



BAHAMAS, BOLIVIA, BELIZE, CANADA,
 CHILE, TAIWAN, COLOMBIA, COSTA RICA,
 DOMINICAN REPUBLIC, ECUADOR, EL
 SALVADOR, TRINIDAD AND TOBAGO,
 UNITED STATES, URUGUAY, VENEZUELA,
 ARUBA, NICARAGUA, PERU, PUERTO RICO,
 Curaçao, GUAM, GUATEMALA, GUYANA,
 HAITI, HONDURAS, JAMAICA, KOREA,
 SOUTH KOREA, PANAMA

Countries:
Availability: ISIS, Bus ISIS, FleetISIS, IsSIR
Major System: BUS BODY
Current Language: English
Other Languages: [Español](#), [Français](#),
Viewed: 3764

Document ID: IK2200070
Revision: 9
Created: 4/30/2008
Last Modified: 1/30/2018
Author: Brandon Akridge

[Less Info](#)
[Hide Details](#)

Coding Information

Copy Link	Copy Relative Link	Bookmark	Add to Favorites	Print	Provide Feedback	Helpful	Not Helpful
		View My Bookmarks				562	247

Title: Bus Body Tie Down, Floor Sill Repair

Applies To: All Bus Models

CHANGE LOG

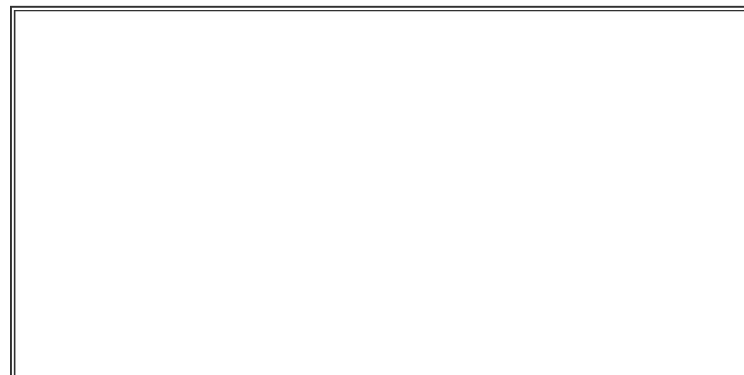
Please refer to the change log text box below for recent changes to this article:

2015/08/10 - updated part numbers for field fix kits
 07/27/2017 - Updated article formatting.
 01/30/2018 - update diagnostic and format

DESCRIPTION

Floor sill damage at the body tie down point can be caused by improper adjustment, a missing anti-squeak pad, or a tie down placed on the opposite main sill flange as the anti-squeak pad. Loose or over tightened tie downs (formed clip, J-bolt or u-bolt) will cause excessive stress to the floor sill flange resulting in deformities and/or eventually a fatigue crack.

The following kits are available to reinforce the floor sill flange area to restore proper body tie-down strength. The floor sill reinforcement kits are welded to the existing main floor sill to repair and reinforce the tie down area. Weld instructions are included with each kit.



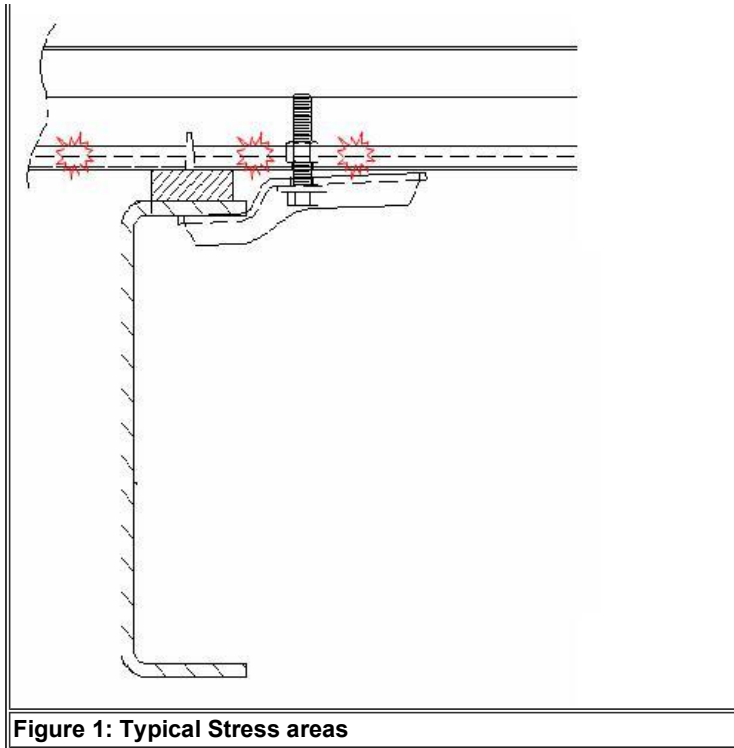


Figure 1: Typical Stress areas

SYMPTOM(s)

Diagnostic Trouble Code(s) & Dashboard Indicator Light(s):

DTC/Light	Description
N/A	
N/A	

SPECIAL TOOL(s) / SOFTWARE

Tool Description	Tool Number	Comments	Instructions
General shop tools			

SERVICE PARTS INFORMATION

Kit Description	Part Number	Quantity Required	Notes
KIT FIELD FIX TIE DOWN L	2232174C92	1	
KIT FIELD FIX TIE DOWN R	2232175C92	1	

DIAGNOSTIC STEP(s)

Step	Action	Decision
# 1	DIAGNOSTIC: Is tie-down location missing anti-squeak pad?	Yes. Obtain proper anti-squeak pad for use in later step or repair process.
		No. proceed to step 2

Step	Action	Decision
# 2	DIAGNOSTIC: Does the sill have a stress crack?	Yes. Proceed to repair section.
		No. Remove tiedown and pad. Bend/manipulate sill back in normal perpendicular location, reinstall tie-down and anti-squeak pad, apply proper torque to tie-down.

REPAIR STEP(s)

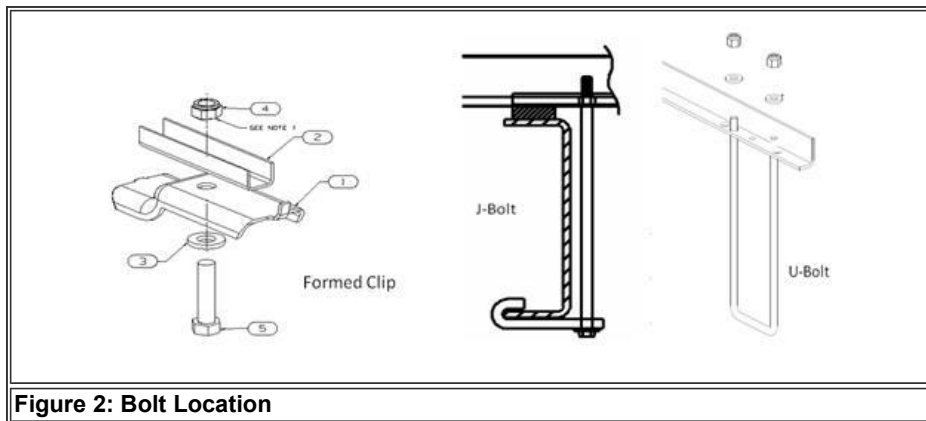


Figure 2: Bolt Location

1. From under the bus, remove the nut, bolt, tie-down clip (or j-bolt/u-bolt) and channel from floor sill.

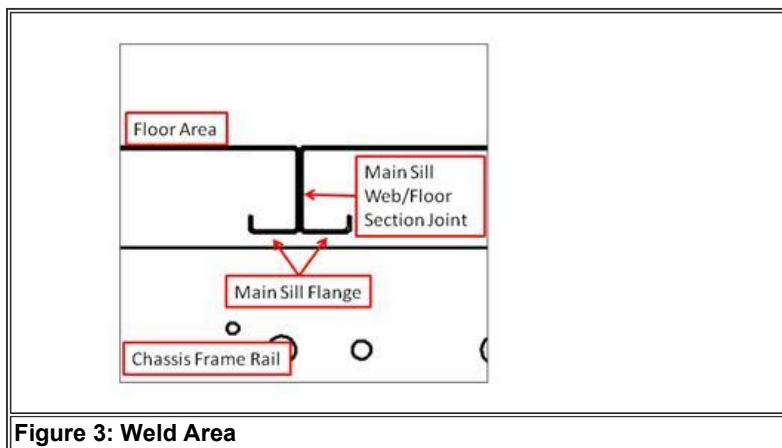
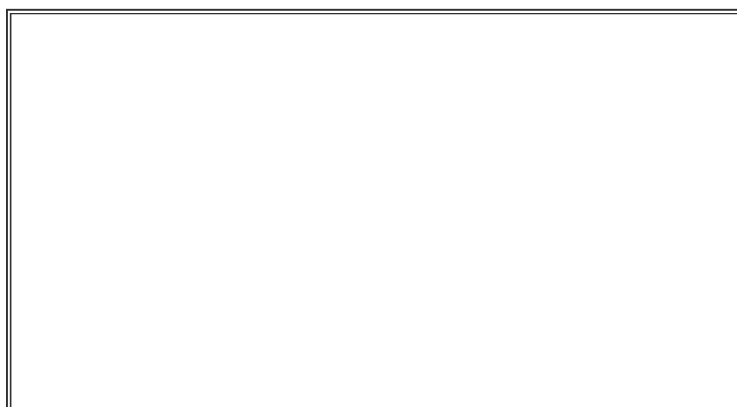
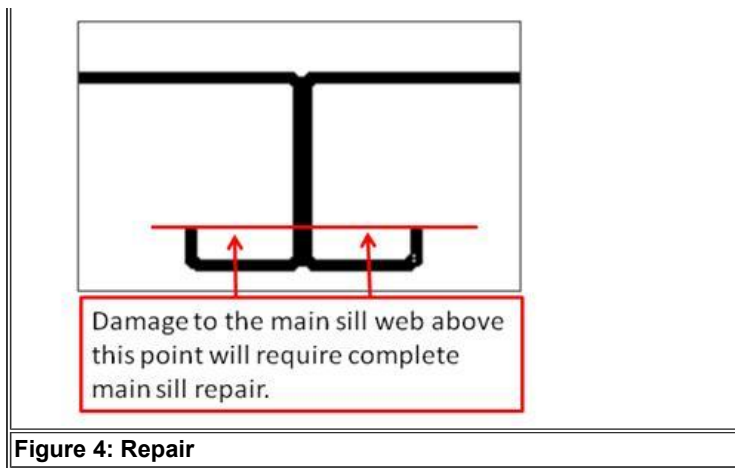


Figure 3: Weld Area

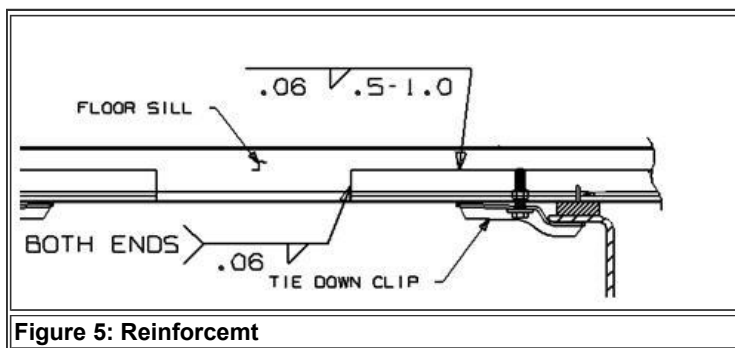
2. Weld up any cracks found in the floor sill flange.
 - a. Area of repair should be cleaned and prepped prior to beginning weld process. Manipulate/bend sill into proper perpendicular shape.
 - b. Welding the cracked main sill flange will eliminate further migration of the crack.
 - c. If the main sill flange is damaged to the point material is missing, remove excess loose material and weld any remaining cracks. The floor sill reinforcement transfers the tie-down load to the vertical main sill web of the floor section joint removing the load from the main sill flange. Missing main sill flange material in the tie-down reinforcement area is acceptable once the reinforcement is welded in place. If the main sill web is damaged above the flange area (see figure 4), a complete main sill repair should be performed.





3. Weld reinforcement to the main sill.

- a. Area of repair should be cleaned and prepped prior to beginning weld process.
- b. The reinforcement weld instructions are as follows. NOTE: Before starting the weld process, ensure the reinforcement is located correctly, horizontally and vertically, to allow the anti-squeak pad and tie-down to be reinstalled without any additional drilling.
 - i. The top horizontal edge of the reinforcement is to be welded with a 1/16" weld, 1/2" long on 1" centers.
 - ii. The vertical ends of the reinforcement are to be welded with a 1/16" weld in the area accessible, typically 3/4" to 1" of the reinforcement height.



4. Weld reinforcement to the main sill.

- a. Replace the tie-down clip, (j-bolt/u-bolt).
- b. Tie-down is to be reinstalled on the same main sill flange as the anti-squeak pad.
- c. If the tie-down components condition will not allow proper torque process, the component(s) should be replaced.

5. Apply rust preventative coatings to repaired area.

****If assistance in determining required repairs for a specific units condition is available by starting an iKNow case file****

WARRANTY INFORMATION

Warranty Claim Coding:

Group:	22000 - Genesis Body Comp
Noun:	330 - Tiedown Bolts, Plate, J-Bolts, U-bolts

Standard Repair Time(s):Refer to the [SRT Manual](#) for Repair Times

OTHER RESOURCES[Master Service Information Site](#)[•IK2200007 Bus Body Tie Down Torque Specifications](#)

Hide Details

Feedback Information

Viewed: 3763

Helpful: 562

Not Helpful: 247

No Feedback Found

Copyright © 2018 Navistar, Inc.