

August 18, 2014

To:

Select Blue Bird Customers

Subject:

Service Bulletin S14XL Ford 6.8L Propane Engine Crossmember

Mounting Bracket

**Models Affected:** 

2013 through 2015 Model Year Vision Buses equipped with Ford

6.8L Propane Engines

**Bulletin Duration:** 

One (1) Year from Date of Issue

#### Overview

One or more of the upper mounting capscrews and lower studs that retain both sides of the engine mount crossmember to the chassis frame bracket assembly may fail. Service Bulletin S14XL provides instructions for inspecting and, if needed, repairing the engine mount crossmember.

#### **Affected Units**

Certain 2013 through 2015 model year Vison model buses equipped with Ford 6.8L propane engines. The buses in your fleet that are affected by this bulletin are identified by Blue Bird body serial number(s) on the enclosed cover sheet.

#### **Time Allowance**

Time allowed to inspect the engine mount crossmember and fasteners are not found to be broken is 0.2 hours per bus.

After the initial inspection buses should be inspected every 4,000 to 6,000 miles until bus reaches a maximum of 36,000 miles. If fasteners are found to be broken and the brace is installed, further inspections are no longer required.

Time allowed to inspect the engine mount crossmember and repair if one capscrew(s)/stud(s) is found broken on right hand (curb) side is 5.7 hours per bus. (Requires Parts List A)

Time allowed to inspect the engine mount crossmember and repair if two capscrew(s)/stud(s) are found broken on right hand (curb) side is 6.7 hours per bus. (Requires Parts List B)

Time allowed to inspect the engine mount crossmember and repair if all fasteners are found broken on right hand (curb) side is 7.2 hours per bus. (Requires Parts List C)

Time allowed to install new right hand brace, if bus has broken capscrews/studs and has been repaired before Service Bulletin S14XL was issued, is 4.2 hours per bus. (Requires Parts List D)

# Blue Bird Body Company

S14XL

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#### **Repair Parts**

If needed, replacement parts must be ordered by your dealer directly through Blue Bird Service Parts. Parts are anticipated to be available on or about September 12, 2014.

#### Labor Reimbursement

Warranty applications for labor reimbursement for Service Bulletin S14XL may be submitted to your Blue Bird dealer.

#### **Bulletin Duration**

Service Bulletin S14XL ends one (1) year from date of issue.

#### **Repair Facility**

We encourage you to contact your Blue Bird dealer to arrange to have this Service Bulletin performed. However, you have the option to perform this Service Bulletin yourself or have a qualified repair facility convenient to you perform this work. A qualified technician must perform work required under this bulletin.

#### Questions

Questions regarding Service Bulletin S14XL should be directed to your Blue Bird Dealer.

Sincerely,

Bill Coleman

**Engineering Services** 

478-822-2242





Models Affected: All Ford 6.8L Propane Vision Models

#### **ISSUE**

The upper mounting capscrews and lower studs that retain both sides of the engine mount crossmember to the chassis frame bracket assembly may break.

#### **CORRECTIVE ACTION**

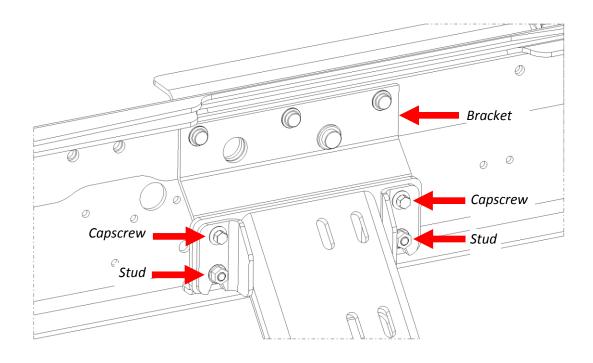
Inspect and repair per instructions below.

## **PROCEDURE**

**WARNING:** Always follow all Federal, State, Local, and Shop safety standards and use proper safety equipment, and thoroughly read and understand all instructions before performing these procedures.

## **Inspection**

- 1. Park the bus on a level surface, apply parking brake, turn off engine, remove keys, and chock wheels.
- 2. Locate the four fasteners indicated below. Two capscrews on top and two studs with nuts below. Inspect LH side and RH side for any broken fasteners. If no broken studs, reinspect every 4,000 to 6,000 miles until the vehicle reaches 36,000 miles. If any studs are broken, repair per instructions on the following pages.







## **After Inspection Actions**

If no capscrews/studs are broken on initial inspection:

1. Re-inspect every 4,000 to 6,000 miles until the vehicle reaches 36,000 miles.

If capscrew(s)/stud(s) is broken on RH side:

- 1. Install new brace from engine crossmember to bottom of frame rail at RH bracket with **New Brace Installation** pages 3-5.
- 2. Repair broken capscrew/stud with **Repair Broken Stud** page 6.
- 3. Replace tops capscrews on RH ONLY per **Replace Upper Capscrews** page 7.
- 4. See Parts List A for one capscrew/stud and Parts List B for two capscrews/studs page 8.

If all fasteners fail on RH side:

- 1. Install new brace from engine crossmember to bottom of frame rail at RH bracket with **New Brace Installation** pages 3-5.
- 2. Repair broken capscrew/stud with **Repair Broken Stud** page 6.
- 3. Replace tops capscrews on both RH and LH per Replace Upper Capscrews page 7.
- 4. See Parts List C page 9.

If a unit has had broken capscrew(s)/stud(s) and has been repaired prior to receiving Service Bulletin S14XL:

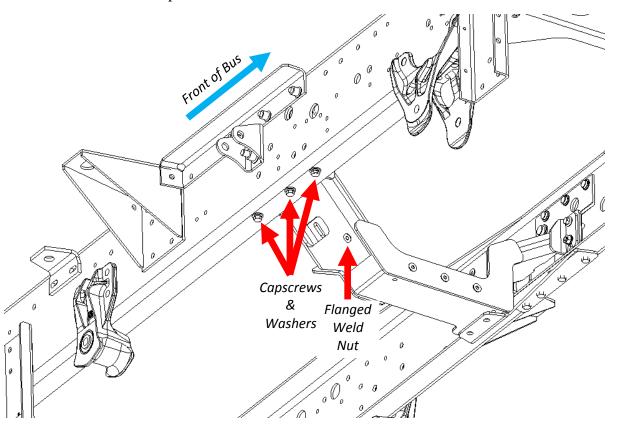
- 1. Install new brace from engine crossmember to bottom of frame rail at RH bracket with **New Brace Installation** pages 3-5.
- 2. See Parts List D page 9.





### **New Brace Installation**

- 1. Park the bus on a level surface, apply parking brake, turn off engine, remove keys, disconnect battery and chock wheels. Disconnect the battery cables by disconnecting the negative cable first.
- 2. Locate and remove three capscrews and washers that attached bottom of RH engine mounting bracket to the frame rail. Retain capscrews for step 4, discard washers.
- 3. Remove flanged weld nut from right hand outside of engine crossmember by grinding off welds. Paint to prevent corrosion.

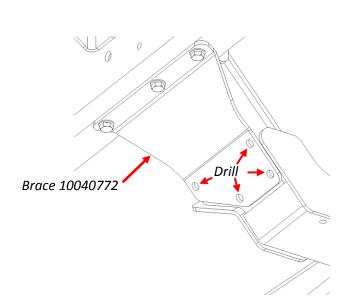






## **New Brace Installation**

- 4. Using the three capscrews removed in step two, install brace 10040772 to bottom of frame rail and tighten, do not torque.
- 5. Using brace as a drill jig, drill four 17/32 inch diameter holes into the outside of engine crossmember. Note: Use short drill bits. Do not drill into other side of crossmember at this time.
- 6. Remove brace by removing three capscrews in bottom of frame rail. Discard these three capscrews.
- 7. Using jig 10041034, drill four ¼ inch pilot holes in the opposite side of engine crossmember. Then drill these out to 17/32 inch diameter.



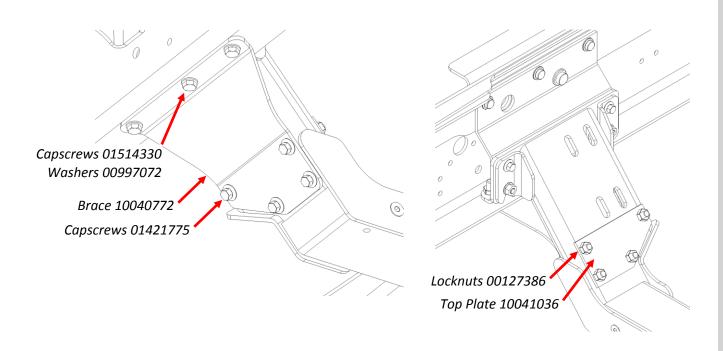






## **New Brace Installation**

- 8. Attach brace 10040772 to bottom of frame rails with three new M12-1.75 X 40 MM long capscrews 01514330 and hardened flat washers 00997072. Do not tighten. Apply Loctite® Threadlocker Blue 242® to capscrew threads before installing.
- 9. Place top plate 10041036 on top of engine crossmember. Install four (4) M12-1.75 X 80 MM long capscrews 01421775 through new brace, engine crossmember, and top plate. Install four (4) flanged hex head lock nut 00127386 finger tight.
- 10. Torque all seven capscrews to 70-80 ft-lb.

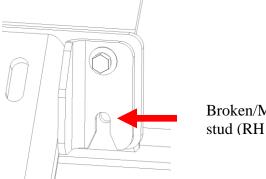






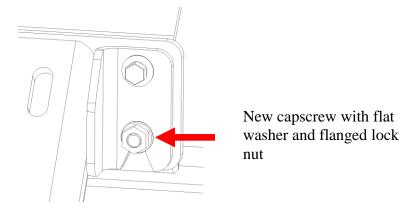
## **Repair Broken Stud**

- 1. Park the bus on a level surface, apply parking brake, turn off engine, remove keys, and chock wheels.
- 2. Disconnect the battery cables by disconnecting the negative cable first.
- 3. Remove wires/cables to the starter on the right side of the engine for rear stud repair.
- 4. Drill out the broken stud with ½ inch bit. Recommend short bit due to limited space. **CAUTION**: Do not drill into objects between the mounting brackets and frame rail such as hydraulic brake lines.



Broken/Missing lower rear stud (RH shown).

5. Install M12-1.75 X 40 MM long capscrews 01514330 from inside brackets with the threads pointed toward engine. Install hardened flat washers on both sides of bracket and flanged hex head lock nut 00127386 on engine side of bracket. Torque to 70-80 ft-lb.



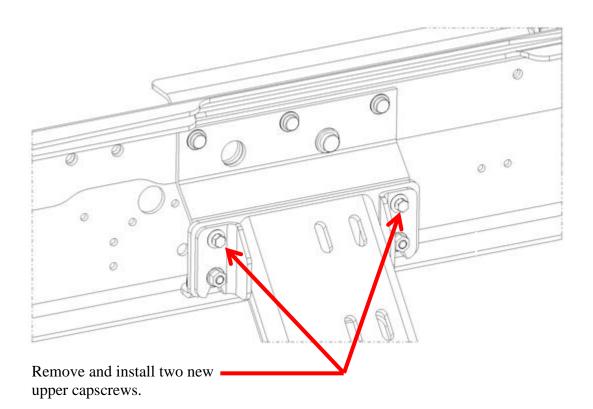
6. If starter wires/cables were removed, re-install and torque small nut to 3.0 - 3.5 ft-lb. and large nut to 6 - 8 ft-lb. Add protective coating to cable nuts.





### **Replace Upper Capscrews**

- 1. Park the bus on a level surface, apply parking brake, turn off engine, remove keys, and chock wheels.
- 2. Disconnect the battery cables by disconnecting the negative cable first.



- 3. Remove each capscrew and replace with new M12-1.75 X 38 MM long capscrews 10028214. Torque to 70-80 ft-lb. NOTES:
  - a. Apply Loctite® Threadlocker Blue 242® to capscrew threads before installing.
  - b. On buses with Air Conditioner Compressor on right side of engine, front capscrew may be broken loose with an air ratchet but finish removing with a wrench due to reduced space.



# **Crossmember Mounting Bracket**

## PARTS LIST A: ONE STUD BROKEN

ITEM NUMBER	PART NUMBER	DESCRIPTION	QTY.
1	01514330	CAPSCREW,HX HD,M12-1.75X40,CL10.9,OLVDRBCMT	4
2	00127386	NUT, HEX HD,M12-1.75,CL 10.9, FLG LK	5
3	10040772	BRACE, REINF, CROSSMEMBER	1
4	10041036	PLATE,TOP	1
5	01421775	CAPSCREW,HX HD,M12-1.75X80,FLANGE	4
6	00997072	WASHER,FLAT,HARDENED	5
7	10028214	CAPSCREW,HX HD,M12-1.75X38,CL10.9,FORD W713728	2
8		Loctite® Threadlocker Blue 242®	Procure Locally

### **PARTS LIST B: TWO STUDS BROKEN**

ITEM	PART		
NUMBER	NUMBER	DESCRIPTION	QTY.
1	01514330	CAPSCREW,HX HD,M12-1.75X40,CL10.9,OLVDRBCMT	5
2	00127386	NUT, HEX HD,M12-1.75,CL 10.9, FLG LK	6
3	10040772	BRACE, REINF, CROSSMEMBER	1
4	10041036	PLATE,TOP	1
5	01421775	CAPSCREW,HX HD,M12-1.75X80,FLANGE	4
6	00997072	WASHER,FLAT,HARDENED	7
7	10028214	CAPSCREW,HX HD,M12-1.75X38,CL10.9,FORD W713728	2
		V 1 0 TH 11 1 D1 0100	Procure
8		Loctite® Threadlocker Blue 242®	Locally



# **Crossmember Mounting Bracket**



## PARTS LIST C: ALL FASTENERS FAILED RIGHT SIDE

ITEM	PART	DESCRIPTION	
NUMBER	NUMBER		QTY.
1	01514330	CAPSCREW,HX HD,M12-1.75X40,CL10.9,OLVDRBCMT	5
2	00127386	NUT, HEX HD,M12-1775,CL 10.9, FLG LK	6
3	10028214	CAPSCREW,HX HD,M12-1.75X38,CL10.9,FORD W713728	4
4	10040772	BRACE, REINF, CROSSMEMBER	1
5	10041036	PLATE,TOP	1
6	01421775	CAPSCREW,HX HD,M12-1.75X80,FLANGE	4
7	00997072	WASHER,FLAT,HARDENED	7
			Procure
8		Loctite® Threadlocker Blue 242®	Locally

### PARTS LIST D: ADD BRACE ONLY

ITEM	PART	DESCRIPTION	
NUMBER	NUMBER		QTY.
1	01514330	CAPSCREW,HX HD,M12-1.75X40,CL10.9,OLVDRBCMT	3
2	00127386	NUT, HEX HD,M12-1775,CL 10.9, FLG LK	4
3	10040772	BRACE, REINF, CROSSMEMBER	1
4	10041036	PLATE,TOP	1
5	01421775	CAPSCREW,HX HD,M12-1.75X80,FLANGE	4
6	00997072	WASHER,FLAT,HARDENED	3
			Procure
7		Loctite® Threadlocker Blue 242®	Locally