see Figure 2).



Figure 2

8. Remove scuff plate (screws x4).
9. Remove LH sill carpet, pull from around footrest, handbrake lever and A-post trim (see Figure 3).



Figure 3

10. Remove LH tunnel carpet, pull from under centre console.

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11. Pull back RH front centre carpet for access (see Figure 4).



Figure 4

12. Remove RH rear centre (press stud x2) and seat runner carpets for access (see Figure 5).



Figure 5

13. Remove RH sill carpet, pull from around A-post trim (see Figure 6).



Figure 6

14. Remove RH tunnel carpet, pull from under centre console (see Figure 7).



Figure 7

Installation

1. Install LH sill carpet around footrest, handbrake lever and A-post trim.
2. Install LH tunnel carpet, push under centre console.
3. Install scuff plate (screws x4).
4. Install LH front centre carpet (ensure good fit around pedals).
5. Install LH rear centre (ensure end tucked into sub woofer) and seat runner carpets.
6. Install RH sill carpet, ensure fit around A-post trim.
7. Install RH tunnel carpet, push under centre console.
8. Install RH front centre carpet.
9. Install RH rear centre (ensure end tucked into heel board) and seat runner carpets.
10. Install LH quarter panel assembly (see Workshop Manual procedure 01.05.CM Panel Assembly - Quarter - LH - Remove for Access and Refit).
11. Install RH quarter panel assembly (see Workshop Manual procedure 01.05.CL Panel Assembly - Quarter - RH - Remove for Access and Refit).
12. Install passenger seat (see Workshop Manual procedure 01.10.AA Seat Assembly - Front - RH - Remove for Access and Refit).
13. Install drivers seat (see Workshop Manual procedure 01.10.AB Seat Assembly - Front - LH - Remove for Access and Refit).
14. Install handbrake gaiter (see Workshop Manual procedure 01.05.DK Gaiter - Handbrake - Renew).

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Top Rear Console Finisher Panel Assembly - Renew (Roadster Only)

Repair Operation Time (ROT)	
Item	**Code**
Top Rear Console Finisher Panel Assembly-Renew	**01.05.DR**

Removal

1. Remove Wind deflector (see Workshop Manual procedure 01.17.DA Wind Deflector - Renew).
2. Remove Console panel assembly rear LH (see Workshop Manual procedure 01.12.DE Console Panel Assembly - Rear - Roadster - LH - Renew).
3. Remove Console panel assembly rear RH (see Workshop Manual procedure 01.12.DF Console Panel Assembly - Rear Roadster - RH - Renew).
4. Remove screws (x2), collect washers and remove trim.

Installation

1. Install trim, washers and screws.
2. Install Console panel assembly rear RH (see Workshop Manual procedure 01.12.DF Console Panel Assembly - Rear Roadster - RH - Renew).
3. Install Console panel assembly rear LH (see Workshop Manual procedure 01.12.DE Console Panel Assembly - Rear - Roadster - LH - Renew).
4. Install Wind deflector (see Workshop Manual procedure 01.17.DA Wind Deflector - Renew).

RH/LH Bodyside Rear Trim Panel Assembly - Renew (Roadster Only)

Repair Operation Time (ROT)		
Item		**Code**
Bodyside Rear Trim Panel Assembly-Renew	RH	**01.05.DX**
Bodyside Rear Trim Panel Assembly-Renew	LH	**01.05.DY**

Removal

1. Remove Quarter panel trim (see Workshop Manual procedure 01.05.CR/01.05.CS Panel Assembly - Quarter Trim Lower - RH/LH - Renew).
2. Remove Wind stop hook (see Workshop Manual procedure 01.05.CZ Hook - Windstop - Renew).
3. Remove nut securing body side trim to console panel (see Figure 1).



Figure 1

4. Remove nuts securing trim to ROPS bracket (see Figure 2).

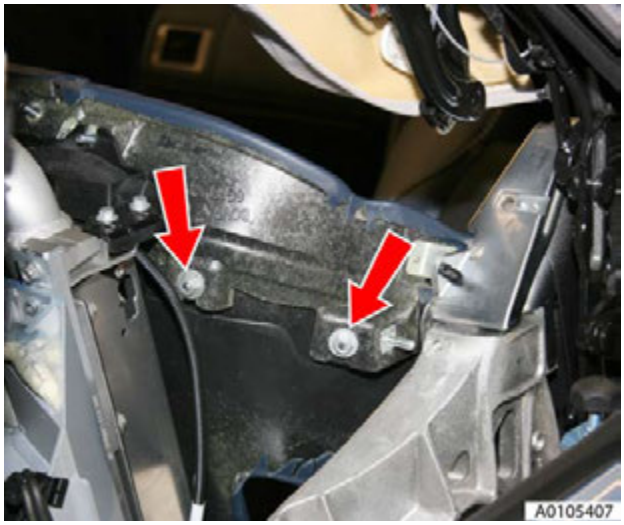


Figure 2

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5. Remove bolt securing trim to B-post (see Figure 3).



Figure 3

6. Release fir tree clip and remove trim.

Installation

1. Install trim and secure fir tree clip.
2. Install bolt securing trim to B-post.
3. Install nut securing trim to Roll Over Protection System (ROPS) bracket.
4. Install nut securing body side trim to console panel.
5. Install Wind stop hook (see Workshop Manual procedure 01.05.CZ Hook - Windstop - Renew).
6. Install Quarter panel trim (see Workshop Manual procedure 01.05.CR/01.05.CS Panel Assembly - Quarter Trim Lower - RH/LH - Renew).

Tonneau to Body Weatherstrip Assembly - Renew (Roadster Only)

Repair Operation Time (ROT)	
Item	**Code**
Tonneau to Body Weatherstrip Assembly-Renew	**01.07.AR**

Removal

1. Remove panel assembly body side LH (see Workshop Manual procedure 01.05.DY Panel Assembly - Bodyside Trim - Rear - LH - Renew).
2. Remove panel assembly body side RH (see Workshop Manual procedure 01.05.DX Panel Assembly - Bodyside Trim - Rear - RH - Renew).
3. Mark fitted position of seal on B-post (both sides).
4. Remove nuts (x2) from seal retaining bar and remove bar (both sides) (see Figure 1).

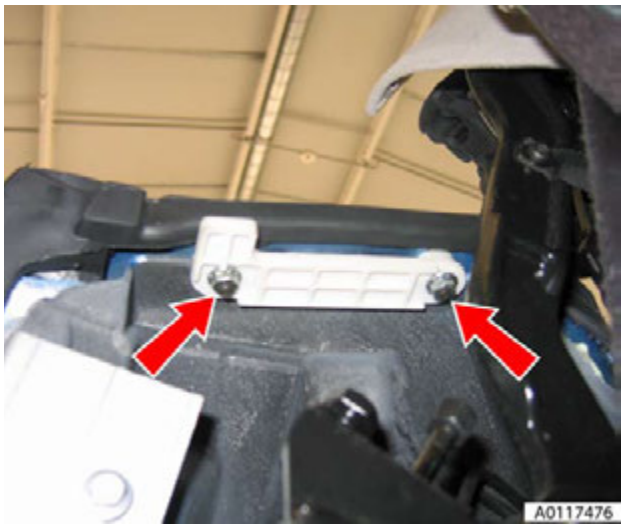


Figure 1

5. Remove retaining clip from B-post (both sides) (see Figure 2).

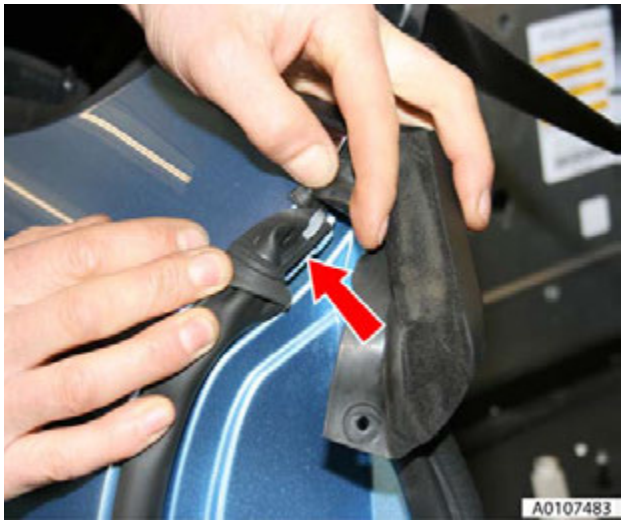


Figure 2

6. Remove margin seal retaining clip from B-post (both sides).

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7. Release seal from B-post adhesive (see Figure 3).



Figure 3

8. Release inner part of seal from tonneau (see Figure 4).



Figure 4

9. Release outer seals from body (both sides) and remove seal.
10. Remove chrome trims and clips from seal.

Installation

1. Clean adhesive from B-posts.
2. Install chrome trims and clips to seal.
3. Apply suitable adhesive to B-post part of seal.
4. Align and install seal to fitted position on B-posts (both sides).
5. Position retaining bar and install nuts (both sides).
6. Install outer seals to body (both sides).
7. Install inner part of seal to tonneau.
8. Install margin seal retaining clip from B-post (both sides).
9. Install retaining clip to B-post (both sides).
10. Install panel assembly body side RH (see Workshop Manual procedure 01.05.DX Panel Assembly - Bodyside Trim - Rear - RH - Renew).
11. Install panel assembly body side LH (see Workshop Manual procedure 01.05.DY Panel Assembly - Bodyside Trim - Rear - LH - Renew).

Door Trim Weather Strip Assembly - Renew (Roadster Only)

Repair Operation Time (ROT)	
Item	**Code**
Door Trim Weather Strip Assembly-Renew	**01.07.AX**

Removal

1. Remove LH door assembly (see Workshop Manual procedure 01.03.FA Door Assembly - LH - Remove for Access & Refit).
2. Remove RH door assembly (see Workshop Manual procedure 01.03.EA Door Assembly - RH - Remove for Access & Refit).
3. Remove LH front sill plate (see Workshop Manual procedure 01.05.AK Plate - Front Sill - LH - Renew).
4. Remove RH front sill plate (see Workshop Manual procedure 01.05.AJ Plate - Front Sill - RH - Renew).
5. Remove header rail finisher (see Workshop Manual procedure 01.08.JA Finisher - Header - Windshield - Renew).
6. Remove screw and retaining stud seal retainer to A-post (both sides).
7. Release seal from under tonneau seal and to top of A-posts (both sides) (see Figure 1).



Figure 1

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8. Release locating section from above A-post chrome trims (both sides) (see Figure 2).



Figure 2

9. Release seal from under A-post chrome trims (both sides) (see Figure 3).



Figure 3

10. Release seal from header rail and remove.

Installation

1. Clean adhesive from header rail.
2. Apply suitable adhesive to header rail and secure seal to header rail.
3. Secure seal under chrome trims (both sides).
4. Secure locating section from over chrome trims (both sides).
5. Secure seal from top of A-posts to under tonneau seal (both sides) (see Figure 4).



Figure 4

6. Install screw and retaining stud seal retainer to A-post (both sides).
7. Install RH front sill plate (see Workshop Manual procedure 01.05.AJ Plate - Front Sill - RH - Renew).
8. Install LH front sill plate (see Workshop Manual procedure 01.05.AK Plate - Front Sill - LH - Renew).
9. Install RH door assembly (see Workshop Manual procedure 01.03.EA Door Assembly - RH - Remove for Access & Refit).
10. Install LH door assembly (see Workshop Manual procedure 01.03.FA Door Assembly - LH - Remove for Access & Refit).
11. Install header rail finisher (see Workshop Manual procedure01.08.JA Finisher - Header - Windshield - Renew).
12. Perform water leak test (see Workshop Manual procedure 01.17.XX Water Test).

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Body System (01.00)

Exterior Trim (01.08)

Maintenance

RH/LH Applique Sill - Renew

Repair Operation Time (ROT)		
Item		**Code**
Applique Sill-Renew	LH	**01.08.CC**
Applique Sill-Renew	RH	**01.08.CD**

Removal

1. Raise vehicle on ramp.
2. Remove road wheel/s.
3. Release rear of front wheel arch liner (screws x7) for access.
4. Remove nut and bolt, sill to front fender (see Figure 1).

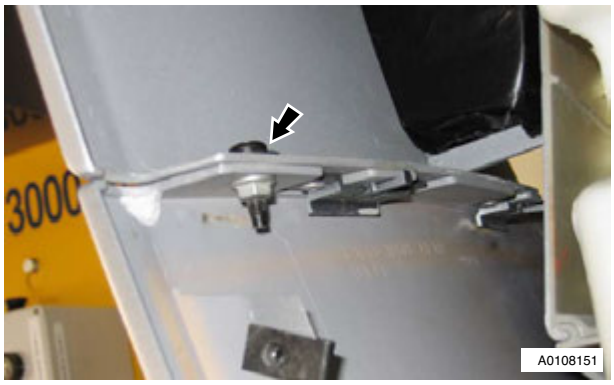


Figure 1

5. Release front of rear wheel arch liner (screws x5) for access.
6. Remove nut and bolts (x2), sill to rear body (see Figure 2).

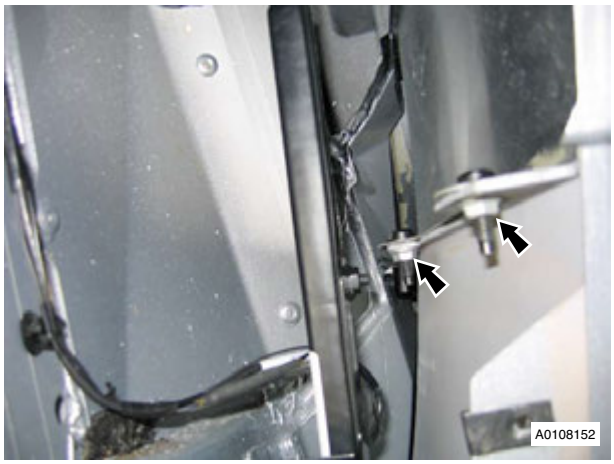


Figure 2

7. Remove screws (x5) sill to body (see Figure 3).

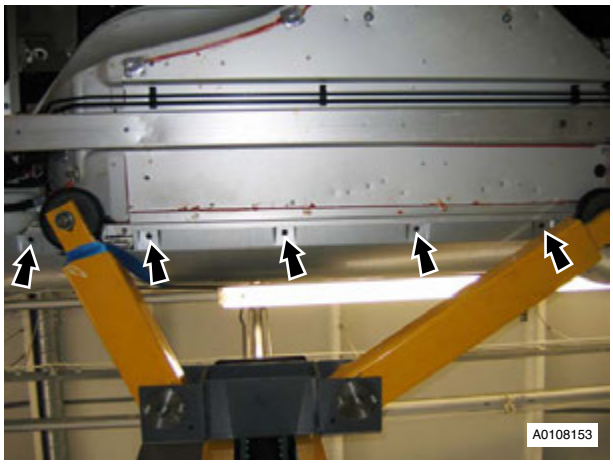


Figure 3

8. Remove margin seal (see Workshop Manual procedure 01.07.AM Seal - Front Door Margin - Lower - RH - Renew).
9. Remove screws (x4) from sill top (see Figure 4).

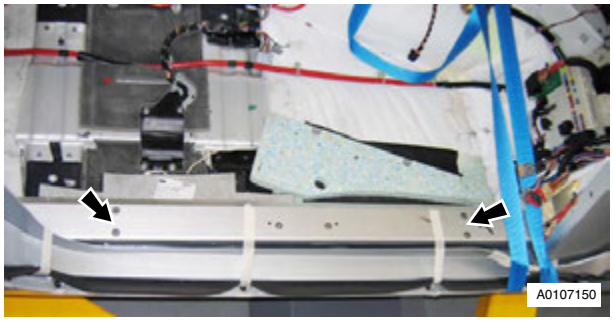


Figure 4

10. Refit wheels with 3 nuts and lower vehicle to floor.
11. Release clips (x2) wing to sill and remove sill.

Installation

1. Install sill.
2. Install screws (x4) to sill top.
3. Install margin seal (see Workshop Manual procedure 01.07.AM Seal - Front Door Margin - Lower - RH - Renew).
4. Remove wheels and raise vehicle.
5. Install screws (x5) sill to body.
6. Install nut and bolt, sill to front wing.
7. Position front of rear wheel arch liner (screws x5).
8. Install nut and bolts (x2), sill to rear body.
9. Position rear of front wheel arch liner (screws x7).
10. Install road wheel/s.
11. Lower vehicle on ramp.

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RH Wing Side Strake - Renew

Repair Operation Time (ROT)		
Item		**Code**
Wing Side Strake-Renew	RH	**01.08.CG**

Removal

1. Disconnect vehicle battery.
2. Raise vehicle on ramp.
3. Remove mesh - RH side strake (see Workshop Manual procedure 01.08.CE Mesh - Side Strake - RH - Renew).
4. Remove Torx screw, (inside A-post) securing side strake to body.
5. Remove nut securing side strake to RH inner fender.
6. Remove side strake.

Installation

1. Install side strake, install and tighten nut and Torx screw.
2. Install mesh - RH side strake (see Workshop Manual procedure 01.08.CE Mesh - Side Strake - RH - Renew).
3. Lower vehicle on ramp.
4. Connect vehicle battery.

LH Wing Side Strake - Renew

Repair Operation Time (ROT)		
Item		**Code**
Wing Side Strake-Renew	LH	**01.08.CH**

Removal

1. Raise vehicle on ramp.
2. Remove mesh - LH side strake (see Workshop Manual procedure 01.08.CF Mesh - Side Strake - LH - Renew).
3. Remove nuts (x3) mesh to side strake.
4. Remove mesh.
5. Remove screw inside A-post side strake to body.
6. Remove nut side strake to wheel arch.
7. Remove side strake.

Installation

1. Install side strake, nut and screw.
2. Position mesh to side strake and install nuts (x3).
3. Install mesh - LH side strake (see Workshop Manual procedure 01.08.CF Mesh - Side Strake - LH - Renew).
4. Lower vehicle on ramp.

Channel Assembly Divider Bar - Renew

Repair Operation Time (ROT)	
Item	**Code**
Channel Assembly Divider Bar-Renew	**01.08.HA**
Channel Assembly Divider Bar-Renew	**01.08.HB**

Removal

1. Remove window regulator (see Workshop Manual procedure 01.11.DA Regulator - Door Glass - RH - Renew).
2. Remove fixed glass (see Workshop Manual procedure 01.11.BG Glass - Front Door - Fixed RH - Renew).
3. Remove seal.
4. Remove screw, divider bar to mirror (see Figure 1).



Figure 1

5. Remove nut (hold stud with Allen key) divider bar to door and remove (see Figure 2).



Figure 2

Installation

1. Install bar and nut (hold stud with Allen key).
2. Install screw, divider bar to mirror (Do not tighten at this point).
3. Install seal.
4. Adjust bar. Rotate Allen stud in centre in/out until desired alignment of bar is achieved, then torque fixings.
5. Install fixed glass (see Workshop Manual procedure 01.11.BG Glass - Front Door - Fixed RH - Renew).
6. Install window regulator (see Workshop Manual procedure 01.11.DA Regulator - Door Glass - RH - Renew).

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Windshield Header Finisher - Renew (Roadster Only)

Repair Operation Time (ROT)	
Item	Code
Windshield Header Finisher-Renew	01.08.JA

Removal

1. Operate roof to halfway position and support roof when hydraulic pressure drops using suitable straps (see Figure 1).

WARNING

APPROXIMATELY 20 SECONDS AFTER THE OPEN/ CLOSE OPERATION HAS BEEN INTERRUPTED THE ROOF MAY SUDDENLY DROP DUE TO LOSS OF HYDRAULIC PRESSURE. IF THIS HAPPENS ENSURE NO BODY PARTS ARE CLOSE TO THE ROOF MECHANISM. IF THE ROOF REQUIRES MAINTENANCE, SUPPORT PROPERLY USING SUITABLE PROPS AND STRAPS.



Figure 1

2. Release header seal from trim buttons (x2) to access retaining screw and remove screws (both sides) (see Figure 2).



Figure 2

3. Remove screws (x2) securing finisher to windscreen frame and remove finisher (see Figure 3).



Figure 3

Installation

1. Position finisher and install screws (x2).
2. Install screws under header seal (both sides).
3. Clean trim buttons, apply suitable adhesive and affix seal (both sides).
4. Restore roof to original position.

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Body System (01.00)

Mirrors (01.09)

Specifications

Torque Figures	
Description	Nm
Mirror Mounting	**20-25**

Maintenance

RH Door Mirror Assembly - Renew

Repair Operation Time (ROT)		
Item		**Code**
Door Mirror Assembly-Renew	RH	**01.08.GC**

Removal

1. Remove door trimboard (see Workshop Manual procedure 01.05.CB Trimboard Assembly - Door - Remove for Access and Refit).
2. Lift rear of fixed window, remove rubber surround at top and pull out window.
3. Remove the door mirror rubber cheater panel.
4. Disconnect multiplug and release harness from fir tree clips (x2) (see Fig 1).

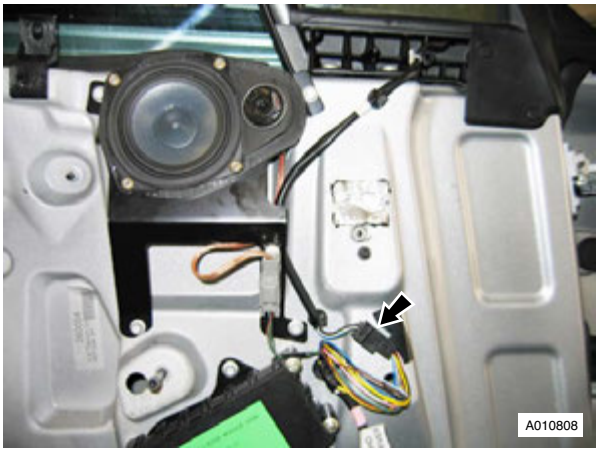


Figure 1

5. Remove bolts (x4) and remove mirror assembly (see Fig 2).

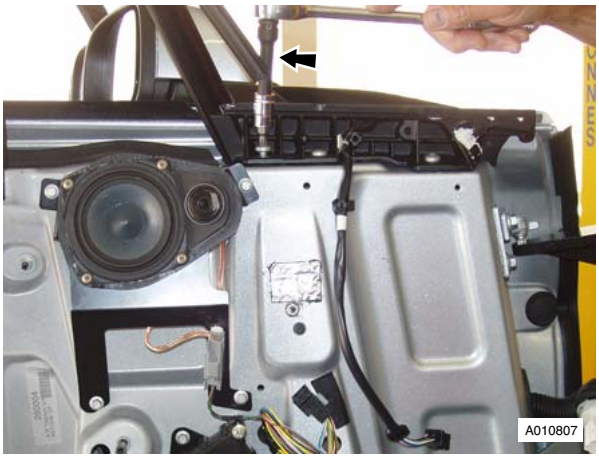


Figure 2

Installation

1. Position mirror and install and torque tighten bolts (x4).
2. Connect multiplug and secure harness fir tree clips (x2).
3. Install rubber mirror cheater panel and insert rubber guttering.
4. Install fixed window, ensure rubber surround is correctly installed.
5. Install door trimboard (see Workshop Manual procedure 01.05.CB Trimboard Assembly - Door - Remove for Access and Refit).

LH Door Mirror Assembly - Renew

Repair Operation Time (ROT)		
Item		**Code**
Door Mirror Assembly-Renew	LH	**01.08.GD**

Removal

1. Remove door trimboard (see Workshop Manual procedure 01.05.CB Trimboard Assembly - Door - Remove for Access and Refit).

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2. Lift rear of fixed window, remove rubber surround at top and pull out window (see Fig 1).



Figure 1

3. Remove the door mirror rubber cheater panel (see Fig 2).



Figure 2

4. Disconnect multiplug and release harness from fir tree clips (x2) and self adhesive clip (see Fig 3).

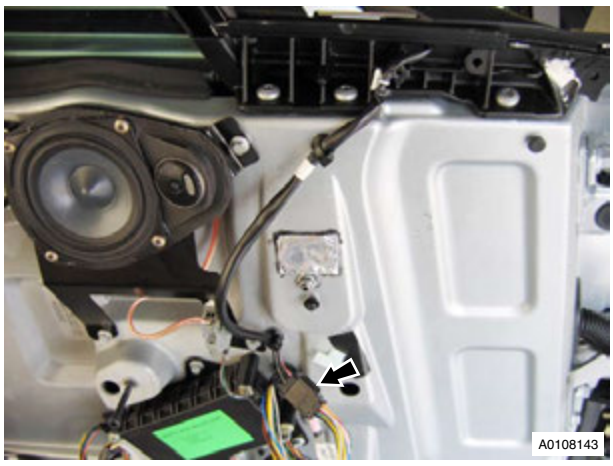


Figure 3

5. Remove Torx bolts (x3) and screw from glass channel, remove mirror assembly (see Fig 4).



Figure 4

Installation

1. Position mirror, install and torque tighten Torx bolts (x3) and screw (glass channel).
2. Connect multiplug and secure harness fir tree clips (x2) and self adhesive clip.
3. Install rubber mirror cheater panel and insert rubber guttering.
4. Refit fixed window, ensure rubber surround is correctly installed.
5. Install door trimboard (see Workshop Manual procedure 01.05.CB Trimboard Assembly - Door - Remove for Access and Refit).

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Body System (01.00)

Seating (01.10)

Description

The front seats are installed with the following features:

- Integral side airbags
- Head restraints
- Safety belt reel pretensioner
- Electrically adjustable seat positioning and lumbar support
- Heated seat (optional)

Heated Seats

The heated seat system comprises:

- Heated seat switches
- Backrest heater element
- Cushion heater element and thermostat

The heated seat function permits the electrical heating of the seat back and cushion on the driver and front passenger seats. The heating system of each seat is selected by separate switches located on the inside of each seat base.

Once the heated seat function has been activated, it will operate until one of the following conditions have been satisfied:

- A fixed period of time has expired (10 minutes)
- If the engine is not running and the ignition key is removed
- A malfunction is detected by the heated seat module

Confirmation that the heated seat function is active is indicated by the illumination of an amber light on the switch.

Specifications

Torque Figures	
Description	Nm
Seat mountings	20-25
Seatbelt	15-20

Maintenance

RH/LH Front Seat - Remove and Install

Repair Operation Time (ROT)		
Item		**Code**
Front Seat - Remove and Install	RH	**01.10.AA**
Front Seat - Remove and Install	LH	**01.10.AB**

Remove

1. Power seat fully forward.
2. Remove bolts (x2), securing rear of seat to seat rails.
3. Power seat fully rearwards.
4. Disconnect vehicle battery.
5. Remove bolt securing seat belt to seat frame.
6. Remove bolts (x2), securing front of seat to seat rails.
7. Tip the seat forwards and disconnect multiplugs (x4).
8. Protect sill plate and trim prior to seat removal.
9. With assistance, remove seat assembly.

Install

1. With assistance, Install seat in the vehicle.
2. Position seat belt to seat frame, install and torque tighten bolt.
3. Tip the seat forwards and connect multiplugs (x4).
4. Position seat onto seat rails.
5. Remove sill plate protection.
6. Connect vehicle battery.
7. Install front bolts (x2. Power seat forward and install rear bolts (x2). Torque tighten bolts (x4).

To power the drivers seat the ignition switch must be in the 'II' position

Front Seat Squab Cover Assembly (Each, Pre-08MY) - Remove and Install

Repair Operation Time (ROT)	
Item	**Code**
Front Seat Squab Cover Assembly - Remove and Install	**01.10.AC**

Remove

1. Remove seat (see Workshop Manual procedure 01.10.AB Seat Assembly - Front - LH - Remove for Access and Refit).

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2. Remove release lever (see Figure 1).



Figure 1

3. Remove lever cover (see Figure 2).



Figure 2

4. Disconnect airbag multiplug and release from bracket (see Figure 3).



Figure 3

5. Remove fixing multiplug bracket, move aside (see Figure 4).



Figure 4

6. Remove (slide down) airbag module (bolt x1) (see Figure 5).



Figure 5

7. Release cover from seat back shell (studs x2 velcrox2) (see Figure 6).



Figure 6

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8. Release cover from seat back shell (strip x2 /clips x9) (see Figure 7).



Figure 7

9. Release cover from bottom of seat back shell (see Figure 8).



Figure 8

10. Push cover through to front of seat, release strip, ease from foam (velcro strips) and remove cover (see Figure 9).



Figure 9

Installation

1. Install cover over foam attach to velcro, secure strip and push through seat.
2. Secure cover to seat back shell.
3. Secure cover to bottom of seat back shell.
4. Secure cover to seat back shell (studs and velcro).
5. Install airbag module (bolt x1) (torque).
6. Install multiplug bracket fixing.
7. Connect airbag multiplug and secure to bracket.
8. Install lever cover.
9. Install release lever.
10. Install seat (see Workshop Manual procedure 01.10.AB Seat Assembly - Front - LH - Remove for Access and Refit).

Front Seat Squab Cover Assembly (Each, from 08MY) - Remove and Install

Repair Operation Time (ROT)	
Item	**Code**
Front Seat Squab Cover Assembly (from 08MY) - Remove and Install	**01.10.AC**

Remove

Information to follow

Front Seat Cushion Cover Assembly (Each)-Renew

Repair Operation Time (ROT)	
Item	**Code**
Front Seat Cushion Cover Assembly-Renew	**01.10.AD**

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Removal

1. Remove 6 way height adjuster (see Workshop Manual procedure 01.10.AE 6 Way Height Adjuster - Including Motors - Renew).
2. Remove screws (x3) heater and lumbar switch assembly (see Figure 1).



Figure 1

3. Release switch assembly and disconnect multiplug
4. Release cover from cushion frame assembly (see Figure 2).



Figure 2

5. Pull seat cushion cover from between squab and cushion frames and remove cover (see Figure 3).

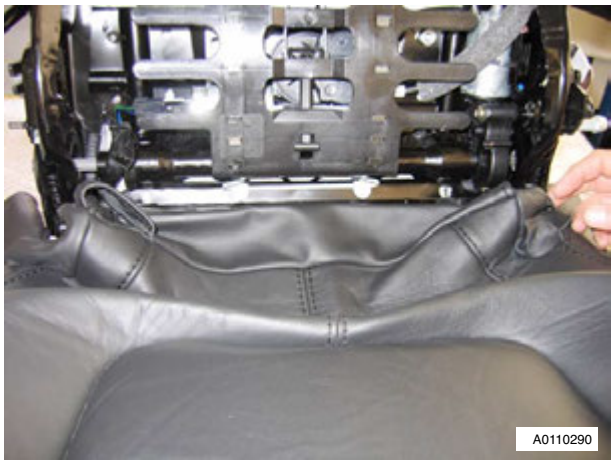


Figure 3

Installation

1. Connect multiplugs (x2) heater and lumber switch assembly.
2. Install switch assembly to seat
3. Ease cover over cushion foam attach to velcro.
4. Push cushion flap between cushion and squab and secure to cushion frame assembly.
5. Secure cushion cover to sides and front edge of seat cushion frame assembly.
6. Install 6 way height adjuster (see Workshop Manual procedure 01.10.AE 6 Way Height Adjuster - Including Motors - Renew).

6-Way Height Adjuster (Inc. Motors) - Renew

Repair Operation Time (ROT)	
Item	**Code**
6-Way Height Adjuster-Renew	**01.10.AE**

Removal

1. Power seat fully forward.
2. Remove bolts (x2) securing rear of seat to seat rails.
3. Power seat fully rearwards.
4. Remove bolts (x2) securing front of seat to seat rails.
5. Battery isolation switch 'OFF'.
6. Remove bolt securing seat belt to seat frame.
7. Tip the seat forwards and disconnect multiplugs (x4).
8. With assistance, remove seat assembly.
9. Remove screw (x1) relay to seat cushion base.

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10. Disconnect multiplugs (x3) seat motors (see Figure 1).

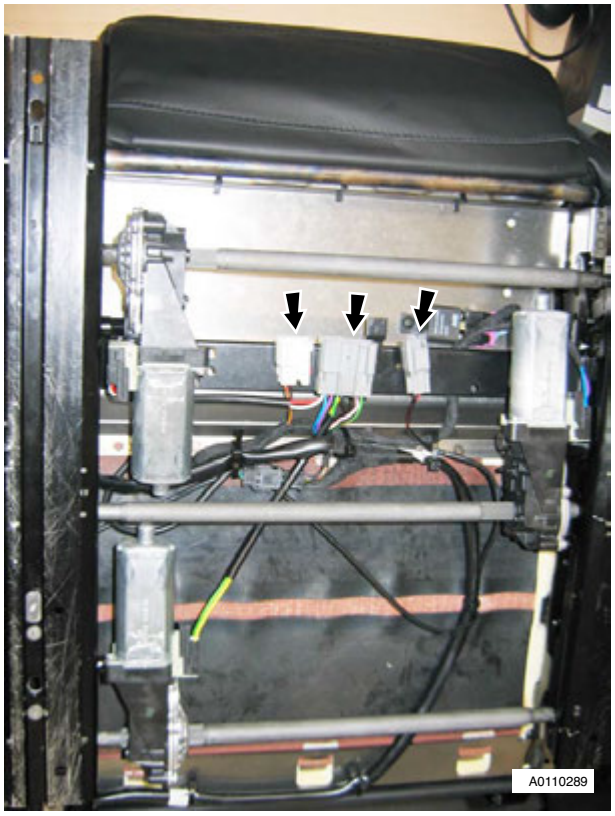


Figure 1

11. Release multiplugs (3) from 6 way seat adjuster frame assembly.
12. Remove bolt (x1) seat belt buckle to frame (see Figure2).



Figure 2

13. Release cable ties (x4) securing seat belt buckle harness to 6 way seat adjuster frame assembly (see Figure 3).

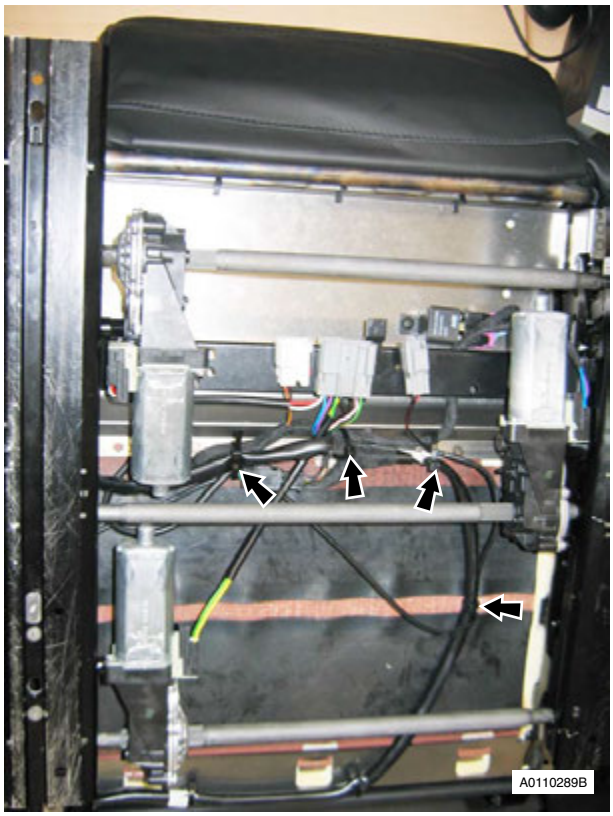


Figure 3

14. Remove seat belt buckle assembly.
15. Remove screws (x4) 6 way height adjuster to seat cushion frame (see Figure 4).

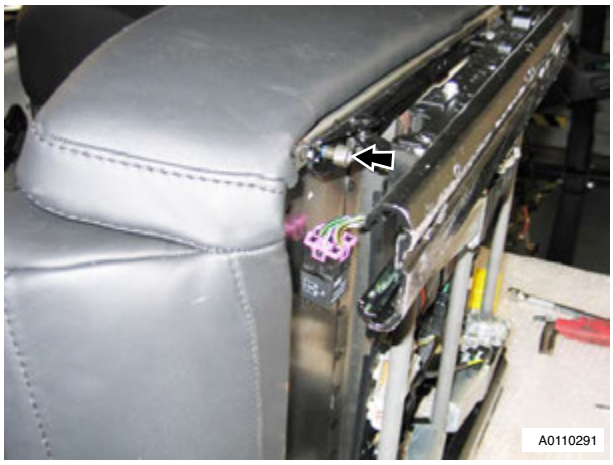


Figure 4

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16. Slide 6 way height adjuster to release and remove adjuster from seat assembly (see Figure 5).



Figure 5

Installation

1. Install relay to seat cushion base.
2. Connect multiplugs (x3) and secure to 6 way adjuster frame.
3. Secure seat belt buckle harness (cable ties x4) to 6 way seat adjuster frame assembly.
4. Install a new bolt that attaches the seat belt buckle.
5. Position 6 way height adjuster to seat cushion frame assembly and install screws (x4).
6. With assistance, install seat in the vehicle.
7. Position seat belt to seat frame, install and torque tighten bolt.
8. Tip seat forwards and connect multiplugs (x4).
9. Position seat onto seat rails.
10. Battery isolation switch 'ON'.
11. Install front bolts (x2), Power seat forward and install rear bolts (x2). Torque tighten bolts (x 4).

Squab Motor Kit - Renew

Repair Operation Time (ROT)	
Item	**Code**
Squab Motor Kit-Renew	**01.10.AF**

Removal

1. Remove squab cover (see Workshop Manual procedure 01.10.AC Cover Assembly - Front Seat Squab - Each - Renew).
2. Disconnect heater multiplug and remove squab foam (see Figure 1).

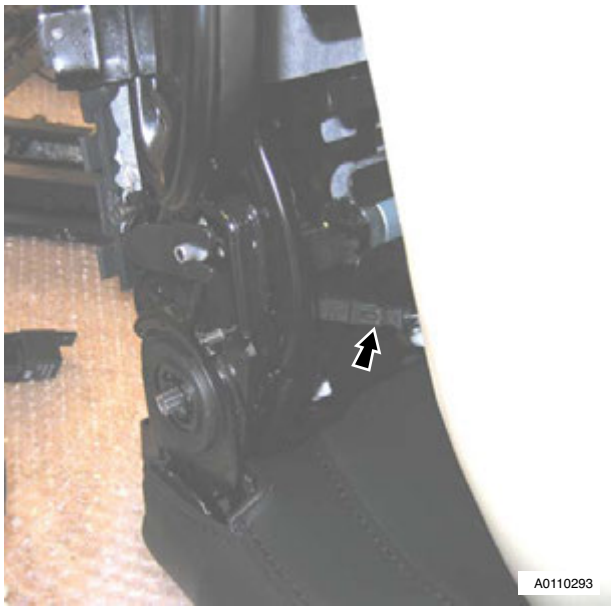


Figure 1

3. Release top mountings of lumbar adjust frame and move to access squab motor (see Figure 2).

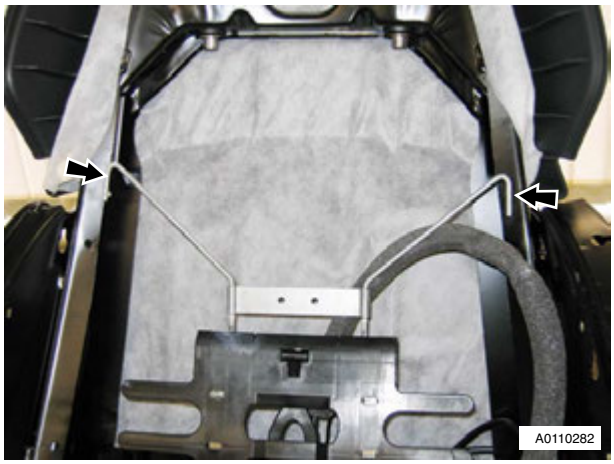


Figure 2

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4. Remove clip from adjust rod and pull through to clear motor (see Figure 3).

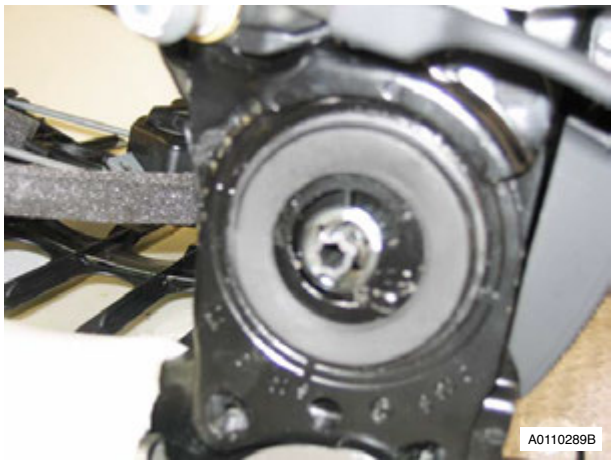


Figure 3

5. Remove motor from seat frame (bolt x1 and multiplug x1). (see Figure 4)

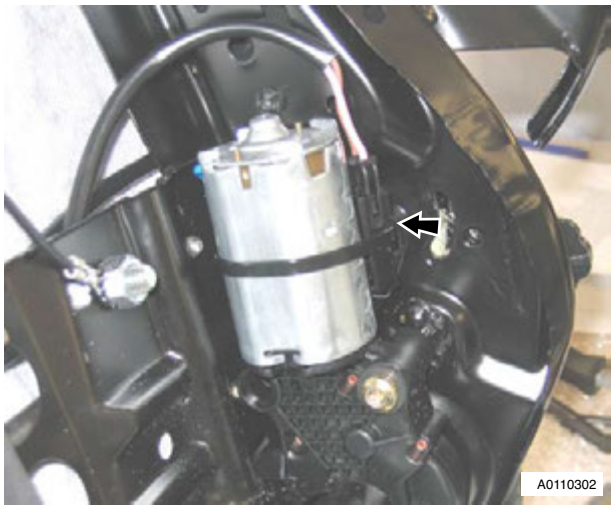


Figure 4

Installation

1. Install motor to seat frame, push adjust rod through motor (key splined) and install clip.
2. Position motor and install bolt (x1) and multiplug (x1).
3. Install top mountings of lumbar adjust frame.
4. Connect heater multiplug and install squab foam.
5. Install squab cover (see Workshop Manual procedure 01.10.AC Cover Assembly - Front Seat Squab - Each - Renew).

Lumbar Support Kit - Renew

Repair Operation Time (ROT)	
Item	**Code**
Lumbar Support Kit-Renew	01.10.AG

Removal

1. Remove squab cover (see Workshop Manual procedure 01.10.AC Cover Assembly - Front Seat Squab - Each - Renew).
2. Disconnect heater multiplug and remove squab foam (see Figure 1).

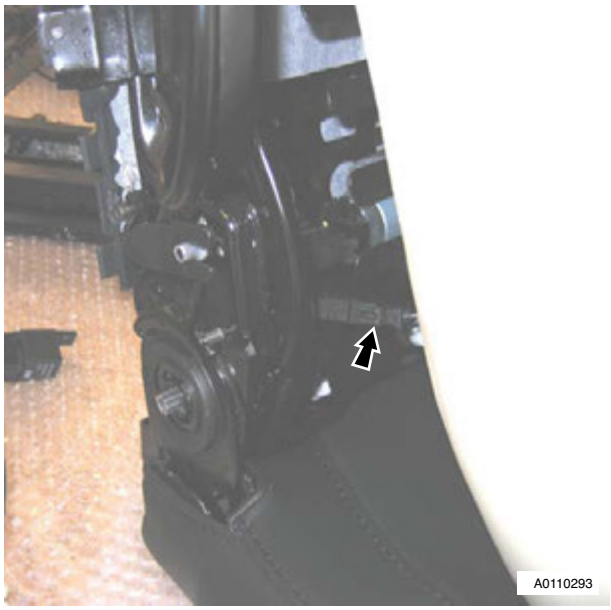


Figure 1

3. Remove seat back shell (rivets x4) (see Figure 2).



Figure 2

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4. Disconnect lumbar motor multiplug (see Figure 3).

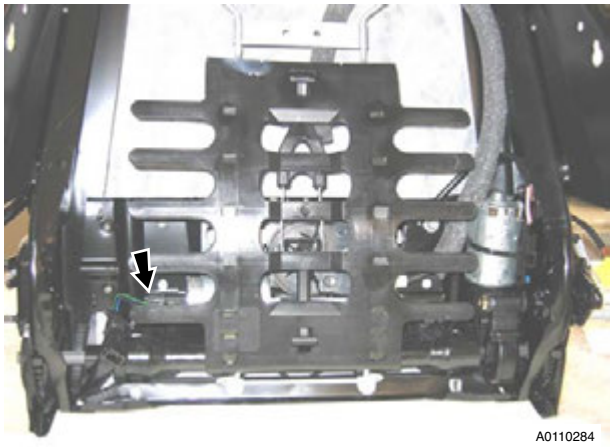


Figure 3

5. Remove lumbar support from seat frame (screws x2) (see Figure4).

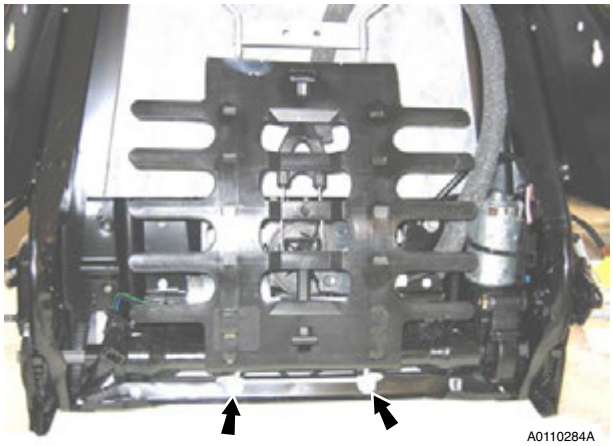


Figure 4

Installation

1. Install lumbar support to seat frame (screws x2).
2. Connect lumbar motor multiplug.
3. Install seat back shell (rivets x4).
4. Connect heater multiplug and install squab foam.
5. Install squab cover (see Workshop Manual procedure 01.10.AC Cover Assembly - Front Seat Squab - Each - Renew).

Side Airbag - Renew

Repair Operation Time (ROT)		
Item		**Code**
Side Airbag-Renew	RH	**01.10.AH**
Side Airbag-Renew	LH	**01.10.AJ**

Removal

1. Remove seat (see Workshop Manual procedure 01.10.AB Seat Assembly - Front - LH - Remove for Access and Refit).
2. Remove lever cover (manoeuvre over lever).
3. Disconnect airbag multiplug and release from bracket (see Figure 1).



Figure 1

4. Remove fixing multiplug bracket, move aside (see Figure 2).



Figure 2

5. Remove (slide down) airbag module (bolt x1).

Installation

1. Install airbag module (bolt x1) (torque).
2. Install multiplug bracket fixing.
3. Connect airbag multiplug and secure to bracket.
4. Install lever cover (manoeuvre over lever).
5. Install seat (see Workshop Manual procedure 01.10.AB Seat Assembly - Front - LH - Remove for Access and Refit).

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Front Seat Buckle Assembly - Renew

Repair Operation Time (ROT)	
Item	**Code**
Front Seat Buckle Assembly-Renew	**01.10.AM**

Removal

1. Power seat fully forward.
2. Remove bolts (x2) securing rear of seat to seat rails.
3. Power seat fully rearwards.
4. Remove bolts (x2) securing front of seat to seat rails.
5. Battery isolation switch 'OFF'.
6. Remove bolt securing seat belt to seat frame.
7. Tip the seat forwards and disconnect multiplugs (x4).
8. With assistance, remove seat assembly.
9. Release multiplug (x1) seat belt buckle harness to 6 way seat adjuster frame assembly.
10. Release cable ties (x4) securing seat belt buckle harness to 6 way seat adjuster frame assembly (see Figure 1).

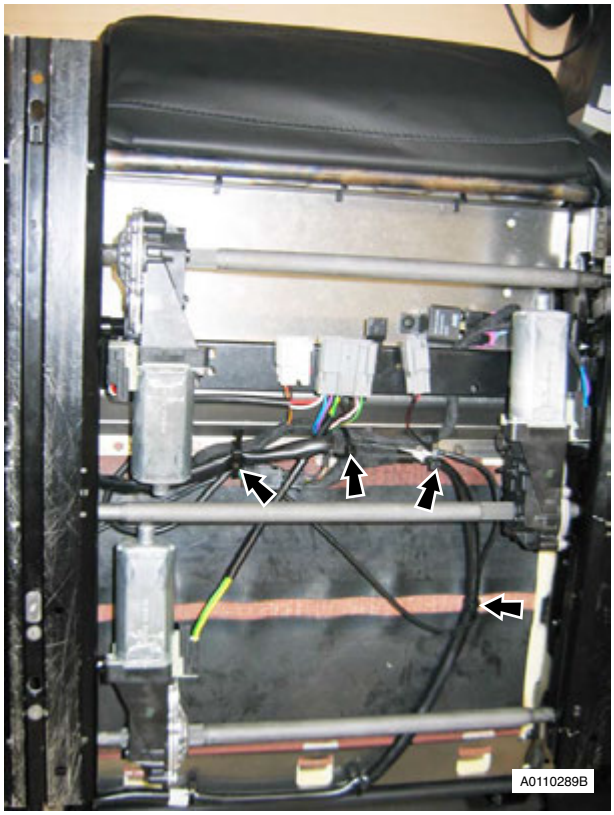


Figure 1

11. Remove bolt (x1) seat belt buckle to frame (see Figure 2).



Figure 2

12. Remove seat belt buckle assembly.

Installation

1. Secure harness and multiplug to 6 way seat adjuster frame assembly.
2. Install seat belt buckle.
3. With assistance, install seat in the vehicle.
4. Position seat belt to seat frame, install and torque tighten bolt.
5. Tip seat forwards and connect multiplugs (x4).
6. Position seat onto seat rails.
7. Battery isolation switch 'ON'.
8. Install front bolts (x2), Power seat forward and install rear bolts (x2). Torque tighten bolts (x 4).

Valance Heater and Lumbar Switch Assembly - Renew

Repair Operation Time (ROT)	
Item	**Code**
Valance Heater and Lumbar Switch Assembly-Renew	**01.10.AN**

Removal

1. Power seat fully forward.
2. Remove bolts (x2) securing rear of seat to seat rails.
3. Power seat fully rearwards.
4. Remove bolts (x2) securing front of seat to seat rails.
5. Disconnect vehicle battery.

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6. Tip the seat backwards and remove screws (x3) heater and lumbar switch assembly to seat (see Figure 1).



Figure 1

7. Release switch assembly from seat.
8. Disconnect multiplug (x2) and remove switch assembly (see Figure 2).

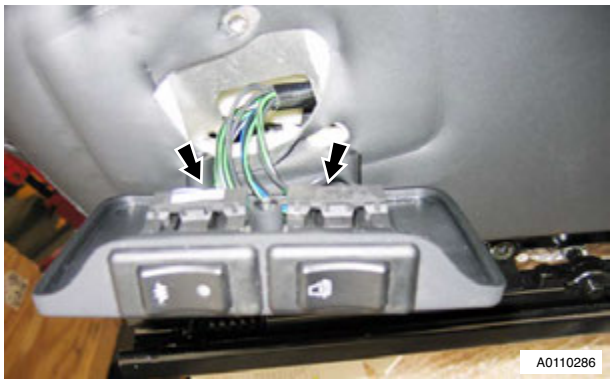


Figure 2

Installation

1. Connect multiplugs (x2) switch assembly.
2. Install switch assembly (screws x3).
3. Position seat onto seat rails.
4. Connect vehicle battery
5. Install front bolts (x2), Power seat forward and install rear bolts (x2). Torque tighten bolts (x 4).

Seat Harness Kit - Renew

Repair Operation Time (ROT)	
Item	**Code**
Seat Harness Kit-Renew	**01.10.AV**

Removal

1. Remove seat 6 way height adjuster (see Workshop Manual procedure 01.10.AE 6 Way Height Adjuster - Inc. Motors - Renew).
2. Remove release lever (see Figure 1).



Figure 1

3. Remove lever cover (see Figure 2).



Figure 2

4. Disconnect airbag multiplug and release from bracket (see Figure 3).



Figure 3

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5. Remove fixing multiplug bracket, move aside.
6. Remove (slide down) airbag module (bolt x1).
7. Release cover from seat back shell (studs x2 velcrox2).
8. Release cover from seat back shell (strip x2 /clips x9).
9. Release cover from bottom of seat back shell.
10. Push cover through to front of seat, release strip and ease from foam (velcro strips).
11. Disconnect heater multiplug and remove squab foam (see Figure 4).

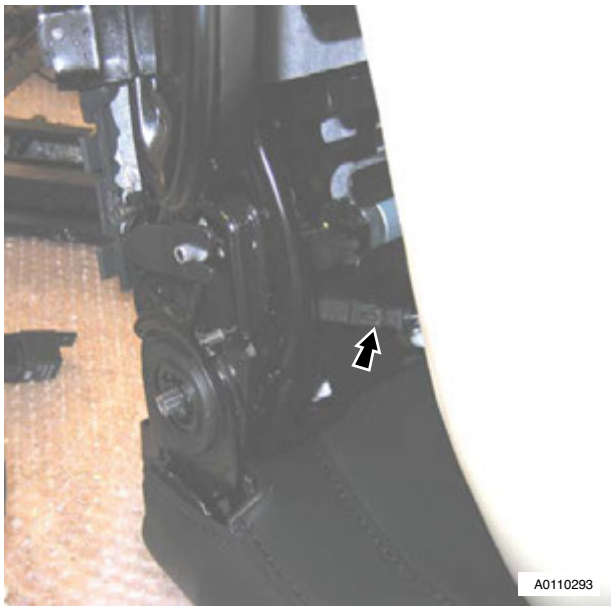


Figure 4

12. Remove seat back shell (rivets x4) (see Figure 5).



Figure 5

13. Disconnect lumbar and squab motor multiplugs (see Figure 6).

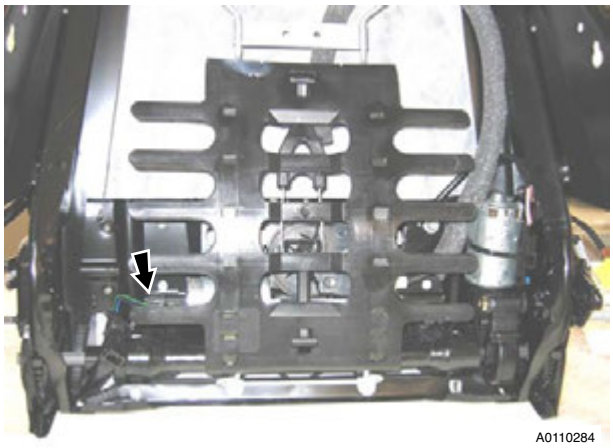


Figure 6

14. Remove earth header (nut and bolt) and release harness from clips (x2) (see Figure 7).

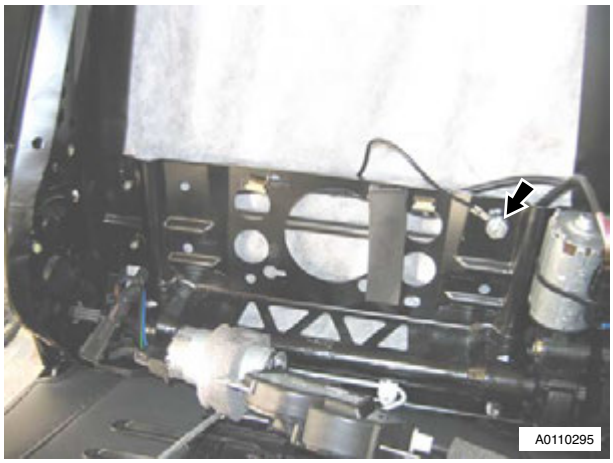


Figure 7

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15. Drill out pop rivets from release rod support, and feed harness past rod (see Figure 8).

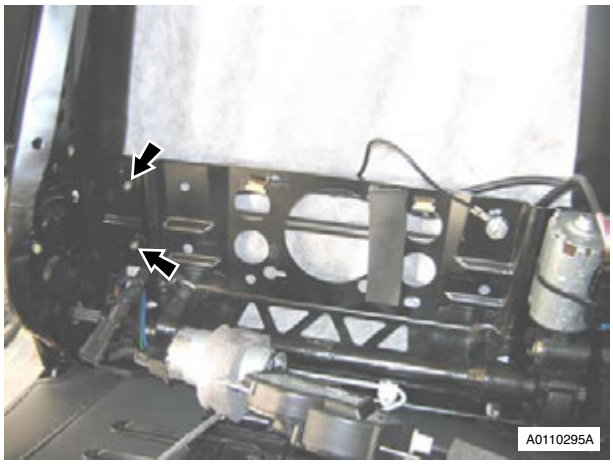


Figure 8

16. Release harness from clips (x3) and seat cover loop, feed through seat frame (see Figure 9).

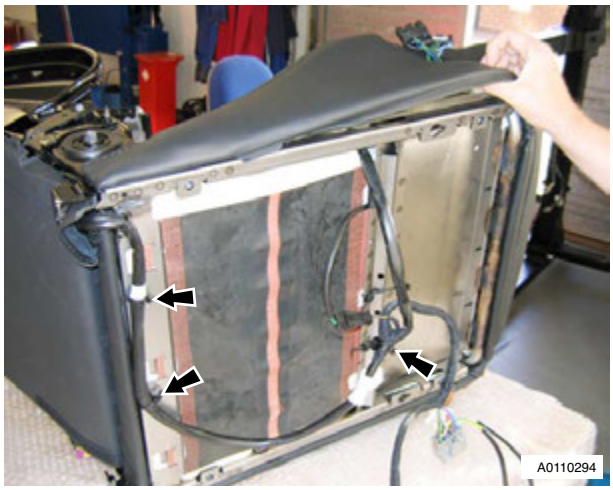


Figure 9

17. Disconnect cushion heater multiplug (see Figure 10).

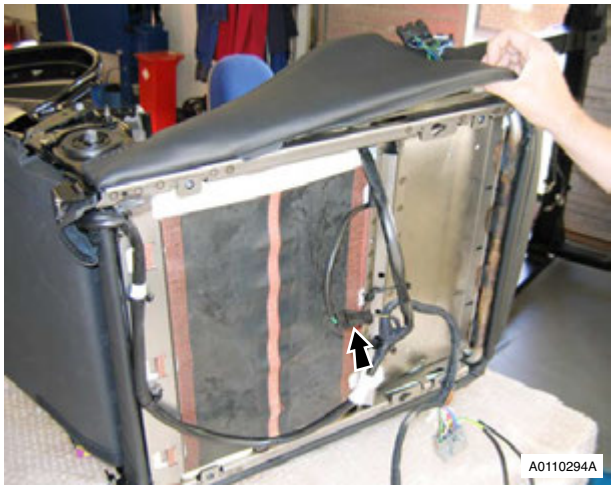


Figure 10

18. Release cushion cover from frame, feed harness through cover and foam (see Figure 11).

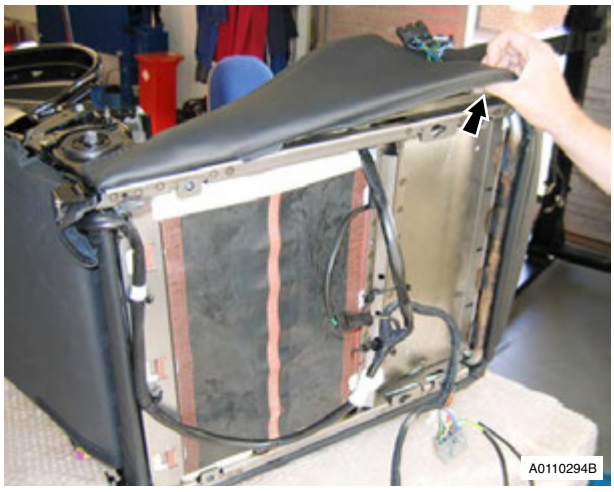


Figure 11

Installation

1. Feed harness through cushion cover and foam, secure cover to frame,
2. Connect cushion heater multiplug.
3. Feed harness through seat frame, secure to clips (x3) and seat cover loop.
4. Feed harness past rod and install pop rivets to release rod support.
5. Install earth header (nut and bolt) and secure harness to clips (x2).
6. Connect lumbar and squab motor multiplugs.
7. Install seat back shell (rivets x4).
8. Connect heater multiplug and install squab foam.
9. Ease cover over foam attach to velcro, secure strip and push through seat.
10. Secure cover to seat back shell.

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11. Secure cover to bottom of seat back shell.
12. Secure cover to seat back shell (studs and velcro).
13. Install airbag module (bolt x1) (torque).
14. Install multiplug bracket fixing.
15. Connect airbag multiplug and secure to bracket.
16. Install lever cover.
17. Install release lever.
18. Install seat 6 way height adjuster (see Workshop Manual procedure 01.10.AE 6 Way Height Adjuster - Inc. Motors - Renew).

RH/LH Seat Switchpack Assembly - Renew

Repair Operation Time (ROT)		
Item		**Code**
Seat Switchpack Assembly-Renew	RH	**01.10.CA**
Seat Switchpack Assembly-Renew	LH	**01.10.CB**

Removal

1. Remove instrument panel bezel assembly (see Workshop Manual procedure 01.12.AV Bezel Assembly - Instrument Panel - Remove for Access and Refit).
2. Remove console panel assembly (see Workshop Manual procedure 01.12.DB Panel Assembly Console - Renew).
3. Remove instrument cluster hood (6 clips)
4. Remove passenger upper outer panel assembly (see Workshop Manual procedure 01.12.AE Panel Assembly - IP - Upper - Passenger - Renew).
5. Remove passenger panel assembly (4 clips and 4 screws)
6. Remove driver's upper inner panel assembly (5 clips)
7. Remove driver's upper outer panel assembly (4 clips)
8. Remove driver's panel assembly (4 clips and 3 screws)
9. Remove receiver and audio media system panel screws (x4), disconnect multiplugs (x12).
10. Pull back carpet and disconnect seat adjust switch multiplugs (x6), release harness clip (x2)
11. Remove instrument centre panel assembly
12. Remove seat adjust switch (screws x4) (see Figure 1).

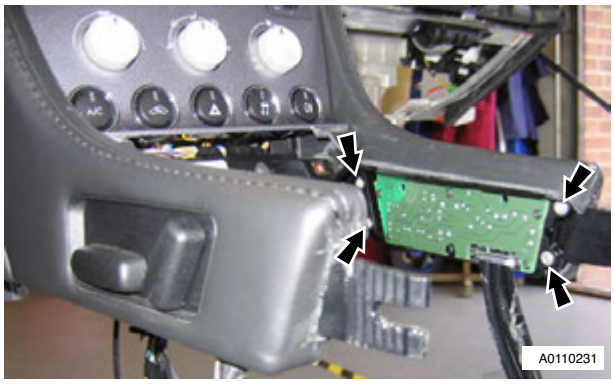


Figure 1

Installation

1. Install seat adjust switch.
2. Install instrument centre panel assembly
3. Connect seat adjust switch multiplugs (x6), install harness clip (x2) and carpet.
4. Install receiver and audio media systems panel (12 multiplugs and 4 screws)
5. Install driver's panel assembly (4 clips and 3 screws)
6. Install driver's upper outer panel assembly (4 clips)
7. Install driver's upper inner panel assembly (5 clips)
8. Install passenger's panel assembly (4 clips and 4 screws)
9. Install passenger's upper outer panel assembly (see Workshop Manual procedure 01.12.AE Panel Assembly - IP - Upper - Passenger - Renew).
10. Install instrument cluster hood (6 clips)
11. Install console panel assembly (see Workshop Manual procedure 01.12.DB Panel Assembly Console - Renew).
12. Install instrument panel bezel assembly (see Workshop Manual procedure 01.12.AV Bezel Assembly - Instrument Panel - Remove for Access and Refit).

Lumbar Pump for the Front Seat (From 08MY) - Remove and Install

Repair Operation Time (ROT)	
Item	**Code**
Lumbar Pump for the Front Seat (From 08MY) - Remove and Install	**01.10.EF**

Remove

1. Remove the applicable front seat (Refer to 'RH/LH Front Seat - Remove and Install', page 1-7-1).
2. Remove the cover for the squab from the seat (Refer to 'Front Seat Squab Cover Assembly (Each, from 08MY) - Remove and Install', page 1-7-3).
3. Move the lumbar inlay to give access.
4. Remove the tape that attaches the air hoses for the bladder into the lumbar inlay.
5. Move the air pump out of the lumbar inlay.
6. Disconnect the air hoses from the pump.
7. Disconnect the electrical connector for the pump.
8. Remove the pump assembly.

Install

1. Connect the the air hose to the pump.
2. Put the air valve in position into the inlay.
3. Connect the electrical connector for the pump.
4. Put the pump into the correct position in the lumbar inlay.
5. Use applicable tape to hold the hoses into the lumbar inlay.
6. Put the lumbar inlay into the correct position.

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7. Install the cover for the seat squab (Refer to 'Front Seat Squab Cover Assembly (Each, from 08MY) - Remove and Install', page 1-7-3).
8. Install the seat (Refer to 'RH/LH Front Seat - Remove and Install', page 1-7-1).

Lumbar Valve for the Front Seat (From 08MY) - Remove and Install

Repair Operation Time (ROT)	
Item	**Code**
Lumbar Valve for the Front Seat (From 08MY) - Remove and Install	**01.10.EH**

Remove

1. Remove the applicable seat (Refer to 'RH/LH Front Seat - Remove and Install', page 1-7-1).
2. Remove the cover for the squab from the seat (Refer to 'Front Seat Squab Cover Assembly (Each, from 08MY) - Remove and Install', page 1-7-3).
3. Remove the tape that attaches the air hoses for the bladder into the lumbar inlay.
4. Record the air-hose connections to the air valve.
5. Move the air valve out of the lumbar inlay.
6. Disconnect the air hoses from the valve.
7. Disconnect the electrical connector for the valve.
8. Remove the valve assembly.

Install

1. Connect the the air hoses to the valve at the positions recorded during removal.
2. Connect the electrical connector to the valve assembly.
3. Put the valve into the correct position in the lumbar inlay.
4. Use applicable tape to hold the pipes into the lumbar inlay.
5. Put the lumbar inlay into the correct position.
6. Install the cover for the seat squab (Refer to 'Front Seat Squab Cover Assembly (Each, from 08MY) - Remove and Install', page 1-7-3).
7. Install the seat (Refer to 'RH/LH Front Seat - Remove and Install', page 1-7-1).

Lumbar Bladder for the Front Seat (From 08MY) - Remove and Install

Repair Operation Time (ROT)	
Item	**Code**
Lumbar Bladder for the Front Seat (From 08MY) - Remove and Install	**01.10.EK**

Remove

1. Remove the applicable front seat (Refer to 'RH/LH Front Seat - Remove and Install', page 1-7-1).
2. Remove the cover for the squab from the seat (Refer to 'Front Seat Squab Cover Assembly (Each, from 08MY) - Remove and Install', page 1-7-3).
3. Release the clips that attach the lumbar bladder.
4. move the bladder to give access.
5. Release and remove the clips that attach the lumbar inlay.
6. Remove the tape that attaches the air hoses for the bladder into the lumbar inlay.
7. Record the air-hose connections to the air valve.
8. Move the air valve out of the lumbar inlay.
9. Disconnect the air hoses from the valve.
10. Remove the bladder assembly.

Install

1. Put the bladder in position on the seat.
2. Connect the the air hoses to the valve at the positions recorded during removal.
3. Put the air valve in position into the inlay.
4. Use applicable tape to hold the hoses into the lumbar inlay.
5. Put the lumbar inlay into the correct position.
6. Put the bladder into the correct position.
7. Install the bladder attachment clips.
8. Install the cover for the seat squab (Refer to 'Front Seat Squab Cover Assembly (Each, from 08MY) - Remove and Install', page 1-7-3).
9. Install the seat (Refer to 'RH/LH Front Seat - Remove and Install', page 1-7-1).

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Body System (01.00)

Glass, Frame and Mechanism (01.11)

Description

Power to the door window regulator motor is available when the ignition switch is at position '0' and is supplied, through a thermal cut-out, to the left and right window switches. The switches are double pole earth so that the current through a window regulator motor may be switched in either direction to raise or lower the glass.

Frameless doors

To avoid damaging the body seals during door opening, the door glass must be lowered before the door can be opened. This function is controlled by the door modules.

The door module senses the rotation of the latch claw as the door opens, the door module then drives the door window regulator motor briefly to lower the door glass until it clears the glass seals. After closing a door, the window regulator motor operates to raise the door glass to seat against the body seals.

⚠ WARNING ⚠
PUT ON PROTECTIVE GLOVES AND EYE PROTECTION WHEN YOU HOLD THE GLASS COMPONENTS.
THE GLASS CAN BREAK EASILY AND CAUSE INJURY.

Specifications

Torque Figures	
Description	Nm
Regulator mountings	9.0 (M6)
	10-15 (M10)
Glass grip screws	5.0 - 6.0

Maintenance

Glass Regulator - Renew

Repair Operation Time (ROT)		
Item		**Code**
Door Glass Regulator-Renew	RH	**01.11.DA**
Door Glass Regulator-Renew	LH	**01.11.DB**

Removal

1. Remove door trimboard assembly (see Workshop Manual procedure 01.05.CB Trimboard Assembly - Door - Remove for Access and Refit).
2. Remove screws (x4) securing switchpack to trimboard assembly, remove switchpack.
3. Connect switchpack to door cable harness multiplug (x1).
4. With power on raise/lower glass to access glass clamping bolts (x2).
5. Battery isolation switch 'OFF'.
6. Mark the glass around the rear clamp.

⚠ WARNING ⚠
PUT ON PROTECTIVE GLOVES AND EYE PROTECTION WHEN YOU HOLD THE GLASS COMPONENTS.
THE GLASS CAN BREAK EASILY AND CAUSE INJURY.

7. Remove clamping bolts (x2) and lift glass out of door (see Figure 1).

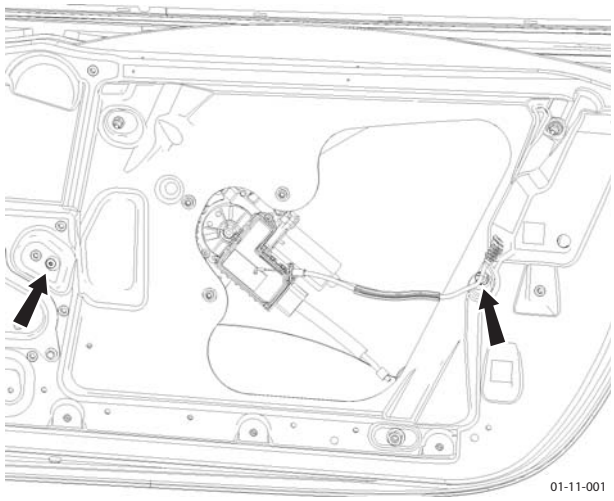


Figure 1

8. Remove nuts (x4) securing door glass regulator mechanism (see Figure 2).

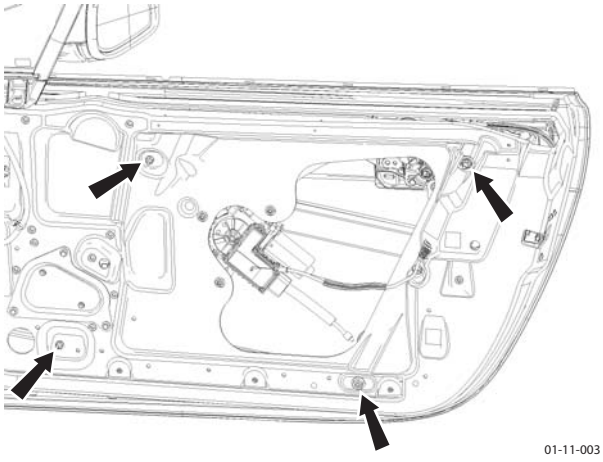


Figure 2

9. Disconnect multiplug from regulator motor.

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10. Remove screws (x3) securing regulator motor to door frame (see Figure 3).

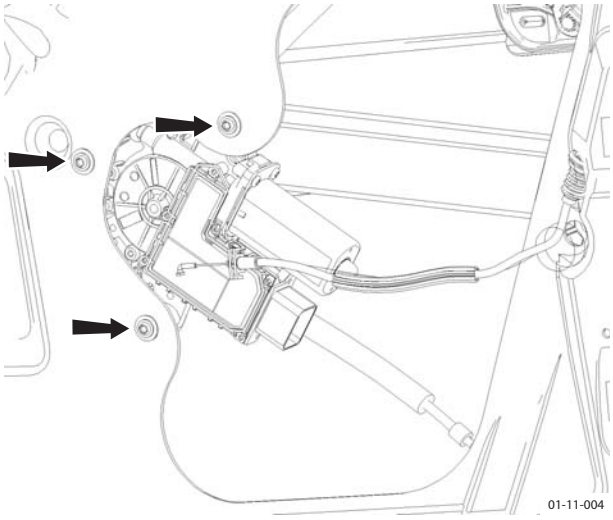


Figure 3

11. Carefully remove regulator mechanism and regulator motor out through the larger door frame aperture (see Figure 4).

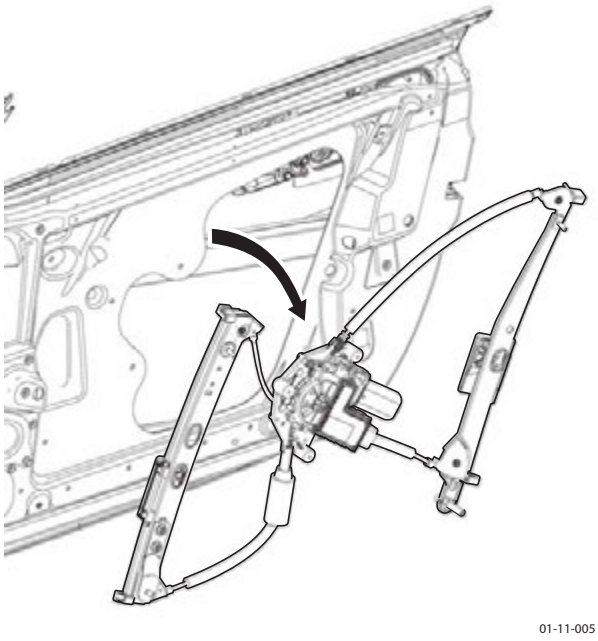


Figure 4

Installation

1. Install regulator mechanism and motor, install and torque tighten nuts (x4) and screws (x3).
2. Connect multiplug to regulator motor.

⚠ WARNING ⚠
PUT ON PROTECTIVE GLOVES AND EYE PROTECTION WHEN YOU HOLD THE GLASS COMPONENTS.
THE GLASS CAN BREAK EASILY AND CAUSE INJURY.

3. Fit glass into door and engage the clamping brackets to the marked position, install clamping bolts and partially tighten.
4. Battery isolation switch 'ON'.
5. Raise glass to fully up and adjust alignment, lower fully and check alignment, repeat until alignment is correct, finally torque tighten clamping bolts (x2).
6. Disconnect switchpack multiplug, install switchpack on trimboard, install and tighten screws (x4).
7. Install door trimboard assembly (see Workshop Manual procedure 01.05.CB Trimboard Assembly - Door - Remove for Access and Refit).

RH/LH Door Glass - Renew

Repair Operation Time (ROT)		
Item		**Code**
Door Glass-Renew	RH	**01.11.BA**
Door Glass-Renew	LH	**01.11.BC**

Removal

1. Remove door trimboard assembly (see Workshop Manual procedure 01.05.CB Trimboard Assembly - Door - Remove for Access and Refit).
2. Set glass position to access clamping bolts (x2) through apertures in door frame (see Figure 1).

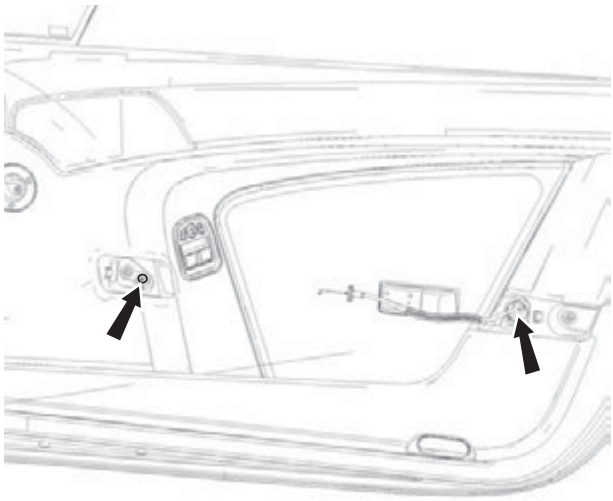


Figure 1

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3. Remove clamping bolts (x2) (see Figure 2).

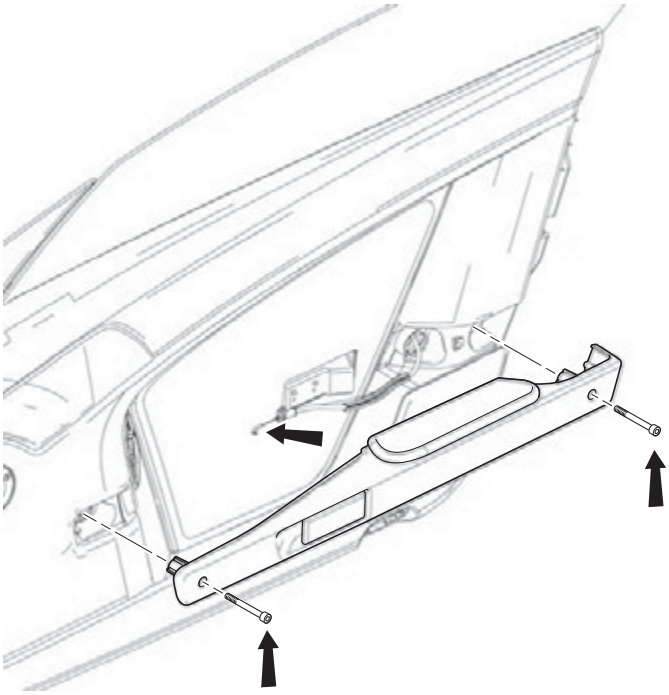


Figure 2

⚠ WARNING ⚠
PUT ON PROTECTIVE GLOVES AND EYE PROTECTION WHEN YOU HOLD THE GLASS COMPONENTS.
THE GLASS CAN BREAK EASILY AND CAUSE INJURY.

4. Hold glass firmly and lift out of door, place on protective material in a safe place (see Figure 3).

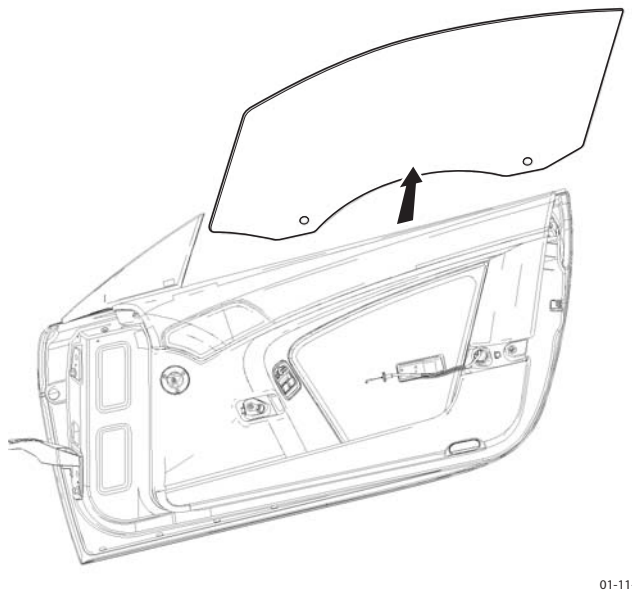


Figure 3

Installation

⚠ WARNING ⚠
PUT ON PROTECTIVE GLOVES AND EYE PROTECTION WHEN YOU HOLD THE GLASS COMPONENTS.
THE GLASS CAN BREAK EASILY AND CAUSE INJURY.

1. Install door glass with front edge into the channel, and position in clamps, install clamping bolts (x2) and lightly tighten.
2. With power on, raise glass fully up and adjust position, drop glass fully down and readjust, when aligned raise to access clamping bolts and tighten bolts to recommended torque. Repeat until aligned.
3. Install door trimboard assembly (see Workshop Manual procedure 01.05.CB Trimboard Assembly - Door - Remove for Access and Refit).
4. Install door trimboard assembly (see Workshop Manual procedure 01.05.CB Trimboard Assembly - Door - Remove for Access and Refit).

Door Glass - Adjust/Reset

Repair Operation Time (ROT)		
Item		**Code**
Door Glass-Adjust/Reset	RH	**01.11.BB**
Door Glass-Adjust/Reset	LH	**01.11.BD**

1. Open door.
2. Remove interior door handle securing bolts (x2).
3. Remove inner handle trim and disconnect door latch inner cable and remove securing bolts for the outer cable.
4. Remove access plugs (x2), door trimboard.
5. Set glass to position to access clamping bolts (x2) through apertures in the trim panel.
6. Slightly loosen clampbolts (x2), raise glass and align, lower glass and check alignment. Raise and lower until correct alignment is achieved.
7. Position glass for access to clamp bolts and tighten bolts.
8. Reset upper glass limit.
9. Reset lower glass limit.

Installation

1. Reconnect door latch inner and outer cable, refit inner handle trim.
2. Install door handle.
3. Reset lower glass limit.
4. Install plugs (x2), door trimboard.

Front Windshield - Renew

Repair Operation Time (ROT)	
Item	**Code**
Front Windshield-Renew	**01.11.AA**

1. Open bonnet.

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2. Remove wiper arm drivers side (see Workshop Manual procedure 01.16.AD Arm Assembly - Wiper - Driver - Renew).
3. Remove wiper arm passengers side (see Workshop Manual procedure 01.16.AE Arm Assembly - Wiper - Passenger - Renew).
4. Remove plate and disconnect multiplug (x1) windshield (see Figure 1).

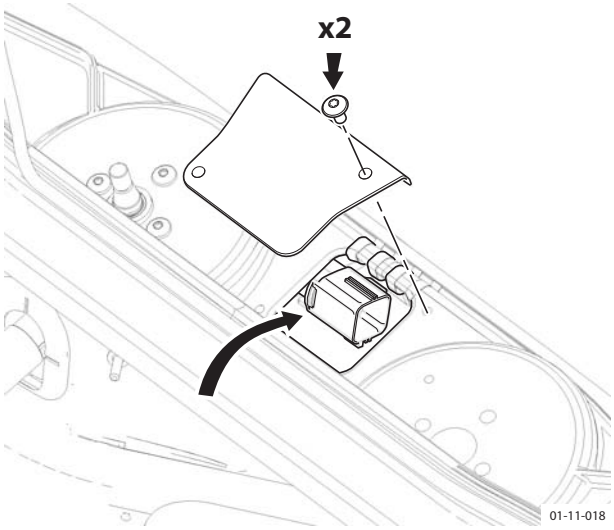


Figure 1

5. Close bonnet.
6. Remove interior mirror (see Workshop Manual procedure 01.08.FA Mirror Assembly - Rear Dipping - Renew).
7. Protect external body work and internal trim adjacent to glass.
8. Place suitable covers over trim and bodywork.
9. Make hole in sealer and assemble cutting knife.

⚠ WARNING ⚠
PUT ON PROTECTIVE GLOVES AND EYE PROTECTION WHEN YOU HOLD THE GLASS COMPONENTS.
THE GLASS CAN BREAK EASILY AND CAUSE INJURY.

10. Cut out windshield and remove (see Figure 2).

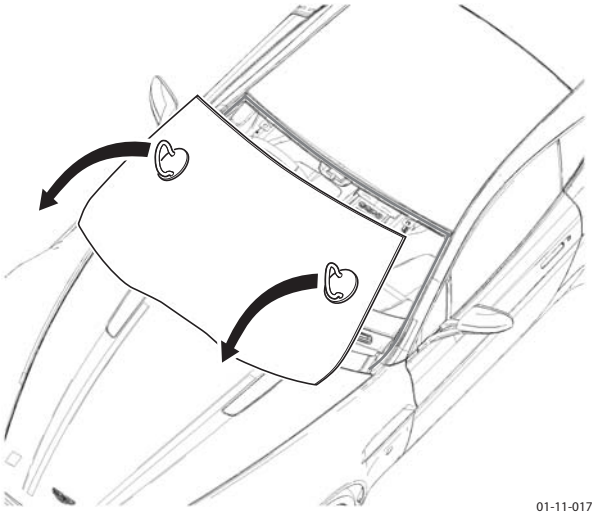


Figure 2

11. Remove sealer from body and original screen if refitting.
12. Clean and polish windshield.
13. Apply etch primer around windshield aperture.
14. Assemble applicator.
15. Attach suction handles to windshield.
16. Apply sealer to glass.

⚠ WARNING ⚠
PUT ON PROTECTIVE GLOVES AND EYE PROTECTION WHEN YOU HOLD THE GLASS COMPONENTS.
THE GLASS CAN BREAK EASILY AND CAUSE INJURY.

17. With assistance, lift windshield into place and align in aperture. Lightly press glass to sealer.
18. Remove suction handles from windshield.
19. Remove all protective covers and tape.
20. Check screen for leaks.
21. Connect multiplug (x1) to windshield and install plate.
22. Install wiper arm passengers side (see Workshop Manual procedure 01.16.AE Arm Assembly - Wiper - Passenger - Renew).
23. Install wiper arm drivers side (see Workshop Manual procedure 01.16.AD Arm Assembly - Wiper - Driver - Renew).
24. Install interior mirror (see Workshop Manual procedure 01.08.FA Mirror Assembly - Rear Dipping - Renew).

Rear Windshield - Renew

Repair Operation Time (ROT)	
Item	**Code**
Rear Windshield-Renew	**01.11.BE**

1. Remove tailgate trim (see Workshop Manual procedure 01.05.EF Trim - Tailgate Lid Assembly - Renew).

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2. Disconnect lucar connectors (x2) from rear windshield (see Figure 1).

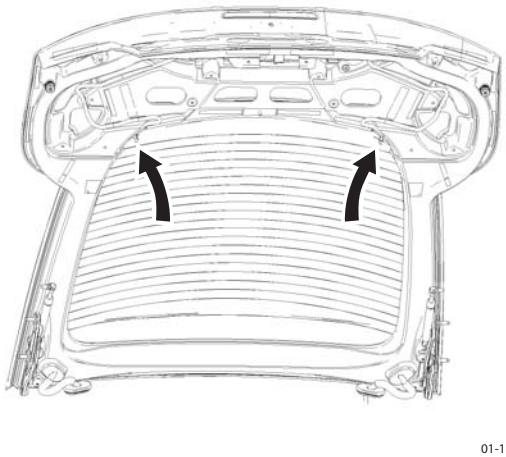


Figure 1

3. Protect external bodywork and internal trim adjacent to glass.
4. Place suitable covers over trim and bodywork.
5. Make hole in sealer and assemble cutting knife.

⚠ WARNING ⚠
PUT ON PROTECTIVE GLOVES AND EYE PROTECTION WHEN YOU HOLD THE GLASS COMPONENTS.
THE GLASS CAN BREAK EASILY AND CAUSE INJURY.

6. Cut out rear windshield and remove (see Figure 2).



Figure 2

7. Remove sealer from body and original windshield if refitting.
8. Clean and polish rear windshield.
9. Apply etch primer around rear windshield aperture.
10. Attach suction handles to rear windshield.
11. Assemble applicator.
12. Apply sealer to rear windshield.

⚠ WARNING ⚠
PUT ON PROTECTIVE GLOVES AND EYE PROTECTION WHEN YOU HOLD THE GLASS COMPONENTS.
THE GLASS CAN BREAK EASILY AND CAUSE INJURY.

13. With assistance lift rear windshield into place and align in aperture. Lightly press glass to sealer.
14. Remove suction handles from rear windshield.
15. Remove all protective covers and tape.
16. Check rear windshield for leaks.
17. Connect lucar connectors (x2) rear windshield.
18. Install tailgate trim (see Workshop Manual procedure 01.05.EF Trim - Tailgate Lid Assembly - Renew).

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Quarter Window Glass - Renew

Repair Operation Time (ROT)		
Item		**Code**
Quarter Window Glass-Renew	RH	**01.11.BF**
Quarter Window Glass-Renew	LH	**01.11.CA**

Removal

1. Partially remove door aperture seal.

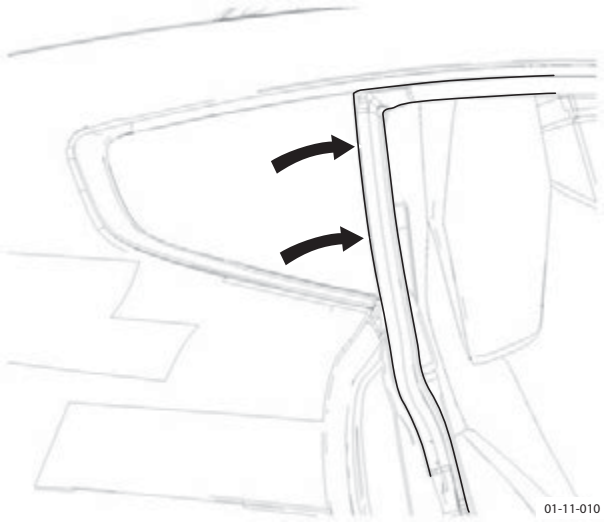


Figure 1

2. Protect external body work and internal trim adjacent to glass.
3. Remove the lower finisher around the fixed quarter glass. Pull items 1, 2 and 3 and slide item 4 (see Fig 2).

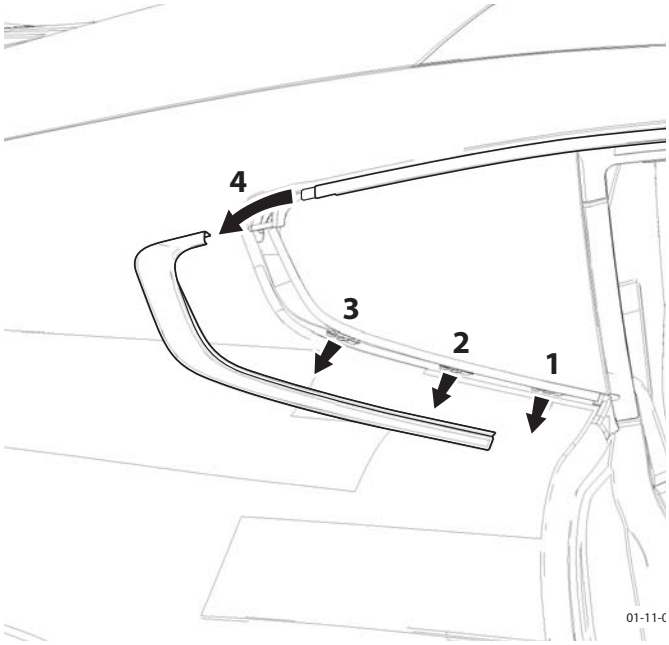


Figure 2

4. Place suitable covers over trim and bodywork.
5. Make hole in sealer and assemble cutting knife.

⚠ WARNING ⚠
PUT ON PROTECTIVE GLOVES AND EYE PROTECTION WHEN YOU HOLD THE GLASS COMPONENTS.
THE GLASS CAN BREAK EASILY AND CAUSE INJURY.

6. Cut out glass and remove (see Figure 3).

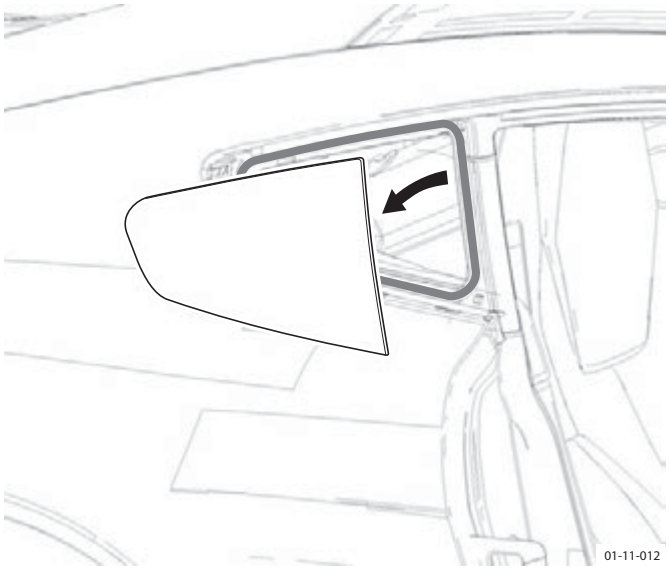


Figure 3

7. Remove sealer from aperture.

Installation

⚠ WARNING ⚠
PUT ON PROTECTIVE GLOVES AND EYE PROTECTION WHEN YOU HOLD THE GLASS COMPONENTS.
THE GLASS CAN BREAK EASILY AND CAUSE INJURY.

1. Clean and polish glass.
2. Apply etch primer around aperture.
3. Assemble applicator.
4. Apply sealer to glass.
5. Position glass in aperture and lightly press glass to sealer.
6. Remove all protective covers and tape.
7. Install the lower finisher around the fixed quarter glass.
8. Install door aperture seal.
9. Check for leaks.

Passenger Window Lift Switch - Renew

Repair Operation Time	
Item	**Code**
Passenger Window Lift-Renew	**01.11.FA**

Removal

1. Remove door trim board (see Workshop Manual procedure 01.05.CB Trimboard Assembly - Door - Remove for Access and Refit).

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2. Remove screws (x4) window lift switch to door trim board and remove switch (see Figure 1).

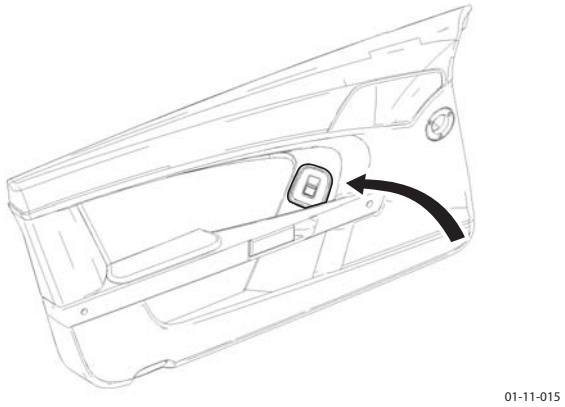


Figure 1

Installation

1. Install window lift switch to door trim board.
2. Install door trim board (see Workshop Manual procedure 01.05.CB Trimboard Assembly - Door - Remove for Access and Refit).

Driver Window Lift Switch - Renew

Repair Operation Time	
Item	**Code**
Driver Window Lift-Renew	**01.11.FB**

Removal

1. Remove door trim board (see Workshop Manual procedure 01.05.CB Trimboard Assembly - Door - Remove for Access and Refit).
2. Remove screws (x4) window lift switch to door trim board and remove switch (see Figure 1).

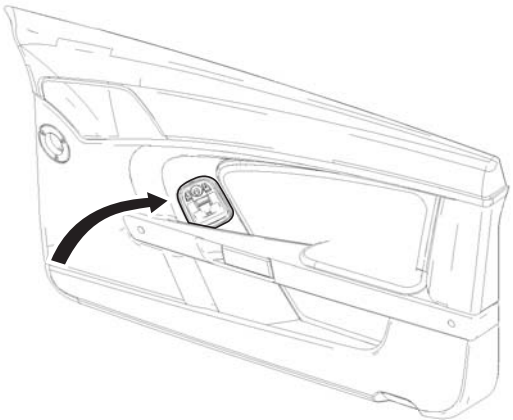


Figure 1

Installation

1. Install window lift switch to door trim board.
2. Install door trim board (see Workshop Manual procedure 01.05.CB Trimboard Assembly - Door - Remove for Access and Refit).

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Body System (01.00)

Instrument Panel (IP) (01.12)



Specifications

Torque Figures	
Description	Nm
IP Mountings	22.5
Glue pot bolts	8
Blower motor to bulkhead	10-14

Maintenance

Instrument Panel - Renew

Repair Operation Time (ROT)	
Item	**Code**
Instrument Panel-Renew	**01.12.AB**

Removal

1. Disconnect vehicle battery.
2. Drain cooling system (see Workshop Procedure 03.03.AD Coolant - Drain and Refill).
3. Evacuate air conditioning system (see Workshop Procedure 12.03.FA Tank - Receiver Drier - Renew).
4. Remove RH door (see Workshop Procedure 01.03.EA Door Assembly - RH - Remove for Access and Refit).
5. Remove LH front seat (see Workshop Manual 01.10.AB Seat Assembly - Front - LH - Remove for Access and Refit).
6. Remove RH front seat (see Workshop Manual 01.10.AA Seat Assembly - Front - RH - Remove for Access and Refit).
7. Remove tread plate badges - screws x2 (see Figure1).



Figure 1

8. Remove screws (x12) 6 each side and remove LH and RH side tread plates.
9. Release door seal from door aperture (see Figure 2).



Figure 2

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10. Remove screw/release fir tree securing door seal plate to A-post (see Figure 3 and Figure 4).



Figure 3



Figure 4

11. Remove LH and RH A-post trim panels.
12. Disconnect fuel filler flap release switch.
13. Disconnect multiplugs (x5) from instrument panel RH side.
14. Disconnect multiplugs (x6) from instrument panel LH side.
15. Release both door seals from body.
16. Remove trim finishers (x4) and screws (x4) (see Figure 5).

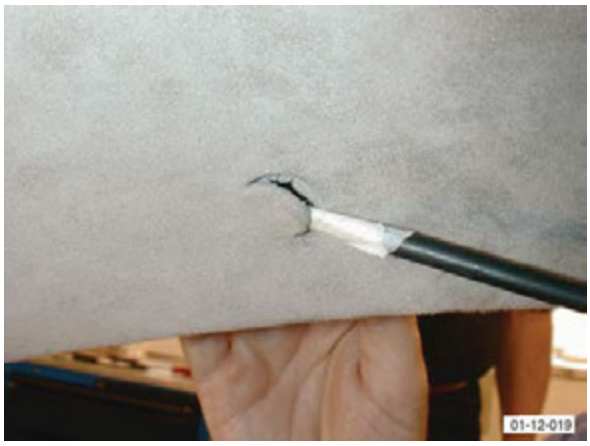


Figure 5

17. Remove LH and RH A-post cant rail trim panels (see Figure 6).



Figure 6

18. Remove rear centre console (see Workshop Manual procedure 01.04.BB Centre Console Rear Renew).

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19. Disconnect multiplugs (x8) and remove centre column switch panel (see Figure 7 and Figure 8).

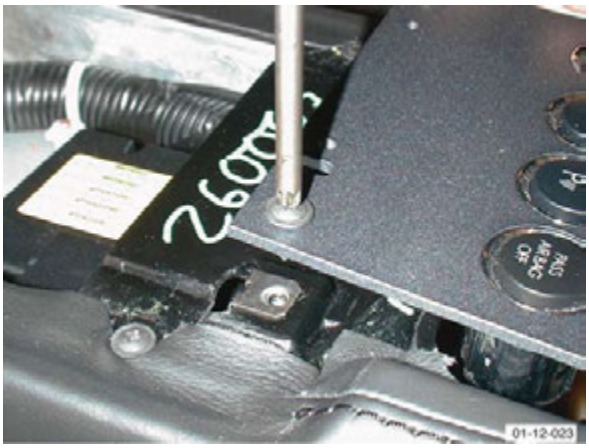


Figure 7



Figure 8

20. Using special tool, release selector cable ball joints from gear lever mechanism.
21. Remove screws (x6) and remove gear lever mechanism.
22. Remove Allen bolts (x4) from securing carpet retaining plate to bulkhead drivers side (see Figure 9).

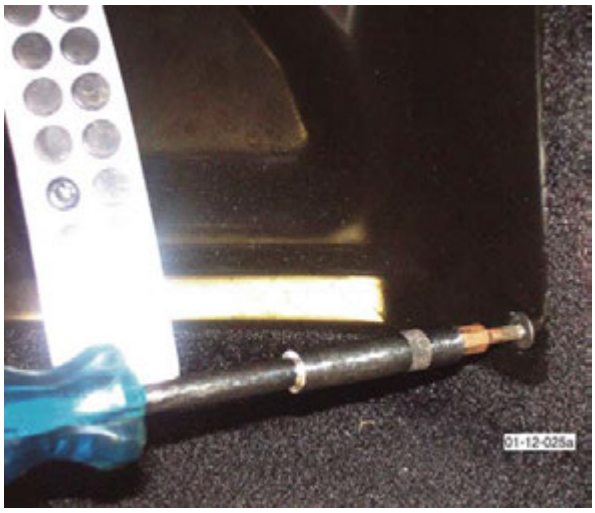


Figure 9

23. Pull back footwell carpets and remove bolts (x2) that secure instrument panel to tunnel (see Figure 10).



Figure 10

24. Remove bolt securing heater fan to bulkhead (see Figure 11).

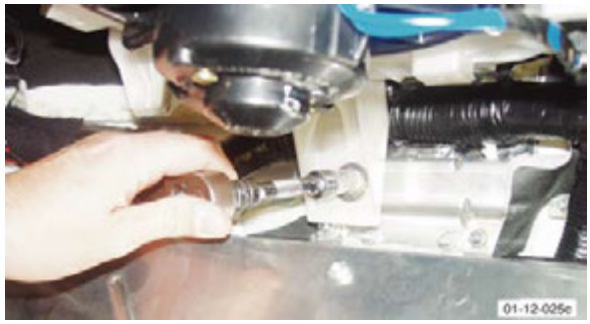


Figure 11

25. Remove steering wheel (see Workshop Manual 11.06.AB Steering Wheel Renew).

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26. Remove screws (x7) from steering column upper and lower shrouds (see Figure 12).



Figure 12

27. Remove lower and upper column shrouds (see Figure 13).



Figure 13

28. Release and remove drivers side lower instrument panel clips (x7) and disconnect air temperature pipe (see Figure 14).



Figure 14

29. Pull back steering column bulkhead gaiter.
30. Remove and discard pinch bolt from upper column to intermediate shaft.
31. Disconnect multiplugs (x14) from instrument panel to main body harness.
32. Remove instrument panel upper air vents (x2) (see Figure 15).



Figure 15

33. Remove screws from instrument panel to bulkhead (x4).
34. Remove bolts securing instrument panel to both A-posts (x6).
35. With assistance, position tool (501-F116) to instrument panel (see Figure 16).



Figure 16

36. Attach and tighten brackets (x2) to instrument panel.

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37. Manoeuvre and remove instrument panel sufficient to gain access to heater hose (see Figure 17).



Figure 17

38. Position container to collect coolant.
39. Release clip and disconnect hose from heater unit.
40. Disconnect condenser hose from heater unit.
41. Manoeuvre and remove instrument panel from vehicle (see Figure 18).



Figure 18

42. Remove container.

Installation

1. With assistance, manoeuvre instrument panel into vehicle.
2. Connect condenser hose to heater unit.
3. Connect hose to heater and secure with clip.
4. With assistance, manoeuvre instrument panel into position aligning upper column to intermediate shaft.
5. Install new upper column pinch bolt (do not torque at this stage).
6. Install bolts (x6) through instrument panel to both A-posts (do not torque at this stage).
7. Install screws (x4) through instrument panel to bulkhead (do not torque at this stage).
8. Ensure instrument panel is correctly aligned and tighten screws (x4) and bolts (x6) to correct torque.
9. Loosen and release attachments from instrument panel and with assistance, remove tool (501-F116) from vehicle.
10. Tighten upper column pinch bolt to correct torque.
11. Install gaiter to bulkhead.
12. Connect multiplugs (x14) from instrument panel to main body harness.
13. Apply adhesive and install instrument panel upper air vents and secure in clips.
14. Position drivers side lower instrument panel and connect air temperature pipe.
15. Install panel in clips (x7).
16. Install steering column upper and lower shrouds and install and tighten screws (x7).
17. Install steering wheel (see Workshop Manual 11.06.AB Steering Wheel Renew).
18. Install and tighten bolt from heater fan to bulkhead.
19. Install and torque tighten bolts (x2) from instrument panel to tunnel.
20. Install footwell carpet.
21. Install drivers side carpet retaining plate to bulkhead.
22. Install and torque tighten Allen bolts (x4).
23. Install gear lever mechanism and install and tighten screws (x6).
24. Install selector cable ball joints to gear lever mechanism.
25. Install centre column switch panel and connect multiplugs (x8).
26. Install rear centre console (see Workshop Manual 01.04.BB Centre Console Rear Renew).
27. Install LH and RH cant rail trim panels and install and tighten screws (x4).
28. Install trim finishers (x4) and install seals to door aperture.
29. Connect multiplugs (x11) from LH and RH A-post to instrument panel.
30. Connect fuel filler flap release switch.
31. Install LH and RH A-post trim panels.
32. Install LH and RH A-post door trim plates.
33. Install rivets (x2), install and tighten screws (x2).
34. Install seal to door aperture.
35. Install LH and RH side tread plates and tighten screws (x12).
36. Install LH and RH side tread plate badges and tighten screws (x4).
37. Install RH door (see Workshop Manual 01.03.EA Door Assembly - RH - Remove for Access and Refit).
38. Install RH front seat (see Workshop Manual 01.10.AA Seat Assembly - Front - RH - Remove for Access and Refit).

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39. Install LH front seat (see Workshop Manual 01.10.AB Seat Assembly - Front - LH - Remove for Access and Refit).
40. Fill cooling system (see Workshop Manual 03.03.AD Coolant - Drain and Refill).
41. Re-charge air conditioning system (see Workshop Manual 12.03.FA Tank - Receiver Drier - Renew).
42. Connect vehicle battery.

Airbag Panel and Door Assembly - Renew

Repair Operation Time (ROT)	
Item	**Code**
Airbag Panel and Door Assembly-Renew	**01.12.AJ**

Removal

1. Remove glovebox assembly (see Workshop Manual procedure 01.12.AL Glovebox Assembly - Renew).
2. Remove glovebox shield (see Figure 1).



Figure 1

3. Remove the bolts (x3) that secure the airbag panel and door assembly plate to the chassis (see Figure 2).

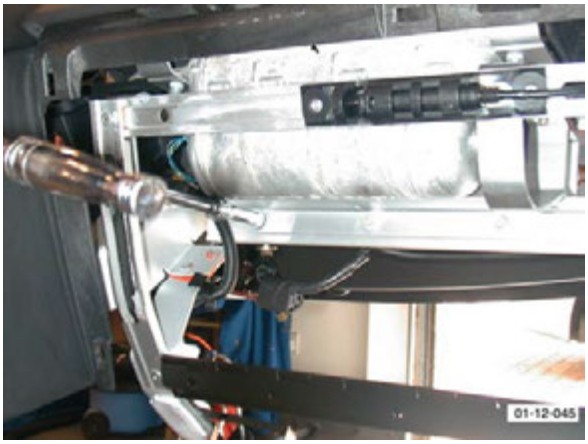


Figure 2

4. Remove airbag panel and door assembly (5 clips) (see Figure3).



Figure 3

Installation

1. Install airbag panel and door assembly (5 clips).
2. Through glovebox aperture, install support right-angled bar and secure bolts (x3).
3. Remove and clean double-sided taped from glovebox shield, apply new tape and install.
4. Install glovebox assembly (see Workshop Manual procedure 01.12.AL Glovebox Assembly - Renew).

Glovebox Assembly - Renew

Repair Operation Time (ROT)	
Item	**Code**
Glovebox Assembly-Renew	**01.12.AL**

Removal

1. Remove passenger lower panel assembly (5 clips and multiplug).
2. Remove the securing screws holding the glove box hinge to the chassis (x2).
3. Support the glove box and locate the latch mechanism.
4. Using a suitable tool press the latch mechanism to release the glove box.
5. Support the glove box and detach the buffer cord from the glove box.

Installation

1. Support glovebox and attach the buffer cord (ensure the cord is through correct aperture).
2. Install glovebox into aperture and press top to latch.
3. Align the glovebox hinge and secure with screws (x2) including spacers between the hinge and chassis.
4. Install passenger lower panel assembly (5 clips and 1 multiplug).

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Instrument Centre Panel Assembly - Renew

Repair Operation Time (ROT)	
Item	**Code**
Instrument Centre Panel Assembly-Renew	**01.12.AM**

1. Remove instrument panel bezel assembly (see Workshop Manual procedure 01.12.AV Bezel Assembly - Instrument Panel - Remove for Access and Refit).
2. Remove console panel assembly (see Workshop Manual procedure 01.12.DB Panel Assembly Console - Renew).
3. Remove instrument cluster hood (6 clips)
4. Remove passenger upper outer panel assembly (see Workshop Manual procedure 01.12.AE Panel Assembly - IP - Upper - Passenger - Renew).
5. Remove passenger panel assembly (4 clips and 4 screws)
6. Remove driver's upper inner panel assembly (5 clips)
7. Remove driver's upper outer panel assembly (4 clips)
8. Remove driver's panel assembly (4 clips and 3 screws)
9. Remove receiver and audio media system panel screws (x4), disconnect multiplugs (x12).
10. Pull back carpet and disconnect seat adjust switch multiplugs (x6), release harness clip (x2)
11. Remove instrument centre panel assembly
12. Remove seat adjust switches (screws x8).

Installation

1. Install seat adjust switches (screws x8).
2. Install instrument centre panel assembly
3. Connect seat adjust switch multiplugs (x6), install harness clip (x2) and carpet.
4. Install receiver and audio media systems panel (12 multiplugs and 4 screws)
5. Install driver's panel assembly (4 clips and 3 screws)
6. Install driver's upper outer panel assembly (4 clips)
7. Install driver's upper inner panel assembly (5 clips)
8. Install passenger's panel assembly (4 clips and 4 screws)
9. Install passenger's upper outer panel assembly (see Workshop Manual procedure 01.12.AE Panel Assembly - IP - Upper - Passenger - Renew).
10. Install instrument cluster hood (6 clips)
11. Install console panel assembly (see Workshop Manual procedure 01.12.DB Panel Assembly Console - Renew).
12. Install instrument panel bezel assembly (see Workshop Manual procedure 01.12.AV Bezel Assembly - Instrument Panel - Remove for Access and Refit).

Knee Protector - Renew

Repair Operation Time (ROT)	
Item	**Code**
Knee Protector-Renew	**01.12.AN**

Removal

1. Remove driver's lower panel assembly (7 clips) and disconnect air temperature pipe.
2. Disconnect footwell light and remove unit from panel.
3. Mark one socket for relocation and remove diagnostic sockets (x2) from panel.
4. Remove pop-rivets (x5), screws (x4) and remove panel.

Installation

1. Align knee protector panel in position and secure with screws (x4).
2. Install pop-rivets (x5).
3. Install diagnostic sockets (x2) (ensure marked socket is in correct location).
4. Install footwell light and reconnect multiplug.
5. Install driver's lower panel assembly (7 clips) and connect air temperature pipe.

Instrument Panel Assembly - Renew

Repair Operation Time (ROT)	
Item	**Code**
Instrument Panel Assembly-Renew	**01.12.AR**

Removal

1. Remove Instrument panel assembly (see Workshop Manual procedure 01.12.AB Instrument Panel - Facia Assembly - Remove for Access and Refit).
2. Remove steering column (bolts x4, multiplugs x5).
3. Remove passenger air bag module (screws x4).
4. Remove centre speaker (screws x2) and unclip harness (see Figure 1).



Figure 1

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5. Remove lighting switch (screws x3) (see Figure 2).

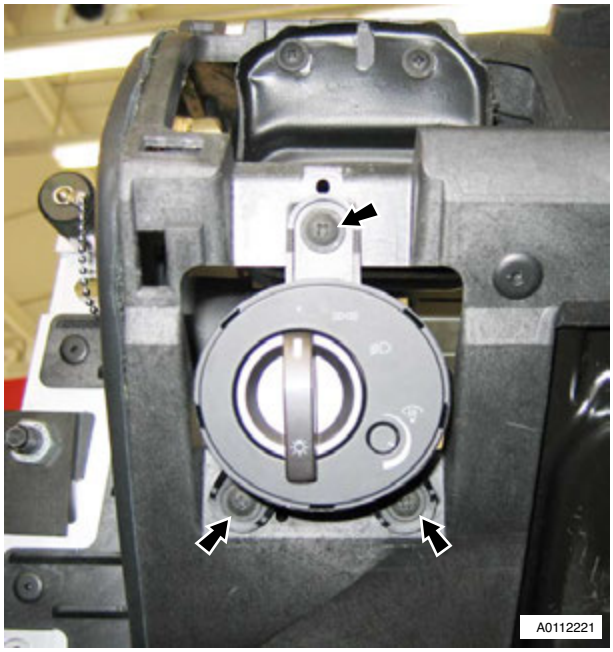


Figure 2

6. Disconnect Passenger airbag inhibit switch (see Figure 3).

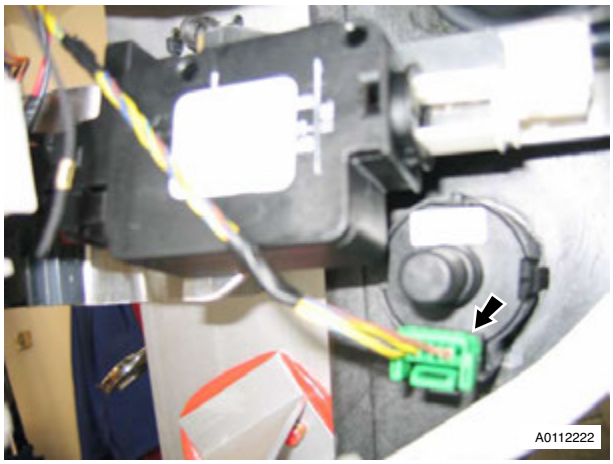


Figure 3

7. Disconnect interior guard switch (see Figure 4).

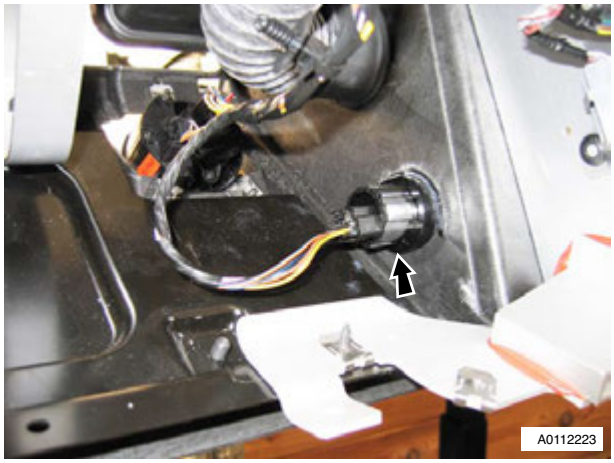


Figure 4

8. Remove RKE module (screws x2).
9. Remove side demist ducts (see Figure 5).

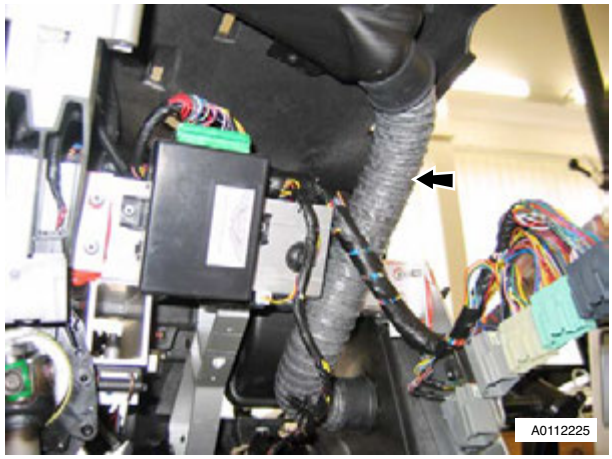


Figure 5

10. Remove RH footwell lamp (see Figure 6).

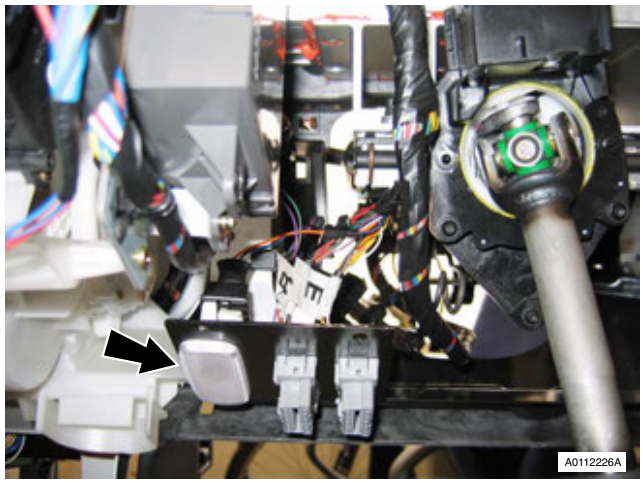


Figure 6

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11. Unclip diagnostic plugs (x2) (see Figure 7).

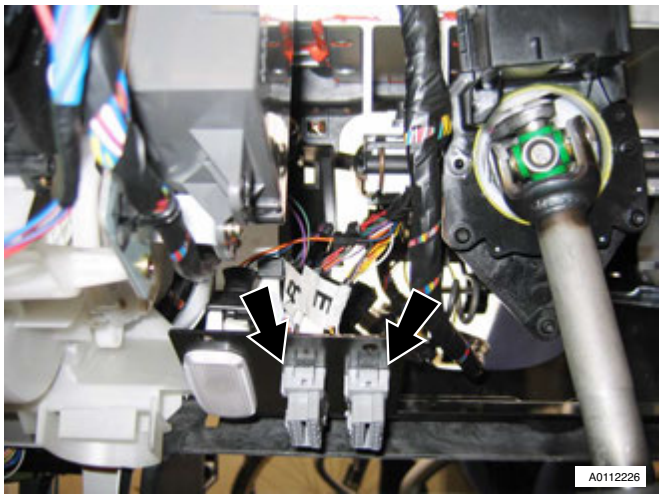


Figure 7

12. Remove CD unit (screws x2) (see Figure 8).

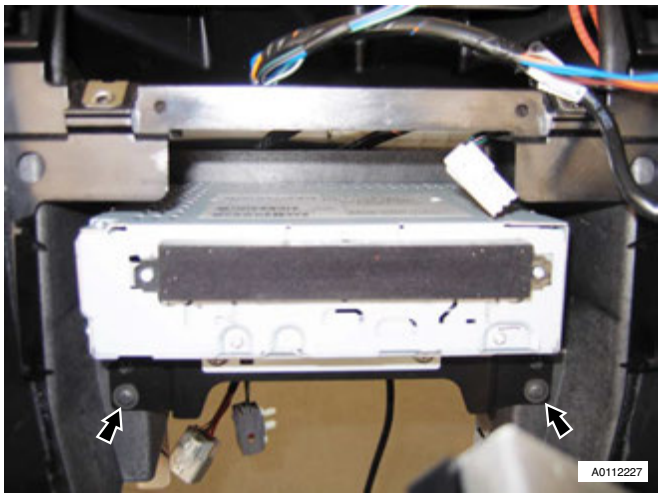


Figure 8

13. Remove screws (x4) panel to reinforcement.
14. Drill out rivets (x11).
15. Pull back IP panel, disconnect solar sensor and speaker multiplugs, unclip harness (x2) and remove IP.
16. Remove Interior guard and Airbag inhibit switch.
17. Drill out rivets (x5) plate to IP panel (see Figure 9).

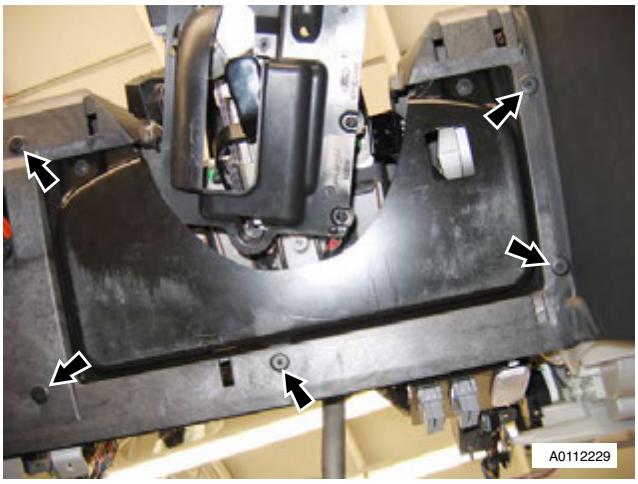


Figure 9

Installation

1. Install rivets (x5) plate to IP panel.
2. Install Interior guard and Airbag inhibit switch
3. Before positioning IP panel, connect solar sensor and speaker multiplugs and clip harness (x2).
4. Install panel rivets (x11).
5. Install screws (x4) panel to reinforcement.
6. Install diagnostic plugs (x2).
7. Install footwell lamp
8. Install side demist ducts.
9. Install RKE module (screws x2).
10. Connect interior guard switch.
11. Connect Passenger airbag inhibit switch.
12. Install lighting switch
13. Install centre speaker.
14. Install passenger air bag module.
15. Install steering column.
16. Install Instrument panel assembly (see Workshop Manual procedure 01.12.AM Panel Assembly - Instrument Centre - Renew).

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Cluster Bezel Panel - Renew

Repair Operation Time (ROT)	
Item	**Code**
Cluster Bezel Panel-Renew	**01.12.AT**

Removal

1. Remove instrument cluster hood assembly (6 clips) (see Figure 1).



Figure 1

2. Remove driver's upper outer panel assembly (4 clips) (see Figure 2).



Figure 2

3. Remove driver's upper inner panel assembly (5 clips) (see Figure 3).



Figure 3

4. Remove instrument cluster bezel panel (5 screws) and remove steering column cover (2 screws).

Installation

1. Install steering column cover to instrument cluster bezel panel (2 screws) and then install bezel to instrument cluster (5 screws).
2. Install driver's upper inner panel assembly (5 clips).
3. Install driver's upper outer panel assembly (4 clips).
4. Install instrument cluster hood (6 clips).

Driver Panel Assembly - Renew

Repair Operation Time (ROT)	
Item	**Code**
Driver Panel Assembly-Renew	**01.12.AU**

Removal

1. Remove instrument panel hood assembly (6 clips) (see Figure 1)



Figure 1

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2. Remove driver's upper outer panel assembly (4 clips) (see Figure 2).



Figure 2

3. Remove driver's upper inner panel assembly (5 clips) (see Figure 3).



Figure 3

4. Remove driver's panel assembly (3 screws and 4 clips).

Installation

1. Install driver's panel assembly (3 screws and 4 clips).
2. Install driver's upper inner panel assembly (5 clips).
3. Install driver's upper outer panel assembly (4 clips).
4. Install instrument cluster hood assembly (6 clips).

Instrument Panel Bezel Assembly (With Sat. Nav.) - Renew

Repair Operation Time (ROT)	
Item	**Code**
Instrument Panel Bezel Assembly-Renew	**01.12.AY**

Removal

1. Using tool (501 - 108), release instrument panel bezel assembly clips (x4) from IP (restrain panel movement).
2. Disconnect multiplug (x1) starter button and remove panel assembly (see Figure 1).

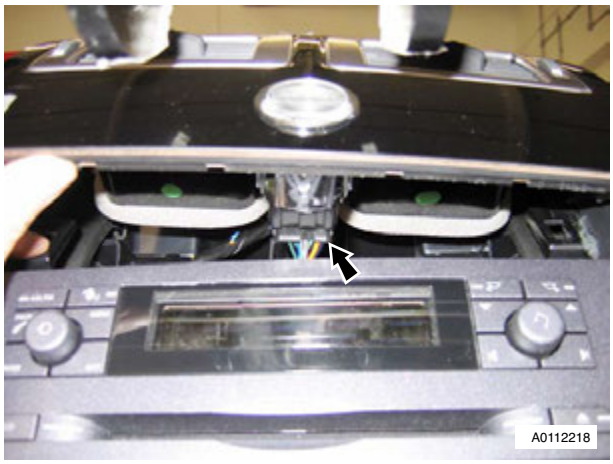


Figure 1

3. Remove starter button from instrument panel bezel assembly.
4. Remove screws (x6) air vents (x2) to bezel assembly and remove air vents.
5. Remove screws (x11) satellite navigation screen panel from instrument panel bezel assembly.
6. Remove Satellite screen panel.

Installation

1. install satellite screen panel (screws x 11) to bezel assembly.
2. Install air vents (x2).
3. Install starter button.
4. Position panel assembly, connect multiplug (x1) starter button.
5. Install panel and secure in clips (x4).

Instrument Panel Bezel Assembly (Without Sat. Nav.) - Renew

Repair Operation Time (ROT)	
Item	**Code**
Instrument Panel Bezel Assembly-Renew	**01.12.AZ**

Removal

1. Using tool (501 - 108), release instrument panel bezel assembly clips (x4) from IP (restrain panel movement).

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2. Disconnect multiplug (x1) starter button and remove panel assembly (see Figure 1).

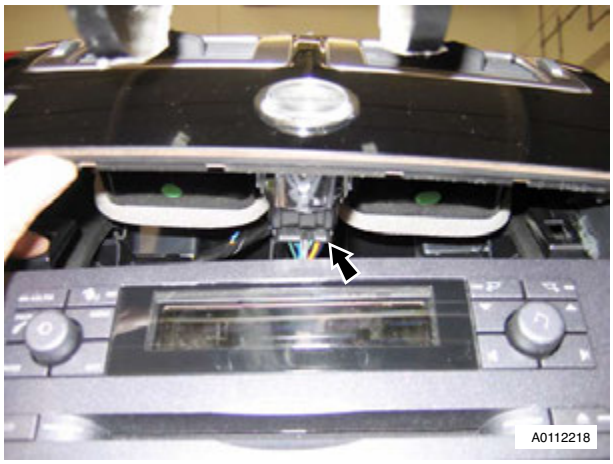


Figure 1

3. Remove starter button from instrument panel bezel assembly (see Figure 2).

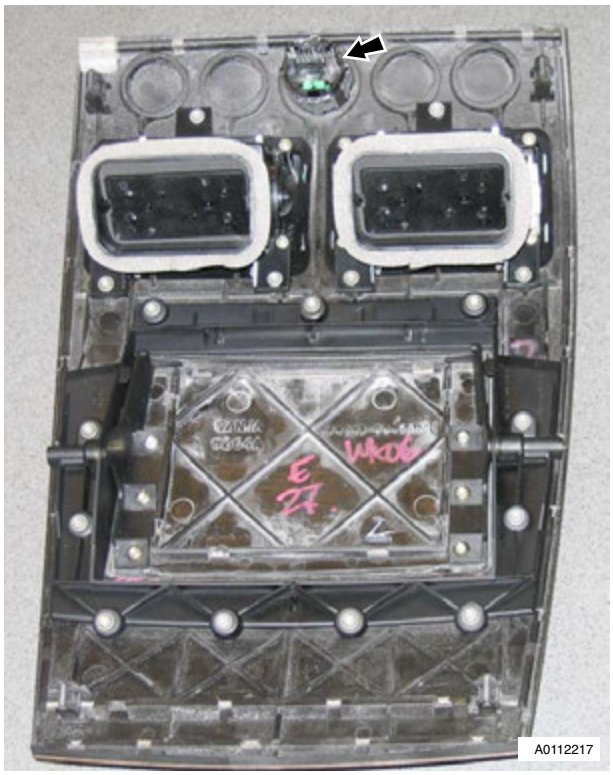


Figure 2

4. Remove screws (x6) air vents (x2) to bezel assembly and remove air vents (see Figure 3).

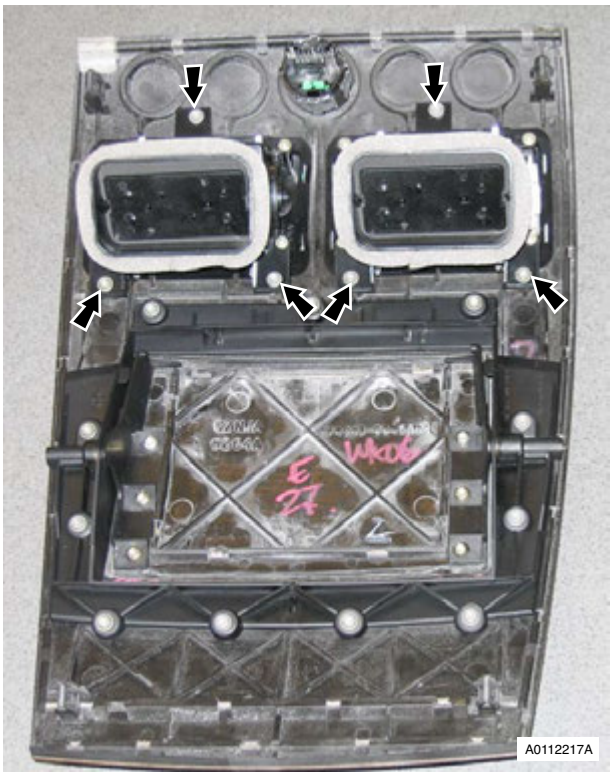


Figure 3

Installation

1. Install air vents (x2).
2. Install starter button.
3. Position panel assembly, connect multiplug (x1) starter button.
4. Install panel and secure in clips (x4).

Rear Console Panel Assembly - Renew

Repair Operation Time (ROT)	
Item	**Code**
Rear Console Panel Assembly-Renew	**01.12.CA**

Removal

1. Battery isolation switch 'OFF'
2. Remove stowage compartment door.
3. Remove bolt and screws (x5), support rail to body. Remove support rail.
4. Remove screw (x1) centre arm rest to rear console panel assembly.
5. Release/remove centre arm rest.
6. Remove nuts (x3), screws (x4), panel assembly rear console.
7. Remove screws (x2) ashtray console panel assembly to floor.
8. Remove rear console panel assembly.

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Installation

1. Position rear console panel, install and tighten nuts (x3) and screws (x4).
2. Install screws (x2) ashtray console panel to floor.
3. Install centre arm rest.
4. Install support rail, install and tighten screws (x5) and bolt.
5. Install stowage compartment door.
6. Battery isolation switch 'ON'.

Armrest Pad Assembly - Renew

Repair Operation Time (ROT)	
Item	**Code**
Armrest Pad Assembly-Renew	**01.12.DA**

Removal

1. Battery isolation switch 'OFF'.
2. Remove stowage compartment door.
3. Remove bolt (x1) and screws (x5) support rail to body.
4. Remove screw (x1) centre arm rest to rear console panel assembly.
5. Release and remove arm rest

Installation

1. Install arm rest assembly.
2. Install rear support rail
3. Install stowage compartment door.
4. Battery isolation switch 'ON'.

Console Panel Assembly - Renew

Repair Operation Time (ROT)	
Item	**Code**
Console Panel Assembly-Renew	**01.12.DB**

Removal

1. Battery isolation switch 'OFF'.
2. Remove stowage compartment door.
3. Remove bolt (x1) and screws (x5) support rail to body.
4. Remove screw (x1) centre arm rest to rear console panel assembly.
5. Release and remove arm rest
6. Release gear lever gaiter.
7. Remove screws (x2) ashtray console panel assembly to floor.
8. Release switch panel and disconnect multiplugs (x6) and Lucar connectors (x2).
9. Remove switch panel.
10. Remove boot release and central locking switch.
11. Remove switches below ashtray (x4)
12. Remove Ashtray from panel assembly. (Allen screws x4)

Installation

1. Install ashtray to panel
2. Install switches (x4)
3. Install switch panel screws (x2).
4. Install boot release and central locking switch to panel assembly console.
5. Position switch panel and connect multiplugs and Lucar connectors.
6. Install gear lever gaiter.
7. Install arm rest assembly.
8. Install rear support rail
9. Install stowage compartment door.
10. Battery isolation switch 'ON'.

RH/LH Rear Console Panel Assembly - Renew (Roadster Only)

Repair Operation Time (ROT)		
Item		**Code**
Rear Console Panel Assembly	RH	**01.12.DE**
Rear Console Panel Assembly	LH	**01.12.DF**

Removal

1. Remove panel assembly centre (see Workshop Manual procedure 01.05.FR/01.05.FS Panel Assembly - Centre - Rear Bulkhead - LH/RH - Renew).
2. Remove screw (x1) trim to body lower (see Figure 1).

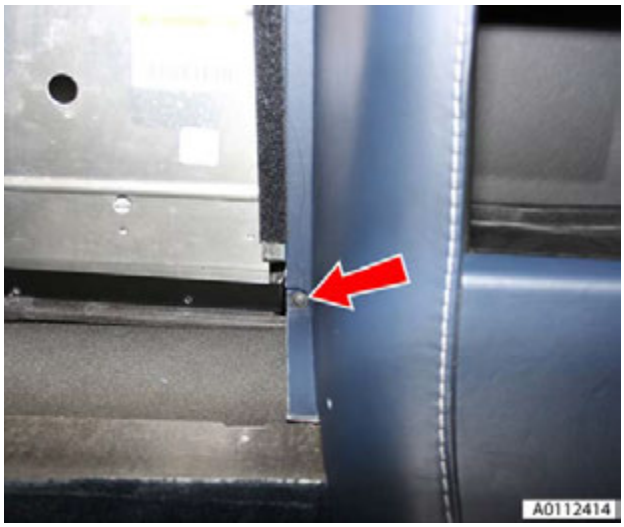


Figure 1

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3. Remove nut securing console panel to body side trim (see Figure 2).



Figure 2

4. Remove wind stop hook (see Workshop Manual procedure 01.05.CZ Hook - Windstop - Renew).
5. Remove accessory socket cover and cubby box liner (see Figure 3).



Figure 3

6. Remove stowage cover (see Figure 4).



Figure 4

7. Prise top of cubby box side trim aside and remove securing screw (see Figure 5).



Figure 5

8. Remove screws (x2) securing trim to tunnel and remove trim.

Installation

1. Install trim and securing screws (x2).
2. Prise top of cubby box side trim aside and install securing screw.
3. Install stowage cover.
4. Install accessory socket cover and cubby box liner.
5. Install wind stop hook (see Workshop Manual procedure 01.05.CZ Hook - Windstop - Renew).
6. Install nut securing console panel to body side trim.
7. Install screw (x1) trim to body lower.

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8. Install panel assembly centre (see Workshop Manual procedure 01.05.FR/01.05.FS Panel Assembly - Centre - Rear Bulkhead - LH/RH - Renew).

Centre Console Panel - Remove and Install (Coupe Only)

Repair Operation Time (ROT)		
Item		**Code**
Centre Console Panel - Remove and Install	Coupe	**01.12.DG**

Removal

1. Operate the front seats to their fully forward positions.
2. Remove the rear infill panel.



Figure C-01-12-DA-02

3. Remove the five screws that attach the rear finisher to the body.

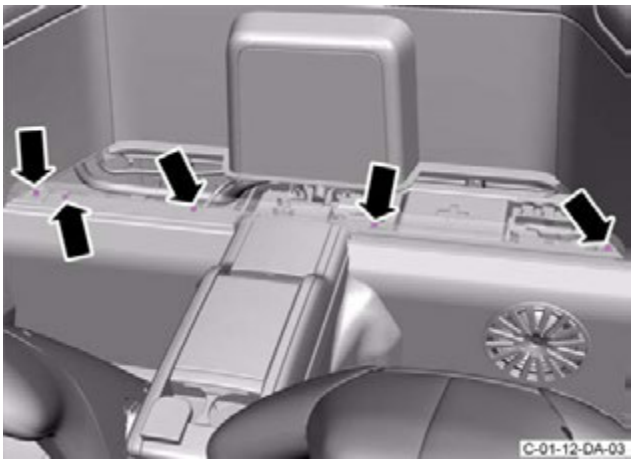


Figure C-01-12-DA-03

4. Remove the rear finisher.

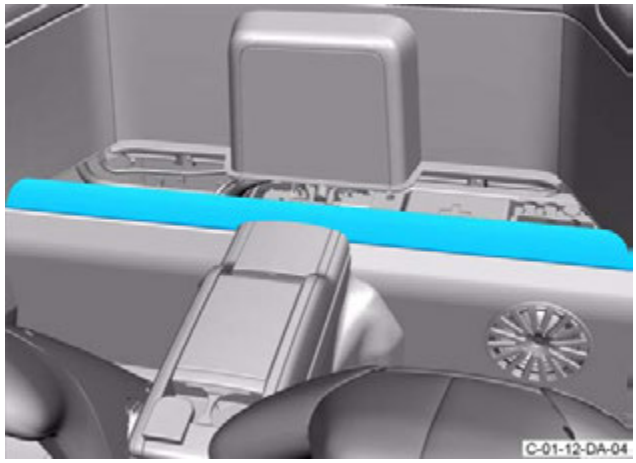


Figure C-01-12-DA-04

5. Remove the rubber mat from the cup holder.

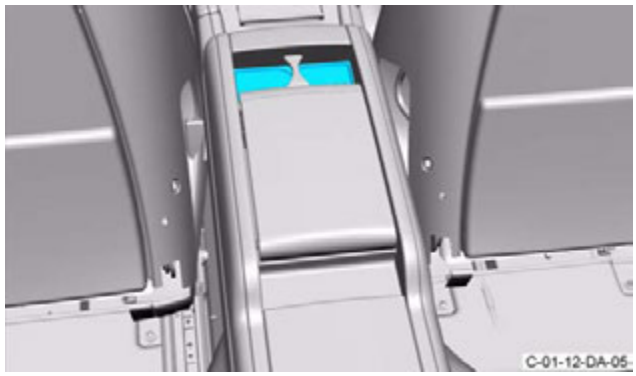


Figure C-01-12-DA-05

Note: The bracket and washers will fall from the armrest.in the step that follows

6. Remove the two Torx bolts that attach the armrest to the body.

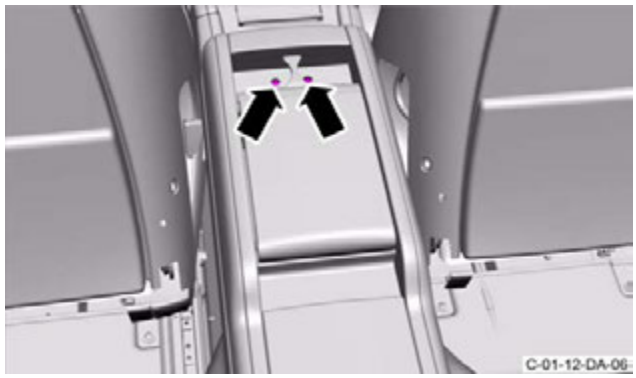


Figure C-01-12-DA-06

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7. Remove the leather insert..

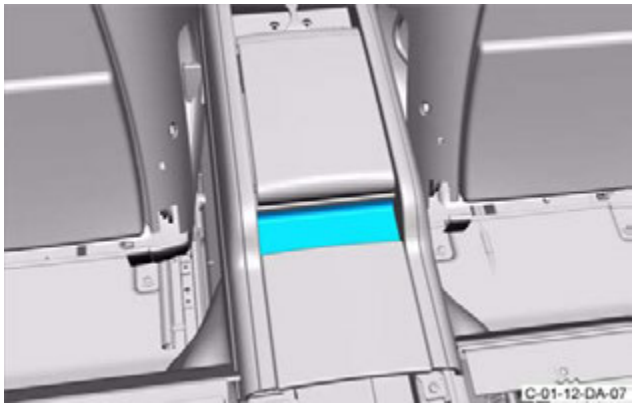


Figure C-01-12-DA-07

8. Remove the two screws that attach the armrest to the body.

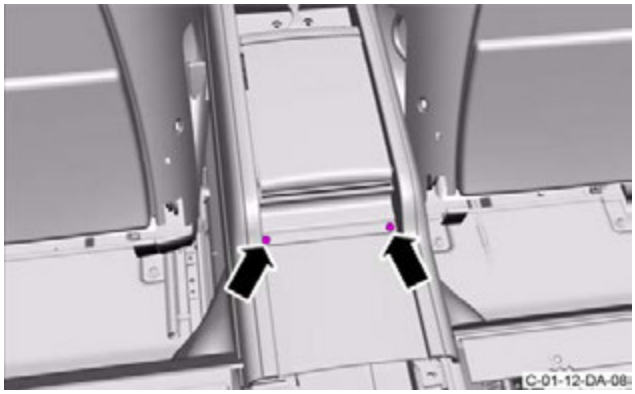


Figure C-01-12-DA-08

9. Remove the rear screw that attaches the armrest to the body.

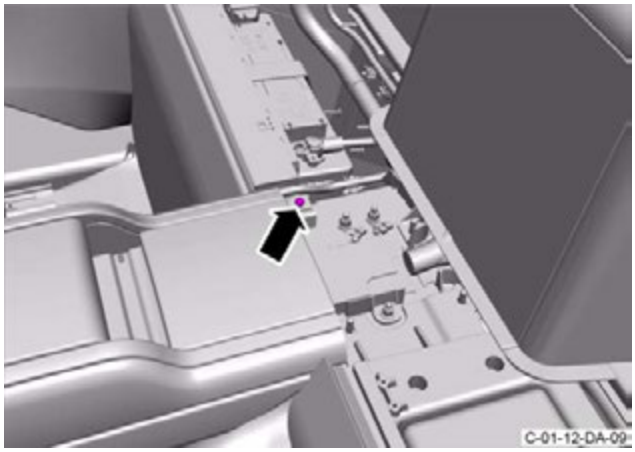


Figure C-01-12-DA-09

10. Move the armrest to get access to the electrical connector for the auxiliary socket.

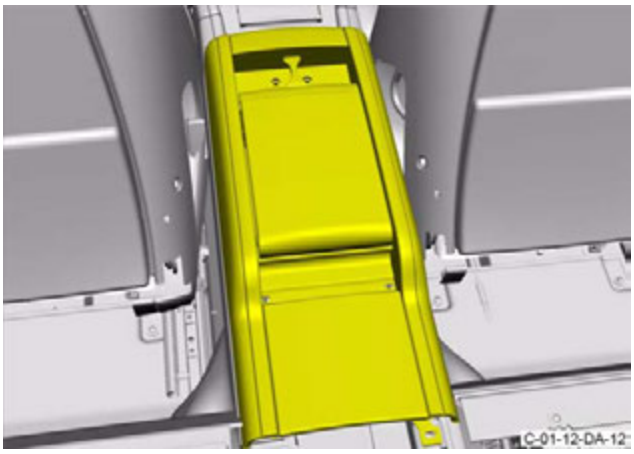


Figure C-01-12-DA-12

11. Disconnect the electrical connector from the auxiliary socket.

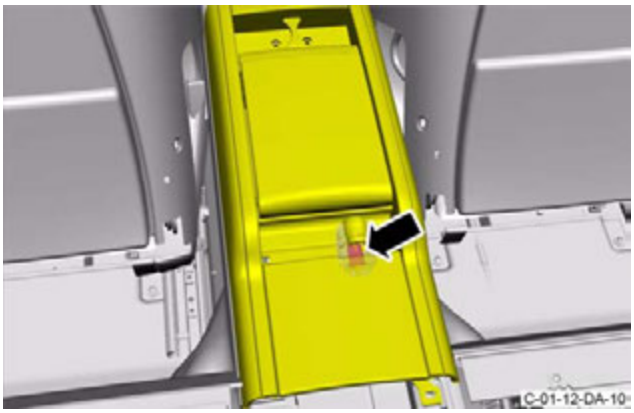


Figure C-01-12-DA-10

12. Remove the armrest.
13. Remove the two screws that attach the centre console panel to the body.

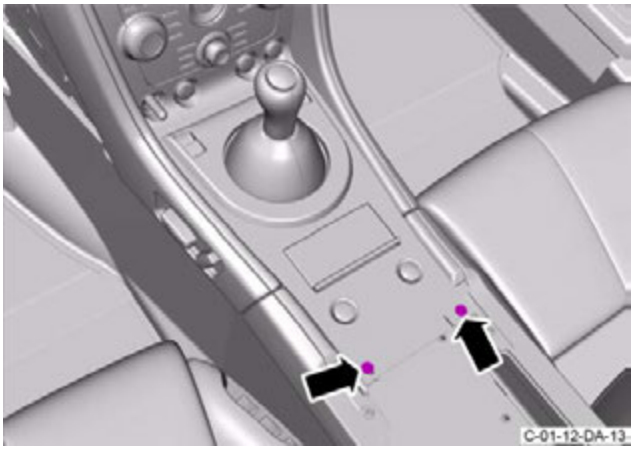


Figure C-01-12-DA-13

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14. Push the gearknob down and turn it counterclockwise.

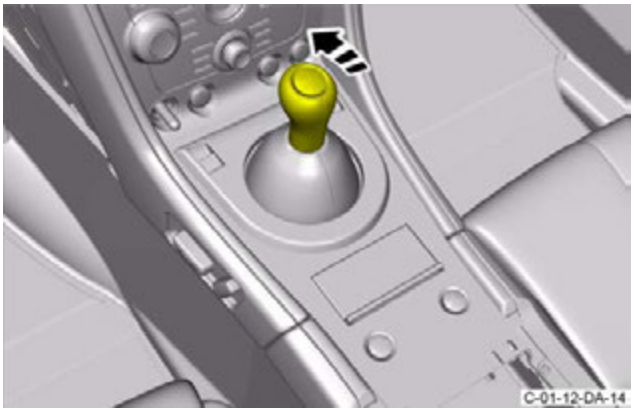


Figure C-01-12-DA-14

15. Remove the gearknob.
16. Release the centre console panel from the body.

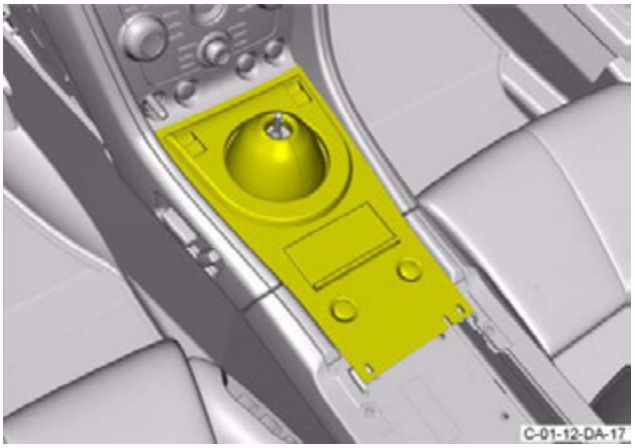


Figure C-01-12-DA-17

17. Disconnect the four electrical connectors from the switches.

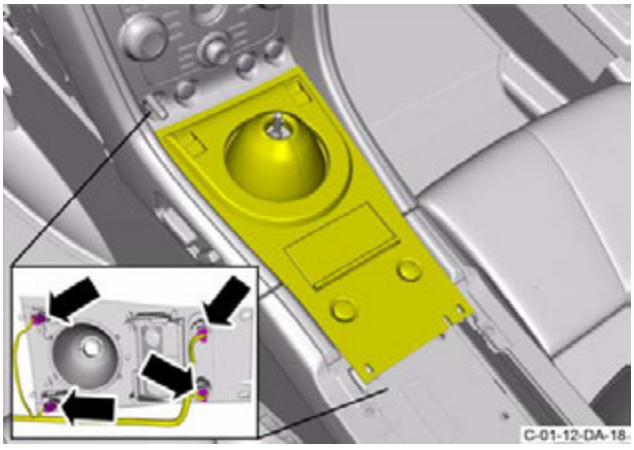


Figure C-01-12-DA-18

18. Remove the centre console panel.

Install

1. Put the centre console panel into position.

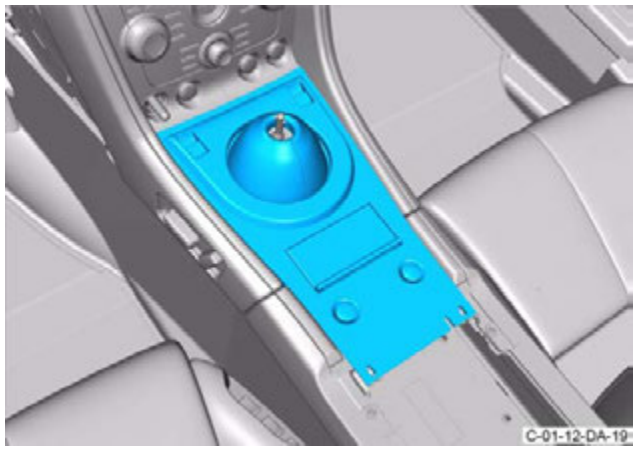


Figure C-01-12-DA-19

2. Connect the four electrical connectors to the switches (refer to Figure C-01-12-DA-18).
3. Install the centre console panel.
4. Install the gearknob.
5. Push the gearknob down and twist it clockwise.

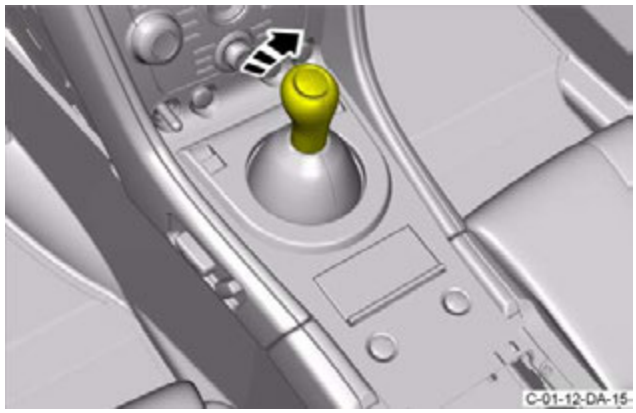


Figure C-01-12-DA-15

6. Install and tighten the two screws that attach the centre console panel to the body.

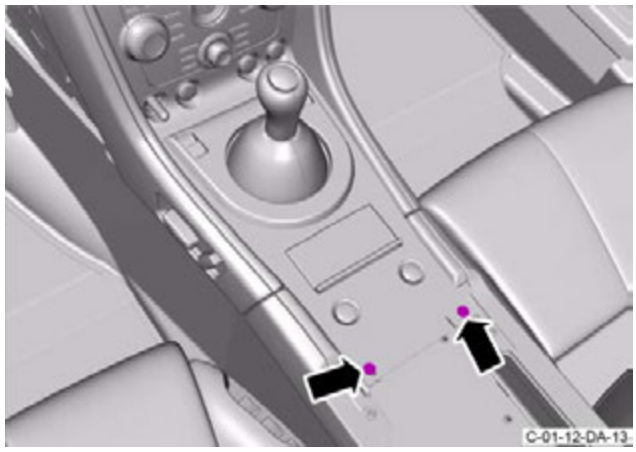


Figure C-01-12-DA-13

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7. Install, but do not tighten, the two Torx screws, washers and bracket onto the armrest. Do not tighten the screws at this step.

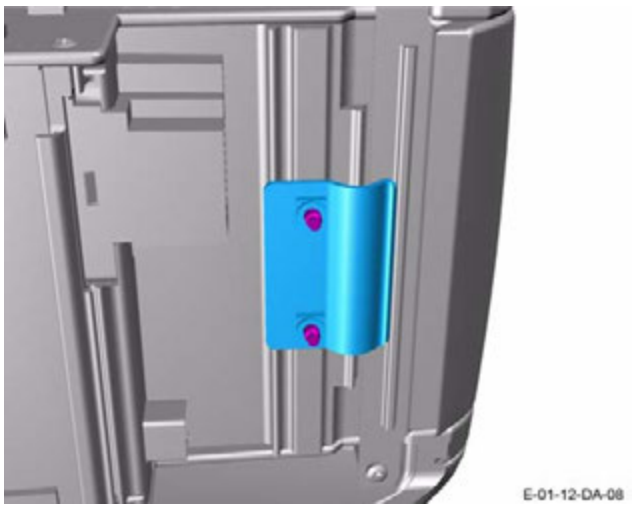


Figure E-01-12-DA-08

8. Put the armrest into position.

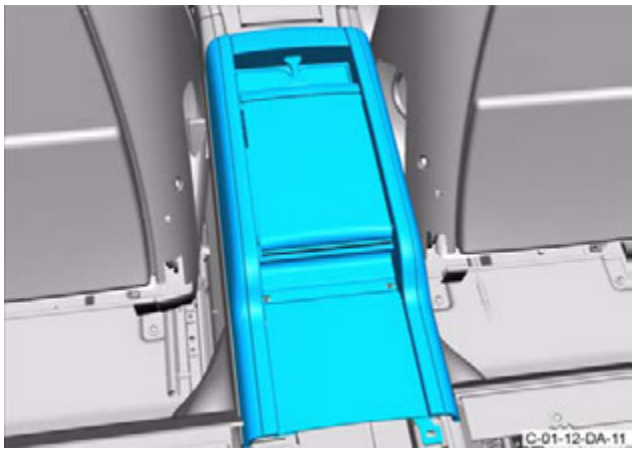


Figure C-01-12-DA-11

9. Connect the electrical connector to the auxiliary socket.

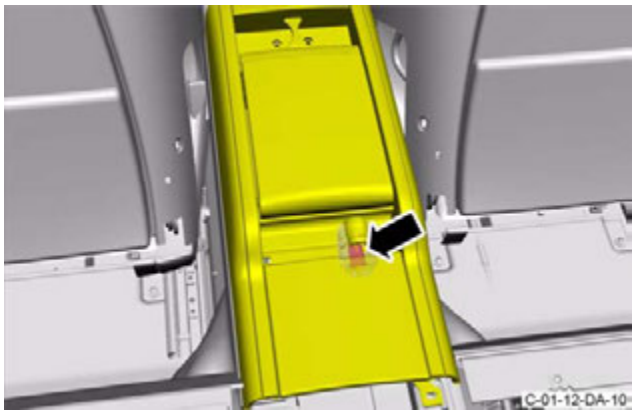


Figure C-01-12-DA-10

10. Install the armrest.
11. Install and tighten the rear screw that attaches the armrest to the body.

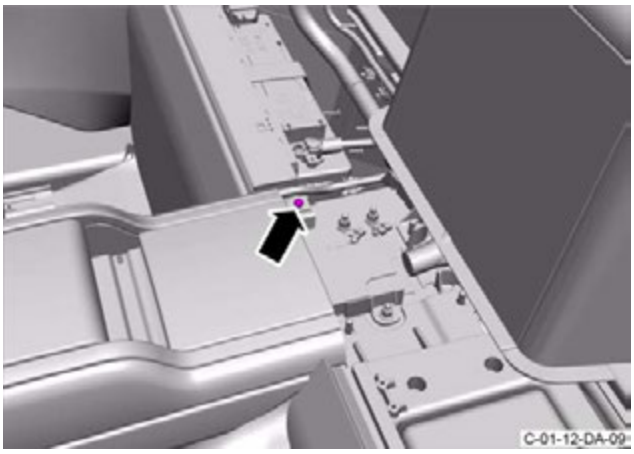


Figure C-01-12-DA-09

12. Tighten the two Torx bolts that attach the armrest to the bracket.

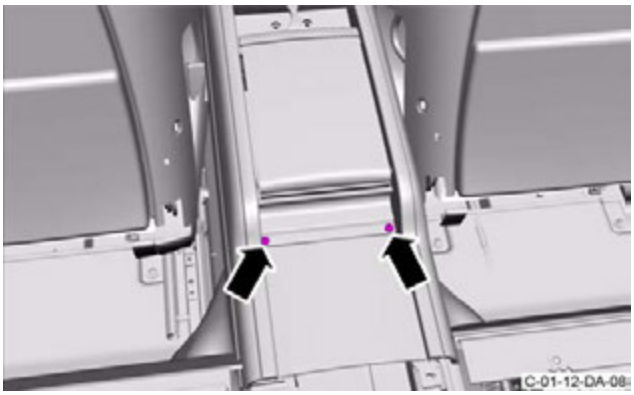


Figure C-01-12-DA-08

13. Install the leather insert.

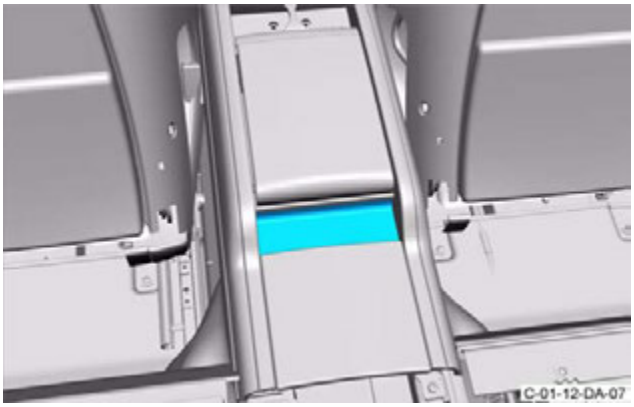


Figure C-01-12-DA-07

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14. Install and tighten the two Torx bolts that attach the armrest to the body.

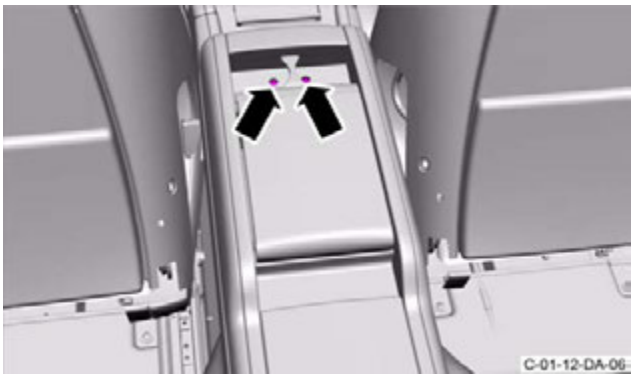


Figure C-01-12-DA-06

15. Install the rubber mat into the cup holder.

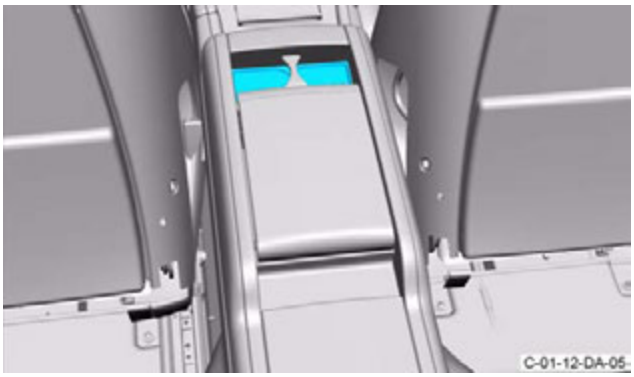


Figure C-01-12-DA-05

16. Install the rear finisher.

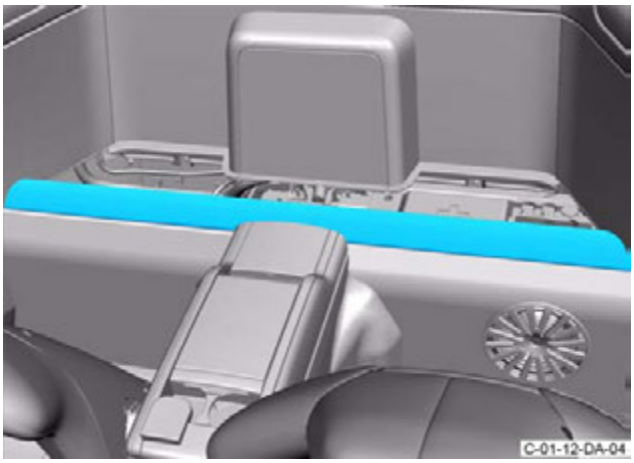


Figure C-01-12-DA-04

17. Install and tighten the five screws that attach the rear finisher to the body.

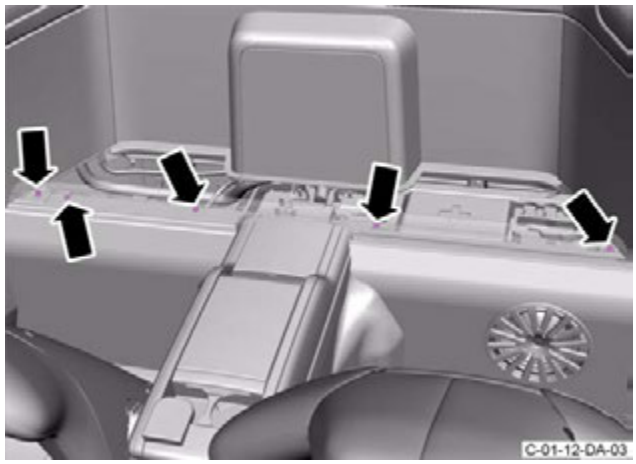


Figure C-01-12-DA-03

18. Install the rear infill panel.



Figure C-01-12-DA-02

19. Operate the front seats to their initial positions.

Centre Console Panel - Remove and Install (Roadster Only)

Repair Operation Time (ROT)		
Item		**Code**
Centre Console Panel - Remove and Install	Roadster	**01.12.DG**

Removal

1. Operate the front seats to their fully forward positions.
2. Disconnect the battery.

WARNING

LEAVE THE VEHICLE FOR TWO MINUTES AFTER YOU SET THE IGNITION TO OFF BEFORE YOU DO WORK ON THE ROLL-OVER PROTECTION SYSTEM (ROPS) UNITS. IF YOU DO NOT, THE ROPS CAN OPERATE AND CAUSE INJURY OR DEATH.

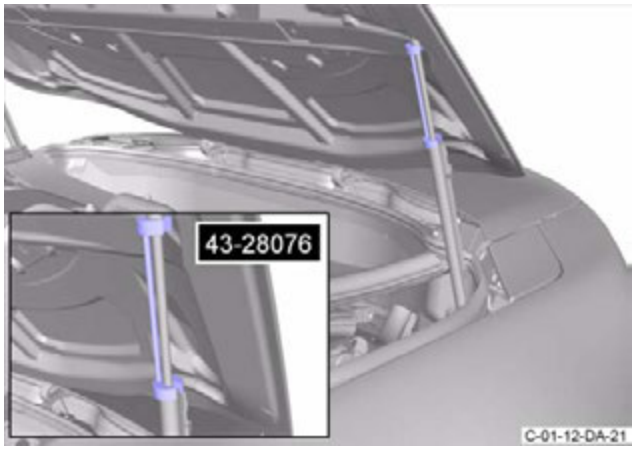
cardiagn.com

3. Fully open the tonneau cover to get access to the hood compartment.



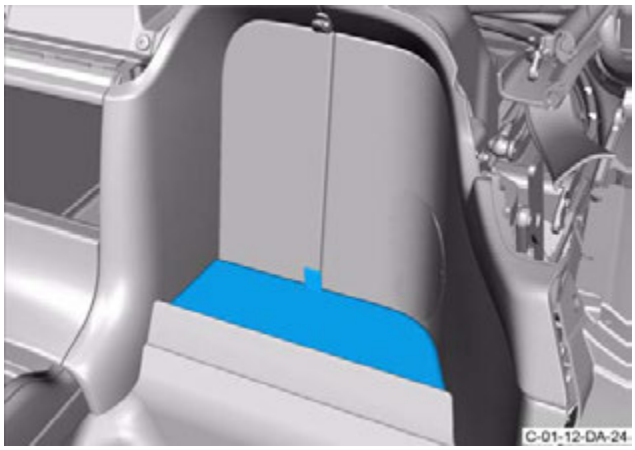
C-01-12-DA-20

4. Use the special tool to hold the tonneau cover.



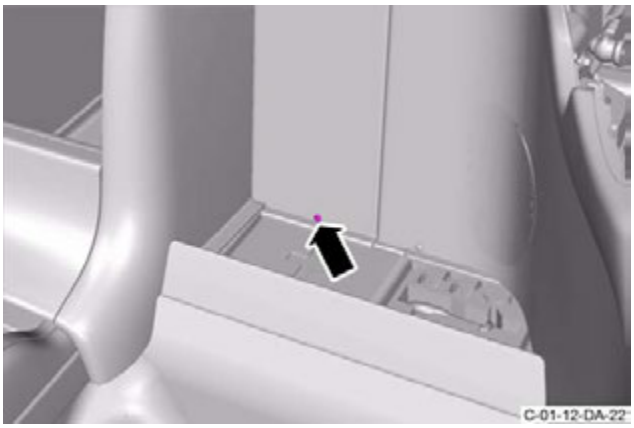
C-01-12-DA-21

5. Remove the left side infill panel.



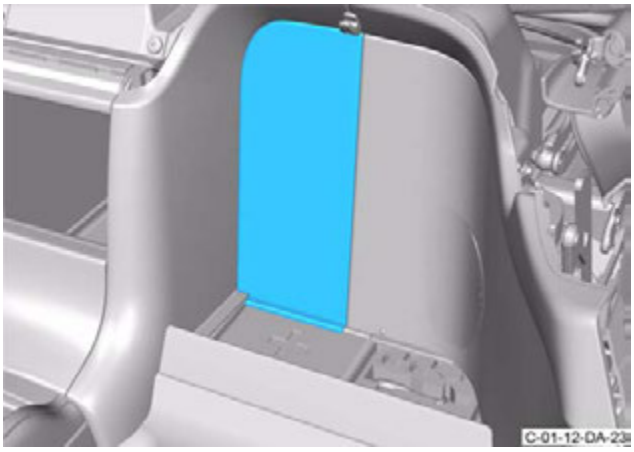
C-01-12-DA-24

6. Remove the screw that attaches the left side rear bulkhead cover to the body.



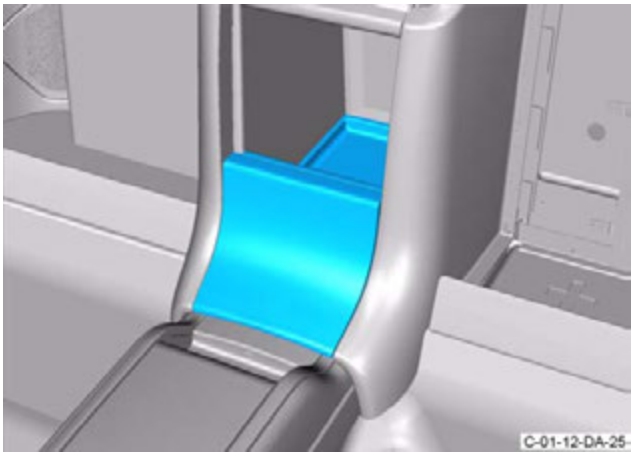
C-01-12-DA-22

7. Remove the left side rear bulkhead cover.



C-01-12-DA-23

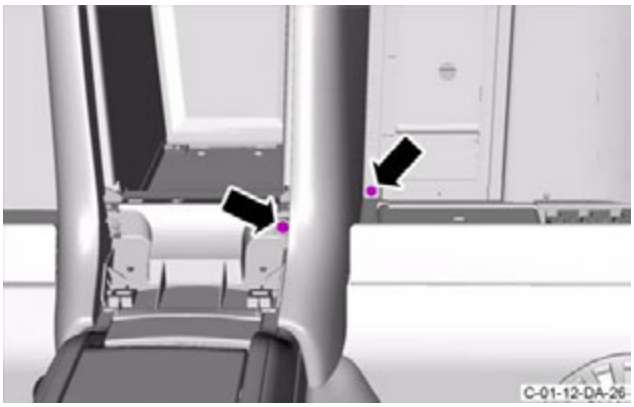
8. Remove the stowage box cover and the rubber mat.



C-01-12-DA-25

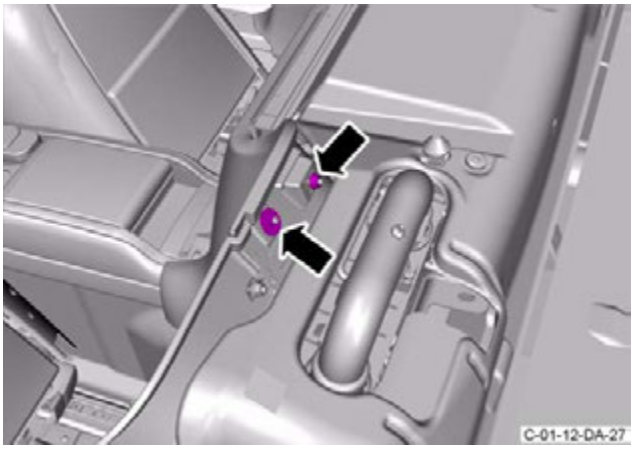
cardiagn.com

9. Remove the two screws that attach the left side cover panel for the centre console to the body.



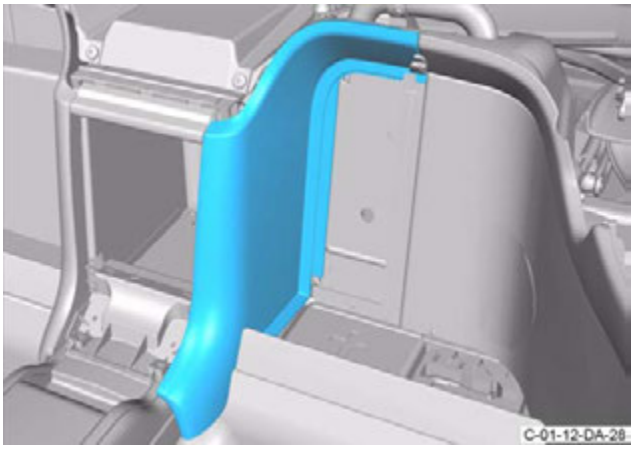
C-01-12-DA-26

10. Remove the two nuts that attach the left side cover panel for the centre console to the body.



C-01-12-DA-27

11. Remove the left side cover panel for the centre console.



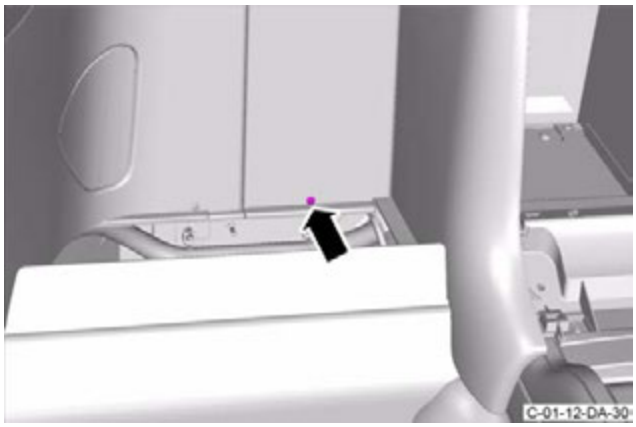
C-01-12-DA-28

12. Remove the right side infill panel.



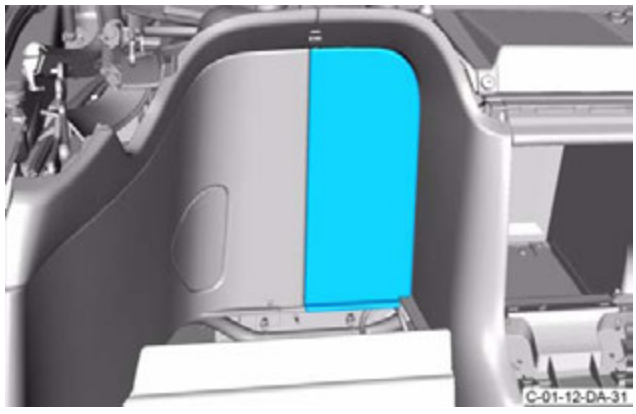
C-01-12-DA-29

13. Remove the screw that attaches the right side rear bulkhead cover to the body.



C-01-12-DA-30

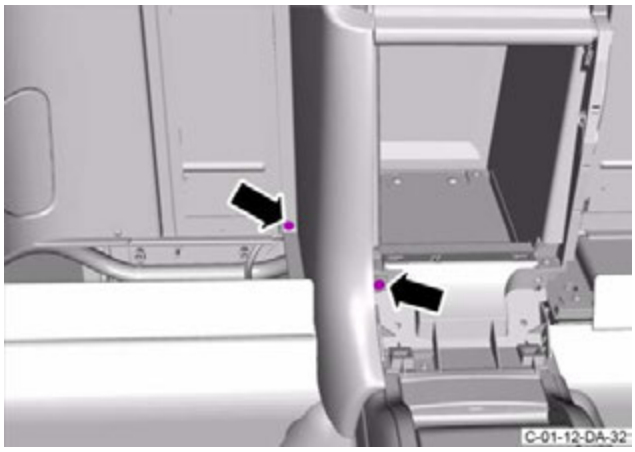
14. Remove the right side rear bulkhead cover.



C-01-12-DA-31

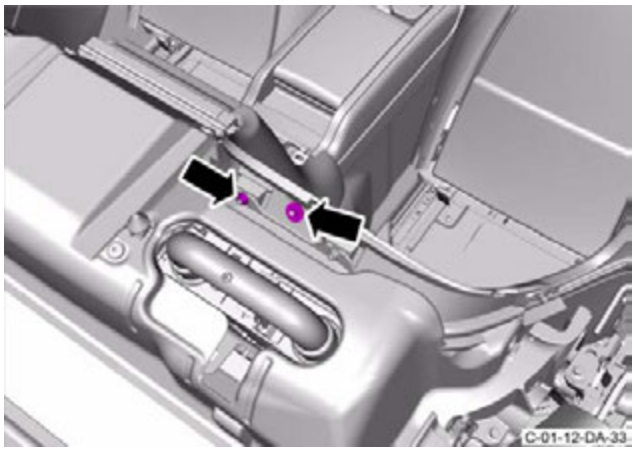
cardiagn.com

15. Remove the two screws that attach the right side cover panel for the centre console to the body.



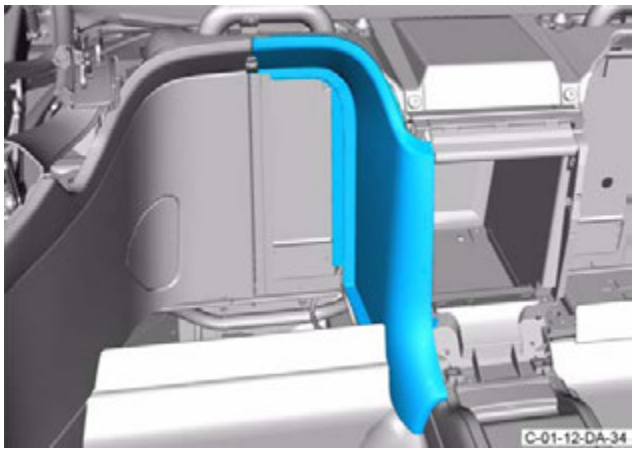
C-01-12-DA-32

16. Remove the two nuts that attach the right side cover panel for the centre console to the body.



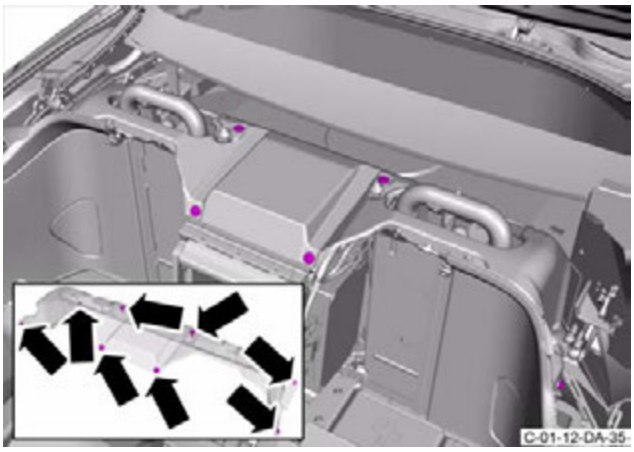
C-01-12-DA-33

17. Remove the right side cover panel for the centre console.



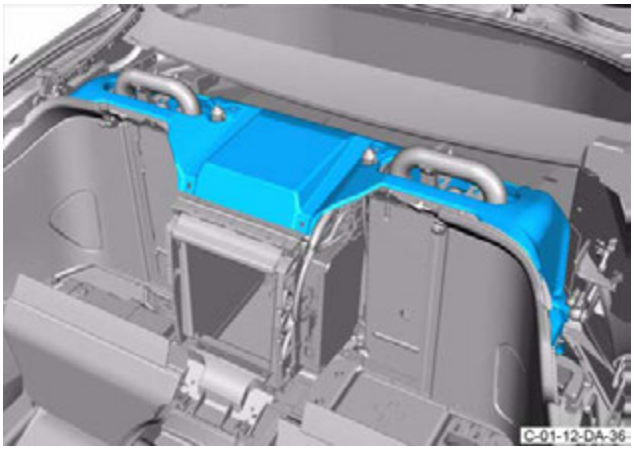
C-01-12-DA-34

18. Remove the four Torx screws and the four nuts that attach the stowage compartment cover to the body.



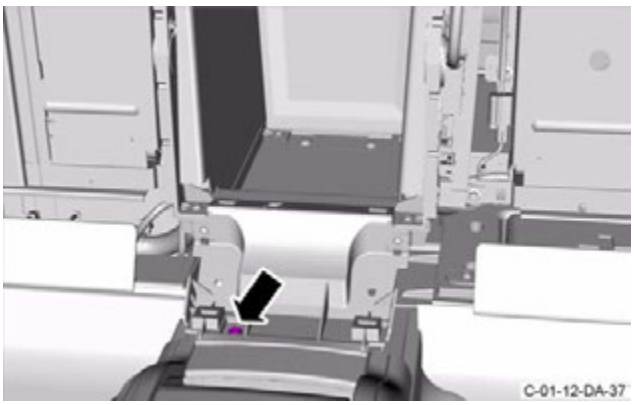
C-01-12-DA-35

19. Remove the stowage compartment cover.



C-01-12-DA-36

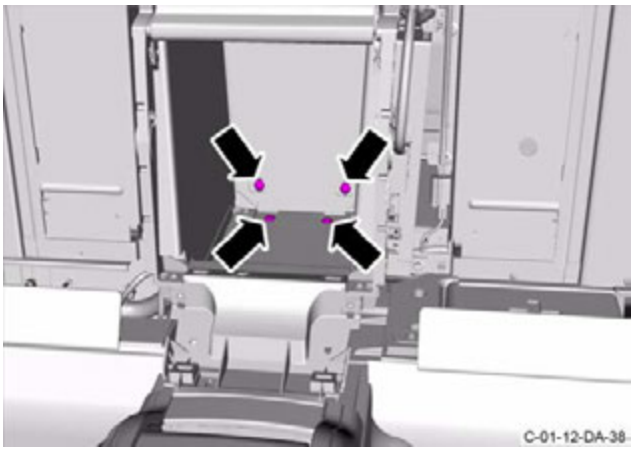
20. Remove the screw that attaches the stowage compartment to the body.



C-01-12-DA-37

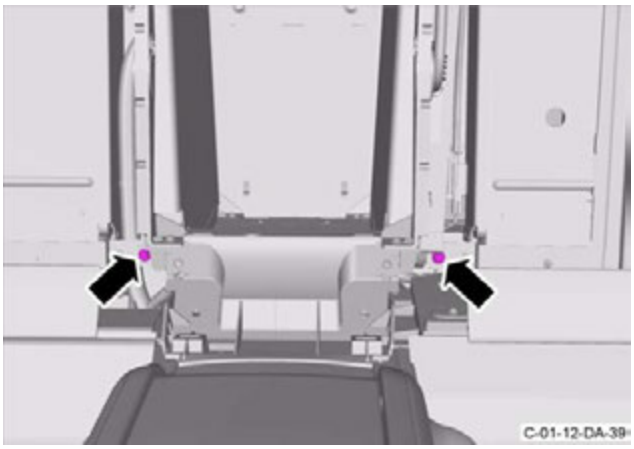
cardiagn.com

21. Remove the four Torx screws that attach the stowage compartment to the body.



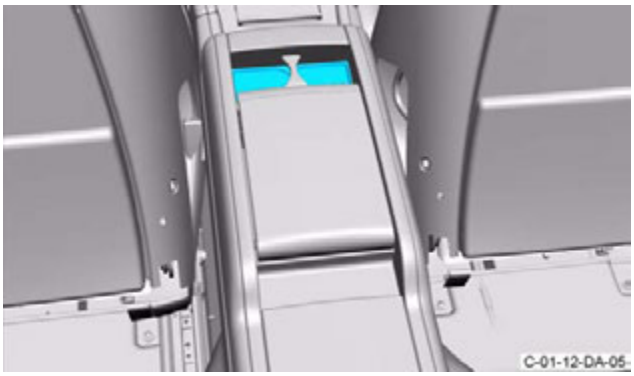
C-01-12-DA-38

22. Remove the two screws that attach the stowage compartment to the body.



C-01-12-DA-39

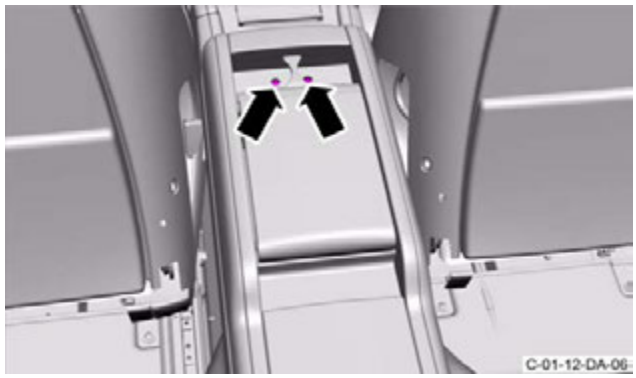
23. Remove the rubber mat from the cup holder.



C-01-12-DA-05

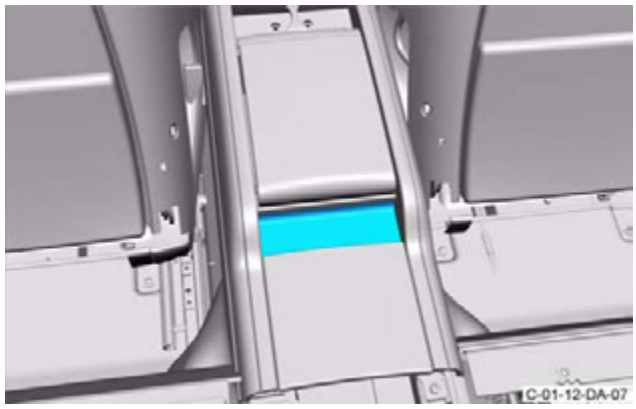
Note: The bracket and washers will fall from the armrest in the step that follows.

24. Remove the two Torx screws that attach the armrest to the bracket.



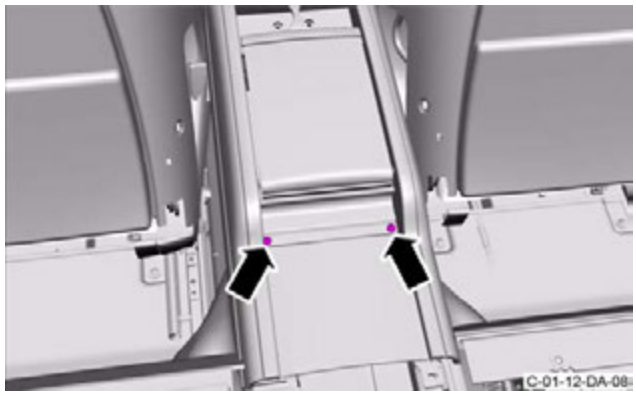
C-01-12-DA-06

25. Remove the leather insert.



C-01-12-DA-07

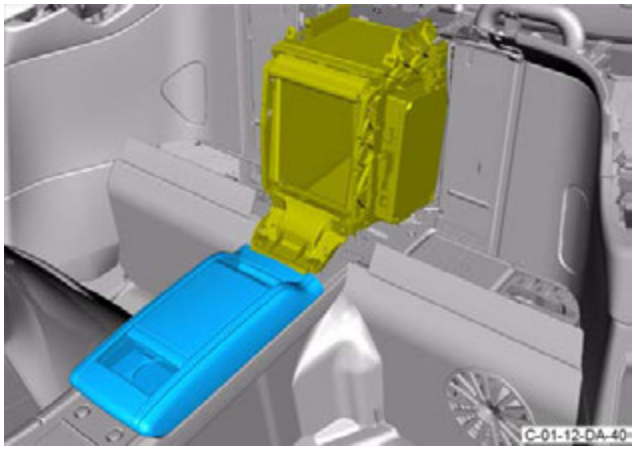
26. Remove the two Torx screws that attach the armrest to the body.



C-01-12-DA-08

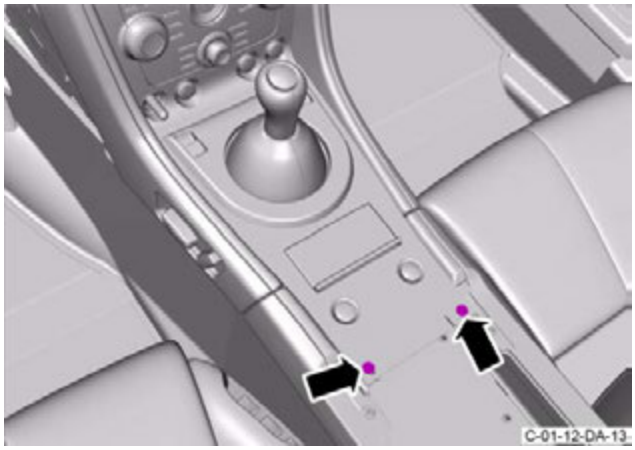
cardiagn.com

27. Move the stowage box and remove the armrest.



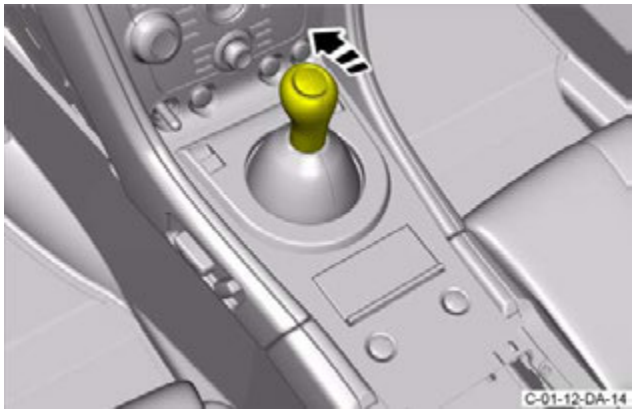
C-01-12-DA-40

28. Remove the two screws that attach the centre console panel to the body.



C-01-12-DA-13

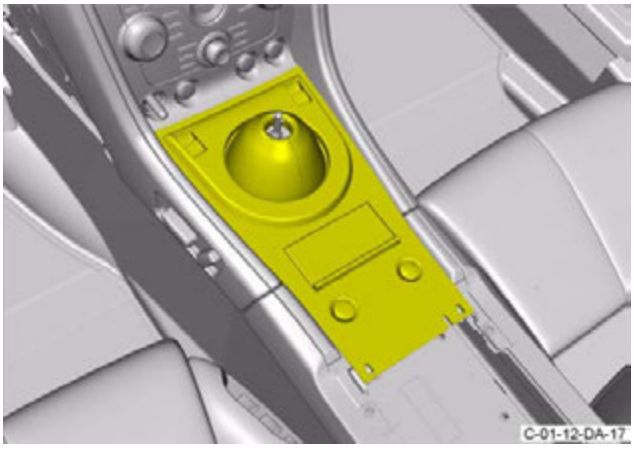
29. Push the gear knob down and turn it counterclockwise.



C-01-12-DA-14

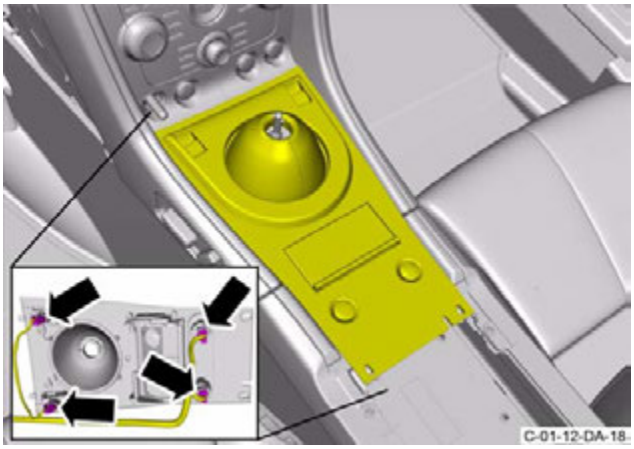
30. Remove the gear knob.

31. Release the centre console panel from the body.



C-01-12-DA-17

32. Disconnect the electrical connector from each of the four switches.

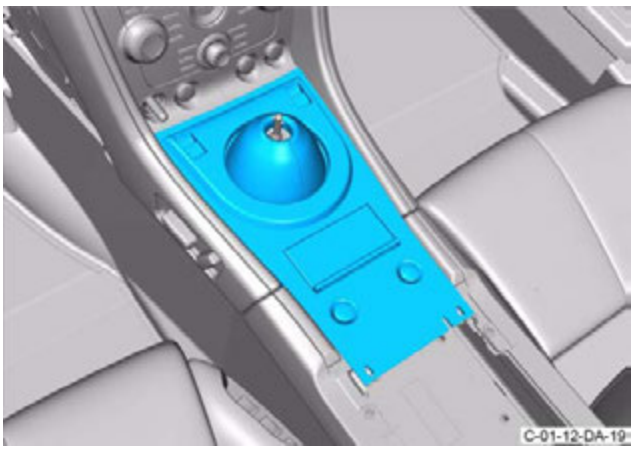


C-01-12-DA-18

33. Remove the centre console panel.

Install

1. Connect the four electrical connector to each of the four switches (refer to Figure C-01-12-DA-18).
2. Put the centre console panel into position.

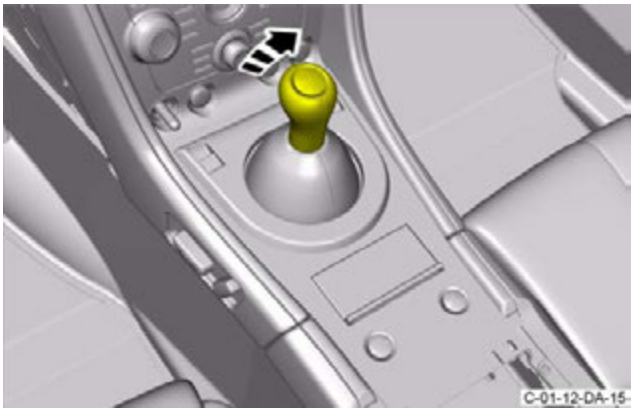


C-01-12-DA-19

3. Install the centre console panel.
4. Install the gearknob.

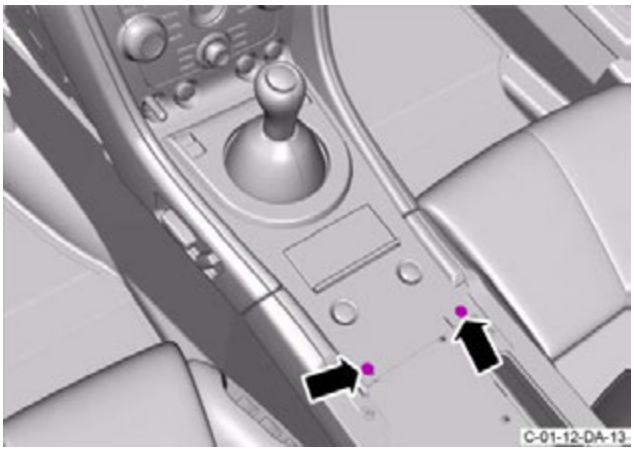
cardiagn.com

5. Push the gearknob down and turn it clockwise.



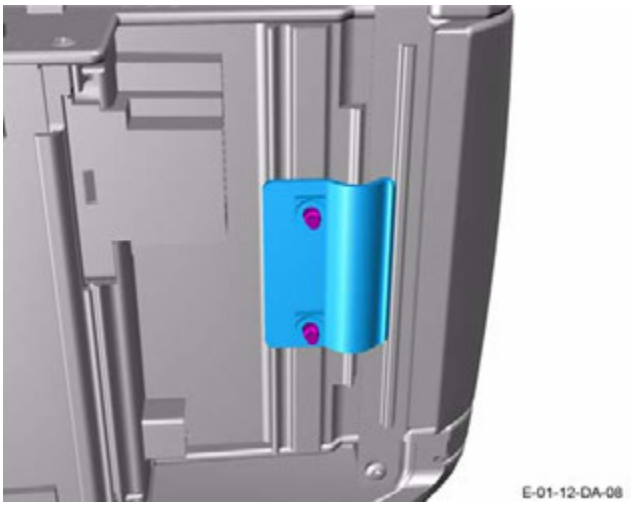
C-01-12-DA-15

6. Install and tighten the two screws that attach the centre console panel to the body.



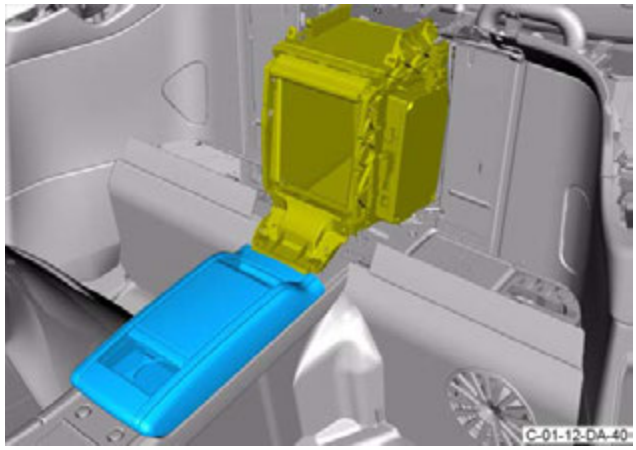
C-01-12-DA-13

7. Install but do not tighten, the two Torx screws, washers and bracket to the armrest.



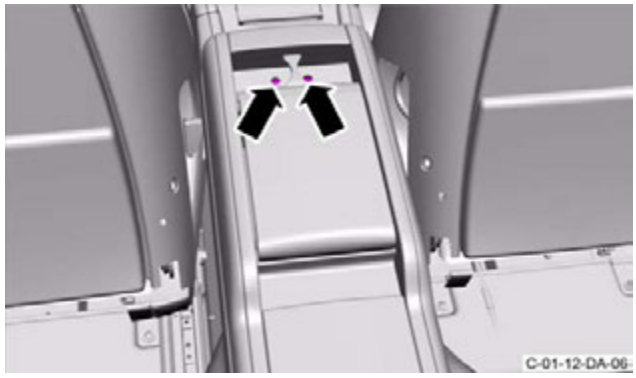
E-01-12-DA-08

8. Move the stowage box and install the armrest.



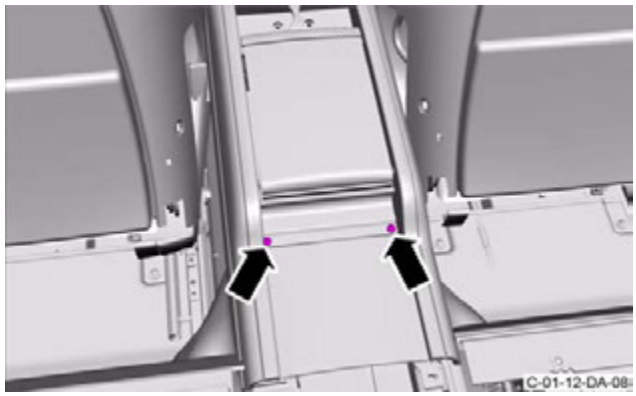
C-01-12-DA-40

9. Tighten the two Torx scrws that attach the armrest to the bracket.



C-01-12-DA-06

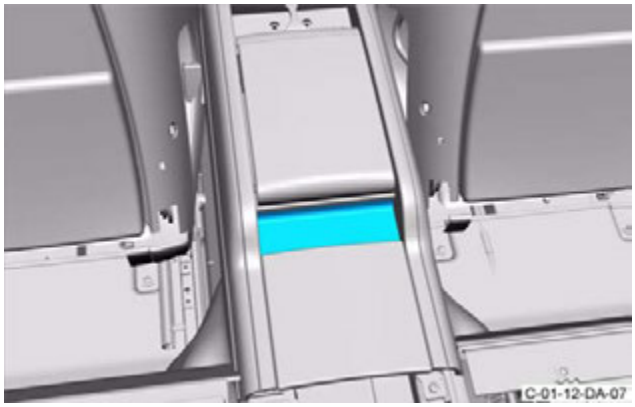
10. Install and tighten the two Torx screws that attach the armrest to the body.



C-01-12-DA-08

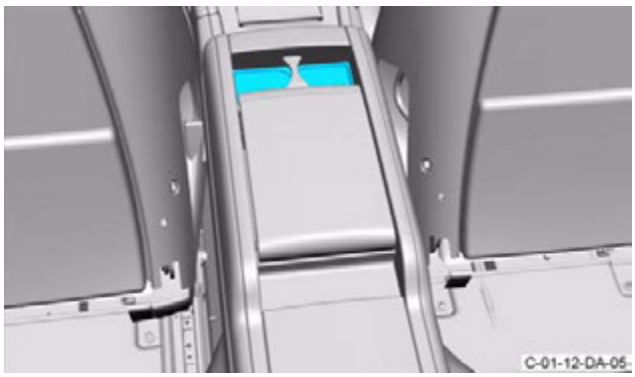
cardiagn.com

11. Install the leather insert.



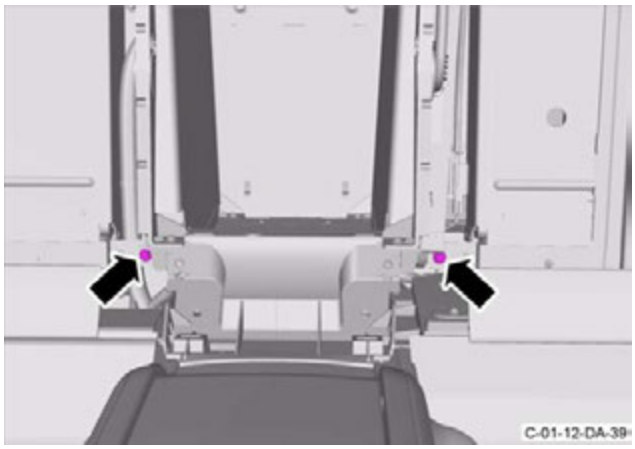
C-01-12-DA-07

12. Install the rubber mat into the cupholder.



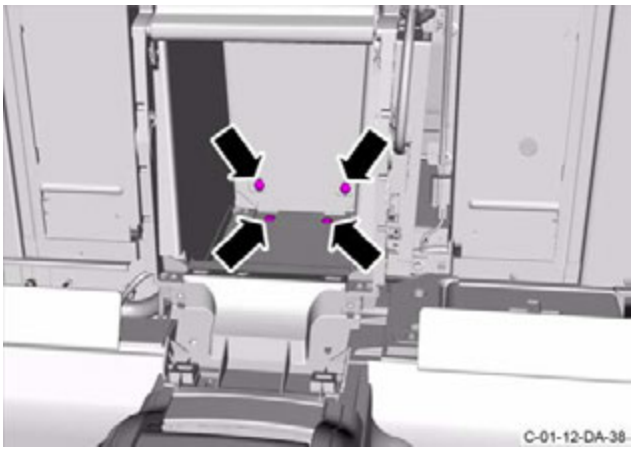
C-01-12-DA-05

13. Install and tighten the two screws that attach the stowage compartment to the body.



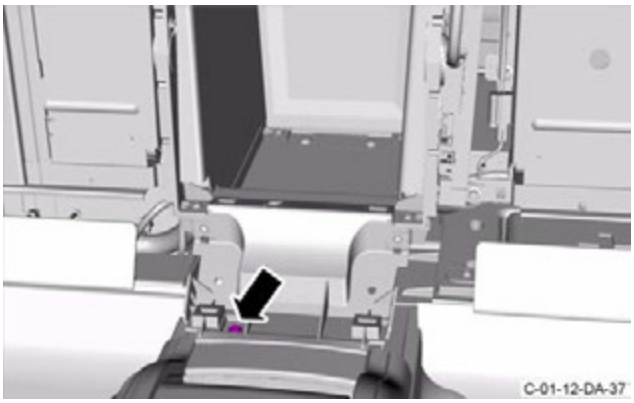
C-01-12-DA-39

14. Install and tighten the four Torx screws that attach the stowage compartment to the body.



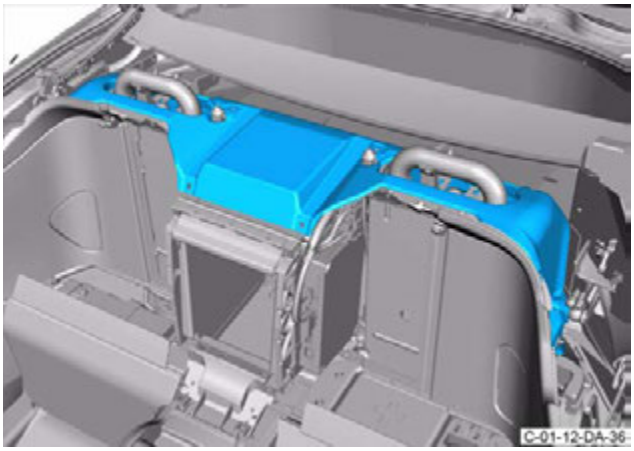
C-01-12-DA-38

15. Install and tighten the screw that attaches the stowage compartment to the body.



C-01-12-DA-37

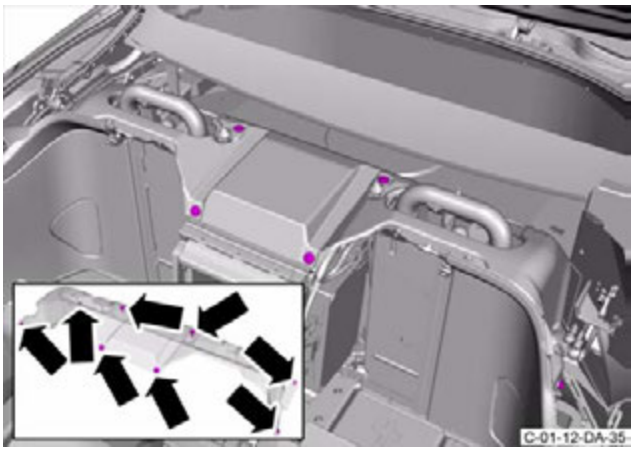
16. Install the stowage compartment cover.



C-01-12-DA-36

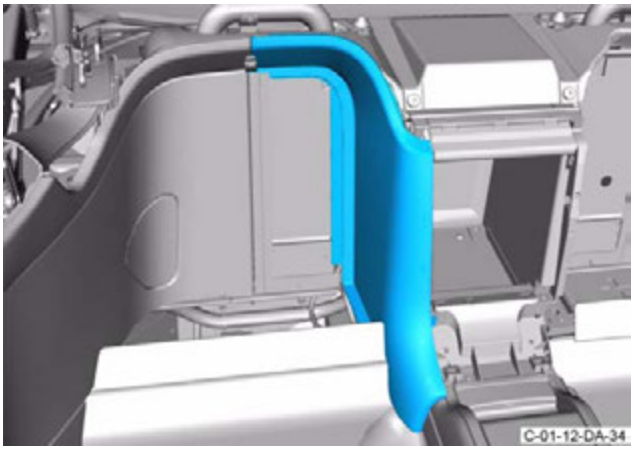
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17. Install and tighten the four Torx screws and the four nuts that attach the stowage compartment cover to the body.



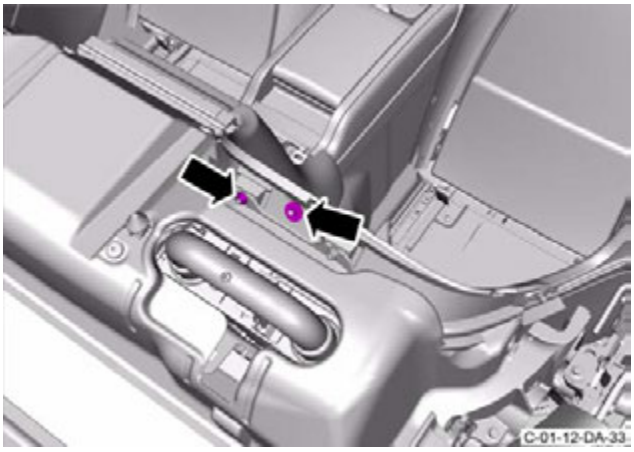
C-01-12-DA-35

18. Install the right side cover panel for the centre console.



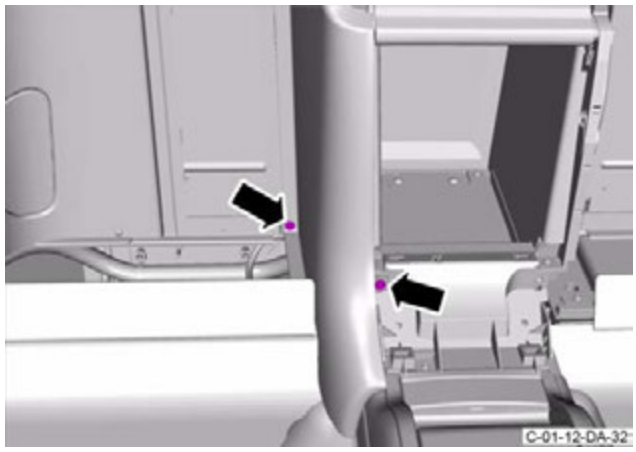
C-01-12-DA-34

19. Install and tighten the two nuts that attach the right side cover panel for the centre console to the body.



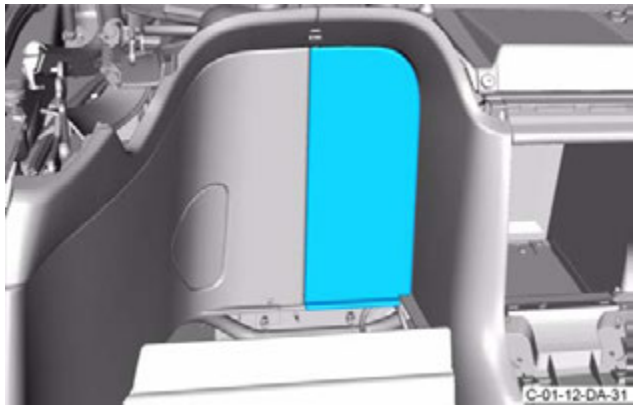
C-01-12-DA-33

20. Install and tighten the two screws that attach the right side cover panel for the centre console to the body.



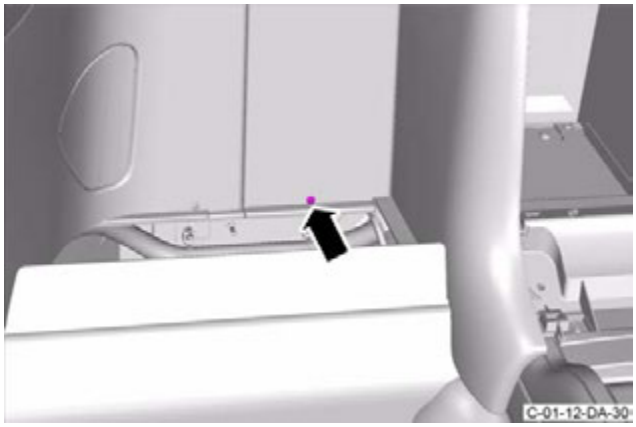
C-01-12-DA-32

21. Install the right side rear bulkhead cover.



C-01-12-DA-31

22. Install and tighten the screw that attaches the right side rear bulkhead cover to the body.



C-01-12-DA-30

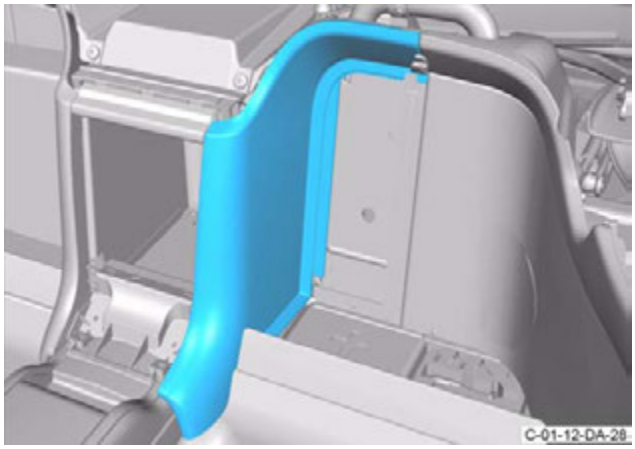
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23. Install the right hand side infill panel.



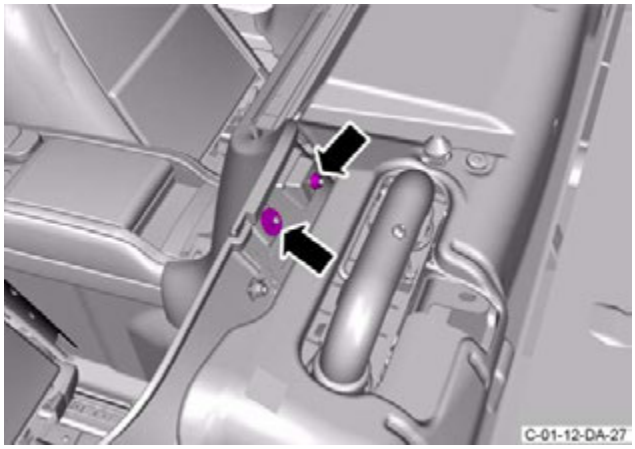
C-01-12-DA-29

24. Install the left side cover panel for the centre console.



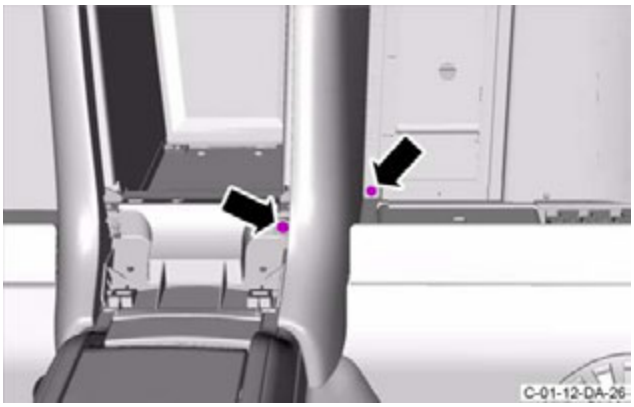
C-01-12-DA-28

25. Install and tighten the two nuts that attach the left side cover panel for the centre console to the body.



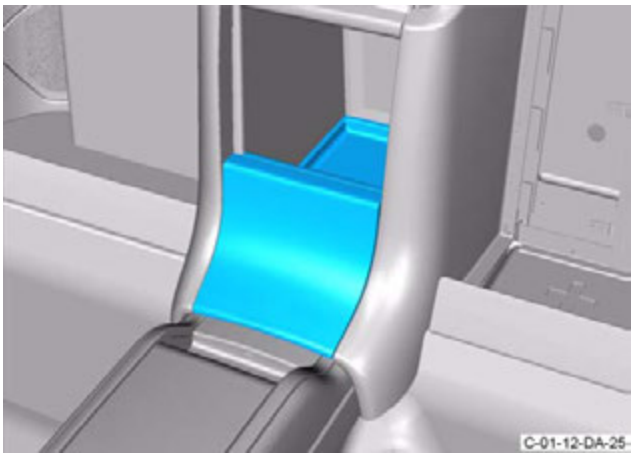
C-01-12-DA-27

26. Install and tighten the two screws that attach the left side cover panel for the centre console to the body.



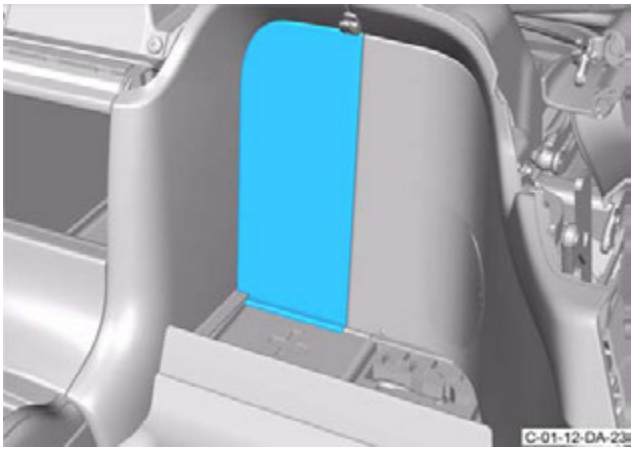
C-01-12-DA-26

27. Install the stowage box cover and the rubber mat.



C-01-12-DA-25

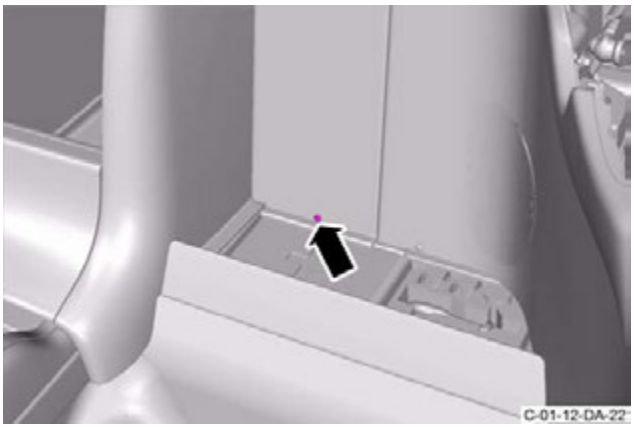
28. Install the left side rear bulkhead cover.



C-01-12-DA-23

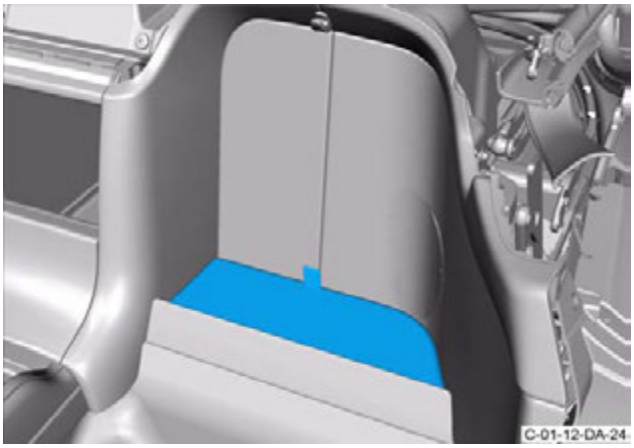
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29. Install and tighten the screw that attaches the left side rear bulkhead cover to the body.



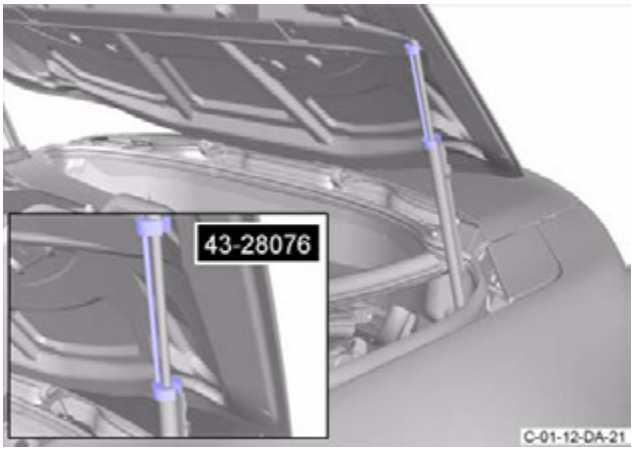
C-01-12-DA-22

30. Install the left side infill panel.



C-01-12-DA-24

31. Remove the special tool from the operating ram on the tonneau cover.



C-01-12-DA-21

32. Fully close the tonneau cover.
33. Connect the battery.
34. Operate the front seats to their initial positions.

RH/LH Lower Quarter Panel Assembly - Renew (Roadster Only)

Repair Operation Time (ROT)		
Item		**Code**
Lower Quarter Panel Assembly	RH	**01.12.DR**
Lower Quarter Panel Assembly	LH	**01.12.DS**

Removal

1. Remove wind deflector (see Workshop Manual procedure 01.17.DA Wind Deflector - Renew).
2. Remove panel centre (see Workshop Manual procedure 01.05.FR/01.05.FS Panel Assembly - Centre - Rear Bulkhead - LH/RH - Renew).
3. Remove speaker grille (see Workshop Manual procedure 01.05.CP/01.05.CN Grille - Speaker Rear Quarter - LH/RH - Renew).
4. Remove screw (x1) securing quarter trim to body (under speaker grille) (see Figure 1).



Figure 1

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5. Remove screw (x1) securing bottom centre of quarter trim (see Figure 2).



Figure 2

6. Remove bolt securing body side trim to quarter panel via B-post roof aperture (see Figure 3).



Figure 3

7. Remove nuts (x2) securing panel quarter trim to body side trim (see Figure 4).

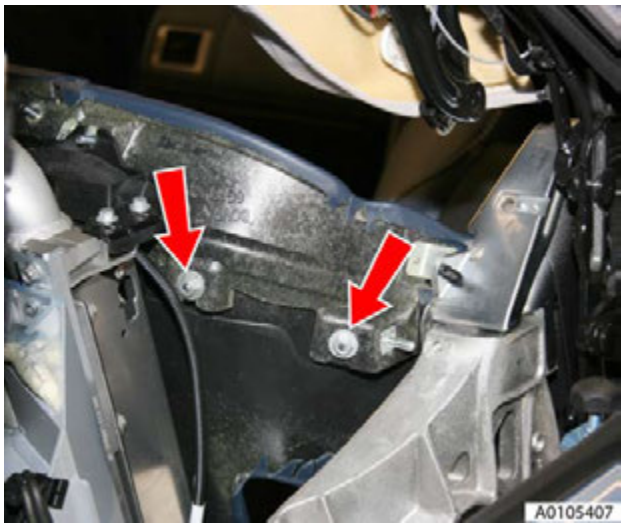


Figure 4

8. Release fir tree clip securing quarter trim to body (see Figure 5).

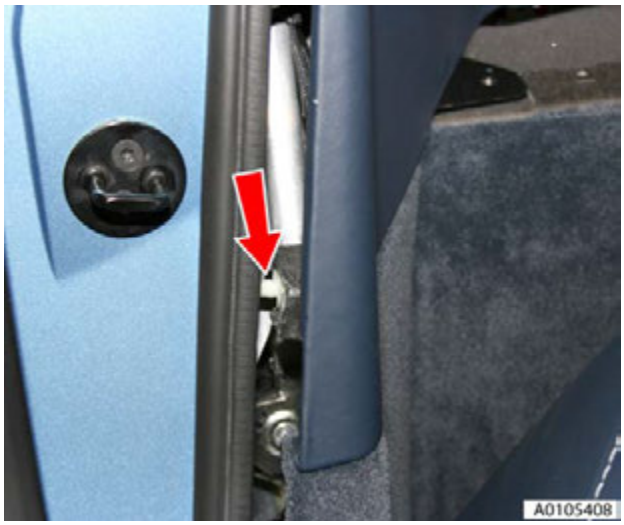


Figure 5

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9. Release quarter trim from heal board and remove quarter trim (see Figure6).



Figure 6

10. Remove nut (x2) securing lower panel to quarter panel.

Installation

1. Install nut (x2) securing lower panel to quarter panel.
2. Install quarter trim and secure under heal board.
3. Install fir tree clip securing quarter trim to body.
4. Install nuts (x2) securing panel quarter trim to body side trim.
5. Install bolt securing body side trim to quarter panel via B-post roof aperture.
6. Install screw (x1) securing bottom centre of quarter trim.
7. Install screw (x1) securing quarter trim to body (under speaker grille)
8. Remove speaker grille (see Workshop Manual procedure 01.05.CP/01.05.CN Grille - Speaker Rear Quarter - LH/RH - Renew).
9. Remove panel centre (see Workshop Manual procedure 01.05.FR/01.05.FS Panel Assembly - Centre - Rear Bulkhead - LH/RH - Renew).
10. Install wind deflector (see Workshop Manual procedure 01.17.DA Wind Deflector - Renew).

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Body System (01.00)

Handles and Lock Mechanisms (01.14)

Description

Vehicle Key/Remote Transmitter

The vehicle key operates the ignition and the door lock, the remote transmitter operates the central locking and alarm systems.



Do not leave them in the vehicle.

Central Locking System

The Central Locking system consists of lock actuators in both doors, the boot and the fuel flap. Central locking control is through the door modules.

Each lock actuator incorporates a microswitch which signals a change of state when any motor runs to drive the actuator. The microswitches are of the change over type and provide an earth for lock/unlock signals to the door module.

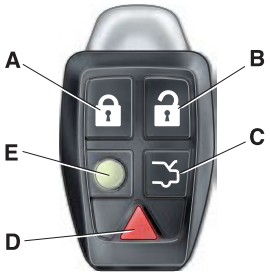
The boot will remain locked or will be unlocked simultaneously with the doors dependant on the boot lock position. The boot lock can be enabled at any time using the remote transmitter irrespective of the Central Locking status.

Remote Transmitter

The remote control system consists of a transmitter and an antenna (radio frequency system). The remote control transmitter for the radio frequency system will operate without the transmitter being directed at the vehicle. The normal range between the transmitter and the antenna is up to 5 meters. Before the remote control system can be used, each transmitter must be initialized to the vehicle. A maximum number of four transmitters can be initialized to any vehicle. All remote transmitters must be initialized at the same time.The keyless entry / remote operated locks will not operate when the ignition key is in the ignition switch.

(A) Lock - One step vehicle locking and alarm enable.

The vehicle will deadlock after 25 seconds.



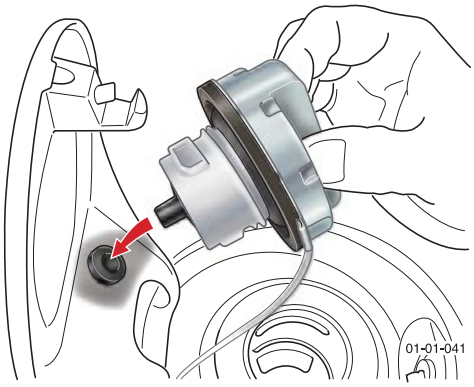
(B) Un-lock - One step vehicle unlocking or two step vehicle unlocking and alarm disable.

(C) Boot Open - Press to enable the boot catch.

(D) Panic Alarm - Activates / deactivates the panic alarm.

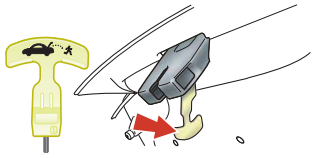
(E) Approach Light - Activates the front and rear side lights.

Fuel Filler Assembly



Boot Emergency Release

The boot can be opened from inside the boot by pulling the luminous emergency release handle.



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Specifications

Torque Figures	
Description	Nm
Door handle	5
Latch	9

Maintenance

Ignition Cylinder Lock - Renew

Repair Operation Time	
Item	**Code**
Ignition Cylinder Lock-Renew	**01.14.AD**

Removal

1. Remove steering column shroud (see Workshop Manual procedure 11.04.DB Shroud Assembly - Upper and Lower - Steering Column - Renew).
2. Insert ignition key into steering lock and turn to position 2 (see Figure 1).

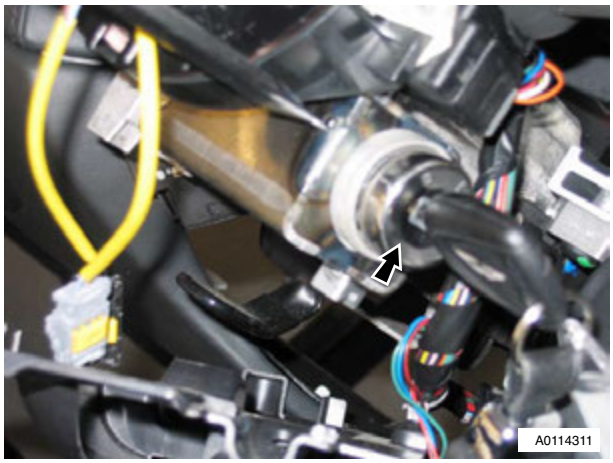


Figure 1

3. Push release button down (through hole).
4. Retract barrel by pulling outwards (gently rotate from side to side) with key (see Figure 2).

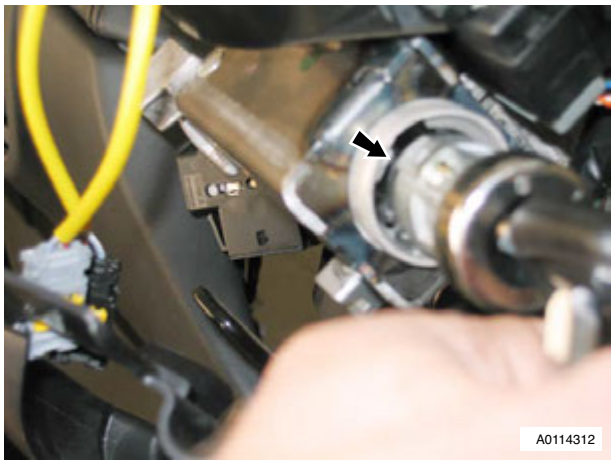


Figure 2

5. Remove key from barrel.

Installation

1. Install key to barrel.
2. Install barrel into steering lock housing until button locates properly.
3. Install steering column shroud (see Workshop Manual procedure 11.04.DB Shroud Assembly - Upper and Lower - Steering Column - Renew).

RH/LH Front Door Latch Assembly - Renew

Repair Operation Time (ROT)		
Item		**Code**
Front Door Latch Assembly	RH	**01.14.CE**
Front Door Latch Assembly	LH	**01.14.CF**

Removal

1. Remove glass regulator (see Workshop Manual procedure 01.11.DA/01.11.1DB Regulator - Door Glass - LH/RH - Renew).
2. Remove aperture seal from inside door.
3. Remove rear rubber cheater panel, fir tree trim pins (x3), and inner glass seal.
4. Disconnect latch mechanism multiplug.
5. Disconnect exterior door handle inner and outer cable.
6. Remove nuts (x3) securing exterior door handle, remove handle.
7. Loosen upper nut and remove lower nut securing key lock mechanism.

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8. Remove bolts (x3) securing door latch (see Figure 1).

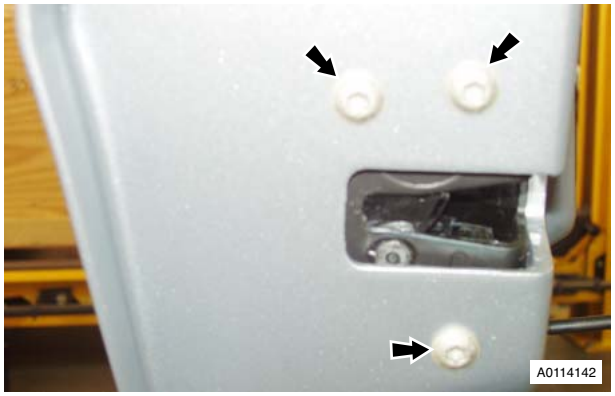


Figure 1

9. Feed interior latch handle cable through inner skin into door interior.
10. Remove latch and keylock mechanisms carefully through aperture.

Installation

1. Install latch and key lock mechanisms through door aperture and feed interior door latch handle cable through aperture.
2. Align door latch, install and torque tighten bolts (x3).
3. Align key lock mechanism, install lower nut, torque tighten nuts (x2).
4. Install exterior door handle, install and torque tighten nuts (x3).
5. Connect latch inner and outer cable to exterior door handle.
6. Connect latch mechanism multiplug.
7. Refit inner glass seal and rubber rear cheater panel, secure with tree trim pins (x3).
8. Refit door aperture seal.
9. Install glass regulator (see Workshop Manual procedure 01.11.DA/01.11.1DB Regulator - Door Glass - /LHRH - Renew).

Bonnet Latch Assembly - Renew

Repair Operation Time	
Item	**Code**
Bonnet Latch Assembly-Renew	**01.14.BD**

Removal

1. Remove grille (see Workshop Manual procedure 01.08.AA Grille - Radiator - Renew
2. Remove slam panel (bolts x12).
3. Remove bolts (x4) securing PAS oil cooler.
4. Remove bolts securing crossmember to inner wing (x4).
5. Remove bolts and spacers securing crossmember to wing (x2).
6. Move crossmember to one side and lift up clear of location (protect paintwork).
7. Disconnect bonnet latch multiplug.
8. Remove switch from latch body (to access cable).
9. Disconnect bonnet latch cable.
10. Remove bonnet latch from crossmember (screws x2).

Installation

1. Install bonnet latch to crossmember (screws x2).
2. Connect bonnet latch cable.
3. Install switch to latch body.
4. Connect bonnet latch multiplug.
5. Install crossmember (as removed).
6. Install bolts and spacers securing crossmember to wing (x2).
7. Install bolts securing crossmember to inner wing (x4).
8. Install bolts (x4) securing PAS oil cooler.
9. Install slam panel (bolts x12).
10. Install grille (see Workshop Manual procedure 01.08.AA Grille - Radiator - Renew).

Hood Release Cable Assembly - Renew (Roadster Only)

Repair Operation Time		
Item		**Code**
Hood Release Cable Assembly-Renew	LHD	**01.14.BE**

Removal

1. Remove hood latch (see Workshop Manual procedure 01.14.BD Latch Assembly - Hood - Renew).
2. Remove Torx screw securing hood release handle to body.
3. Disconnect hood release cable from handle.
4. Release cable tie fir tree from body, remove cable tie from release cable.
5. Tie a length of string to the handle end of release cable for assembly purposes.
6. Remove bolts (x4) securing corner cross brace, remove cross brace.
7. Move expansion tank aside for access (bolt x1, nut x1. hose clips x2, multiplug x1.
8. Remove LH front wheel arch liner (see Workshop Manual procedure 01.02.FB Wheel Arch Liner - Front - LH - Renew).
9. Release clips (x2), release cable to under wing bracket and body.
10. Pull hood release cable through bulkhead, releasing grommet from bulkhead.
11. Remove string from hood release cable, remove cable.
12. Remove grommet from release cable.

Installation

1. Install grommet on hood release cable.
2. Position hood release cable, tie string to cable.
3. Pull release cable through bulkhead, install grommet, remove string from cable.

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4. Connect release cable to handle, position handle, install and tighten Torx screw.
5. Install and secure hood release cable with fir tree clip.
6. Install hood latch assembly (see Workshop Manual procedure 01.14.BD Latch Assembly - Hood - Renew).
7. Install and secure hood release cable with fir tree clips to under wing bracket and body.
8. Install expansion tank (bolt x1, nut x1, hose clips x2, multiplug x1.
9. Install corner cross brace, install bolts (x4)(torque tighten bolts with vehicle on level floor).
10. Install LH front wheel arch liner (see Workshop Manual procedure 01.02.FB Wheel Arch Liner - Front - LH - Renew).
11. Top-up cooling system.

Bonnet Secondary Latch Assembly - Renew

Repair Operation Time	
Item	**Code**
Bonnet Secondary Latch Assembly-Renew	**01.14.BF**

Removal

1. Open bonnet.
2. Remove Torx screws (x2), securing secondary latch to bonnet (see Figure 1).

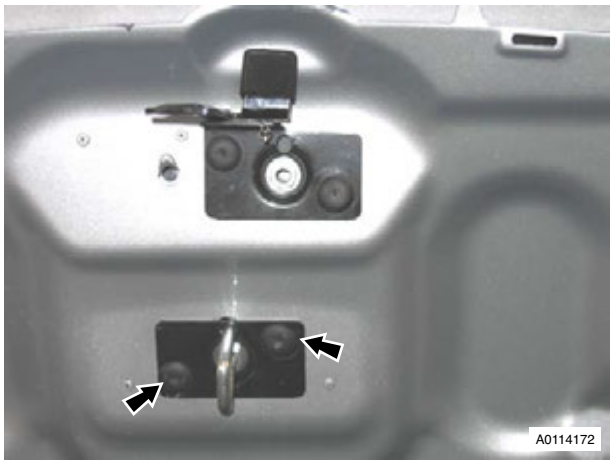


Figure 1

3. Remove secondary latch.
4. Remove sleeve from release lever.

Installation

1. Install sleeve on release lever.
2. Install secondary latch, install and torque tighten Torx screws (x2).
3. Close and re-open bonnet, check secondary latch for correct operation.
4. Close hood.

Tailgate Latch and Cable Assembly - Renew

Repair Operation Time (ROT)	
Item	**Code**
Tailgate Latch and Cable Assembly-Renew	**01.14.DC**

Removal

1. Remove trim - tailgate lid assembly (see Workshop Manual procedure 01.05.EF Trim - Tailgate Lid Assembly - Renew).
2. Remove Torx screws (x2) securing latch assembly to tailgate.
3. Manoeuvre latch from tailgate, disconnect multiplug, remove latch.
4. Release clips (x2), remove bezel from latch.

Installation

1. Install bezel on latch.
2. Install latch in tailgate, align manual release cable.
3. Install and torque tighten Torx screws (x2).
4. Connect multiplug to latch.
5. Install trim - tailgate lid assembly (see Workshop Manual procedure 01.05.EF Trim - Tailgate Lid Assembly - Renew).
6. Check operation of tailgate opening and closing.

Fuel Filler Actuator Assembly - Renew (Roadster Only)

Repair Operation Time (ROT)	
Item	**Code**
Fuel Filler Actuator Assembly-Renew	**01.14.FA**

Removal

1. Remove luggage compartment lid striker assembly (see Workshop Manual procedure 01.03.GE Striker Assembly - Trunk Lid - Renew).
2. Remove front luggage compartment carpet (screws x4, trim clip x1).

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3. Release left hand luggage compartment lamp, release multiplug and remove lamp (see Figure 1).



Figure 1

4. Remove lower left-hand luggage compartment carpet.
5. Remove upper left-hand luggage compartment carpet.
6. Release left-hand front luggage compartment carpet from studs and remove.
7. Remove 2 bolts securing fuel filler actuator assembly to body (see Figure 2).

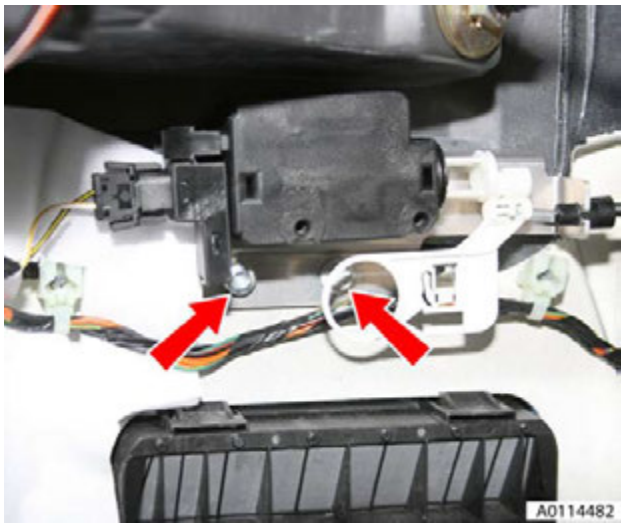


Figure 2

8. Release multiplug from fuel filler actuator.
9. Release cable from fuel filler actuator assembly and remove actuator.

Installation

1. Attach cable to fuel filler actuator assembly.
2. Connect multiplug to fuel filler actuator.
3. Secure fuel filler actuator assembly to body with bolts.
4. Install left-hand front luggage compartment carpet over studs.
5. Install upper left-hand luggage compartment carpet.
6. Install lower left-hand luggage compartment carpet.
7. Connect left-hand luggage compartment lamp and install.
8. Install front luggage compartment carpet.
9. Install luggage compartment lid striker assembly (see Workshop Manual procedure 01.03.GE Striker Assembly - Trunk Lid - Renew).

Fuel Filler Release Cable - Renew (Roadster Only)

Repair Operation Time (ROT)	
Item	**Code**
Fuel Filler Release Cable-Renew	**01.14.FB**

Removal

1. Remove luggage compartment lid striker assembly (see Workshop Manual procedure 01.03.GE Striker Assembly - Trunk Lid - Renew).
2. Remove front luggage compartment carpet (screws x4, trim clip x1).
3. Release left-hand luggage compartment lamp, release multiplug and remove lamp (see Figure 1).



Figure 1

4. Remove lower left-hand luggage compartment carpet.
5. Remove upper left-hand luggage compartment carpet.
6. Release left-hand front luggage compartment carpet from studs and remove.
7. Release cable from fuel filler actuator assembly.

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8. Release bayonet fitting on release catch and remove cable (see Figure 2).

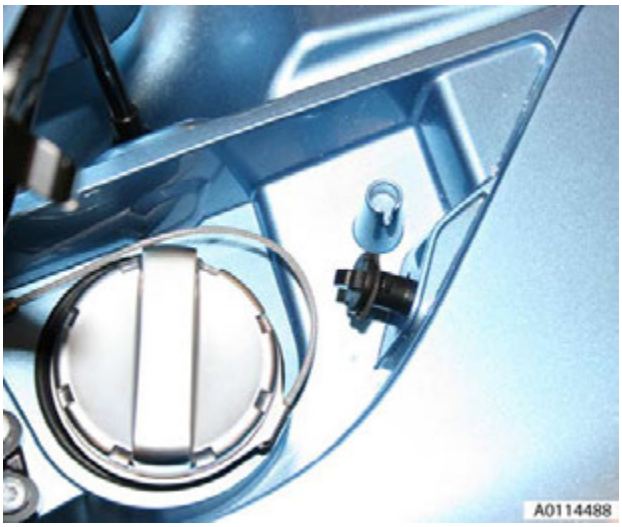


Figure 2

Installation

1. Install fuel filler release cable and secure release catch.
2. Attach cable to fuel filler actuator assembly.
3. Install left-hand front luggage compartment carpet over studs.
4. Install upper left-hand luggage compartment carpet.
5. Install lower left-hand luggage compartment carpet.
6. Connect left-hand luggage compartment lamp and install.
7. Install front luggage compartment carpet.
8. Install luggage compartment lid striker assembly (see Workshop Manual procedure 01.03.GE Striker Assembly - Trunk Lid - Renew).

Fuel Flap Release Switch - Renew

Repair Operation Time (ROT)	
Item	**Code**
Fuel Flap Release Switch-Renew	**01.14.FC**

Removal

1. Remove Trim - upper panel - front pillar - LH (see Workshop Manual procedure 01.05.BE Trim - Upper Panel - Front Pillar - LH - Renew).
2. Remove LH front sill plate (see Workshop Manual procedure 01.05.AK Plate - Front Sill - LH - Renew).
3. Remove trim studs (x2) securing lower A-post trim panel to body (see Figure 1).



Figure 1

4. Disconnect multiplug from fuel flap release switch, remove trim panel (see Figure 2).



Figure 2

5. Depress clips, remove fuel flap release switch from trim panel.

Installation

1. Install switch in trim panel.
2. Position trim panel, connect multiplug.
3. Position A-post trim panel, install trim studs (x2).
4. Install LH front sill plate (see Workshop Manual procedure 01.05.AK Plate - Front Sill - LH - Renew).
5. Install Trim - upper panel - front pillar - LH (see Workshop Manual procedure 01.05.BE Trim - Upper Panel - Front Pillar - LH - Renew).

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RH/LH Tonneau Latch Motor - Renew (Roadster Only)

Repair Operation Time (ROT)		
Item		**Code**
Tonneau Latch Motor-Renew	RH	**01.14.GA**
Tonneau Latch Motor-Renew	LH	**01.14.GB**

Removal

1. Remove wind deflector (see Workshop Manual procedure 01.17.DA Wind Deflector - Renew).
2. Release 2 clips securing harness to latch motor bracket.
3. Remove 4 bolts securing latch motor bracket to body (see Figure 1).

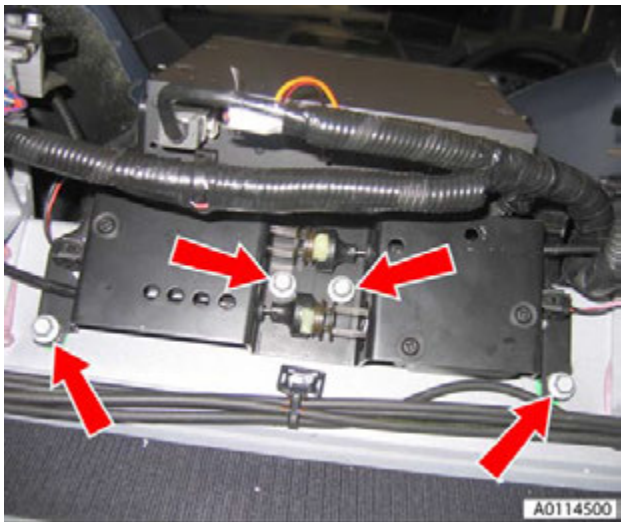


Figure 1

4. Disconnect latch motor multiplug.
5. Release cable from latch motor.
6. Remove 2 screws securing latch motor to bracket and remove.

Installation

1. Install latch motor and secure to bracket with screws.
2. Secure cable to latch motor.
3. Connect latch motor multiplug.
4. Secure latch motor bracket to body with screws.
5. Secure harness to latch motor bracket.
6. Install wind deflector (see Workshop Manual procedure 01.17.DA Wind Deflector - Renew).

RH/LH Tonneau Latch - Renew (Roadster Only)

Repair Operation Time (ROT)		
Item		**Code**
Tonneau Latch-Renew	RH	**01.14.GC**
Tonneau Latch-Renew	LH	**01.14.GD**

Removal

1. Remove wind deflector (see Workshop Manual procedure 01.17.DA Wind Deflector - Renew).
2. Release tonneau latch multiplug from body and disconnect.
3. Unclip emergency pull string from tonneau latch (see Figure 1).

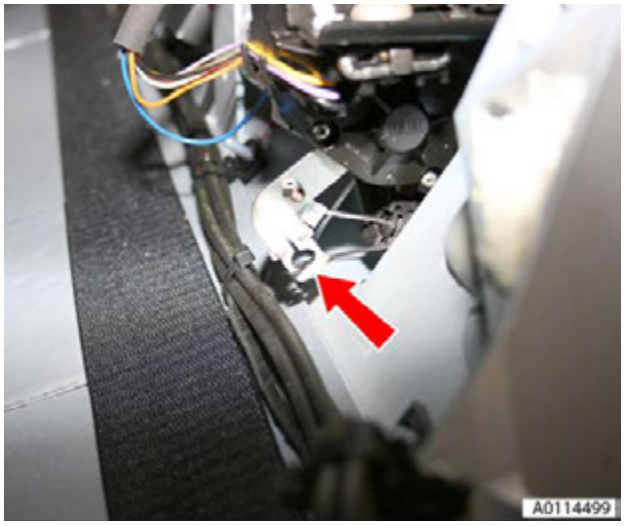


Figure 1

4. Mark position of tonneau latch.
5. Remove 2 bolts securing tonneau latch to bracket.
6. Unclip inner release cable from tonneau latch.
7. Unclip outer release cable from tonneau latch, remove latch.

Installation

1. Install tonneau latch and secure outer release cable.
2. Secure inner release cable to tonneau latch.
3. Align tonneau latch and secure with bolts
4. Secure pull string to tonneau latch.
5. Connect tonneau latch multiplug and secure to body.
6. Install wind deflector (see Workshop Manual procedure 01.17.DA Wind Deflector - Renew).

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RH/LH Tonneau Cover Striker Assembly - Renew (Roadster Only)

Repair Operation Time (ROT)	
Item	**Code**
Tonneau Cover Striker Assembly-Renew	01.14.GE
Tonneau Cover Striker Assembly-Renew	01.14.GF

Removal

1. Operate roof to halfway position with tonneau open.
2. Support roof when hydraulic pressure drops with suitable straps and support tonneau cover with suitable prop (see Figure 1).

WARNING

APPROXIMATELY 20 SECONDS AFTER THE OPEN/CLOSE OPERATION HAS BEEN INTERRUPTED THE ROOF MAY SUDDENLY DROP DUE TO LOSS OF HYDRAULIC PRESSURE. IF THIS HAPPENS ENSURE NO BODY PARTS ARE CLOSE TO THE ROOF MECHANISM. IF THE ROOF REQUIRES MAINTENANCE, SUPPORT PROPERLY USING SUITABLE PROPS AND STRAPS.



Figure 1

3. Mark mounting position of right-hand tonneau striker.
4. Remove 2 bolts securing right-hand tonneau striker and remove (see Figure 2).

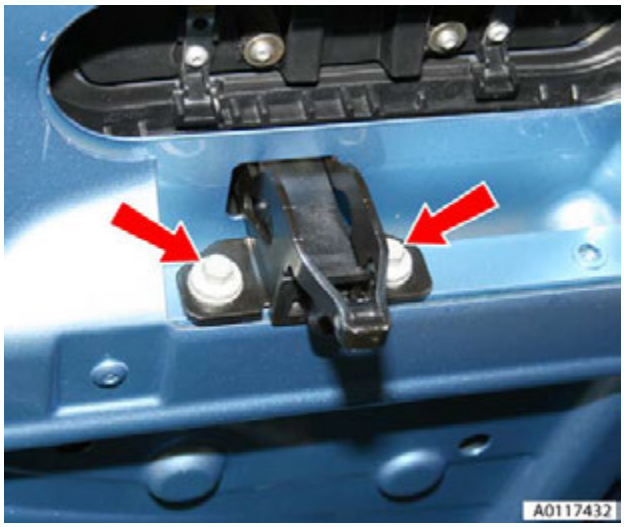


Figure 2

Installation

1. Align and install right-hand tonneau striker, secure with bolts.
2. Restore roof and tonneau to original position.

Tailgate Latch Assembly-Renew (Roadster Only)

Repair Operation Time (ROT)	
Item	**Code**
Tailgate Latch Assembly-Renew	01.14.HA

Removal

1. Open trunk lid.
2. Remove bolt securing strap to trunk lid and remove strap (see Figure 1).



Figure 1

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3. Remove clip securing cable to release lever and remove cable.
4. Release clips (x8) and remove trunk lid trim panel.
5. Disconnect multiplugs from latch and release solenoid.
6. Remove cable tie, remove bolts (x3) securing latch to trunk lid and remove latch.

Installation

1. Connect multiplugs to trunk lid latch and release solenoid.
2. Install trunk lid trim panel and secure with clips.
3. Connect cable to release lever and secure with clip.
4. Install latch and secure with bolts and cable tie.
5. Install strap and secure with bolt.
6. Close trunk lid.

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Body System (01.00)

Wipers and Washer System (01.16)

The wipers and washers system consists of the following components:

- Wipers and washers
- Mounting arm and pivot shaft
- Wiper motor
- Reservoir and washer pump
- Headlamp washing system

The wipers have two speed control (low and high) and an intermittent wipe mode. The wipers will park automatically irrespective of their position when the 'OFF' position of the ignition or control switch is selected.

Within the wiper and washer system the following features can be attained:

- Adjustable interval intermittent wiping

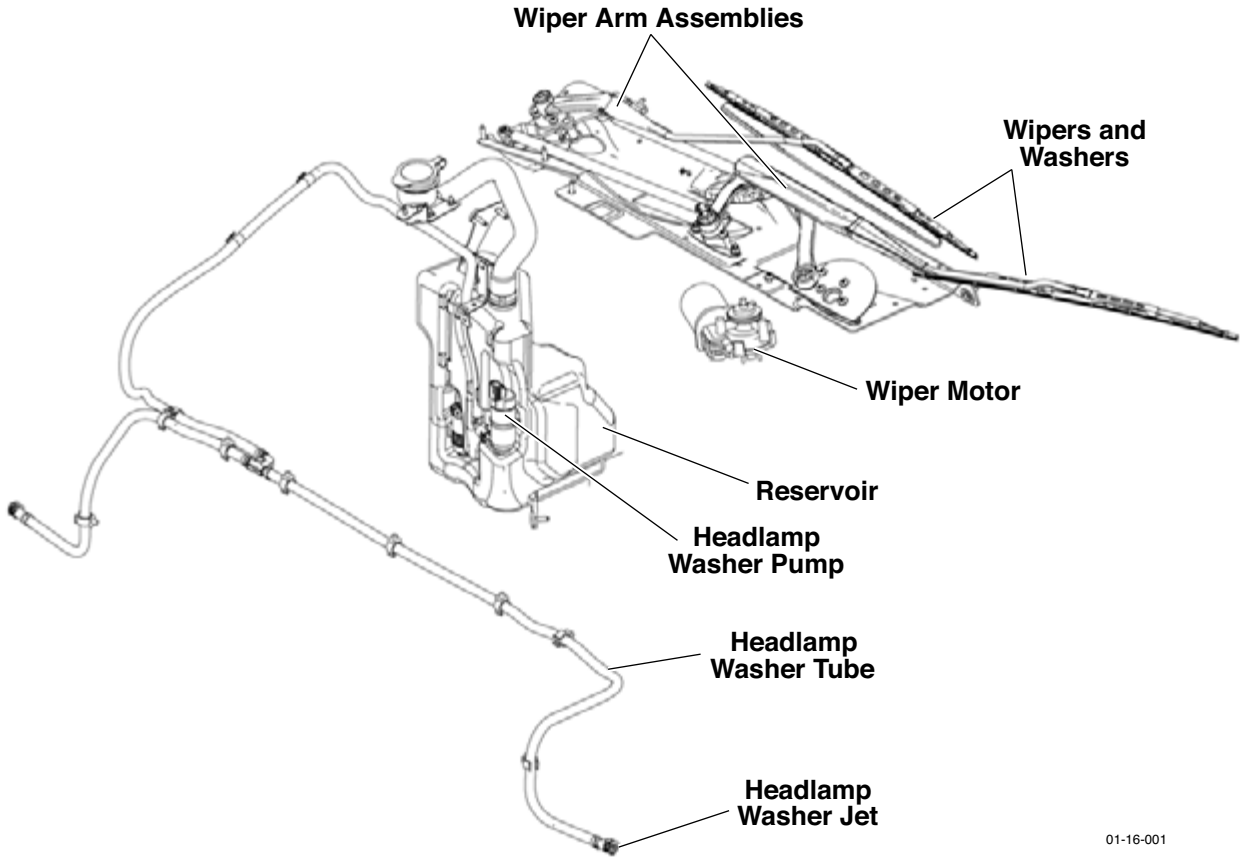
  The intermittent wiping has six speed settings, 3, 6, 9, 12, 15, 18 seconds.
- Programmable wash and wipe sequences

  The programmable wash and wipe sequence is driver controlled. With a depression of the wash/wipe switch between 40 milliseconds and 1.2 seconds the wash pump will be activated for a duration of 1.2 seconds. When the wash/wipe switch is depressed for longer than 1.2 seconds the wash pump will be activated for the duration of switch depression, a 10 second duration is the maximum available.
- Vertical wiper park routine to aid servicing the wiper blades.

  Hold buttons 8 and 9 (centre console) on continuously for 500ms within 3 seconds of switching the ignition 'ON'. Once ignition is 'ON' the wipers will move to the most vertical position. To cancel simply switch 'OFF' ignition or switch wiper switch from 'OFF' position.

Wipers must be in 'OFF' position before continuing with procedure.

The wiping system is automatically activated with the depression of the wash switch.



Headlamp Washing

Headlight washers will operate automatically on operation of the windscreen washers. After one operation of the headlamp washers they will not operate for 16 minutes, after which they will be available on the next operation of the windscreen washers.

Headlamp washing is only available when the headlamps are switched on.

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Specifications

Torque Figures	
Description	Torque Figure (Nm)
Wiper motor crank to motor	35-42Nm
Wiper motor to cowl panel	7-10Nm
Wiper assembly plate	6Nm (M6 Torx) 8Nm (M6 Bolt)
Brake servo nuts	21-24Nm
Brake master cylinder nuts	25
Wiper arm (Driver)	13-17Nm (M8 Nut)
Wiper arm (Passenger)	20-26Nm (M10 Nut) 5-7Nm (M6 Bolt)

Maintenance

Windscreen Wiper Motor Assembly - Renew

Repair Operation Time (ROT)	
Item	**Code**
Windscreen Wiper Motor Assembly-Renew	**01.16.BB**

Removal

1. Remove wiper linkage.
2. Remove arm from motor (nut x1).
3. Remove motor from plate (bolts x3).

Installation

1. Install motor to plate (bolts x3).
2. Ensure wiper motor is in the 'PARK' position.
3. Install arm from motor (nut x1), using special tool.
4. Install wiper linkage.

Wiper Linkage Assembly - Renew

Repair Operation Time (ROT)		
Item		**Code**
Wiper Linkage Assembly-Renew	LHD	**01.16.BA**
Wiper Linkage Assembly-Renew	RHD	**01.16.BC**

Removal

1. Remove brake booster (see Workshop Manual procedure 06.07.DE/06.07.DG Master Cylinder and Vacuum Booster - Brake - Renew).
2. Remove inlet manifold (see Workshop Manual procedure 03.01.BB/03.01.BF Gasket - Manifold Assembly - Intake Upper - Renew).
3. Remove wiper arm drivers side (see Workshop Manual procedure 01.16.AD Arm Assembly - Wiper - Driver - Renew).
4. Remove wiper arm passengers side (see Workshop Manual procedure 01.16.AE Arm Assembly - Wiper - Passenger - Renew).
5. Unclip expansion tank hose for access.
6. Remove sound deadening (trim buttons x6).
7. Remove seal from spindle.
8. Remove nuts (x2) from heatshield to move aside.
9. Unclip wiper motor harness (x2) LHS.
10. Unclip windscreen heater harness RHS.
11. Disconnect motor multiplug and unclip harness (x2).
12. To prevent damage, protect A/C pipe with tape before wiper linkage removal.
13. Remove plate securing screws (x10) (through plenum).
14. Remove plate securing bolts (x8) (under bonnet).
15. Remove wiper linkage.

Installation

1. Install wiper linkage.
2. Install plate securing bolts (x8) (under bonnet).
3. Install plate securing screws (x10) (through scuttle panel).
4. Connect motor multiplug and clip harness (x2).
5. Clip harness LHS.
6. Clip harness RHS.
7. Refit heatshield and install nuts (x2).
8. Install seal to spindle.
9. Install sound deadening (re-stick, trim buttons x6).
10. Clip expansion tank hose.
11. Install wiper arm drivers side (see Workshop Manual procedure 01.16.AD Arm Assembly - Wiper - Driver - Renew).
12. Install wiper arm passengers side (see Workshop Manual procedure 01.16.AE Arm Assembly - Wiper - Passenger - Renew).
13. Install inlet manifold (see Workshop Manual procedure 03.01.BB/03.01.BF Gasket - Manifold Assembly - Intake Upper - Renew).
14. Install brake booster (see Workshop Manual procedure 06.07.DE/06.07.DG Master Cylinder and Vacuum Booster - Brake - Renew).

Windshield Wash Tube - Renew

Repair Operation Time (ROT)	
Item	**Code**
Windshield Wash Tube-Renew	**01.16.CB**

Removal

1. Remove RH wheel arch liner (see Workshop Manual Procedure 01.02.GB Wheel Arch Liner - Front - RH - Renew).
2. Place container to catch fluid.

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3. Disconnect tube from motor and reservoir (Move Headlamp motor and tube to one side) (see Figure 1).

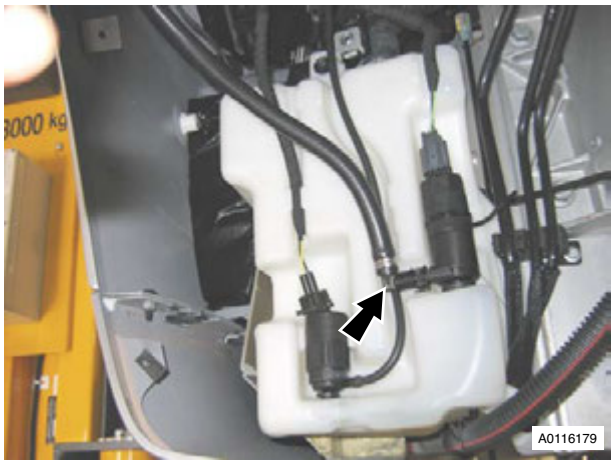


Figure 1

4. Lower ramp.
5. Open hood.
6. Remove jets from hood (pull forward) (see Figure 2).



Figure 2

7. Remove jets from tube.
8. Remove tube and valve from long tube (LH).
9. Attach string to both tube ends (RH and LH side).
10. Pull tube from hood and disconnect to string.
11. Remove tube from clips (x5) and remove tube from vehicle (see Figure 3).

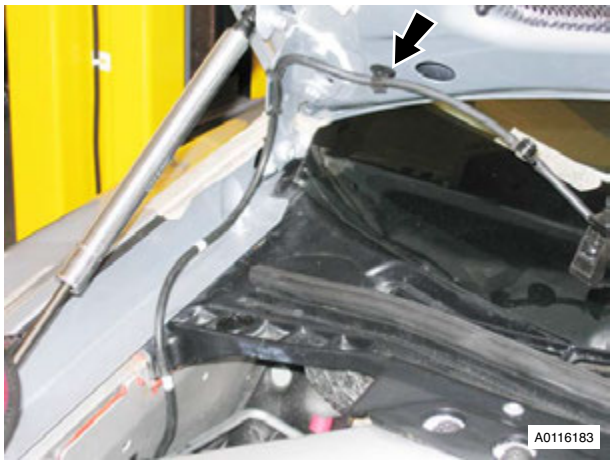


Figure 3

Installation

1. Install tube to vehicle and clips (x5)
2. Attach string to tube ends.
3. Pull tube through hood and disconnect to string.
4. Install tube and valve to long tube.
5. Install jets to tube.
6. Install jets to hood.
7. Close hood.
8. Raise ramp.
9. Connect tube to motor and reservoir.
10. Install RH wheel arch liner (see Workshop Manual Procedure 01.02.GB Wheel Arch Liner - Front - RH - Renew).
11. Remove container and refill reservoir.
12. Adjust jets spray.

Windscreen Reservoir and Motor Assembly - Remove and Install

Repair Operation Time (ROT)	
Item	**Code**
Windscreen Reservoir and Motor Assembly - Remove and Install	**01.16.DA**

Remove

1. Raise the vehicle and make it safe.
2. On Roadster vehicles, remove the centre undertray.
3. Remove the front right roadwheel.
4. Remove the five or six M6 Torx-head screws that attach the rear of the wheelarch liner.
5. Remove the self-tapping screw that attaches the rear of the wheelarch liner into the wheelarch.
6. Turn the steering fully to the right.
7. Move the rear of the wheelarch liner away to get access to the windscreen reservoir.

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8. Disconnect the windscreen washer pipe and drain the reservoir into an applicable container.
9. Disconnect the two clips that attach the battery harness to the bottom of the reservoir.
10. Move the harness away.
11. Disconnect the clip that attaches the harness for the level sensor to the reservoir.
12. Remove the rear bottom reservoir fixing.
13. Lower the vehicle on the lift.
14. Disconnect the electrical connector for the windscreen washer motor.
15. Release the headlamp washer pipe from the clip and turn the motor to disconnect the pipe (quickfit) and the electrical connector.
16. Release the windscreen washer pipe from the reservoir.
17. Remove the two reservoir attachment screws.
18. Let the reservoir fall, then release the filler tube from the clip.
19. Move the reservoir down and forward to get access.
20. Disconnect the electrical connector from the level sensor.

Install

1. Connect the electrical connector to the level sensor.
2. Move the reservoir into position.
3. Install the filler pipe into the clip.
4. Install the three attachment screws.
5. Install the windscreen washer pipe into clips on the reservoir and connect it to the motor.
6. Install the headlamp washer pipe. Connect the pipe to the pump.
7. Connect the electrical connector to the pump.
8. Connect the electrical connector for the windscreen washer motor.
9. Raise the vehicle on the lift.
10. Connect the clip that attaches the level sensor harness to the reservoir.
11. Connect the two clips that attach the battery harness to bottom of the reservoir.
12. Put the wheelarch liner back into position.
13. Turn the steering to the centre position.
14. Install the self-tapping screw that attaches the rear of the wheelarch liner into the wheelarch.
15. Install the five or six M6 Torx-head screws that attach the rear of the wheelarch liner.
16. Install the front right roadwheel.
17. On Roadster vehicles, install the centre undertray.
18. Lower the vehicle.
19. Fill the washer reservoir.

Low Level Water Sensor - Remove and Install

Repair Operation Time (ROT)	
Item	**Code**
Low Level Water Sensor - Remove and Install	**01.16.DC**

Remove

1. Raise the vehicle and make it safe.
2. On Roadster vehicles, remove the centre undertray.
3. Remove the front right roadwheel.
4. Remove the five or six M6 Torx-head screws that attach the rear of the wheelarch liner.
5. Remove the self-tapping screw that attaches the rear of the wheelarch liner into the wheelarch.
6. Turn the steering fully to the right.
7. Move the rear of the wheelarch liner away to get access to the windscreen reservoir.
8. Disconnect the windscreen washer pipe and drain the reservoir into an applicable container.
9. Disconnect the two clips that attach the battery harness to the bottom of the reservoir.
10. Move the harness away.
11. Disconnect the clip that attaches the level sensor harness to the reservoir.
12. Remove the rear-lower reservoir fixing.
13. Lower the vehicle on the lift.
14. Disconnect the electrical connector from the windscreen washer motor.
15. Unclip headlamp washer pipe and turn motor to disconnect pipe (quickfit) and multiplug.
16. Unclip the windscreen washer pipe from the reservoir.
17. Remove the two reservoir attachment screws.
18. Let the reservoir fall, then release the filler tube from the clip.
19. Move the reservoir down and forward to give access.
20. Disconnect the electrical connector for the level sensor.
21. Remove level sensor and seal from reservoir.

Install

1. Install the level sensor and seal in the reservoir.
2. Connect the electrical connector for the level sensor
3. Move the reservoir into position.
4. Install the filler pipe in the clip.
5. Install the three attachment screws.
6. Clip the windscreen washer pipe into reservoir and install it onto the motor.
7. Clip the headlamp washer pipe, connect the pipe (quickfit) and the electrical connector.
8. Connect windscreen washer motor multiplug.
9. Raise ramp.
10. Connect the clip that attaches the level sensor harness to the reservoir.

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11. Connect the two clips that attach the battery harness to the bottom of the reservoir.
12. PPut the wheelarch liner back into position.
13. Turn the steering to the centre position.
14. Install the self-tapping screw that attaches the rear of the wheelarch liner into the wheelarch.
15. Install the five or six M6 Torx-head screws that attach the rear of the wheelarch liner.
16. Install the front right roadwheel.
17. On Roadster vehicles, install the centre undertray.
18. Lower the vehicle.
19. Fill the washer reservoir.

Headlamp Wash Motor and Pump Assembly - Renew

Repair Operation Time (ROT)	
Item	**Code**
Headlamp Wash Motor and Pump Assembly-Renew	**01.16.EB**

Removal

1. Raise the vehicle and make it safe.
2. On Roadster vehicles, remove the centre undertray.
3. Remove the front right roadwheel.
4. Remove the five or six M6 Torx-head screws that attach the rear of the wheelarch liner.
5. Remove the self-tapping screw that attaches the rear of the wheelarch liner into the wheelarch.
6. Turn the steering fully to the right.
7. Move the rear of the wheelarch liner away to get access to the windscreen reservoir.
8. Disconnect the windscreen washer pipe and drain the reservoir into an applicable container.
9. Disconnect the two clipsthat attach the battery harness to the bottom of the reservoir. Move the harness away.
10. Disconnect the clip that attaches the harness for the level sensor to the reservoir.
11. Remove the rear-lower reservoir fixing.
12. Lower the vehicle on the lift.
13. Disconnect the electrical connector for the windscreen washer motor.
14. Release the headlamp washer pipe and turn the motor to disconnect the pipe (quickfit) and the electrical connector.
15. Release the windscreen washer pipe from the reservoir.
16. Remove the two reservoir attachment screws.
17. Let the reservoir fall, then release the filler tube from the clip.
18. Move the reservoir down and forward to give access.
19. Disconnect the electrical connector for the level sensor.
20. Remove the headlamp washer motor, seal and support clip from reservoir.

Installation

1. Install the headlamp washer motor, seal and support clip into the reservoir.
2. Connect the electrical connector for the level sensor.
3. Move the reservoir into position.
4. Connect the filler pipe and install the clip.
5. Install the three attachment screws.
6. Clip the windscreen washer pipe into reservoir and connect it to the motor.
7. Install the headlamp washer pipe in position. Connect the pipe (quickfit) and the electrical connector.
8. Connect the electrical connector for the windscreen washer motor.
9. Raise ramp.
10. Connect the clip that attaches the level sensor harness to the reservoir.
11. Connect the two clips that attach the battery harness to the bottom of the reservoir.
12. Put the wheelarch liner back into position.
13. Turn the steering to the centre position.
14. Install the self-tapping screw that attaches the rear of the wheelarch liner into the wheelarch.
15. Install the five or six M6 Torx-head screws that attach the rear of the wheelarch liner.
16. Install the front right roadwheel.
17. On Roadster vehicles, install the centre undertray.
18. lower the vehicle.
19. Fill washer reservoir.

Headlamp Wash Tube Assembly - Renew

Repair Operation Time (ROT)	
Item	**Code**
Headlamp Wash Tube Assembly-Renew	**01.16.EC**

Removal

1. Remove LH headlamp (see Workshop Manual procedure 17.01.AB Headlamp Assembly - LH - Renew).
2. Remove RH headlamp (see Workshop Manual procedure 17.01.BB Headlamp Assembly - RH - Renew).
3. Place container to catch fluid.

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4. Remove tube from motor (quickfit) and reservoir (see Figure 1).

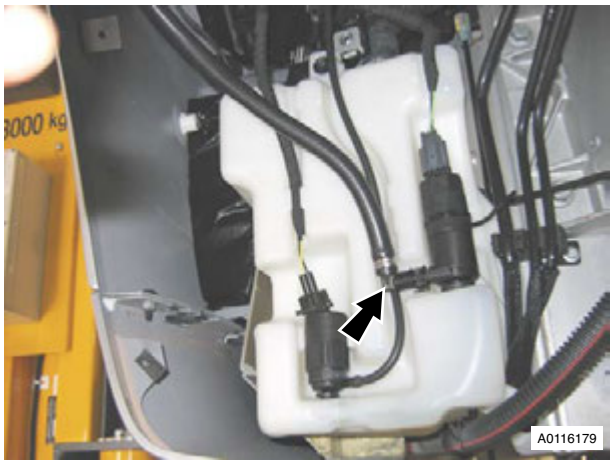


Figure 1

5. Remove tube from body (clips x2) (see Figure 2).

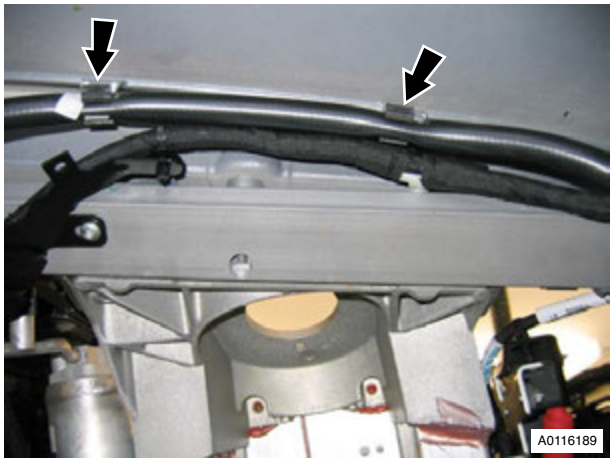


Figure 2

6. Lower ramp.
7. Open hood.
8. Remove slam panel.
9. Remove tube from clips (x9) and remove tube from vehicle (see Figure 3).

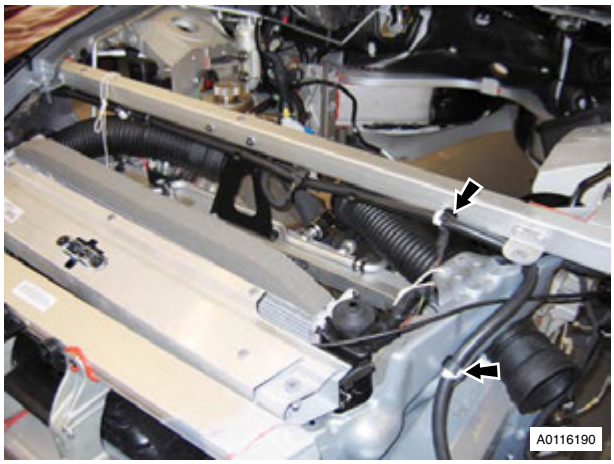


Figure 3

Installation

1. Install tube to vehicle and clips.
2. Install slam panel.
3. Close hood.
4. Raise ramp.
5. Install tube to body (clips x2).
6. Install tube to motor (quickfit) and reservoir.
7. Install LH headlamp (see Workshop Manual procedure 17.01.AB Headlamp Assembly - LH - Renew).
8. Install RH headlamp (see Workshop Manual procedure 17.01.BB Headlamp Assembly - RH - Renew).
9. Remove container and refill reservoir.
10. Adjust jets spray.

Washer Fluid Reservoir - Renew

Repair Operation Time (ROT)	
Item	**Code**
Washer Fluid Reservoir-Renew	**01.16.FB**

Removal

1. Remove RH wheel arch liner (see Workshop Manual procedure 01.02.GB Wheel Arch Liner - Front - RH - Renew).
2. Disconnect Windscreen washer pipe to drain reservoir into suitable container.
3. Disconnect clips (x2) securing battery harness to bottom of reservoir (move aside).
4. Disconnect clip (x1) securing level sensor harness to reservoir.
5. Remove rear lower reservoir fixing.
6. Lower ramp.
7. Disconnect windscreen washer motor multiplug.
8. Unclip Headlamp washer pipe and turn motor to disconnect pipe (quickfit) and multiplug.
9. Unclip windscreen washer pipe from reservoir.

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10. Remove reservoir retaining screws (x2).
11. Allow reservoir to drop, then disconnect filler tube (clip x1).
12. Manoeuvre reservoir down and forward to access, disconnect level sensor multiplug.
13. Remove level sensor and seal from reservoir.
14. Remove windscreen washer motor and seal from reservoir.
15. Remove headlamp washer motor and seal and support clip from reservoir.

Installation

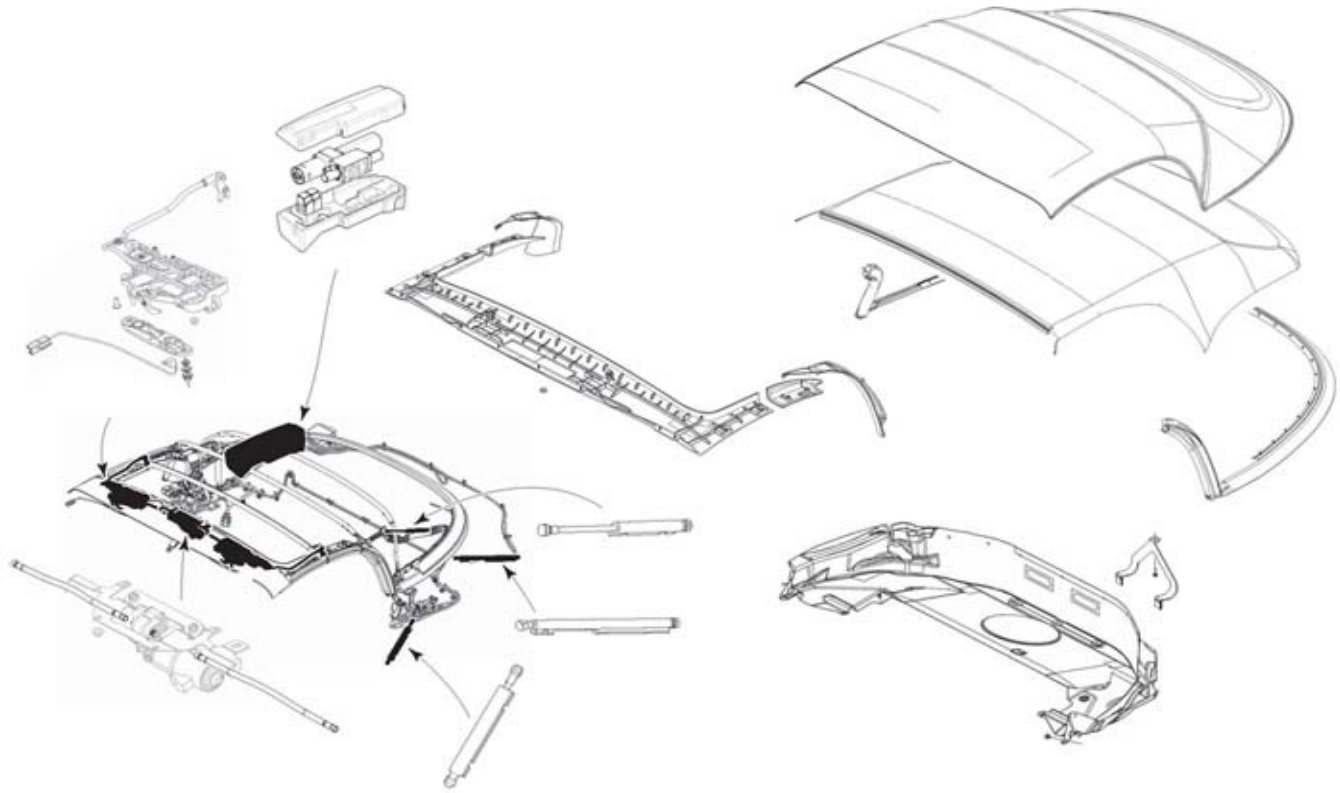
1. Install headlamp Washer motor and seal and support clip to reservoir.
2. Install windscreen washer motor and seal to reservoir.
3. Install level sensor and seal to reservoir.
4. Connect level sensor multiplug and manoeuvre reservoir into position.
5. Connect filler pipe (clip x1).
6. Install fixing screws (x3).
7. Clip windscreen washer pipe into reservoir and install to motor.
8. Clip headlamp washer pipe, connect pipe (quickfit) and multiplug.
9. Connect windscreen washer motor multiplug.
10. Raise ramp.
11. Connect clip (x1) securing level sensor harness to reservoir.
12. Connect clips (x2) securing battery harness to bottom of reservoir.
13. Remove RH wheel arch liner (see Workshop Manual procedure 01.02.GB Wheel Arch Liner - Front - RH - Renew).
14. Fill washer reservoir.

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Body System (01.00)

Convertible Roof and Roof Opening Subsystem (01.17)



System Description

The convertible roof system comprises of an electrically driven hydraulic pump and six hydraulic rams. Four rams raise and lower the roof and two raise and lower the tonneau cover. The pump is powered via either the 'Hydraulic Pump Fluid In' or 'Hydraulic Pump Fluid Out' relay and is instructed via the Convertible Roof Module (CRM). The CRM is activated by the Console mounted Roof Switch. A further module controls the position and drive command for the Tonneau Latches. The roof hydraulic pump is protected by a 30A fuse. During Roof Operation the door glass and boot release commands are also controlled by the CRM.

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Maintenance

WARNING

MANY OF THE FOLLOWING PROCEDURES ADVISE OPERATING THE ROOF TO THE HALFWAY POSITION. WHEN THE OPERATION OF THE ROOF IS STOPPED MID-CYCLE, WITH THE TONNEAU UP, ANY LOSS OF POWER (I.E. REMOVING THE VEHICLE KEY OR AFTER 10 MINUTES OF IDLE) WILL RESULT IN THE HYDRAULIC PRESSURE DROPPING AND MAY CAUSE A CLASH SCENARIO.

WHEN ADVISED TO OPEN THE ROOF TO THE HALFWAY POSITION, ALWAYS SECURE THE ROOF WITH STRAPS AND PROPS (AS ADVISED). SHOULD THE ROOF CLASH AND THEN POWER BE RETURNED TO THE VEHICLE SEVERE DAMAGE TO THE ROOF WILL RESULT.

TO RECTIFY THE 'CLASH' SCENARIO FOLLOW THE PROCEDURE BELOW:

1. ENSURE IGNITION IS OFF AND REMOVE KEY.

2. MANUALLY RAISE TONNEAU LID.

3. WHILST TONNEAU IS RAISED, FULLY RETRACT ROOF ALLOWING IT TO SETTLE BACK INTO TONNEAU WELL.

4. ENSURE LID CLEARS TONNEAU STRIKERS DURING MOVEMENT.

5. CLOSE TONNEAU LID (ALLOW TO DROP UNDER OWN WEIGHT).

6. ONCE TONNEAU IS CLOSED TURN ON IGNITION AND FULLY RETRACT ROOF INTO TONNEAU WELL AND LATCH TONNEAU.

7. ONCE MOVEMENT IS COMPLETED AND HOOD IS STOWED FULL FUNCTIONALITY IS RESTORED.

Hood Assembly-Renew

Repair Operation Time (ROT)	
Item	**Code**
Hood Assembly-Renew	**01.17.AB**

Removal

1. Remove Tonneau well liner (see Workshop Manual procedure 01.17.DB Tonneau Well Liner - Renew).
2. Remove Panel assembly body side LH (see Workshop Manual procedure 01.05.DY Panel Assembly - Bodyside Trim - Rear - LH - Renew).
3. Remove Panel assembly body side RH (see Workshop Manual procedure 01.05.DX Panel Assembly - Bodyside Trim - Rear - RH - Renew).
4. Remove Tonneau cover (see Workshop Manual procedure 01.17.CA Cover - Tonneau - Renew).
5. Disconnect vehicle battery.
6. Release both tonneau cylinders lower retaining clips and disconnect cylinders from body (see Figure 1).

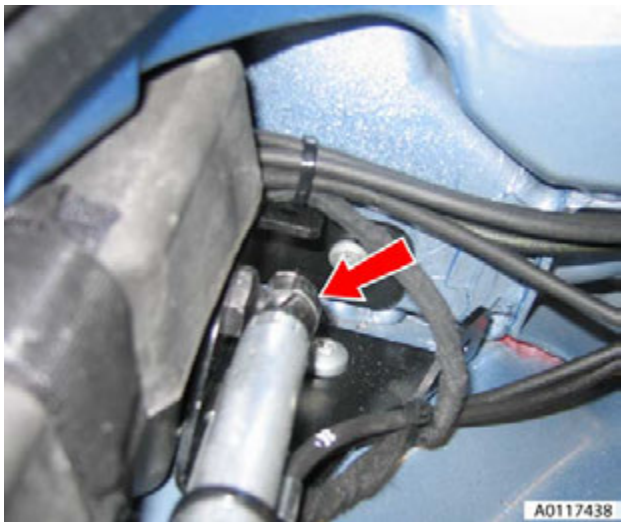


Figure 1

7. Remove tonneau cylinder pivot bracket from body (bolts x3) (see Figure 2).

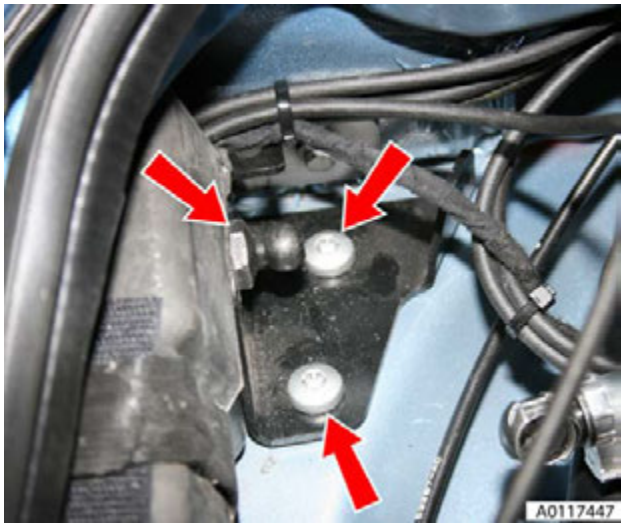


Figure 2

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8. Release motor and casing from under tonneau body side (see Figure 3).



Figure 3

9. Cut cable tie securing valve to bracket (see Figure 4).

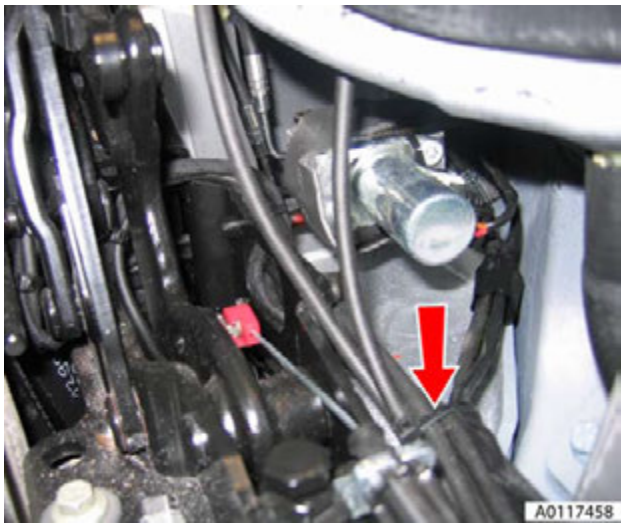


Figure 4

10. Release valve from support bracket, the bracket may need bending slightly.

11. Release both main cylinders lower retaining clips and disconnect cylinders from B-posts (see Figure 5).



Figure 5

12. Release multiplug from body and disconnect and feed through into tonneau area (RH) (see Figure6).



Figure 6

13. Disconnect multiplug (RH).
14. Release harness/pipe retaining clips (x3) (RH).

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15. Disconnect multiplugs (x2) and feed into tonneau area (LH) (see Figure 7).

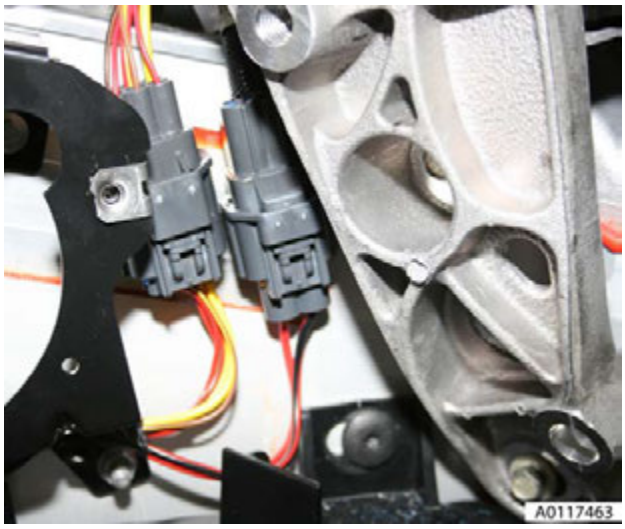


Figure 7

16. Release harness/pipe retaining clips (x2) (LH) (see Figure 8).

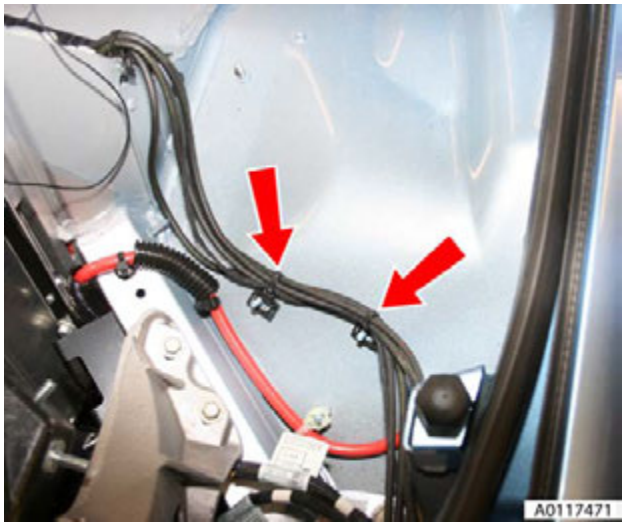


Figure 8

17. Release harness/pipe retaining clips (x7) behind Roll Over Protection System (ROPS) units (see Figure 9).

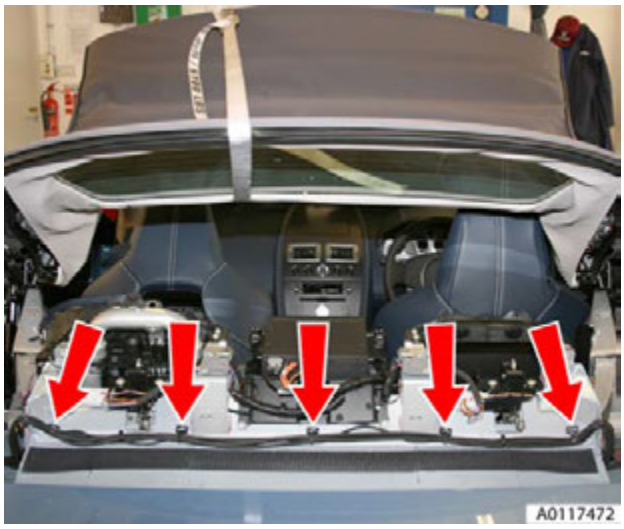


Figure 9

18. Release harness/pipe retaining clips (x3) LH (see Figure 10).

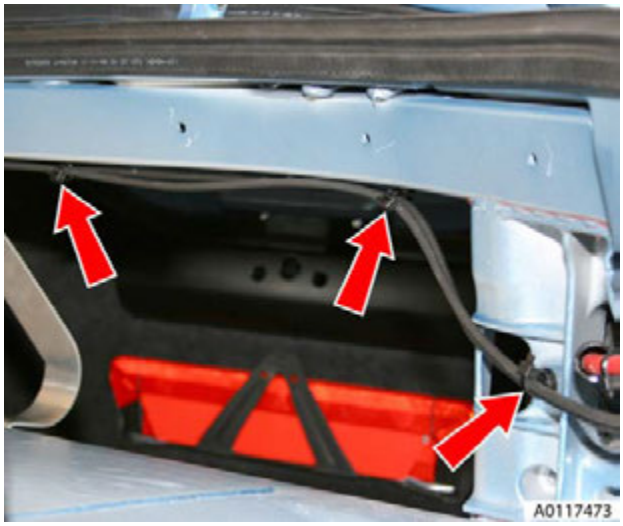


Figure 10

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19. Release harness/pipe retaining clips (x3) RH side (see Figure 11).

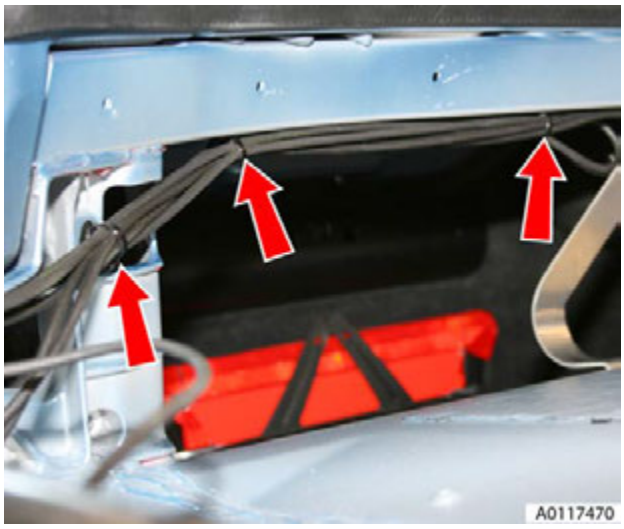


Figure 11

20. Release velcro from bracket and feed harness/pipes under bracket into tonneau area.
21. Tie harness/pipes and tonneau cylinders to roof to ease removal.
22. Mark roof fitted position to body, support weight of roof and remove securing bolts (x6).
23. Lift roof approximately 10mm then using assistance supporting pump unit, manoeuvre roof towards luggage compartment past B-posts.
24. When roof is clear of B-posts, lift roof to clear luggage compartment lid and remove roof from vehicle.

Installation

1. Manoeuvre roof to fitted position on body and install securing bolts (torque)
2. Remove lifting equipment.
3. Untie harness/pipes and tonneau cylinders from roof and layout in approximately fitted position.
4. Feed harness/pipes under bracket into luggage compartment and secure bracket.
5. Secure harness/pipe retaining clips (x3) RH side.
6. Secure harness/pipe retaining clips (x7) behind ROPS units.
7. Secure harness/pipe retaining clips (x2).
8. Feed multiplugs through from tonneau area and connect.
9. Secure harness/pipe retaining clips (x3).
10. Disconnect multiplug.
11. Feed multiplug through from tonneau area, connect and secure to body.
12. Install cylinders to B-post.
13. Install valve to support bracket, reposition bracket.
14. Install cable tie securing valve to bracket. Ensure no pipes or wiring will foul roof mechanism.
15. Install motor and casing under tonneau onto location posts.
16. Install cylinder pivot bracket to body.
17. Install tonneau cylinders to body.
18. Connect vehicle battery.
19. Install Tonneau cover (see Workshop Manual procedure 01.17.CA Cover - Tonneau - Renew).
20. Operate roof from fully open to fully closed. Check operation of roof for correct latching, seal fit, fouling of pipes and harnesses and oil leakage. Carry out adjustments as necessary.
21. Install Panel assembly body side LH (see Workshop Manual procedure 01.05.DY Panel Assembly - Bodyside Trim - Rear - LH - Renew).
22. Install Panel assembly body side RH (see Workshop Manual procedure 01.05.DX Panel Assembly - Bodyside Trim - Rear - RH - Renew).
23. Install Tonneau well liner (see Workshop Manual procedure 01.17.DB Tonneau Well Liner - Renew).
24. Perform water leakage test on roof (see Workshop Manual procedure 01.17.XX Water Test).

Canopy Cover - Renew

Repair Operation Time (ROT)	
Item	**Code**
Canopy Cover-Renew	**01.17.AC**

Removal

1. Remove headlining (see Workshop Manual procedure 01.05.BA Headlining - Renew).
2. Position hood to gain access to rivets (x6) securing B-post seal to hood.
3. Drill out rivets (x6) securing B-post seal to hood mechanism and release seal (see Figure 1).



Figure 1

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4. Release velcro securing canopy to tension belts and remove leaf springs (see Figure 2).



Figure 2

5. Remove screws securing canopy strap to third cross bar (see Figure 3).



Figure 3

6. Mark position of nuts (x4) to aid installation.
7. Remove nuts (x4) securing front seal holders to hood mechanism and remove holders.
8. Note position of shims and collect (see Figure 4).

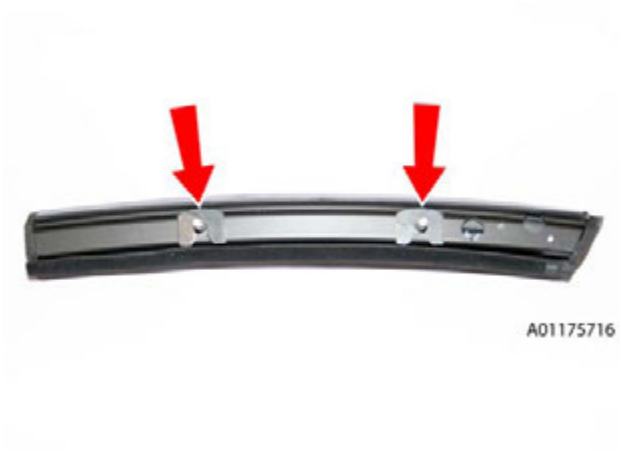


Figure 4

9. Remove screws (x11) securing front header canopy retainer to header rail and remove retainer (see Figure 5).



Figure 5

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10. Pull back canopy flag covering tension cable clips (see Figure 6).

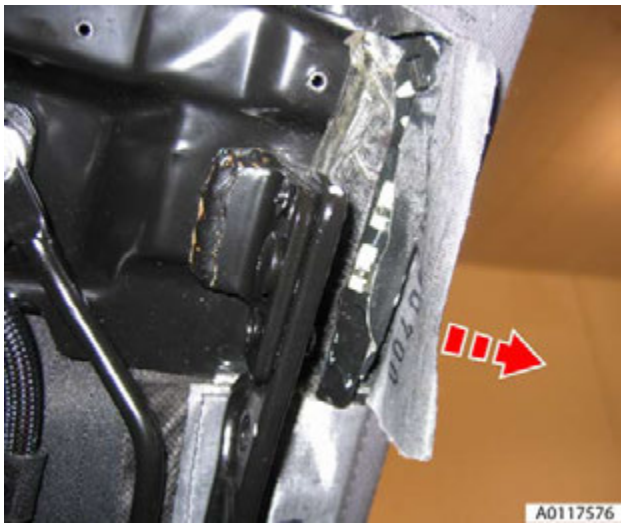


Figure 6

11. Remove tape covering tension cable clips.
12. Release clips (x4) securing tension cables to header rail (see Figure 7).

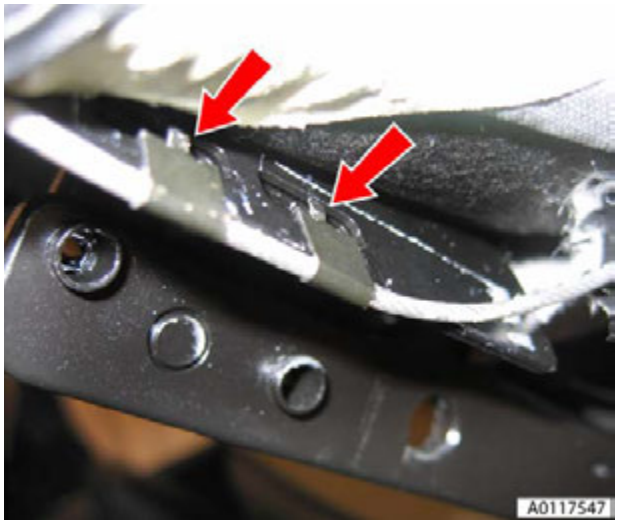


Figure 7

13. Release cables from header rail.
14. Release front of canopy from header rail (see Figure 8).



Figure 8

15. Remove screws (x4) securing canopy liner to header rail (see Figure 9).

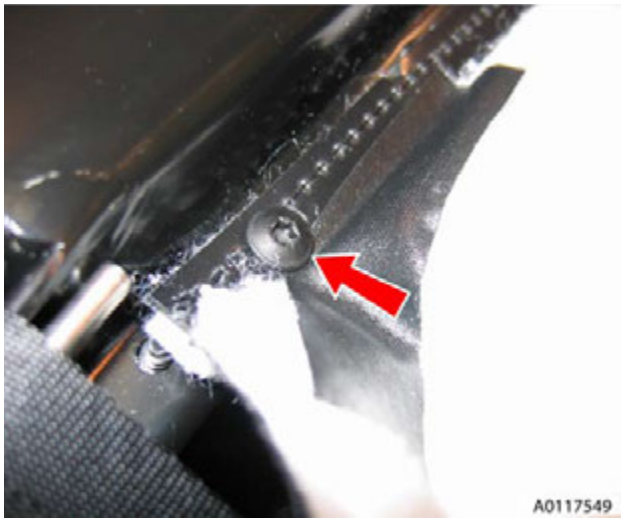


Figure 9

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16. Release double sided tape securing canopy flag to third cross bar (see Figure 10).



Figure 10

17. Release double sided tape securing canopy flag to second cross bar (see Figure 11).



Figure 11

18. Release double sided tape securing canopy flag to first cross bar (see Figure 12).



Figure 12

19. Using assistance, remove tension cables from canopy channel and upper B-post slots and remove canopy cover.

Installation

1. Using assistance, position canopy cover on hood frame and secure to header rail using screws.
2. Feed tension cables through upper B-post slots, through canopy channel and attach to header rail.
3. Secure tension cables to header rail using clips.
4. Install front header canopy retainer and secure with screws excluding outer 2 screws.
5. Secure outer of front header retainer with screws.
6. Position hood an midway position and support.
7. Position canopy cover to tension bow and secure to B-post temporarily using self tapping screws.
8. Install leaf springs.
9. Position rear insulation over tension belts.
10. Fully close roof and ensure that rear insulation is in correct position.
11. Pull leaf spring retaining straps within tension belts through insulation slots and install leaf springs.
12. Attach velcro between canopy cover and tension belt.
13. Pull canopy flag over third cross bar and align holes in flag with those in cross bar.
14. Stick double sided tape to rear edges of canopy flags.
15. Peel back double sided tape of rearmost canopy flag, pull flag over third cross bar, align holes and attach.
16. Repeat for second and first flags and cross bars.
17. Peel back double sided tape on front header flags and cover tension cable clips.
18. Position seal holder to hood mechanism with shims in original positions, fit nuts but do not tighten at this stage.
19. Align to marked position and tighten nuts.

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20. Secure canopy straps to third cross bar using screws.
21. Position hood to gain access to B-post seal fixings.
22. Remove self tapping screws and secure B-post seal to hood mechanism using rivets starting with the lowest hole first.
23. Restore roof to original position, raise door glass and check alignment of front seals.
24. Install headlining (see Workshop Manual procedure 01.05.BA Headlining - Renew).
25. Check operation and fit of hood.

Header Latch Motor - Renew

Repair Operation Time (ROT)	
Item	**Code**
Header Latch Motor-Renew	**01.17.AF**

Removal

1. Remove left-hand header latch flex shaft (see Workshop Manual procedure 01.17.EF Flex Shaft - LH - Renew).
2. Remove right-hand header latch flex shaft (see Workshop Manual procedure 01.17.EG Flex Shaft - RH - Renew).
3. Cut 2 cable ties securing wiring harness to motor mounting bracket (see Figure 1).



Figure 1

4. Disconnect 2 motor multiplugs.
5. Remove 4 nuts securing motor mounting bracket to roof.
6. Remove motor from studs.

Installation

1. Ensure header motor and latch are in fully open position prior to installation.
2. Install motor and tighten nuts to 8 Nm.
3. Connect motor multiplugs.
4. Secure wiring harness to motor mounting bracket with cable ties.
5. Install right-hand header latch flex shaft (see Workshop Manual procedure 01.17.EG Flex Shaft - RH - Renew).
6. Install left-hand header latch flex shaft (see Workshop Manual procedure 01.17.EF Flex Shaft - LH - Renew).

Hydraulic Main Actuator Cylinder - Renew

Repair Operation Time (ROT)		
Item		**Code**
Hydraulic Main Actuator Cylinder-Renew	RH	**01.17.AG**
Hydraulic Main Actuator Cylinder-Renew	LH	**01.17.AH**

Removal

1. Remove panel quarter trim lower (see Workshop Manual procedure 01.05.CR/01.05.CS Panel Assembly - Quarter trim Lower - RH - Renew).
2. Release cylinder lower retaining clip and disconnect cylinder from B-post (see Figure 1).



Figure 1

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3. Release cylinder lower retaining clip and disconnect cylinder from roof mechanism (see Figure 2).

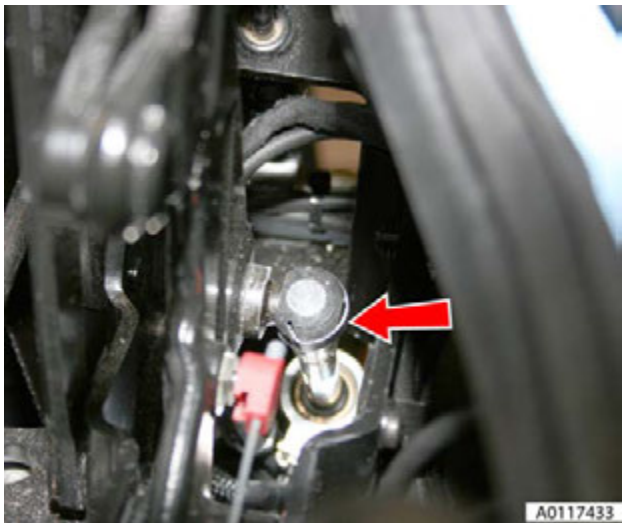


Figure 2

4. Lower cylinder to access pipes and switches.
5. Cut cable ties securing pipes and wires to cylinder (see Figure 3).



Figure 3

6. Release clips securing pipes to cylinder and disconnect pipes.
7. Release clips securing hall effect sensors to cylinder, disconnect sensors and remove cylinder.

Installation

1. Position sensors to cylinder and secure with clips.
2. Position pipes to cylinder and secure with clips.
3. Secure pipes and wires to cylinder with cable tie.
4. Move cylinder into position and install cylinder to roof mechanism.
5. Install cylinder to B-post.
6. Install panel quarter trim lower (see Workshop Manual procedure 01.05.CR/01.05.CS Panel Assembly - Quarter Trim Lower - RH - Renew).

Hydraulic Tensrod Cylinder - Renew

Repair Operation Time (ROT)		
Item		**Code**
Hydraulic Tensrod Cylinder-Renew	LH	**01.17.AJ**
Hydraulic Tensrod Cylinder-Renew	RH	**01.17.AK**

Removal

1. Operate roof to halfway position with tonneau open and support roof when hydraulic pressure drops with suitable straps and support tonneau cover with suitable prop (see Figure 1).

WARNING

APPROXIMATELY 20 SECONDS AFTER THE OPEN/ CLOSE OPERATION HAS BEEN INTERRUPTED THE ROOF MAY SUDDENLY DROP DUE TO LOSS OF HYDRAULIC PRESSURE. IF THIS HAPPENS ENSURE NO BODY PARTS ARE CLOSE TO THE ROOF MECHANISM. IF THE ROOF REQUIRES MAINTENANCE, SUPPORT PROPERLY USING SUITABLE PROPS AND STRAPS.



Figure 1

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2. Remove lower cover (screw x1) (see Figure 2).

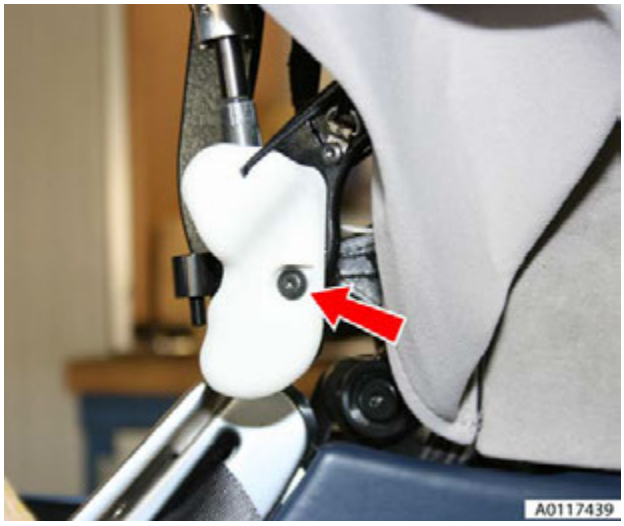


Figure 2

3. Release cylinder upper retaining clip and disconnect cylinder from roof mechanism (see Figure 3).



Figure 3

4. Release cylinder lower retaining clip and disconnect cylinder from roof mechanism (move cylinder to access pipes and wiring).
5. Cut cable tie securing pipes to cylinder.
6. Release clips securing pipes to cylinder and disconnect pipes.

Installation

1. Position pipes to cylinder and secure with clips.
2. Secure pipes to cylinder with cable ties.
3. Move cylinder into position and install cylinder to roof.
4. Install cylinder to roof.
5. Install lower cover.
6. Restore roof and tonneau to original position

Hydraulic Tonneau Cylinder - Renew

Repair Operation Time (ROT)		
Item		**Code**
Hydraulic Tonneau Cylinder-Renew	LH	**01.17.AL**
Hydraulic Tonneau Cylinder-Renew	RH	**01.17.AM**

Removal

1. Operate roof to halfway position with tonneau open and support roof when hydraulic pressure drops with suitable straps and support tonneau cover with suitable prop (see Figure 1).

WARNING

APPROXIMATELY 20 SECONDS AFTER THE OPEN/ CLOSE OPERATION HAS BEEN INTERRUPTED THE ROOF MAY SUDDENLY DROP DUE TO LOSS OF HYDRAULIC PRESSURE. IF THIS HAPPENS ENSURE NO BODY PARTS ARE CLOSE TO THE ROOF MECHANISM. IF THE ROOF REQUIRES MAINTENANCE, SUPPORT PROPERLY USING SUITABLE PROPS AND STRAPS.



Figure 1

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2. Release cylinder upper retaining clip and disconnect cylinder from tonneau cover (see Figure 2).

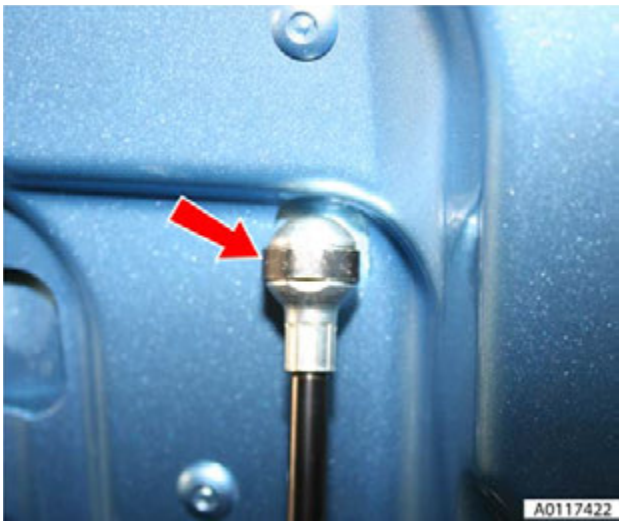


Figure 2

3. Release velcro and move tonneau well liner aside to expose lower cylinder fixing (see Figure 3).



Figure 3

4. Release cylinder lower retaining clip and disconnect cylinder from body (see Figure 4).

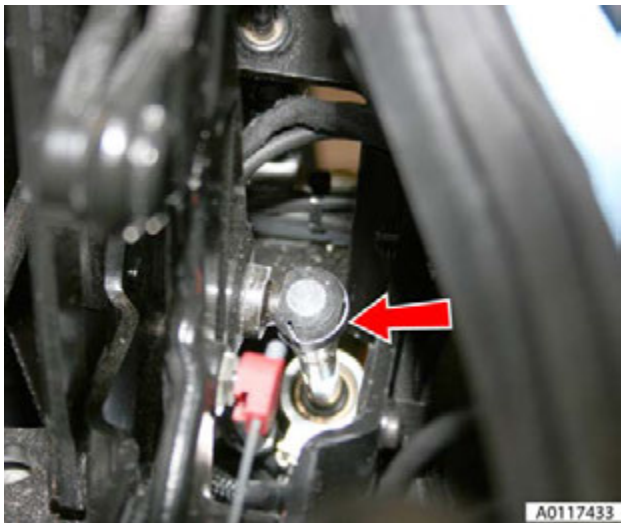


Figure 4

5. Cut cable ties securing pipes and wires to cylinder.
6. Release clips securing pipes to cylinder and disconnect pipes (see Figure 5).

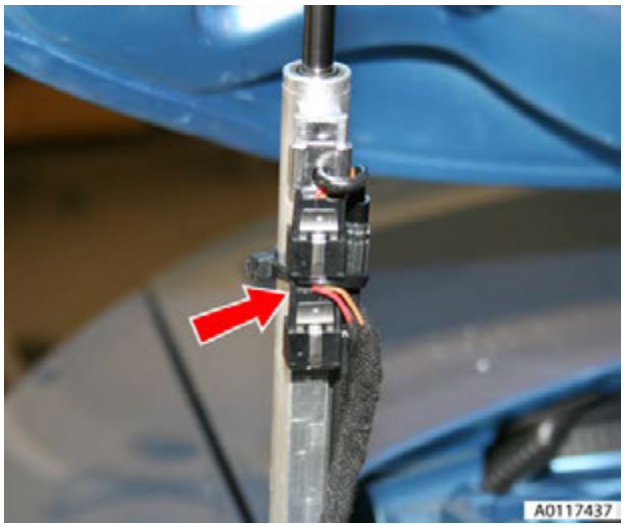


Figure 5

7. Release clips securing hall effect sensors to cylinder, disconnect sensors and remove cylinder.

Installation

1. Position sensors to cylinder and secure with clips.
2. Position pipes to cylinder and secure with clips.
3. Secure pipes and wires to cylinder with cable ties.
4. Move cylinder into position and install cylinder to body.
5. Install cylinder to tonneau cover.
6. Install tonneau well liner.
7. Restore roof and tonneau to original position.

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Convertible Top ECU - Renew

Repair Operation Time (ROT)	
Item	Code
Convertible Top ECU-Renew	01.17.AN

Removal

1. Remove wheel arch liner rear RH (see Workshop Manual procedure 01.02.HB Wheel Arch Liner - Rear - RH - Renew).
2. Remove bolts (x4) securing ECU mounting plate and release from body (see Figure 1).

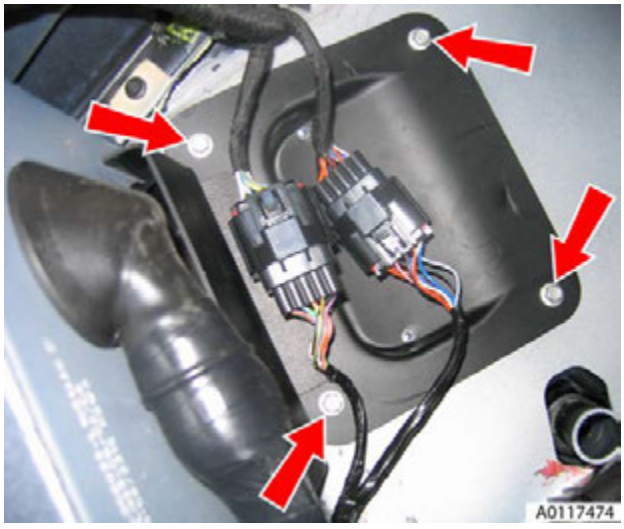


Figure 1

3. Disconnect multiplugs (x3) from ECU (see Figure 2).



Figure 2

4. Remove ECU from mounting plate (nuts x2).

Installation

1. Install ECU to mounting plate.
2. Connect multiplugs (x3) to ECU.
3. Position mounting plate to body and install securing bolts.
4. Remove wheel arch liner rear RH (see Workshop Manual procedure 01.02.HB Wheel Arch Liner - Rear - RH - Renew).

Hydraulic Pump - Renew

Repair Operation Time (ROT)	
Item	Code
Hydraulic Pump-Renew	01.17.AP

Removal

1. Operate roof to halfway position with tonneau open and support roof when hydraulic pressure drops with suitable straps and support tonneau cover with suitable prop (see Figure 1).

WARNING

APPROXIMATELY 20 SECONDS AFTER THE OPEN/CLOSE OPERATION HAS BEEN INTERRUPTED THE ROOF MAY SUDDENLY DROP DUE TO LOSS OF HYDRAULIC PRESSURE. IF THIS HAPPENS ENSURE NO BODY PARTS ARE CLOSE TO THE ROOF MECHANISM. IF THE ROOF REQUIRES MAINTENANCE, SUPPORT PROPERLY USING SUITABLE PROPS AND STRAPS.



Figure 1

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2. Remove trim clip and release tonneau lining stiffening rod (see Figure 2).



Figure 2

3. Release velcro and move tonneau well liner aside to expose lower cylinder fixing and motor casing.
4. Release cylinder lower retaining clip and disconnect tonneau cylinder from body (see Figure 3).

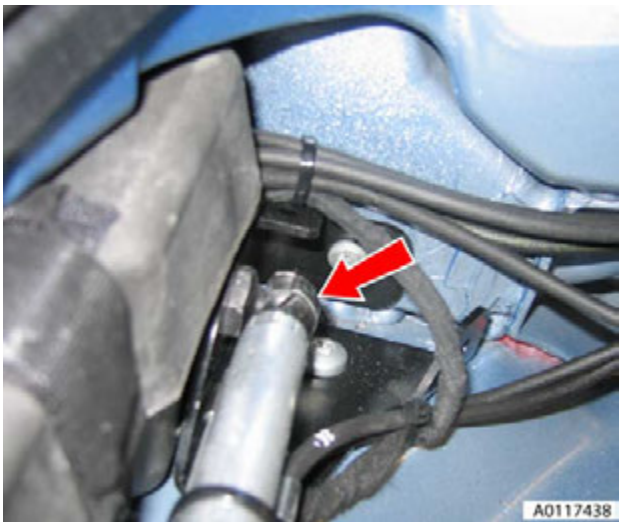


Figure 3

5. Remove cylinder pivot bracket from body (bolts x3) (see Figure 4).

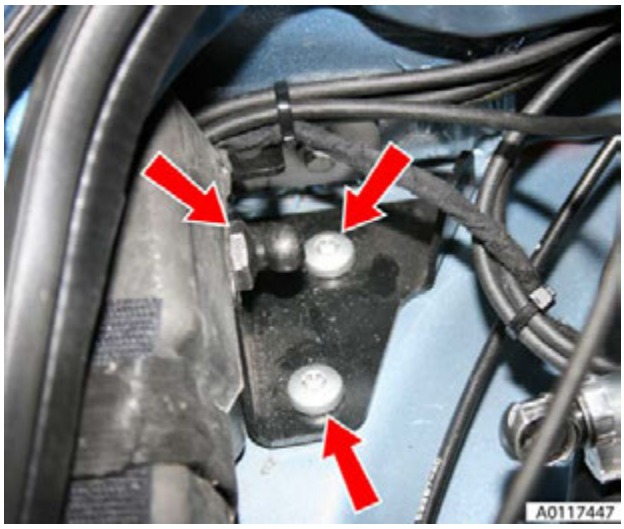


Figure 4

6. Release pump and casing from under tonneau body side (see Figure 5).



Figure 5

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7. Release velcro around pump casing and remove casing (see Figure 6).



Figure 6

8. Disconnect pump multiplug (see Figure 7).



Figure 7

9. Disconnect pump multiplug (see Figure 8).



Figure 8

10. Remove end cover (locating tabs x2).
11. Disconnect pump lucar connectors (x2) (see Figure 9).

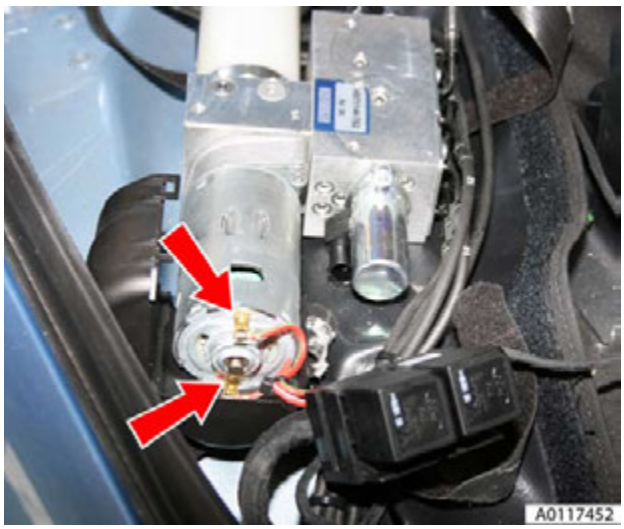


Figure 9

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12. Loosen (x6) screws retaining plate (see Figure 10).

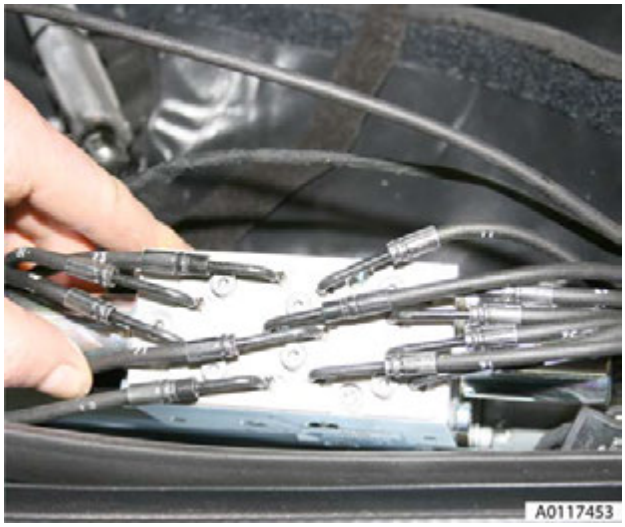


Figure 10

13. Slide retaining plate, disconnect pipes and remove pump (pipes and locations are numbered).

Installation

1. Check pump hydraulic oil level and top-up if required (see Figure 1).



Figure 1

2. Clean pipes and install pipes to pump.
3. Slide retaining plate into place and tighten screws (pipes and locations are numbered).
4. Connect motor lucar connectors (x2).
5. Install end cover (locating tabs x2).
6. Connect pump multiplug.
7. Connect pump multiplug.
8. Install motor under tonneau body side ensuring the roof can be operated without pipes or wires fouling and insulate with cloth if required.
9. Install cylinder pivot bracket and connect cylinder to bracket.
10. Operate roof from fully shut to fully open then to halfway position with tonneau open and support roof when hydraulic pressure drops with suitable straps and support tonneau cover with suitable prop.
11. Disconnect cylinder and remove cylinder pivot bracket.
12. Check pump and pipes for leaks.
13. Remove pump from tonneau bodyside and check oil level. If top up necessary remove reservoir end plug with pump in upright position, add small quantity of oil replace plug and re-check level.
14. Install pump casing and secure velcro.
15. Install pump and casing under tonneau onto location posts.
16. Install cylinder pivot bracket and connect cylinder to bracket.
17. Move tonneau well liner around lower cylinder fixing and motor casing and secure velcro.
18. Install trim clip and position tonneau lining stiffening rod.
19. Restore roof and tonneau to original position

Hydraulic Lock Valve - Renew

Repair Operation Time (ROT)	
Item	**Code**
Hydraulic Lock Valve-Renew	01.17.AV

Removal

1. Operate roof to halfway position with tonneau open and support roof when hydraulic pressure drops with suitable straps and support tonneau cover with suitable prop (see Figure 1).

WARNING

APPROXIMATELY 20 SECONDS AFTER THE OPEN/ CLOSE OPERATION HAS BEEN INTERRUPTED THE ROOF MAY SUDDENLY DROP DUE TO LOSS OF HYDRAULIC PRESSURE. IF THIS HAPPENS ENSURE NO BODY PARTS ARE CLOSE TO THE ROOF MECHANISM. IF THE ROOF REQUIRES MAINTENANCE, SUPPORT PROPERLY USING SUITABLE PROPS AND STRAPS.

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Figure 1

2. Cut cable tie securing valve to bracket (see Figure 2).

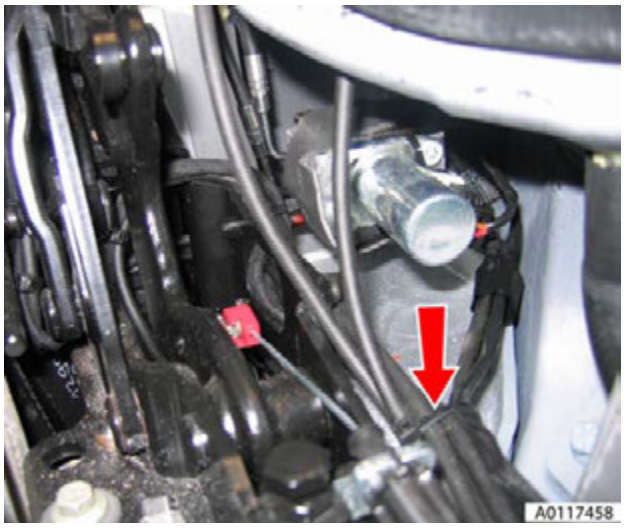


Figure 2

3. Release valve from support bracket, the bracket may need bending slightly.
4. Disconnect multiplug (see Figure 3).



Figure 3

5. Mark pipe fitted positions, loosen screw, slide retaining plate to release pipes and disconnect pipes (x2).
6. Turn valve over and mark pipe fitted position, loosen screw, slide retaining plate to release pipes, disconnect pipes (x2) and remove valve (see Figure 4).



Figure 4

Installation

1. Clean pipes, note fitted position, connect pipes to valve, slide retaining plate and tighten screw.
2. Turn valve over, clean pipes, note fitted position, connect pipes to valve, slide retaining plate and tighten screw.
3. Connect multiplug.
4. Install valve to support bracket, reposition bracket.
5. Install cable tie securing valve to bracket (ensure no pipes or wiring will foul roof mechanism).
6. Restore roof and tonneau to original position.

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RH/LH Front Cantrail Seal - Spare Part - Renew

Repair Operation Time (ROT)		
Item		**Code**
Front Cantrail Seal-Spare Part-Renew	RH	**01.17.BE**
Front Cantrail Seal-Spare Part-Renew	LH	**01.17.BG**

Removal

1. Remove header trim (see Workshop Manual procedure 01.05.BB Panel Assembly - Header - Renew).
2. Mark position of nuts (x2) to aid installation.
3. Remove nuts (x2) securing seal holder to hood mechanism and remove seal from holder.
4. Note position of shims and collect (see Figure 1).



Figure 1

Installation

1. Install seal onto holder using soapy water.
2. Position seal holder to hood mechanism with shims in original positions, fit nuts but do not tighten at this stage.
3. Align to marked position and tighten nuts.
4. Restore roof to original position, raise door glass and check alignment.
5. Install header trim (see Workshop Manual procedure 01.05.BB Panel Assembly - Header - Renew).
6. Perform water test (see Workshop Manual procedure 01.17.XX Water Test).

RH/LH Front Cantrail Seal Spare Part Kit - Renew

Repair Operation Time (ROT)		
Item		**Code**
Front Cantrail Seal Spare Part Kit-Renew	RH	**01.17.BF**
Front Cantrail Seal Spare Part Kit-Renew	LH	**01.17.BQ**

Removal

1. Remove header trim (see Workshop Manual procedure 01.05.BB Panel Assembly - Header - Renew).
2. Mark position of nuts (x2) to aid installation.
3. Remove nuts (x2) securing seal holder to hood mechanism and remove seal from holder.
4. Note position of shims and collect (see Figure 1).



Figure 1

Installation

1. Install new seal onto holder using soapy water.
2. Position seal holder to hood mechanism with shims in original positions, fit nuts but do not tighten at this stage.
3. Align to marked position, fit new nuts and tighten.
4. Restore roof to original position and raise door glass.
5. Remove/install shims as necessary to obtain horizontal alignment to door glass.
6. Loosen securing nuts and adjust seal to obtain vertical alignment to door glass and fore and aft alignment to existing seal edges.
7. Adjust seal to obtain alignment to A pillar seal and middle cantrail seal (ensure that seal exerts light pressure on middle cantrail seal without deforming).
8. Tighten nuts securing seal to hood mechanism.
9. Install header trim (see Workshop Manual procedure 01.05.BB Panel Assembly - Header - Renew).
10. Perform water test (see Workshop Manual procedure 01.17.XX Water Test).

RH/LH Middle Cantrail Seal Spare Part - Renew

Repair Operation Time (ROT)		
Item		**Code**
Middle Cantrail Seal Spare Part-Renew	RH	**01.17.BH**
Middle Cantrail Seal Spare Part-Renew	LH	**01.17.BK**

Removal

1. Remove cantrail cover trim (see Workshop Manual procedure 01.17.BT Cover - Trim - Cantrail - Renew).

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2. Mark position of nuts (x2) to aid installation (see Figure 1).

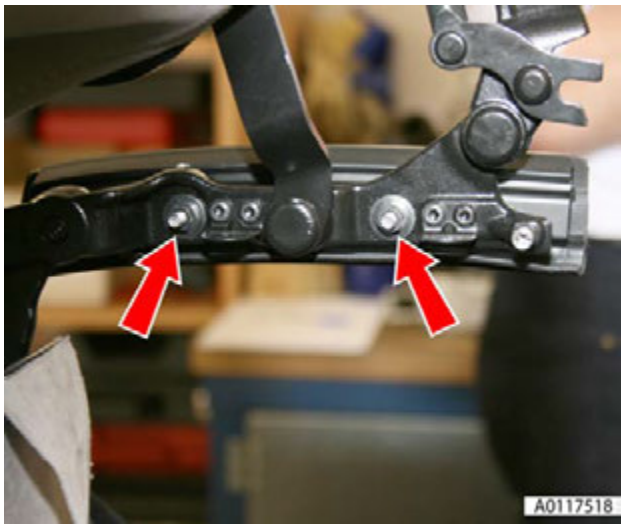


Figure 1

3. Remove nuts (x2) securing seal holder to hood mechanism and remove seal from holder.
4. Note position of shims and collect.

Installation

1. Install seal onto holder using soapy water.
2. Position seal holder to hood mechanism with shims in original positions, fit nuts but do not tighten at this stage.
3. Align to marked position and tighten nuts.
4. Restore roof to original position, raise door glass and check alignment.
5. Install cantrail cover trim (see Workshop Manual procedure 01.17.BT Cover - Trim - Cantrail - Renew).
6. Perform water test (see Workshop Manual procedure 01.17.XX Water Test).

RH/LH Middle Cantrail Seal Spare Part Kit - Renew

Repair Operation Time (ROT)		
Item		**Code**
Middle Cantrail Seal Spare Part Kit-Renew	RH	**01.17.BJ**
Middle Cantrail Seal Spare Part Kit-Renew	LH	**01.17.BL**

Removal

1. Remove cantrail cover trim (see Workshop Manual procedure 01.17.BT Cover - Trim - Cantrail - Renew).

2. Mark position of nuts (x2) to aid installation (see Figure 1).

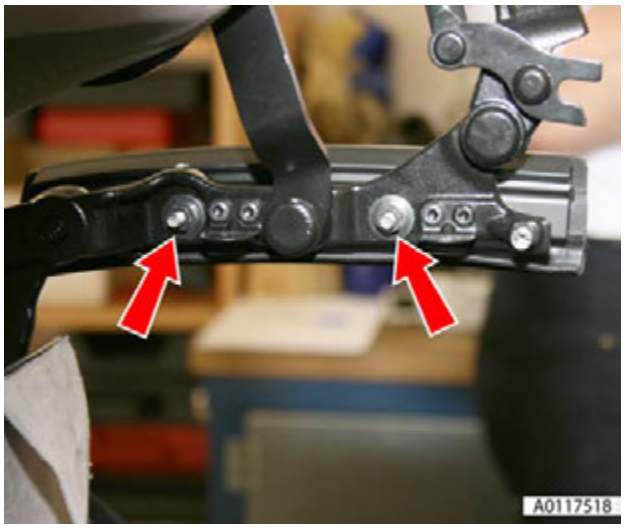


Figure 1

3. Remove nuts (x2) securing seal holder to hood mechanism and remove seal from holder.
4. Note position of shims and collect.

Installation

1. Install seal onto holder using soapy water.
2. Position seal holder to hood mechanism with shims in original positions, fit nuts but do not tighten at this stage.
3. Align to marked position and tighten nuts.
4. Restore roof to original position and raise door glass.
5. Remove/install shims as necessary to obtain vertical alignment to door glass and fore and aft alignment to existing seal edges.
6. Adjust seal to obtain alignment to front seal and rear seal (ensure that seal exerts light pressure on seals without deforming).
7. Tighten nuts securing seal to hood mechanism.
8. Install cantrail cover trim (see Workshop Manual procedure 01.17.BT Cover - Trim - Cantrail - Renew).
9. Perform water test (see Workshop Manual procedure 01.17.XX Water Test).

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Rear Seal Spare Part Assembly Kit - Renew

Repair Operation Time (ROT)	
Item	**Code**
Rear Seal Spare Part Assembly Kit-Renew	**01.17.BM**

Removal

1. Operate roof to halfway position (support roof when hydraulic pressure drops with suitable straps) (see Figure 1).



Figure 1

2. Remove 2 screws securing seal retaining brackets to rear seal assembly, remove brackets (see Figure 2).



Figure 2

3. Remove remaining 26 screws securing rear seal assembly to tension bow, rest seal assembly on tonneau (note fitted position of tension springs).
4. Remove RH cant rail trims (see Workshop Manual procedure 01.17.BT Cover - Trim - Cantrail - Renew).
5. Remove LH cant rail trims (see Workshop Manual procedure 01.17.BT Cover - Trim - Cantrail - Renew).
6. Mark position of B-post trim bolts.
7. Remove 4 bolts securing B-post trims to roof (see Figure 3).



Figure 3

8. Drill out 6 pop-rivets securing rear seal assembly to B-posts (see Figure 4).



Figure 4

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9. Release water pocket from seal, remove rear seal assembly (see Figure 5).



Figure 5

Installation

1. Insert long straight leg of seal carrier into B-post seal towards joint with tension bow (ensure seal anchors are wrapped around carrier - both sides).
2. Slide carrier to end of seal (ensure carrier is tightly fitted against seal, including corners - both sides).
3. Press seal over full length of carrier (ensure seal inner top anchor and seal lower anchors are fully engaged with carrier - both sides).
4. Check ends of seal are flush with ends of carrier (both sides).
5. Fully roll seal top anchor lip onto carrier (ensure any gaps between seal and carrier are at open end of seal - both sides).
6. Affix (super glue) whole length of seal top anchor lip to carrier (both sides).
7. At each end of the tension bow seal, measure 135mm from the end of the Velcro and mark with black pen.
8. Insert each end of seal retainer into seal at black pen marks.
9. Align seal evenly along retainer, fully push fit home centre of seal onto retainer.
10. Working outwards from centre position, fully push fit home seal onto retainer.
11. Working inwards from ends, fully push fit home seal onto retainer.
12. Position seal assembly across tonneau and rear quarters.
13. Insert water pockets to seal, place a drop of super glue at each end of water pockets.
14. Crimp seal to secure water pocket in place.
15. Secure seal assembly to B-posts with pop-rivets, starting with lower rivet.
16. Align and install B-post trims, secure with bolts.
17. Install LH cant rail trims (see Workshop Manual procedure 01.17.BT Cover - Trim - Cantrail - Renew).
18. Install RH cant rail trims (see Workshop Manual procedure 01.17.BT Cover - Trim - Cantrail - Renew).
19. Align and install seal assembly to tension bow, ensure brackets and spring clips are correctly positioned, secure with screws.

LH Fully Automatic Latching Kit - Renew

Repair Operation Time (ROT)		
Item		**Code**
Fully Automatic Latching Kit-Renew	LH	**01.17.BN**

Removal

1. Remove left-hand header latch flex shaft (see Workshop Manual procedure 01.17.EF Flex Shaft - LH - Renew).
2. Mark mounting position of latching kit (see Figure 1).



Figure 1

3. Remove 3 nuts and 1 screw securing latching kit to roof.

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4. Remove C-clip securing tie rod to roof hinge, release tie rod (see Figure 2).

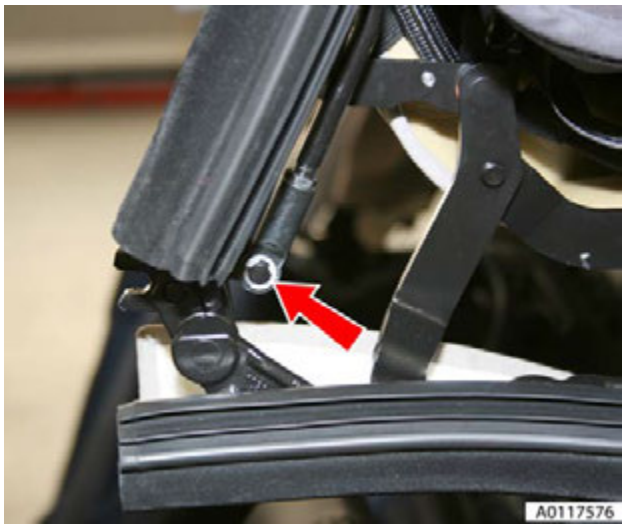


Figure 2

5. Cut cable tie securing latch sensor harness to latch motor bracket (see Figure 3).

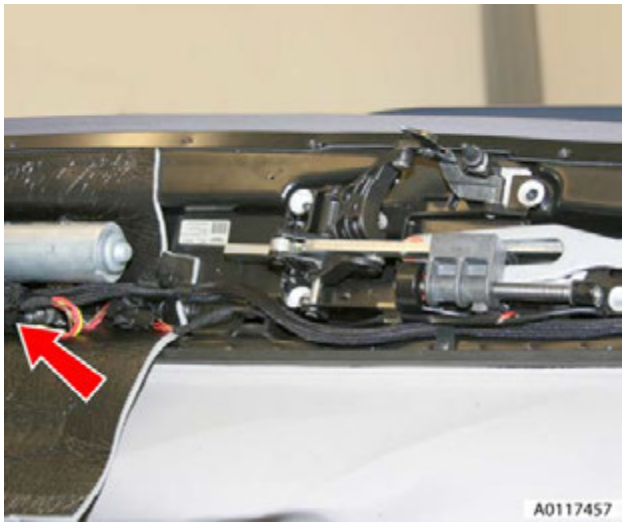


Figure 3

6. Disconnect latch sensor multiplug.
7. Remove latching kit from studs.

Installation

1. Ensure header motor and latch are in fully open position prior to installation.
2. Align and install latching kit, secure with nuts and screw.
3. Connect latch sensor multiplug.
4. Secure latch sensor harness to latch motor bracket with cable tie.
5. Attach tie rod, secure with C-clip.
6. Install left-hand header latch flex shaft (see Workshop Manual procedure 01.17.EF Flex Shaft - LH - Renew).

RH Fully Automatic Latching Kit - Renew

Repair Operation Time (ROT)		
Item		**Code**
Fully Automatic Latching Kit-Renew	RH	**01.17.BP**

Removal

1. Remove right-hand header latch flex shaft (see Workshop Manual procedure 01.17.EG Flex Shaft - RH - Renew).
2. Mark mounting position of latching kit (see Figure 1).



Figure 1

3. Remove 3 nuts and 1 screw securing latching kit to roof.
4. Remove C-clip securing tie rod to roof hinge, release tie rod (see Figure 2).

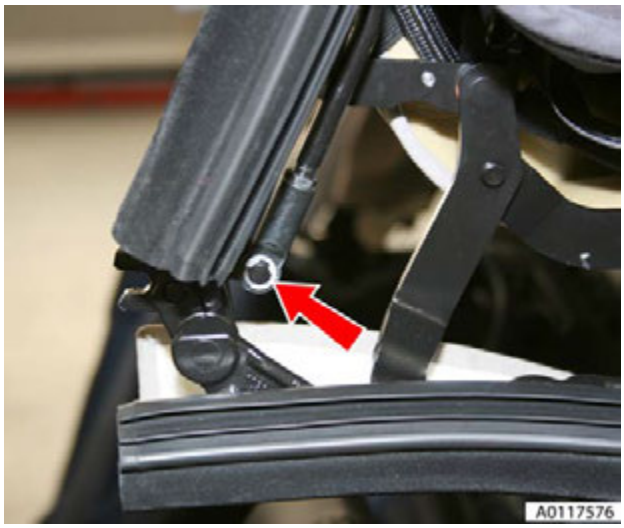


Figure 2

5. Remove latching kit from studs.

Installation

1. Ensure header motor and latch are in fully open position prior to installation.

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2. Align and install latching kit, secure with nuts and screw.
3. Attach tie rod, secure with C-clip.
4. Install right-hand header latch flex shaft (see Workshop Manual procedure 01.17.EG Flex Shaft - RH - Renew).

Convertible Roof Hydraulic Pump - Check Fluid Level

Repair Operation Time (ROT)	
Item	**Code**
Convertible Roof Hydraulic Pump-Check Fluid Level	**01.17.BR**

Removal

1. Operate roof to halfway position with tonneau open. Support roof when hydraulic pressure drops with suitable straps and support tonneau cover with suitable prop (see Figure 1).

WARNING

APPROXIMATELY 20 SECONDS AFTER THE OPEN/CLOSE OPERATION HAS BEEN INTERRUPTED THE ROOF MAY SUDDENLY DROP DUE TO LOSS OF HYDRAULIC PRESSURE. IF THIS HAPPENS ENSURE NO BODY PARTS ARE CLOSE TO THE ROOF MECHANISM. IF THE ROOF REQUIRES MAINTENANCE, SUPPORT PROPERLY USING SUITABLE PROPS AND STRAPS.



Figure 1

2. Remove trim clip and release tonneau lining stiffening rod (see Figure 2).



Figure 2

3. Release velcro and move tonneau well liner aside to expose lower cylinder fixing and pump casing.
4. Release cylinder lower retaining clip and disconnect cylinder from body (see Figure 3).

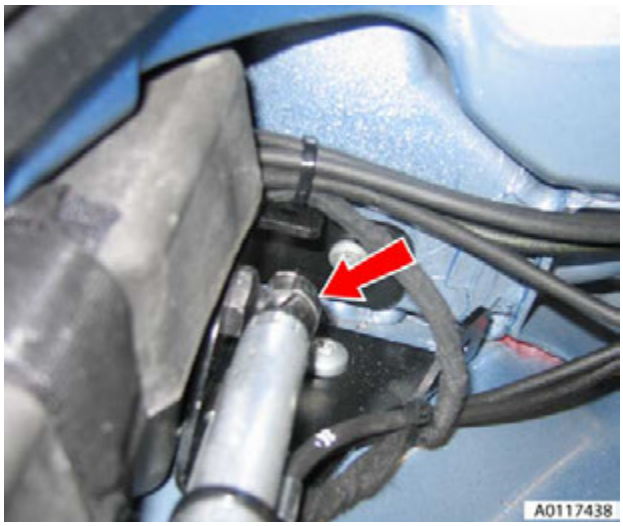


Figure 3

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5. Remove cylinder pivot bracket from body (bolts x3) (see Figure 4).

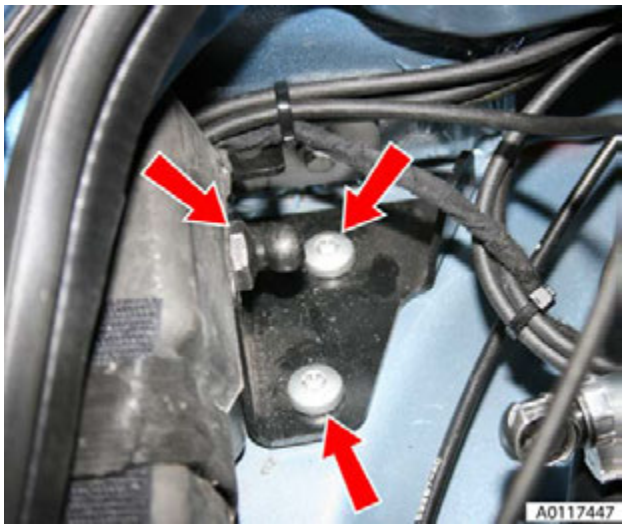


Figure 4

6. Release pump and casing from under tonneau body side (see Figure 5).



Figure 5

7. Release velcro around pump casing and remove casing (see Figure 6).



Figure 6

Installation

1. Check pump and pipes for leaks.
2. Check oil level and top-up if necessary by removing reservoir end plug with pump in upright position, add small quantity of oil replace plug and re-check level (see Figure 1).



Figure 1

3. Install pump casing and secure velcro.
4. Install pump and casing under tonneau onto location posts.
5. Install cylinder pivot bracket and connect cylinder to bracket.
6. Move tonneau well liner around lower cylinder fixing and pump casing and secure velcro.
7. Install trim clip and position tonneau lining stiffening rod.

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8. Restore roof and tonneau to original position

Cantrail Cover Trim - Renew

Repair Operation Time (ROT)	
Item	Code
Cantrail Cover Trim-Renew	01.17.BT

Removal

1. Operate roof to halfway position and support roof when hydraulic pressure drops with suitable straps.

WARNING

APPROXIMATELY 20 SECONDS AFTER THE OPEN/ CLOSE OPERATION HAS BEEN INTERRUPTED THE ROOF MAY SUDDENLY DROP DUE TO LOSS OF HYDRAULIC PRESSURE. IF THIS HAPPENS ENSURE NO BODY PARTS ARE CLOSE TO THE ROOF MECHANISM. IF THE ROOF REQUIRES MAINTENANCE, SUPPORT PROPERLY USING SUITABLE PROPS AND STRAPS.

2. Remove Torx screws (x2) securing trim to hood mechanism and release trim (see Figure 1).

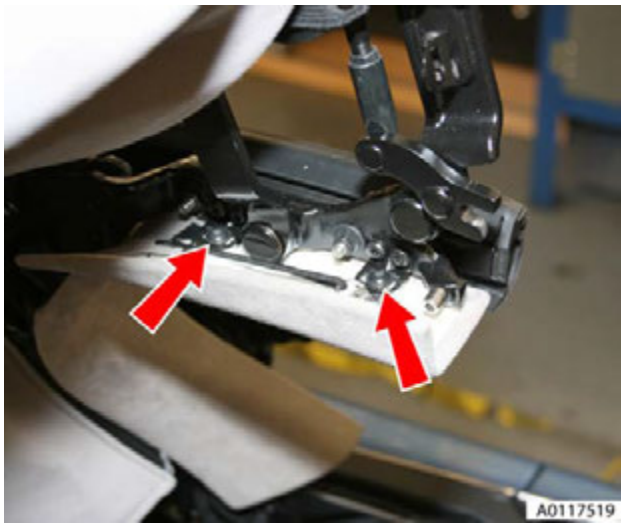


Figure 1

3. Remove bolt securing tension string to trim and remove trim (see Figure 2).

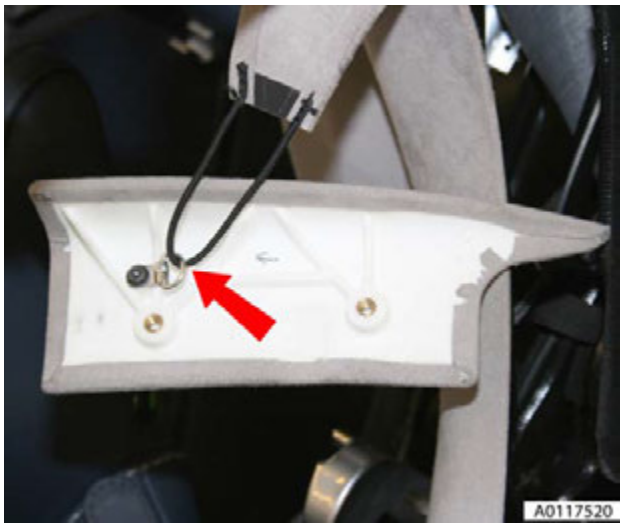


Figure 2

Installation

1. Position tension string to trim and secure with screw.
2. Install trim to hood and secure with bolts (ensure tension string is positioned either side of rear screw).
3. Restore roof to original position.

B-Post Trim Cover - Renew

Repair Operation Time (ROT)	
Item	Code
B-Post Trim Cover-Renew	01.17.BU

Removal

1. Remove cantrail trim (see Workshop Manual procedure 01.17.BT Cover - Trim - Cantrail - Renew).
2. Mark position of screws (x2) to aid installation.

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3. Remove screws (x2) securing trim to hood mechanism and release trim (see Figure 1).



Figure 1

4. Unclip spring securing tension string to hood mechanism (see Figure 2).



Figure 2

5. Remove screw securing tension strap to hood mechanism and remove trim (see Figure 3).



Figure 3

Installation

1. Pass tension strap through trim and secure to hood mechanism using bolt.
2. Pass tension string through trim and secure tension spring to hood mechanism.
3. Install trim to hood mechanism and secure with screws.
4. Install cantrail trim (see Workshop Manual procedure 01.17.BT Cover - Trim - Cantrail - Renew).

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Tonneau Cover - Renew

Repair Operation Time (ROT)	
Item	Code
Tonneau Cover-Renew	01.17.CA

Removal

1. Open trunk lid and loosen 2 tonneau hinge bolts (see Figure 1).

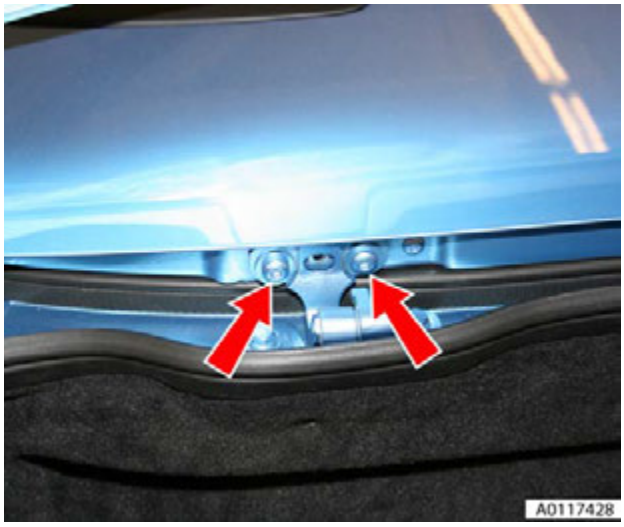


Figure 1

2. Protect tonneau cover and boot lid edges with suitable tape and close trunk lid.
3. Operate roof to halfway position and support roof when hydraulic pressure drops with suitable straps and support tonneau cover with suitable prop (see Figure 2).

WARNING

APPROXIMATELY 20 SECONDS AFTER THE OPEN/ CLOSE OPERATION HAS BEEN INTERRUPTED THE ROOF MAY SUDDENLY DROP DUE TO LOSS OF HYDRAULIC PRESSURE. IF THIS HAPPENS ENSURE NO BODY PARTS ARE CLOSE TO THE ROOF MECHANISM. IF THE ROOF REQUIRES MAINTENANCE, SUPPORT PROPERLY USING SUITABLE PROPS AND STRAPS.



Figure 2

4. Release upper spring clips securing tonneau cylinders to tonneau cover and release cylinders (both sides) (see Figure 3).



Figure 3

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5. Release velcro and clip securing right-hand tonneau well liner edges (see Figure 4).



Figure 4

6. Release velcro and 3 clips securing left-hand tonneau well liner edges (see Figure 5).

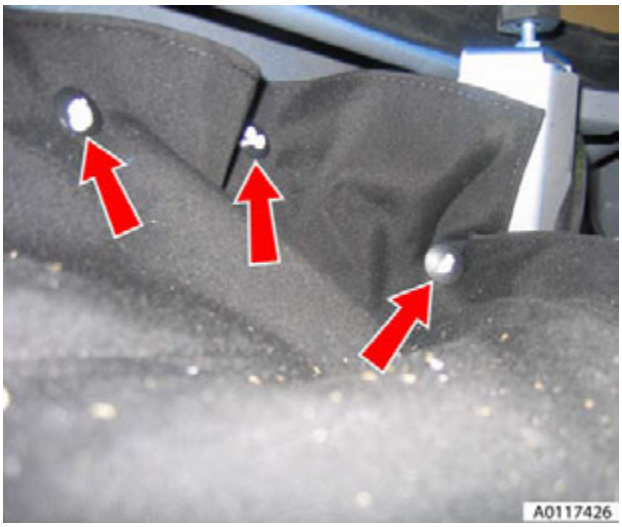


Figure 5

7. Release tonneau B-post flap cables from hood linkage (both sides) (see Figure 6).



Figure 6

8. With assistance, remove tonneau hinge bolts and remove tonneau cover.
9. Release 2 clips (both sides) securing B-post flap cables to tonneau cover (see Figure 7).

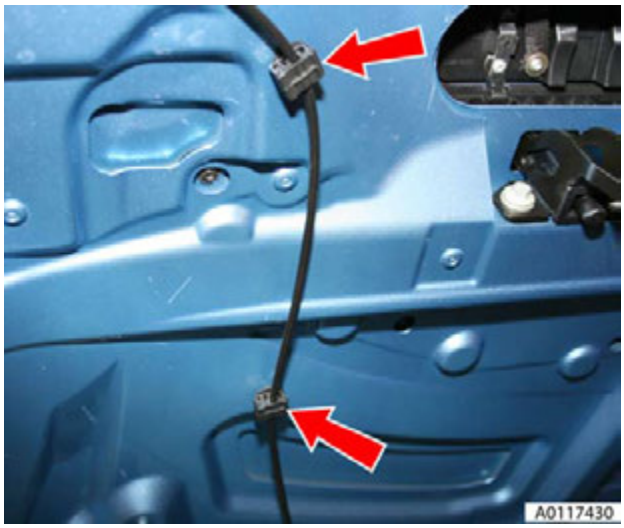


Figure 7

10. Mark mounting position of B-post flaps (both sides).

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11. Remove 3 bolts (both sides) securing B-post flaps to tonneau cover and remove (see Figure 8).

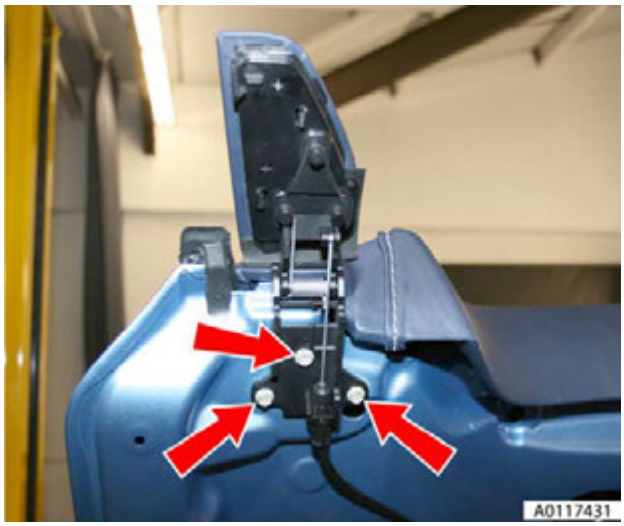


Figure 8

12. Mark mounting position of tonneau strikers (both sides).
13. Remove 2 bolts (both sides) securing tonneau strikers and remove (see Figure 9).

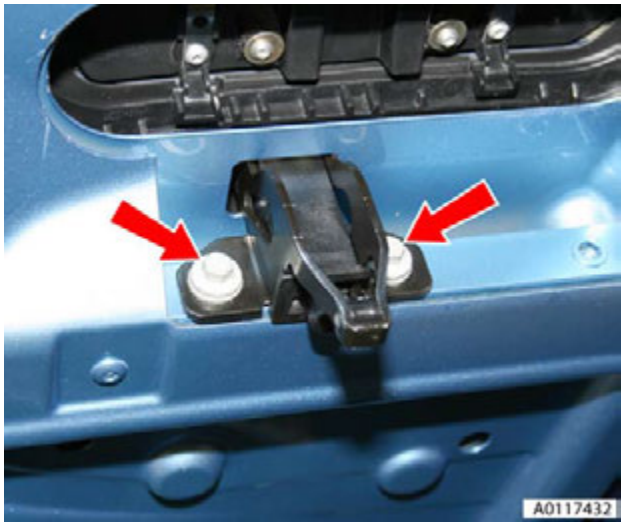


Figure 9

14. Remove 8 screws (both sides) securing tonneau trim and remove (see Figure 10).

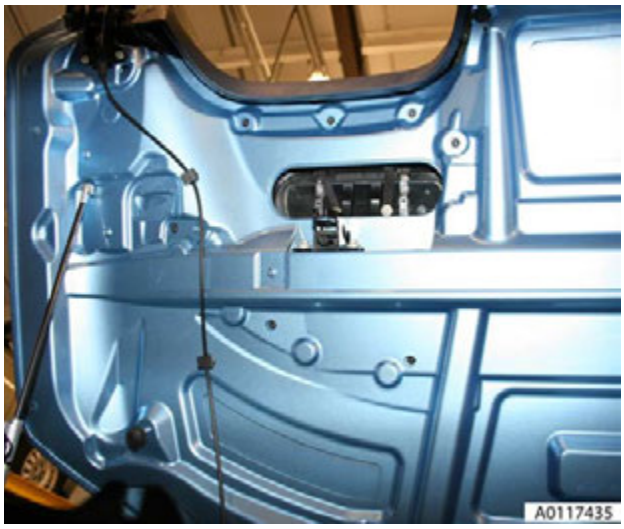


Figure 10

Installation

1. Install tonneau trims and secure with screws (both sides).
2. Align and install tonneau strikers (both sides), secure with bolts.
3. Align and install B-post flaps (both sides), secure with bolts.
4. Secure B-post flap cables to tonneau cover with clips (both sides).
5. With assistance, install tonneau cover and hinge bolts.
6. Secure tonneau B-post flap cables to hood linkage (both sides).
7. Secure tonneau well liner with velcro and clips.
8. Attach tonneau cylinders and secure with clips (both sides).
9. Restore roof and tonneau to original position.
10. Open trunk lid and tighten 2 tonneau hinge bolts.
11. Remove protective tape, close trunk lid

LH Front Main Hydraulic Cylinder Pipe - Renew

Repair Operation Time (ROT)		
Item		**Code**
Front Main Hydraulic Cylinder Pipe-Renew	LH	**01.17.CH**

Removal

1. Operate roof to halfway position with tonneau open and support roof when hydraulic pressure drops with

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suitable straps and support tonneau cover with suitable prop (see Figure 1).

WARNING
APPROXIMATELY 20 SECONDS AFTER THE OPEN/ CLOSE OPERATION HAS BEEN INTERRUPTED THE ROOF MAY SUDDENLY DROP DUE TO LOSS OF HYDRAULIC PRESSURE. IF THIS HAPPENS ENSURE NO BODY PARTS ARE CLOSE TO THE ROOF MECHANISM. IF THE ROOF REQUIRES MAINTENANCE, SUPPORT PROPERLY USING SUITABLE PROPS AND STRAPS.



Figure 1

2. Remove panel quarter trim lower (see Workshop Manual procedure 01.05.CR Panel Assembly - Quarter Trim Lower - RH - Renew).
3. Disconnect battery.
4. Cut cable ties securing pipes and wires to cylinder (see Figure 2).



Figure 2

5. Release clips securing pipes to cylinder and disconnect pipes.
6. Release fir tree clip and cable tie securing both pipes to roof frame (remove pipes as pair).
7. Attach string to cylinder end of both pipes to aid installation.
8. Feed pipes through to tonneau area by carefully guiding through roof mechanism and release string (see Figure 3).



Figure 3

9. Remove harness/pipe retaining clips (x2) (LH) (see Figure 4).

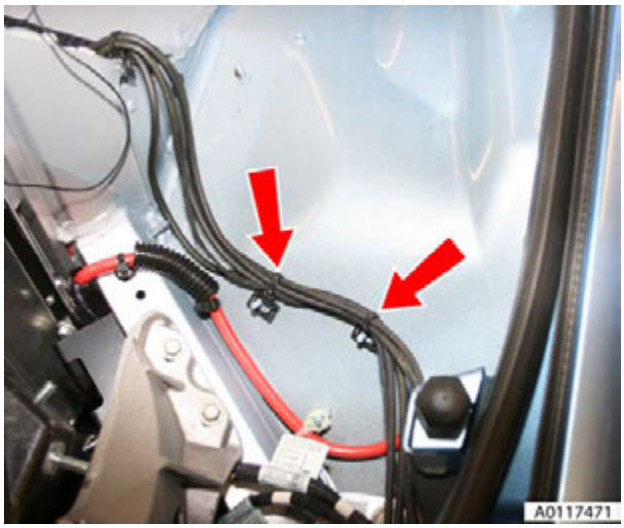


Figure 4

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10. Remove harness/pipe retaining clips (x9) behind ROPS units (see Figure 5).

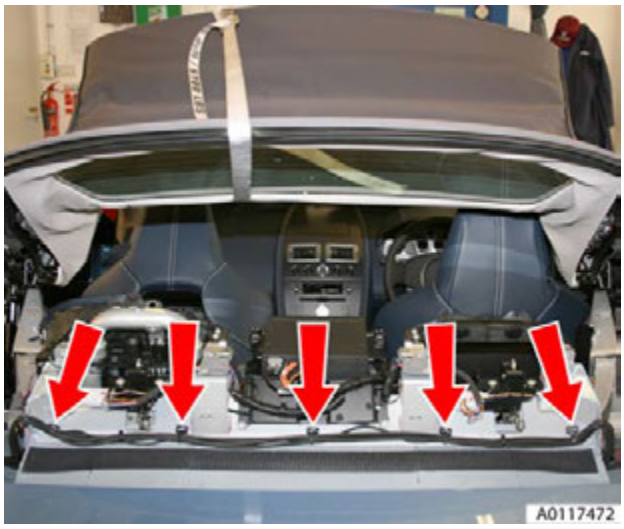


Figure 5

11. Remove harness/pipe retaining clips (x3) LH side (see Figure 6).

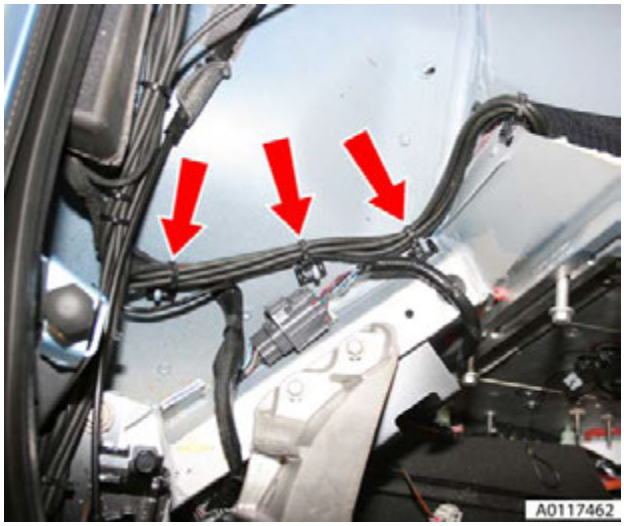


Figure 6

12. Remove trim clip and release tonneau lining stiffening rod (see Figure 7).



Figure 7

13. Release velcro and move tonneau well liner aside to expose lower cylinder fixing and pump casing.
14. Release cylinder lower retaining clip and disconnect cylinder from body (see Figure 8).

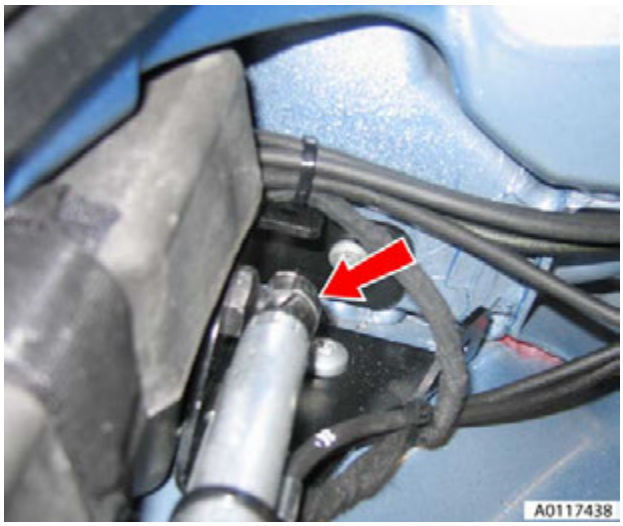


Figure 8

15. Remove cylinder pivot bracket from body (bolts x3).

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16. Release pump and casing from under tonneau body side (see Figure 9).



Figure 9

17. Release velcro around pump casing and remove casing (see Figure 10).



Figure 10

18. Loosen (x6) screws on pump retaining plate (see Figure 11).

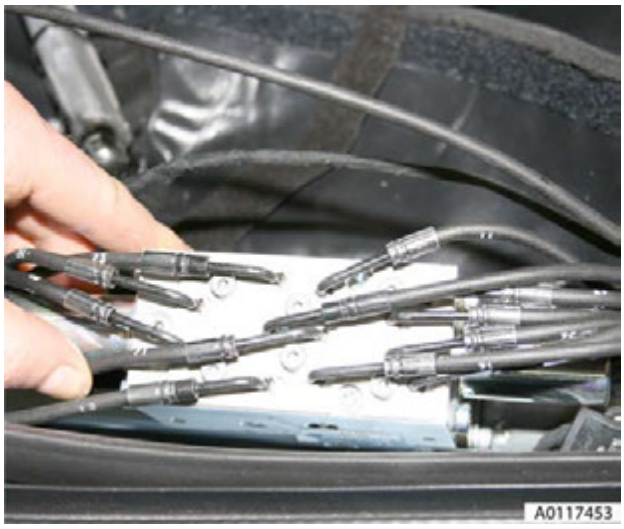


Figure 11

19. Slide retaining plate, disconnect pipe from pump (pipes and locations are numbered).
20. Remove cable ties and remove pipe from vehicle (see Figure 12).

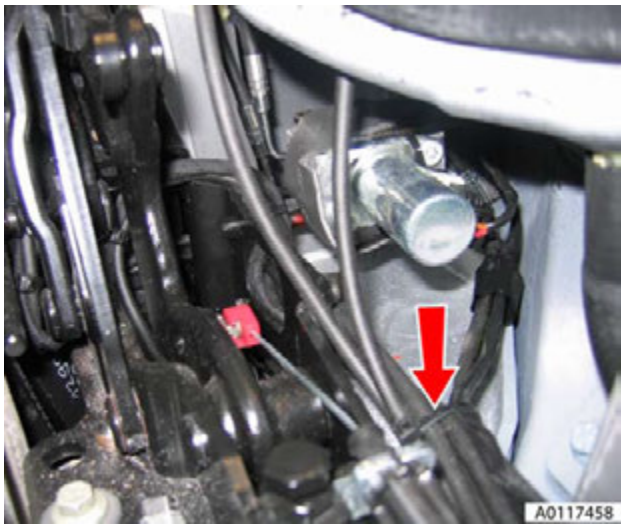


Figure 12

Installation

1. Check oil level and top-up if necessary by removing reservoir end plug with pump in upright position, add

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small quantity of oil replace plug and re-check level (see Figure 1).



Figure 1

2. Install pipe to approximate route on vehicle and install cable ties.
3. Clean pipe and install pipe to pump then slide retaining plate into place and tighten screws (pipes and locations are numbered).
4. Install pump casing and secure velcro.
5. Install pump and casing under tonneau onto location posts.
6. Install cylinder pivot bracket and connect cylinder to bracket.
7. Move tonneau well liner around lower cylinder fixing and pump casing and secure velcro.
8. Install trim clip and position tonneau lining stiffening rod.
9. Install harness/pipe retaining clips (x9) behind ROPS units.
10. Install harness/pipe retaining clips LH (x2).
11. Install harness/pipe retaining clips RH (x3).
12. Attach pipes to guide string, feed pipes through roof frame and remove string.
13. Position pipes to cylinder and secure with clips.
14. Secure pipes and wires to cylinder with cable tie.
15. Install new clips securing pipes to roof frame.
16. Connect battery.
17. Install Panel quarter trim lower (see Workshop Manual procedure 01.05.CR Panel Assembly - Quarter Trim Lower - RH - Renew).
18. Restore roof and tonneau to original position.

LH Rear Main Hydraulic Cylinder Pipe - Renew

Repair Operation Time (ROT)		
Item		**Code**
Rear Main Hydraulic Cylinder Pipe-Renew	LH	**01.17.CK**

Removal

1. Operate roof to halfway position with tonneau open and support roof when hydraulic pressure drops with suitable straps and support tonneau cover with suitable prop (see Figure 1).

WARNING

APPROXIMATELY 20 SECONDS AFTER THE OPEN/CLOSE OPERATION HAS BEEN INTERRUPTED THE ROOF MAY SUDDENLY DROP DUE TO LOSS OF HYDRAULIC PRESSURE. IF THIS HAPPENS ENSURE NO BODY PARTS ARE CLOSE TO THE ROOF MECHANISM. IF THE ROOF REQUIRES MAINTENANCE, SUPPORT PROPERLY USING SUITABLE PROPS AND STRAPS.



Figure 1

2. Remove panel quarter trim lower (see Workshop Manual procedure 01.05.CR Panel Assembly - Quarter Trim Lower - RH - Renew).
3. Disconnect battery.

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4. Cut cable ties securing pipes and wires to cylinder (see Figure 2).



Figure 2

5. Release clips securing pipes to cylinder and disconnect pipes.
6. Release fir tree clip and cable tie securing both pipes to roof frame (remove pipes as pair).
7. Attach string to cylinder end of both pipes to aid installation.
8. Feed pipes through to tonneau area by carefully guiding through roof mechanism and release string (see Figure 2).



Figure 2

9. Remove harness/pipe retaining clips (x2) (LH) (see Figure 3).

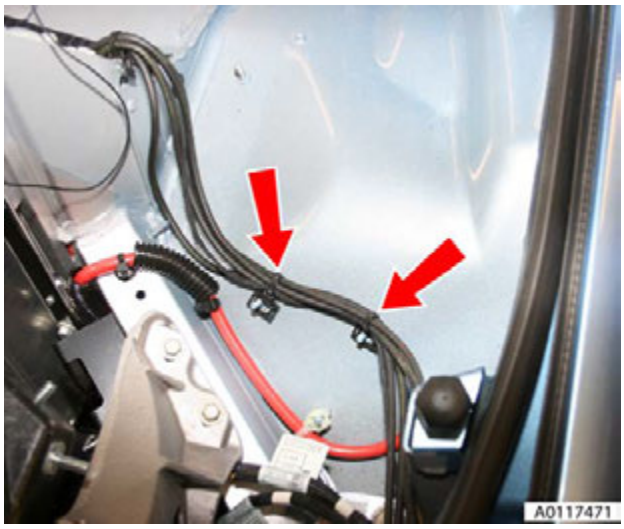


Figure 3

10. Remove harness/pipe retaining clips (x9) behind ROPS units (see Figure 4).

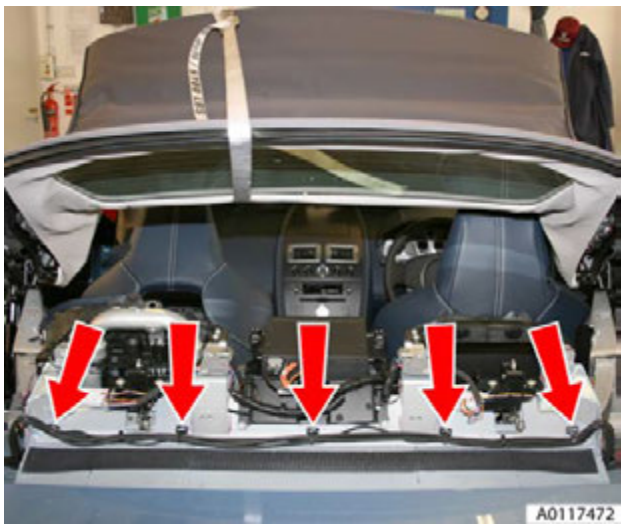


Figure 4

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11. Remove harness/pipe retaining clips (x3) LH side (see Figure 5).

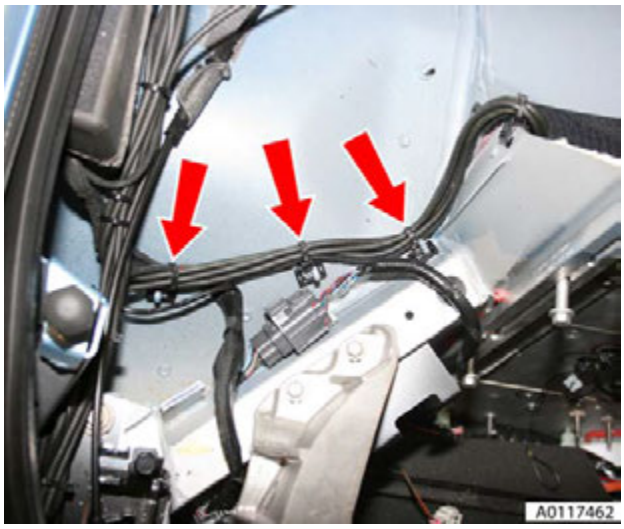


Figure 5

12. Remove trim clip and release tonneau lining stiffening rod (see Figure 6).



Figure 6

13. Release velcro and move tonneau well liner aside to expose lower cylinder fixing and pump casing.
14. Release cylinder lower retaining clip and disconnect cylinder from body (see Figure 7).

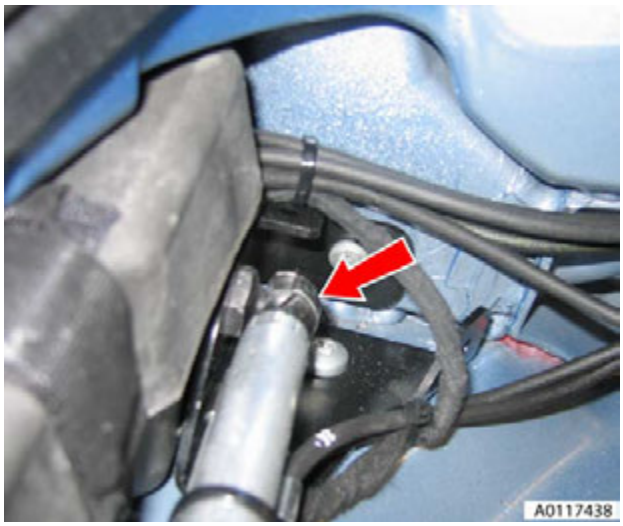


Figure 7

15. Remove cylinder pivot bracket from body (bolts x3).
16. Release pump and casing from under tonneau body side (see Figure 8).



Figure 8

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17. Release velcro around pump casing and remove casing (see Figure 9).



Figure 9

18. Loosen (x6) screws on pump retaining plate (see Figure 10).

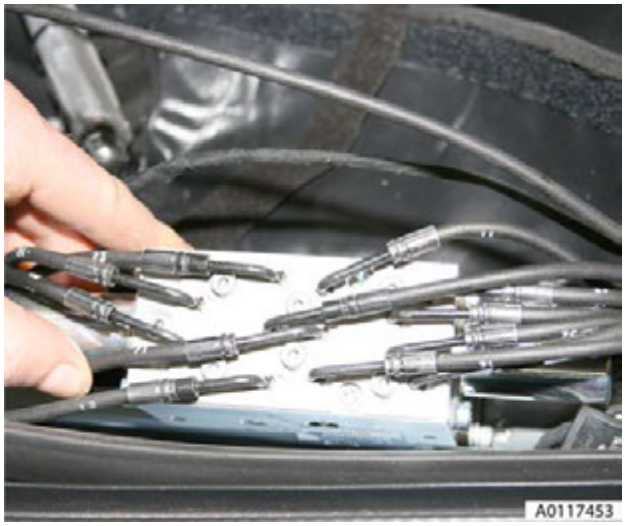


Figure 10

19. Slide retaining plate, disconnect pipe from pump (pipes and locations are numbered).
20. Remove cable ties and remove pipe from vehicle (see Figure 11).

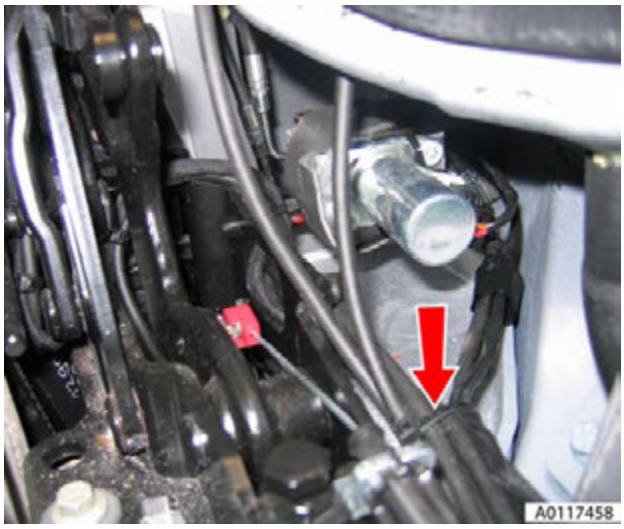


Figure 11

Installation

1. Check oil level and top-up if necessary by removing reservoir end plug with pump in upright position, add small quantity of oil replace plug and re-check level (see Figure 1).



Figure 1

2. Install pipe to approximate route on vehicle and install cable ties.
3. Clean pipe and install pipe to pump then slide retaining plate into place and tighten screws (pipes and locations are numbered).
4. Install pump casing and secure velcro.
5. Install pump and casing under tonneau onto location posts.
6. Install cylinder pivot bracket and connect cylinder to bracket.

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7. Move tonneau well liner around lower cylinder fixing and pump casing and secure velcro.
8. Install trim clip and position tonneau lining stiffening rod.
9. Install harness/pipe retaining clips (x9) behind ROPS units.
10. Install harness/pipe retaining clips LH (x2).
11. Install harness/pipe retaining clips RH (x3).
12. Attach pipes to guide string, feed pipes through roof frame and remove string.
13. Position pipes to cylinder and secure with clips.
14. Secure pipes and wires to cylinder with cable tie.
15. Install new clips securing pipes to roof frame.
16. Connect battery.
17. Install Panel quarter trim lower (see Workshop Manual procedure 01.05.CR Panel Assembly - Quarter Trim Lower - RH - Renew).
18. Restore roof and tonneau to original position

RH Front Main Hydraulic Cylinder Pipe - Renew

Repair Operation Time (ROT)		
Item		**Code**
Front Main Hydraulic Cylinder Pipe-Renew	RH	**01.17.CL**

Removal

1. Operate roof to halfway position with tonneau open and support roof when hydraulic pressure drops with suitable straps and support tonneau cover with suitable prop (see Figure 1).

WARNING

APPROXIMATELY 20 SECONDS AFTER THE OPEN/CLOSE OPERATION HAS BEEN INTERRUPTED THE ROOF MAY SUDDENLY DROP DUE TO LOSS OF HYDRAULIC PRESSURE. IF THIS HAPPENS ENSURE NO BODY PARTS ARE CLOSE TO THE ROOF MECHANISM. IF THE ROOF REQUIRES MAINTENANCE, SUPPORT PROPERLY USING SUITABLE PROPS AND STRAPS.



Figure 1

2. Remove panel quarter trim lower (see Workshop Manual procedure 01.05.CR Panel Assembly - Quarter Trim Lower - RH - Renew).
3. Disconnect battery.
4. Cut cable ties securing pipes and wires to cylinder (see Figure 2).



Figure 2

5. Release clips securing pipes to cylinder and disconnect pipes.
6. Release fir tree clip and cable tie securing both pipes to roof frame (remove pipes as pair).
7. Attach string to cylinder end of both pipes to aid installation.

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8. Feed pipes through to tonneau area by carefully guiding through roof mechanism and release string (see Figure 3).



Figure 3

9. Remove trim clip and release tonneau lining stiffening rod (see Figure 4).



Figure 4

10. Release velcro and move tonneau well liner aside to expose lower cylinder fixing and pump casing.
11. Release cylinder lower retaining clip and disconnect cylinder from body (see Figure 5).

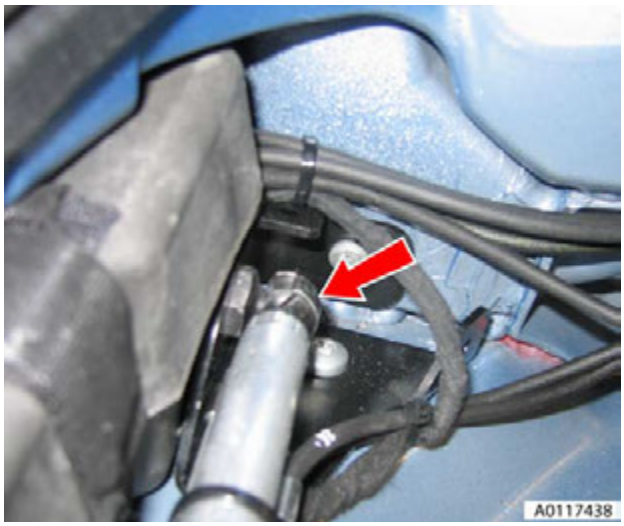


Figure 5

12. Remove cylinder pivot bracket from body (bolts x3).
13. Release pump and casing from under tonneau body side (see Figure 6).



Figure 6

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14. Release velcro around pump casing and remove casing (see Figure 7).



Figure 7

15. Loosen (x6) screws on pump retaining plate (see Figure 8).

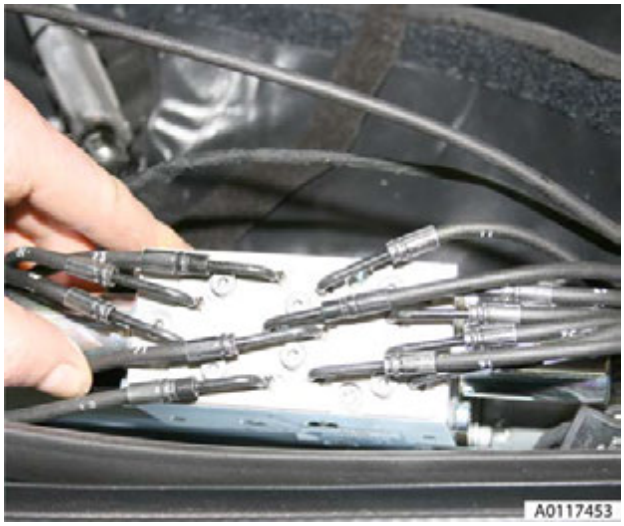


Figure 8

16. Slide retaining plate, disconnect pipe from pump (pipes and locations are numbered).
17. Remove cable ties and remove pipe from vehicle (see Figure 9).

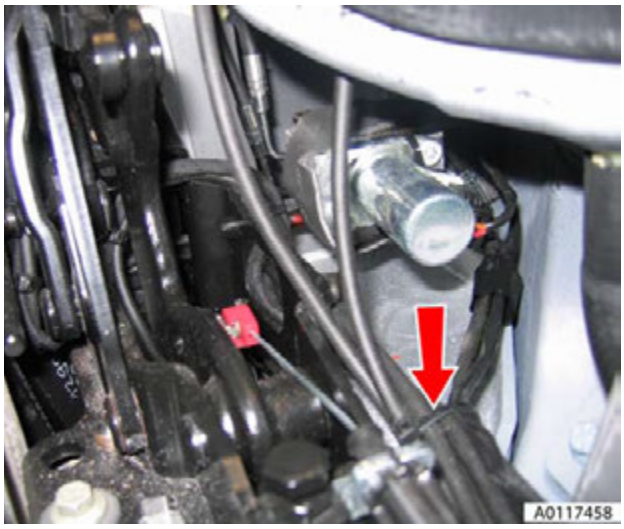


Figure 9

Installation

1. Check oil level and top-up if necessary by removing reservoir end plug with pump in upright position, add small quantity of oil replace plug and re-check level (see Figure 1).



Figure 1

2. Install pipe to approximate route on vehicle and install cable ties.
3. Clean pipe and install pipe to pump then slide retaining plate into place and tighten screws (pipes and locations are numbered).
4. Install pump casing and secure velcro.
5. Install pump and casing under tonneau onto location posts.
6. Install cylinder pivot bracket and connect cylinder to bracket.

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7. Move tonneau well liner around lower cylinder fixing and pump casing and secure velcro
8. Install trim clip and position tonneau lining stiffening rod.
9. Attach pipes to guide string, feed pipes through roof frame and remove string.
10. Position pipes to cylinder and secure with clips.
11. Secure pipes and wires to cylinder with cable tie.
12. Install new clips securing pipes to roof frame.
13. Connect battery.
14. Install panel quarter trim lower (see Workshop Manual procedure 01.05.CR Panel Assembly - Quarter Trim Lower - RH - Renew).
15. Restore roof and tonneau to original position

RH Rear Main Hydraulic Cylinder Pipe - Renew

Repair Operation Time (ROT)		
Item		**Code**
Rear Main Hydraulic Cylinder Pipe-Renew	RH	**01.17.CM**

Removal

1. Operate roof to halfway position with tonneau open then support roof when hydraulic pressure drops with suitable straps and support tonneau cover with suitable prop (see Figure 1).

WARNING

APPROXIMATELY 20 SECONDS AFTER THE OPEN/ CLOSE OPERATION HAS BEEN INTERRUPTED THE ROOF MAY SUDDENLY DROP DUE TO LOSS OF HYDRAULIC PRESSURE. IF THIS HAPPENS ENSURE NO BODY PARTS ARE CLOSE TO THE ROOF MECHANISM. IF THE ROOF REQUIRES MAINTENANCE, SUPPORT PROPERLY USING SUITABLE PROPS AND STRAPS.



Figure 1

2. Remove Panel quarter trim lower (see Workshop Manual procedure 01.05.CR Panel Assembly - Quarter Trim Lower - RH - Renew).
3. Disconnect battery.

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4. Cut cable ties securing pipes and wires to cylinder (see Figure 2).



Figure 2

5. Release clips securing pipes to cylinder and disconnect pipes.
6. Release fir tree clip and cable tie securing both pipes to roof frame (remove pipes as pair).
7. Attach string to cylinder end of both pipes to aid installation.
8. Feed pipes through to tonneau area by carefully guiding through roof mechanism and release string (see Figure 3).



Figure 3

9. Remove trim clip and release tonneau lining stiffening rod (see Figure 4).



Figure 4

10. Release velcro and move tonneau well liner aside to expose lower cylinder fixing and pump casing.
11. Release cylinder lower retaining clip and disconnect cylinder from body (see Figure 5).

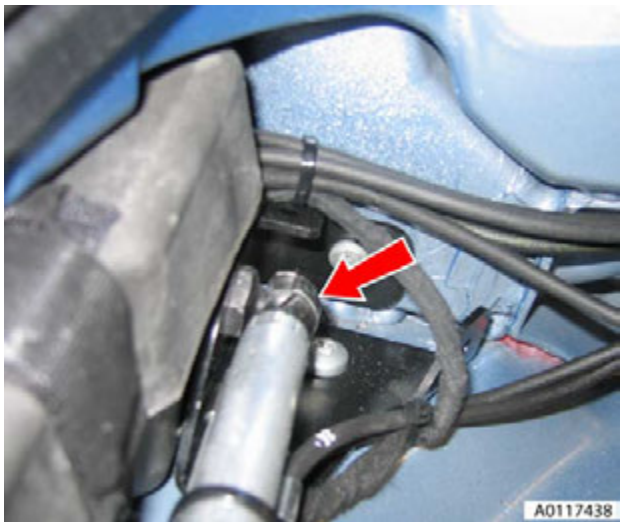


Figure 5

12. Remove cylinder pivot bracket from body (bolts x3).

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13. Release pump and casing from under tonneau body side (see Figure 6).



Figure 6

14. Release velcro around pump casing and remove casing (see Figure 7).



Figure 7

15. Loosen (x6) screws on pump retaining plate (see Figure 8).

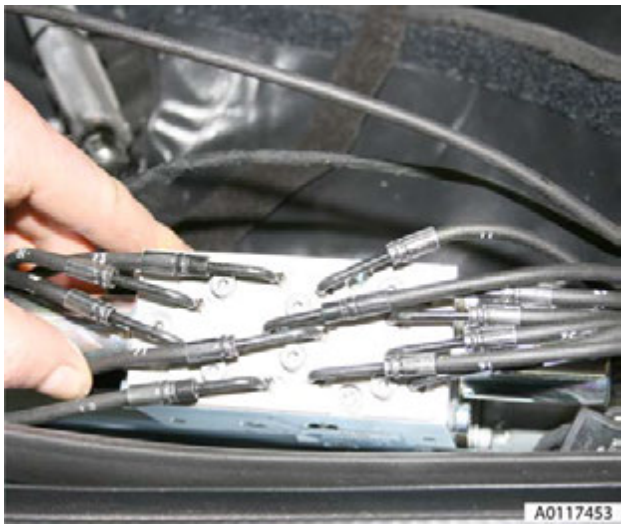


Figure 8

16. Slide retaining plate, disconnect pipe from pump (pipes and locations are numbered).
17. Remove cable ties and remove pipe from vehicle (see Figure 9).

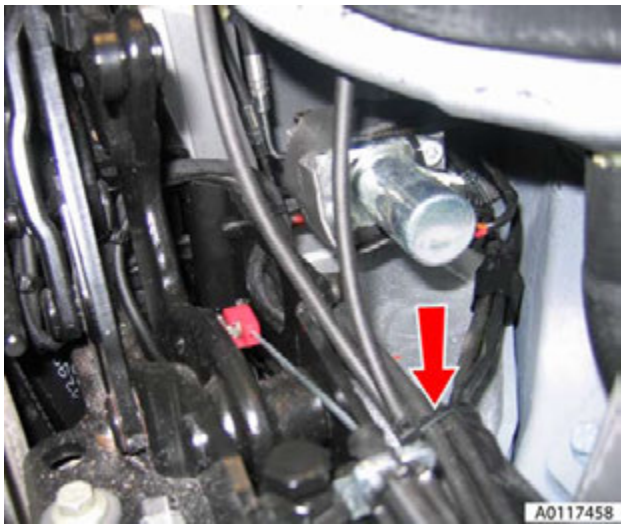


Figure 9

Installation

1. Check oil level and top-up if necessary by removing reservoir end plug with pump in upright position, add

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small quantity of oil replace plug and re-check level (see Figure 1).



Figure 1

2. Install pipe to approximate route on vehicle and install cable ties.
3. Clean pipe and install pipe to pump. Slide retaining plate into place and tighten screws (pipes and locations are numbered).
4. Install pump casing and secure velcro.
5. Install pump and casing under tonneau onto location posts.
6. Install cylinder pivot bracket and connect cylinder to bracket.
7. Move tonneau well liner around lower cylinder fixing and pump casing and secure velcro.
8. Install trim clip and position tonneau lining stiffening rod.
9. Attach pipes to guide string, feed pipes through roof frame and remove string.
10. Position pipes to cylinder and secure with clips.
11. Secure pipes and wires to cylinder with cable tie.
12. Install new clips securing pipes to roof frame.
13. Connect battery.
14. Install Panel quarter trim lower (see Workshop Manual procedure 01.05.CR Panel Assembly - Quarter Trim Lower - RH - Renew).
15. Restore roof and tonneau to original position.

LH Front Hydraulic Cylinder Pipe - Renew

Repair Operation Time (ROT)		
Item		**Code**
Front Hydraulic Cylinder Pipe-Renew	LH	**01.17.CN**

Removal

1. Operate roof to halfway position with tonneau open then support roof when hydraulic pressure drops with suitable straps and support tonneau cover with suitable prop (see Figure 1).

WARNING

APPROXIMATELY 20 SECONDS AFTER THE OPEN/ CLOSE OPERATION HAS BEEN INTERRUPTED THE ROOF MAY SUDDENLY DROP DUE TO LOSS OF HYDRAULIC PRESSURE. IF THIS HAPPENS ENSURE NO BODY PARTS ARE CLOSE TO THE ROOF MECHANISM. IF THE ROOF REQUIRES MAINTENANCE, SUPPORT PROPERLY USING SUITABLE PROPS AND STRAPS.



Figure 1

2. Remove wind deflector (see Workshop Manual procedure 01.17.DA Wind Deflector - Renew).
3. Disconnect battery.
4. Remove lower cover (screw x1) (see Figure 2).

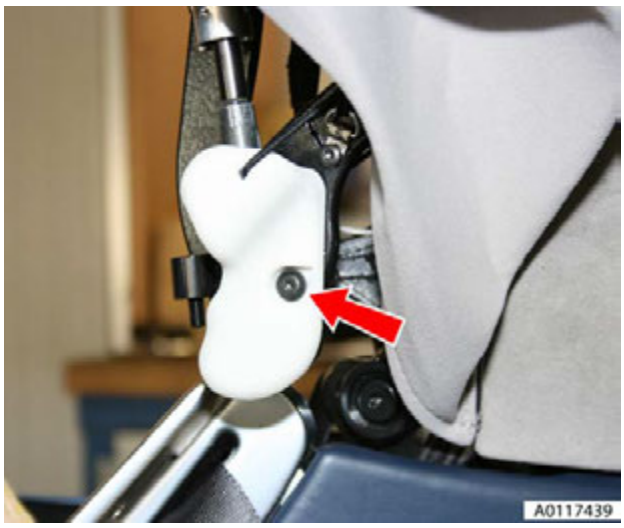


Figure 2

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5. Cut cable ties securing pipes and wires to cylinder (see Figure 3).



Figure 3

6. Release clips securing pipe to cylinder and disconnect pipes.
7. Remove cable ties securing pipes to roof frame (see Figure 4).

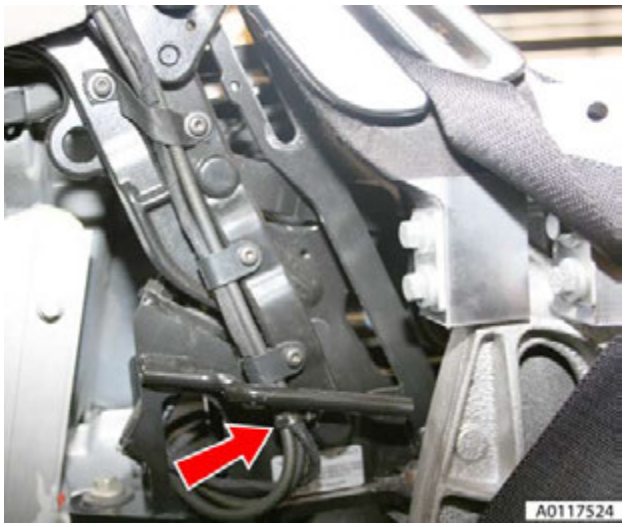


Figure 4

8. Remove screws securing P-clips and strap to frame and release harness.
9. Remove screw of cable/wiring keeper plate, loosen other and release pipe.
10. Attach string to cylinder end of both pipes to aid installation.
11. Feed pipes through to tonneau area by carefully guiding through roof mechanism and release string (see Figure 5).



Figure 5

12. Remove harness/pipe retaining clips (x2) (LH) (see Figure 6).

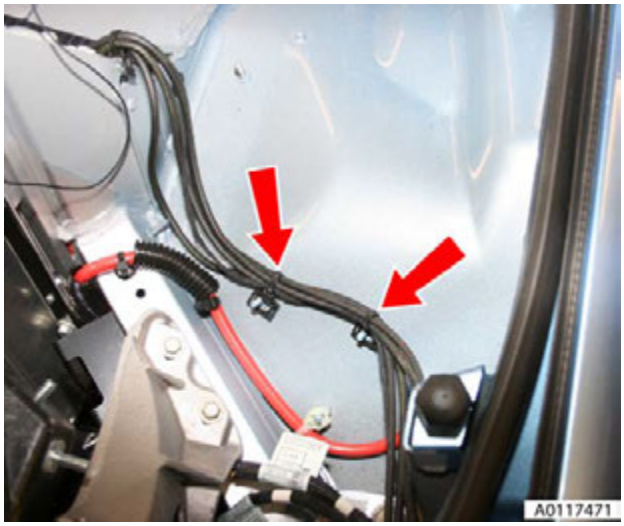


Figure 6

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13. Remove harness/pipe retaining clips (x9) behind ROPS units (see Figure 7).

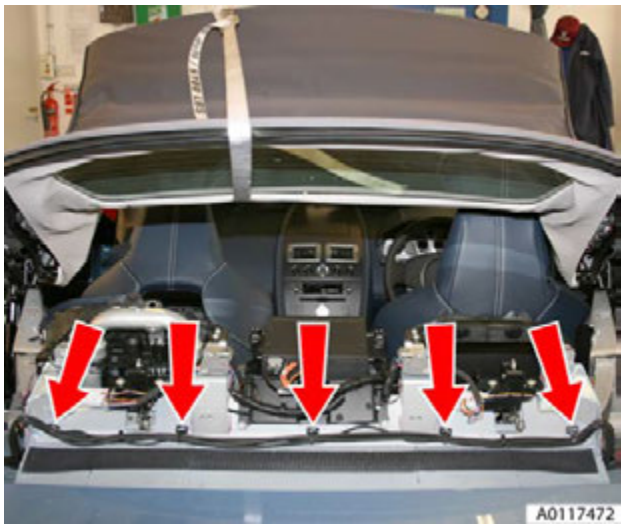


Figure 7

14. Remove harness/pipe retaining clips (x3) LH side (see Figure 8).

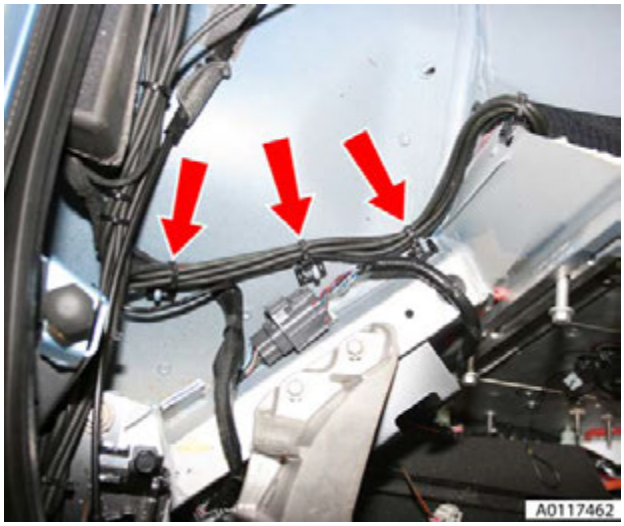


Figure 8

15. Remove trim clip and release tonneau lining stiffening rod (see Figure 9).



Figure 9

16. Cut cable tie securing valve to bracket (see Figure 10).

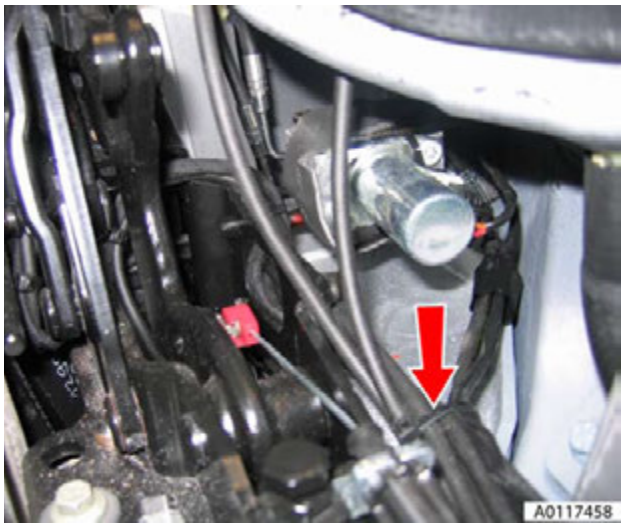


Figure 10

17. Release valve from support bracket, the bracket may need bending slightly.

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18. Loosen screw, slide retaining plate to release pipe and remove pipe (see Figure 11).



Figure 11

Installation

1. Fit pipe to approximate position behind ROPS units.
2. Clean pipe, connect pipe to valve, slide retaining plate and tighten screw.
3. Install valve to support bracket, reposition bracket.
4. Install cable tie securing valve to bracket. Ensure no pipes or wiring will foul roof mechanism.
5. Install trim clip and position tonneau lining stiffening rod.
6. Install harness/pipe retaining clips (x9) behind ROPS units.
7. Install harness/pipe retaining clips LH (x2).
8. Install harness/pipe retaining clips RH (x3).
9. Attach pipes to guide string, feed pipes through roof frame and remove string.
10. Position pipes to cylinder and secure with clips.
11. Secure pipes and wires to cylinder with cable ties.
12. Install pipe under keeper plate, install and tighten screws
13. Install new clips securing pipes to roof frame.
14. Install lower cover.
15. Install wind deflector (see Workshop Manual procedure 01.17.DA Wind Deflector - Renew).
16. Connect battery.
17. Restore roof and tonneau to original position

LH Rear Hydraulic Cylinder Pipe - Renew

Repair Operation Time (ROT)		
Item		**Code**
Rear Hydraulic Cylinder Pipe-Renew	LH	**01.17.CP**

Removal

1. Operate roof to halfway position with tonneau open then support roof when hydraulic pressure drops with suitable straps and support tonneau cover with suitable prop (see Figure 1).

WARNING

APPROXIMATELY 20 SECONDS AFTER THE OPEN/ CLOSE OPERATION HAS BEEN INTERRUPTED THE ROOF MAY SUDDENLY DROP DUE TO LOSS OF HYDRAULIC PRESSURE. IF THIS HAPPENS ENSURE NO BODY PARTS ARE CLOSE TO THE ROOF MECHANISM. IF THE ROOF REQUIRES MAINTENANCE, SUPPORT PROPERLY USING SUITABLE PROPS AND STRAPS.



Figure 1

2. Remove Wind deflector (see Workshop Manual procedure 01.17.DA Wind Deflector - Renew).
3. Disconnect battery.
4. Remove lower cover (screw x1) (see Figure 2).

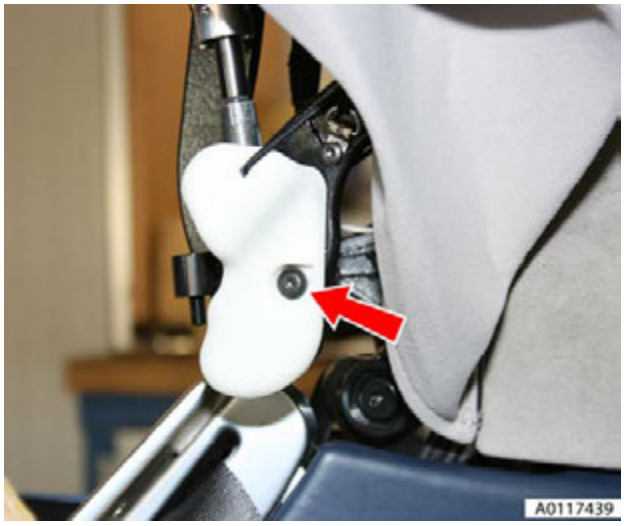


Figure 2

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5. Cut cable ties securing pipes and wires to cylinder (see Figure 3).



Figure 3

6. Release clips securing pipe to cylinder and disconnect pipes.
7. Remove cable ties securing pipes to roof frame (see Figure 4).

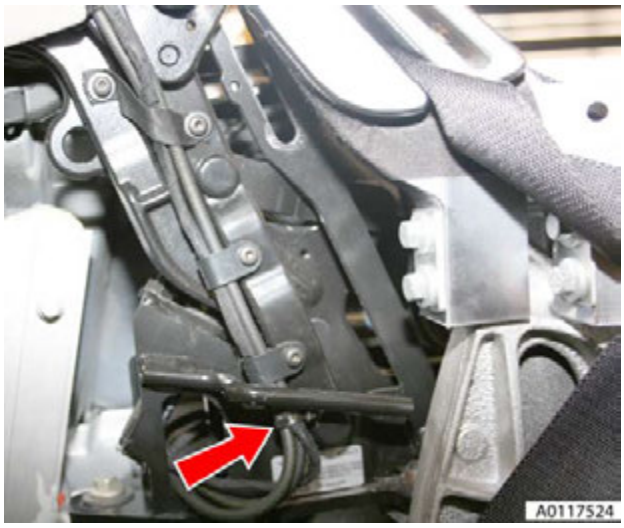


Figure 4

8. Remove screws securing P-clips and strap to frame and release harness.
9. Remove screw of cable/wiring keeper plate, loosen other and release pipe.
10. Attach string to cylinder end of both pipes to aid installation.
11. Feed pipes through to tonneau area by carefully guiding through roof mechanism and release string (see Figure 5).



Figure 5

12. Remove harness/pipe retaining clips (x2) (LH) (see Figure 6).

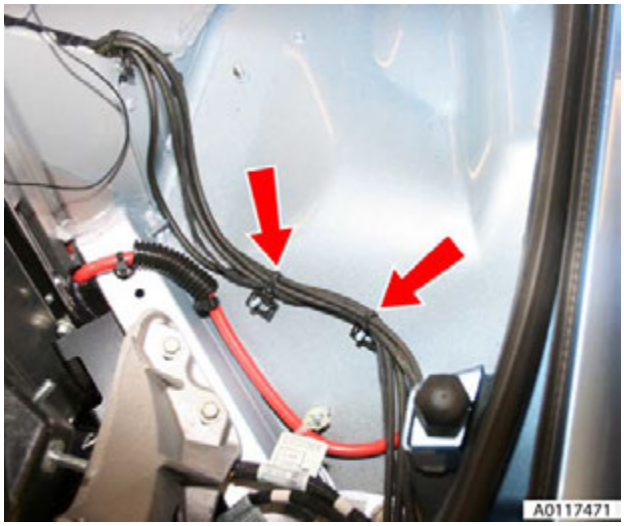


Figure 6

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13. Remove harness/pipe retaining clips (x9) behind ROPS units (see Figure 7).

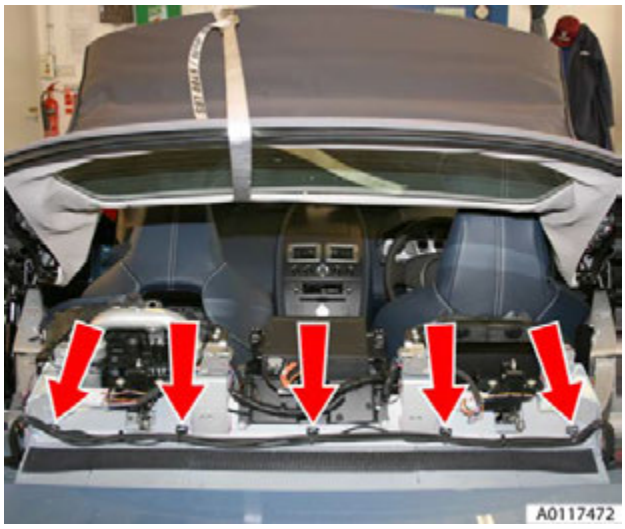


Figure 7

14. Remove harness/pipe retaining clips (x3) LH side (see Figure 8).

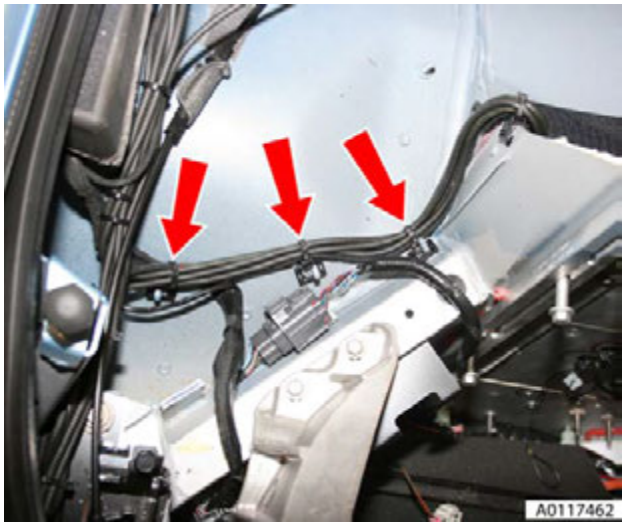


Figure 8

15. Remove trim clip and release tonneau lining stiffening rod (see Figure 9).



Figure 9

16. Release velcro and move tonneau well liner aside to expose lower cylinder fixing and pump casing.
17. Release cylinder lower retaining clip and disconnect cylinder from body (see Figure 10).

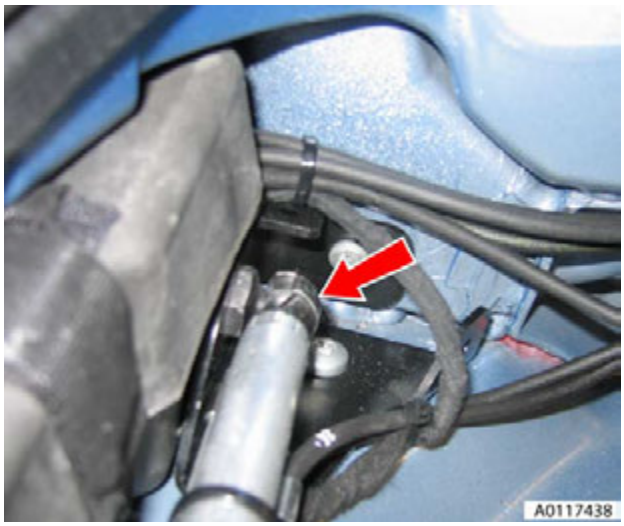


Figure 10

18. Remove cylinder pivot bracket from body (bolts x3).

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19. Release pump and casing from under tonneau body side (see Figure 11).



Figure 11

20. Release velcro around pump casing and remove casing (see Figure 12).



Figure 12

21. Loosen (x6) screws on pump retaining plate (see Figure 13).

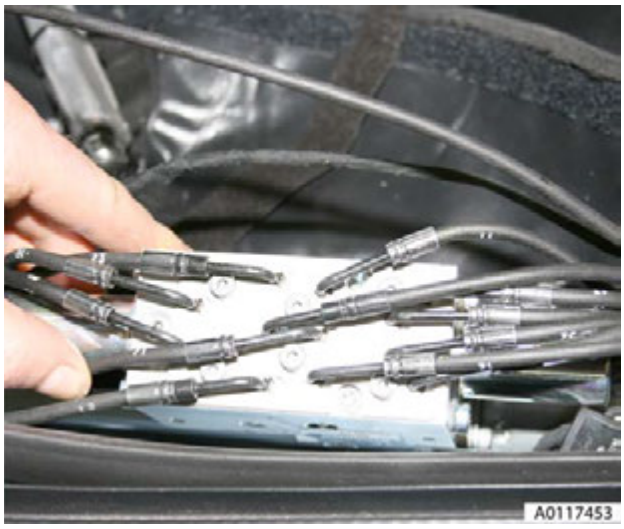


Figure 13

22. Slide retaining plate, disconnect pipe from pump (pipes and locations are numbered).
23. Remove cable ties and remove pipe from vehicle (see Figure 14).

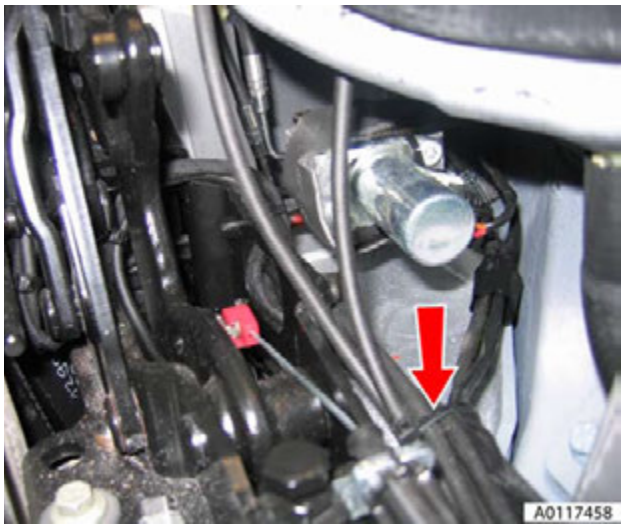


Figure 14

Installation

1. Check oil level and top-up if necessary by removing reservoir end plug with pump in upright position, add

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small quantity of oil replace plug and re-check level (see Figure 1).



Figure 1

2. Install pipe to approximate route on vehicle and install cable ties.
3. Clean pipe and install pipe to pump then slide retaining plate into place and tighten screws (pipes and locations are numbered).
4. Install pump casing and secure velcro.
5. Install pump and casing under tonneau onto location posts.
6. Install cylinder pivot bracket and connect cylinder to bracket.
7. Move tonneau well liner around lower cylinder fixing and pump casing and secure velcro.
8. Install trim clip and position tonneau lining stiffening rod.
9. Install harness/pipe retaining clips (x9) behind ROPS units.
10. Install harness/pipe retaining clips LH (x2).
11. Install harness/pipe retaining clips RH (x3).
12. Attach pipes to guide string, feed pipes through roof frame and remove string.
13. Position pipes to cylinder and secure with clips.
14. Secure pipes and wires to cylinder with cable ties
15. Install pipe under keeper plate, install and tighten screws.
16. Install new clips securing pipes to roof frame.
17. Install lower cover.
18. Connect battery.
19. Install Wind deflector (see Workshop Manual procedure 01.17.DA Wind Deflector - Renew).
20. Restore roof and tonneau to original position

RH Front Hydraulic Cylinder Pipe - Renew

Repair Operation Time (ROT)		
Item		**Code**
Front Hydraulic Cylinder Pipe-Renew	RH	**01.17.CQ**

Removal

1. Operate roof to halfway position with tonneau open then support roof when hydraulic pressure drops with suitable straps and support tonneau cover with suitable prop (see Figure 1).

WARNING

APPROXIMATELY 20 SECONDS AFTER THE OPEN/ CLOSE OPERATION HAS BEEN INTERRUPTED THE ROOF MAY SUDDENLY DROP DUE TO LOSS OF HYDRAULIC PRESSURE. IF THIS HAPPENS ENSURE NO BODY PARTS ARE CLOSE TO THE ROOF MECHANISM. IF THE ROOF REQUIRES MAINTENANCE, SUPPORT PROPERLY USING SUITABLE PROPS AND STRAPS.



Figure 1

2. Remove wind deflector (see Workshop Manual procedure 01.17.DA Wind Deflector - Renew).
3. Disconnect battery.

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4. Remove lower cover (screw x1) (see Figure 2).

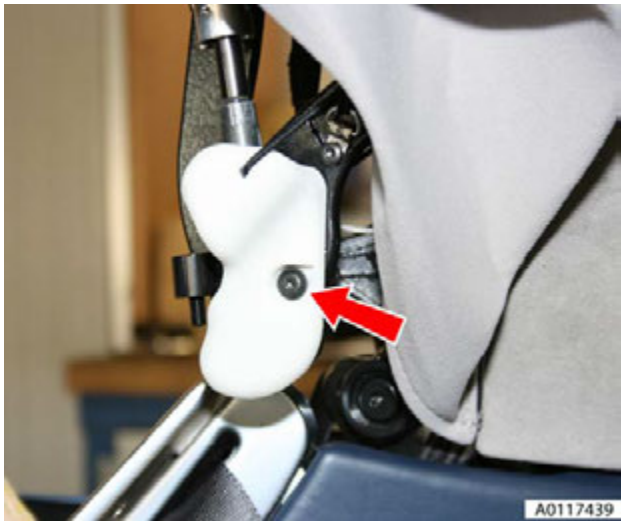


Figure 2

5. Cut cable ties securing pipes and wires to cylinder (see Figure 3).



Figure 3

6. Release clips securing pipe to cylinder and disconnect pipes.
7. Remove cable ties securing pipes to roof frame (see Figure 4).

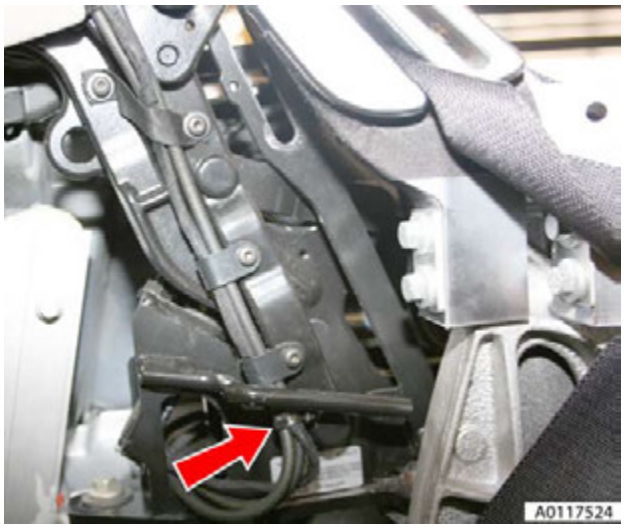


Figure 4

8. Remove screws securing P-clips and strap to frame and release harness.
9. Remove screw of cable/wiring keeper plate, loosen other and release pipe.
10. Attach string to cylinder end of both pipes to aid installation.
11. Feed pipes through to tonneau area by carefully guiding through roof mechanism and release string (see Figure 5).



Figure 5

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12. Remove harness/pipe retaining clips (x3) LH side (see Figure 6).

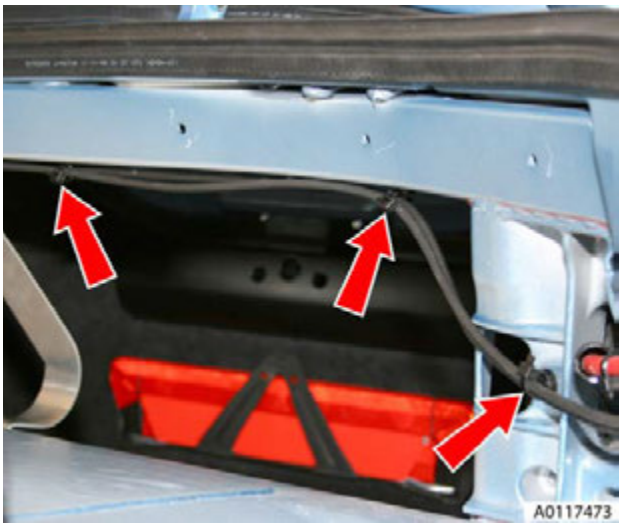


Figure 6

13. Remove trim clip and release tonneau lining stiffening rod (see Figure 7).



Figure 7

14. Cut cable tie securing valve to bracket (see Figure 8).

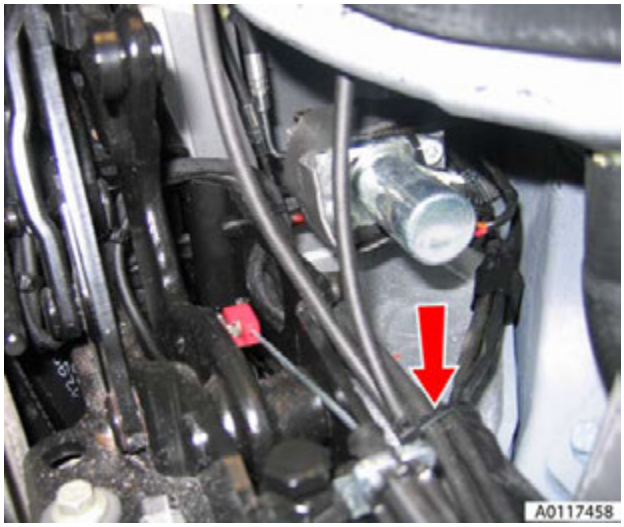


Figure 8

15. Release valve from support bracket, the bracket may need bending slightly.
16. Loosen screw, slide retaining plate to release pipe and remove pipe (see Figure 9).



Figure 9

Installation

1. Fit pipe to approximate position.
2. Clean pipe, connect pipe to valve, slide retaining plate and tighten screw.
3. Install valve to support bracket, reposition bracket.
4. Install cable tie securing valve to bracket. Ensure no pipes or wiring will foul roof mechanism
5. Install trim clip and position tonneau lining stiffening rod.
6. Install harness/pipe retaining clips RH (x3).
7. Attach pipes to guide string, feed pipes through roof frame and remove string.

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8. Position pipes to cylinder and secure with clips.
9. Secure pipes and wires to cylinder with cable ties
10. Install pipe under keeper plate, install and tighten screws
11. Install new clips securing pipes to roof frame.
12. Install lower cover.
13. Install wind deflector (see Workshop Manual procedure 01.17.DA Wind Deflector - Renew).
14. Connect battery.
15. Restore roof and tonneau to original position

RH Rear Hydraulic Cylinder Pipe - Renew

Repair Operation Time (ROT)		
Item		**Code**
Rear Hydraulic Cylinder Pipe-Renew	RH	**01.17.CR**

Removal

1. Operate roof to halfway position with tonneau open then support roof when hydraulic pressure drops with suitable straps and support tonneau cover with suitable prop (see Figure 1).

WARNING
APPROXIMATELY 20 SECONDS AFTER THE OPEN/ CLOSE OPERATION HAS BEEN INTERRUPTED THE ROOF MAY SUDDENLY DROP DUE TO LOSS OF HYDRAULIC PRESSURE. IF THIS HAPPENS ENSURE NO BODY PARTS ARE CLOSE TO THE ROOF MECHANISM. IF THE ROOF REQUIRES MAINTENANCE, SUPPORT PROPERLY USING SUITABLE PROPS AND STRAPS.



Figure 1

2. Disconnect battery.
3. Remove lower cover (screw x1) (see Figure 2).

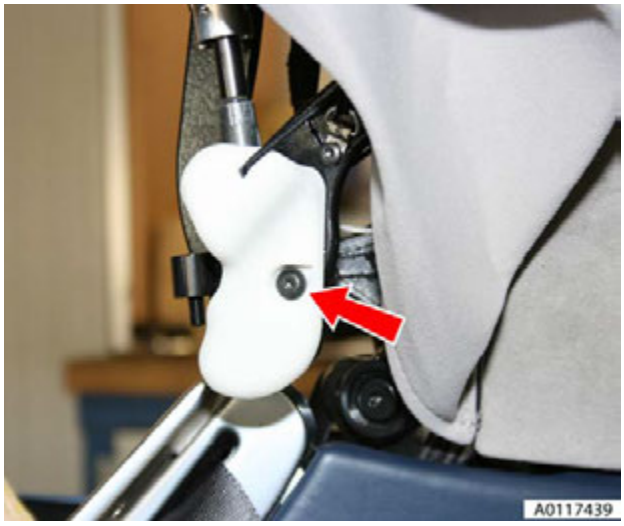


Figure 2

4. Cut cable ties securing pipes and wires to cylinder (see Figure 3).



Figure 3

5. Release clips securing pipe to cylinder and disconnect pipes.

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6. Remove cable ties securing pipes to roof frame (see Figure 4).

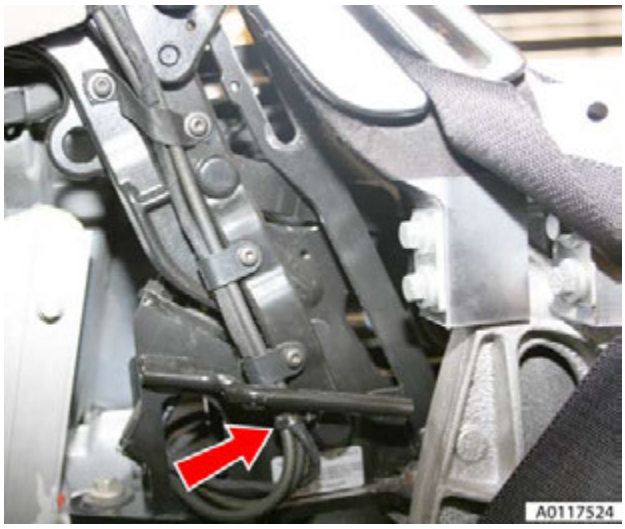


Figure 4

7. Remove screws securing P-clips and strap to frame and release harness.
8. Remove screw of cable/wiring keeper plate, loosen other and release pipe.
9. Attach string to cylinder end of both pipes to aid installation.
10. Feed pipes through to tonneau area by carefully guiding through roof mechanism and release string (see Figure 5).



Figure 5

11. Remove harness/pipe retaining clips (x3) LH side (see Figure 6).

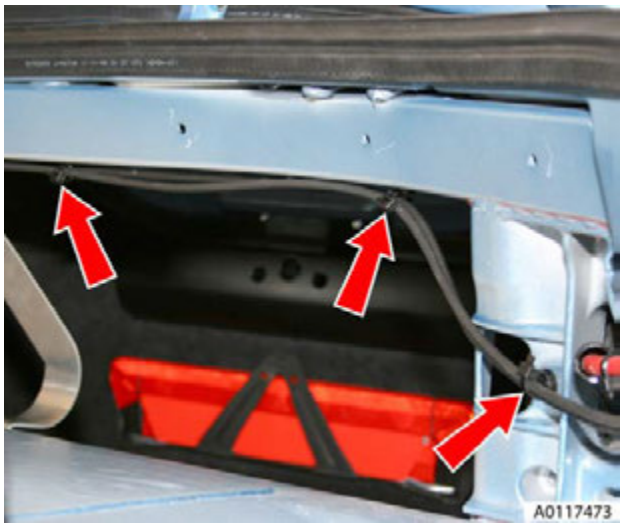


Figure 6

12. Remove trim clip and release tonneau lining stiffening rod (see Figure 7).



Figure 7

13. Release velcro and move tonneau well liner aside to expose lower cylinder fixing and pump casing.

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14. Release cylinder lower retaining clip and disconnect cylinder from body (see Figure 8).

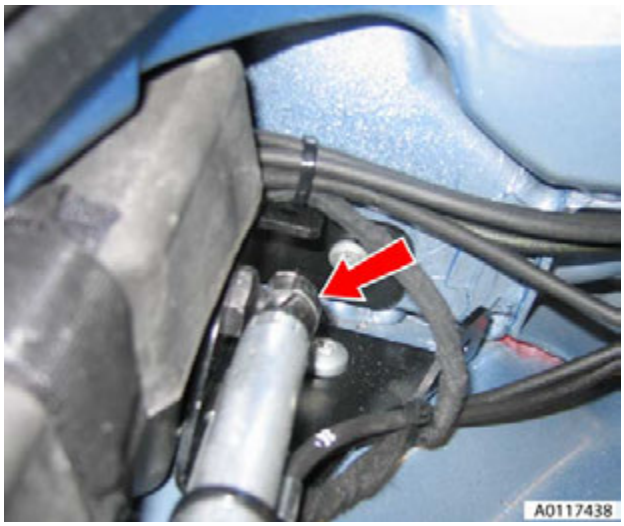


Figure 8

15. Remove cylinder pivot bracket from body (bolts x3).
16. Release pump and casing from under tonneau body side (see Figure 9).



Figure 9

17. Release velcro around pump casing and remove casing (see Figure 10).



Figure 10

18. Loosen (x6) screws on pump retaining plate (see Figure 11).

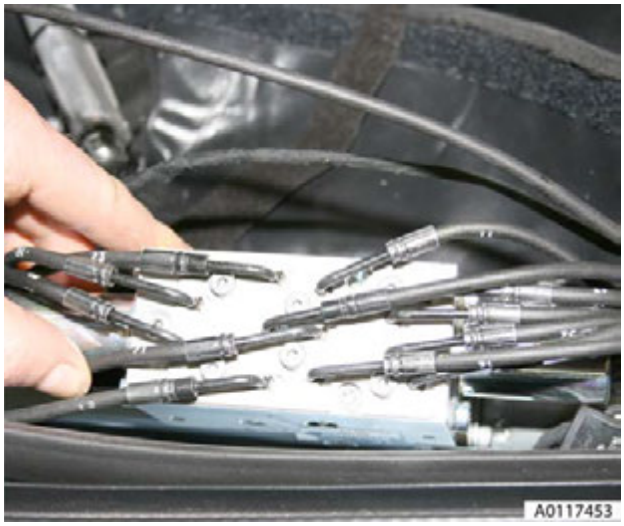


Figure 11

19. Slide retaining plate, disconnect pipe from pump (pipes and locations are numbered).

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20. Remove cable ties and remove pipe from vehicle (see Figure 12).

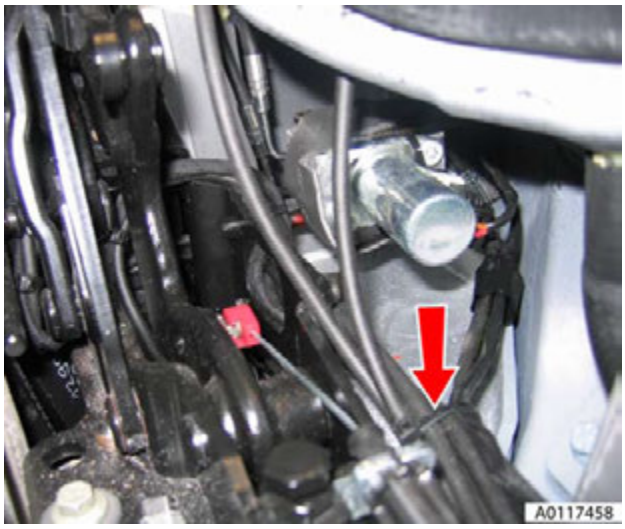


Figure 12

Installation

1. Check oil level and top-up if necessary by removing reservoir end plug with pump in upright position, add small quantity of oil replace plug and re-check level (see Figure 1).



Figure 1

2. Install pipe to approximate route on vehicle and install cable ties.
3. Clean pipe and install pipe to pump then slide retaining plate into place and tighten screws (pipes and locations are numbered).
4. Install pump casing and secure velcro.
5. Install pump and casing under tonneau onto location posts.
6. Install cylinder pivot bracket and connect cylinder to bracket.
7. Move tonneau well liner around lower cylinder fixing and pump casing and secure velcro
8. Install trim clip and position tonneau lining stiffening rod.
9. Install harness/pipe retaining clips RH (x3).
10. Attach pipes to guide string, feed pipes through roof frame and remove string.
11. Position pipes to cylinder and secure with clips.
12. Secure pipes and wires to cylinder with cable ties
13. Install pipe under keeper plate, install and tighten screws.
14. Install new clips securing pipes to roof frame.
15. Install lower cover.
16. Connect battery.
17. Restore roof and tonneau to original position

RH/LH Rear Hydraulic Tonneau Cylinder Pipe - Renew

Repair Operation Time (ROT)	
Item	**Code**
Rear Hydraulic Tonneau Cylinder Pipe- Renew LH	**01.17.CS**
Rear Hydraulic Tonneau Cylinder Pipe- Renew RH	**01.17.CV**

Removal

1. Operate roof to halfway position with tonneau open then support roof when hydraulic pressure drops with suitable straps and support tonneau cover with suitable prop (see Figure 1).

WARNING

APPROXIMATELY 20 SECONDS AFTER THE OPEN/ CLOSE OPERATION HAS BEEN INTERRUPTED THE ROOF MAY SUDDENLY DROP DUE TO LOSS OF HYDRAULIC PRESSURE. IF THIS HAPPENS ENSURE NO BODY PARTS ARE CLOSE TO THE ROOF MECHANISM. IF THE ROOF REQUIRES MAINTENANCE, SUPPORT PROPERLY USING SUITABLE PROPS AND STRAPS.

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Figure 1

2. Disconnect battery.
3. Remove trim clip and release tonneau lining stiffening rod (see Figure 2).



Figure 2

4. Release velcro and move tonneau well liner aside to expose lower cylinder fixing and pump casing.
5. Release cylinder lower retaining clip and disconnect cylinder from body (see Figure 3).

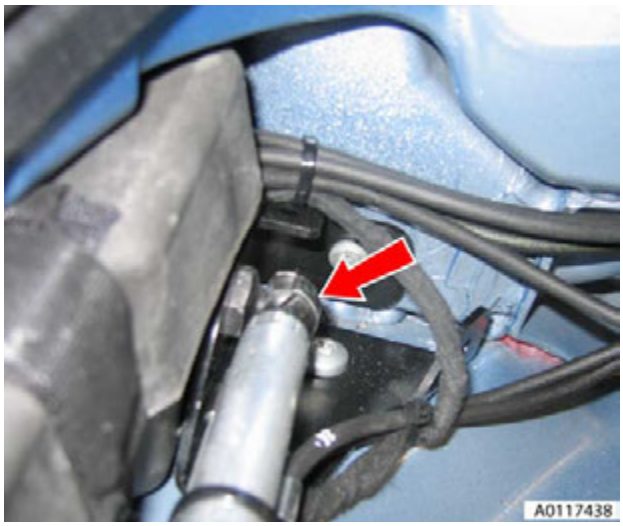


Figure 3

6. Remove cylinder pivot bracket from body (bolts x3) (see Figure 4).

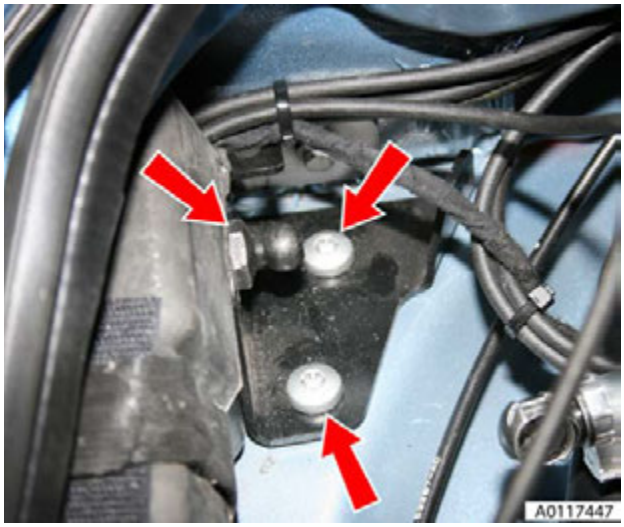


Figure 4

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7. Release pump and casing from under tonneau body side (see Figure 5).



Figure 5

8. Release velcro around pump casing and remove casing (see Figure 6).



Figure 6

9. Release trim clips (x5) tonneau liner to body, release velcro from around cylinder and pull liner forward to access pipes and clips (see Figure 7).



Figure 7

10. Cut cable ties (x2) securing pipes and wires to cylinder (see Figure 8).



Figure 8

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11. Release clip securing pipe to cylinder and disconnect pipe (see Figure 9).



Figure 9

12. Loosen (x6) screws on pump retaining plate (see Figure 10).

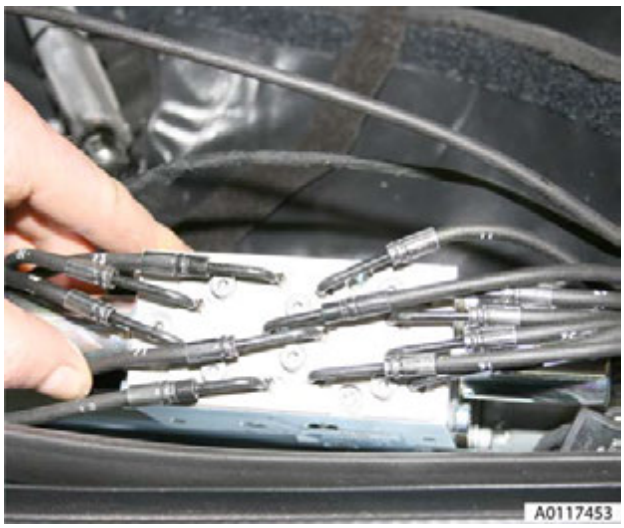


Figure 10

13. Slide retaining plate, disconnect pipe from pump (pipes and locations are numbered).
14. Remove harness/pipe retaining clips (x3) LH/RH (see Figure 11).

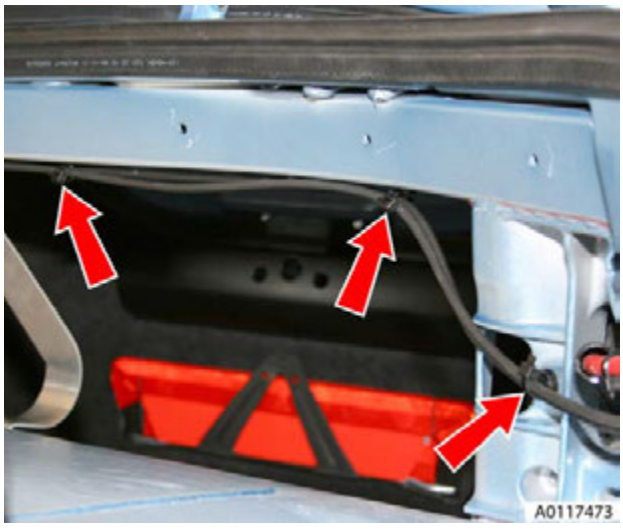


Figure 11

15. Remove harness/pipe retaining clips (x3) RH/LH (see Figure 12).

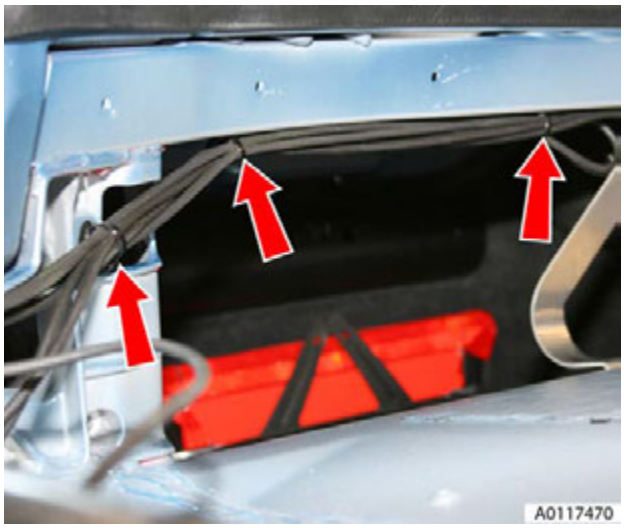


Figure 12

16. Remove pipe from vehicle.

Installation

1. Check oil level and top-up if necessary by removing reservoir end plug with pump in upright position, add

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small quantity of oil replace plug and re-check level (see Figure 1).



Figure 1

2. Install pipe to approximate route on vehicle.
3. Clean pipe and install pipe to pump then slide retaining plate into place and tighten screws (pipes and locations are numbered).
4. Clean pipe, connect to cylinder and secure clip.
5. Install cable ties securing pipes and wires to cylinder.
6. Install harness/pipe retaining clips.
7. Position tonneau liner to body and install clips.
8. Install pump casing and secure velcro.
9. Install pump and casing under tonneau onto location posts.
10. Install cylinder pivot bracket and connect cylinder to bracket.
11. Move tonneau well liner around lower cylinder fixing and pump casing and secure velcro.
12. Install trim clip and position tonneau lining stiffening rod.
13. Connect battery.
14. Restore roof and tonneau to original position

LH/RH Front Hydraulic Tonneau Cylinder Pipe - Renew

Repair Operation Time (ROT)	
Item	**Code**
Front Hydraulic Tonneau Cylinder Pipe- LH Renew	**01.17.CT**
Front Hydraulic Tonneau Cylinder Pipe- RH Renew	**01.17.CU**

Removal

1. Operate roof to halfway position with tonneau open then support roof when hydraulic pressure drops with suitable straps and support tonneau cover with suitable prop (see Figure 1).

WARNING

APPROXIMATELY 20 SECONDS AFTER THE OPEN/ CLOSE OPERATION HAS BEEN INTERRUPTED THE ROOF MAY SUDDENLY DROP DUE TO LOSS OF HYDRAULIC PRESSURE. IF THIS HAPPENS ENSURE NO BODY PARTS ARE CLOSE TO THE ROOF MECHANISM. IF THE ROOF REQUIRES MAINTENANCE, SUPPORT PROPERLY USING SUITABLE PROPS AND STRAPS.



Figure 1

2. Disconnect battery.
3. Remove trim clip and release tonneau lining stiffening rod (see Figure 2).



Figure 2

4. Release velcro and move tonneau well liner aside to expose lower cylinder fixing and motor casing.

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5. Release cylinder lower retaining clip and disconnect cylinder from body (see Figure 3).

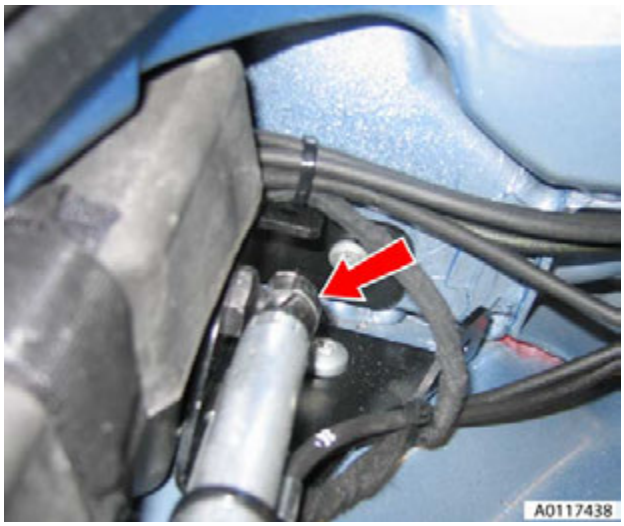


Figure 3

6. Remove cylinder pivot bracket from body (bolts x3) (see Figure 4).

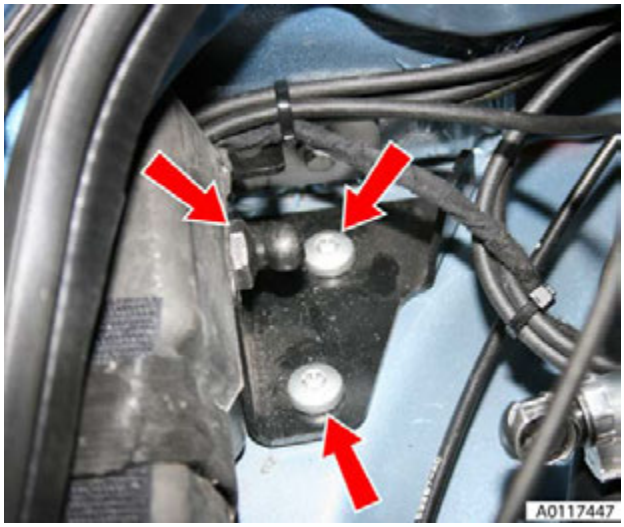


Figure 4

7. Release pump and casing from under tonneau body side (see Figure 5).



Figure 5

8. Release velcro around pump casing and remove casing (see Figure 6).



Figure 6

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9. Release trim clips (x5) tonneau liner to body, release velcro from around cylinder and pull liner forward to access pipes and clips (see Figure 7).



Figure 7

10. Cut cable ties (x2) securing pipes and wires to cylinder (see Figure 8).



Figure 8

11. Release clip securing pipe to cylinder and disconnect pipe.
12. Loosen (x6) screws on pump retaining plate (see Figure 9).

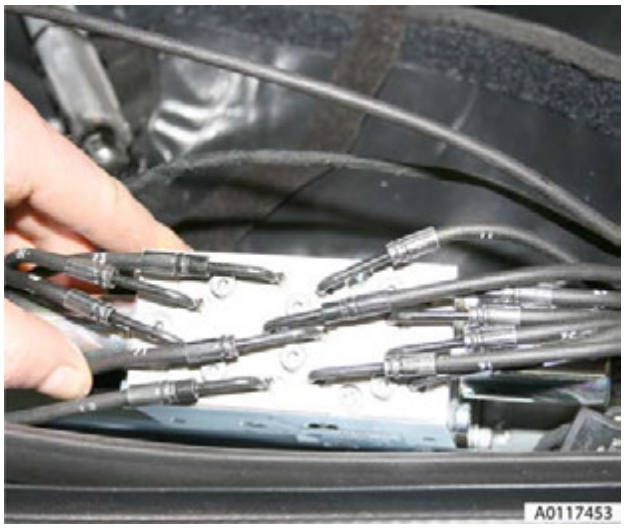


Figure 9

13. Slide retaining plate, disconnect pipe from pump (pipes and locations are numbered).
14. Remove harness/pipe retaining clips (x3) LH/RH (see Figure 10).

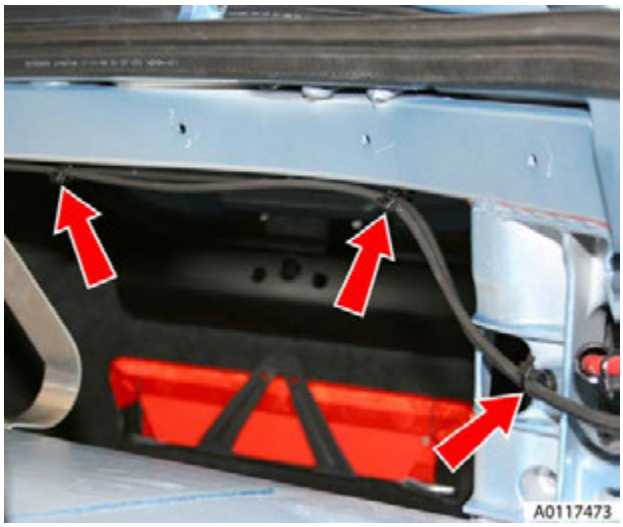


Figure 10

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15. Remove harness/pipe retaining clips (x3) RH/LH (see Figure 11).

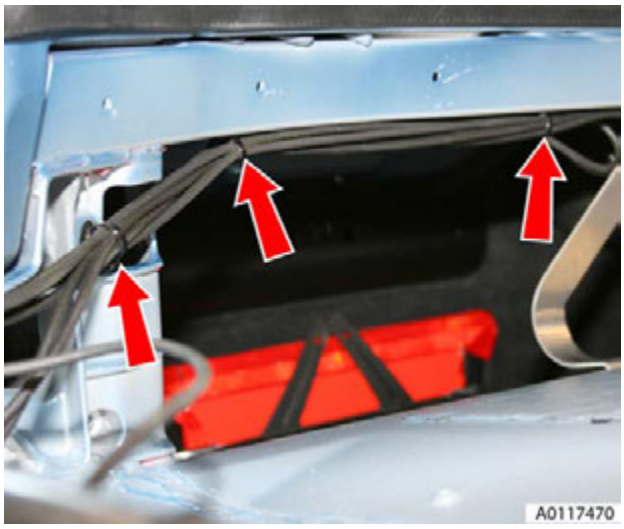


Figure 11

16. Remove pipe from vehicle.

Installation

1. Check oil level and top-up if necessary by removing reservoir end plug with pump in upright position, add small quantity of oil replace plug and re-check level (see Figure 1).



Figure 1

2. Install pipe to approximate route on vehicle.
3. Clean pipe and install pipe to pump then slide retaining plate into place and tighten screws (pipes and locations are numbered).
4. Clean pipe, connect to cylinder and secure clip.
5. Install cable ties securing pipes and wires to cylinder.
6. Install harness/pipe retaining clips.
7. Position tonneau liner to body and install clips.
8. Install pump casing and secure velcro.
9. Install pump and casing under tonneau onto location posts.
10. Install cylinder pivot bracket and connect cylinder to bracket.
11. Move tonneau well liner around lower cylinder fixing and pump casing and secure velcro.
12. Install trim clip and position tonneau lining stiffening rod.
13. Connect battery.
14. Restore roof and tonneau to original position

Hydraulic Cylinder Valve to Pump Pipe - Renew

Repair Operation Time (ROT)	
Item	**Code**
Hydraulic Cylinder Valve to Pump Pipe-Renew	**01.17.CX**

Removal

1. Operate roof to halfway position with tonneau open then support roof when hydraulic pressure drops with suitable straps and support tonneau cover with suitable prop (see Figure 1).



Figure 1

2. Disconnect battery.

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3. Cut cable tie securing valve to bracket (see Figure 2).

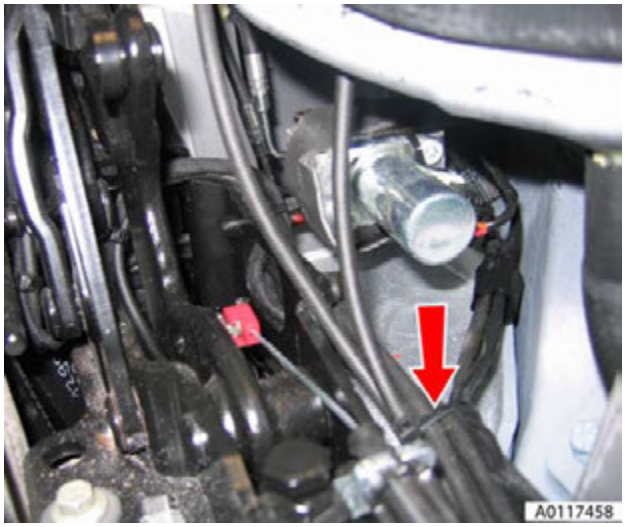


Figure 2

4. Release valve from support bracket, the bracket may need bending slightly.
5. Remove trim clip and release tonneau lining stiffening rod (see Figure 3).



Figure 3

6. Mark pipe fitted positions, loosen screw, slide retaining plate to release pipe and disconnect pipe (see Figure 4).



Figure 4

7. Release velcro and move tonneau well liner aside to expose lower cylinder fixing and motor casing.
8. Release cylinder lower retaining clip and disconnect cylinder from body (see Figure 5).

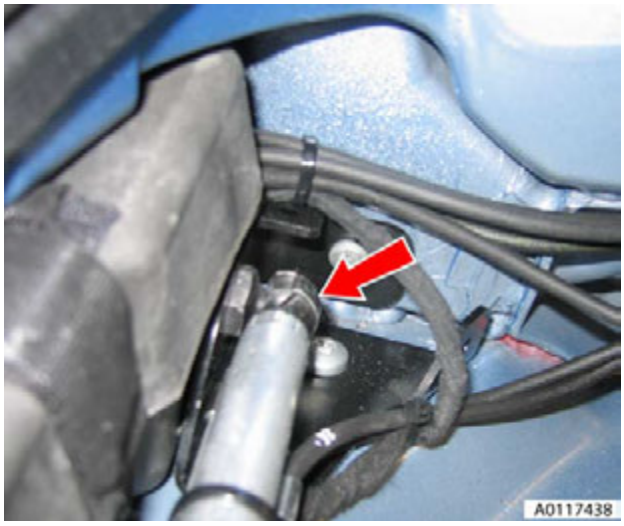


Figure 5

9. Remove cylinder pivot bracket from body (bolts x3).

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10. Release motor and casing from under tonneau body side (see Figure 6).



Figure 6

11. Release velcro around motor casing and remove casing (see Figure 7).



Figure 7

12. Release trim clips (x4) tonneau liner to body, release velcro from around cylinder and pull liner forward to access pipes and clips (see Figure 8).



Figure 8

13. Remove pipe retaining clips (x3) RH (see Figure 9).

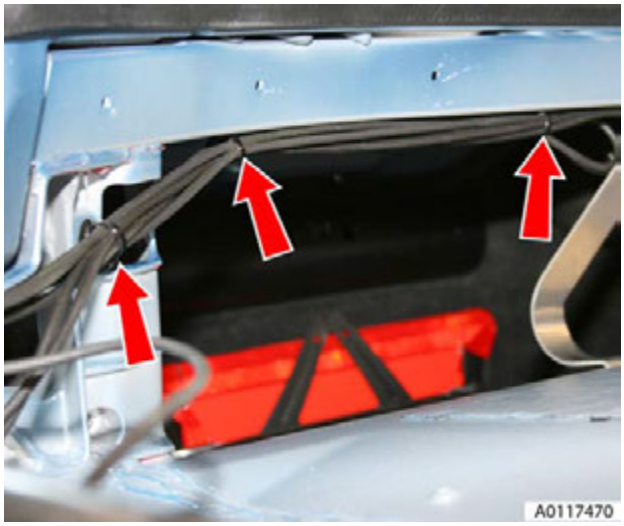


Figure 9

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14. Loosen (x6) screws on pump retaining plate (see Figure 10).

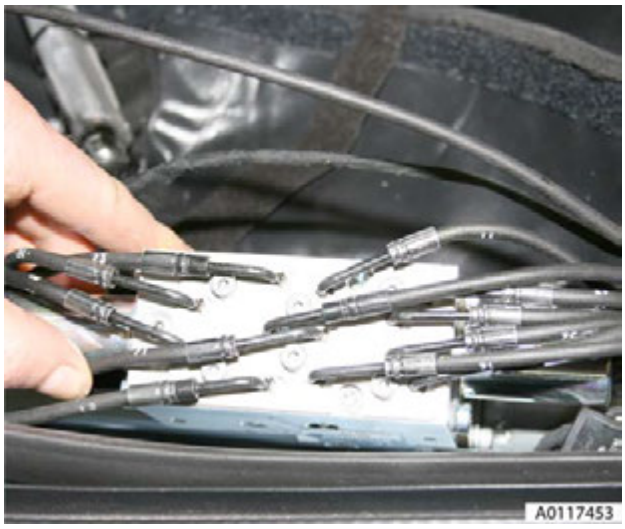


Figure 10

15. Slide retaining plate, disconnect pipe from pump (pipes and locations are numbered).
16. Remove cable ties and remove pipe from vehicle (see Figure 11).

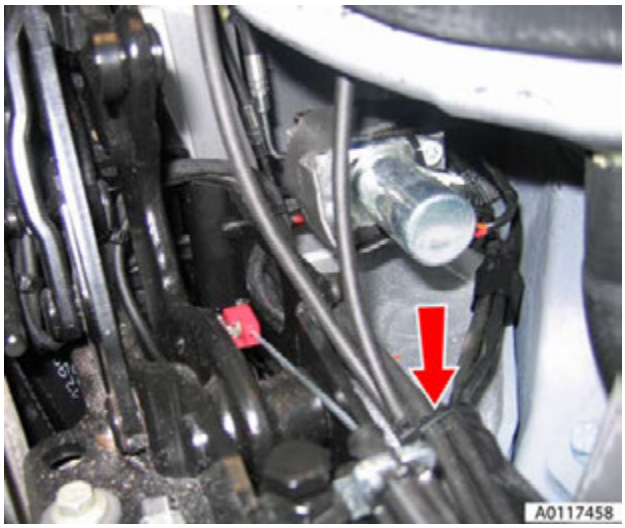


Figure 11

Installation

1. Check oil level and top-up if necessary by removing reservoir end plug with pump in upright position, add small quantity of oil replace plug and re-check level (see Figure 1).



Figure 1

2. Install pipe to approximate route on vehicle and install cable ties.
3. Clean pipe and install pipe to pump then slide retaining plate into place and tighten screws. (pipes and locations are numbered).
4. Install motor casing and secure velcro.
5. Install motor and casing under tonneau onto location posts.
6. Install cylinder pivot bracket and connect cylinder to bracket.
7. Move tonneau well liner around lower cylinder fixing and motor casing and secure velcro
8. Position tonneau liner to body and install clips.
9. Install trim clip and position tonneau lining stiffening rod.
10. Clean pipe, connect pipe to valve, slide retaining plate and tighten screw.
11. Install valve to support bracket, reposition bracket.
12. Install cable tie securing valve to bracket. Ensure no pipes or wiring will foul roof mechanism.
13. Connect battery.
14. Restore roof and tonneau to original position

Wind Deflector - Renew

Repair Operation Time (ROT)	
Item	**Code**
Wind Deflector-Renew	**01.17.DA**

Removal

1. Operate roof to halfway position with tonneau open then support roof when hydraulic pressure drops with

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suitable straps and support tonneau cover with suitable prop (see Figure 1).

WARNING
APPROXIMATELY 20 SECONDS AFTER THE OPEN/ CLOSE OPERATION HAS BEEN INTERRUPTED THE ROOF MAY SUDDENLY DROP DUE TO LOSS OF HYDRAULIC PRESSURE. IF THIS HAPPENS ENSURE NO BODY PARTS ARE CLOSE TO THE ROOF MECHANISM. IF THE ROOF REQUIRES MAINTENANCE, SUPPORT PROPERLY USING SUITABLE PROPS AND STRAPS.



Figure 1

2. Remove nuts securing wind deflector to tonneau deck. (LH & RH) (see Figure 2).



Figure 2

3. Remove buffers (x2) and securing screws (x4) (see Figure 3).

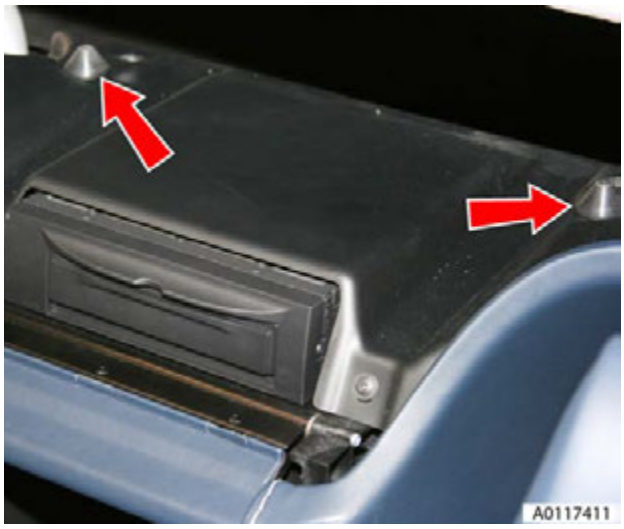


Figure 3

4. Remove nuts (x2) securing wind deflector to both quarter panels and remove wind deflector (see Figure 4).



Figure 4

Installation

1. Install wind deflector, secure nuts wind deflector to both quarter panels.
2. Install buffers (x2) and securing screws (x4).
3. Install nuts securing wind deflector to tonneau deck (LH & RH).
4. Restore roof and tonneau to original position.

Tonneau Well Liner - Renew

Repair Operation Time (ROT)	
Item	**Code**
Tonneau Well Liner-Renew	01.17.DB

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Removal

1. Access luggage compartment and remove front liner (screws x4, trim clip x1) (see Figure 1).



Figure 1

2. Release velcro straps x2 and drain tubes x3.
3. Close luggage compartment.
4. Remove Wind deflector (see Workshop Manual procedure 01.17.DA Wind Deflector - Renew).
5. Release stiffener, liner trim clip and velcro from around hood motor (see Figure 2).



Figure 2

6. Release velcro from around tonneau cylinder and remove trim clips (x3) (see Figure 3).

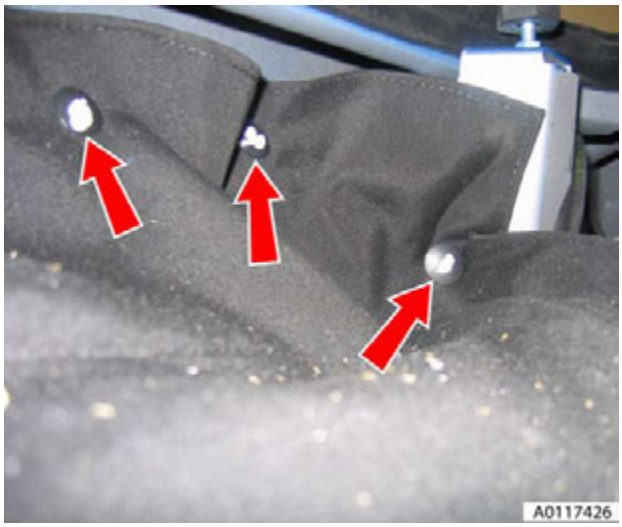


Figure 3

7. Release trim clips (x7) from luggage compartment panel (see Figure 4).



Figure 4

8. Release velcro from behind ROPS units and remove liner.
9. Remove stiffening rod from liner.

Installation

1. Install stiffening rod to liner.
2. Install liner and secure velcro.
3. Install trim clips (x7) to luggage compartment panel.
4. Secure velcro around tonneau cylinder and install trim clips (x3).
5. Install stiffener, liner trim clip and velcro to around hood motor.
6. Install Wind deflector (see Workshop Manual procedure 01.17.DA Wind Deflector - Renew).

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7. Open luggage compartment. secure velcro straps x2 and drain tubes x3.
8. Install front liner.
9. Close luggage compartment.

RH/LH Flex Shaft - Renew

Repair Operation Time (ROT)		
Item		**Code**
Flex Shaft-Renew	RH	**01.17.EG**
Flex Shaft-Renew	LH	**01.17.EF**

Removal

10. Remove header panel assembly (see Workshop Manual procedure 01.05.BB Panel Assembly - Header - Renew).
11. Release insulation from header latch motor (see Figure 1).

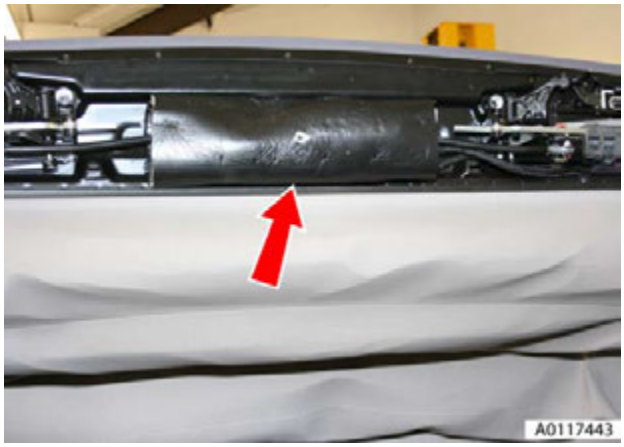


Figure 1

12. Release flex shaft from centre securing clip (see Figure 2).

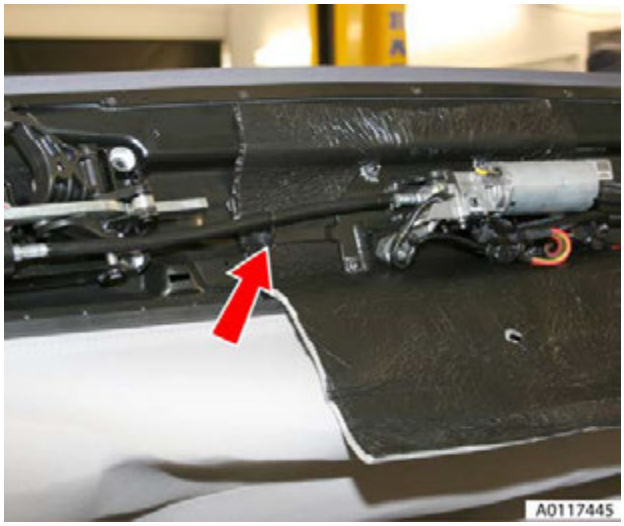


Figure 2

13. Release flex shaft from motor splines.
14. Release flex shaft from latch splines and remove.

Installation

1. Ensure header motor and latch are in fully open position prior to installation.
2. Align flex shaft on latch splines and install.
3. Align flex shaft to motor splines and install.
4. Secure flex shaft to centre securing clip.
5. Secure insulation to header latch motor.
6. Install header panel assembly (see Workshop Manual procedure 01.05.BB Panel Assembly - Header - Renew).

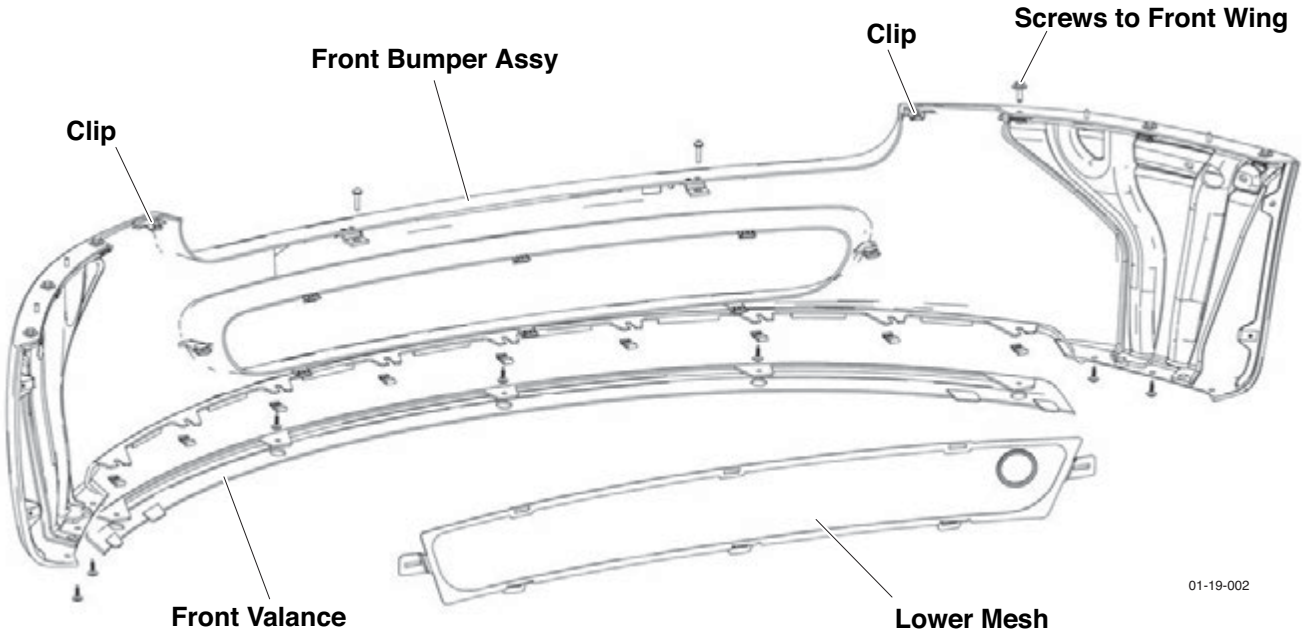
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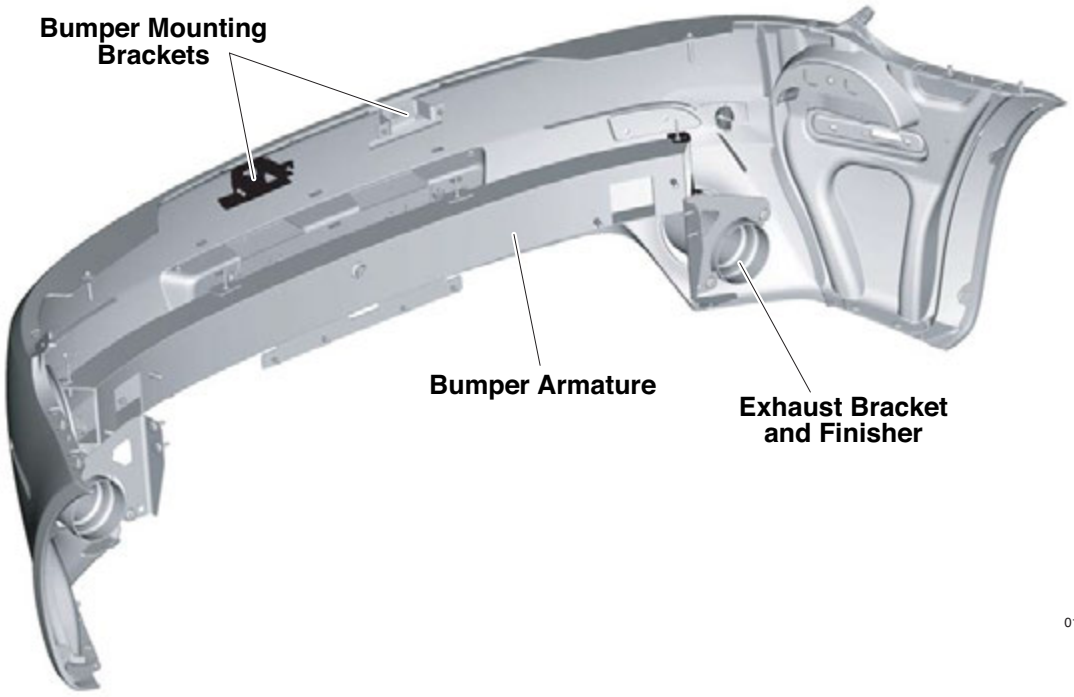
Body System (01.00)

Bumpers (01.19)

Front Bumper



Rear Bumper



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Specifications

Torque Figures	
Description	Nm
Front Bumper to bumper bracket	4-5
Rear Bumper to Bumper Bracket	2-3

Maintenance

Front Bumper Cover - Renew

Repair Operation Time (ROT)	
Item	**Code**
Front Bumper Cover-Renew	**01.19.AA**

Removal

1. Raise vehicle on ramp.
2. Remove front number plate and plinth (see Workshop Manual procedure 01.19.BD Licence Plate - Plinth Assembly - Front - Renew).
3. Remove valance (see Workshop Manual procedure 01.19.AF Panel - Front Valance - Renew).
4. Remove screws (x2) securing front of undertray to bumper (see Figure 1).

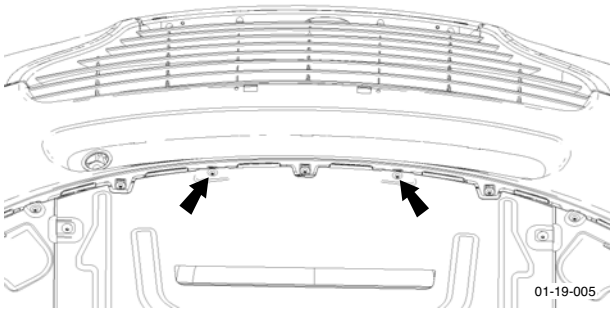


Figure 1

5. Remove screws (x5) LH front wheel arch liner to bumper.
6. Remove screws (x5) RH front wheel arch liner to bumper.
7. Remove bolts (x3 securing LH air box to mounting brackets.
8. Remove bolts (x3 securing RH air box to mounting brackets.
9. Remove bolts (x6) securing bumper to front wing (see Figure 2).

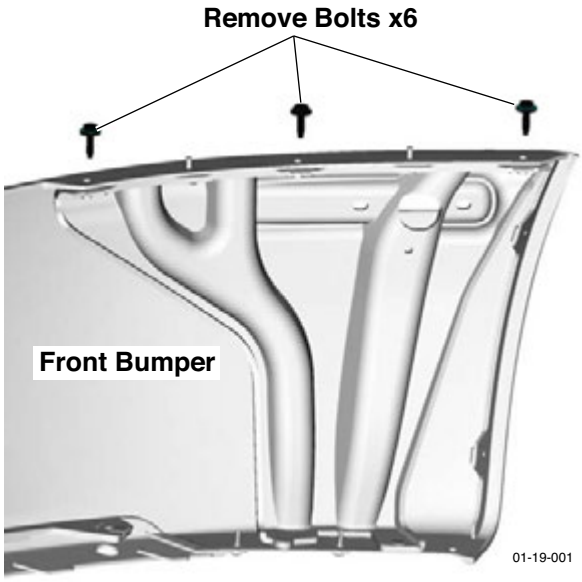


Figure 2

10. With assistance, release bumper from clips (x2) and remove bumper (see Figure 3).

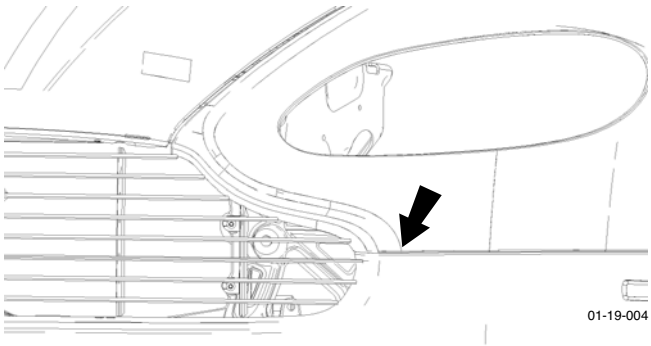


Figure 3

11. Remove mesh (clips x8).

Installation

1. Install mesh (clips x8).
2. With assistance position bumper and secure in clips (x2).
3. Install bolts (x6) bumper to front wing.
4. Install bolts (x3 securing RH air box to mounting brackets.
5. Install bolts (x3 securing LH air box to mounting brackets.
6. Install screws (x5) LH front wheel arch liner to bumper.
7. Install screws (x5) RH front wheel arch liner to bumper.
8. Install screws (x2) securing front undertray to bumper.

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9. Install number plate and plinth (see Workshop Manual procedure 01.19.BD Licence Plate - Plinth Assembly - Front - Renew).
10. Install valance (see Workshop Manual procedure 01.19.AF Panel - Front Valance - Renew).
11. Lower vehicle on ramp.

Rear Bumper Cover - Renew

Repair Operation Time (ROT)	
Item	**Code**
Rear Bumper Cover-Renew	**01.19.BA**

Removal

1. Raise vehicle on ramp.
2. Remove number plate.
3. Remove LH rear lamp assembly (see Workshop Manual procedure 17.03.AB Lamp Assembly (Rear) - LH Renew).
4. Remove RH rear lamp assembly (see Workshop Manual procedure 17.03.BB XREF: 280 Lamp Assembly (Rear) - RH Renew).
5. Remove wheel arch liner LH (see Workshop Manual procedure 01.02.JB Wheel Arch Liner - Rear - RH - Renew).
6. Remove wheel arch liner RH (see Workshop Manual procedure 01.02.HB Wheel Arch Liner - Rear - LH - Renew).
7. Remove tyre mobility kit from the rack.
8. Remove torx bolts located behind carpets to rear wings (x2).
9. Remove bolts (x2) in rear light recess.
10. Remove bolts securing bumper to wheel arch (6).
11. Remove bolts (x4) securing bumper to brackets.
12. With assistance Release bumper from body.
13. Release fir trees securing harness to bumper (x6).
14. Release remaining harness clips from bumper (x6).
15. Disconnect multiplugs to parking aid sensors (x2).
16. Disconnect multiplugs to license plate lamps (x2).
17. Remove nuts (x6) securing exhaust finishers to bumper.
18. Remove number plate light assembly (clips x5).
19. Remove parking aid sensors (x2)
20. Remove screw retaining clips (x13)

Installation

1. Install screw retaining clips x13.
2. Install parking aid sensors x2.
3. Install number plate light assembly
4. Install exhaust finishers to bumper.
5. With assistance position bumper to body.
6. Connect multiplugs to license plate lamps X2.
7. Connect multiplug to parking aid sensors.
8. Secure harness to bumper (fir trees x6 and clips x6)
9. Install bumper bolts to brackets and body (x10).
10. Install tyre mobility kit to rack.
11. Install number plate.
12. Install RH rear lamp assembly (see Workshop Manual procedure 17.03.BB Lamp Assembly (Rear) - RH Renew).
13. Install LH rear lamp assembly (see Workshop Manual procedure 17.03.AB Lamp Assembly (Rear) - LH Renew).
14. Install wheel arch liner LH (see Workshop Manual procedure 01.02.JB Wheel Arch Liner - Rear - RH - Renew).
15. Install RH wheel arch liner (see Workshop Manual procedure 01.02.HB Wheel Arch Liner - Rear - RH - Renew).
16. Lower vehicle on ramp.

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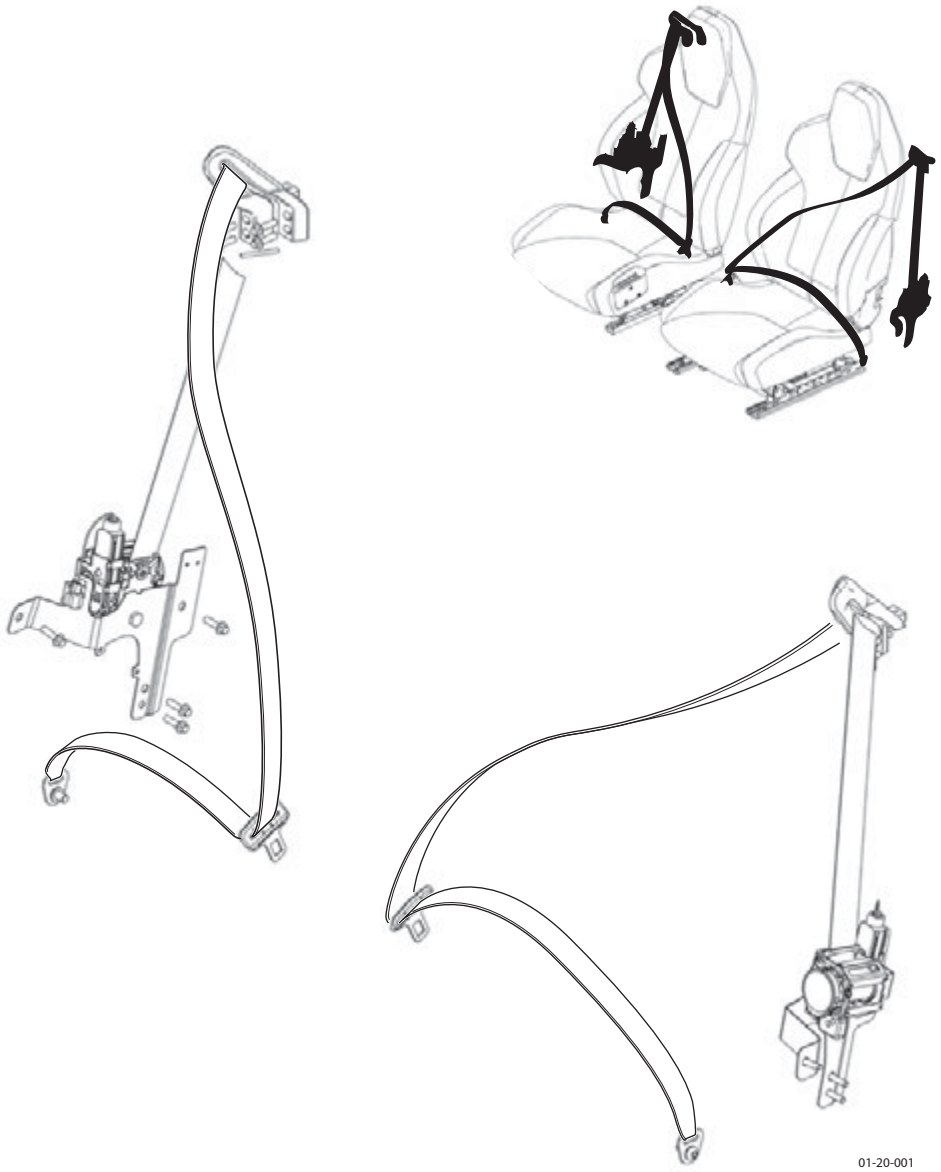
ASTON MARTIN

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Body System (01.00)

Restraining Devices (01.20)

Seat Belts



This vehicle is installed with two inertia reel safety belts. The inertia belt reels automatically tension the belts to provide security with comfort. In the event of a collision or during severe braking, the belt reels will lock.

The driver and front passenger safety belt buckles are installed with a switch, which is connected to a warning indicator housed within the DIM. When the ignition is first turned on the warning indicator will illuminate only if the seat belt is not fastened. If the safety belt is fastened before the ignition is turned on the circuit is broken and the indicator will remain off.

Pre-tensioner and Load Limiting Systems

The driver and front passenger seat belts are equipped with pre-tensioner and load limiting systems.

In most moderate frontal or near frontal accidents, the front airbag and pre-tensioner systems will deploy simultaneously.

In some moderate frontal or near frontal accidents, only the pre-tensioner system will deploy.

The pre-tensioners take up slack in the front seat belts as the airbags are expanding. The load limiting system releases belt webbing in a controlled manner to reduce belt force on the occupant's chest.

The RCM receives information on the status of the safety belt buckles from a switch contained in the buckle. Only fastened safety belts will activate.

The safety belt retractors, which are mounted within the base of the B pillars, incorporate a torsion bar load limiting device. This device consists of a retractor reel which is

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mounted onto a spindle (torsion bar) which once the sensor has locked the retractor reel and a predetermined load is applied, twists and allows additional webbing into the system. The deceleration force required to initiate this sequence is approximately the same as that required to initiate airbag deployment. The torsion bar load limiting device will only react if the safety belt is in use at the time of the impact.

Caution

It should be considered that during any event that utilizes the full capability of the safety belts, the webbing may have been elongated and the torsion bar may have twisted. For this reason, if a vehicle is involved in an accident which results in the deployment of the airbag(s), all the safety belts that were in use at the time of the accident MUST be renewed.

Emergency Locking Retractor (ELR)

The retractors in all seat positions feature ELR. During any period of sudden deceleration, or under lateral load when cornering at speed, a sensor weight within the safety belt retractor moves a locking pawl against the teeth on the retractor reel, which then locks the retractor preventing any further release of webbing. As soon as the load applied onto the retractor through the safety belt webbing is removed the locking pawl releases the retractor reel and normal movement is returned to the retractor.

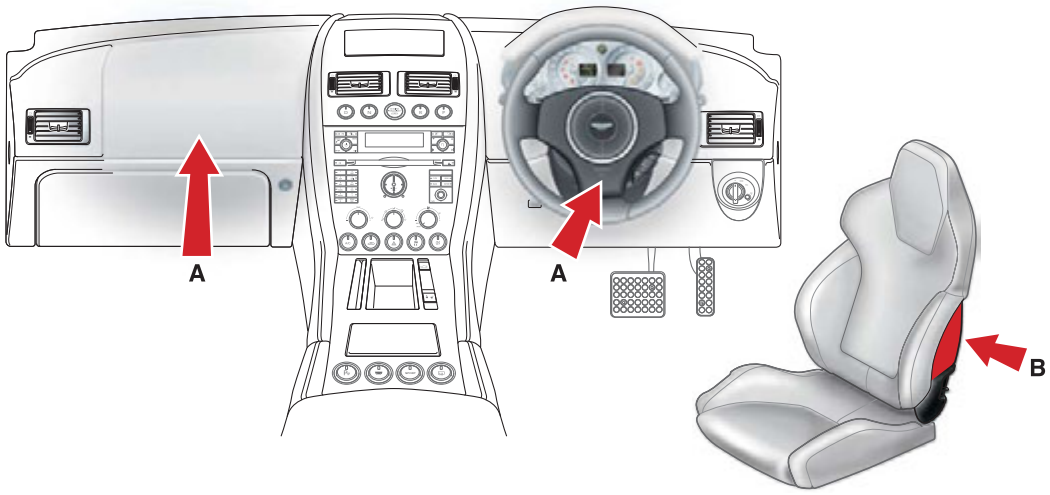
Automatic Locking Retractor (ALR)

Automatic locking retractors (ALR) are installed to all passenger seat positions.

The safety belt webbing on these are clearly marked to show their operating feature. To initiate the ALR system, fasten the safety belt into it's buckle and pull all of the webbing from the retractor, as the safety belt is released the retractor locks allowing travel in only one plane thus producing a fixed length restraint and preventing the safety belt from introducing slack, making any child seat it may be restraining secure. The ALR system of the retractor is disengaged by releasing the safety belt and allowing the safety belt to fully retract onto the reel.

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Airbag System



The airbag system is designed to provide increased collision protection for front seat occupants in addition to that provided by the safety belt system. Safety belt use is necessary to obtain the best occupant protection and to receive the full advantages of the airbag system.

This vehicle is equipped with driver, passenger, side impact airbags and seat belt pretensioners, which are electrically controlled an RCM (Restraints Control Module).

The driver and passenger airbags (A) only deploy in a serious front collision. The side airbags (B (one airbag in each front seat)) only deploy according to which side has been impacted in a serious side collision.

The purpose of the driver, passenger and side airbags is to provide **additional** protection for the front seat occupants in the event of a serious impact (front or side impacts). The airbags are supplementary to the seat belts.

Airbag Deployment

WARNING
AIRBAGS INFLATE RAPIDLY AND WITH CONSIDERABLE FORCE, THERE IS THEREFORE A RISK OF DEATH OR SERIOUS INJURY SUCH AS FRACTURES, FACIAL AND EYE INJURIES OR INTERNAL INJURIES, PARTICULARLY TO OCCUPANTS WHO ARE NOT PROPERLY RESTRAINED BY SEAT BELTS OR ARE NOT SITTING CORRECTLY WHEN THE AIRBAGS DEPLOY. THE RISK OF INJURY FROM A DEPLOYING AIRBAG IS GREATEST CLOSE TO THE TRIM COVERING THE AIRBAG.

WARNING
THE WHOLE SEQUENCE OF AIRBAG DEPLOYMENT, FROM SENSING THE IMPACT TO FULL INFLATION OF THE AIRBAG TAKES PLACE IN A FRACTION OF A SECOND.

The noise and gas associated with the deployment of the airbags are not injurious to health.

Driver airbag Module

The driver airbag module is installed in the steering wheel, the cover forming the outer surface of the steering wheel boss. The cover has a split line moulded into its surface allowing the airbag to exit through the cover when the system deploys.

No routine maintenance is required and there are no serviceable parts. The driver airbag module is replaced as an assembly.

Passenger Airbag Module

The passenger airbag module is located above the glove compartment behind a deployment panel.

The passenger airbag deployment panel hinges up out of the way during airbag deployment.

The passenger airbag module is replaced as an assembly. There is no routine maintenance required and there are no serviceable parts.

Side Airbag Module

A side impact airbag module is mounted in the outboard bolster of each front seat and uses compressed argon to inflate. It provides protection for the thorax (the part of the torso between the neck and the abdomen). In a side airbag module deployment situation, the airbag module deploys from behind a hard trim panel.

Clockspring

The airbag clockspring continuously transfers electrical signals from the driver airbag module to the airbag sensor.

The airbag clockspring is mounted on the steering column, behind the steering wheel and does not contain any serviceable components. Ensure that the steering wheel is locked in the central position before commencing any work on the steering column, wheel or airbag.

Control Module

The primary purpose of the RCM is to discriminate between an event that warrants an airbag system deployment and an

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event that does not. The RCM governs the operation of the whole system and performs continual system diagnostics. Information on the severity of an impact is received from the impact sensors.

Variations in the deployment of the front airbag modules are dependent on the status of the front safety belt buckles.

Dual Inflation Technology

When activated, the airbags will deploy at either a normal or reduced level of inflation, depending on crash severity. Various sensors determine the direction and severity of an impact. The system analyses this information then deploys the appropriate airbags.

Impact Sensors

Side Impact - Side impact sensors are mounted to the base of each B-pillar and within each door. In the event of a side impact, the RCM processes the impact data sent by the side impact sensor against stored data. The RCM will deploy the side airbag on the side the deployment request was initiated and the seat belt pretensioner.

Front Impact - Front impact sensors (x2) are located under the grill opening panel.

The SRS module processes the impact data sent by the front impact sensor against stored data, and deploys the front airbags, and the seat belt pretensioners.

Passenger Airbag Deactivation

The passenger airbag can be deactivated using the PAD (Passenger Airbag Deactivation) switch. Switching the passenger airbag off allows children under the age of 12 to be carried safely in the passenger seat. The PAD switch is located at the passenger end of the instrument panel and is accessible when the passenger door is open.

Note

Please see the Owner's Guide for the full deactivation procedure.

Warning

Unnecessary deactivation of the passenger airbag is dangerous. The passenger will not receive the added protection from the airbag and serious injuries or even death could occur. With the exception of installing a child seat on the passenger seat, do not turn the passenger airbag deactivation switch to the off position.

Warning

Never place a child in a child seat or on a booster cushion in the passenger seat if the airbag is active.

Maintenance

Driver's Airbag Module - Renew

Repair Operation Time (ROT)	
Item	**Code**
Driver's Airbag Module-Renew	**01.20.AC**

Removal

1. Disconnect vehicle battery.
2. Allow a two minute power down period to de-activate airbag system.
3. Rotate steering wheel to access and remove bolts (x2) from driver's airbag module to steering wheel (see Figure 1).



Figure 1

4. Release driver's airbag module, disconnect multiplugs (x2) and remove airbag module (see Figure 2).



Figure 2

Installation

1. Position driver's airbag module and connect multiplugs (x2).
2. Install bolts (x2) and tighten.
3. Connect vehicle battery.

LH Front Seat Belt - Renew

Repair Operation Time (ROT)		
Item		**Code**
Front Seat Belt-Renew	LH	**01.20.BA**

Removal

1. Remove front seat (see Workshop Manual procedure 01.10.AB Seat Assembly - Front - LH - Remove for Access and Refit).

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2. Remove sub woofer enclosure (see Workshop Manual procedure 15.03.GA Subwoofer Enclosure - Premium - Renew).
3. Remove speaker grille.
4. Remove bolts (x2) and screw (x1) securing upper quarter trim moulding to body and rear bulkhead panel.
5. Feed seatbelt through trim moulding aperture and remove moulding.
6. Remove foam cover, disconnect speaker multiplug, remove upper trim quarter moulding.
7. Remove bolts (x4) securing seat belt upper anchor mounting plate (see Figure 1).

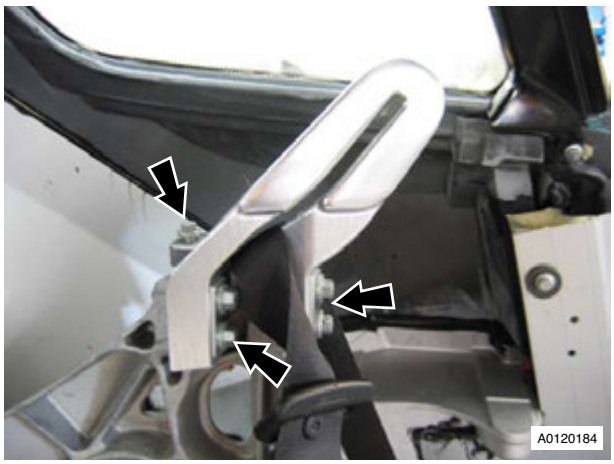


Figure 1

8. Release seat belt from anchor mounting plate, remove mounting plate.
9. Disconnect pre-tensioner multiplug, release multiplug from mounting bracket.

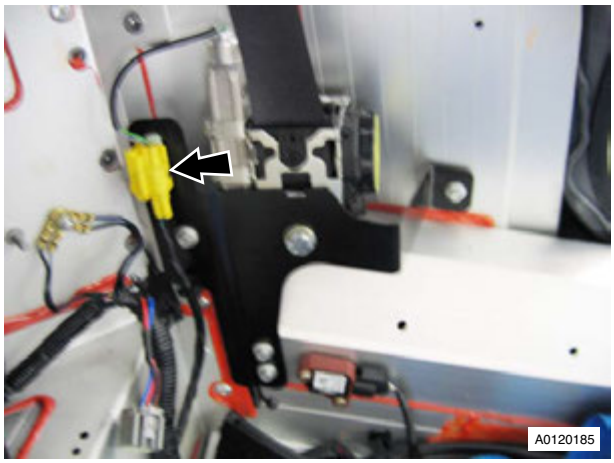


Figure 2

10. Remove bolts (x4) securing seat belt mounting bracket to body.
11. Remove seat belt assembly.
12. Remove bolt securing seat belt stalk to seat frame, remove stalk.

Installation

1. Position seat belt stalk to seat frame, install and torque tighten bolt.
2. Install seat belt assembly, install and torque tighten bolts (x4).
3. Install seat belt in upper anchor mounting plate.
4. Position seat belt upper anchor mounting plate, install and torque tighten bolts (x4).
5. Connect pre-tensioner multiplug, secure multiplug in mounting bracket.
6. Position quarter moulding, connect speaker multiplug, secure foam cover.
7. Feed seat belt harness through quarter trim moulding.
8. Install quarter trim moulding, install and tighten bolts (x3).
9. Install sub woofer enclosure (see Workshop Manual procedure 15.03.GA Subwoofer Enclosure - Premium - Renew).
10. Install front seat (see Workshop Manual procedure 01.10.AB Seat Assembly - Front - LH - Remove for Access and Refit).

RH Front Seat Belt - Renew

Repair Operation Time (ROT)		
Item		**Code**
Front Seat Belt-Renew	RH	**01.20.BB**

Removal

1. Remove front seat (see Workshop Manual procedure 01.10.AA Seat Assembly - Front - RH - Remove for Access and Refit).
2. Remove moulding assembly - quartet trim upper - RH (see Workshop Manual procedure 01.05.CL Moulding Assembly - Quarter Trim Upper - RH - Renew).
3. Remove bolts (x5) securing seat belt upper anchor mounting plate (see Figure 1).



Figure 1

4. Release seat belt from anchor mounting plate, remove mounting plate.

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5. Disconnect pre-tensioner multiplug, release multiplug from mounting bracket (see Figure 2).

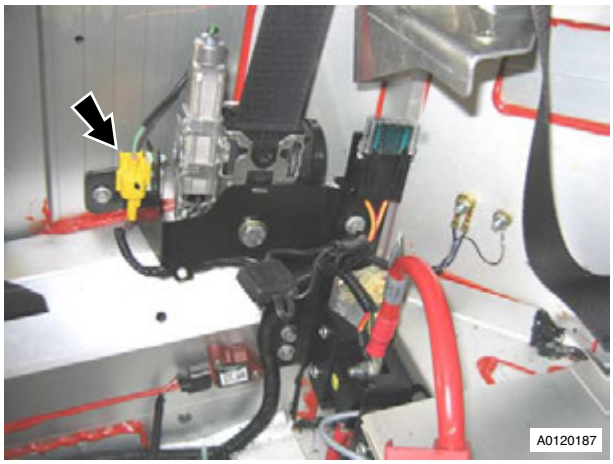


Figure 2

6. Release harness fir tree clips (x2) from seat belt mounting bracket.
7. Release main fuse clips from seat belt mounting bracket.
8. Remove bolts (x4) securing seat belt mounting bracket to body.
9. Remove seat belt assembly.
10. Remove bolt securing seat belt stalk to seat frame, remove stalk.

Installation

1. Position seat belt stalk to seat frame, install and torque tighten bolt.
2. Install seat belt assembly, install and torque tighten bolts (x4).
3. Install seat belt in upper anchor mounting plate.
4. Position seat belt upper anchor mounting plate, install and torque tighten bolts (x5).
5. Install main fuse to mounting bracket.
6. Secure harness fir tree clips (x2) in mounting bracket.
7. Connect pre-tensioner multiplug, secure multiplug in mounting bracket.
8. Install moulding assembly - quartet trim upper - LH (see Workshop Manual procedure 01.05.CL Moulding Assembly - Quarter Trim Upper - RH - Renew).
9. Install front seat (see Workshop Manual procedure 01.10.AA Seat Assembly - Front - RH - Remove for Access and Refit).

Passenger Airbag - Renew

Repair Operation Time (ROT)	
Item	**Code**
Passenger Airbag-Renew	**01.20.CA**

Removal

1. Disconnect vehicle battery for minimum of 2 minutes.
2. Remove airbag panel and door assembly (see Workshop Manual procedure 01.12.AJ Panel and Door Assembly - Air Bag - Renew).
3. Remove bolts (x4) securing airbag unit.
4. Disconnect multiplugs (x2), remove airbag unit.

Installation

1. Install airbag unit, install and tighten bolts (x4), connect multiplugs (x2).
2. Install airbag panel and door assembly (see Workshop Manual procedure 01.12.AJ Panel and Door Assembly - Air Bag - Renew).
3. Connect vehicle battery.

ARS Side Impact Sensor Assembly - B Pillar-Renew

Repair Operation Time (ROT)	
Item	**Code**
ARS Side Impact Sensor Assembly-B-pillar-Renew	**01.20.DB**

Removal

1. Remove plate - front sill - RH (see Workshop Manual procedure 01.05.AJ Plate - Front Sill - RH - Renew).
2. Pull back sill carpet sufficient to access side impact sensor.
3. Disconnect multiplug from side impact sensor (see Figure 1).
4. Remove screws (x2) securing side impact sensor to inner sill, remove sensor.

Installation

1. Install side impact sensor, install and tighten screws (x2).
2. Connect multiplug to side impact sensor.
3. Re-position sill carpet.
4. Install plate - front sill - RH (see Workshop Manual procedure 01.05.AJ Plate - Front Sill - RH - Renew).

Side Impact Door ARS Sensor Assembly - Renew

Repair Operation Time (ROT)	
Item	**Code**
Side Impact Door ARS Sensor Assembly-Renew	**01.20.DD**

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Removal

1. Remove door trimboard assembly (see Workshop Manual procedure 01.05.CB Trimboard Assembly - Door - Remove for Access and Refit).
2. Remove door module securing bolts (x4), swing downwards.
3. Remove door impact sensor plate securing bolts (x3) and disconnect sensor multiplug (x1).
4. Remove sensor securing nuts (x2) from plate.

Installation

1. Install sensor on plate and secure nuts (x2).
2. Connect sensor multiplug (x1) and fit plate securing bolts (x3).
3. Install door module with securing bolts (x4).
4. Install door trimboard assembly (see Workshop Manual procedure 01.05.CB Trimboard Assembly - Door - Remove for Access and Refit).

Front Impact Sensor Assembly - Renew

Repair Operation Time (ROT)	
Item	**Code**
Front Impact Sensor Assembly-Renew	**01.20.DE**

Removal

1. Remove grille (see Workshop Manual procedure 01.08.AA Grille - Radiator - Renew).
2. Remove slam panel (bolts x12).
3. Remove bolts (x4) securing PAS oil cooler.
4. Remove bolts securing crossmember to inner wing (x4).
5. Remove bolts and spacers securing crossmember to wing (x2).
6. Move crossmember to one side and lift up clear of location (protect paintwork).
7. Disconnect multiplug from front impact assessor (see Figure 1).

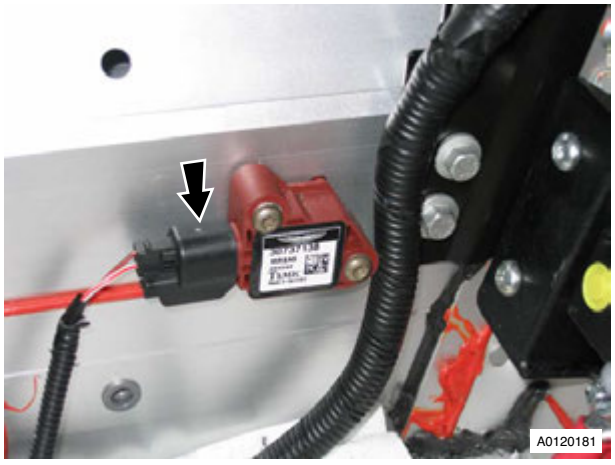


Figure 1

8. Remove screws (x2) securing front impact sensor to cross member, remove sensor.

Installation

1. Install front impact sensor to cross member. install and tighten screws.
2. Connect multiplug to impact sensor.
3. Install crossmember (as removed).
4. Install bolts and spacers securing crossmember to wing (x2).
5. Install bolts securing crossmember to inner wing (x4).
6. Install bolts (x4) securing PAS oil cooler.
7. Install slam panel (bolts x12).
8. Install grille (see Workshop Manual procedure 01.08.AA Grille - Radiator - Renew).

Occupant Restraint Control Module Assembly - Renew

Repair Operation Time (ROT)	
Item	**Code**
Occupant Restraint Control Module Assembly-Renew	**01.20.DF**

Removal

1. Remove rear centre console (see Workshop Manual procedure 01.12.CA Panel Assembly - Console - Rear - Renew).
2. Release harness clip and disconnect front multiplug (x1) (see Figure 1).



Figure 1

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3. Remove nuts (x2) and bolts (x2) module to centre tunnel (see Figure 2).
4. Disconnect rear multiplug (x2) and remove module occupant restraint (see Figure 3).



Figure 2



Figure 3

Installation

1. Connect rear multiplug (x1) occupant restraint module.
2. Install module.
3. Connect front multiplug (x1) and secure harness.
4. Install rear centre console (see Workshop Manual procedure 01.12.CA Panel Assembly - Console - Rear - Renew).

RH/LH Roll Over Protection System - Renew

Repair Operation Time (ROT)		
Item		**Code**
Roll Over Protection System-Renew	RH	**01.20.EA**
Roll Over Protection System-Renew	LH	**01.20.EB**

Removal

1. Remove right-hand/left-hand rear body side trim (see Workshop Manual procedure 01.05.DX/01.05.DY Panel Assembly - Bodyside Trim - Rear - RH/LH - Renew).
2. Remove right-hand/left-hand rear console panel assembly (see Workshop Manual procedure 01.12.DF/01.12.DE Console Panel Assembly - Rear Roadster - RH/LH - Renew).

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3. Release ROPS multiplug from body and disconnect (see Figure 1).

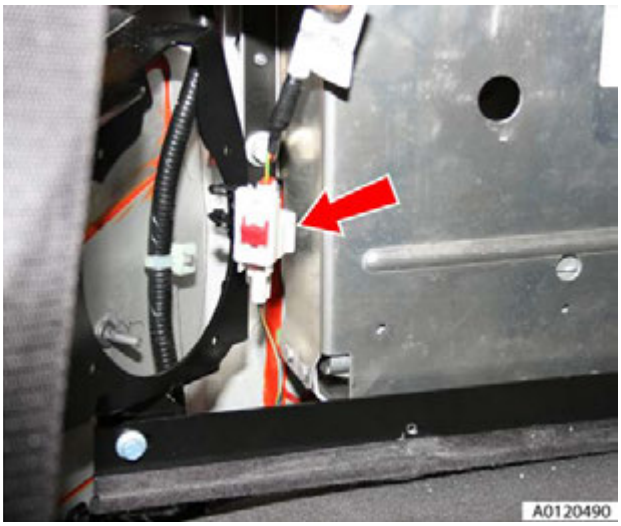


Figure 1

4. Remove 4 bolts securing upper Roll Over Protection System (ROPS) trim and remove.
5. Remove 6 bolts securing ROPS unit to body and remove (see Figure 2).



Figure 2

Installation

1. Install ROPS unit and secure with bolts.
2. Install upper ROPS trim and secure with bolts.
3. Connect ROPS multiplug and secure to body.
4. Install right-hand/left-hand rear console panel assembly (see Workshop Manual procedure 01.12.DF/01.12.DE Console Panel Assembly - Rear Roadster - RH - Renew).
5. Install right-hand/left-hand rear body side trim (see Workshop Manual procedure 01.05.DX/01.05.DY Panel Assembly - Bodyside Trim - Rear - RH/LH - Renew).

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