



NUMBER: 23-001-07

GROUP: Body

DATE: January 6, 2007

This bulletin is supplied as technical information only and is not an authorization for repair. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without written permission of DaimlerChrysler Corporation.

THIS BULLETIN IS BEING PROVIDED IN ADVANCE. DO NOT ORDER PARTS OR PERFORM ANY ACTIONS RELATED TO THIS BULLETIN UNTIL JANUARY 15, 2007.

SUBJECT:

Modular Hard Top Freedom Panel Waterleaks

OVERVIEW:

This bulletin involves replacement of foam and/or butyl tape(s) and/or weatherstrips to eliminate Freedom Panel water leaks.

MODELS:

2007 (JK) Wrangler/Wrangler Unlimited

SYMPTOM/CONDITION:

Water may leak at the center front, center rear, A-pillar corners or B-pillar corners of hard top Freedom Panels.

DIAGNOSIS:

1. Ensure that the Freedom Panels are correctly attached to the vehicle. The panels should be located and clamped in the correct sequence as described in the owner's manual. When installing the Freedom Panels always close the windshield latch first.
2. Have an assistant apply water across the hard top affected area with a hose for approximately 3-5 minutes while inspecting the interior of the hard top for waterleaks to determine general leak source location.
3. Water leaks at front center onto Instrument Panel (IP) and/or center console area are indicators of front center Freedom Panel leak path, but could also be a rear center Freedom Panel leak that travels forward. Review the information in the Repair Procedure below to determine if this has occurred.
4. Water leaks from Freedom Panel dial fasteners in speaker bar, leaks near the left or right B-pillar onto sport bar cloth covering, or onto front seats are indicators of leak paths from the rear center of the Freedom Panels. Review the information in the Repair Procedure below.
5. Water leaks at Upper B-pillar out board of the sport bar that drip onto the B-pillar hard trim panel is an indicator of a leak path between the hard top and the Freedom Panel or a leak path under the seal on the hard top. Review the information in the Repair Procedure below.
6. Water leaks at Upper B-pillar out board of the sport bar that drip onto the inner surface of the door panel at the B-pillar is an indicator of a leak path between the door and the Hard top/Freedom Panel intersection. Review the information in the Repair Procedure below.



Stick with the Specialists™

7. Water leaks from the Upper A-pillar that drip onto the IP ends is an indicator of a leak path between the door inner panel and the Freedom Panel/windshield header intersection. There also could be a leak path at the windshield header area. These will need additional investigation. Review the information in the Repair Procedure below.

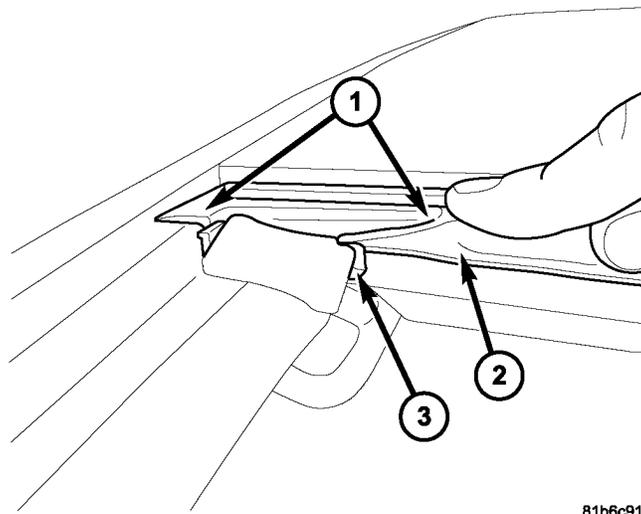
PARTS REQUIRED:

Qty.	Part No.	Description
AR (1)	68026937AA	Kit, Replacement Foam
AR (2)	68027813AA	Butyl, Tape
AR (1)	55397095AD	Seal, Right Freedom Panel Center
AR (1)	55397046AD	Seal, 4 Door Hard Top Center
AR (1)	55395708AC	Seal, Right B-Pillar Cup 4 Door
AR (1)	55395709AC	Seal, Left B-Pillar Cup 4 Door
AR (1)	55397058AD	Seal, 2 Door Hard Top Center
AR (1)	55395240AC	Seal, Windshield Header
AR (2)	06036678AA	Rivet, Windshield Header Seal

REPAIR PROCEDURE:

Freedom Panel Center & Rear Leaks

1. Remove left Freedom Panel.
2. Inspect the center seal that is attached to the right Freedom Panel. Look for water traces at the front molded detail area. Water collecting along the inboard edge of the panel could travel forward from the rear of the panel. If the seal, p/n 55397095AD, is cut/torn/or otherwise damaged, replacement is required.
3. Lift up the outboard lip on the right Freedom Panel center seal near the front molded detail. Examine area for water entry under adhesive tape and/or butyl that is applied alongside of the tape, (Fig. 1). Note any areas for repair.



81b6c919

Fig. 1 FREEDOM PANEL CENTER SEAL

- 1 - CENTER SEAL FRONT MOLDED DETAIL
- 2 - ADHESIVE TAPE RUNS ENTIRE LENGTH OF SEAL
- 3 - BUTYL

-
- 4. Perform similar examination on the rear molded detail area, looking for water traces near the adhesive tape and/or butyl.
 - 5. If leaks to the interior were at the dial fasteners or the B-pillar area, and no water traces are found on the right Freedom Panel inboard edge or molded detail areas of the seal, look for water traces on the hardtop panel front flange directly below the Freedom Panels. Water collected here can indicate a leak under the Freedom Panel in the "cup" area of the hard top seal, (Fig. 2). This type of leak could be a leak path under the hard top seal center mold, or a path past the foam under the right Freedom Panel rear molded detail.

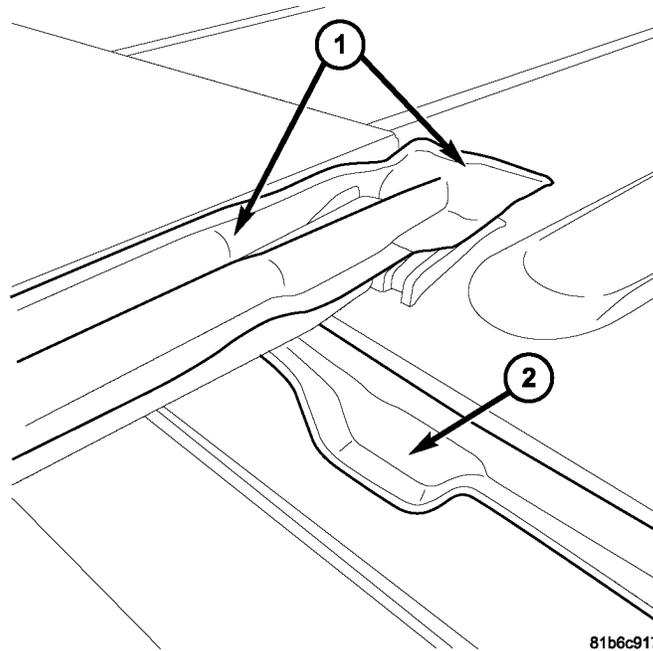


Fig. 2 HARD TOP SEAL CUP AREA

- 1 - CENTER SEAL REAR MOLDED DETAIL
- 2 - HARD TOP SEAL CUP AREA

-
6. Remove right Freedom Panel & set on work table, protecting edges & top surface from damage. Proceed with repairing the seal area on the right Freedom Panel.
 7. IF center seal replacement is required, remove old seal and clean seal mounting surfaces of residual adhesive tape. Apply repair butyl, p/n 68027813AA, to the front and rear ends of the seal mounting zone. Remove tape liner from new seal. Locate seal at each end onto panel, pressurize each end. Proceed to pressurize center section, ensuring good, continuous adhesion.
 8. If seal replacement is not required, add small amounts of repair butyl, p/n 68027813AA, to any areas of water entry found along the center seal of the Freedom Panel. Replace the foam on the front detail or the foam under the rear detail if it is damaged or missing with replacement closed cell foam in kit, p/n 68026937AA. (Fig. 3)

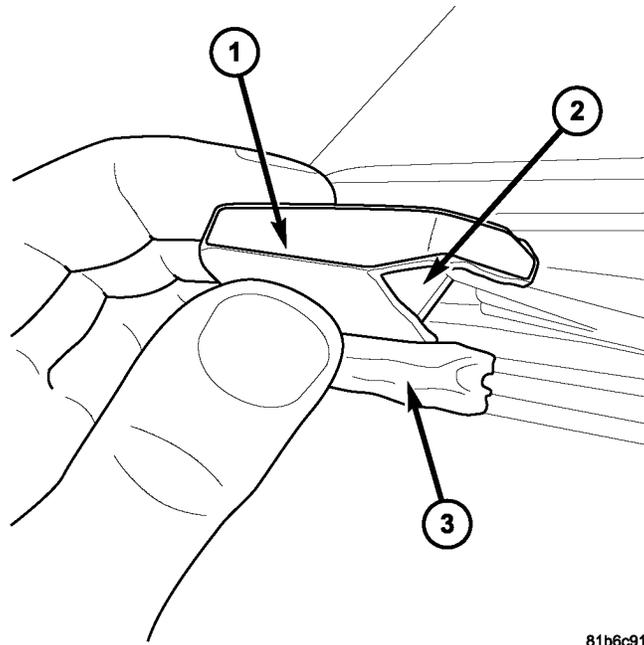


Fig. 3 FOAM AND BUTYL LOCATION

- 1 - EDGE OF FOAM MUST NOT EXTEND PAST TIP OF "D" SECTION ON SEAL
- 2 - "D" SECTION
- 3 - BUTYL MUST BE PRESENT TO BLOCK WATER PATH BELOW "D" SECTION

-
- 9. If the leak path is under the hard top seal center mold, repair with butyl, p/n 68027813AA, sealer.
 - 10. Replace the Freedom Panels on the vehicle, right side first, followed by the left side. Proceed to position and clamp them in the correct sequence according to the owner's manual. When installing the Freedom Panels always close the windshield latch first.
 - 11. Retest to verify that the leak corrected.

B-Pillar Inboard of the Freedom Panels Corner to Hard Top Leaks

- 1. Remove Left & Right Freedom Panels.
- 2. Inspect end details of hard top end seal for water traces to determine leak path. Seals that have the "cup" distorted or rolled will create a leak path. Refit the seal to correct a distorted/rolled seal.
- 3. Water traces on the hard top corner and leading into the "cup" of the upper B-pillar molded detail (4 DR), (Fig. 4), near the fastener indicate a leak either under the hard top seal or between the hard top seal and the Freedom Panel.

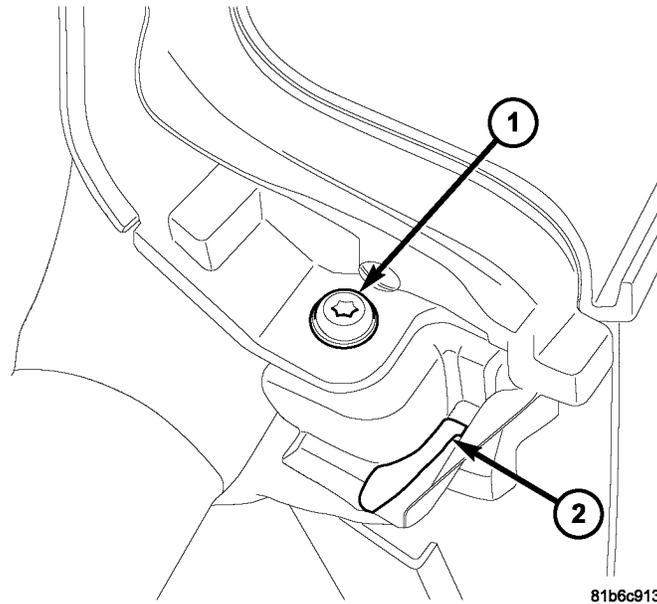


Fig. 4 B-PILLAR CUP (4 DOOR SHOWN)

- 1 - 4 DOOR ONLY
- 2 - B-PILLAR CUP SEAL

-
4. If the water trace is under the hard top end seal leading into the “cup” of the upper B-pillar molded detail, dry off the area & apply butyl, p/n 68027813AA, to close off the path under the seal to the hard top.
 5. If the water trace is over the top of the hard top seal at the outboard corners, examine the rear outboard corners of Freedom Panel for damaged or missing foam, (Fig. 5). Replace if required with foam in kit p/n 68026937AA.

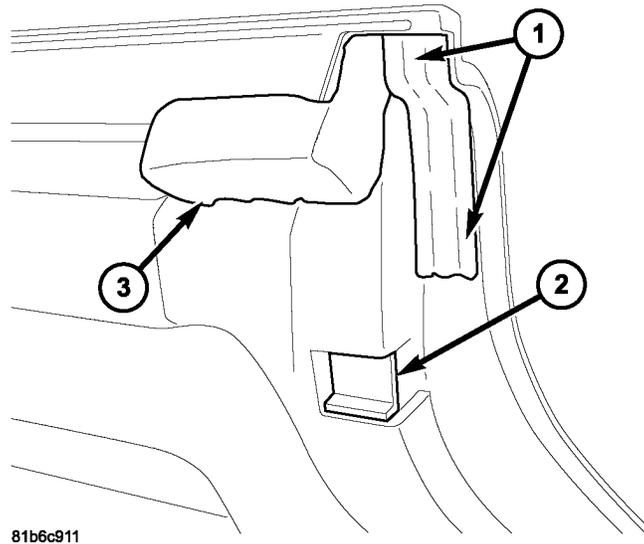


Fig. 5 REAR CORNER FOAM OF FREEDOM PANEL

- 1 - HORIZONTAL SURFACE FOAM
- 2 - LOCATOR NOTCH
- 3 - PANEL TO B-PILLAR INTERFACE FOAM

-
6. If there is no leak under the hard top seal, no water trace at the outboard corners, and there is a water trace on hard top seal approximately 1 in. - 8 in. inboard of the corners, then inspect the hard top seal for distortion or flatness. There is an insert/stuffer inside the seal end that is 7 in. - 8.75 in. long. Verify that the insert is present and located all the way outboard to the hard top seal end. Shift insert outboard to support the hard top seal end if required.
 7. If hard top seal is damaged, replace it using appropriate 2 door seal, p/n 55397058AD, or 4 door seal(s) p/n's 55397046AD and/or 55395708AC and/or 55395709AC.
 8. Replace the Freedom Panels on the vehicle, right side first, followed by the left side. Proceed to position and clamp them in the correct sequence according to the owner's manual.
 9. Retest to verify that the leak corrected.

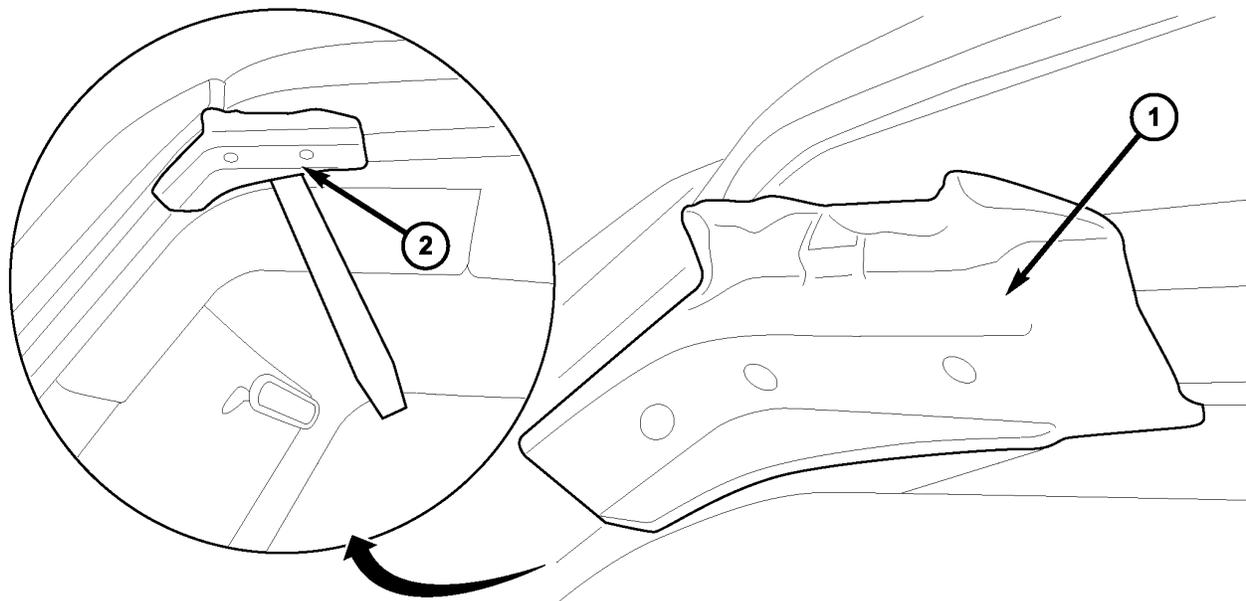
B-Pillar Outboard Freedom Panel Corner & Hard Top Leaks

1. Leaks tracing along the door inner panel near the upper rear corner indicate a path between the door & the hardtop/Freedom Panel intersection.
2. Examine the door to body fit for an over-flush condition. Refit if over-flush greater than 1.5mm (1/16 in.).
3. Inspect end details of hard top end seal for water traces to determine leak path. Seals that have the "cup" distorted or rolled will create a leak path. Refit the seal to correct a distorted/rolled seal.
4. Examine the rear outboard corners of Freedom Panel for damaged or missing foam, (Fig. 5). Replace if required with foam in kit 68026937AA.

5. If hard top seal is damaged, replace it using appropriate 2 door seal, p/n 55397058AD, or 4 door seal(s) p/n's 55397046AD and/or 55395708AC and/or 55395709AC.
6. Replace the Freedom Panels on the vehicle, right side first, followed by the left side. Proceed to position and clamp them in the correct sequence according to the owner's manual. When installing the Freedom Panels always close the windshield latch first.
7. Retest to verify that the leak corrected.

A-Pillar Outboard Freedom Panel Corner & Hard Top Leaks

1. Water traces/drips onto the door trim panel near the handle indicate a door to body leak path.
2. Examine the door fit to body for an over-flush condition. Refit if over-flush greater than 1.5mm.
3. Examine the windshield header seal end detail to Freedom Panel for a smooth transition from the seal to the panel. A distorted/rolled seal or step off transition can lead to a leak. Refit the seal and/or bend the metal flange of the windshield frame that is to achieve a flush fit.



81b6ff33

Fig. 6 HEADER SEAL TO FREEDOM PANEL TRANSITION

1 - EXCESSIVE STEP OFF

2 - BEND FLANGE TO OBTAIN SMOOTH TRANSITION

-
4. If water traces are on the end of the IP, the leak path is located between the windshield header and/or the windshield header seal and the Freedom Panel corner.
 5. Remove left & right Freedom Panels.
 6. Inspect end details of windshield header seal for water traces in the rear ward "cup" portion.
 7. Water traces on the windshield header seal end detail rearward "cup" indicate a leak path from either the area between the Freedom Panel front corner or the windshield header seal.
 8. Examine the front outboard corners of Freedom Panel for damaged or missing foam, (Fig. 7). Replace if required with foam in kit p/n 68026937AA.

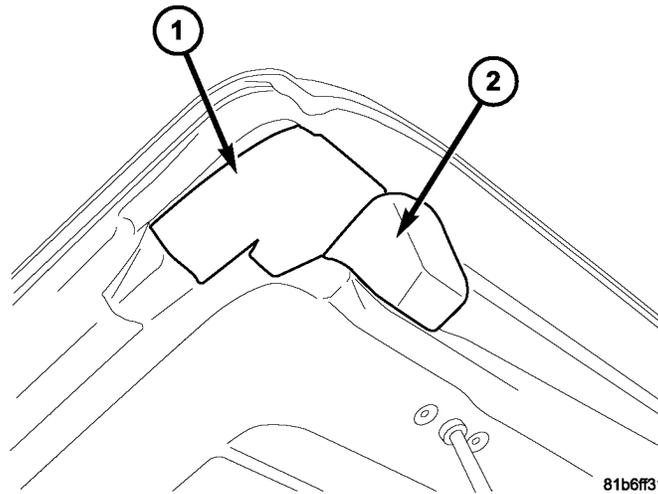


Fig. 7 FRONT CORNER OF FREEDOM PANEL

- 1 - PANEL TO WINDSHIELD FOAM
- 2 - PANEL TO A-PILLAR FOAM

9. If no issues with the Freedom Panel corner, examine the windshield header seal end details to ensure it is sealed to the windshield frame. Carefully peel back the front lip of the seal and inspect for gaps in the adhesive tape and butyl that is located under the sealing lip across the windshield header. Repair with butyl, p/n 68027813AA, as required.
10. Replace the windshield header seal if damaged, p/n 55395240AC and 2 - p/n 06036678AA rivets.
11. Replace the Freedom Panels on the vehicle, right side first, followed by the left side. Proceed to position and clamp them in the correct sequence according to the owner's manual. When installing the Freedom Panels always close the windshield latch first.
12. Retest to verify that the leak corrected.

POLICY:

Reimbursable within the provisions of the warranty.

TIME ALLOWANCE:

Labor Operation No:	Description	Amount
23-51-35-90	Modular Top Waterleaks-Reseal (C)	A/T Hrs.

FAILURE CODE:

ZZ	Service Action
----	----------------