

## **Agenda**

### **2016 Four-Hour Update**

1. Administration and welcome.
2. Reinforce inspection for rubbing and chafing.
3. Air dryer maintenance
4. Five year bumper to bumper warranty.
5. Fleet condition update.
6. Program review.
7. Air door adjustment.
8. DEF Questions and answers.
9. Slack Adjusters: Review
10. Changes to minimum Specifications 2017.
11. Thomas Built Recalls.
12. IC Corp Recalls.
13. Blue Bird Recalls.



**INSPECTOR – INSTRUCTOR**

**TRAINING PROGRAM**

**REIMBURSEMENT FORM**

SCHOOL DISTRICT: \_\_\_\_\_

NAME: \_\_\_\_\_

TRAINING DATES: \_\_\_\_\_

DAILY WAGES: \_\_\_\_\_ X \_\_\_\_\_ = \$ \_\_\_\_\_  
# OF DAYS

MOTEL EXPENSE: \_\_\_\_\_

MEALS: (BR \$7, LU \$8, DI \$15) – TOTALS: Breakfast: \$ \_\_\_\_\_

Lunch: \$ \_\_\_\_\_

Dinner: \$ \_\_\_\_\_

TRAVEL: # OF MILES \_\_\_\_\_ X \$0.39 PER MILE = \$ \_\_\_\_\_

OTHER PRE-APPROVED EXPENSES:

\_\_\_\_\_  
\_\_\_\_\_

\$ \_\_\_\_\_

TOTAL EXPENSES \$ \_\_\_\_\_

**OFFICIAL RECEIPTS MUST BE ATTACHED FOR ALL EXPENDITURES**

SIGNATURES

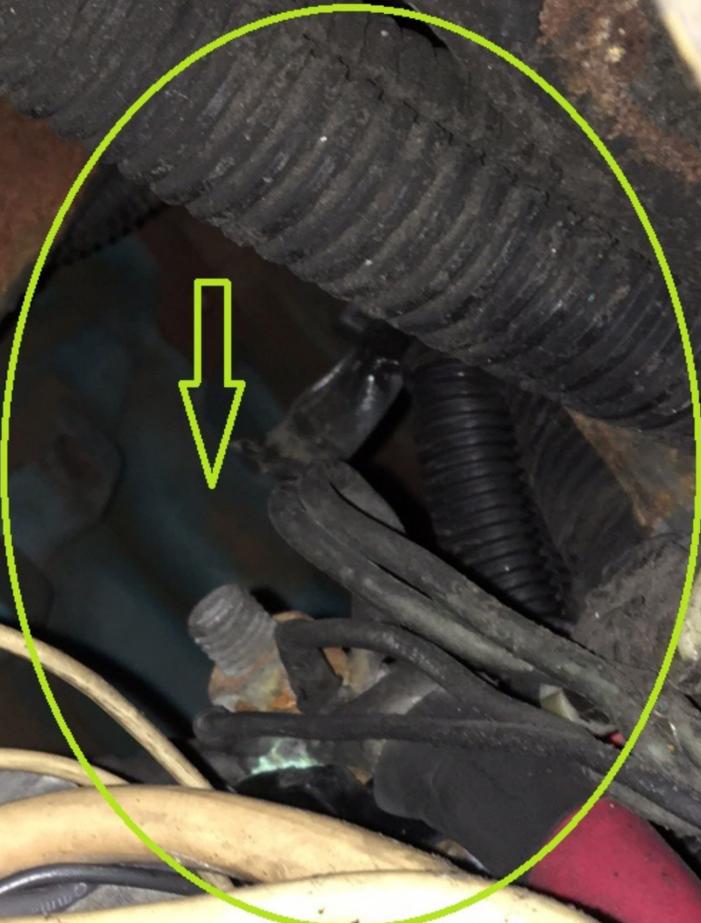
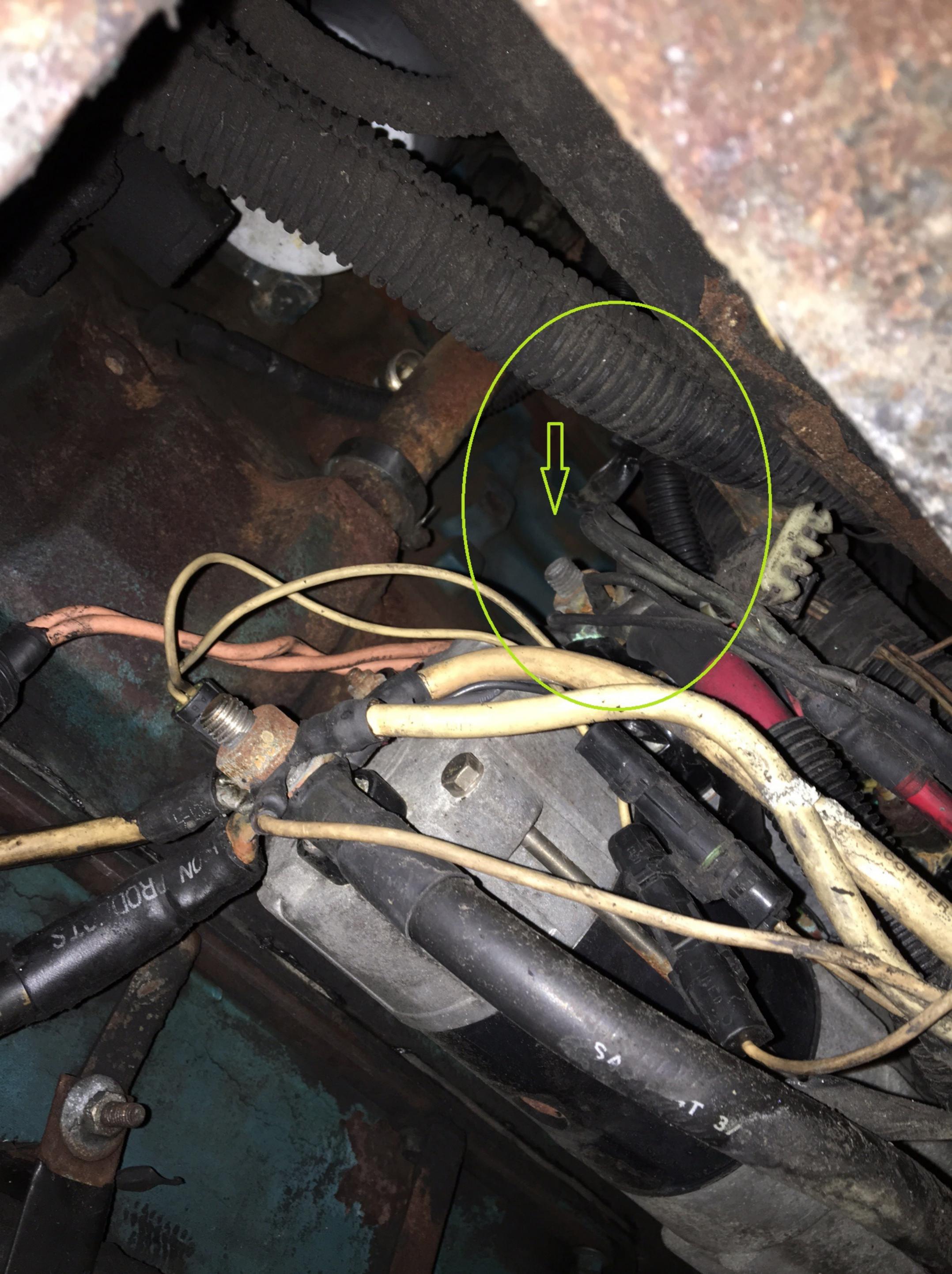
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INSPECTOR-INSTRUCTOR

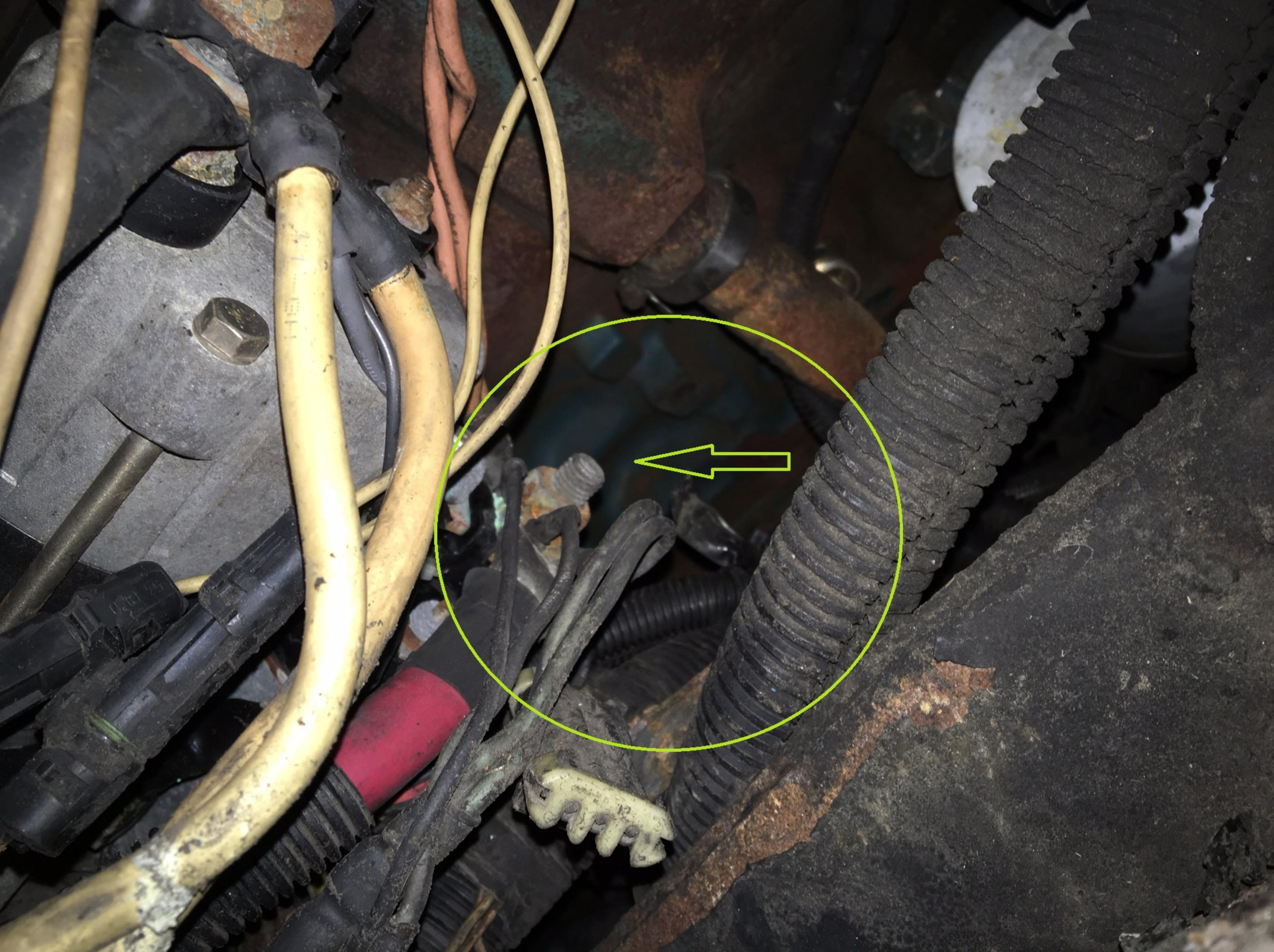
\_\_\_\_\_  
SUPERINTENDENT OR  
DIRECTOR

1. We have had several Rear engine fires in the last two years. It is always hard to determine the origin of a vehicle fire if the fire gets to an advanced stage but we think that the source of these fires may have been the positive battery cable starter lug rubbing through the power steering hose. This hose is steel braded so when the lug rubs through the rubber coating an arc is produced which may ignite the power steering fluid.

This is difficult to say that this is the cause of this type of fire but it is easy to say that you are almost never wrong securing a component. It is a very important part of our function is to check for rubbing and chafing hoses and wires. It is not unusual to find a P-clamp or a wire tie that gets left off after a repair so please encourage everyone to be diligent in looking for this type of problem.

2. AD-9 air dryers are good. So good that we often ignore them until there is a problem. (Show video if possible). There is a maintenance schedule for them also. The manual says they are to be checked every 25,000 miles and rebuilt every 300,000. But the 300,000 is for road tractors. What is appropriate for a school bus application?
3. Please repeat the change to the 2016 Specification.
  - a. Applicable to all newly delivered buses.
  - b. Option for small repairs of parts only
  - c. We have paid for this, encourage districts to take advantage.
4. Fleet update included to break the ice.





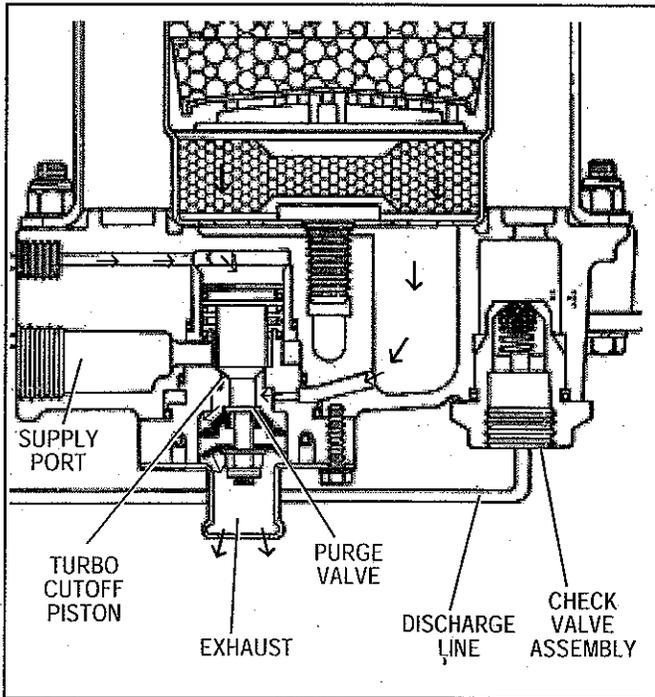


FIGURE 4 - AD-9™ AIR DRYER TURBO CUTOFF

At the onset of the purge cycle, the downward travel of the purge piston is stopped when the turbo cut-off valve (tapered portion of purge piston) contacts its mating metal seat in the purge valve housing. With the turbo cut-off valve seated (closed position), air in the discharge line and AD-9™ air dryer inlet port is restricted from entering the air dryer. While the turbo cut-off effectively prevents loss of turbo charger boost pressure to the engine, some "seepage" of air may be detected under certain conditions of compressor engine and turbo charger operation, even so there will always be low pressure trapped in the discharge line.

## PREVENTIVE MAINTENANCE

**Important:** Review the warranty policy before performing any intrusive maintenance procedures. An extended warranty may be voided if intrusive maintenance is performed during this period. Note: It is acceptable for the purge valve to be maintained as necessary, i.e., the installation of a purge valve maintenance kit, without voiding the warranty.

Because no two vehicles operate under identical conditions, maintenance and maintenance intervals will vary. Experience is a valuable guide in determining the best maintenance interval for any one particular operation.

**Every 900 operating hours or 25,000 miles or every three (3) months:**

1. Check for moisture in the air brake system by opening reservoirs, drain cocks, or valves and checking for presence of water. If moisture is present, the desiccant may require replacement; however, the following conditions can also cause water accumulation and should be considered before replacing the desiccant:

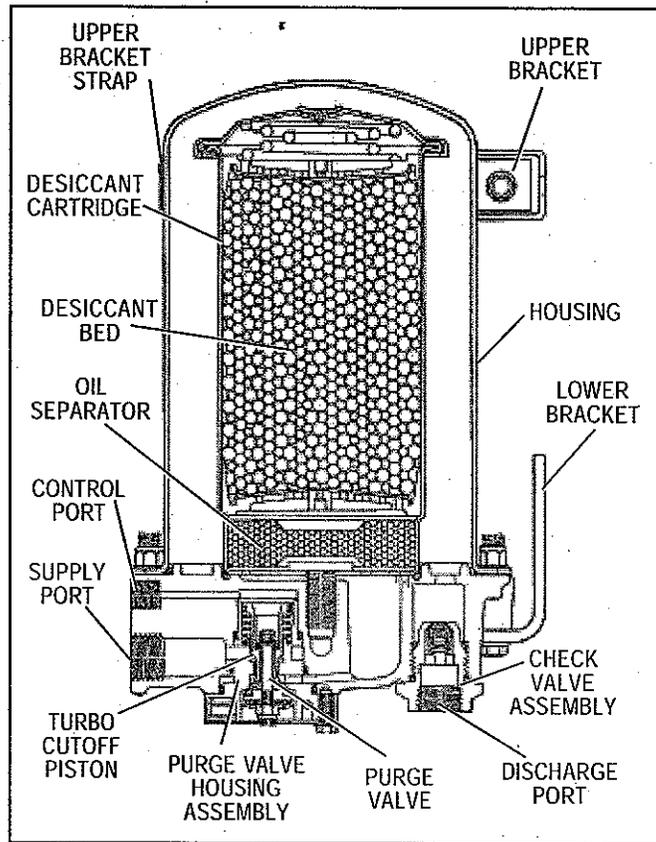


FIGURE 5 - AD-9™ AIR DRYER SECTIONAL VIEW

- A. An outside air source has been used to charge the system. This air did not pass through the drying bed.
- B. Air usage is exceptionally high and not normal for a highway vehicle. This may be due to accessory air demands or some unusual air requirement that does not allow the compressor to load and unload (compressing and non-compressing cycle) in a normal fashion. Check for high air system leakage. If the vehicle vocation has changed it may be necessary to upgrade the compressor size. Refer to Appendix A, Table A and the column entitled Vehicle Vocation.
- C. The air dryer has been installed in a system that has been previously used without an air dryer. This type of system will be saturated with moisture and several weeks of operation may be required to dry it out.
- D. Location of the air dryer is too close to the air compressor. Refer to *Locating AD-9™ Air Dryer On Vehicle* section and Appendix A, Table A, column 2 for discharge line length.
- E. In areas where more than a 30 degree range of temperature occurs in one day, small amounts of water can accumulate in the air brake system due to condensation. Under these conditions, the presence of small amounts of moisture is normal

Air dryers were created to minimize the amount of moisture and other contaminants that make it to the air tanks. The Bendix AD-9 air dryer alternates between two modes or "cycles" during use, the charge cycle and the purge cycle. Both cycles play an important part in keeping your air tanks as clean as possible.

## AD-9 CHARGE CYCLE

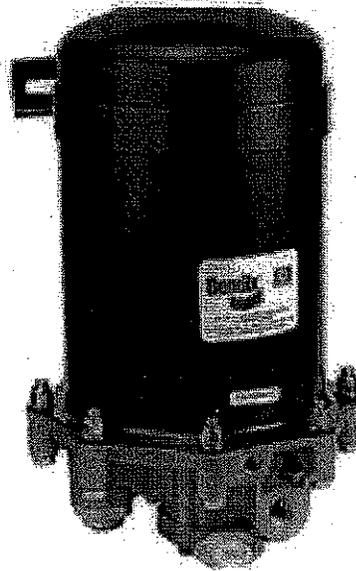
With an AD-9 air dryer installed, contaminants enter the supply port of the air dryer end cover. As the compressed air travels through the end cover assembly, its direction of flow changes several times causing contaminants to condense and drop to the bottom of the air dryer end cover.

The compressed air exits the end cover and flows into the desiccant cartridge where it flows through an oil separator that removes any water as well as oil and solid contaminants. The air then leaves the oil separator and enters the desiccant drying column. The moist air flowing through the column of desiccant becomes progressively drier as the water vapor absorbs into the desiccant material. The desiccant cartridge removes 95% of the water vapor from the pressurized air. Most of the dry air exits the desiccant cartridge through a built-in single check valve and fills the purge volume between the desiccant cartridge and outer shell. Some air exits the desiccant cartridge through the purge orifice near the check valve. The dry air is then moved out of the purge volume through the single check valve and out the delivery port to the first (supply) reservoir of the air system. The air dryer stays in the charge cycle until the air brake system pressure reaches the governor cutout setting.

## AD-9 PURGE CYCLE

The purge cycle of the air dryer begins when the governor causes the compressor to unload (stop compressing air). During compressor unload, the line connecting the governor unloader port to the AD-9 air dryer end cover control port is pressurized. The air pressure causes the air dryer purge valve to open. Contaminants in the end cover sump are expelled immediately when the purge valve opens. At the same time, the air that was traveling through the desiccant cartridge reverses direction and begins to flow to the open purge valve removing oil and solid contaminants collected by the oil separator.

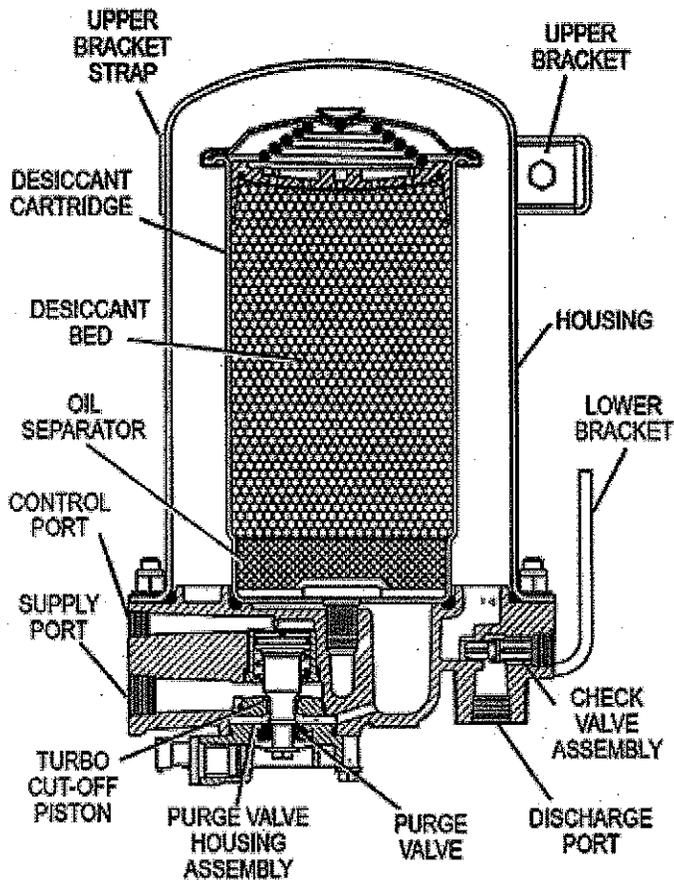
The initial purge and desiccant cartridge decompression happens in just a few seconds and is evidenced by a burst of air at the AD-9 air dryer exhaust.



The flow of dry air through the desiccant cartridge drying bed reactivates the desiccant material by removing the water vapor it previously absorbed. It normally takes 15-30 seconds for the entire purge volume to flow through the desiccant drying bed.

The single check valve in the AD-9 end cover keeps air pressure in the brake system from blowing back into the air dryer during the purge cycle.

The purge valve will not close until air brake system pressure is reduced and the governor signals the compressor to begin compressing air again. That will start the next charge cycle.



## Shop for AD-9 Air Dryers (/category/http-brake-air-dryers-ad9.html)

Need more AD-9 air dryer information? Then, you should have a look at the Bendix AD-9 Service Data Sheet (/instructions/060-AD9ServiceDataSheet.pdf). It's full of detailed AD-9 info and troubleshooting help.

### Having trouble finding what you want?

Tell us what you need or were expecting to find.

Don't forget to include your email address if you'd like a reply from us.

Email Address:  (Optional)

Message:

Please answer this simple math problem for verification purposes.

LEONARDO DA VINCI



Restate the 2016 Change to Minimum Specifications on warranty..

This five year, bumper to bumper provision is inforce for the buses now being delivered.

Warranty start date is August 15 provided the bus has fewer than 3000 miles, if more the start date reverts to actual delivery date.

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## WARRANTY

Chassis warranties shall be ~~the manufacturer's standard, twelve thousand (12,000) miles or twelve (12) months. Any chassis or chassis component warranty extension greater than standard warranty coverage shall be made available to purchasers.~~ For five years, one-hundred thousand miles, bumper to bumper excluding fair wear and tear items. Repairs under \$500 parts and labor may be repaired at the district's maintenance facility with the dealer supplying the parts and the district supplying the labor at the districts discretion. THE IN-SERVICE DATE OF THE CHASSIS WARRANTY SHALL BE STATED AS PART OF THE INVITATION TO BID ON KENTUCKY SCHOOL BUSES. (Normally August 15) One copy of the chassis/body manufacturer's bus warranty and service handbook shall be shipped to each purchasing school district. Pass through warranty shall be handled by the selling dealer without additional charges to the local district. ~~All wiring and electronic modules shall be warranted for five years.~~ All drive train (Engine, Transmission, Differential and Drivelines) warranties shall be a minimum five-year unlimited miles with one hundred (100) percent parts and labor.

**Fleet update 2016**

9,856 Buses	26 Manual Transmissions remaining
310 Type A 3%	0 Gasoline powered
0 Type B 0%	21 Propane
7569 Type C 77%	156 Diesel Electric Hybrids
1977 Type D 20%	8066 listed a Daily
23% are out of depreciation.	1722 listed as spare, 21 Activity

**This year's purchase as of March 31, 2016: 335**

International, 142, 42%

Thomas, 116, 35%

Blue Bird, 73, 22%

Collins, 4, 1%

## 2016 4-Hour Update Notes

We are in a critical driver shortage right now. Some of the Inspectors are driving route on a pretty regular basis. This is not a problem in and of its self but if this is interfering with maintenance then it is a problem. The district Inspector has the primary responsibility of ensuring that the bus is in safe operating condition. The fact that he is now driving does not change that fact.

1. The inspection process is part of a preventative Maintenance program.
  - a. Inspection does not correct the problem it identifies the problem.
  - b. The correction and the identification may be done by different people.
  - c. The Inspector is always responsible.
2. The goal of the Preventative Maintenance Program is to give the school system the safest possible buses.
  - a. Always come back to the primary goal, safety.
  - b. Safety requires that we do quality inspection and correct deficiencies before break downs occur when possible.
  - c. The inspection identifies the problem the maintenance program corrects the problem.
  - d. The two parts work in unison.
3. For this to be possible the system must be set up so that it happens almost automatically. This requires regularly scheduled maintenance.
  - a. Scheduling may be as simple as a calendar or computerized.
  - b. Regardless of how it is done the goal will be the same, inspect the bus monthly around the same time.
  - c. Identify deficiencies.
  - d. The Maintenance function will procure the parts, assign the mechanic and,
  - d. Correct the problem.
4. Prevention is the key.
  - a. Try to discern patterns.
  - b. Set up maintenance intervals based on these patterns and deal with the exceptions.
  - c. There is space allotted on the forms for additional maintenance function that experience has shown is necessary.

5. Only proper planning can ensure that the goal is met. (Old saying, plan your work, work your plan.) Or if you don't work maintenance it will work you.

- a. All maintenance is to be scheduled by mileage.
- b. The old "Summer Service" is obsolete.
- c. The monthly A inspection is the only non-mileage based inspection and is the catch all.
- d. By regulation an A inspection is required each month that school is in session. 702KAR 5:030 Section 2.

6. The purpose of the inspection program is to assist local districts in planning the work. The basis of the inspection program is the service manual.

- a. Maintenance intervals are set by service manuals and federal regulation.
- b. This means that we must use the least common denominator so that we catch all requirements for all buses.
- c. In certain circumstances it is required that the service manual take precedence over the recommended service in the inspectors manual (IE, Transmission service on a late model bus).

7. Each district will need to customize their work plan in order to be effective.

- a. The system must accommodate all size fleets from West point with one to Jefferson with 1266.
- b. Some districts will have inspectors do inspection only; in most cases the inspector will also make the correction. Never the less the two functions are separate.
- c. The plan must take into account district schedules to ensure that all bus receive a monthly inspection.

8. We need to review the types of inspections.

- a. Driver pre-trip. The most over looked. A shop cannot expect to effectively maintain a set of buses without a quality pre-trip inspection program. An inspector sees the bus once a month; a driver sees it every day and operates it under all types of conditions. The driver should find the majority of the defects in the vehicle. If this is not happening in a district then the director needs to be informed and corrections need to be made. Not just because it is the law but because it is safest way to proceed.

b. A Inspection. This is the basic safety inspection required monthly regardless of miles. It is the automatic part that we were talking about. When in doubt: you are almost never wrong doing an A inspection.

1. What if the A inspection turns up multiple short comings that should be clearly visible to the driver? A copy of the A inspection and the driver's pre-trip should be stapled together and sent to the director, the driver may need additional training.
2. Does the 45 minutes for this inspection include repairs? Answer. It includes nothing. Not even advanced diagnostics time.
3. This inspection simply identifies a possible problem. From there it moves through the shop as a regular job.

When a defect is detected write it up.

B. B inspection. This inspection is an A inspection plus an oil change and lube.

1. 6000 miles is default. If they extend beyond that, they need to have an oil analyses to ensure that that they are not doing damage to the engine.
2. The hour allotted does not include repair times.
3. It is still an A inspection.

C. C inspection. An A inspection plus a tune up. This is for Gasoline powered buses only.

1. There are only four gasoline powered buses remaining on the inventory.
2. Most garages will not use this form. When 12,000 miles elapses then the bus will need a B inspection.
3. It is still an A inspection.

D. D inspection. An A inspection plus a Transmission service when applicable. In addition you will put the bus in as close to new condition as possible considering its age. Rear end service, clean engine, tightens U bolts, thoroughly inspect brakes, Check for frame cracks and loose bolts. Check routing wiring and air lines. King pin play and front wheel bearing run out, repack wheel bearings when applicable. Correct oil leaks, air cleaner, test coolant...

1. Any deferred maintenance should be done at this time. (Minor dents)
2. Reinforce the Applicability of the maintenance. (Buses with TransSynd ATF should not have the fluid changed for 100,000 miles; Wet hubs cannot be repacked.... Etc.)
3. It is still an A inspection.

9. All inspections will generate a work order. When possible the inspection should be attached to the work order. The first Line will say Preventive Maintenance Inspection or A inspection.

1. After the inspection add the deficiencies to the work order.
2. As the deficiencies are worked off the mechanic performing the service should initial the line that lists when service he has performed.
3. Only when all corrections are made does the inspector initial the block "Insp.Initials" releasing the bus.
4. Until the Inspector initials the work order as complete or deferred the bus cannot run.

10. No work order didn't happen.

1. Reinforce to importance of using a work order for all maintenance operations.
2. Best way to protect yourself and the district.

11. All paper work related to a bus should be kept in a file folder for that bus.

1. This includes AFC's, recalls, inspections, driver pre-trips that generate a work order.
2. When a job is done at a dealer, it still needs a district work order when it returns.
  - a. Fill out the section "Outside Garage Service"
  - b. The local Inspector is still responsible for the bus.
  - c. The inspector should look over the work and then release it by initialing it.
  - d. Recalls, AFC's need be attached to a work order correcting the condition.
3. Remember the purpose of the file folder is to document maintenance in a way that can be defended in a court of law. It is therefore important to keep complete records.
  - a. Make sure description of the operation is sufficiently detailed.
  - b. Time must be accounted for.
  - c. Parts and expendable supplies must be accounted for.
  - d. When an electronic maintenance program is used the same things must be accounted for.
  - e. Each work order should have a unique WO number. This can be as simple as the date/1. (IE 050813-1, 050813-2....) or it can be assigned by the computer.
  - f. Hours should be totaled and labor charge computed.

12. Why do we do all this? It is to protect yourself, your district and most important for safety.

- a. Maintenance management requires that you track the condition of the buses.
- b. It is not possible to do this without accurate records.
- c. After an accident the record is all you have to stand on.
- d. Accountants have a habit of asking questions.
- e. You will be held responsible whether or not you have records.
- f. The law says that if you are doing what you have been instructed to do as a normal part of your employment then the employer incurs the responsibility.



# Inspector Instructor Update 2016

School Bus Entrance Doors



# Overview

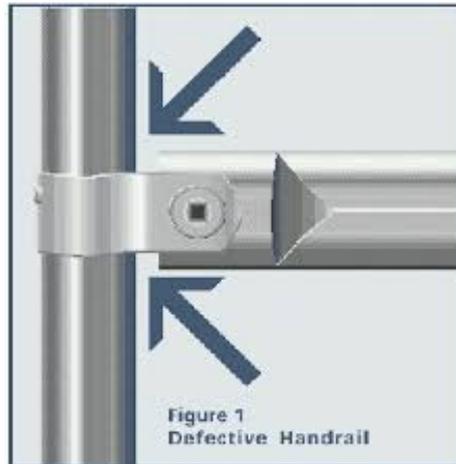
- ▶ Concerns of entry door and handrail safety
- ▶ Handrails and stepwell area
- ▶ Types of doors and operation types
- ▶ Outward opening air door visual inspection
- ▶ Air system inspection and adjustment



# Reflections of the Past



- Between 1991 and 1997 America experienced eight student fatalities as a result of students becoming trapped in handrails while exiting their school bus, according to the AP News Archive.
- The school bus industry responded by a voluntary recall of 160,000 school buses where a modification to the handrail was needed to prevent this tragedy from reoccurring.
- Fortunately, these types of dragging incidents have been eliminated through better design and awareness training. However, recent dragging incidents have drawn attention back to the issues surrounding school bus design and driver training.



# Reported Events

- ❖ The recent school bus dragging incidents have raised concern among parents, school officials, citizens, and the school bus industry.
- ❖ Several students have become trapped in the service door while exiting the bus in recent years or have fallen out the service door.
- ❖ The first media reported incident occurred in December of 1998.
- ❖ From 2004-2015, in 18 states, there were 31 reported instances where students were shut in the service door.
- ❖ Two of which were in the state of Kentucky.



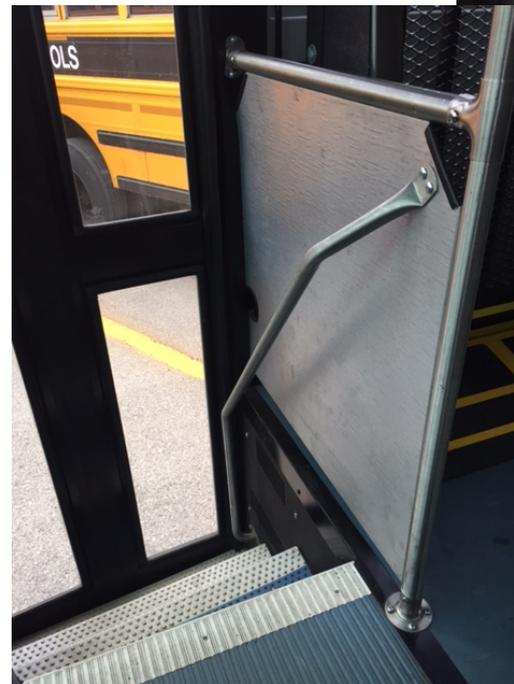
# Step Well Area

- ▶ The step well is the most hazardous area when entering or exiting a school bus.
- ▶ Anytime one goes above or below a level plain a hazard is present.
- ▶ Inspect step well area for weak or rusted out areas.
- ▶ Check for missing, damaged or loose step treads, flooring or fasteners which could result in a trip or snag hazard.



# Handrail

- ▶ Handrails are provided in the step well area to aid in ascending and descending of steps.
- ▶ Inspect handrails, hardware, and mounting at ALL inspections.
- ▶ Perform handrail test on ALL inspections and record (Pass or Fail) on inspection sheet or work order.
- ▶ If handrail test fails bus is out of service until proper repair is made.



# Entry Door Types

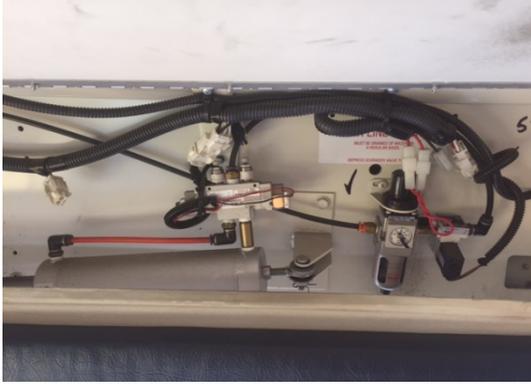
Jackknife



Outward Opening



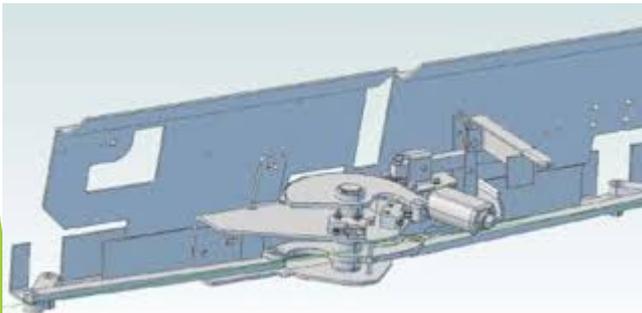
# Entry Door Operation Types



Air Door System



Manual Door System



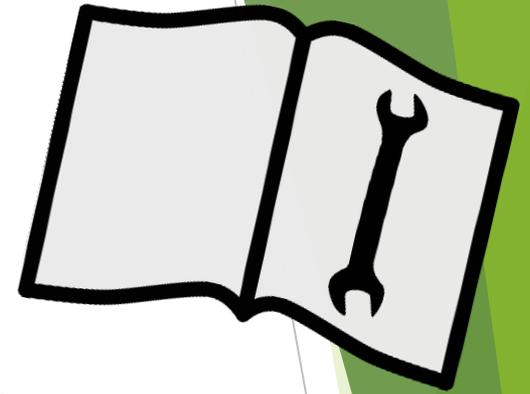
Electric Door System

# Why Entrance Door Inspection & Adjustment Important

- ▶ An entrance door operates 50 to over 150 cycles daily depending on route.
- ▶ Entrance door adjustment is critical for proper performance and life of the entrance door components.
- ▶ Door adjustment critical for proper operation of the child reminder system operation.
- ▶ There are roughly 15-20 different years, makes, models and body types in our state fleet.

# Follow Manufactures Specifications

- ▶ ALWAYS refer to service manuals for door adjustment and maintenance procedures. Also visit the bus manufactures website if a manual is not available.
- ▶ Always use manuals (electronic or hardcopy) for your protection and to decrease your liability.
- ▶ Absolutely NO modifications to ANY part of the entry door or alter manufacturers adjustment what so ever.
- ▶ Any part of the door system that has a deficiency (air, mechanical, or electrical) shall be taken out of service until repair is completed.



# Air Door Visual Inspection Exterior

- ▶ Inspect glass for cracks. No decals, no tint, and for correct glass.
- ▶ Open & close door by hand. Check for binding or excessive movement.
- ▶ Door leaves should not open to wide or narrow. 90 degrees Ideal.
- ▶ Grab handle loose or missing.
- ▶ Check door leaf timing. Rear leaf closes slightly before front for seal overlap.
- ▶ Check "Brake Over". The last few inches of door closure where door snaps closed.



# Air Door Visual Inspection Exterior

- ▶ Inspect door hinges, screws and rivets.
- ▶ Door bearings or bushings, upper and lower for wear or missing.
- ▶ Door leaves dragging on bottom step.
- ▶ Door seals and weather stripping being loose, damaged or missing.
- ▶ Rusted out door frame or sheet metal.
- ▶ Cracked door frames or welds.



# Air Door Visual Inspection Interior

- ▶ A panel may need removed to better access air door cylinder, linkage, wiring or other components.
- ▶ Broken, missing, or loose air door cylinder cover.
- ▶ Loose or missing bump pad.
- ▶ Missing operation or warning decals
- ▶ Air door cylinder compartment is NOT a storage area.
- ▶ Door linkage, rods, brackets, levers, turnbuckles-bent broken or missing.
- ▶ Washers, cotter keys, hair pins, jam nuts, clevis and pins.
- ▶ Air lines and/or wiring rubbing on door linkage moving parts.

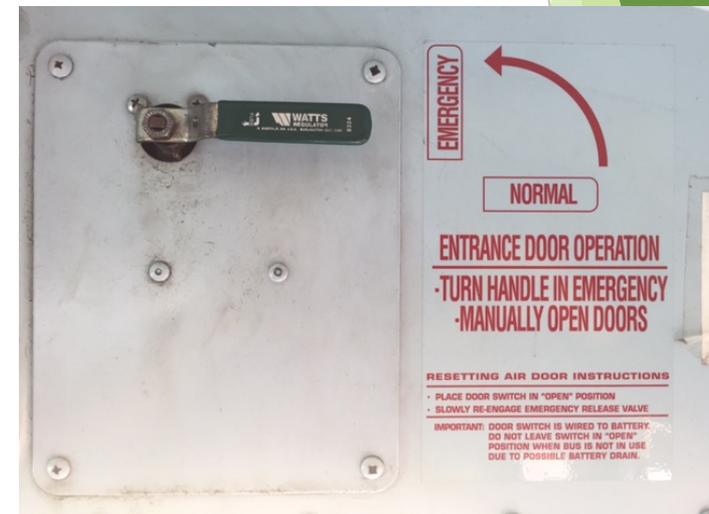


# Air System Inspection

- ▶ Ensure air system is at 120 psi when checking door operation.
- ▶ Systems operate from 60-120 psi.
- ▶ Door switch operation (3 positions). 1-closed 2-stop arm(door closed) 3-door open.
- ▶ Open and close door note air door speed and adjust as needed.
- ▶ With door closed give the forward door leaf a hard push about  $\frac{3}{4}$  from the top. If little effort is needed to push door open a pressure or mechanical adjustment may be needed.
- ▶ Listen for air leaks at lines, fitting, air regulator, and water separator (drain if needed).

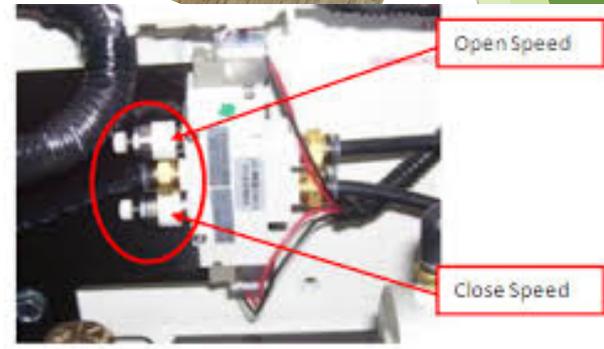
# Air System Inspection cont.

- ▶ With door closed (air on door) check “Emergency release” operation, door should open with little effort by hand.
- ▶ Check protection valve operation (should not operate below 55-60 psi)  
\*\*May need to drain auxiliary tank.
- ▶ With ignition in “off” position air should release from air door and push open with little effort.
- ▶ Air system maintenance (air dryer) with help prolong life of air door system.



# Air System Adjustment

- ▶ Make mechanical adjustments first.
- ▶ Verify air pressure then adjust working pressure. May need known good test gauge to check both.
- ▶ Adjust opening and closing speeds.



# Summary

- ▶ Entrance door adjustments are critical for proper performance and life of the entrance door components.
- ▶ Perform preventative maintenance Not progressive maintenance.
- ▶ Always make your PM system grown with your fleet. Make improvements and adjustments for duty cycle and refer to all manuals for recommendations.



# Information



[thomasbusonline.com](http://thomasbusonline.com)



[blue-bird.com](http://blue-bird.com)



[icbus.com](http://icbus.com)

A **NAVISTAR** COMPANY

# Questions???



# Diesel Exhaust Fluid (DEF) Q & A

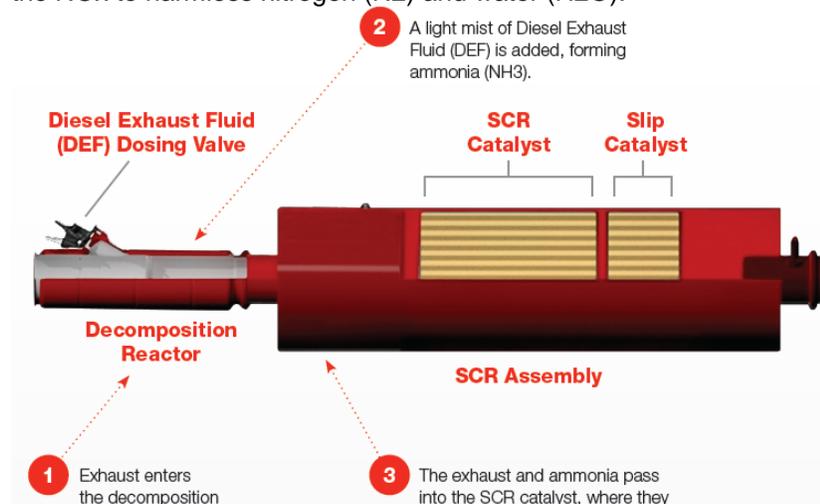
## SCR: The Leading Technology to Meet 2010 Emission Regulations

### Q. What is Selective Catalytic Reduction (SCR)?

A. SCR is a technology that uses a urea based diesel exhaust fluid (DEF) and a catalytic converter to significantly reduce oxides of nitrogen (NOx) emissions. SCR is the leading technology being used to meet 2010 emission regulations.

### Q. How does an SCR system work?

A. The purpose of the SCR system is to reduce levels of NOx (oxides of nitrogen emitted from engines) that are harmful to our health and the environment. SCR is the aftertreatment technology that treats exhaust gas downstream of the engine. Small quantities of diesel exhaust fluid (DEF) are injected into the exhaust upstream of a catalyst, where it vaporizes and decomposes to form ammonia and carbon dioxide. The ammonia (NH<sub>3</sub>) is the desired product which in conjunction to the SCR catalyst, converts the NOx to harmless nitrogen (N<sub>2</sub>) and water (H<sub>2</sub>O).



## **Q. What are the advantages for the fleet in using SCR technology?**

**A.** Cummins 2010 engines will deliver what customers need in these challenging economic times. Cummins 2010 heavy duty engines utilizing SCR will provide substantial fuel economy improvement, up to 5%. SCR catalyst technology allows much greater NOx conversion efficiency, thereby allowing the engine to be fully optimized, which contributes to this fuel economy improvement. Another benefit to the improved fuel consumption is less frequent Diesel Particulate Filter (DPF) cleanout, thereby further reducing costs.

## **Q. What experience does Cummins have with SCR systems?**

**A.** SCR technology is not new to Cummins. In 2006, Cummins launched its midrange engine certified to the Euro 4 standard using SCR for commercial vehicle applications in Europe. Cummins has built and shipped over 50,000 SCR engines to date. Cummins Emission Solutions has built and shipped over 250,000 SCR systems. Cummins Filtration has provided DEF, previously marketed under the Stableguard name, to the stationary market for over 5 years.

## **DEF: Properties & Handling Guidelines**

### **Q. What is Diesel Exhaust Fluid (DEF)?**

**A.** DEF is the reactant necessary for the functionality of the SCR system. It is a carefully blended aqueous urea solution of 32.5% high purity urea and 67.5% deionized water.

### **Q. What is urea?**

**A.** Urea is a compound of nitrogen that turns to ammonia when heated. It is used in a variety of industries, including as a fertilizer in agriculture.

### **Q. How will I know that the DEF product I purchase will work?**

**A.** The DEF you purchase should state and display the certification of the American Petroleum Institute (API), German Institute of Standardization DIN70700, the International Organization for Standardization ISO 22241-1, and meet AUS – 32 specifications. This will ensure the proper purity and concentration (32.5%) of urea. For more information on these specifications, visit [www.iso.org](http://www.iso.org).

### **Q. Can I make DEF myself?**

**A.** Cummins Filtration does not recommend customers make DEF themselves. DEF has strict requirements for maintaining concentration and purity of ingredients that is critical to the proper functioning and longevity of the SCR system. Cummins and other OEMs require that DEF used with their SCR systems meet all ISO22241 specifications as well as API certification requirements. It is recommended that end users purchase certified DEF and avoid blending it themselves. For more information about the quality standards, refer to ISO22241 which details specifications for DEF quality, handling, testing, transportation storage, and refilling.

### **Q. What is API Certification?**

**A.** API Certification is a voluntary program established by the American Petroleum Institute (API) which certifies and monitors that diesel exhaust fluid meets ISO specifications. The program was launched in March 2009. Cummins Filtration DEF currently meets ISO specification and is also API certified.

**Q. Is the 32.5% urea solution critical?**

A. Yes, The 32.5% urea concentration is the ideal solution as it provides the lowest freeze point. Also, SCR systems will be calibrated to the 32.5%, so that optimum NOx will be reduced during operation.

**Q. What is the freeze point of DEF?**

A. A 32.5% solution of DEF will begin to crystallize and freeze at 12 deg F (-11 deg C). At 32.5%, both the urea and water will freeze at the same rate, ensuring that as it thaws, the fluid does not become diluted, or over concentrated. The freezing and unthawing of DEF will not cause degradation of the product.

**Q. Does DEF expand when frozen?**

A. Yes, DEF expands by approximately 7% when frozen. DEF packaging and tanks are designed to allow for expansion.

**Q. How much does DEF weigh?**

A. DEF weighs approximately 9 pounds per gallon.

**Q. How do I keep the DEF from freezing? What happens if the DEF freezes in the tank on the vehicle?**

A. During vehicle operation, SCR systems are designed to provide heating for the DEF tank and supply lines. If DEF freezes when the vehicle is shut down, start up and normal operation of the vehicle will not be inhibited. The SCR heating system is designed to quickly return the DEF to liquid form and the operation of the vehicle will not be impacted. The freezing and unthawing of DEF will not cause degradation of the product.

**Q. Can an anti-gelling or freeze point improver be added to the DEF to prevent it from freezing?**

A. No. While an additive could improve freeze point of the mixture, the 32.5% solution is very specific to providing NOx reducing properties. Any further blending or adjusting of the DEF mixture will impede its ability to perform correctly and may cause damage to the SCR components. Additives of any type are not approved for use in DEF today. If the ISO standards should change to allow antifreeze additives, Cummins Filtration will ensure our product continues to meet ISO requirements.

**Q. Are there special storage requirements for DEF?**

A. DEF should be stored in a cool, dry, well-ventilated area, out of direct sunlight. While the optimum storage temperature is up to 77 deg F (25 deg C), temporary exposure to higher temperatures has little to no impact on the quality of DEF.

**Q. What is the shelf life of DEF?**

A. The shelf life of DEF is a function of ambient storage temperature. DEF will degrade over time depending on temperature and exposure to sun light. Expectations for shelf life as defined by ISO Spec 22241-3 are the minimum expectations for shelf life when stored at constant temperatures. If stored between 10 and 90 deg F, shelf life will easily be one year. If the maximum temperature does not exceed approximately 75 deg F for an extended period of time, the shelf life will be two years.

**Q. How can I determine when the DEF I have purchased was manufactured?**

**A.** All DEF packages will have a date code located somewhere on the product. The date code will allow you determine the date the DEF was made. 1 gallon containers will have a laser code imprinted on the bottle. 2.5 and 5 gallon containers have a small date code label applied to the bottle. Drum and totes will have a label applied to either the top or side of the product.

The first digit of the date code represents the DEF batch number and the next 6 digits reflect the date that the batch was filled.



**Date Code Imprint**



**Date Code Label**

**Q. What impact will exposure to high temperatures for an extended period of time have on DEF?**

**A.** While DEF exposure to constant, high storage temperature may have some impact on shelf life, this should not concern operators. Extensive testing in very hot climates has been conducted confirming that DEF stored at a constant temperature of 95 deg F had a shelf life of over 6 months.

**Q. Should I be concerned about handling DEF?**

**A.** No. DEF is a nontoxic, nonpolluting, non-hazardous and nonflammable solution. It is stable, colorless, and meets accepted international standards for purity and composition. DEF is safe to handle and store and poses no serious risk to humans, animals, equipment or the environment when handled properly. MSDS sheets are currently available on [cumminsfiltration.com](http://cumminsfiltration.com).

**Q. What should I do if I spill DEF?**

**A.** If DEF is spilled, contain the spilled liquid and absorb it with an inert, non-combustible absorbent material, such as sand. Shovel the material into a suitable container for disposal. Spills into a drain should be avoided. If spilled into a drain, flush thoroughly with water. For significant quantities, contact local authorities for proper disposal procedures. If DEF is spilled on your vehicle, rinse with water.

**Q. What happens if I ingest DEF?**

A. DEF should never be ingested. If it is ingested, do not induce vomiting. A physician should be consulted if you begin experience any symptoms.

**Q. What happens if I inhale DEF?**

A. While pumping DEF will not cause significant exposure, inhalation may occur if exposed to DEF in a closed area and/ of if DEF is misted into the air. Under normal conditions of use, harmful effects are not expected.

If you inhale DEF, you should move to an area with fresh air and obtain medical attention if symptoms, such as irritation to nose and throat, develop or persist.

**Q. Does DEF smell?**

A. DEF may have a slightly pungent odor similar to that of ammonia, however it is completely harmless.

**Q. Is DEF corrosive?**

A. DEF is corrosive to copper and brass as well as other materials. Only approved materials, such as high density polyethylene (HDPE), will be used in the DEF tank, packaging and dispensing equipment.

**Q. Will DEF evaporate and what happens if it does?**

A. Because DEF is comprised of 67.5% water, evaporation will occur over time. However, Cummins has built and shipped over 50,000 SCR equipped engines and Cummins Emissions Solutions has built and shipped over 250,000 SCR systems. These SCR engines and systems are operating throughout Europe, including the warmer climates of Spain, Greece and even into the Middle East with no problems associated with evaporation. In addition, our field test vehicles across the US in high temperature locations have not yielded any significant amounts of evaporation that would impede engine performance or operation. As a preventative measure, it is important to keep the cap of the DEF tank and storage containers securely closed. If the urea concentration does become more or less than recommended over time, the DEF tank should be drained. Cummins Filtration will offer equipment to test the urea concentration of DEF.

**Q. What measures have been put in place to prevent diesel from being pumped into the DEF tank?**

A. The standard nozzle diameter for dispensing DEF has been designed at 19mm versus the standard diesel fuel nozzle diameter which is 22mm. In addition, the tank cap for the DEF tank will be blue to further differentiation from the diesel tank.

**Q. What happens if a non-DEF substance is accidentally entered into the DEF tank?**

A. The SCR system will recognize solutions other than DEF, and the DEF indicator light will appear notifying the driver. Depending on the level of contamination in the tank, the vehicle may require servicing.

## **DEF Usage**

### **Q. How much DEF will a truck consume?**

A. DEF consumption is expected to be approximately 2% of fuel consumption, depending on vehicle operation, duty cycle, geography, load ratings, etc.

### **Q. What is the number of miles a truck can expect to travel on one gallon of DEF?**

A. DEF consumption is directly related to fuel consumption. A truck averaging 6 MPG can expect to go approximately 300 miles on one gallon of DEF.

### **Q. How can an operator determine how much DEF they will need/use?**

A. DEF consumption will be approximately 2% of the diesel fuel consumed. Another way to consider it is that DEF will be consumed on a 50 to 1 ratio with diesel. (For every 50 gallons of diesel fuel burned, you will use 1 gallon of DEF). If you know the average fuel consumption of a vehicle, you can easily calculate the amount of DEF that will be used.

Annual miles for average truck = 50,000 miles

MPG for average truck = 8 mpg

50,000 miles / 8 mpg = 6,250 gallons diesel fuel per year

DEF usage @ 2% of fuel consumption = 125 gallons of DEF / year

125 gallons / 10 gallon tank (average size) = 13 DEF fill-ups / year

### **Example...Heavy duty**

Annual Miles per Vehicle	Annual Total Miles	Average MPG per Truck	Average DEF Tank Size (on vehicle)	Annual Fuel Usage (gallons)	Consumption per Gallon of fuel	Estimated Annual DEF Consumption	DEF Fill-Ups per Year
120,000	120,000	6	20	20,000	2%	400	20

Annual miles for average truck = 120,000 miles

MPG for average truck = 6 mpg

120,000 miles / 6 mpg = 20,000 gallons diesel fuel per year

DEF usage @ 2% of fuel consumption = 400 gallons of DEF / year

400 gallons / 20 gallon tank (average size) = 20 DEF fill-ups / year

### **Example...Medium Duty**

Annual Miles per Vehicle	Annual Total Miles	Average MPG per Truck	Average DEF Tank Size (on vehicle)	Annual Fuel Usage (gallons)	Consumption per Gallon of fuel	Estimated Annual DEF Consumption	DEF Fill-Ups per Year
50,000	50,000	8	10	6,250	2%	125	13

\*\*To calculate your estimated DEF usage visit online usage calculator, [on cumminsfiltration.com](http://cumminsfiltration.com).

### **Q. Is the DEF dose rate the same for all engine manufacturers?**

A. The DEF dose rate will vary slightly amongst engine manufacturers. While most engines will have a dose rate of 2% of diesel fuel consumed, the dose rate will range from 1% to 3%.

**Q. What happens if the vehicle runs out of DEF?**

A. Vehicles that use DEF will have indicators on the dash that will alert the driver of the quantity of DEF on board. A gauge similar to a fuel gauge will indicate the level of DEF. There will be a DEF low level warning lamp that will illuminate when DEF is low. If the vehicle is operated such that one would run completely out of DEF, vehicle power will be reduced enough to encourage the operator to refill the DEF tank. Once the tank has been refilled the engine will resume normal power levels.

**Q. Is any maintenance required on the DEF Dosing Unit Filter?**

A. The DEF Dosing Unit Filter will need to be replaced about every 200k miles as part of routine maintenance.

**Q. Will Cummins Filtration supply the DEF Dosing Unit Filter?**

A. The DEF Dosing Unit Filter is part of the DEF dosing system and will be available

**Q. On SCR equipped vehicles, what changes will be expected for lube filter service intervals?**

A. There will be no changes to the lube filter service intervals on SCR equipped vehicles. The SCR process impacts the exhaust emissions after they are produced by the engine.

**DEF Product Options & Availability**

**Q. What package sizes will be available? When?**

A. Cummins Filtration has offered DEF since 2003 in 4 sizes: 55 gal drum, 275 gal disposable tote, 330 gal tote, and bulk. Cummins Filtration recently expanded their DEF product line to include smaller packaging options, including 1, 2.5, and 5 gallon containers.

**Q. Can I fill my own bottles of DEF?**

A. Cummins Filtration does not recommend that customers fill bottles of DEF for use in SCR systems due to the strict ISO requirements for maintaining DEF purity (free of contamination). For customers that do require filling, the ISO 22241 specifications provide detailed information regarding DEF quality, handling, testing, transportation storage, and refilling.

**Q. What does IBC stand for?**

A. Intermediate Bulk Containers (IBC) are all containers larger than a 55 gallon (207L) drums, and smaller than a tanker.

**Q. Can totes be returned and refilled after use?**

A. The 330 gallon tote is a returnable tote. Empty tote returns should be made to the tote vendor rather than Cummins Filtration. For information on returning totes, please call 1- 800-608-8587.

The 275 gallon tote is disposable and primarily used for refilling of the larger plastic refillable tote. However, if customers do utilize the 275 gallon tote the transfer equipment must be DEF compatible and completely free of contaminants. Stainless steel and high density polyethylene plastic are DEF compatible materials. For a complete list of DEF compatible materials, see ISO22241. If required, the DEF dispensing equipment can be utilized with the 275 gallon tote when the dispensing equipment is supported by an appropriate structure.

**Q. Where will DEF be available?**

A. In North America, all major truck stops have committed to carrying and selling DEF. The initial supply of DEF will most likely be in packaged containers while bulk dispensing options are being installed. In addition, Cummins Filtration is making DEF available to thousands of distributors, dealers and other outlets.

**Q. Will Cummins Filtration offer dispensing options?**

A. Cummins Filtration currently offers several dispensing equipment options, including electric and air operated pumps for use with drums, totes as well as a flow meter. For more information, see our dispensing kits brochure (LT36135) available on [cumminsfiltration.com](http://cumminsfiltration.com).

**Q. Will Cummins Filtration offer equipment to test the urea concentration of DEF?**

A. For several years, Cummins Filtration has offered field testing tools for coolant products. Similar products will be made available for DEF.

**Q. What price can be expected for DEF?**

A. Current pricing for DEF centers on 'niche' markets which itself drives very low volume usage and premium pricing. This is not a realistic indication of where the industry will be in 1 year, or even 6 months. We agree with current predictions that at the pump DEF pricing will be at or below the price of diesel fuel and is forecasted to be in the \$2 - \$3 range.

**Q. Is there an Environmental Hazardous Charge (EHC) that applies to DEF shipments received in Ontario?**

A. There is no EHC applied to DEF at this time.

To find your nearest retailer of Fleetguard products, visit [cumminsfiltration.com/wrl](http://cumminsfiltration.com/wrl).



For more information, visit  
[cumminsfiltration.com](http://cumminsfiltration.com)

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# Inspector Instructor Update 2015

## Slack Adjuster Basics



# Purpose & Scope

- The purpose of this seminar is to provide the inspector and technician with guidelines for maintenance and operation of manual and automatic slack adjusters on Kentucky school buses. Many of the procedures are an extension of the definition of the manufacture's service manuals. There is no intent to deviate from the recommend manufacture's practices and procedures, but rather to highlight and expand those procedures.
- Always utilize the maintenance and safety procedures described in the manufacture's manuals. Any time there is conflict with this seminar and the manufacture's manuals, the manufacture's manual shall prevail.

# OUR GOAL

- To provide Kentucky school districts with the safest and most efficient transportation available.



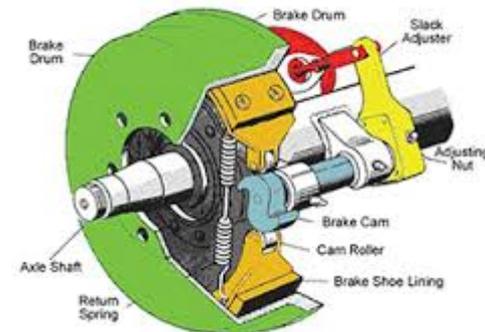
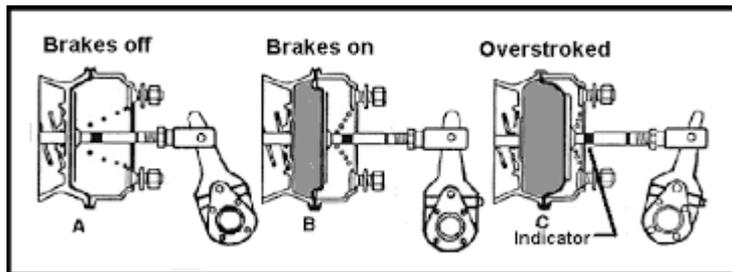
# Today's Topics

- Manual Slack Adjusters
- Automatic Slack Adjusters
  - Bendix ASA-5
  - Haldex AA-1
  - Haldex S-ABA
- Haldex S-ABA Issues
- Question & Answer



# What Are Slack Adjusters?

- The slack adjuster is the link between a brake chamber or actuator and the S-Cam brake camshaft. Its arm is fastened to the push rod with a yoke and its spline installed on the foundation brake cam shaft. It transforms and multiplies the force developed by the chamber into torque which applies the brakes via the camshaft.



# Slack Adjuster Terms

- At Rest: When service brakes or park brake are not applied & system pressure is at 90-100 psi.
- Free Stroke: The amount of movement of the adjuster arm required to move the brake shoes against the drum. If free stroke is good, but applied stroke is too long there is probably a problem with the foundation brakes.
- Applied Stroke: Measurement made from the face of the brake chamber to the center of the slack clevis pin, at 90-100 psi. with park brake released.
- Maximum Stroke: Farthest distance at which brake chamber rod can travel before brakes need adjusted.
- AL Factor: A measurement of leverage which is obtained by multiplying the area of the brake chamber by the effective length of the slack adjuster.

# Types Of Slack Adjusters

## MANUAL

- To maintain proper lining to drum clearance this adjuster must be physically adjusted. Adjust at each inspection Or 1,000 Miles.



## AUTOMATIC

- Automatically adjusts for brake lining wear. No periodic physical adjustment required. Check brake stroke at PM's.



## Brake Performance Check (On lot Or Road Test)

- 1) Low Pedal
- 2) Vibrating Pedal
- 3) Spongy Or Springy Pedal
- 4) Hard Pedal
- 5) Drag
- 6) Fade
- 7) Pull
- 8) Grab
- 9) Squeal or Abnormal noise
- 10) Lock
- 11) Sluggish Response

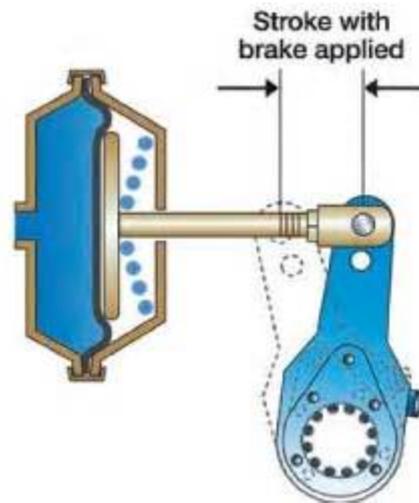


# Brake Performance Check

- ✓ Ensure slack clevis pins move freely & lube if needed.
- ✓ Correct slack clevis pin(s) (size & length). Bushing in slack not worn or missing.
- ✓ Correct slack length (5 ½") (Multi-hole slack application.)
- ✓ Ensure brake chamber rod is not too far through clevis.
- ✓ Check all slack adjuster hardware for looseness, missing parts, incorrect parts or damage. (Snap rings, s-cam washers, cotter pins, clevis, clevis pins, mounting hardware)
- ✓ Roll wheel forward & backward it must roll freely. (There may be a broken return spring or fallen out brake roller.)
- ✓ Check free stroke.
- ✓ Adjust front & rear brakes. (Manual slacks only)
- ✓ Check front & rear brake adjustment. (Auto slacks only)

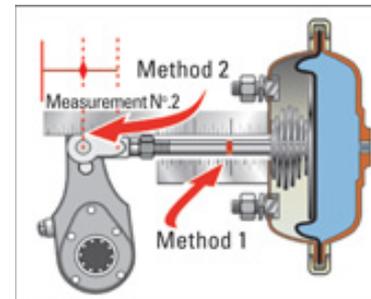
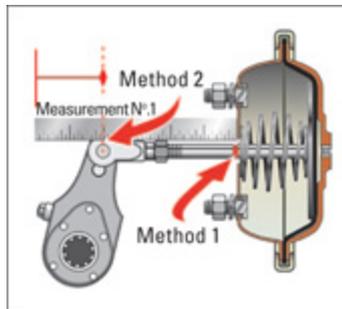
# Manual Slack Adjusters

- To compensate for the gradual wear on the brake lining, manual slack adjusters are equipped with an adjusting mechanism, which provides a means of adjusting for brake lining wear.
- The most efficient braking action is obtained when the slack adjuster arm travel is approximately 90 degrees and in the recommended range of the chamber.
- The last half of an air chamber stroke is less efficient than the first half. It is important that brake adjustments are made as often as necessary.



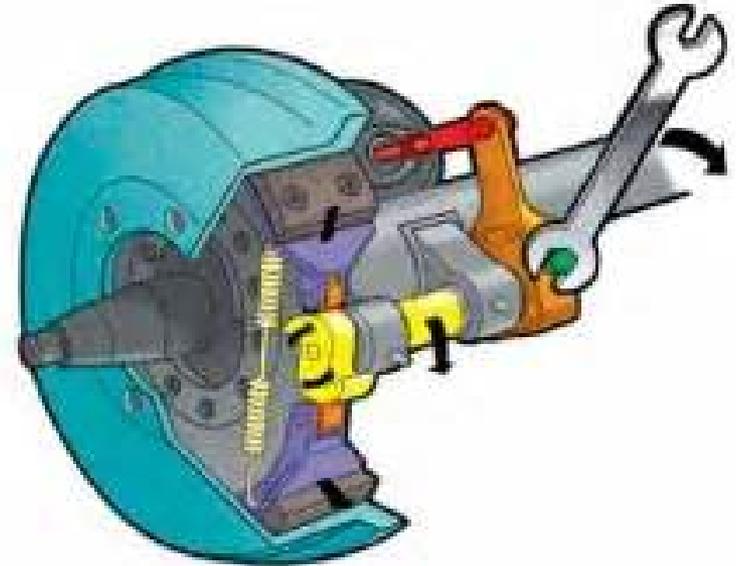
# Manual Slack Adjuster Testing

- Check free stroke with brakes released and brake pressure at 90 psi. Free stroke should be approximately 1/2" to 5/8" in. If free stroke greater than desired length adjust brakes or a foundation brake problem may exist.
- Slack adjuster should move freely without binding or dragging.
- Inspect slack adjuster hardware for being missing, damaged, worn or incorrect.
  - Clevis pins move freely, slack clevis, clevis pin bushings, cotter pins.
  - S-cam snap rings, s-cam washers, Broken grease zerk.
  - Adjusting hex lock



# Manual Slack Adjuster Adjustment Procedure

- 1) Raise and support vehicle. Release park brake.
- 2) Insure air pressure is a minimum 90-100 psi.
- 3) Push in adjusting hex lock, rotate adjusting hex until brake linings contact drum.
- 4) Reverse adjusting hex approximately  $\frac{1}{4}$  turn. Rotate wheel to insure little or no drag is present. Be sure adjusting hex lock return to lock position.
- 5) Brake stroke should be as short as possible without brakes dragging.
- 6) Test drive & check brake performance. (Outlined earlier)



# Manual Slack Adjusters

## Notes

- Have been installed on Kentucky school buses for several years. Manual slack adjusters ended in 1990.
- Adjust manual slack adjusters each inspection or 1,000 miles.
- Can upgrade to an automatic slack adjuster if desired. Upgrade both axles. Verify correct application.



# Automatic Slack Adjusters

## Overview

- Automatic slack adjusters perform the same function as the standard unit, except that it automatically adjusts for lining wear.
- The automatic slack adjuster **DOES NOT** require periodic manual adjustment, but does provide for manual adjustment.

## 3 Automatic Slack Models

- Bendix ASA-5
- Haldex AA-1
- Haldex S-ABA

# Bendix ASA-5

## Overview

- Bendix ASA-5 Installed on school Kentucky school buses from 1991-99.
- If small clevis pin is missing in link rod or link rod is broken or damaged adjustment will not hold.
- A brake chamber rod to long could hit slack.
- When replacing slack adjuster replace clevis.
- Brake stroke is rated by chamber size, not slack type or length.
- Test slack adjusters on all brake jobs.
- Never use air tools on adjusting hex.
- DO NOT periodically adjust Automatic Slacks if past recommended stroke, test slack, or you have a foundation brake issue.
- Can upgrade to Haldex AA-1 Or S-ABA slack adjuster if desired. Upgrade both axles. Verify correct application.



## Bendix ASA-5 Torque Testing

- 1) Raise and support vehicle.  
Release park brake.
- 2) Insure air pressure is a  
minimum 90-100 psi.
- 3) Set a torque wrench to 15  
ft. lbs.
- 4) Attach torque wrench to  
the hex extension. Rotate  
clockwise. If the hex did not  
rotate OR there is less than  
15 ft. lbs. the adjuster must  
be replaced.
- 5) If the hex rotates clockwise  
and has a counterclockwise  
torque greater than 15 ft.  
lbs. the adjuster is operating  
normally.



## Bendix ASA-5 Ratchet Testing

- 1) Back off hex extension  $\frac{1}{2}$ -1 turn counterclockwise.
- 2) Have assistant apply brakes several times and watch the hex to rotate clockwise. Or mark hex & adjuster housing, apply brakes several times, be sure marks do not line up.
- 3) Replace slack if torque test fails.
- 4) Re-adjust brakes when testing complete.

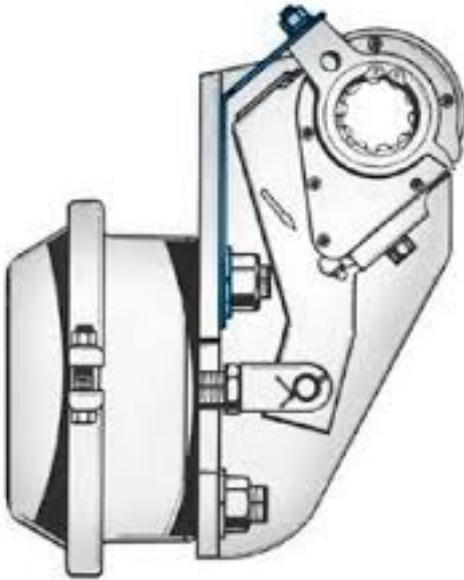


## Haldex AA-1 Overview

- Installed on Kentucky schools buses from 2000-11.
- Require anchor brackets & hardware for installation.
- Correct hardware installation & slack set-up critical for proper slack adjuster operation.
- Different front & rear hardware configurations.
- Offset, angled, & straight-armed configurations.
- **DOES NOT** require periodic manual adjustment. **CHECK** brake adjustment at inspections.
- Never use air tools on adjustment hex.
- Can upgrade to Haldex S-ABA slack adjuster if desired. Upgrade both axles. Verify correct application.
- Test slack adjusters on all brake jobs.
- Refer to Haldex AA-1 service manual for installation & set up.



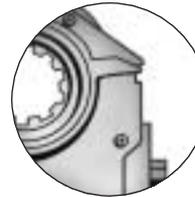
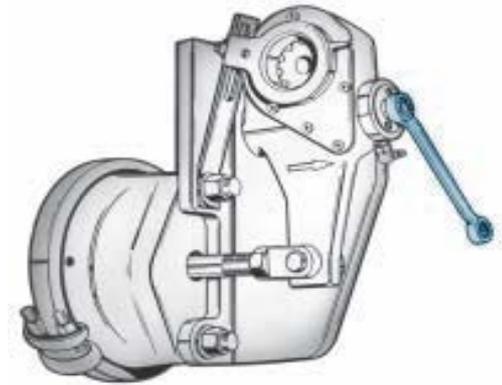
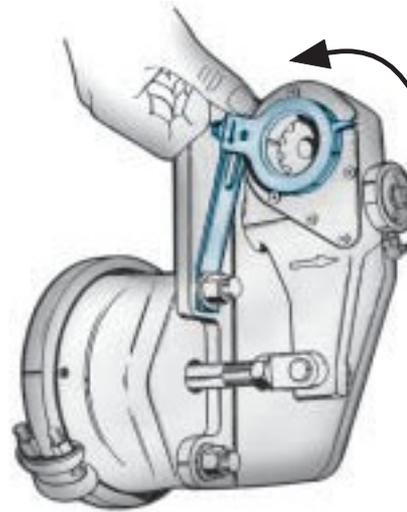
## Haldex AA-1 Visual & Operational Checks



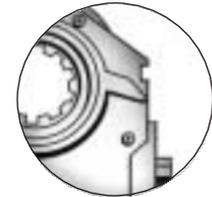
- Inspect brackets & control arms for looseness, damage or missing parts.
- Verify control arm does not move freely. (Off Vehicle Inspection)
- Verify Installation Indicator pointer is in Indicator notch.
  - With brakes released & air at 90-100 psi.
- Clevis pin should move freely & cotter pin installed.
- Chamber rod length through clevis (could hit slack).
- Slack adjuster should move freely without binding or dragging.
- Measure free stroke between 3/8"-3/4". At 90-100 psi. with park brake released.

## Haldex AA-1 Testing

1. Ensure brake psi. is at 90-100psi.
2. Check that push rod is fully retracted.
3. Manually de-adjust brakes one full turn, a ratcheting sound should occur & torque should be no less than 13 ft. lbs. Replace adjuster if one or both of these tests fail.
4. Make one full service brake application.
5. During brake release observe rotation of adjustment hex.
6. If rotation is not observed troubleshoot slack set-up, hardware & foundation brakes.
7. Verify control arm does not move freely. (Off Vehicle Inspection)
8. Manually re-adjust brakes after testing. Tighten hex until shoes contact drum, back off 1/2 turn.



Pointer in window  
(Brakes released)



Pointer not in window  
(Brakes applied)

## Haldex S-ABA (Self- Setting Automatic Brake Adjuster)

- Installed on Kentucky schools buses from 2011-current.
- Require anchor brackets & hardware for installation.
- Establishes its own reference point by setting control arm in any position.
- **DOES NOT** require periodic manual adjustment. Check brake adjustment at inspections.
- A replacement slack may appear physically different, but will fit your application.
- Refer to Haldex service manual for installation & set up



# Haldex S-ABA

## Testing

1. Ensure brake psi. is at 90-100psi.
2. Check that push rod is fully retracted.
3. Manually de-adjust brakes one full turn, a ratcheting sound should occur & torque should be no less than 13 ft. lbs. Replace adjuster if one or both of these tests fail.
4. Make one full service brake application.
5. During brake release observe rotation of adjustment hex.
6. If rotation is not observed troubleshoot slack set-up, hardware & foundation brakes.
7. Manually re-adjust brakes after testing. Tighten hex until shoes contact drum, back off 1/2 turn.
8. Test slack adjusters on all brake jobs.



# HalDEX S-ABA Issues

- The retainer around the adjustment hex is unscrewing itself causing the brake adjustment not to hold.
- The brake chamber will eventually continue to maximum stroke and bottom out. Therefore resulting in no brakes on that wheel or wheels effected.
- A majority of the failed slack adjusters are on the rear, but a small percentage are on the front.

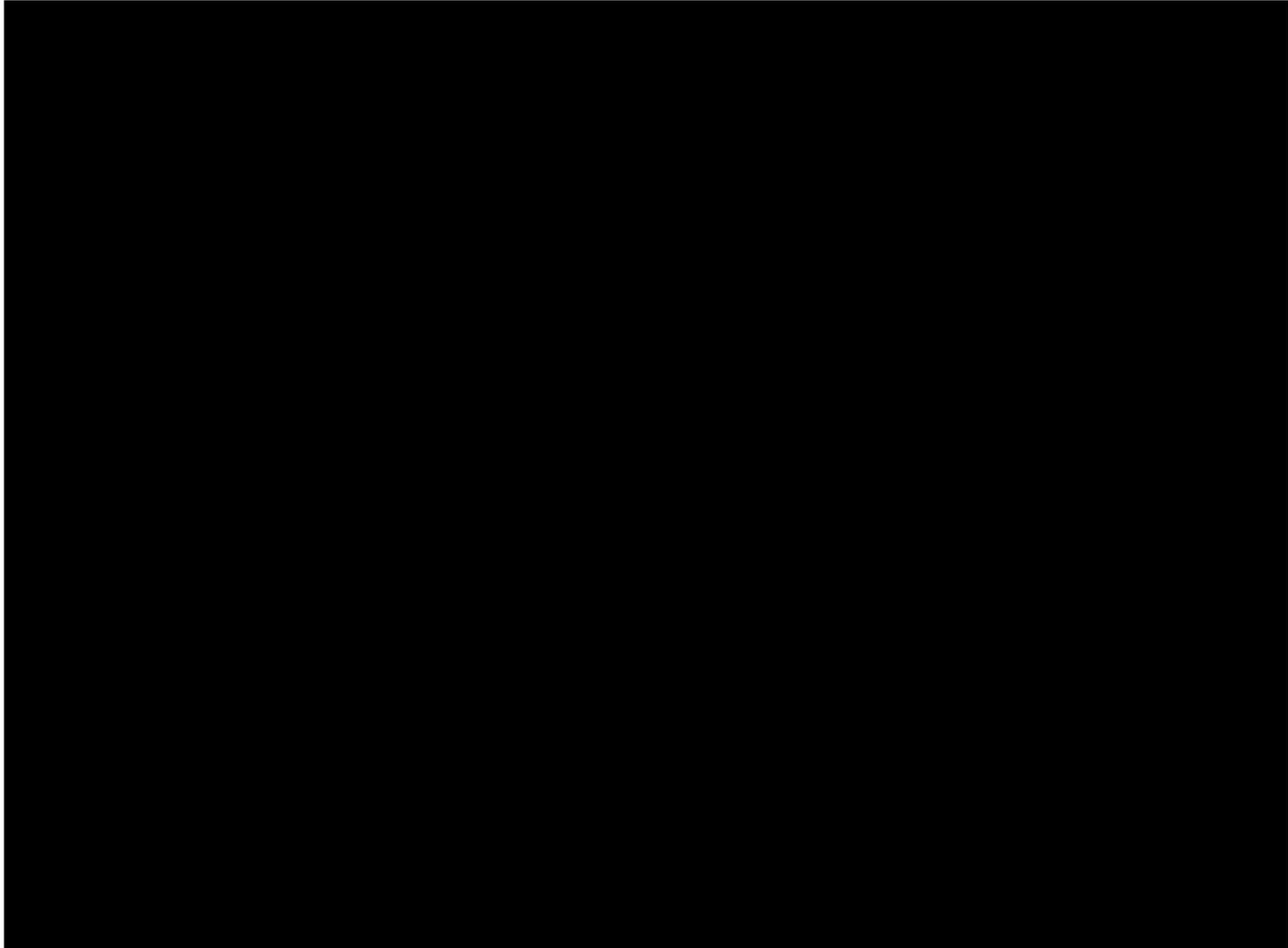


# Haldex S-ABA Issues

- Models effected 2011-13 Thomas/ Freightliner C2 52-66 Passenger buses.
- No reports have been made that IC or Bluebird buses have this issue.
- No formal recalls or bulletins have been put out by Haldex.
- No mileage range on when this slack adjuster may fail.
- A possible toque & securing process of the hex retainer has changed from being pinned to a thread locking compound.



# Haldex S-ABA Video



# What do I do if I have a failed Haldex S-ABA?

- 1) Take a picture of the bus # and effected slack or slack adjusters.
- 2) Record the mileage & VIN number of the bus.
- 3) Note weather the slack is the front or rear and left or right.
- 4) Contact your Thomas/ Freightliner dealer make them aware of the situation. Also contact Dave Mangum & pass along your info.

## NOTE:

- Jefferson County has sent out 80 slack adjusters to Haldex for testing. Results still pending.
- A Meritor ASA will be a option for Thomas/ Freightliner for the 2016 build.



# References



[www.Bendix.com](http://www.Bendix.com)



[www.Haldex.com](http://www.Haldex.com)



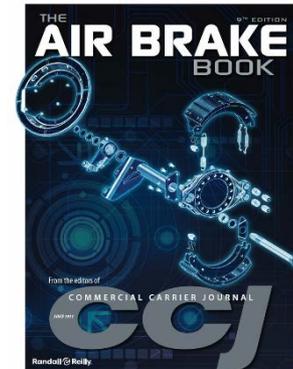
[www.thomasbus.com](http://www.thomasbus.com)



[www.ICbus.com](http://www.ICbus.com)



[www.blue-bird.com](http://www.blue-bird.com)



[www.ccjdigital.com](http://www.ccjdigital.com)

**Proposed Changes to 2017 Kentucky Minimum Specification.**

**Page 24**

**ENGINE**

The chassis shall be equipped with one of the following diesel engines:

<b>Engine</b>	<b>Minimum Horsepower</b>	<b>Chassis</b>
<del>INTERNATIONAL MAXFORCE DT466</del>	<del>230</del>	<del>78-84 PASSENGER "RE"</del>
Cummins ISL	260	78-84 PASSENGER "RE"
Cummins ISB	190	34-52 PASSENGER TYPE "C"
Cummins ISB	210	66-72 PASSENGER TYPE "C"
Cummins ISB	210	66-78 PASSENGER "FE"
Cummins ISB	230	78-84 PASSENGER "RE"
Cummins ISB	250	78-84 PASSENGER "RE"

14) The engine shall be programed to de-rate when the oil pressure fall below the manufacturers recommended pressure.

Reason for changes: The Maxforce DT466 is no longer offered. The Cummins ISL is an equivalent engine for the application. Addition of an oil pressure de-rate gives the driver one additional warning of engine failure.

Page 29

**TRANSMISSION (AUTOMATIC)**

Chassis, thirty-four (34) through eighty-four (84) passenger capacity, equipped with spring-loaded rear axle parking brakes, shall be equipped with an automatic transmission.

The automatic transmission shift quadrant shall be dash mounted and located to the right of the steering column, accessible to the driver and approved by the Pupil Transportation Branch. The gearshift quadrant shall be covered by a scabbard and lighted, with provision for a backup and neutral safety switch and a positive lock shift with the reverse position forward.

Buses equipped with 3000 PTS transmissions may utilize a touch pad shifting mechanism. All 2500 series transmissions shall be equipped with an Allison approved cable controlled scabbard shift. All Allison automatics shall be filled with TransSynd, TES 295 fluid or prior approved equal.

The following engines shall be equipped with the following automatic transmissions:

Engine	Horsepower	Capacity	Transmission	Standard/Option
INTERNATIONAL DT466E-Cummins ISL	230 250 260	78-84 RE	PTS3000	STANDARD
CUMMINS ISB	190	34-52	PTS2500	STANDARD
CUMMINS ISB	210	66	PTS2500	STANDARD

Reason for change: The Cummins ISL replaces the Maxforce DT466.

Page 35

### ROOF CONSTRUCTION

Mechanical fasteners shall be used in all roof panel joints to achieve sixty (60) percent joint strength. Construction adhesive will not be permitted to meet the joint strength requirements (60 percent joint strength with fasteners only). All roof sheets shall be sealed with Ruvan or approved equal. The product supplier shall certify that recommended practice is being followed. Manufacturers may utilize utilizing structural adhesives along with mechanical fasteners (hybrid joints) to achieve compliance with FMVSS 221. Manufacturers using adhesive for joint strength shall be capable of demonstrating to the Kentucky Department of Education that the design of the hybrid joint in conjunction with the adhesive and mechanical fasteners used is capable of 150% of FMVSS 221 strength test.

Reason for change: Clarifies joint strength requirements for the two different types of joints that are available.

Page 47

### STEP COVERING

Steps shall be covered with first quality, specially processed step covering material. Koroseal pebble top, Blue #71; RCA Rubber, Apex, Color #702; SMI Studded Step flooring, Color #702 or approved equal shall be used. Step covering material shall have non-skid characteristics. The step covering shall have a contrasting white, turndown nosing. The lip of the turndown shall be molded in an approximate 90° shape and shall be an integral part of the tread. Pebble pattern shall extend to the leading edge of the nosing on all but the top step and shall have corrosion and impact resistant polymeric or galvanized metal backing.

The step covering shall be securely fastened to the steps in a manner that will minimize tripping. This requires that the heads of mounting screws or bolts be below the top surface of the step tread. All floor covering seams, joints and termination edges shall be sealed.

NOTE: BODY COMPANIES MAY COAT THE STEP WELL, CLOSEOUT PANNELS AND ASSOCIATED TRIM WITH “PROFLEX”, “RHINO LINER” OR SIMILAR MATERIAL PROVIDED THE PEBBLE PATTERN IS MAINTAINED ON THE

TREAD AND THE WHITE NOSING IS MAINTAINED AS AN ADDED COMPONENT. THIS MATERIAL MAY BE BLACK IN COLOR. ALL SURFACES, INSIDE AND OUT, SHALL BE COATED. THE MATERIAL USED SHALL MEET WEAR RESISTANCE ASTM D5963, ASTM D4060 AND SLIP RESISTANCE ASTM D2047.

Reason for change: Allows body companies to use Elastomer coatings on scuff prone areas.

Page 49

## HEATERS

School bus heating systems shall meet the following performance standards:

- A. Provide evenly distributed heat throughout the bus body.
- B. Provide defrosting for the windshield and entrance door.
- C. Have capabilities of providing evenly distributed heat, creating a temperature rise to 50 degrees Fahrenheit inside the body shell when soaked in an ambient temperature of 0 degrees Fahrenheit for fifteen (15) hours.
- D. The heater water flow shall be controlled by the installation of bulkhead mounted water shutoff valves. (Water shutoff valves and bulkhead mounts shall require approval from the Pupil Transportation Branch. Refer to heater valve drawings of the appendix.)
- E. Valves shall be one-quarter (1/4) turn, ball-type, and have a minimum nominal three quarters (3/4) inch internal port.
- F. The heater hose entrance through the firewall or floor shall be through prior approved bulkhead fittings.
- G. Type C – FC buses shall have all drivers' heaters air duct extended beyond the driver's side modesty panel into the passengers area.
- H. Switching for heaters shall provide independent switches for each motor.
- I. Type C and type D bus heaters shall have easily removable air filters.
- J. Type D buses shall have a 12,000 BTU floor mounted heater mounted in the driver's area and controlled by a separate switch. Alternately, a means to direct heat to the driver's feet shall be provided.

Reason for change: Requires heat distribution on type D buses to be similar to the heat distribution on type C buses.

### CROSSING CONTROL ARM

1. Buses shall be equipped with a crossing control arm mounted on the right side of the front bumper, which shall not open more than ninety degrees. All air brake equipped chassis shall be equipped with air operated **bladder controlled** crossing arms.
2. All components of the crossing control arm and all connections shall be weather proofed.
3. The crossing control arm shall incorporate system connectors (electrical, or air) at the gate and shall be easily removable to allow for towing of the bus.
4. The crossing control arm shall be constructed of non-corrosive or nonferrous material.
5. There shall be no sharp edges or projections that could cause hazard or injury to students.
6. The crossing control arm shall extend approximately seventy inches from the front bumper when in the extended position.

Reason for change: Requires all buses to use a similar system of deployment for crossing gates.

### **SEATS (PUPIL)**

15. School bus body shells, sixty-six (66) through seventy-eight (78) passengers, having a left side emergency door installed and requiring the last two (2) rows of seats to be thirty-nine inches wide to attain specification seating capacity, may reduce the rear seat buffer zone to eight (8) inches on the right side rear seat. The left side rear seat must maintain a buffer of twelve (12) inches measured at the rear most portion of the seat bottom **frame**.

Reason for change: Clarifies the measuring point for the buffer zone.

### **SUNSHIELD**

An adjustable sunshield of tinted transparent plastic, approximately six (6) by ~~twenty four (24)~~ thirty inches (30), shall be provided in the driver view area. ~~This requirement shall be met with a Tiger Eye Multi-Adjustable Sun Visor or prior approved equal.~~ **An additional adjustable sunshield of tinted transparent plastic shall be provided to the left of the driver's seated position. This sunshield shall be a minimum of six (6) by eighteen (18) inches.**

Reason for change: Eliminates current sun visor due to poor maintenance performance. Adds dual sun visor for the driver's front and left side window.

Page 76

#### SERVICE DOOR ENTRANCE

A Suitable devices shall be provided to assist passengers during entry or egress. ~~This~~ These devices shall allow for easy grasping or holding and shall have no openings or pinch points which might entangle clothing, accessories or limbs. It shall be designed to afford easy accessibility to small children. All special needs buses shall be equipped with two (2) service door handrails (one on the left and one on the right).

Reason for change: Some special needs students need a hand rail on either side if the service door to assist them while using the steps.

Page 82

#### AIR DISK BRAKES

Air disk brakes may be installed as a local district purchase option provided they are in full compliance with all applicable FMVSS standards and certified by the original equipment manufacturer at the time of the buses construction.

Reason for change: Allows local districts to purchase air disk brakes for evaluation purposes.

Page 84

#### SIDE GLASS TINTING

Regular education school buses may be equipped with tinted side windows of approximately 28% light transmittance. The driver's window, entrance door glass and rear glass shall be clear glass.

Reason for change: Local districts have requested the option of tinting the side windows on regular education buses.

Page 85

## **TABLET DEVICES**

Tablet devices may be installed on Kentucky school buses as a part of routing, GPS and pre-trip systems. These systems shall have the ability to go dark and silent when the vehicle is in motion. The tablet shall be removable and be firmly secured in place when in its mount. The tablet shall be mounted in a safe location that does not the drivers view of the roadway, mirrors or component controls.

Reason for change: Allows the use of Android type tablets to assist in route identification, GPS, driver's pre-trip inspections, passenger lists, and addresses.

## **WIFI HOTSPOT**

Local district may install WIFI equipment on bus at their discretion provided the equipment is separately fused and secured. Equipment should be powered from the auxiliary side of the electrical panel.

Reason for change: Allows local districts to add WIFI to buses for students use.

# IMPORTANT SAFETY RECALL

## SynTec Seating Solutions, LLC

December 21, 2015

TMS100

NHTSA # 15E089

## Dealer Notification

### Subject: S3B School Bus Seat "Track Mount"

**S3B "Track Mounted Seats" manufactured August 24, 2014 through October 23, 2015**

#### General Information

SynTec Seating Solutions, LLC has decided that a noncompliance with Federal Motor Vehicle Safety Standard FMVSS 222: School Bus Passenger Seating and Crash Protection exists in certain school buses equipped with S3B "track mounted" school bus seats. Bending of the front seat feet during the rearward push test was determined to be the root cause of the noncompliance. This noncompliance could result in passengers sustaining injuries in the knee area and / or impede egress in the event of a severe rear-end collision. Clamps will be added to the front feet to ensure compliance.

There are approximately 540 vehicles and 3500 seats involved in this campaign

#### Additional Repairs

Dealers must complete all outstanding Recall campaigns prior to the sale or delivery of a vehicle. A Dealer will be liable for any progressive damage that results from failure to complete campaigns before sale or delivery of a vehicle.

Owners may be liable for any progressive damage that results from failure to complete campaigns within a reasonable time after receiving notification.

#### Work Instructions

Please refer to the work instructions.

#### Replacement Parts

Replacement parts are now available and can be obtained by ordering from SynTec Seating Solutions, LLC., 200 Swathmore Ave, High Point, NC 27263.

Our records show your dealership has ordered vehicles involved in campaign number TMS100 (NHTSA # 15E089). A list of the customers and vehicle identification numbers is attached. Please refer to this list when ordering parts for this recall.

**Table 1 – Replacement Parts for TMS100**

SynTec Campaign #	Part#	Description of Parts in Kit
TMS100	2519591	Toe clamp reinforcement (2 per seat)
	2519592	Toe clamp Retainer (2 per seat)
Reinforcement KIT# TMS100K	0014021	Black plastic Christmas tree retainer (1 per kit)
	247122BLK	Black 3/16" X 5/8" (flange) rivet (3 per kit)
	2519695	Stud with lug and washer (2 per kit)
	TMS100-WI	Work Instruction (1 per kit)

**Table 2 – Labor Allowance**

Campaign#	NHTSA#	Time Allowance (Hours)	Procedure
TMS100	15E089	.2 hours per seat	Install (2) track seat front leg reinforcements

**Claims for Credit**

The dealer or customer will be reimbursed for labor to install reinforcement part per Table 2. Parts will be provided at no charge. To receive reimbursement for labor submit your claim / invoice to: SynTec Seating Solutions, LLC. 200 Swathmore Ave, High Point, NC 27263 ATT. Warranty Department

Claims/Invoices may also be emailed to [ana.hall@takata.com](mailto:ana.hall@takata.com). All claims are to be submitted within 30 days of completing this campaign.

**Claim / Invoice Information**

Please include the following information on your claim or invoice.

- Recall # TMS100 / NHTSA 15E089
- Vehicle Identification Number (VIN)
- Number of kits # TMS100K (per Table #2)
- Number of Seats repaired
- Labor Rate
- Labor Hours per Table #2
- Miscellaneous Expense

Please retain a copy of your claim / invoice for your records.

# Recall Campaign

SynTec Seating Solutions, LLC

December 21, 2015

TMS100

NHTSA # 15E089

## Work Instructions

### Subject: S3B School Bus Seat "Track Mount"

S3B "Track Mounted Seats" manufactured August 24, 2014 through October 23, 2015

### Repair Procedure

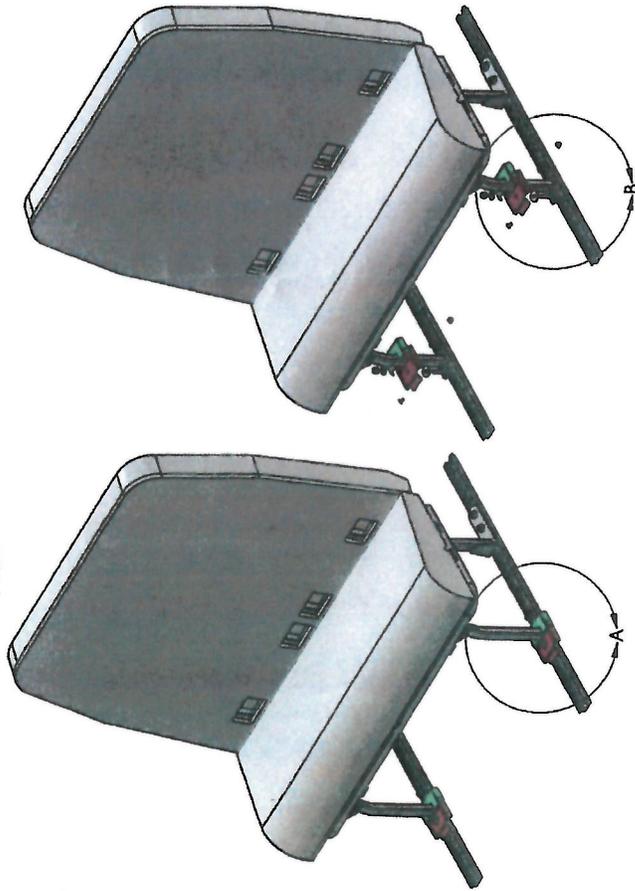
1. Locate bus, make sure parking brake is set and wheels chocked
2. Locate track mounted seats in bus. Make sure there are sufficient kits for the number of track mounted seats. Include any seats that may have been removed from bus in repair.
3. Wear appropriate safety equipment (i.e. safety glasses) while effecting the repair
4. Follow work instructions per *Figure # 1* attached
5. Remove any debris from the repair upon completion
6. Un-chock the wheels and report the bus as ready for service

### Tools

- The following tools will be required to complete the repairs
- ½" Drive with 9/16" socket
- ½" Drive ratchet with cordless impact
- ½" Drive torque wrench
- Rivet gun (manual, electric or air operated)
- Safety glasses

UNCONTROLLED IF PRINTED  
 S3B SCHOOL BUS SEAT-TRACK MOUNT  
 TSM-100  
 NHTSA #15E089 WORK INSTRUCTION

REVISIONS			
REV.	DESCRIPTION	BY	DATE
AA0	RELEASE-EO 2019365-DL	BMG	10-28-15
AB0	DELETE WASHER-EO 2019365-OP	BMG	12-17-15



**S3C FRAME ASSEMBLY PROCEDURE:**

INSERT SURE-LOK STUD INTO TRACK DIRECTLY FORWARD OF FRONT LEG.

INSTALL SURE LOCK HEAVY WASHER OVER STUD.

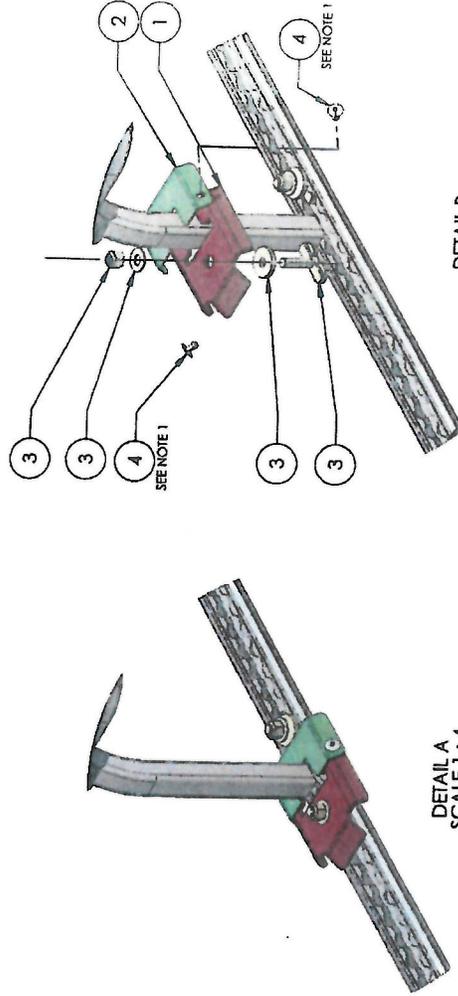
INSTALL CLAMP OVER FRONT LEG BRACKET, ALIGN HOLE WITH STUD.

INSTALL 5/16" WASHER AND SURE LOK NUT ONTO STUD. TORQUE TO 20-25 FOOT-POUNDS.

INSTALL CLAMP RETAINER OVER CLAMP. ALIGN TWO SLOTS WITH HOLES IN CLAMP.

INSTALL TWO BLIND RIVETS THROUGH HOLES IN THE RETAINER AND CLAMP ON AISLE SIDE LEG.

INSTALL ONE XMAS TREE FASTENER ON OUTBOARD SIDE OF WALL LEG RETAINER AND ONE BLIND RIVET ON INBOARD SIDE OF WALL LEG RETAINER.



DETAIL A  
SCALE 1 : 4

DETAIL B  
SCALE 1 : 4

ITEM	PART NUMBER	DESCRIPTION	QTY PER SEAT
1	2519591	CLAMP	2
2	2519592	CLAMP RETAINER	2
3	2519695	SURE-LOK FE200739-STUD/WASHER/NUT	2
4	2471122	3/16" BLIND RIVET	3 (SEE NOTE 1)
5	2520109	XMAS TREE FASTENER AU-VE-CO 14021	1 (SEE NOTE 1)

**NOTE:**

1: XMAS TREE FASTENER 2520109 TO BE USED ON OUTBOARD SIDE OF WALL LEG IN PLACE OF RIVET.

**Figure 1**

SYNTEC SEATING SOLUTIONS, LLC. S3B RECALL #TMS 100 / NHTSA #15E-089  
 CUSTOMER LIST

DEALER CODE	DEALER NAME	BODY #	VIN	CUSTOMER NAME	CITY	STATE	ZIP	COUNTRY	SEAT TYPE	QTY
18105	Wayne Supply Company	1468190	4UZABRD7GCGT6423	OWENSBORO BOE	OWENSBORO	KY	42302	USA	RES	2
18105	Wayne Supply Company	1468207	4UZABRD7GCGT4016	HOPKINS COUNTY	MADISONVILLE	KY	42431	USA	RES	4
18105	Wayne Supply Company	1468246	4UZABRD7GCGT4017	HOPKINS COUNTY	MADISONVILLE	KY	42431	USA	RES	4
18105	Wayne Supply Company	1561425	4UZABRD7XGCGY1217	BREATHITT COUNTY BOE	JACKSON	KY	41339	USA	RES	4
18105	Wayne Supply Company	1561543	4UZABRD7GCGZ5299	KENTON COUNTY BOE	FORT WRIGHT	KY	41017	USA	RES	4
18105	Wayne Supply Company	1561766	4UZABRD7GCGZ9412	KENTON COUNTY BOE	FORT WRIGHT	KY	41017	USA	RES	2
18105	Wayne Supply Company	1561813	4UZABRD73GCHA2226	MONTGOMERY COUNTY	MT STERLING	KY	40353	USA	RES	4
18105	Wayne Supply Company	1564591	4UZABRD75GCHA1160	MEADE COUNTY BOE	BRANDENBURG	KY	40108	USA	RES	5
18105	Wayne Supply Company	1566482	4UZABRD7GCHF8525	LINCOLN COUNTY BOE	STANFORD	KY	40484	USA	RES	2

**SYNTEC SEATING SOLUTIONS, LLC. S3B RECALL #TMS 100 / NHTSA #15E-089**

**REPLACEMENT PARTS**

**CUSTOMER LIST**

<b>SYNTEC CUSTOMER NUMBER</b>	<b>CUSTOMER NAME</b>	<b>PURCHASE ORDER NUMBER</b>	<b>SHIPPED DATE</b>	<b>INVOICE NUMBER</b>	<b>SEAT TYPE</b>	<b>QTY</b>
325	Whayne Supply	4589826681	10/20/15	86890	RES	4
325	Whayne Supply	4589826682	10/20/15	86891	RES	1

Please notify SynTec when recalled buses are completed in your area at: [shannon.clouse@takata.com](mailto:shannon.clouse@takata.com)

# Field Service Campaign

Daimler Trucks  
North America LLC

July 2015  
SF512A

## Subject: TBB Air Cleaner Housings

**Models Affected: Specific Thomas Built Buses Saf-T-Liner HDX manufactured November 22, 2012 through February 13, 2015.**

### General Information

Daimler Trucks North America LLC (DTNA), on behalf of its wholly owned subsidiary, Thomas Built Buses (TBB), is initiating Field Service Campaign SF512A to modify the vehicles mentioned above.

There are approximately 1,300 vehicles involved in this campaign.

On certain vehicles, the air cleaner housing tube may have been clamped inappropriately during installation causing the air cleaner housing to be deformed. Deformation of the air cleaner housing may introduce unfiltered air into the engine which can cause severe damage.

Air cleaner housings will be inspected and replaced as needed.

**Thomas Built Buses is urging customers to have this campaign completed as soon as possible to prevent engine damage. Engine damage occurring on or after January 1, 2016, due to a deformed air cleaner will not be covered by this campaign due to failure to have the work done in a reasonable time.**

### Additional Repairs

Dealers must complete all outstanding Recall and Field Service campaigns prior to the sale or delivery of a vehicle. A Dealer will be liable for any progressive damage that results from its failure to complete campaigns before sale or delivery of a vehicle.

Owners may be liable for any progressive damage that results from failure to complete campaigns within a reasonable time after receiving notification. **Failure to complete this campaign may void the engine manufacturer's warranty. Review the engine manufacturer's warranty regarding coverage.**

### Work Instructions

Please refer to the attached work instructions.

### Replacement Parts

Replacement parts are now available and can be obtained by ordering from your facing Parts Distribution Center.

If our records show your dealership has ordered any vehicles involved in campaign number SF512A, a list of the customers and vehicle identification numbers will be available on AccessFreightliner.com. Please refer to this list when ordering parts for this recall.

**Table 1 – Replacement Parts for SF512A**

Campaign Number	Part Number	Description	Qty.
SF512A	TBB 179958	Air Cleaner Assembly	1

Table 1

### Removed Parts

Please follow Warranty Failed Parts Tracking shipping instructions for the disposition of all removed parts.

# Field Service Campaign

Daimler Trucks  
North America LLC

July 2015  
SF512A

## Labor Allowance

Table 2 – Labor Allowance

Campaign Number	Procedure	Time Allowed (Hours)	SRT Code	Correction Code
SF512A	Inspect Air Cleaner	0.1	174-6802B	06 – Inspect
	Inspect and Replace Air Cleaner	0.3	174-6802A	12 – Repair Recall/Campaign

Table 2

## Claims for Credit

You will be reimbursed for your parts, labor, and handling by submitting your claim through the Warranty system within 30 days of completing this campaign. Please reference the following information in OWL:

- Claim Type is **Field Service**.
- Enter the campaign number and appropriate condition code (**SF512A**).
- In the Primary Failed Part Number field, enter **TBB 179958**.
- In the Parts field, enter the appropriate kit/part number(s) as shown in the Replacement Parts Table.
- In the Labor field, enter the appropriate SRT from the Labor Allowance Table.
- For OWL, the VMRS Component Code is **013-09-064** and the Cause Code is **A1 - Campaign**.
- The termination date is **July 31, 2016**.

**IMPORTANT:** OWL must be viewed prior to performing the field service to ensure the vehicle is involved and the campaign has not been previously completed.

Contact the TBB Warranty Campaigns Department at (336) 889-4871, from 8:00 a.m. to 5:00 p.m. Eastern Time, Monday through Friday, via Web inquiry at [AccessFreightliner.com](http://AccessFreightliner.com) / My Tickets and Submit an Inquiry, if you have any questions or need additional information.

All claims must be submitted within 30 days of the repair and within 30 days of the termination date of the campaign. All excess inventory to be returned to the PDC following the conclusion of the campaign must be returned in resalable condition to the Memphis PDC within 90 days from the termination date. Please submit a PAR to request return to the Memphis PDC. (Canadian dealers should return the kits to their facing PDC.)

# Field Service Campaign

Daimler Trucks  
North America LLC

July 2015  
SF512A

## Copy of Notice to Owners

### Subject: TBB Air Cleaner Housings

Daimler Trucks North America LLC (DTNA), on behalf of its wholly owned subsidiary, Thomas Built Buses (TBB), is initiating Field Service Campaign SF512A to modify specific Thomas Built Buses Saf-T-Liner HDX manufactured November 22, 2012, through February 13, 2015.

On certain vehicles, the air cleaner housing tube may have been clamped inappropriately during installation causing the air cleaner housing to be deformed. Deformation of the air cleaner housing may introduce unfiltered air into the engine which can cause severe damage.

Air cleaner housings will be inspected and replaced as needed.

**Thomas Built Buses urges you to have this campaign completed as soon as possible to prevent engine damage. Engine damage occurring on or after January 1, 2016, due to a deformed air cleaner will not be covered by this campaign due to failure to have the work done in a reasonable time.**

To arrange for repairs, contact your local TBB dealer. The repair should take approximately half an hour and will be performed at no charge to you. To find a dealer in your area please go to [www.thomasbus.com](http://www.thomasbus.com).

This Field Service Campaign will **terminate on July 31, 2016**. Please make sure the campaign is completed prior to this date. Work completed after this date will be done at the customer's expense.

As stated in the terms of your express limited warranty, Thomas Built Buses will not pay for any damage caused by failure to properly maintain your vehicle. Thomas Built Buses considers the work necessary under this campaign to be proper maintenance and will, therefore, not pay for any damage to your vehicle caused by your failure to have the repairs that are the subject of this campaign performed in a reasonable time. **Failure to complete this campaign may void the engine manufacturer's warranty. Review the engine manufacturer's warranty regarding coverage.**

If you have any questions about this recall, please contact the Warranty Department at (336) 889-4871, 8:00 a.m. to 5:00 p.m. Eastern Time, Monday through Friday.

THOMAS BUILT BUSES WARRANTY DEPARTMENT  
Enclosure

July 2015  
SF512A

## Work Instructions

### Subject: TBB Air Cleaner Housings

Models Affected: Specific Thomas Built Buses Saf-T-Liner HDX  
manufactured November 2012, through February 2015.

### Air Cleaner Housing Inspection

- 1) Place bus in Park/neutral and chock wheels on bus.
- 2) Turn ignition off.
- 3) Open the housing by unclipping the four metal clips (shown in **Figure 1**) and then separating the housing.

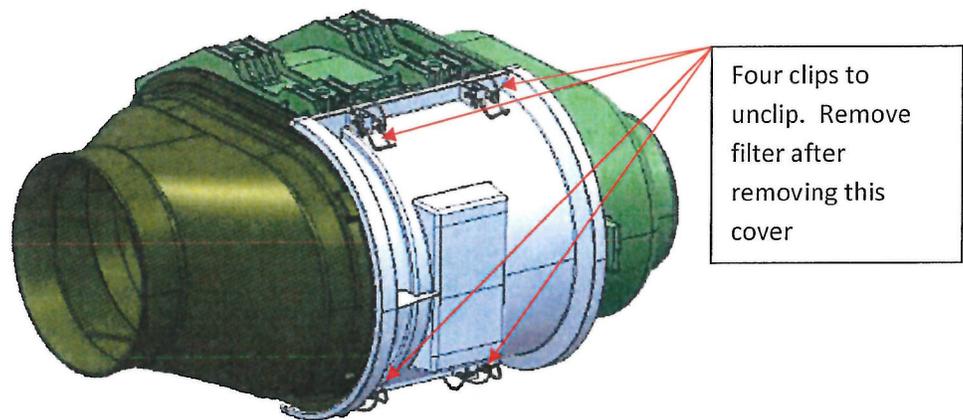


Figure 1

- 4) Take the filter out and keep for reinstallation.
- 5) Once the filter is removed, inspect the inside of the two tubes that are the entrance and exit of the housing. The inside circumference should not have any indentions or flattened edges (**Figure 2**).

If the inside area has no indentations, reassemble. No further work is needed. Un-chock the tires.

If the interior where the module clamps to the hose has a flat spot or indentation, replace the housing. (**Figure 3**)

July 2015  
SF512A

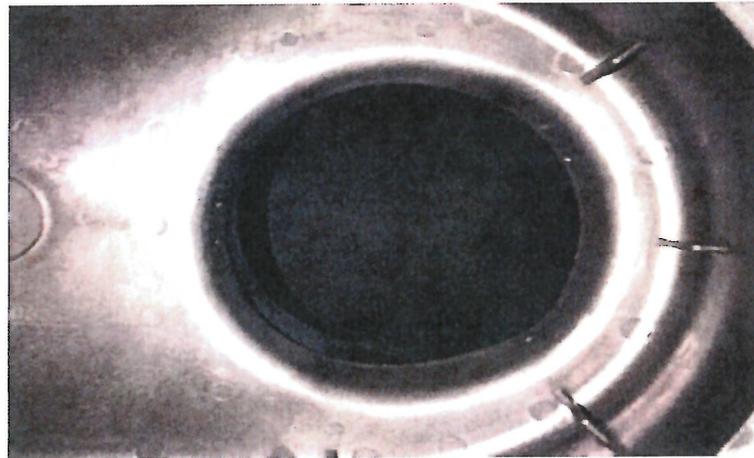


Figure 2

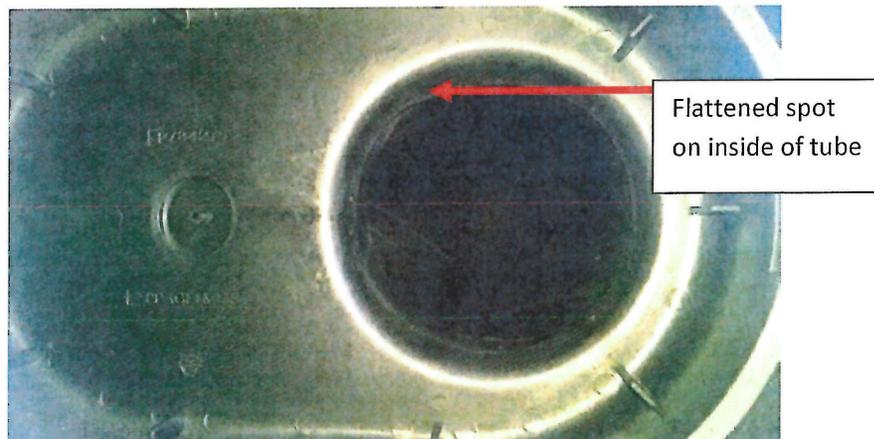


Figure 3

## Air Cleaner Housing Replacement

- 1) Loosen the two clamps on each side of the air cleaner housing.
- 2) Pull the hose out of each side and insert the new module and hoses.
- 3) Make sure that the metal clamps that hold the module on each end are parallel to the entrance. If the straps are like the one shown in **Figure 4**, correct the strap so that it is not at an angle.
- 4) Tighten the straps to 40 lbf·in (452 N·cm).
- 5) Un-chock tires.

July 2015  
SF512A

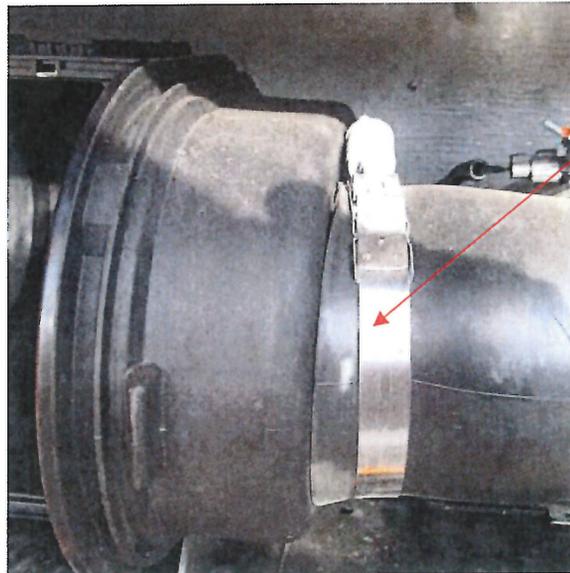


Figure 4

Card No	Order No	Dir No/Dir Name His Type	Customer Name	State	Engine Serial	Invoice No	Inv Date	Chass Build	Body No	Vin	Chassis S/N: mfg	Unit Status
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Recall No/ Title: SF512 Air Cleaner Housing and Clamps

18105 KY HOUSE/WHAYNE SUPPLY COMPANY

5801005	81125		CALDWELL COUNTY	KY	73644048	41012	3/24/14	2/18/14	1430123	1T7YU4E2XF1281125	THOS	S O
5800304	80762		CALLLOWAY COUNTY SCHOOLS	KY	73659588	42052	4/11/14	3/26/14	1430119	1T7YT4E29F1280762	THOS	S O
5800819	75671		CHRISTIAN COUNTY	KY	73593057	36308	12/3/13	10/16/13	1331311	1T7YU4E27F1275671	THOS	S O
5800851	69506			KY	73504479	26280	5/3/13	3/11/13	1330268	1T7YU4E28E1269506	THOS	S O
5800919	91511			KY	73773231				1431314	1T7YU4E28G1291511	THOS	S O
5800806	70498		CORBIN IND.	KY	73517724	26928	5/16/13	4/19/13	1330452	1T7YU4E27E1270498	THOS	S O
5800436	83644		COVINGTON IND.	KY	73685615	45300	6/17/14	5/28/14	1430528	1T7YU4E20F1283644	THOS	S O
5800337	85596		DANVILLE INDEPENDENT SCHOOLS	KY	73703473	47747	8/4/14	6/30/14	1430683	1T7YT4E2XF1285596	THOS	S O
5800737	69522		FRANKLIN COUNTY	KY	73506455	26281	5/3/13	3/7/13	1330257	1T7YU4E26E1269522	THOS	S O
5800562	69526			KY	73504481	26208	5/2/13	3/13/13	1330279	1T7YU4E23E1269526	THOS	S O
5800852	69523			KY	73503695	26367	5/7/13	3/8/13	1330261	1T7YU4E28E1269523	THOS	S O
5800456	69525			KY	73506449	26207	5/2/13	3/13/13	1330276	1T7YU4E21E1269525	THOS	S O
5800973	69524			KY	73506452	26282	5/3/13	3/11/13	1330264	1T7YU4E2XE1269524	THOS	S O
5801020	86213		GRAVES COUNTY	KY	73712137	48820	9/3/14	7/22/14	1430785	1T7YU4E2XF1286213	THOS	S O
5800134	81145		LAUREL COUNTY BD. OF EDUCATION	KY	73659584	44333	6/3/14	3/26/14	1430146	1T7YT4E21F1281145	THOS	S O
5800176	81129			KY	73659574	42004	4/10/14	3/26/14	1430108	1T7YT4E23F1281129	THOS	S O
5800331	81144			KY	73659586	42479	4/24/14	3/26/14	1430139	1T7YT4E2XF1281144	THOS	S O
5800177	81146			KY	73659585	42422	4/23/14	3/27/14	1430152	1T7YT4E23F1281146	THOS	S O
5800286	81143			KY	73659561	42421	4/23/14	3/26/14	1430135	1T7YT4E28F1281143	THOS	S O
5800133	81128			KY	73659591	42420	4/23/14	3/26/14	1430104	1T7YT4E21F1281128	THOS	S O
5800317	70062		LAWRENCE COUNTY BOARD OF EDUCA	KY	73519314	26926	5/16/13	4/17/13	1330436	1T7YT4E2XE1270062	THOS	S O
5800276	70061			KY	73519797	26925	5/16/13	4/11/13	1330420	1T7YT4E28E1270061	THOS	S O
5800295	91365		MADISON COUNTY	KY	73773228				1431289	1T7YT4E28G1291365	THOS	S O
5800264	81537			KY	73659583	42386	4/22/14	3/27/14	1430158	1T7YT4E27F1281537	THOS	S O
5800306	81538			KY	73659592	42485	4/24/14	3/27/14	1430164	1T7YT4E29F1281538	THOS	S O
5800255	91364			KY	73773236				1431285	1T7YT4E26G1291364	THOS	S O

Card No	Order No	Dir No/Dir Name Bus Type	Customer Name	State	Engine Serial	Invoice No	Inv Date	Chass Build	Body No	Vin	Chassis S/N: mfg	Unit Status
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Recall No/ Title: SF512 Air Cleaner Housing and Clamps

18105 KY HOUSE/WHAYNE SUPPLY COMPANY

5800339	91366		MADISON COUNTY	KY	73775276				1431297	1T7YT4E2XG1291366	THOS	S O
5800106	81539			KY	73643082	42426	4/23/14	3/27/14	1430172	1T7YT4E20F1281539	THOS	S O
5800597	81564		MONTGOMERY COUNTY	KY	73644055	41711	4/4/14	3/4/14	1430182	1T7YU4E23F1281564	THOS	S O
5800451	90837		OWENSBORO BOARD OF EDUCATION	KY	73766693				1431225	1T7YU4E20G1290837	THOS	S O
5800561	69512			KY	73504787	26206	5/2/13	3/12/13	1330270	1T7YU4E23E1269512	THOS	S O
5800455	69511			KY	73506453	26366	5/7/13	3/11/13	1330259	1T7YU4E21E1269511	THOS	S O
5800438	84888		PULASKI COUNTY	KY	73700569	46958	7/16/14	6/24/14	1430648	1T7YU4E20F1284888	THOS	S O
5800954	84887			KY	73696837	46957	7/16/14	6/19/14	1430629	1T7YU4E29F1284887	THOS	S O
5800832	82670		ROWAN COUNTY	KY	73667553	42898	5/5/14	4/11/14	1430342	1T7YU4E27F1282670	THOS	S O
5800434	82669			KY	73666098	43609	5/15/14	4/9/14	1430330	1T7YU4E20F1282669	THOS	S O
5800105	81525		SOMERSET INDEPENDENT SCHOOLS	KY	73661451	42127	4/14/14	3/27/14	1430176	1T7YT4E20F1281525	THOS	S O
5800876	75968		TAYLOR BUS SALES, INC	KY	73595637	35503	11/8/13	10/22/13	1331340	1T7YU4E28F1275968	THOS	S O
5800998	75969			KY	73597693	38316	1/20/14	10/29/13	1331371	1T7YU4E2XF1275969	THOS	S O
5800148	69875		TRIMBLE COUNTY BD. OF EDUCATIO	KY	73516478	26290	5/3/13	4/8/13	1330398	1T7YT4E22E1269875	THOS	S O
5800099	69874			KY	73514109	26223	5/2/13	4/3/13	1330380	1T7YT4E20E1269874	THOS	S O
5800920	91556		WAYNE COUNTY	KY	73773248				1431291	1T7YU4E28G1291556	THOS	S O
5800798	91555			KY	73773232				1431287	1T7YU4E26G1291555	THOS	S O
5800642	79516		WHAYNE SUPPLY COMPANY	KY	73602131	36683	12/9/13	11/7/13	1331426	1T7YU4E24F1279516	THOS	S O
5800252	90036		WOODFORD COUNTY	KY	73757436	53422	12/5/14	10/29/14	1431159	1T7YT4E26G1290036	THOS	S O
5800211	90035			KY	73757326	52941	12/2/14	10/29/14	1431156	1T7YT4E24G1290035	THOS	S O
5800292	90037			KY	73757435	52942	12/2/14	10/31/14	1431170	1T7YT4E28G1290037	THOS	S O

Number for Distno's: 47

February 2016

FL685AB

NHTSA #15V-432 (School Bus)

NHTSA #15V-425 (Non-School Bus)

Transport Canada #15-291 (School Bus)

Transport Canada #15-290 (Non-School Bus)

REVISED NOTICE

## Subject: TBB Emergency Door Handles

**Models Affected: Specific Thomas Built Buses Vista, TL960, Saf-T-Liner Conventional, ER, MVPEF, EFX, MVPER, FS65, and C2, and HDX Buses manufactured February 5, 2001, through May 29, 2012.**

### General Information

Daimler Trucks North America LLC on behalf of its wholly owned subsidiary, Thomas Built Buses, has decided that a defect that relates to motor vehicle safety exists on the vehicles mentioned above.

There are 114,532 vehicles involved in this campaign.

On certain buses, the stem which joins the outside emergency door handle to the door opening mechanism may corrode. Excessive material loss of the stem due to corrosion could result in the outside handle separating from the door mechanism while trying to open the door from the exterior of the bus. In the event of an emergency, opening the emergency door from the outside the bus may cause the handle to separate from the opening mechanism, potentially delaying evacuation and increasing the risk of injury to vehicle occupants.

The emergency door handles will be inspected and replaced as needed. It is expected that approximately 15 percent of buses will require a replacement. Lift doors may also be affected and may be repaired under this recall.

**REVISIONS:** Additional kits for replacement handles have been added (including lift doors in addition to emergency doors), typographical errors have been corrected, and guidance for determining right and left hand interior door handles has been added.

### Additional Repairs

Dealers must complete all outstanding Recall and Field Service campaigns prior to the sale or delivery of a vehicle. A Dealer will be liable for any progressive damage that results from its failure to complete campaigns before sale or delivery of a vehicle.

Owners may be liable for any progressive damage that results from failure to complete campaigns within a reasonable time after receiving notification.

### Work Instructions

Please refer to the attached work instructions.

### Replacement Parts

Replacement parts are now available and can be obtained by ordering from your facing Parts Distribution Center.

# Recall Campaign

Daimler Trucks  
North America LLC

February 2016

FL685AB

NHTSA #15V-432 (School Bus)

NHTSA #15V-425 (Non-School Bus)

Transport Canada #15-291 (School Bus)

Transport Canada #15-290 (Non-School Bus)

## REVISED NOTICE

**Table 1** – Replacement Parts for FL685AB

**NOTE:** See the cross reference list at the end of this bulletin to determine the replacement parts for specific vehicles. It is expected that approximately 15 percent of buses will require a replacement. Lift doors may also be affected and may be repaired under this recall.

Campaign Number	Kit Number	Part Number	Description	Qty.
FL685AB	TBB 204971	TBB 204666	KIT DOOR STEM FEELER GAUGE AND WASHER	1 ea
		TBB 204667	EPDM WASHER, WITH ADHESIVE	1 ea
	TBB 204987	TBB 151501	PIN, TAPERED AND GROOVED .125 X 1.375	1 ea
		TBB 69003249	TAPPING SCREW, #12	4 ea
		TBB 29940005	WASHER - FLAT, 1 OD X	4 ea
	TBB 204988	N/A	HANDLE EMER AND LIFT DR EXT FOR RECALL	1 ea
	TBB 205657	N/A	KIT, SLEEVE, RED VYNL, INTERIOR DOOR HANDLE	1 ea
	TBB 206919M	N/A	KIT INTERIOR HANDLE RECESS, REAR EMER DR	1 ea
	TBB 206920M	N/A	KIT INTERIOR HANDLE RS/LIFT BLK EMER DR	1 ea
FL685A	TBB 204989M	N/A	KIT INTERIOR HANDLE, STD REAR EMER	1 ea
	TBB 204990M	N/A	KIT INTERIOR HANDLE, STD EMER DOOR	1 ea
	TBB 204991M	N/A	KIT INTERIOR HANDLE, RECESS EMER DOOR	1 ea
	TBB 204992M	N/A	KIT INTERIOR HANDLE, STD EMER DOOR	1 ea
	TBB 204993M	N/A	KIT INTERIOR HANDLE, RECESS EMER DOOR	1 ea
	TBB 204995M	N/A	KIT INTERIOR HANDLE BLK REAR EMER	1 ea
	TBB 204996M	N/A	KIT INTERIOR HANDLE LS BLK EMER DOOR	1 ea
	TBB 204997M	N/A	KIT INTERIOR HANDLE RS BLK EMER DOOR	1 ea

**Table 1**

## Removed Parts

Please follow Warranty Failed Parts Tracking shipping instructions for the disposition of all removed parts.

# Recall Campaign

Daimler Trucks  
North America LLC

February 2016

FL685AB

NHTSA #15V-432 (School Bus)

NHTSA #15V-425 (Non-School Bus)

Transport Canada #15-291 (School Bus)

Transport Canada #15-290 (Non-School Bus)

REVISED NOTICE

## Labor Allowance

Table 2 – Labor Allowance

Campaign Number	Procedure	Time Allowed (Hours)	SRT Code	Corrective Action
FL685AB	Inspect & Protect 1 Handle	0.2	174-6804A	12 – Repair Recall/Campaign
	Inspect & Replace 1 Handle	0.5	174-6804B	
	Inspect & Protect 2 Handles	0.4	174-6804C	
	Inspect & Protect 1 Handle, Replace 1 handle	0.7	174-6804D	
	Inspect & Replace 2 Handles	1.0	174-6804E	
	Inspect & Protect 3 Handles	0.6	174-6804F	
	Inspect & Protect 2 Handles, Replace 1 Handle	0.9	174-6804G	
	Inspect & Protect 1 Handle, Replace 2 Handles	1.2	174-6804H	
	Inspect & Replace 3 Handles	1.5	174-6804J	
	Inspect & Protect 4 handles	0.8	174-6804K	
	Inspect & Protect 3 Handles, Replace 1 Handle	1.1	174-6804M	
	Inspect & Protect 2 Handles, Replace 2 Handles	1.4	174-6804N	
	Inspect & Protect 1 Handle, Replace 3 Handles	1.7	174-6804P	
	Inspect & Replace 4 Handles	2.0	174-6804R	

Table 2

# Recall Campaign

February 2016

FL685AB

NHTSA #15V-432 (School Bus)

NHTSA #15V-425 (Non-School Bus)

Transport Canada #15-291 (School Bus)

Transport Canada #15-290 (Non-School Bus)

## REVISED NOTICE

### Claims for Credit

You will be reimbursed for your parts, labor, and handling by submitting your claim through the Warranty system within 30 days of completing this campaign. Please reference the following information in OWL.

**REVISIONS:** Additional kits for replacement handles have been added (including lift doors in addition to emergency doors), typographical errors have been corrected, and guidance for determining right and left hand interior door handles has been added.

Claim Type is **Recall Campaign**.

- In the Campaign field, enter the campaign number and appropriate group (**FL685A or FL685B**).
- In the Primary Failed Part field, enter **TBB 138158**.
- In the Parts section, enter the appropriate part number(s) as shown in the Replacement Parts Table.
- In the Labor section, enter the appropriate SRT from the Labor Allowance Table.
- The VMRS Component Code is **174-013-023** and the Cause Code is **A1 - Campaign**.

**IMPORTANT:** OWL must be viewed prior to performing the recall to ensure the vehicle is involved and the campaign has not been previously completed. Also, check for a completion sticker prior to beginning work.

Contact the Warranty Campaigns Department at (336) 889-4871, from 8:00 a.m. to 5:00 p.m. Eastern Time, Monday through Friday, via Web inquiry at [AccessFreightliner.com](http://AccessFreightliner.com) / My Tickets and Submit an Inquiry, if you have any questions or need additional information.

To return excess kit inventory related to this campaign, U.S. dealers must submit a Parts Authorization Return (PAR) to the Memphis PDC. Canadian dealers must submit a PAR to their facing PDC. All kits must be in resalable condition. PAR requests must include the original purchase invoice number.

The letter notifying U.S. and Canadian vehicle owners is included for your reference.

Please note that the National Traffic and Motor Vehicle Safety Act, as amended (Title 49, United States Code, Chapter 301), requires the owner's vehicle(s) be corrected within a reasonable time after parts are available to you. The Act states that failure to repair a vehicle within 60 days after tender for repair shall be prima facie evidence of an unreasonable time. However, circumstances of a particular situation may reduce the 60 day period. Failure to repair a vehicle within a reasonable time can result in either the obligation to (a) replace the vehicle with an identical or reasonably equivalent vehicle, without charge, or (b) refund the purchase price in full, less a reasonable allowance for depreciation. The Act further prohibits dealers from selling a vehicle unless all outstanding recalls are performed. Any lessor is required to send a copy of the recall notification to the lessee within 10 days. Any subsequent stage manufacturer is required to forward this notice to its distributors and retail outlets within five working days.

February 2016

FL685AB

NHTSA #15V-432 (School Bus)

NHTSA #15V-425 (Non-School Bus)

Transport Canada #15-291 (School Bus)

Transport Canada #15-290 (Non-School Bus)

REVISED NOTICE

## Copy of Notice to Owners

### Subject: TBB Emergency Door Handles

This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act. This notice is sent to you in accordance with the Canadian Motor Vehicle Safety Act.

Daimler Trucks North America LLC, on behalf of its wholly owned subsidiary, Thomas Built Buses, has decided that a defect which relates to motor vehicle safety exists on specific Vista and TL960 vehicles and on Saf-T-Liner Conventional, ER, MVPEF, EFX, MVPER, FS65, C2, and HDX vehicles manufactured February 5, 2001, through May 29, 2012.

The stem which joins the outside emergency door handle to the door opening mechanism may corrode. Excessive material loss of the stem due to corrosion could result in the outside handle separating from the door mechanism while trying to open the door from the exterior of the bus. In the event of an emergency, opening the emergency door from the outside the bus may cause the handle to separate from the opening mechanism, potentially delaying evacuation and increasing the risk of injury to vehicle occupants.

The emergency door handles will be inspected and replaced as needed.

**To arrange for repairs, you should contact your local Thomas Built Buses dealer immediately.** Thomas will remedy this defect without charge. The repair should take approximately two hours, depending on your vehicle, and will be performed at no charge to you. To find a dealer in your area please go to [www.thomasbus.com](http://www.thomasbus.com).

You may be liable for any progressive damage that results from your failure to complete the Recall within a reasonable time after receiving notification.

If you do not own the vehicle that corresponds to the identification number(s) which appears on the Recall Notification, please return the notification to the Warranty Department with any information you can furnish that will assist us in locating the present owner. If you have leased this vehicle, Federal law requires that you forward this notice to the lessee within 10 days.

If you have paid to have this recall condition corrected prior to this notice, you may be eligible to receive reimbursement. For further information, please contact the Warranty Department at the number below.

If you have any questions about this recall, please contact the Warranty Department at (336) 889-4871, 8:00 a.m. to 5:00 p.m. Eastern Time, Monday through Friday. If you are not able to have the defect remedied without charge and within a reasonable time, you may wish to submit a complaint to the Administrator, National Highway Traffic Safety Administration, 1200 New Jersey Avenue, SE., Washington, DC 20590; or call the Vehicle Safety Hotline at (888) 3274236 (TTY: (800) 424-9153); or to <http://www.safercar.gov>. In Canada, you may contact Transport Canada road safety, 80 rue Noel, Gatineau, Quebec J8Z 0A1 or call (800) 333-0510.

We regret any inconvenience this action may cause but feel certain you understand our interest in motor vehicle safety.

THOMAS BUILT BUSES WARRANTY DEPARTMENT

Enclosure

February 2016

FL685AB

NHTSA #15V-432 (School Bus)

NHTSA #15V-425 (Non-School Bus)

Transport Canada #15-291 (School Bus)

Transport Canada #15-290 (Non-School Bus)

REVISED NOTICE

## Work Instructions

### Subject: TBB Emergency Door Handles

**Models Affected: Specific Thomas Built Buses Vista, TL960, Saf-T-Liner Conventional, ER, MVPEF, EFX, MVPER, FS65, and C2, and HDX Buses manufactured February 5, 2001, through May 29, 2012.**

**REVISIONS:** Additional kits for replacement handles have been added (including lift doors in addition to emergency doors), typographical errors have been corrected, and guidance for determining right and left hand interior door handles has been added.

## Inspection and Protection

NOTE: It is expected that approximately 15 percent of buses will require a replacement. Lift doors may also be affected and may be repaired under this recall.

1. Chock the wheels, set the parking brake, make sure the shifter is in Park or Neutral. Disconnect the battery and turn the ignition switch to off.
2. Remove the washers between the external door handle and the door facing. Use a razor knife to slice through the large washer and then the smaller diameter plastic washer. Slide something under the washers to keep from damaging the paint on the door. See **Figure 1**.



**Figure 1, Cutting Washers**

3. Pull the washers off with needle nose pliers and discard the washers. See **Figure 2**.

# Recall Campaign

Daimler Trucks  
North America LLC

February 2016

FL685AB

NHTSA #15V-432 (School Bus)

NHTSA #15V-425 (Non-School Bus)

Transport Canada #15-291 (School Bus)

Transport Canada #15-290 (Non-School Bus)

REVISED NOTICE



Figure 2, Removing Washers

4. Once the washers are removed, use the go/no go gauge (TBB 204666 from kit TBB 204971) to verify the stem material is of sufficient thickness for operation. Try to slide the gauge over the smallest thickness of the stem on each of the four sides. See **Figure 3**. If the gauge is able to slide completely on at any point of the stem, go to "Replacement of Interior and Exterior Door Handles." See **Figure 3** for use of the gauge.



Figure 3, Using the Go/No Go Gauge

5. After verifying the gauge will not slide over the stem, apply a liberal amount of protectant over the entire stem (inside and outside the door cavity). Use an approved corrosion protectant such as WD-40 purchased locally. If any of the protectant liquid gets on the paint or exterior handle, remove it as quickly as possible with an alcohol based wipe. See **Figure 4**.

# Recall Campaign

Daimler Trucks  
North America LLC

February 2016

FL685AB

NHTSA #15V-432 (School Bus)

NHTSA #15V-425 (Non-School Bus)

Transport Canada #15-291 (School Bus)

Transport Canada #15-290 (Non-School Bus)

REVISED NOTICE



Figure 4, Applying Protectant

6. After spraying the stem, install a new external washer (TBB 204677 from kit TBB 204971).
7. Make sure the painted surface around the stem opening is clean and dry. Remove the paper backing from the washer and place the adhesive side on the door around the external handle. Make sure the washer slit is installed on the bottom side of the opening. There will be an opening between the exterior washer and the door handle. See **Figure 5**.



Figure 5, Position of Slit in Washer

8. Connect the battery, remove the chocks.

# Recall Campaign

Daimler Trucks  
North America LLC

February 2016

FL685AB

NHTSA #15V-432 (School Bus)

NHTSA #15V-425 (Non-School Bus)

Transport Canada #15-291 (School Bus)

Transport Canada #15-290 (Non-School Bus)

REVISED NOTICE

## Replacement of Interior and Exterior Door Handles

NOTE: See the cross reference list at the end of this bulletin to determine the replacement parts for specific vehicles and for a guide to determining right and left hand interior handles.

1. Close and lock the door to keep it steady while performing next step.
2. Cut the stem and exterior door handle off. This can be performed with an oscillating tool or similar tool. See **Figure 6**.



Figure 6, Cutting Off the Stem and Exterior Door Handle

3. Enter the bus and open the emergency door. Return to the back of the bus.

NOTE: Before removing the interior door handle, confirm whether it is right or left. See "Determining Right or Left Interior Door Handles" following these replacement instructions for a guide.

# Recall Campaign

February 2016

FL685AB

NHTSA #15V-432 (School Bus)

NHTSA #15V-425 (Non-School Bus)

Transport Canada #15-291 (School Bus)

Transport Canada #15-290 (Non-School Bus)

## REVISED NOTICE

4. Remove the fasteners on the interior locking mechanism using a punch and/or drill bit.

C2 rear emergency doors will have four (4) rivets used for mounting the mechanism to the door bracket. Included in kit TBB 204987 are four (4) #12 screws to be used as replacement fasteners for the rivets. See **Figure 7**.

Legacy products will have screws used for mounting the mechanism to the door. Remove and retain these screws for replacement. See **Figure 8**.



Figure 7, C2 Mounting

5. Remove the two screws on the left side of the locking mechanism and retain them for replacement. See **Figure 8**



Figure 8, Legacy Mounting

# Recall Campaign

Daimler Trucks  
North America LLC

February 2016

FL685AB

NHTSA #15V-432 (School Bus)

NHTSA #15V-425 (Non-School Bus)

Transport Canada #15-291 (School Bus)

Transport Canada #15-290 (Non-School Bus)

## REVISED NOTICE

6. Pull the locking mechanism and handle off the door. Lay the locking mechanism on the side the handle is not on and pull the handle shaft out of the locking mechanism. See **Figure 9**.



**Figure 9, Removing the Locking Mechanism**

7. Install the new handle with the locking mechanism and new washers from the kit (TBB 204987), using #12 screws in all fastener locations (Two (2) that were already used for mounting and four (4) used to replace the rivets).
8. Wipe the surface clean around the new stem where it exits the door.
9. Remove the paper covering the adhesive off back of the new washer and install it around stem. Make sure the washer slit is installed on the bottom side of opening. See **Figure 10**.



**Figure 10, Installing the New Washer**

10. Close the emergency door using the interior door handle. Make sure the interior handle is in the closed position. The closed position is when the interior handle is pushed all the way down to a horizontal position.

# Recall Campaign

February 2016

FL685AB

NHTSA #15V-432 (School Bus)

NHTSA #15V-425 (Non-School Bus)

Transport Canada #15-291 (School Bus)

Transport Canada #15-290 (Non-School Bus)

REVISED NOTICE

11. The exterior door handle must be installed in a vertical orientation. See **Figure 11**.



**Figure 11, Position of Newly Installed Exterior Handle**

12. Using a rubber mallet, hammer the exterior handle (kit TBB 204988) onto the stem. The exterior handle must properly fit on the door stem for installation of the locking pin.

13. Insert the locking pin (TBB151501 from kit TBB 204987) into the side of the exterior handle.

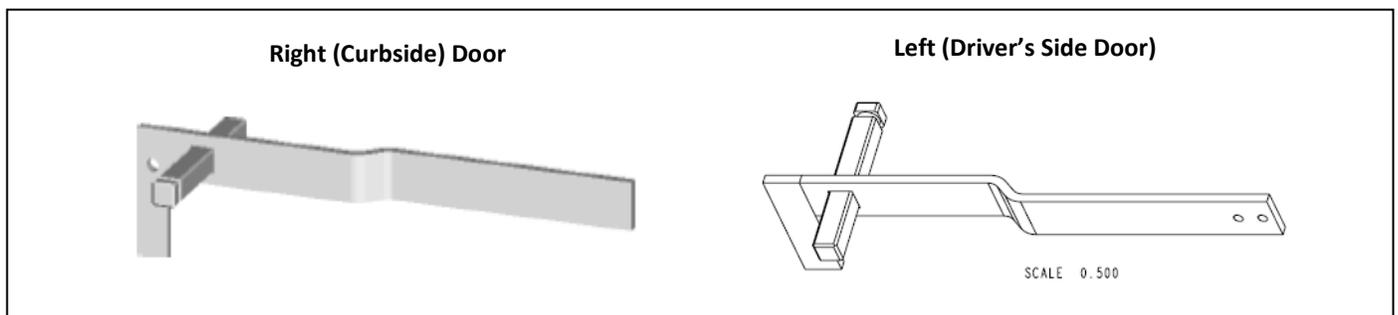
14. Check door operation.

15. Unchock wheels.

## Determining Right or Left Interior Door Handles

To determine if the door stem handle is for a right side or left side door, note:

- The groove in the stem is always toward the outside of the bus door.
- The handle stopper is always pointed down.
- Doors always open to the rear.



**Figure 12, Right and Left Interior Door Handles**

# Recall Campaign

February 2016

FL685AB

NHTSA #15V-432 (School Bus)

NHTSA #15V-425 (Non-School Bus)

Transport Canada #15-291 (School Bus)

Transport Canada #15-290 (Non-School Bus)

REVISED NOTICE

## Existing Part Number to Replacement Kit/Part Number Cross Reference

Existing Part Number	Use Recall Kit/Part Number
TBB 64007431 TBB 64009294 TBB 64000066 TBB 175609	TBB 204989M
TBB 64009820 TBB 64004671 TBB 175615 TBB 175613	TBB 204990M
TBB 64004672 TBB 64009821 TBB 175614	TBB 204991M
TBB 64009823 TBB 175617	TBB 204992M
TBB 64009824 TBB 175618	TBB 204993M
TBB 120058 TBB 175620	TBB 204995M
TBB 120260 TBB 175628	TBB 204996M
TBB 175624 TBB 132817	TBB 204997M
TBB 64007432 TBB 64009295 TBB 64000067 TBB 175610	TBB 206920M
TBB 175626	TBB 206919M
TBB 120504	TBB 204995M <b>and</b> TBB 205657
TBB 131659	TBB 204997M <b>and</b> TBB 205657
TBB 120494	TBB 204997M <b>and</b> TBB 205657

Table 3

February 2016  
FL697A-E  
NHTSA #15V-842  
Transport Canada #15-015

## Subject: TBB Spectal Pushout Windows

**Models Affected:** Specific Saf-T-Liner C2 model vehicles manufactured May 1, 2015, through August 1, 2015, with certain Spectal tempered glass pushout windows.

### General Information

Daimler Trucks North America LLC (DTNA), on behalf of its wholly owned subsidiary, Thomas Built Buses (TBB), has decided that a defect that relates to motor vehicle safety exists on the vehicles mentioned above.

There are approximately 1,500 vehicles involved in this campaign.

Certain vehicles may not meet the window retention test requirements of FMVSS 217, Bus Emergency Exits and Window Retention and Release. In the event of a crash, a window may not retain a passenger in the vehicle, increasing the risk of injury to vehicle occupants.

The windows will be modified as necessary to ensure compliance. Parts are expected to be available February 15, 2016, and dealers may begin repairs as soon as parts are available to order.

### Additional Repairs

Dealers must complete all outstanding Recall and Field Service campaigns prior to the sale or delivery of a vehicle. A Dealer will be liable for any progressive damage that results from its failure to complete campaigns before sale or delivery of a vehicle.

Owners may be liable for any progressive damage that results from failure to complete campaigns within a reasonable time after receiving notification.

### Work Instructions

Please refer to the attached work instructions.

### Replacement Parts

Replacement parts are expected to be available by February 15, 2016, and can be obtained by ordering from your facing Parts Distribution Center at that time.

If our records show your dealership has ordered any vehicles involved in campaign number FL675, a list of the customers and vehicle identification numbers will be available on [AccessFreightliner.com](http://AccessFreightliner.com). Please refer to this list when ordering parts for this recall.

# Recall Campaign

February 2016  
FL697A-E  
NHTSA #15V-842  
Transport Canada #15-015

IMPORTANT: One kit will repair two windows. If you are repairing an odd number of windows, discard the “extra” part from the kit. For example, when repairing one window, discard the second part from the kit.

**Table 1 – Replacement Parts for FL675A-C**

Campaign Number	Part Number	Description	Qty. Per Kit
FL697A (4 Windows – Use 2 Kits)	TBB THSP61010	EMERGENCY WDO PROPELLER LOCKING KIT	2 ea.
FL697B (2 Windows – Use 1 Kit)			
FL697C (1 Windows – Use 1 Kit)	ETHYL CYANOACRYLAT E-BASED GLUE (An allowance will be added to claims for glue.)	EXAMPLES: GORILLA SUPER GLUE or ZAP GEL PT26	As Needed
FL697D (6 Windows – Use 3 Kits)			
FL697E			
FL697E (3 Windows – Use 2 Kits)			

**Table 1**

## Removed Parts

Please follow Warranty Failed Parts Tracking shipping instructions for the disposition of all removed parts.

## Labor Allowance

**Table 2 – Labor Allowance**

Campaign Number	Procedure	Time Allowed (Hours)	SRT Code	Corrective Action
FL697A (3,232 units)	Install 4 window slide retainers	0.4	174-6806B	12 – Repair Recall/Campaign
FL697B (1,170 units)	Install 2 window slide retainers	0.2	174-6806A	12 – Repair Recall/Campaign
FL697C (68 units)	Install 1 window slide retainer	0.2	174-6806A	12 – Repair Recall/Campaign
FL697D (192 units)	Install 6 window slide retainers	0.6	174-6806C	12 – Repair Recall/Campaign
FL697E (69 units)	Install 3 window slide retainers	0.4	174-6806B	12 – Repair Recall/Campaign

**Table 2**

# Recall Campaign

Daimler Trucks  
North America LLC

February 2016  
FL697A-E  
NHTSA #15V-842  
Transport Canada #15-015

## Claims for Credit

You will be reimbursed for your parts, labor, and handling by submitting your claim through the Warranty system within 30 days of completing this campaign. Please reference the following information in OWL:

- Claim Type is **Recall Campaign**.
- In the Campaign field, enter the campaign number and appropriate group (**FL697-A, FL697-B, FL657-C, etc**).
- In the Primary Failed Part field, enter **TBB 185234**.
- In the Parts section, enter the appropriate part number(s) as shown in the Replacement Parts Table. An allowance for required glue will automatically be added to the claim.
- In the Labor section, enter the appropriate SRT from the Labor Allowance Table.
- The VMRS Component Code is **174-006-003** and the Cause Code is **A1 - Campaign**.

**IMPORTANT:** OWL must be viewed prior to performing the recall to ensure the vehicle is involved and the campaign has not been previously completed. Also, check for a completion sticker prior to beginning work.

Contact the Warranty Campaigns Department at (336) 889-4871, from 8:00 a.m. to 5:00 p.m. Eastern Time, Monday through Friday, via Web inquiry at [AccessFreightliner.com](http://AccessFreightliner.com) / My Tickets and Submit an Inquiry, if you have any questions or need additional information.

To return excess kit inventory related to this campaign, U.S. dealers must submit a Parts Authorization Return (PAR) to the Memphis PDC. Canadian dealers must submit a PAR to their facing PDC. All kits must be in resalable condition. PAR requests must include the original purchase invoice number.

The letter notifying U.S. and Canadian vehicle owners is included for your reference.

Please note that the National Traffic and Motor Vehicle Safety Act, as amended (Title 49, United States Code, Chapter 301), requires the owner's vehicle(s) be corrected within a reasonable time after parts are available to you. The Act states that failure to repair a vehicle within 60 days after tender for repair shall be prima facie evidence of an unreasonable time. However, circumstances of a particular situation may reduce the 60 day period. Failure to repair a vehicle within a reasonable time can result in either the obligation to (a) replace the vehicle with an identical or reasonably equivalent vehicle, without charge, or (b) refund the purchase price in full, less a reasonable allowance for depreciation. The Act further prohibits dealers from selling a vehicle unless all outstanding recalls are performed. Any lessor is required to send a copy of the recall notification to the lessee within 10 days. Any subsequent stage manufacturer is required to forward this notice to its distributors and retail outlets within five working days.

February 2016  
FL697A-E  
NHTSA #15V-842  
Transport Canada #15-015

## Copy of Notice to Owners

### Subject: TBB Spectal Pushout Windows

This notice is sent to you in accordance with the National Traffic and Motor Vehicle Safety Act. This notice is sent to you in accordance with the Canadian Motor Vehicle Safety Act.

Daimler Trucks North America LLC, on behalf of its wholly owned subsidiary, Thomas Built Buses, Inc., has decided that a non-compliance with U.S. and Canadian regulations exists on specific Saf-T-Liner C2 model vehicles manufactured May 1, 2015, through August 1, 2015, with certain Spectal tempered glass pushout windows.

Certain vehicles may not meet the window retention test requirements of FMVSS 217, Bus Emergency Exits and Window Retention and Release. In the event of a crash, a window may not retain a passenger in the vehicle, increasing the risk of injury to vehicle occupants.

The windows will be modified as necessary to ensure compliance. Parts are expected to be available February 15, 2016, and repairs will begin as soon as parts are on hand.

Thomas will remedy this defect without charge. The repair should take approximately an hour, and will be performed at no charge to you. To locate a dealer please go to [www.thomasbus.com](http://www.thomasbus.com).

You may be liable for any progressive damage that results from your failure to complete the Recall within a reasonable time after receiving notification.

If you do not own the vehicle that corresponds to the identification number(s) which appears on the Recall Notification, please return the notification to the Warranty Department with any information you can furnish that will assist us in locating the present owner. If you have leased this vehicle, Federal law requires that you forward this notice to the lessee within 10 days.

If you have paid to have this recall condition corrected prior to this notice, you may be eligible to receive reimbursement. For further information, please contact the Warranty Department at the number below.

If you have any questions about this recall, please contact the Warranty Department at (336) 889-4871, 8:00 a.m. to 5:00 p.m. Eastern Time, Monday through Friday. If you are not able to have the defect remedied without charge and within a reasonable time, you may wish to submit a complaint to the Administrator, National Highway Traffic Safety Administration, 1200 New Jersey Avenue, SE, Washington, DC 20590; or call the Vehicle Safety Hotline at (888) 3274236 (TTY: (800) 424-9153); or to <http://www.safercar.gov>.

We regret any inconvenience this action may cause but feel certain you understand our interest in motor vehicle safety.

THOMAS BUILT BUSES WARRANTY DEPARTMENT  
Enclosure

February 2016  
FL697A-E  
NHTSA #15V-842  
Transport Canada #15-015

## Work Instructions

### Subject: TBB Spectal Pushout Windows

**Models Affected:** Specific Saf-T-Liner C2 model vehicles manufactured May 1, 2015, through August 1, 2015, with certain Spectal tempered glass pushout windows.

#### Window Slider Retainer Installation

1. Turn the vehicle off, place in park, and chock the wheels.
2. Open the emergency window and locate slider retainer. See **Figure 1**.



Figure 1, Slide Retainer Installation

# Recall Campaign

Daimler Trucks  
North America LLC

February 2016  
FL697A-E  
NHTSA #15V-842  
Transport Canada #15-015

NOTE: When using pliers, be sure not to damage the window frame.

3. Remove the lower slider retainer using a pair of pliers. Discard old retainer. See **Figure 2**.



**Figure 2 Removing the Lower Slider Retainer**

4. Before installing the new retainer, make sure that the groove in the spring pin is facing upward, as shown in **Figure 3**. If you cannot turn it by hand, gently turn it using a flat head screwdriver, being careful to not deform the spring pin.



**Figure 3, Correct Spring Pin Orientation**

NOTE: If the retainer cavity is overfilled, the excess glue can seep into other parts of the window causing incorrect operation.

5. Using the new retainer, turn over and locate the cavity where glue will be applied. Using a recommended glue, fill cavity at most halfway. See **Figure 4** and **Table 1**.

# Recall Campaign

Daimler Trucks  
North America LLC

February 2016  
FL697A-E  
NHTSA #15V-842  
Transport Canada #15-015



**Figure 4: Filling Retainer Cavity Halfway**

6. Once the glue is inserted, make sure the viscosity of the glue is correct. Turn the slider retainer upside down. The glue should not drip out of the cavity. See **Figure 5**. If it does, use the other recommended glue shown in **Table 1**



**Figure 5: Testing the Viscosity of the Glue**

7. Push evenly on the frame section that has the handle. This pushes the pins out to make it easier to install. See **Figure 6**.

# Recall Campaign

Daimler Trucks  
North America LLC

February 2016  
FL697A-E  
NHTSA #15V-842  
Transport Canada #15-015



**Figure 6, Pushing Handle-Side Window Frame Against the Bus Structure**

8. Using a rubber hammer, install the retainer on the pin. Make sure the retainer is properly installed. No space should be between the slide of the retainer and the window frame
9. After 30 seconds test locking mechanism to make sure window works properly.
10. Close window and lock. Repeat for all affected windows.
11. When all windows are complete, remove the chocks from the wheels.

# ***SERVICE PROCEDURE***

15501R1  
APRIL 2015

**SUBJECT: SAFETY RECALL**  
**Powertrain Harness on certain CE school bus models built 03 October 2013 thru 16 March 2015 with ISB engines**

## **DEFECT DESCRIPTION**

The powertrain harness may contact a high-pressure fuel line and over time may potentially rub through the fuel line, resulting in a fuel leak. A fuel leak in the line may cause fuel to spray inside the engine compartment, increasing the risk of fire resulting in property damage or personal injury.

## **REASON FOR REVISION**

The campaign suspect population has been expanded. Models built 03 October 2013 thru 04 September 2014 require one repair, and models built 08 September 2014 thru 16 March 2015 require a different repair.

## **MODELS INVOLVED**

This Safety Recall involves certain CE school bus models built 03 October 2013 thru 16 March 2015 with ISB engines.

## **ELIGIBILITY**

This procedure applies ONLY to vehicles marked in the International<sup>®</sup> Service Portal<sup>SM</sup> with Safety Recall 15501. Also complete any other open campaigns listed on the Service Portal at this time.

## **PARTS INFORMATION**

**NOTE:** Depending on build date, the bus being serviced will require either P/N 8900250R91 or P/N 306132C1, but not both.

<b>Part Number</b>	<b>Part Description</b>	<b>Quantity</b>
8900250R91	Kit, Harness Routing	1
306132C1 or Source Locally	Strap, Cable Tie	1
Source Locally	Cummins Red Engine Paint or Equivalent	1

**8900250R91** contains the following parts:

<b>Part Description</b>	<b>Quantity</b>
Tie Mount	1
Strap, Cable Tie	1
M6X20 Flange Head Bolt	1
M6 Flange Nut	1

## **SERVICE PROCEDURE**

**WARNING!** TO PREVENT PROPERTY DAMAGE, PERSONAL INJURY, AND / OR DEATH, PARK VEHICLE ON HARD FLAT SURFACE, TURN THE ENGINE OFF, SET THE PARKING BRAKE AND INSTALL WHEEL CHOCKS TO PREVENT THE VEHICLE FROM MOVING IN BOTH DIRECTIONS.

**WARNING!** TO PREVENT PERSONAL INJURY AND / OR DEATH, ALWAYS WEAR SAFE EYE PROTECTION WHEN PERFORMING VEHICLE MAINTENANCE.

**WARNING!** TO PREVENT PROPERTY DAMAGE, PERSONAL INJURY, AND / OR DEATH, ALLOW COMPONENTS IN ENGINE COMPARTMENT TO COOL BEFORE SERVICING ENGINE OR VEHICLE.

**WARNING!** TO PREVENT PROPERTY DAMAGE, PERSONAL INJURY, AND / OR DEATH, KEEP FLAMES OR SPARKS AWAY FROM VEHICLE AND DO NOT SMOKE WHILE SERVICING THE VEHICLE'S BATTERIES. BATTERIES EXPEL EXPLOSIVE GASES.

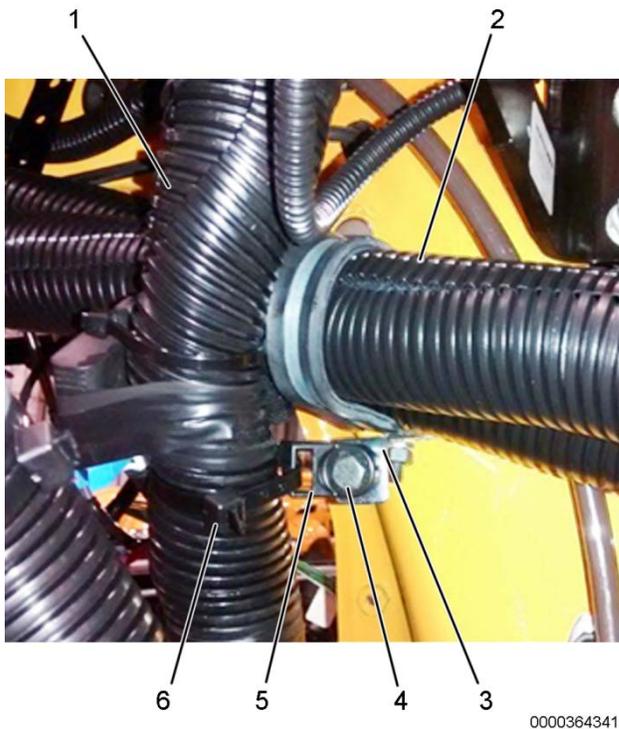
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### **VEHICLE RECALL 15501**

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**NOTE: If the bus you are working on was built 03 October 2013 thru 04 September 2014, use P/N 8900250R91 and perform all repair steps. If the bus you are working on was built 08 September 2014 thru 16 March 2015, use P/N 306132C1 and ONLY perform Steps 1 - 4 and Steps 7 - 11.**

1. Park vehicle on a flat surface with the wheels straight ahead.
2. Shift the transmission to Park or Neutral and set parking brakes.
3. Install wheel chocks.
4. Unlatch and open hood.

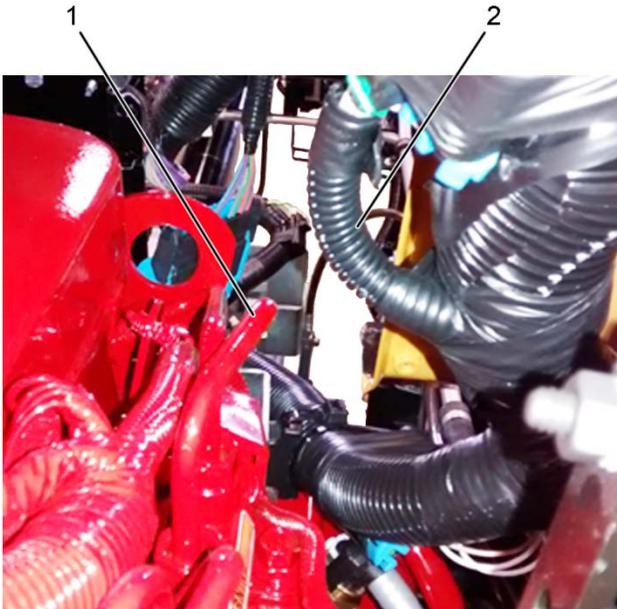


**Figure 1. Powertrain Harness.**

1. Powertrain harness
  2. Heater hose
  3. Extension bracket
  4. M6X20 bolt
  5. Tie mount
  6. Cable tie strap
5. Install tie mount (Figure 1, Item 5) onto M6X20 bolt (Figure 1, Item 4) and install bolt to end of extension bracket (Figure 1, Item 3) at driver side of engine tunnel.
  6. Install M6 nut (not shown) onto M6X20 bolt (Figure 1, Item 4) and tighten.

**NOTE: If the bus you are working on was built 08 September 2014 thru 16 March 2015 and the tie mount is not installed onto the extension bracket, use P/N 8900250R91 and also perform Steps 5 and 6 above.**

7. Use cable tie strap (Figure 1, Item 6) to secure powertrain harness (Figure 1, Item 1) to tie mount (Figure 1, Item 5). Do not tighten cable tie strap at this time.

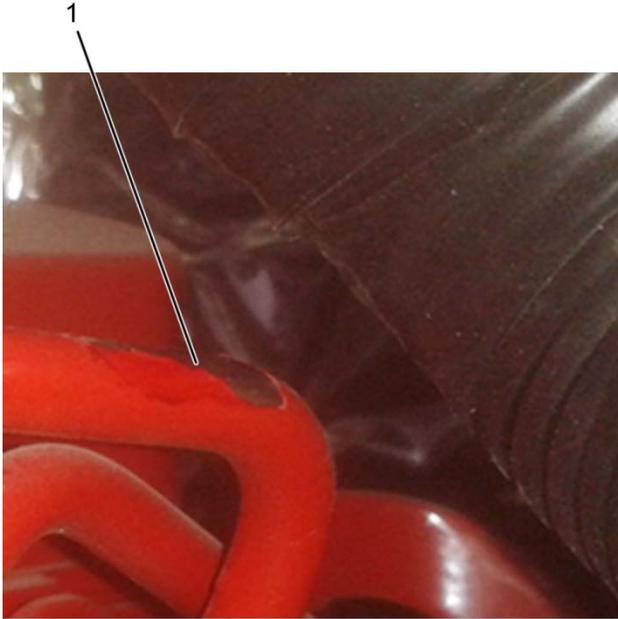


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**Figure 2. High-Pressure Fuel Line.**

1. Injector 5 high-pressure fuel line
2. Powertrain harness

8. Lift powertrain harness (Figure 2, Item 2) to provide minimum 1 in clearance with high-pressure fuel line to number 5 injector (Figure 2, Item 1) and tighten cable tie strap (Figure 1, Item 6). Cut off extra cable tie strap end and discard.



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**Figure 3. Paint Abrasion.**

1. Paint abrasion, injector 5 high-pressure fuel line
9. Inspect injector 5 high-pressure fuel line for paint worn off from abrasion (Figure 3, Item 1).
    - a. If **ONLY** paint is worn from abrasion, properly clean area and protect with new paint.
    - b. If fuel line metal surface is worn from abrasion, take picture and open a technical service case file for approval to order from Cummins, part number 4935974, and replace fuel line according to Cummins replacement procedures. If a fleet is performing the inspection and a fuel line is required, contact your local dealer and have them submit the case file.
  10. Close and latch hood.
  11. Remove wheel chocks.

**END OF SERVICE PROCEDURE**

## **LABOR INFORMATION**

<b>Operation Number</b>	<b>Description</b>	<b>Time</b>
A40-15501-1	Install Tie Mount And Cable Tie, Paint As Necessary	0.3 hr
A40-15501-2	Replace #5 Injector Line – Only If Needed	0.3 hr
A40-15501-3	Install Cable Tie Only, Paint As Necessary	0.2 hr

## **CAMPAIGN IDENTIFICATION LABEL**

Each vehicle corrected in accordance with this campaign must be marked with a CTS-1075 Campaign Identification Label.

Complete the label and attach on a clean surface next to the vehicle identification number (VIN) plate.



The image shows a rectangular label template with a black border. At the top and bottom, it says "DO NOT REMOVE" in white capital letters. In the center, there is a white rounded rectangle containing the following text in black: "INTERNATIONAL" (bold), "Campaign No.", "VIN", "Eng.#", "COMPLETED" (bold), and "Service Location Code #".

## **ADMINISTRATIVE / DEALER RESPONSIBILITIES**

### **WARRANTY CLAIMS**

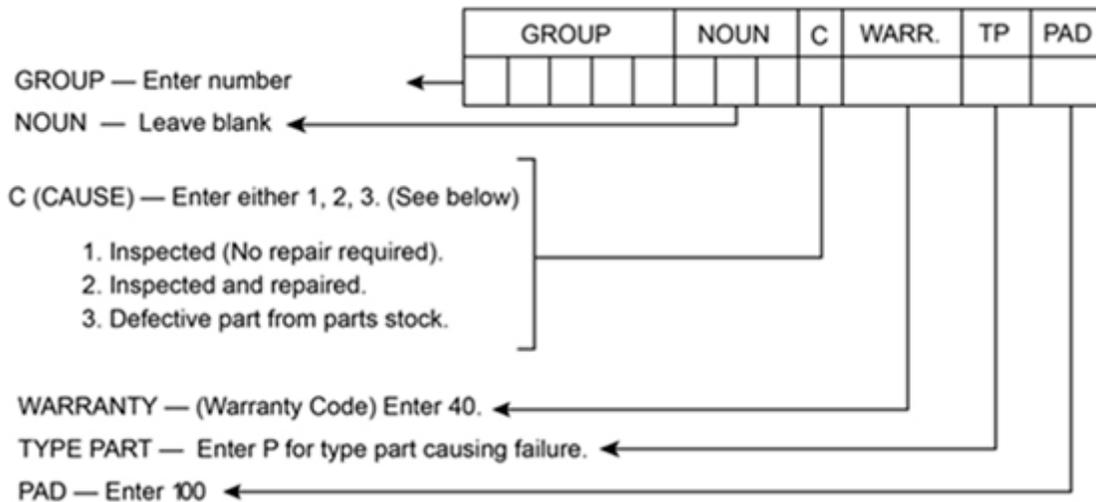
Warranty claim expense is to be charged to Warranty. Claims are to be submitted in the normal manner, making reference to Safety Recall 15501.

It is important that the coding be completed properly to assist in processing the warranty claim. Complete instructions will be found in the Warranty Policy Manual, Section 7.1.8.

As with all claim submissions, items acquired locally must be submitted in the “Other Charges” tab. The cost of any bulk items (such as a bag of cable tie straps, roll of wire, barrel of oil, or a tube of silicone) should be prorated for the cost of the individual pieces / amount used during each repair.

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### **VEHICLE RECALL 15501**



## UNITED STATES AND POSSESSIONS

The National Traffic and Motor Vehicle Safety Act, as amended, provides that each vehicle that is subject to a vehicle recall campaign must be adequately repaired within a reasonable time after the owner has tendered it for repair. A failure to adequately repair within 60 days after a tender of a vehicle is prima facie evidence of failure to repair within a reasonable time. If the condition is not adequately repaired within 60 days, the owner may be entitled to replacement with an identical or reasonable equivalent vehicle at no charge, or to a refund of the purchase price less a reasonable allowance for depreciation.

Dealers must correct all vehicles subject to this campaign at no charge to the owner, regardless of mileage, age of vehicle, or ownership, from this time forward.

Dealers should proceed immediately to make necessary correction to units in inventory. All inventory vehicles subject to this recall campaign must be corrected prior to sale, transfer or delivery. If vehicles have been sold or transferred and you are in receipt of Customer Notification Letters and Authorization for Recall Service cards for those vehicles, the transfer location or customer must be notified immediately from your dealer location.

Dealers must make every effort to promptly schedule an appointment with each owner to repair his or her vehicle as soon as possible. However, consistent with the customer notification, dealers are expected to complete the repairs on the mutually agreed upon service date.

Dealers involved in the recall process will be furnished a listing of owner names and addresses to enable them to follow up with owners and have the vehicles corrected. Use of this listing must be limited to this campaign because the list may contain information obtained from state motor vehicle registration records, and the use of such motor vehicle registration data for purposes other than this campaign is a violation of law in several states.

## **CANADA**

Dealers must correct all vehicles subject to this campaign at no charge to the owner, regardless of mileage, age of vehicle, or ownership, from this time forward.

Dealers should proceed immediately to make necessary correction to units in inventory. All inventory vehicles subject to this recall campaign must be corrected prior to sale, transfer or delivery. If vehicles have been sold or transferred and you are in receipt of Customer Notification Letters and Authorization for Recall Service cards for those vehicles, the transfer location or customer must be notified immediately from your dealer location.

Dealers must make every effort to promptly schedule an appointment with each owner to repair his or her vehicle as soon as possible. However, consistent with the customer notification, dealers are expected to complete the repairs on the mutually agreed upon service date.

Dealers involved in the recall process will be furnished a listing of owner names and addresses to enable them to follow up with owners and have the vehicles corrected. Use of this listing must be limited to this campaign because the list may contain information obtained from state motor vehicle registration records, and the use of such motor vehicle registration data for purposes other than this campaign is a violation of law in several states.

## **EXPORT**

Export Distributors should proceed immediately to make necessary correction to units in inventory. All inventory vehicles subject to this recall campaign must be corrected prior to sale, transfer or delivery. If vehicles have been sold or transferred and you are in receipt of Customer Notification Letters and Authorization for Recall Service cards for those vehicles, the transfer location or customer must be notified immediately from your distributor location.

Export Distributors are to submit warranty claims in the usual manner making reference to this recall number.

Export Distributors are expected to provide full cooperation and follow-up with respect to this important subject matter. If you have any questions or need further assistance, please contact the Regional Service Manager at your regional office.

## **NAVISTAR, INC.**

# ***SERVICE PROCEDURE***

15513R1  
SEPTEMBER 2015

**SUBJECT: EMISSIONS RECALL**

Navistar has decided that a defect which relates to engine emissions exists in certain 1300, DuraStar<sup>®</sup>, and WorkStar<sup>®</sup> truck models and CE C, CE S, RC C, RE C, and RE S bus models built 07 May 2009 thru 02 April 2013 with 2010, 2011, and 2012 EPA emissions MaxxForce<sup>®</sup> DT, 9, and 10 engines.

**DEFECT DESCRIPTION**

This Emissions Recall applies to bus and truck models that were built with 2010, 2011, and 2012 MaxxForce<sup>®</sup> DT, 9 and 10 engines. This recall will require recalibration of the Engine Control Module (ECM). This will reduce fuel injector coil failures resulting in engine misfire.

**REASON FOR REVISION**

An additional step has been added to the end of calibration procedures.

**MODELS INVOLVED**

This Emissions Recall involves certain 1300, DuraStar<sup>®</sup>, and WorkStar<sup>®</sup> truck models built 07 May 2009 thru 07 March 2013 and certain CE C, CE S, RC C, RE C, and RE S bus models built 24 September 2009 thru 02 April 2013 with 2010, 2011, and 2012 EPA emissions MaxxForce<sup>®</sup> DT, 9, and 10 engines.

**ELIGIBILITY**

This procedure applies ONLY to vehicles marked in the International<sup>®</sup> Service Portal<sup>SM</sup> with Emissions Recall 15513. Also complete any other open campaigns listed on the Service Portal at this time.

**PARTS INFORMATION**

There are no parts for this campaign.

## **SERVICE PROCEDURE**

**WARNING!** TO PREVENT PROPERTY DAMAGE, PERSONAL INJURY, AND / OR DEATH, PARK VEHICLE ON HARD FLAT SURFACE, TURN THE ENGINE OFF, SET THE PARKING BRAKE AND INSTALL WHEEL CHOCKS TO PREVENT THE VEHICLE FROM MOVING IN BOTH DIRECTIONS.

**WARNING!** TO PREVENT PERSONAL INJURY AND / OR DEATH, ALWAYS WEAR SAFE EYE PROTECTION WHEN PERFORMING VEHICLE MAINTENANCE.

**WARNING!** TO PREVENT PROPERTY DAMAGE, PERSONAL INJURY, AND / OR DEATH, KEEP FLAMES OR SPARKS AWAY FROM VEHICLE AND DO NOT SMOKE WHILE SERVICING THE VEHICLE'S BATTERIES. BATTERIES EXPEL EXPLOSIVE GASES.

1. Park vehicle on flat surface with wheels straight ahead.
2. Shift transmission to Park or Neutral and set parking brakes.
3. Install wheel chocks.
4. Verify that ECM has latest software by referring to vehicle calibration scorecard in Service Portal system.
  - a. If calibration scorecard indicates that calibration is not current, engine must be reprogrammed to raise calibration to latest level. Proceed to Step 5.
  - b. If calibration scorecard indicates calibration is current, engine does not need to be reprogrammed.
    - i. No further action is required for dealers and customers operating outside California. Proceed to Step 7.
    - ii. Dealers and customers operating in California must also perform Step 8.
5. Program ECM.

**NOTE: All programming and troubleshooting information can be accessed from the articles listed in the chart below, Dealer EZ-Tech<sup>®</sup>, or clicking the link below to access:**

[Diagnostic Software Support Resource Center](#)

**NOTE: These articles contain general information about each reprogramming method and software, with links to specific instructions.**

<b>Programming Method</b>	<b>Programming and Troubleshooting Instructions</b>
<i>NavKal</i>	<i>TL2600002</i>
<i>PocketMaxx™</i>	<i>IK3300001</i>
<i>Auto Upgrade</i>	<i>IK2600082</i>
<i>NETS</i>	<i>IK2600010</i>

6. If assistance is needed, contact Vehicle Programming by creating an iKNow case file or calling 1-800-336-4500, options 3, 1, 1.

**NOTE: Clear all inactive / previously active faults after programming. Only perform diagnostics or procedures on ACTIVE faults.**

7. If any inactive / previously active faults are found after programming, clear them from ECM. Only perform diagnostics or procedures on active faults.

8. Remove wheel chocks.

#### **Additional Requirements for Dealers and Customers Operating in California**

**NOTE: The following step is required only for dealers and customers operating in the state of California.**

9. After completing this recall, dealer must fill out salmon-colored Proof of Correction certificate and provide a copy to customer.
  - a. Use either Figure 1 (certificate to color print on white paper) or Figure 2 (certificate to print on salmon-colored paper) to print DMV certificates.

Vehicle Emission Recall - Proof of Correction				
License Number	Make	Year Model	Body Type	Vehicle Identification Number <div style="display: flex; justify-content: space-around;"> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> </div>
Manufacturer _____			Recall Number _____	
The above described vehicle has been repaired, modified and/or equipped with new emission control devices to meet applicable California Emission Control Laws.				
Dealer's _____		Address, City, State _____		
_____		Dealership's Authorized		
_____		X		
Return this certificate to DMV <u>only</u> when required - otherwise retain for your records.				

0000047743

Figure 1. DMV Certificate, Salmon (Print on 8.5 x 11 inch White Paper).

Vehicle Emission Recall - Proof of Correction				
License Number	Make	Year Model	Body Type	Vehicle Identification Number <div style="display: flex; justify-content: space-around;"> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> <span style="border: 1px solid black; width: 20px; height: 20px;"></span> </div>
Manufacturer _____			Recall Number _____	
The above described vehicle has been repaired, modified and/or equipped with new emission control devices to meet applicable California Emission Control Laws.				
Dealer's _____		Address, City, State _____		
_____		Dealership's Authorized		
_____		X		
Return this certificate to DMV <u>only</u> when required - otherwise retain for your records.				

0000047729

Figure 2. DMV Certificate, White (Print on 8.5 x 11 inch Salmon Paper).

## END OF SERVICE PROCEDURE

## **LABOR INFORMATION**

Operation Number	Description	Time
A40-15513-1	Recalibrate ECM	0.4 hr

## **CAMPAIGN IDENTIFICATION LABEL**

Each vehicle corrected in accordance with this campaign must be marked with a CTS-1075 Campaign Identification Label.

Complete the label and attach on a clean surface next to the vehicle identification number (VIN) plate.



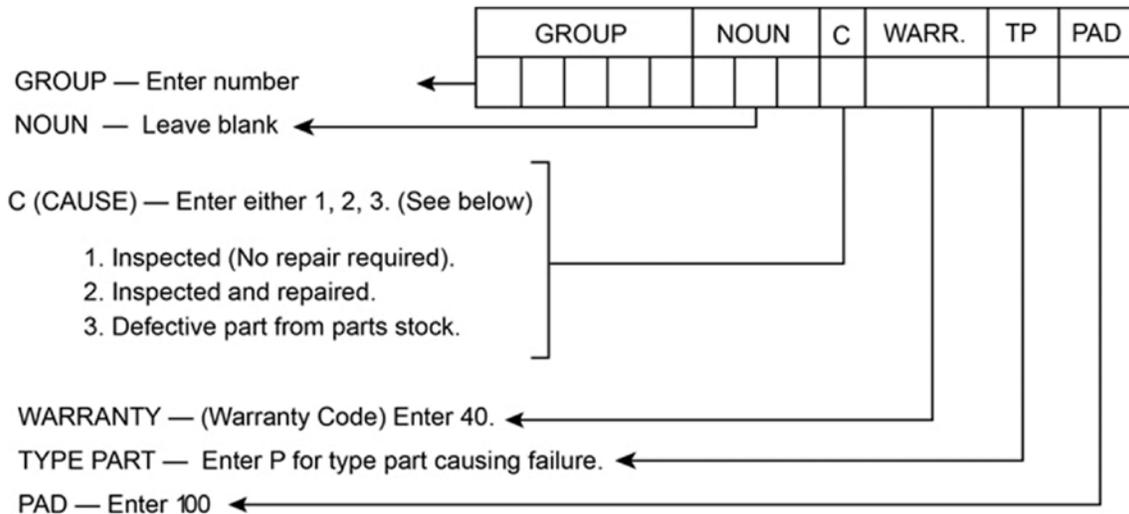
## **ADMINISTRATIVE / DEALER RESPONSIBILITIES**

### **WARRANTY CLAIMS**

Warranty claim expense is to be charged to Warranty. Claims are to be submitted in the normal manner, making reference to Emissions Recall 15513.

It is important that the coding be completed properly to assist in processing the warranty claim. Complete instructions will be found in the Warranty Policy Manual, Section 7.1.8.

As with all claim submissions, items acquired locally must be submitted in the "Other Charges" tab. The cost of any bulk items (such as a bag of cable tie straps, roll of wire, barrel of oil, or tube of silicone) should be prorated for the cost of the individual pieces / amount used during each repair.



0000047910

## UNITED STATES AND POSSESSIONS

The National Traffic and Motor Vehicle Safety Act, as amended, provides that each vehicle that is subject to a vehicle recall campaign must be adequately repaired within a reasonable time after the owner has tendered it for repair. A failure to adequately repair within 60 days after a tender of a vehicle is prima facie evidence of failure to repair within a reasonable time. If the condition is not adequately repaired within 60 days, the owner may be entitled to replacement with an identical or reasonable equivalent vehicle at no charge, or to a refund of the purchase price less a reasonable allowance for depreciation.

Dealers must correct all vehicles subject to this campaign at no charge to the owner, regardless of mileage, age of vehicle, or ownership, from this time forward.

Dealers should proceed immediately to make necessary correction to units in inventory. All inventory vehicles subject to this recall campaign must be corrected prior to sale, transfer or delivery. If vehicles have been sold or transferred and you are in receipt of Customer Notification Letters and Authorization for Recall Service cards for those vehicles, the transfer location or customer must be notified immediately from your dealer location.

Dealers must make every effort to promptly schedule an appointment with each owner to repair his or her vehicle as soon as possible. However, consistent with the customer notification, dealers are expected to complete the repairs on the mutually agreed upon service date.

Dealers involved in the recall process will be furnished a listing of owner names and addresses to enable them to follow up with owners and have the vehicles corrected. Use of this listing must be limited to this campaign because the list

may contain information obtained from state motor vehicle registration records, and the use of such motor vehicle registration data for purposes other than this campaign is a violation of law in several states.

## **CANADA**

Dealers must correct all vehicles subject to this campaign at no charge to the owner, regardless of mileage, age of vehicle, or ownership, from this time forward.

Dealers should proceed immediately to make necessary correction to units in inventory. All inventory vehicles subject to this recall campaign must be corrected prior to sale, transfer or delivery. If vehicles have been sold or transferred and you are in receipt of Customer Notification Letters and Authorization for Recall Service cards for those vehicles, the transfer location or customer must be notified immediately from your dealer location.

Dealers must make every effort to promptly schedule an appointment with each owner to repair his or her vehicle as soon as possible. However, consistent with the customer notification, dealers are expected to complete the repairs on the mutually agreed upon service date.

Dealers involved in the recall process will be furnished a listing of owner names and addresses to enable them to follow up with owners and have the vehicles corrected. Use of this listing must be limited to this campaign because the list may contain information obtained from state motor vehicle registration records, and the use of such motor vehicle registration data for purposes other than this campaign is a violation of law in several states.

## **EXPORT**

Export Distributors should proceed immediately to make necessary correction to units in inventory. All inventory vehicles subject to this recall campaign must be corrected prior to sale, transfer or delivery. If vehicles have been sold or transferred and you are in receipt of Customer Notification Letters and Authorization for Recall Service cards for those vehicles, the transfer location or customer must be notified immediately from your distributor location.

Export Distributors are to submit warranty claims in the usual manner making reference to this recall number.

Export Distributors are expected to provide full cooperation and follow-up with respect to this important subject matter. If you have any questions or need further assistance, please contact the Regional Service Manager at your regional office.

## **NAVISTAR, INC.**

# ***SERVICE PROCEDURE***

**14518  
JANUARY 2015**

**SUBJECT: SAFETY RECALL**  
**Wheelchair Lifts on certain AE, BE, CE, FE and RE school bus models built 02 January 2006 thru 23 September 2014 with Ricon Public Use, "S" 2000 and 5500 Series Lifts**

## **DEFECT DESCRIPTION**

The platforms included on the subject S-Series model wheelchair lifts can exhibit a crack on the platform side plate while in the stowed position. If a crack occurs on both sides of the platform to the point of material separation, it is possible for the lift platform to lean against the vehicle lift door(s) and fall out of the vehicle when the door(s) are opened, putting the lift operator at risk of injury.

## **MODELS INVOLVED**

This Safety Recall involves certain AE, BE, CE, FE, and RE school bus models built 23 January 2006 thru 23 September 2014 with Ricon Public Use, "S" 2000 and 5500 Series lifts.

## **ELIGIBILITY**

This procedure applies ONLY to vehicles marked in the International<sup>®</sup> Service Portal<sup>SM</sup> with Recall 14518. Also, complete any other open campaigns listed on the Service Portal at this time.

## **PARTS INFORMATION**

**NOTE:** If a new platform is required because of cracks in one or both side support brackets, contact Ricon customer support for the appropriate platform for your lift and instruction document by calling 800-322-2884, option 2. **DO NOT** preorder lift platforms, as most platforms will **ONLY** require installation of the platform support bumpers.

<b>Part Number</b>	<b>Part Description</b>	<b>Quantity</b>
8900249R91	Ricon Lift Kit	1

**8900249R91** contains the following parts:

<b>Part Description</b>	<b>Quantity</b>
Elastomeric Bumper	2
Screw	2
Washer	2
Nut	2

## **SERVICE PROCEDURE**

**WARNING!** TO PREVENT PROPERTY DAMAGE, PERSONAL INJURY, AND / OR DEATH, PARK VEHICLE ON HARD FLAT SURFACE, TURN THE ENGINE OFF, SET THE PARKING BRAKE AND INSTALL WHEEL CHOCKS TO PREVENT THE VEHICLE FROM MOVING IN BOTH DIRECTIONS.

**WARNING!** TO PREVENT PROPERTY DAMAGE, PERSONAL INJURY, AND / OR DEATH, IF THE VEHICLE MUST BE RAISED, DO NOT WORK UNDER THE VEHICLE SUPPORTED ONLY BY JACKS. JACKS CAN SLIP OR FALL OVER.

**WARNING!** TO PREVENT PERSONAL INJURY AND / OR DEATH, ALWAYS WEAR SAFE EYE PROTECTION WHEN PERFORMING VEHICLE MAINTENANCE.

**WARNING!** TO PREVENT PROPERTY DAMAGE, PERSONAL INJURY, AND / OR DEATH, KEEP FLAMES OR SPARKS AWAY FROM VEHICLE AND DO NOT SMOKE WHILE SERVICING THE VEHICLE'S BATTERIES. BATTERIES EXPEL EXPLOSIVE GASES.

**WARNING!** TO PREVENT PROPERTY DAMAGE, PERSONAL INJURY, AND / OR DEATH, REMOVE THE GROUND CABLE FROM THE NEGATIVE TERMINAL OF THE BATTERY BOX BEFORE DISCONNECTING ANY ELECTRICAL COMPONENTS. ALWAYS CONNECT THE GROUND CABLE LAST.

1. Bring vehicle into shop and park on flat surface.
2. Shift transmission to Park or Neutral and set parking brakes.
3. Install wheel chocks.

**NOTE:** Refer to Ricon service bulletin [RSB125](#) included with this letter to inspect the platform for cracks. If cracks are found in one or both of the side support brackets, the platform must be replaced before proceeding. Provide the model and serial number of the lift you are servicing to your parts department.

4. Please refer to the Ricon field modification instructions [FMI 751-064](#) included with this letter for installation of the platform support bumpers.

**NOTE:** The decal containing the serial number is located on the inner side of the hydraulic cylinder and top of right arm.

5. Record serial number on work order of lift being serviced.
6. Remove wheel chocks.

## END OF SERVICE PROCEDURE

### LABOR INFORMATION

Operation Number	Description	Time
A40-14518-1	Install Platform Support Bumpers	0.3 hr
A40-14518-2	Replace Complete Platform Lift Assembly if Necessary	1.0 hr
A40-14518-3	Replace Platform Weldment if Necessary	2.0 hrs

## **CAMPAIGN IDENTIFICATION LABEL**

Each vehicle corrected in accordance with this campaign must be marked with a CTS-1075 Campaign Identification Label.

Complete the label and attach on a clean surface next to the vehicle identification number (VIN) plate.

**DO NOT REMOVE**  
**INTERNATIONAL**  
Campaign No.  
VIN  
Eng.#  
**COMPLETED**  
Service Location Code #  
**DO NOT REMOVE**

## **ADMINISTRATIVE / DEALER RESPONSIBILITIES**

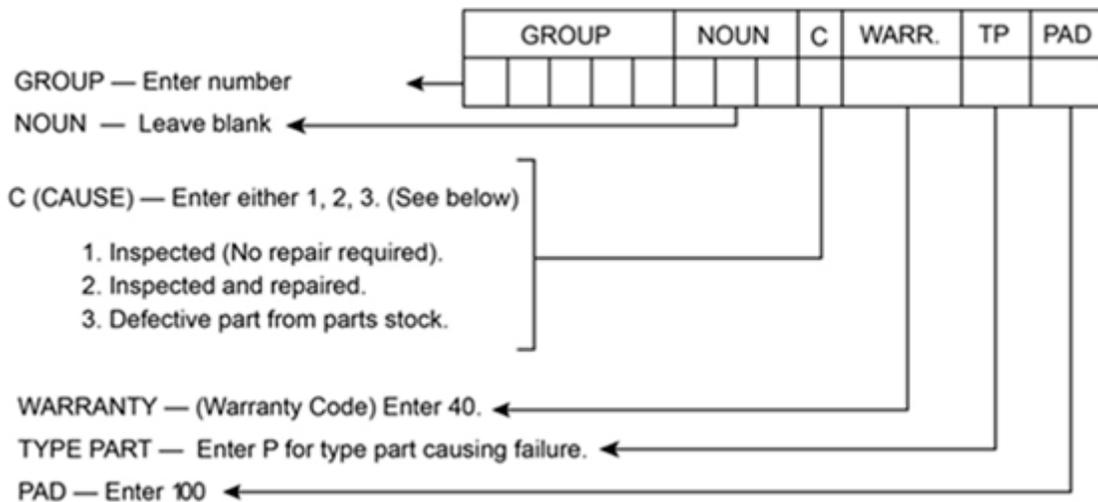
### **WARRANTY CLAIMS**

**NOTE: Warranty claim comments MUST include the vehicle lift serial number being serviced.**

Warranty claim expense is to be charged to Warranty. Claims are to be submitted in the normal manner, making reference to Safety Recall 14518.

It is important that the coding be completed properly to assist in processing the warranty claim. Complete instructions will be found in the Warranty Policy Manual, Section 7.1.8.

As with all claim submissions, items acquired locally must be submitted in the "Other Charges" tab. The cost of any bulk items (such as a bag of cable tie straps, roll of wire, a barrel of oil, or a tube of silicone) should be prorated for the cost of the individual pieces / amount used during each repair.



## UNITED STATES AND POSSESSIONS

The National Traffic and Motor Vehicle Safety Act, as amended, provides that each vehicle that is subject to a vehicle recall campaign must be adequately repaired within a reasonable time after the owner has tendered it for repair. A failure to adequately repair within 60 days after a tender of a vehicle is prima facie evidence of failure to repair within a reasonable time. If the condition is not adequately repaired within 60 days, the owner may be entitled to replacement with an identical or reasonable equivalent vehicle at no charge, or to a refund of the purchase price less a reasonable allowance for depreciation.

Dealers must correct all vehicles subject to this campaign at no charge to the owner, regardless of mileage, age of vehicle, or ownership, from this time forward.

Dealers should proceed immediately to make necessary correction to units in inventory. All inventory vehicles subject to this recall campaign must be corrected prior to sale, transfer or delivery. If vehicles have been sold or transferred and you are in receipt of Customer Notification Letters and Authorization for Recall Service cards for those vehicles, the transfer location or customer must be notified immediately from your dealer location.

Dealers must make every effort to promptly schedule an appointment with each owner to repair his or her vehicle as soon as possible. However, consistent with the customer notification, dealers are expected to complete the repairs on the mutually agreed upon service date.

Dealers involved in the recall process will be furnished a listing of owner names and addresses to enable them to follow up with owners and have the vehicles corrected. Use of this listing must be limited to this campaign because the list may contain information obtained from state motor vehicle registration records,

and the use of such motor vehicle registration data for purposes other than this campaign is a violation of law in several states.

## **CANADA**

Dealers must correct all vehicles subject to this campaign at no charge to the owner, regardless of mileage, age of vehicle, or ownership, from this time forward.

Dealers should proceed immediately to make necessary correction to units in inventory. All inventory vehicles subject to this recall campaign must be corrected prior to sale, transfer or delivery. If vehicles have been sold or transferred and you are in receipt of Customer Notification Letters and Authorization for Recall Service cards for those vehicles, the transfer location or customer must be notified immediately from your dealer location.

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Dealers involved in the recall process will be furnished a listing of owner names and addresses to enable them to follow up with owners and have the vehicles corrected. Use of this listing must be limited to this campaign because the list may contain information obtained from state motor vehicle registration records, and the use of such motor vehicle registration data for purposes other than this campaign is a violation of law in several states.

## **EXPORT**

Export Distributors should proceed immediately to make necessary correction to units in inventory. All inventory vehicles subject to this recall campaign must be corrected prior to sale, transfer or delivery. If vehicles have been sold or transferred and you are in receipt of Customer Notification Letters and Authorization for Recall Service cards for those vehicles, the transfer location or customer must be notified immediately from your distributor location.

Export Distributors are to submit warranty claims in the usual manner making reference to this recall number.

Export Distributors are expected to provide full cooperation and follow-up with respect to this important subject matter. If you have any questions or need further assistance, please contact the Regional Service Manager at your regional office.

## **NAVISTAR, INC**

**Subject:** S-Series Platforms: 34in. x 54in., 32in. x 51in.  
**Applicable Products:** S1205, S2005, S2010, S5005, S5010, S5505, S5010  
**Effectivity:** 6/24/2014

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RICON SERVICE BULLETINS ARE FOR USE BY PROFESSIONAL SERVICE TECHNICIANS, AND ARE NOT INTENDED FOR USE BY NON-PROFESSIONALS OR AMATEURS. SERVICE BULLETINS ALERT TECHNICIANS TO ISSUES THAT MAY OCCUR WITH RICON PRODUCTS, AND ARE INTENDED TO ASSIST THE TECHNICIAN IN THE PROPER SERVICE OF THOSE PRODUCTS.

PROFESSIONAL SERVICE TECHNICIANS HAVE THE BACKGROUND AND KNOWLEDGE TO PERFORM MAINTENANCE WORK PROPERLY AND SAFELY.

AN ISSUE DESCRIBED BY A SERVICE BULLETIN DOES NOT NECESSARILY APPLY TO EVERY UNIT IN A PRODUCT LINE. A RICON AUTHORIZED SERVICE TECHNICIAN WILL BE ABLE TO DETERMINE WHICH UNITS CAN BENEFIT FROM THE INFORMATION PROVIDED HERE.

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### Introduction

This bulletin provides a brief description of a technical issue related to the inspection and possible replacement of the platform assembly of certain S-Series wheelchair lifts.

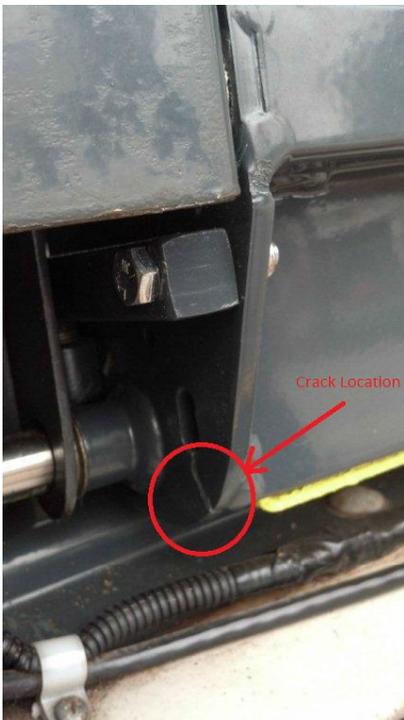
### Incorporation

Inspection and possible replacement of the platform assembly used on wheelchair lift configurations beginning with the following part numbers:

S1205, S2005, S2010, S5005, S5010, S5505, S5510

### Information

Under certain conditions the side plate of the larger platforms included on the subject S-Series model wheelchair lifts can exhibit cracking while in the stowed position which, if left unchecked can propagate to the point where separation of the rear portion of the side plate occurs rendering the lift inoperable and possibly unsafe to use.



Author: J. Juse	<b>Field Modification Instruction          Elastomeric Bumper Bracket Installation</b>	<b>FMI 751-064          08/05/14          Rev: A</b>
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**Field Modification Instructions for Project:**

Elastomeric Bumper Bracket Mitigation

Mitigation for Recall Number 14E-041

J. Juse

08/05/2013

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**Author**

**Date**

D. DeLeo

08/05/2014

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**Director of Engineering**

**Date**

Author: J. Juse	<b>Field Modification Instruction</b> <b>Elastomeric Bumper Bracket Installation</b>	<b>FMI 751-064</b> <b>08/05/14</b> <b>Rev: A</b>
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**Subject:** Recall Number 14E-041 – Occurance of Fatigue Cracks in certain S-Series Wheelchair Lifts

**Reason:** Under certain conditions present in some applications, the platforms included on the potentially affected, S-Series model wheelchair lifts can exhibit cracking of the platform pivot plate while in the stowed position which, if left unchecked, can propagate to the point where separation of the rear portion of the pivot plate occurs rendering the lift potentially inoperable and possibly unsafe for the operator.

These instructions and the material herein referenced are intended to mitigate the circumstances that can potentially precipitate the referenced cracking that is the subject of Ricon Recall number 14E-041.

**Affected Units:**

Ricon DOT Public Use, "S" 2000 and 5500 Series lifts manufactured after January 1, 2006 equipped with platforms measuring 32"x51" and 34"x54". The affected population is comprised of six (6) primary model numbers:

S2005-XXXXXXXX S2010-XXXXXXXX S5005-XXXXXXXX	S5010-XXXXXXXX S5505-XXXXXXXX S5510-XXXXXXXX
--	--

**Approximate completion time:** 20 min

**Parts required:**

**Description**

Kit 57113 Kit, Bracket Elastomeric Mount, S55XX & S50XX  
 Kit 57114 Kit, Bracket Elastomeric Mount, S20XX

**Tools required:**

- (1) 7/16 Inch Open Wrench**
- (1) Marker**
- 1/8-Inch Drill Bit**
- 9/32-Inch Drill Bit**
- 3/8-Inch Drill Motor**
- 7/16-Inch Socket**
- 1/2-Inch Socket**
- Deburring tool**
- Spring Loaded Center Punch or equivalent tool for marking**
- Tape Measure**

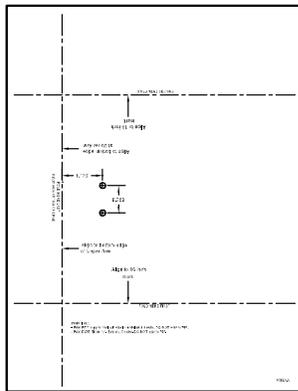
Follow all safety practices before attempting to work on wheelchair lift.

## I. INSTALLATION OF ELASTOMERIC BUMPER ASSEMBLY ON BOTH UPPER PARALLEL ARMS

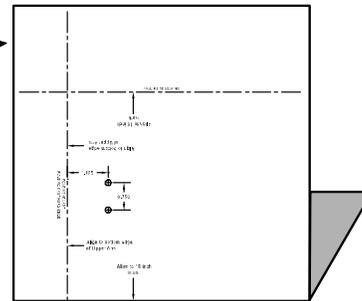
Prior to beginning the installation of the elastomeric bumper kit, inspect the platform as outlined in Ricon Service Bulletin RSB125. In the event a crack is found, the platform must be replaced before proceeding. In the event a new platform is required, contact Ricon customer support for the appropriate platform for your lift and instruction document number 32ii479e - Platform Installation Instruction.

### A. ELASTOMERIC BUMPER MOUNT ASSEMBLY INSTALLATION

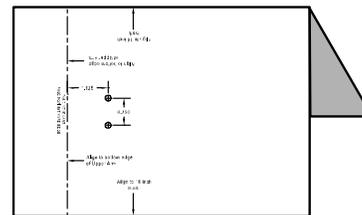
1. Apply power to lift then deploy platform to a level that allows for access to upper parallel arms.
2. Follow instructions on included paper template (P/N 55429) and fold template as shown.  
**Note:** Fold paper template so that hole locations and dimensions are exposed and visible as shown.



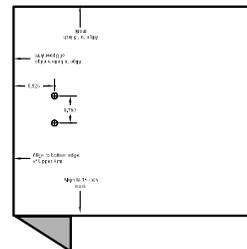
PAPER TEMPLATE



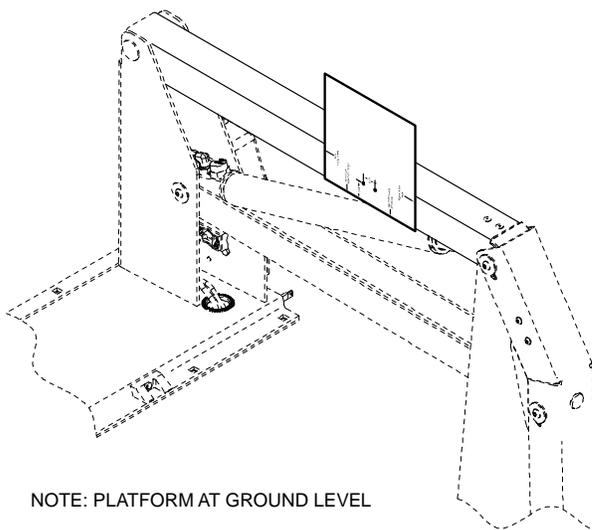
FOLD BOTTOM FIRST



FOLD TOP SECOND



FOLD LEFT SIDE LAST



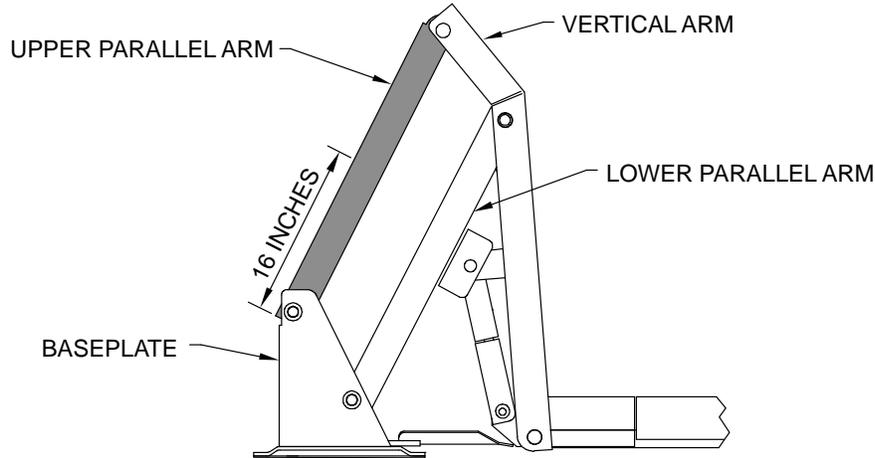
NOTE: PLATFORM AT GROUND LEVEL

**Note:** Paper template will be utilized for both LH and RH upper parallel arms.

RSM0062102

## Field Modification Instruction Elastomeric Bumper Bracket Installation

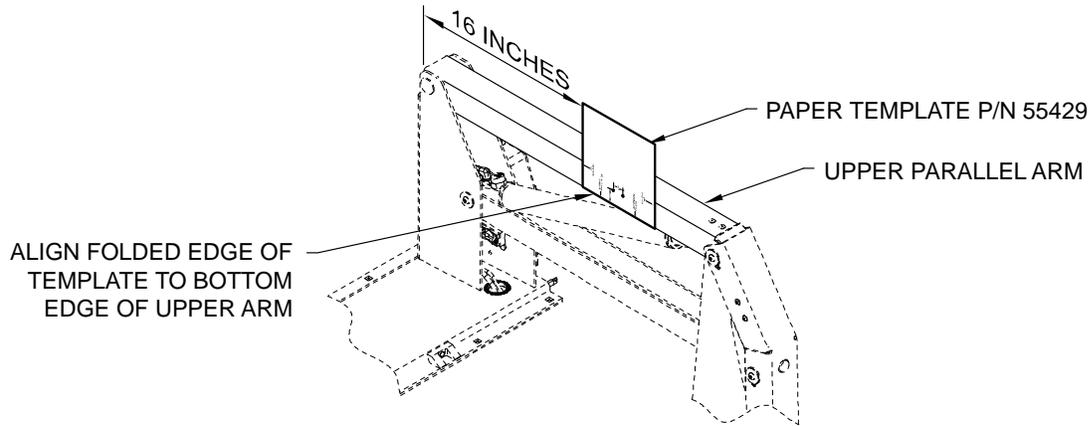
3. Deploy wheelchair lift platform to ground level then remove both LH and RH inboard pinch point shields. Inboard pinch point shields will be replaced by new pinch point shields included in kit.
4. Refer to **Figure 1**. Measure 16 inches from inboard end (near baseplate) of upper parallel arm.



RSM0061600

**FIGURE 1: 16 INCH MEASUREMENT**

5. Refer to **Figure 2**. Align folded edge of paper template (P/N 55429) to bottom edge of upper parallel arm and align with 16 inch mark.



NOTE: PLATFORM AT GROUND LEVEL

RSM0061701

**FIGURE 2: PAPER TEMPLATE ALIGNMENT**

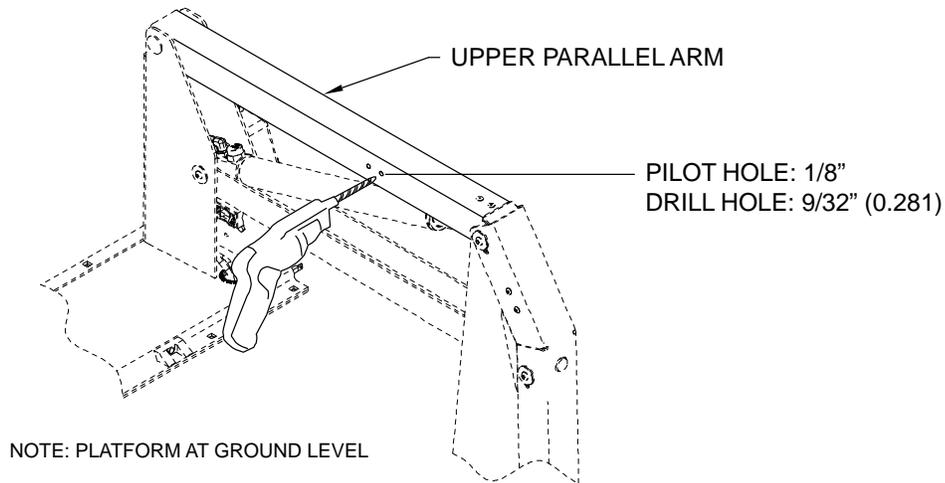
6. Square spring loaded center punch with centers located on paper template and mark both holes as shown for each parallel arm.



**FIGURE 3: Center Punch**

## Field Modification Instruction Elastomeric Bumper Bracket Installation

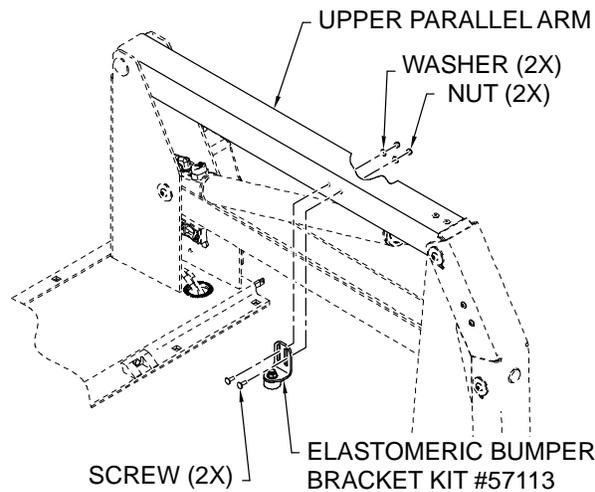
7. Retain paper template for use on opposite side upper parallel arm.
8. Refer to **Figure 4**. Drill a 1/8" pilot hole in each mark.



RSM0061900

**FIGURE 4: DRILL HOLES**

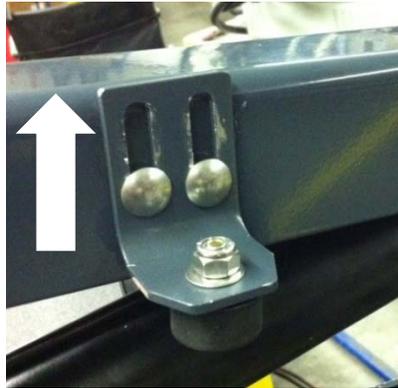
9. Refer to **Figure 4**. Then drill a 9/32" hole in each 1/8" pilot hole.
10. Deburr holes and clean any leftover debris from drilled holes.  
Note: Ensure metal chips are removed from inside lower arm.
11. Repeat procedures to mark and drill holes for opposite parallel arm.
12. Refer to **Figure 5**. Install Elastomeric Bumper Bracket Assemblies on both sides with hardware from applicable kit.  
Note: Ensure applicable kit is used for S20XX and S50XX size lifts.



RSM0062000

**FIGURE 5: ELASTOMERIC BUMPER BRACKET INSTALLATION**

13. Refer to **Figure 6**. Tighten fasteners only to the point where they are snug enough to hold the bracket in its upper/outer most position so that it will be furthest point away from the platform when the lift is folded back up to its fully stowed position.



**FIGURE 6: HOLD BRACKET IN UPPER/OUTER MOST POSITION**

14. Refer to **Figure 7**. Return the lift to its fully stowed position. Use the hand pump to ensure that the platform is fully stowed.



**FIGURE 7: FULLY STOWED POSITION**

15. Refer to **Figure 8**. From inside the vehicle, slide each elastomeric bumper bracket assembly outboard to the point where it contacts the top of the platform side plate.



**FIGURE 8: Bracket Adjustment**

16. Deploy the lift to vehicle floor level and tighten the fasteners (75 in-lb).
17. Install the new inboard pinch shields that include the cut-out for the elastomeric bumper bracket as shown.

FOLD HERE SECOND

Align to 16 inch  
mark

Align to bottom edge  
of Upper Arm

1.125

FOLD HERE LAST  
FOLD AGAINST HARD EDGE

0.750

Align to bottom edge  
of Upper Arm

Align to 16 inch  
mark

FOLD HERE FIRST

PRINTING:

- Print PDF copy to "Actual" size to maintain 1:1 ratio. DO NOT print to "fit".
- Print DWG file to 1:1, Extents, Center. DO NOT print to "fit".

AFC Number: 15902

AFC Date: NOVEMBER 4, 2015

Subject File: ELECTRICAL

**SUBJECT**

GEN 4 Body Control Module (BCM) Kernel Update

**APPLIES TO**

Model:

CE C and CE S Bus Start Date: 23 January 2015 End Date: 27 August 2015

**DESCRIPTION**

The Body Control Module (BCM) may not go to sleep when the ignition is in the OFF position and could result in excessive battery drain when the vehicle has not been operated for an extended period of time.

**ELIGIBILITY**

This procedure applies ONLY to vehicles marked in the International<sup>®</sup> Service Portal<sup>SM</sup> with Authorized Field Change 15902. Also complete any other open campaigns listed on the Service Portal at this time

**PARTS INFORMATION**

There are no parts for this campaign.

**SERVICE PROCEDURE****WARNING:**

To prevent property damage, personal injury, and / or death, park vehicle on hard flat surface, turn the engine off, set the parking brake, and install wheel chocks to prevent the vehicle from moving in both directions.

**WARNING:**

To prevent personal injury and / or death, always wear safe eye protection when performing vehicle maintenance.

**WARNING:**

To prevent property damage, personal injury, and / or death, keep flames or sparks away from vehicle and do not smoke while servicing the vehicle's batteries. Batteries expel explosive gases.

**WARNING:**

To prevent property damage, personal injury, and /or death, remove ground cable from negative terminal of main battery before disconnecting or connecting electrical components. Always connect ground cable last.

1. Park vehicle on a flat surface with the wheels straight ahead.
2. Shift transmission to Park or Neutral, and set parking brake.
3. Install wheel chocks.
4. Using Diamond Logic Builder<sup>®</sup>, reprogram BCM to the most current Kernel. Refer to IK1600174 - Updating Body Controller Software for detailed instruction.
5. Remove wheel chocks.

**LABOR INFORMATION**

Operation number must appear on all claims.

**Table 1 - Labor Information**

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Operation No.	Description	Time
A40-15902-1	Reprogram BCM	0.3 hr

## WARRANTY CLAIMS

### ADMINISTRATIVE PROCEDURE

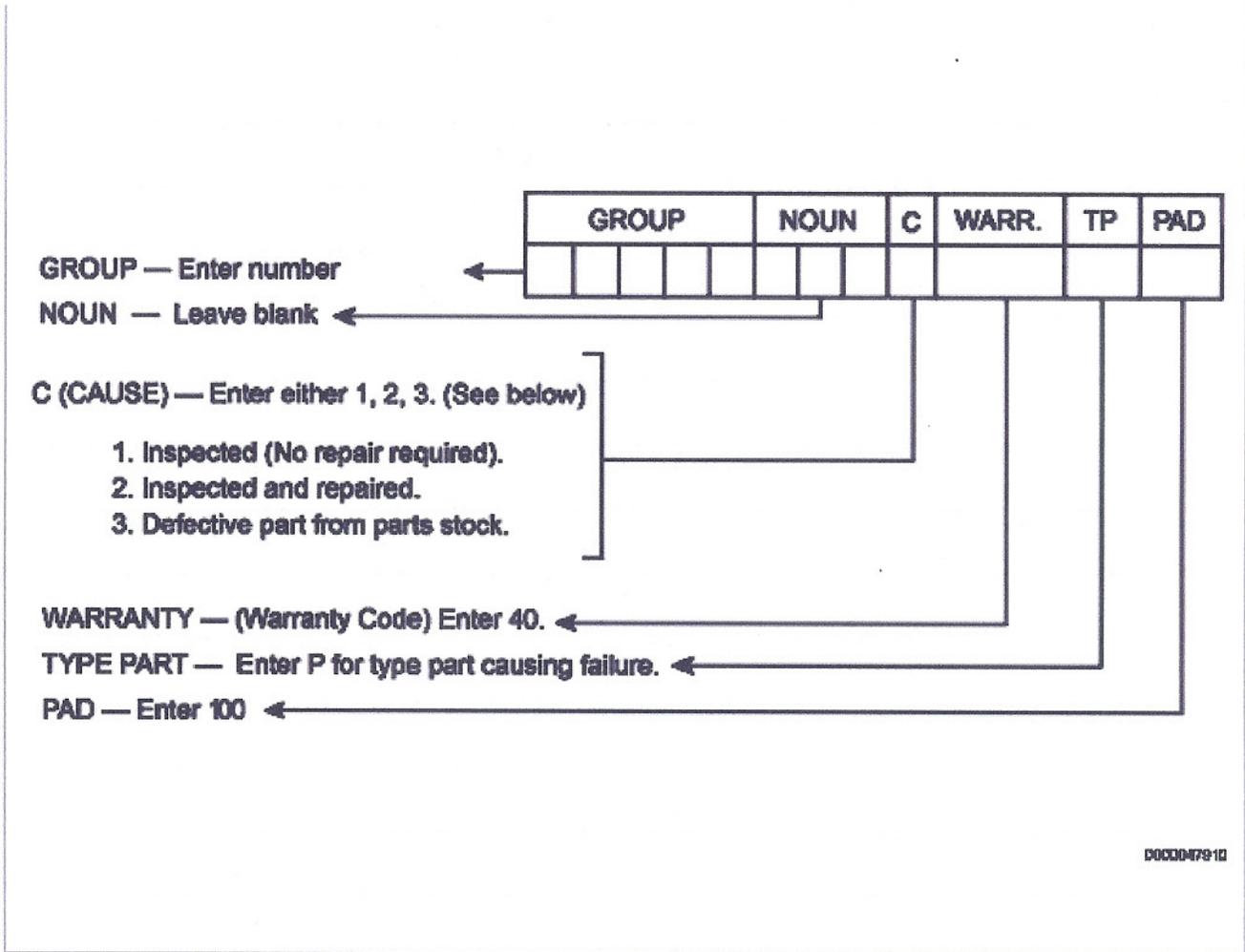
Expense is to be charged to Warranty. Claims are to be submitted in the normal manner, making reference to Authorized Field Change Number 15902.

It is important that the coding be completed properly to assist in processing the warranty claim. Complete instructions will be found in the Warranty Policy Manual, Section 7.1.8.

As with all claim submissions, items acquired locally must be submitted in the "Other Charges" tab. The cost of any bulk items (such as a bag of cable tie straps, roll of wire, barrel of oil, or tube of silicone) should be prorated for the cost of the individual pieces / amount used during each repair.

To ensure this important improvement is made in a timely manner, all claims for 15902 activity must be submitted by 04 November 2016 or within the normal warranty period for the vehicle, if after 04 November 2016.

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**R15YB**

**IMPORTANT SAFETY RECALL NOTICE**

**NHTSA RECALL NO. 15V059 SCHOOL BUS  
NHTSA RECALL NO. 15V060 NON-SCHOOL BUS**

**DATE: March 6, 2015**

**TO: U.S. DEALERS**

**SUBJECT: RECALL R15YB POTENTIAL FOR REAR ENGINE EXHAUST  
HANGERS FAILING**

This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act.

Blue Bird Body Company has decided that a defect which relates to motor vehicle safety exists in certain 2011 through 2016 model year Blue Bird All American Rear Engine model school and non-school buses manufactured from June 5, 2010 through January 13, 2015, and equipped with optional Cummins diesel engines.

On the subject buses, the exhaust system hanger straps may fail under extreme conditions causing damage to the Selective Catalytic Reduction (SCR) and Diesel Particulate Filter (DPF) housings. This hanger failure may allow the exhaust system to partially or completely dislodge from some or all of its mounting points. If the housings were to fall onto the roadway, this could create a road hazard, increasing the risk of a crash. Blue Bird is conducting a recall to correct this defect.

To correct this defect, new exhaust hanger assemblies and exhaust support cables will be supplied to replace each of the four existing exhaust hanger assemblies.

If our records indicate buses subject to this recall were delivered in your service area, a printout identifying affected buses by body number and VIN is enclosed. **Dealers should verify correct owners and assure that complete mailing and shipping addresses are provided for each listed owner.**

If you have in your possession or have sold a bus that was purchased from another dealer that may be affected by this recall, please notify me at 478-822-2242 or [lisa.hancock@blue-bird.com](mailto:lisa.hancock@blue-bird.com).

**BLUE BIRD BODY COMPANY**  
P.O. Box 937 – 402 Blue Bird Blvd – Fort Valley, Georgia – (478) 825-2021

Labor time to perform Recall R15YB is 1.3 hours per bus.

**Parts to complete Recall R15YB must be obtained from Blue Bird Recall Administration via e-mail. Please scan a copy of the completed yellow cover sheet and e-mail to [campaignparts@blue-bird.com](mailto:campaignparts@blue-bird.com). Parts are anticipated to be available on or about March 30, 2015. Owners are being advised to contact their local dealer or to return the yellow cover sheet with the correct shipping address indicated to receive parts.**

For repairs performed by 'the Blue Bird Dealer', the Dealer may submit 'campaign-type' claims in iWarranty for labor reimbursement. For repairs performed by 'other than the Blue Bird Dealer', the Owner's recall notification letter includes a reply sheet that the Owner can send to Blue Bird Recall Administration for reimbursement of labor costs to the Owner.

**Federal law requires that any vehicle lessor receiving this recall notice must forward a copy of this notice to the lessee within ten days.**

Dealers are reminded of their responsibilities under Section 154 of The National Traffic and Motor Vehicle Safety Act of 1991. Dealers are required to complete modifications on units in their inventory before delivering to the final owner. Reference Blue Bird Body Company Distributor Memo No. 42-92.

Questions regarding this recall campaign should be directed to me at (478) 822-2242 or [lisa.hancock@blue-bird.com](mailto:lisa.hancock@blue-bird.com).

Sincerely,

*Lisa Hancock*

Lisa Hancock  
Corporate Recall Administrator  
Blue Bird Body Company



R15YB

**IMPORTANT SAFETY RECALL NOTICE**

**NHTSA RECALL NO. 15V059 SCHOOL BUS  
NHTSA RECALL NO. 15V060 NON-SCHOOL BUS**

**DATE: March 6, 2015**

Dear Blue Bird Owner:

This important safety recall notice applies to your bus(es) identified by both Blue Bird Body Number and Vehicle Identification Number (VIN) on the attached yellow cover sheet.

This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act.

Blue Bird Body Company has decided that a defect which relates to motor vehicle safety exists in certain 2011 through 2016 model year Blue Bird All American Rear Engine model school and non-school buses manufactured from June 5, 2010 through January 13, 2015, and equipped with optional Cummins diesel engines.

On the subject buses, the exhaust system hanger straps may fail under extreme conditions causing damage to the Selective Catalytic Reduction (SCR) and Diesel Particulate Filter (DPF) housings. This hanger failure may allow the exhaust system to partially or completely dislodge from some or all of its mounting points. If the housings were to fall onto the roadway, this could create a road hazard, increasing the risk of a crash. Blue Bird is conducting a recall to correct this defect.

To correct this defect, new exhaust hanger assemblies and exhaust support cables will be supplied to replace each of the four existing exhaust hanger assemblies.

Your Blue Bird bus(es) affected by this recall are identified by both body serial number(s) and vehicle identification number (VIN) on the enclosed yellow and pink reply sheets. If you no longer own the subject bus(es), please complete the appropriate section of the yellow reply sheet and return to Blue Bird in the enclosed pink postage prepaid envelope.

**Blue Bird recommends you contact your local or nearest Blue Bird Dealer to arrange for this recall to be performed.** The Dealer can perform the repairs, or arrange for repairs to be performed by a service facility authorized by the Dealer. However, you may elect to perform this recall yourself or pay another independent repair facility to perform this recall. A qualified technician should perform this recall.

If you elect to perform this recall yourself or pay another independent repair facility to perform this recall, complete and submit the Pink Owner's Recall Reply Sheet provided. The Reply Sheet includes a section for the owner to request reimbursement of the owner's labor or to request

**BLUE BIRD BODY COMPANY**

P.O. Box 937 – 402 Blue Bird Blvd – Fort Valley, Georgia – (478) 825-2021

reimbursement for a labor invoice paid by the owner to an independent repair facility. The Owner's Recall Reply Sheet can be mailed in the postage prepaid envelope provided, faxed to 478-822-2467, or email copies of the documents and supporting documents to [lisa.hancock@blue-bird.com](mailto:lisa.hancock@blue-bird.com).

Of course, if your Blue Bird Dealer performs the recall or arranged for repairs to be performed by a service facility authorized by the Dealer, the Blue Bird Dealer will notify Blue Bird about the completion of the recall.

To receive replacement parts for Recall R15YB, sign and return the enclosed yellow reply sheet to Blue Bird in the pink, self-addressed, postage prepaid envelope. Be sure to provide a valid shipping address as UPS does not deliver to P.O. Boxes. You should retain a copy of the reply sheet for your records.

Labor time to perform recall R15YB is 1.3 hours.

If the modifications directed by this notification were performed on your bus prior to the receipt of this recall notification, complete and sign the recall reply sheet and attach a copy of the work order/invoice. Mail the documents in the **pink** self-addressed postage paid envelope included with the recall notification to Blue Bird for warranty consideration. Reimbursements will be made in accordance with the requirements of the National Highway Transportation Safety Act, Title 49 Code of Federal Regulations, Parts 573 and 577.

**Federal law requires that any vehicle lessor receiving this recall notice must forward a copy of this notice to the lessee within ten days.**

If Blue Bird Body Company should fail to or is unable to remedy this condition without charge to you, you may contact:

**ADMINISTRATOR  
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION  
1200 NEW JERSEY AVENUE, SE  
WASHINGTON, D.C. 20590**

Or, you may call The National Highway Traffic Safety Administration toll free at:

1-888-327-4236    TTY 1-800-424-9153    Or, go to: [HTTP://WWW.SAFERCAR.GOV](http://WWW.SAFERCAR.GOV)

Questions regarding this recall campaign should be directed to me at (478) 822-2242 or [lisa.hancock@blue-bird.com](mailto:lisa.hancock@blue-bird.com).

Sincerely,

*Lisa Hancock*

Lisa Hancock  
Corporate Recall Administrator  
Blue Bird Body Company



# Potential for Rear Engine Exhaust Hangers Failing

# RECALL

**Models Affected:** Certain Rear Engine All American Buses with a Selective Catalytic Reduction (SCR) and Diesel Particulate Filter (DPF).

## ISSUE

The rubber SCR and DPF hanger strap assembly may fail under extreme conditions causing extensive damage to the SCR and DPF modules.

## CORRECTIVE ACTION

Install new exhaust hanger strap assembly 10040843 (4 Places); and exhaust support cables, 10040841.

## 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.

### CAUTION:

Allow exhaust system to cool prior to performing these procedures to prevent the risk of severe burns.

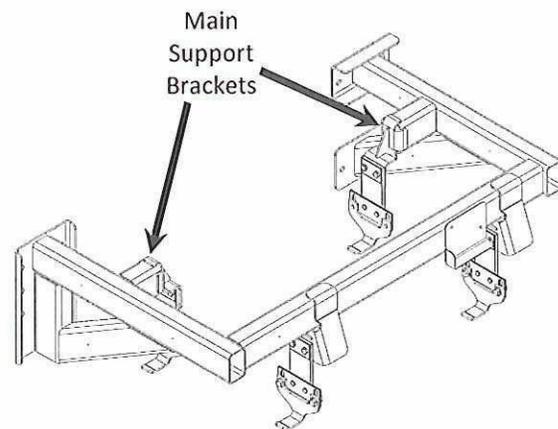
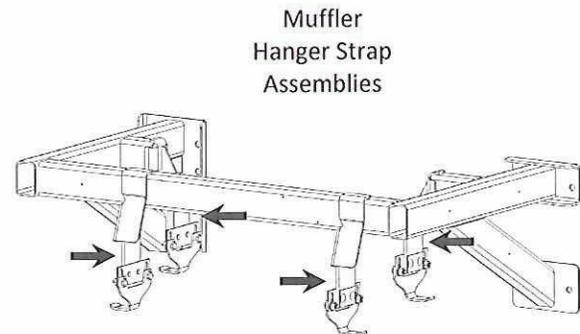
1. Park the bus on a level surface, apply parking brake, turn off engine, remove ignition key, and chock wheels.
2. Locate the four muffler hanger strap assemblies supporting the SCR and DPF at the rear of the bus.

Note: Inspect welded Main Support Brackets for damage (bent brackets or cracked welds) before installing new muffler hanger bracket assemblies. Replace, as needed.

3. Support the SCR and DPF, and replace muffler hanger strap assemblies (4 Places) with new assemblies 10040843 and add two exhaust support cables 10040841, two bolts 00803171, two nuts 00543934, and two nuts 02171809 per exhaust hanger strap assembly. Drill out slots at eight (8) mounting locations to 13/32 inch diameter. Do not reuse old nuts.

Torque upper 3/8" nut that comes with new bracket assembly 10040843 to 72 – 78 in-lb.

4. Torque lower 3/8" nuts (00543934 and 02171809) to 29 - 33 lb-ft. See Sheet 2 for illustration.



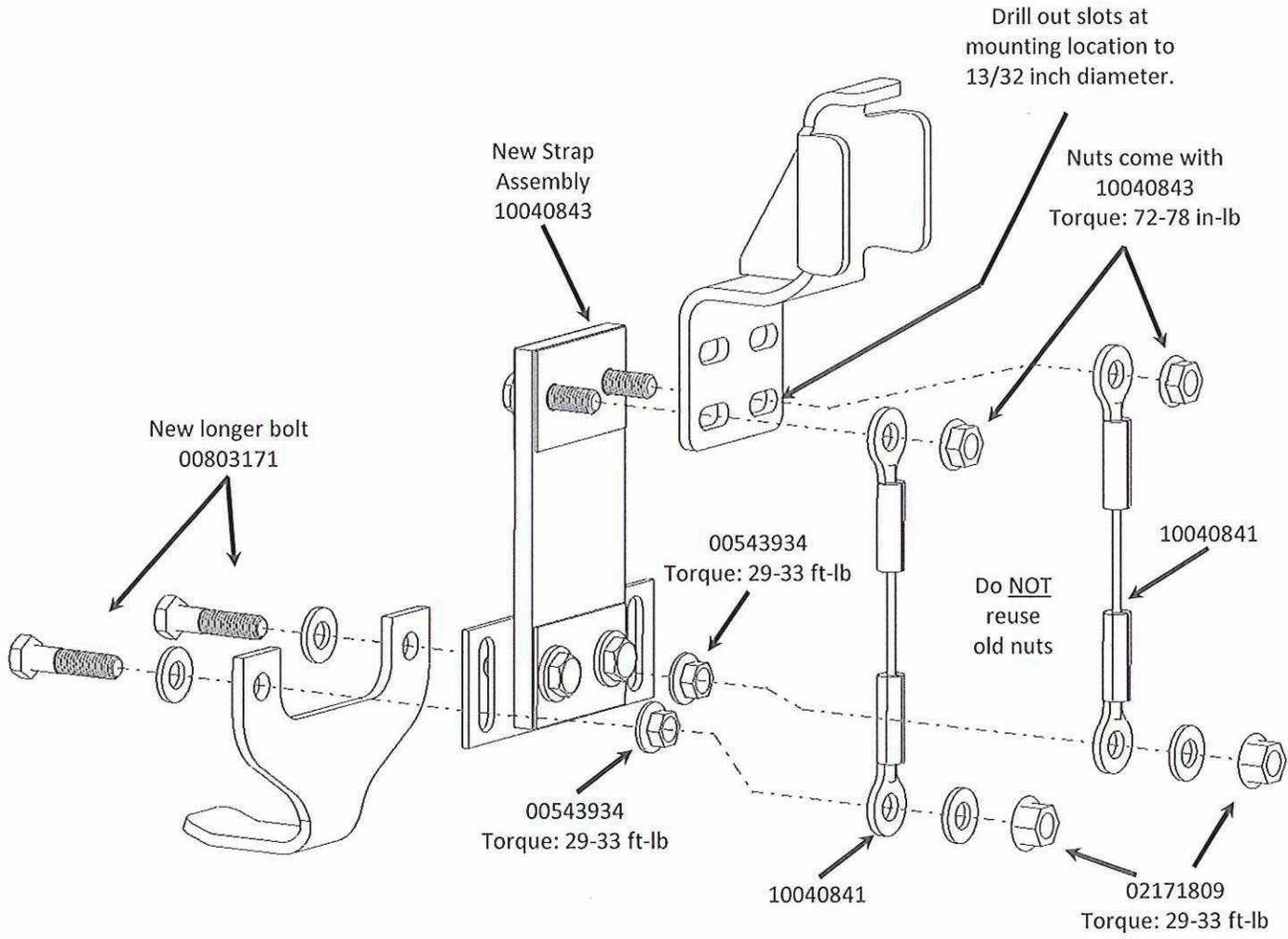
R 1 5 Y B - R E C A L L C A M P A I G N



# Potential for Rear Engine Exhaust Hangers Failing

# RECALL

R I 5 Y B



Parts List		
Part #	Description	Qty
10040841	CABLE ASSY, SUPPORT,5.50",EXHAUST,2014 T3RE	8
10040843	BRACKET ASSY,EXH,HANGER,ADJUSTABLE,5.63	4
02171809	NUT,HEX HD,3/8-16,SM FLG LK	8
00543934	NUT,HEX HD,3/8-16,ZINC,LG FLG LK,YEL ZNDICH	8
00803171	CAPSCREW,HEXHD,3/8-16NCX1-1/2,GR8,YELZNDICH	8

Note: Re-use existing washers.



# Vision Wiper Motor Electrical Connector

# RECALL

Models Affected: Certain 2016 – 2017 Vision

## ISSUE

Windshield wiper motor harness electrical connector may have been assembled incorrectly. Wiring terminals slides were not fully seated into the connector on some wiper motors. This issue could cause the wiper system to stop operating without warning and in adverse conditions this issue could cause degradation of driver visibility.

## CORRECTIVE ACTION

### INSPECTION:

Inspect for loose wires per attached instructions page 2.

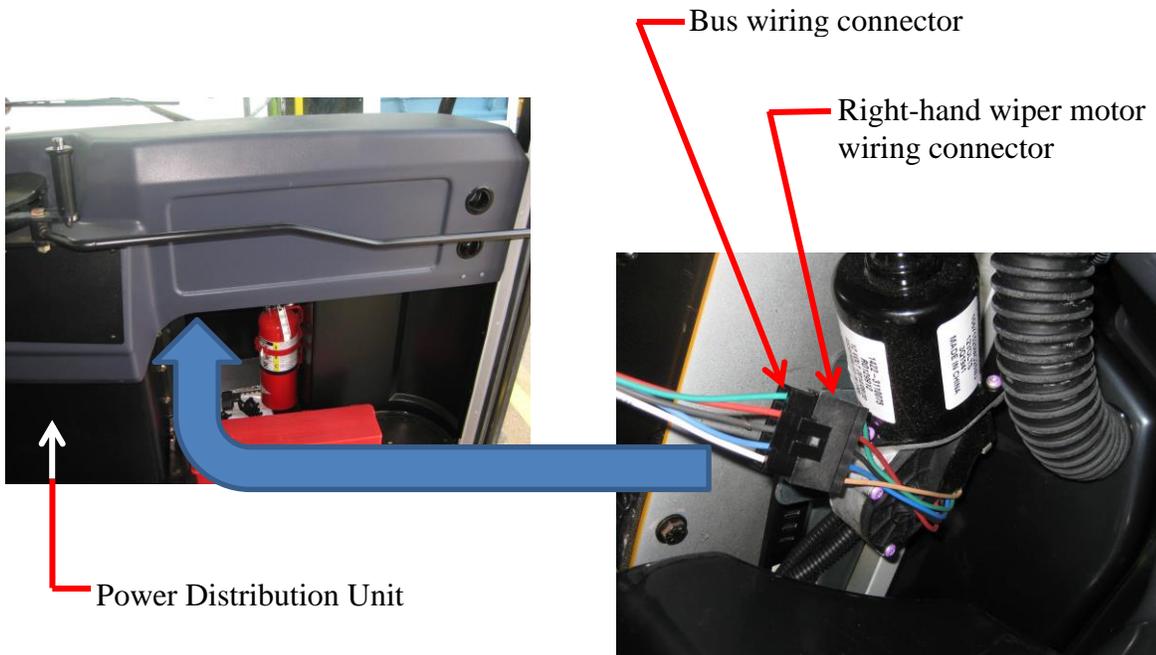
### REPAIR:

Repair loose wires per attached instructions pages 3 through 5. If a connector has been damaged for any reason, replace per attached instructions pages 5 through 10.

## 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.

1. Park bus, turn off ignition and remove the keys.
2. Locate the wiper motors and inspect and repair if necessary, per attached instructions pages 1-5.
3. The right-hand wiper motor is located to the right side of Power Distribution Unit.



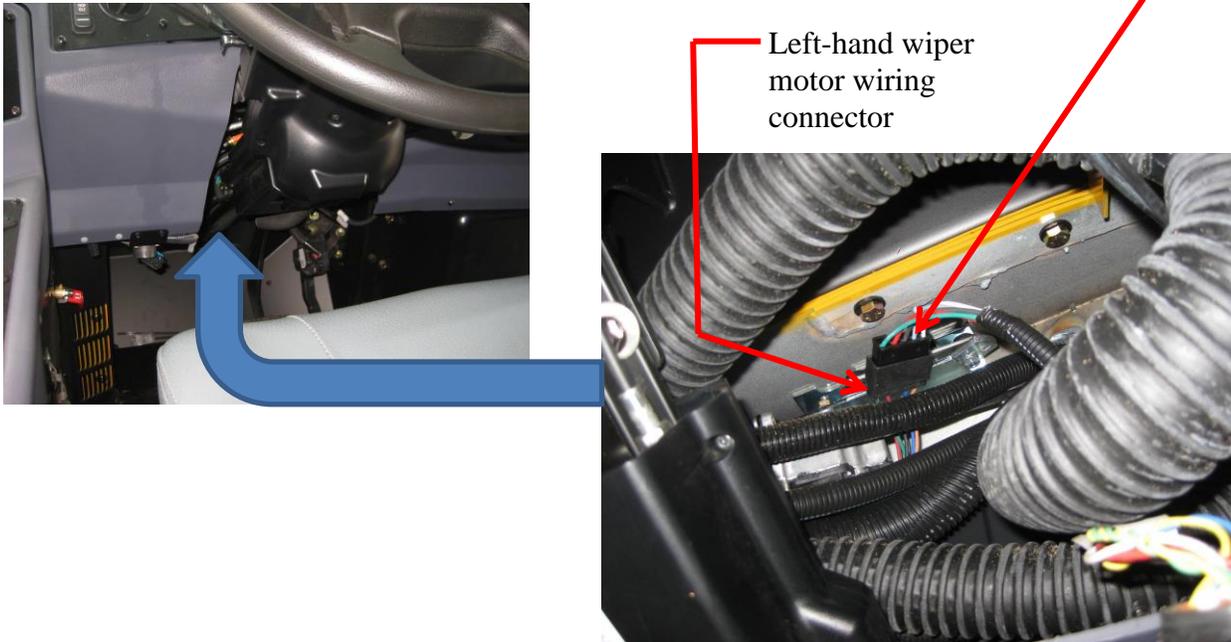
RECALL CAMPAIGN - R I S Y H



## Vision Wiper Motor Electrical Connector

# RECALL

4. The left-hand wiper motor is located on the left-side of the steering column.



### NOTE:

#### **DO NOT REMOVE THE WIPER MOTOR FROM THE BUS.**

The inspection and repair is to be completed with wiper motor installed on the bus. The instructions are generic for inspecting and/or repair whether the motor is installed on a bus or laying on a bench.

5. If any wire is found to be loose during the inspection process, disconnect the wiring connector before performing repair using instructions on pages 1 through 5. If a terminal or connector is damaged, contact Blue Bird Recall Administration for a new terminal or connector. Replace damaged connector with new connector using instructions pages 6 through 10.
6. After the inspection and/or repair have been completed, place ignition key back into the ignition switch and turn the bus on.
7. Operate the wipers to confirm that wipers operate in all speeds.
8. If no problems found, place bus back into service.

RECALL

CAMPAIN

5YH

## 1.0 Objective

1.1 These work instructions will describe the process of inspecting and repairing the electrical connectors of 105715 motors.

## 2.0 Terminology

2.1 Connector



2.2 Terminal



## 3.0 Tools

3.1 Miniature Flathead screwdriver with flat head width of 1/8"



3.2 Miniature Pliers





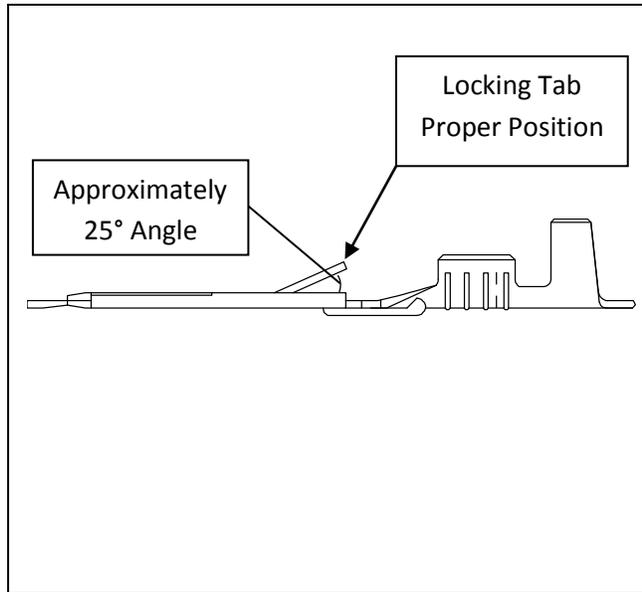
1. Inspect the connector body for damage.

If any damage to the connector body is found please see Work Instruction "105715 Connector Replacement Instructions".

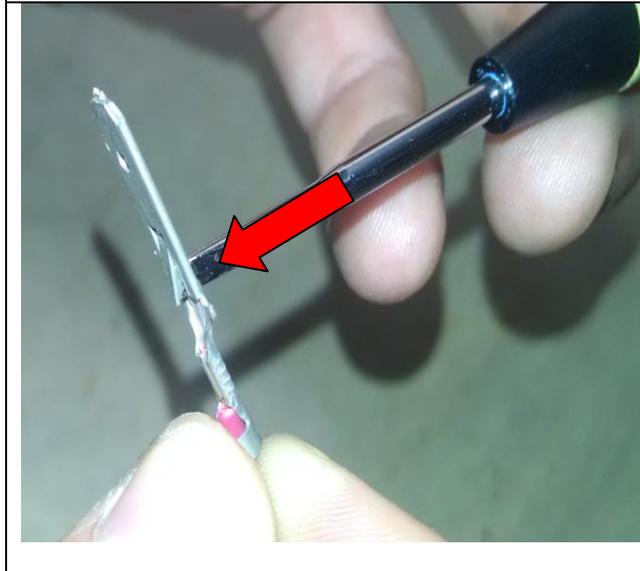
If no damage is found move on to step 2.



2. Pull on each wire of the motor connector and try remove the terminals, any terminals which will not pull out are inserted securely.



3. Examine each loose terminal for proper locking tab position, if the terminal does not match the picture shown perform step 4. If the terminal has the locking tab in the correct position move on to step 5.



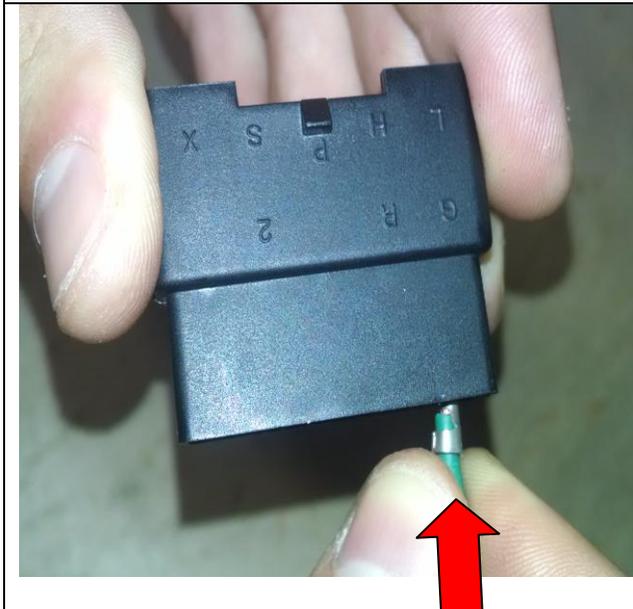
4. Using the miniature screwdriver push the locking tab outwards until it matches the image shown in step 3.



5. The motor connector has labeled cavities corresponding to the correct wire color.

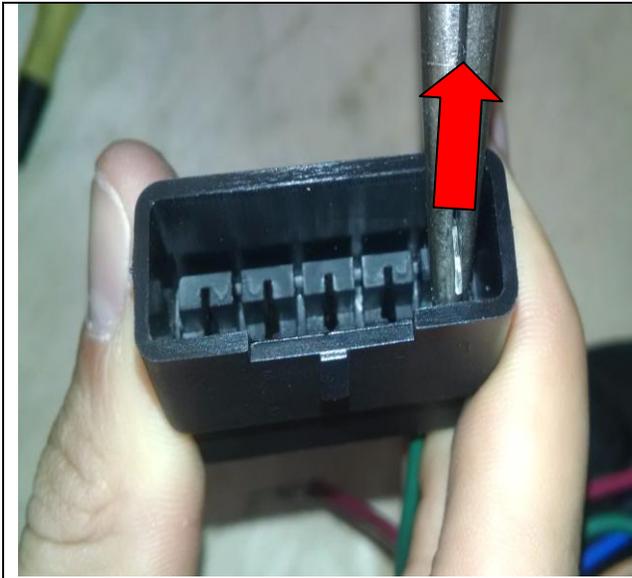
- L – Green
- H – Red
- P – Black
- S – Blue
- X – Brown

continued in next cell

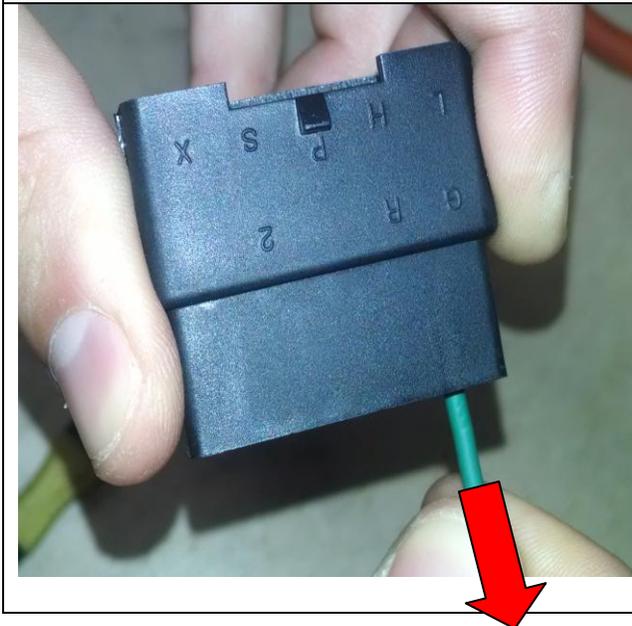


Insert the terminals into the connector until a “clicking” sound can be heard, this is the locking tab engaging with the connector body.

continued in next cell



If no clicking sound can be heard gently pull on the terminal with the miniature pliers until a “click” is heard. Insure that the terminal is not pulled through the connector.



6. Try to pull each terminal out of the connector to verify proper installation. If the terminal moves freely repeat steps 3 – 6.

## 1.0 Objective

- 1.1 These work instructions will describe the process of replacing the electrical connectors of 105715 motors.

## 2.0 Terminology

- 2.1 Connector



- 2.2 Terminal



## 3.0 Tools

- 3.1 Miniature Flathead screwdriver with flat head width of 1/8"



- 3.2 Miniature Pliers



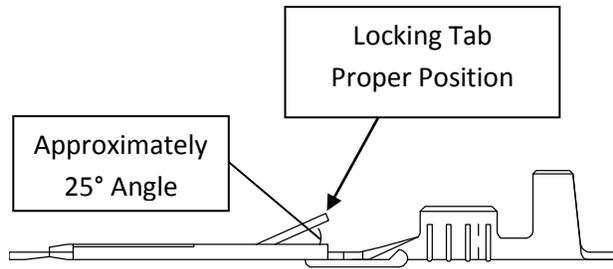
- 3.3 Replacement 400121 connectors



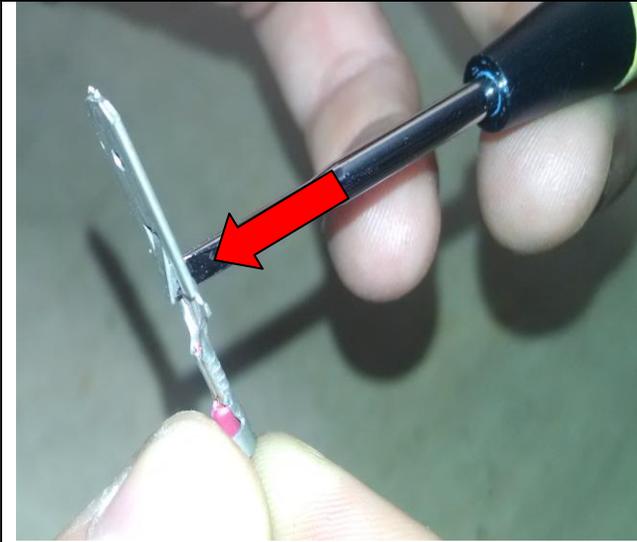


1. To remove the wires from the damaged connector locate the terminal locking tabs as shown.
2. Use the miniature screwdriver to push in the locking tab while also pulling on the wire until the terminal slides free from the connector. Loose wires will not require pushing in the locking tab. Repeat this step for all terminals remaining in the connector.

Discard the damaged connector.



3. Examine each loose terminal for proper locking tab position. If the terminal does not match the picture shown move on to step 4. If the terminal has the locking tab in the correct position move on to step 5.



4. Using the miniature screwdriver push the locking tab outwards until it matches the image shown in step 3.



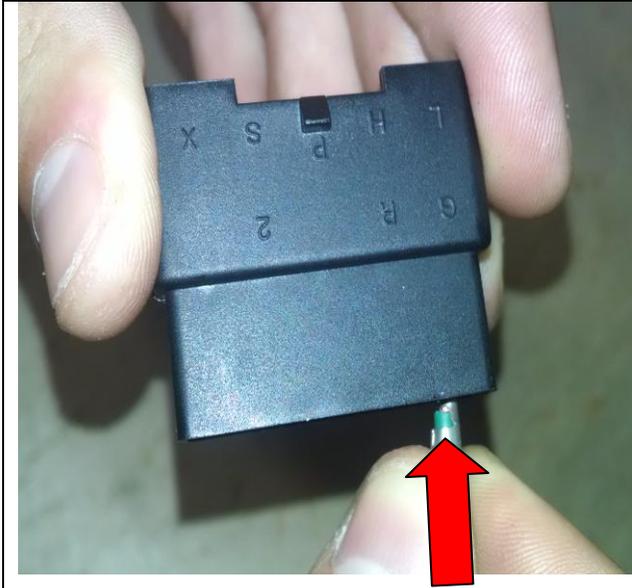
5. The 400121 connector has labeled cavities corresponding to the correct wire color.

L – Green  
H – Red  
P – Black  
S – Blue  
X – Brown

continued in next cell

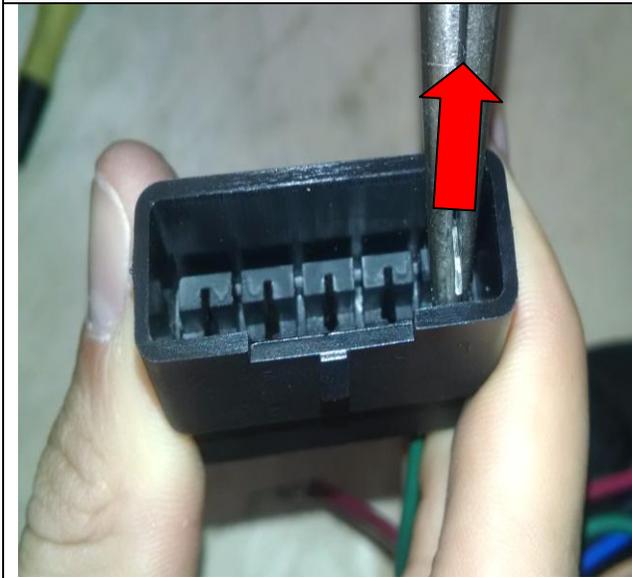
## Wiper Motor Electrical Connector Replacement Instructions

CONFIDENTIAL

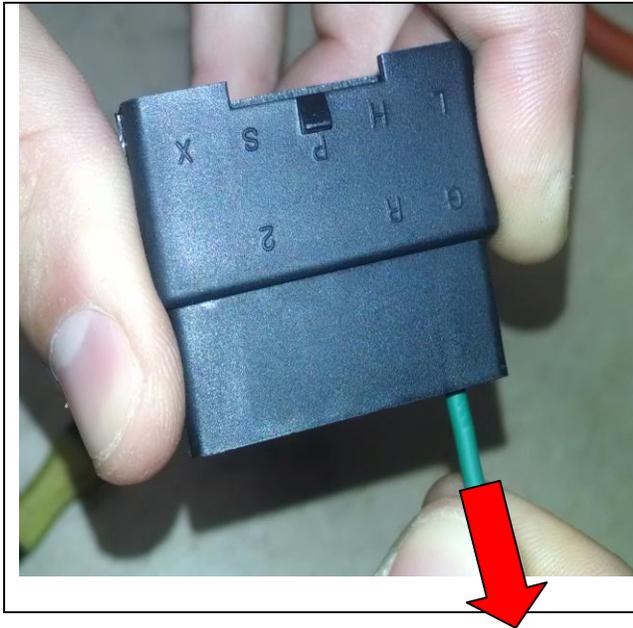


Insert the terminals into a new 400121 connector until a “clicking” sound can be heard, this is the locking tab engaging with the connector body.

continued in next cell



If no clicking sound can be heard gently pull on the terminal with the miniature pliers until a “click” is heard. Insure that the terminal is not pulled through the connector.



6. Try to pull each terminal out of the connector to verify proper installation. If the terminal moves freely repeat steps 3 – 6.



## Rear Engine Exhaust Cables

# BULLETIN

**Models Affected: Certain 2011 – 2017 Model Year Rear Engine All American Buses with a Selective Catalytic Reduction (SCR) and Diesel Particulate Filter (DPF).**

### ISSUE

Rear engine exhaust support cables may fail.

### CORRECTIVE ACTION

Replace existing 5.5 inch cable assembly with new 6.0 inch cable assembly 10047279.

### 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.

**CAUTION:**

Allow exhaust system to cool prior to performing these procedures to prevent the risk of severe burns.

1. Park the bus on a level surface, apply parking brake, turn off engine, remove ignition key, and chock wheels.
2. Locate the four muffler hanger strap assemblies supporting the SCR and DPF at the rear of the bus.
3. Support the SCR and DPF, and replace the eight (8) 5.5 inch exhaust support cable assemblies with eight (8) 6.0 inch exhaust support cable assembly 10047279. Replace each cable assembly by removing the nut at the top of the cable assembly and the nut and washer at the bottom of the cable assembly. Discard old nuts, DO NOT reuse. Remove and discard the 5.5 inch cable assembly. Install the new 6.0 inch cable assembly and new nut at the top and new nut and washer at bottom.
4. Torque upper 3/8" nut to 72 – 78 in-lb. Torque lower 3/8" nut to 29 - 33 ft-lb.

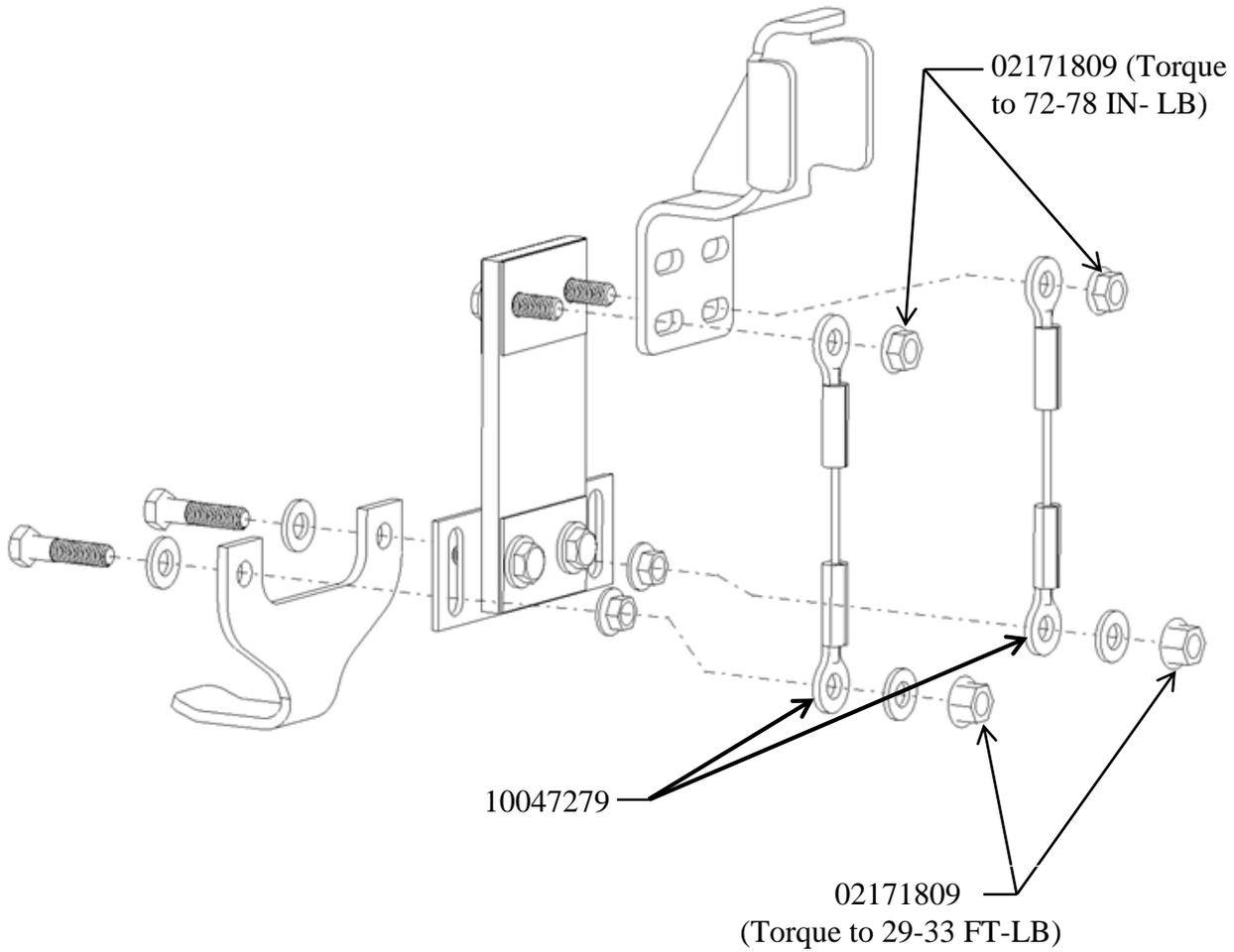
See Sheet 2 for illustration



# Rear Engine Exhaust Cables

# BULLETIN

SERVISE BULLETIN - S I 6 Y J



Parts List		
Part #	Description	Qty
10047279	CABLE ASSY, SUPPORT,6.00",EXHAUST, T3RE	8
02171809	NUT,HEX HD,3/8-16,SM FLG LK	16



BLUE BIRD

**R10RZ**

**DATE: SEPTEMBER 10, 2010**

**TO: U.S. DEALERS**

**SUBJECT: RECALL R10RZ CATERPILLAR C7 07 NUMBER 5 AND 6 FUEL LINE  
CRACKS**

This notice is sent to you in accordance with the requirements of The National Traffic and Motor Vehicle Safety Act.

Blue Bird Body Company has decided that a defect which relates to motor vehicle safety exists in certain vehicles it manufactured equipped with Caterpillar C7 07 engines. This decision was based on information provided by Caterpillar Inc. that a defect exists in their C7 07 engines installed in 2008 through 2010 model year Blue Bird All American school buses and Blue Bird "Vision" conventional school buses manufactured from May 23, 2007 through March 09, 2010.

Caterpillar notified Blue Bird that certain C7 07 engines may develop a crack in the #5 and #6 fuel lines. Caterpillar advises that a cracked fuel line may cause fuel to spray and leak out of the crack which, in the presence of an ignition source, could be a potential fire hazard. An engine de-rate may be experienced and a check engine lamp or an engine protection lamp may also be activated.

Caterpillar is conducting a voluntary recall to correct this defect and will be mailing notification letters to owners. Buses with the defect must be corrected by a Caterpillar dealer. A copy of Caterpillar's owner notification letter dealer service letter is attached.

**It is a violation of Federal law for a dealer to deliver a new motor vehicle covered by this recall under a sale or lease until the defect is remedied. Therefore, dealers must complete modifications/repairs on units in their inventory before delivering to the final owner. Reference Blue Bird Body Company Distributor Memo No. 42-92. A list of your units affected by Recall R10RZ is attached.**

It is the dealer's responsibility to verify that the correct owner name, address and telephone number is provided for each listed vehicle. Any corrections or updates should be made on BBOND. Addresses that cannot be updated on BBOND should be forwarded to the Recall Administrator.

**BLUE BIRD BODY COMPANY**

P.O. Box 937 – 402 Blue Bird Blvd – Fort Valley, Georgia – (478) 825-2021

If you have in your possession or have sold a vehicle that was purchased from another dealer that may be affected by this recall, please notify me at 478-822-2242.

Federal law requires that any vehicle lessor receiving this recall notice must forward a copy of this notice to the lessee within ten days.

Dealers are reminded of their responsibilities under section 154 of The National Traffic and Motor Vehicle Safety Act of 1991.

Questions regarding this recall campaign should be directed to me at (478) 822-2242.

Sincerely,

A handwritten signature in cursive script that reads "Bill Coleman". The signature is written in black ink and is positioned above the typed name and title.

Bill Coleman  
Corporate Recall Administrator  
Blue Bird Corporation



**R09PM**

**DATE: JANUARY 11, 2010**

**TO: U.S. DEALERS**

**SUBJECT: RECALL R09PM OFFSET LEG BARRIER PAD AND 2/3 PASSENGER SEAT BACK PAD NONCOMPLIANCE**

This notice is sent to you in accordance with the requirements of The National Traffic and Motor Vehicle Safety Act.

Blue Bird Corporation has decided that certain school buses identified below by model year and model, may fail to conform to the requirements of Federal Motor Vehicle Safety Standard No. 222, "School Bus Passenger Seating and Crash Protection".

2008 through 2010 model year Blue Bird "Micro Bird" school buses manufactured from August 28, 2007 through May 07, 2009 and equipped with offset leg barriers.

2004 through 2010 model year "Vision" school buses manufactured from January 30, 2003 through May 07, 2009 and equipped with offset leg barriers and 2/3 passenger seats.

2004 through 2010 model year All American school buses manufactured from January 30, 2003 through May 07, 2009 and equipped with offset leg barriers and 2/3 passenger seats.

2004 through 2010 model year conventional school buses manufactured from February 01, 2003 through May 24, 2007 and equipped with offset leg barriers and 2/3 passenger seats.

The offset leg barrier frame pad and the 2/3 seat back pad on the subject buses may have been installed incorrectly or an incorrect pad may have been installed which could result in personal injury in the event of a vehicle crash. Blue Bird is conducting a recall to correct this condition. The subject buses must be modified according to the enclosed instructions for Recall R09PM.

If our records indicate buses subject to this recall were delivered in your service area, a printout identifying affected buses is enclosed. **Dealers should verify correct owners and assure that complete mailing and shipping addresses are provided for each listed owner.**

**BLUE BIRD CORPORATION**  
P.O. Box 937 • Fort Valley, Georgia 31030  
Phone: (478) 825-2021

If you have in your possession or have sold a bus that was purchased from another dealer that may be affected by this recall, please notify me at 478-822-2242.

**Blue Bird is unsure of the quantity of offset leg barrier pads and 2/3 seatback pads that will actually need to be replaced. Therefore, a limited number of parts for Recall R09PM are on order at this time. Parts are only to be ordered based on dealer/owner inspection results.**

**For recall R09PM Dealers and owners must order replacement barrier pads and 2/3 seat back pads as needed through Recall Administration. Parts orders for R09PM will be drop shipped directly to the dealers/owners from the pad manufacturer.**

Allowed labor times for performing Recall R09PM are listed below:

- Labor time to inspect 1 pad is 0.1hr.
- Labor time to inspect and repair 1 pad is 0.6hrs.
- Labor time to inspect and repair 2 pads is 1.2hrs.
- Labor time to inspect and repair 3 pads is 1.8hrs.

Warranty applications may be submitted to Blue Bird iWarranty (Campaigns/Claims).

Federal law requires that any vehicle lessor receiving this recall notice must forward a copy of this notice to the lessee within ten days.

Dealers are reminded of their responsibilities under section 154 of The National Traffic and Motor Vehicle Safety Act of 1991. Dealers are required to complete modifications on units in their inventory before delivering to the final owner. Reference Blue Bird Body Company Distributor Memo No. 42-92.

Questions regarding this recall campaign should be directed to me at (478) 822-2242.

Thank you,



Bill Coleman  
Corporate Recall Administrator  
Blue Bird Corporation



BLUE BIRD

R09PM

January 11, 2010

Dear Blue Bird Owner:

This notice is sent to you in accordance with the requirements of The National Traffic and Motor Vehicle Safety Act.

Blue Bird Corporation has decided that certain school buses identified below by model year and model, may fail to conform to the requirements of Federal Motor Vehicle Safety Standard No. 222, "School Bus Passenger Seating and Crash Protection".

2008 through 2010 model year Blue Bird "Micro Bird" school buses manufactured from August 28, 2007 through May 07, 2009 and equipped with offset leg barriers.

2004 through 2010 model year "Vision" school buses manufactured from January 30, 2003 through May 07, 2009 and equipped with offset leg barriers and 2/3 passenger seats.

2004 through 2010 model year All American school buses manufactured from January 30, 2003 through May 07, 2009 and equipped with offset leg barriers and 2/3 passenger seats.

2004 through 2010 model year conventional school buses manufactured from February 01, 2003 through May 24, 2007 and equipped with offset leg barriers and 2/3 passenger seats.

The offset leg barrier frame pad and the 2/3 seat back pad on the subject buses may have been installed incorrectly or an incorrect pad may have been installed which could result in personal injury in the event of a vehicle crash. Blue Bird is conducting a recall to correct this condition. The subject buses must be modified according to the enclosed instructions for Recall R09PM.

Your Blue Bird bus(es) affected by this recall are identified by body serial number(s) on the enclosed reply sheets. If you no longer own the subject bus(es), please complete the appropriate section of the yellow reply sheet and return to Blue Bird in the enclosed pink postage prepaid envelope.

**To receive parts required to correct this condition, you must inspect each barrier pad and each 2/3 seat back pad according to the attached instructions, record your findings on the enclosed "R09PM Recall Inspection" sheet, sign and return to Blue Bird in the pink self addressed postage prepaid envelope. Replacement pads, if needed, will be shipped "No Charge" to you.**

**BLUE BIRD CORPORATION**

P.O. Box 937 • Fort Valley, Georgia 31030

Phone: (478) 825-2021

**You may contact your Blue Bird dealer to arrange to have this recall performed.** Or, if you prefer, you may perform this recall yourself or have a qualified repair facility convenient to you perform this recall. A qualified technician should perform this recall.

Allowed labor times for performing Recall R09PM are listed below:

- Labor time to inspect 1 pad is 0.1 hr.
- Labor time to inspect and repair 1 pad is 0.6 hrs.
- Labor time to inspect and repair 2 pads is 1.2 hrs.
- Labor time to inspect and repair 3 pads is 1.8 hrs.

Reimbursement for labor may be obtained by completing the **pink** request for reimbursement sheet provided and returning it to Blue Bird in the enclosed **pink** postage prepaid envelope.

If the modifications directed by this notification were performed on your bus prior to the receipt of this recall notification, complete and sign the recall reply sheet and attach a copy of the work order/invoice. Mail the documents in the **pink** self-addressed postage paid envelope included with the recall notification to Blue Bird for warranty consideration. Reimbursements will be made in accordance with the requirements of the National Highway Transportation Safety Act, Title 49 Code of Federal Regulations, Parts 573 and 577.

Federal law requires that any vehicle lessor receiving this recall notice must forward a copy of this notice to the lessee within ten days.

If Blue Bird Body Company should fail to or is unable to remedy this condition without charge to you, you may contact:

**ADMINISTRATOR  
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION  
1200 NEW JERSEY AVENUE, SE  
WASHINGTON, D.C. 20590**

Or, you may call The National Highway Traffic Safety Administration toll free at:

1-888-327-4236  
TTY 1-800-424-9153

Or, go to: [HTTP://WWW.SAFERCAR.GOV](http://WWW.SAFERCAR.GOV)

Questions regarding this recall campaign should be directed to me at (478) 822-2242.

Thank you,



Bill Coleman  
Corporate Recall Administrator  
**BLUE BIRD CORPORATION**





# Offset Leg Barrier & 2/3 Seat Back Pads

# RECALL

**MODELS AFFECTED:** School Bus Models Equipped with Offset Leg Barriers and/or 2/3 Seats,  
Built January 30, 2003 and Later and Delivered May 06, 2009 and Earlier

## ISSUE

On some affected buses, Barriers and/or 2/3 Seats with offset floor-mounted supports may have incorrect foam pad assemblies installed, resulting in a noncompliance with FMVSS 222 S5.3.2 Leg Protection Zone.

## CORRECTIVE ACTION

This procedure describes the necessary inspection to determine if incorrect pad is installed, and replacement of incorrect pads.

## PROCEDURE

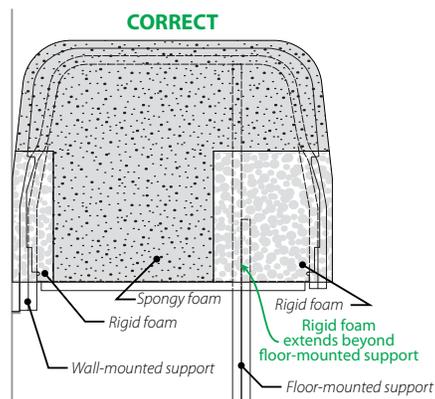
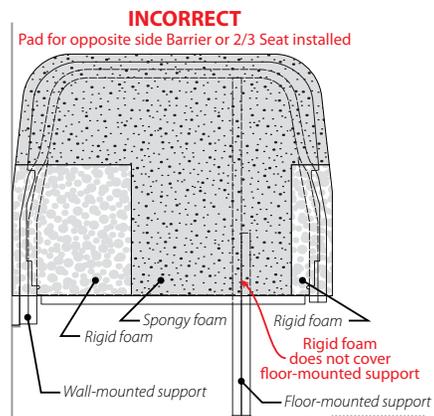
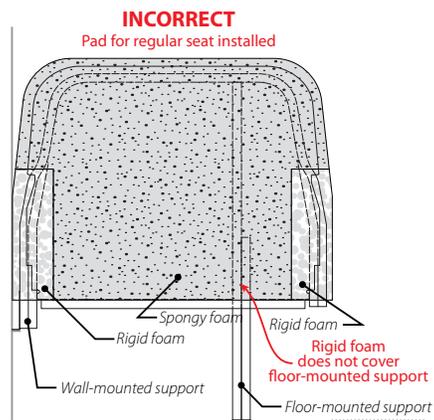
**WARNING** Always follow all federal, state, local, and shop safety standards and use proper safety equipment when performing this procedure.

**1** Thoroughly study and understand the following details of this issue before performing inspections:

- Barrier and Seat Back Pads Construction. The Pads are generally assembled from several pieces of two different types of foam material:
- Non-rigid ("spongy") foam forms the majority of the Pads.
- Rigid expanded polystyrene ("styrofoam-like") boards are used to cover frame members in certain "collision impact zone" areas.

Once familiar with the construction, the edges between the two types of foam are easy to distinguish by feeling along the installed seat back or barrier cover, as will be described in Step 2.

- Correct Pads For Barrier and 2/3 Seat Backs. The offset support legs of Seat Barriers and 2/3 Seat Assemblies extend vertically inside the back frame. These vertical frame members are required to be covered by the rigid foam components of the Pad Assembly.
- Incorrect Pads For Barrier and 2/3 Seat Backs. If a Pad Assembly for a regular full-width seat is installed on a Barrier, or on a 2/3 Seat Back, the vertical extension of the support legs are not sufficiently covered by the rigid foam type.



R09PM

RECALL CAMPAIGN

**2** Inspect each Left and Right Offset Leg Barrier and each 2/3 Seat Assembly to ensure the correct Pad Assembly is installed:

2.1 On the rear side of the Barrier or Seat Assembly back, starting at aisle-side lower corner, press a hand near the bottom edge and move slowly toward the middle of the back. A change in softness can be easily felt where the rigid foam ends and the spongy foam begins. Mark this location, and compare it to the location of the offset leg portion of the frame.



*The edge of the rigid foam inside the cover of a Barrier or a 2/3 Seat extends beyond the vertical support leg, which is offset from the aisle-side of the seat.*



*The pad of a regular seat back also has rigid foam pieces, but they do not extend as far from the aisle-side of the seat, because the vertical support leg is not offset.*

2.2 If the location of the end of the rigid foam cannot be clearly determined by the above-described method, remove the metal trim from the bottom of the back cover and inspect visually.

2.3 Note your findings on the Recall Inspection Sheet, provided, and inspect the next Barrier or 2/3 Seat until all of those on the bus are inspected. For each:

- If the rigid foam spans beyond the offset leg, the correct Pad Assembly is installed, and no rework is required.
- If the rigid foam does not extend beyond the offset leg, an incorrect Pad Assembly is installed, and must be replaced with a correct Pad Assembly. Proceed to Step 3 to perform the Pad replacement on a Barrier Assembly. Proceed to Step 4 to perform the Pad replacement on a 2/3 Seat Assembly.

2.4 Return the completed Recall Inspection Sheet to Blue Bird per the Recall instructions.

**3** Pad Replacement For an Offset Leg Barrier Assembly:

**WARNING** Barrier pad must be installed correctly to comply with FMVSS 222 55.3.2 Leg Protection Zone.

3.1 If the Barrier is a right-side Barrier, behind the entrance door stepwell, remove the handrail on the entrance door side.

3.2 Remove the metal trim along the bottom of the back cover, and the lower panel (if so equipped).

3.3 Carefully remove the staples that attach the cover to the frame along the bottom edge, taking care not to damage the Cover.

3.4 Remove the Cover and retain it for reinstallation.

3.5 Remove and discard the incorrect Pad Assembly.

3.6 Install a new Pad Assembly, with the the rigid foam sections toward the rear of the bus.

3.7 Reinstall the Cover. Pull the Cover tightly and staple to the wood strip along the bottom edge.

3.8 Reinstall all trim, panels, or handrails that were removed in Step 3.2, using the original fasteners.



#### 4 Pad Replacement For a 2/3 Seat Assembly:

**WARNING** *The 2/3 Seat Pad Assembly must be installed correctly to comply with FMVSS 222 S5.3.2 Leg Protection Zone.*

- 4.1 Remove the metal trim along the bottom of the back cover, and the lower panel.
- 4.2 Carefully remove the staples that attach the cover to the frame along the bottom edge, taking care not to damage the Cover.
- 4.3 Remove the Cover and retain it for reinstallation.
- 4.4 Remove and discard the incorrect Pad Assembly.
- 4.5 Install a new Pad Assembly, with the the rigid foam sections toward the rear of the bus.
- 4.6 Reinstall the Cover. Pull the Cover tightly and staple to the wood strip along the bottom edge.
- 4.7 Reinstall the trim that was removed in Step 4.1, using the original fasteners.

#### PARTS

PART NUMBER	QUANTITY	DESCRIPTION
00005525	As Required	PAD,BARRIER, 36.00, GM, LH, OFFSET LEG
00005526	As Required	PAD,BARRIER,36.00, GM, RH, OFFSET LEG
00005527	As Required	PAD, BARRIER, 36.00, HI-BACK, LH, OFFSET LEG
00005528	As Required	PAD, BARRIER, 36.00, HI-BACK, RH, OFFSET LEG
00005531	As Required	PAD, BARRIER, 39.00, HI-BACK, LH, OFFSET LEG
00005532	As Required	PAD, BARRIER, 45.00, HI-BACK, LH, OFFSET LEG
00005533	As Required	PAD, BARRIER, 39.00, HI-BACK, RH, OFFSET LEG
00005534	As Required	PAD, BARRIER, 39.00, GM, LH, OFFSET LEG
00005535	As Required	PAD, BARRIER, 39.00, GM, RH, OFFSET LEG
00005536	As Required	PAD, BARRIER, 45.00, GM, LH, OFFSET LEG
00928416	As Required	PAD, SEAT BACK, 2/3, RH
00949057	As Required	PAD, SEAT BACK, 2/3, LH, 39, SBTf
00114324	As Required	PAD, SEAT, HIGH BACK, 2/3, 30-39, RH
00114323	As Required	PAD, SEAT, HIGH BACK, 2/3, 30-39, LH

R09PM

RECALL CAMPAIGN



**BLUE BIRD**

**R14XN**

**IMPORTANT SAFETY RECALL NOTICE**

**NHTSA RECALL NO. 14V-510 SCHOOL BUS  
NHTSA RECALL NO. 14V-511 NON-SCHOOL BUS**

**DATE:           OCTOBER 01, 2014**

**TO:             U.S. DEALERS**

**SUBJECT:    RECALL R14XN RICON LIFT PLATFORM PIVOT PLATE  
              CRACKS**

Dear Blue Bird Dealer:

This important safety recall notice applies to your buses identified by both Blue Bird body number and Vehicle Identification Number (VIN) on the attached pink reply sheet.

This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act. Blue Bird Body Company has decided that a safety related defect exists in certain Blue Bird school bus and non-school bus models identified below equipped with a Ricon S-Series model platform wheelchair lift.

2007 through 2015 model year All American model  
2007 through 2011 model year Micro Bird model  
2007 through 2015 model year Vison model  
2007 through 2008 model year conventional model

Under certain conditions present in some applications, the platforms included on the subject Ricon S-Series model platform wheelchair lifts can exhibit cracking of the platform pivot plate while in the stowed position which, if left unchecked, can propagate to the point where separation of the rear portion of the pivot plate occurs rendering the lift potentially inoperable and possibly unsafe for the operator. Blue Bird is conducting a recall to notify you of this defect.

To correct this condition Ricon Corporation will provide parts required to modify the platform pivot plate. Instructions for the modification will be included with the parts.

A printout will be sent to you with the body numbers and VINs of the buses that were delivered in your service area which may have the subject lifts installed. The Ricon recall number is 14E-041.

**BLUE BIRD BODY COMPANY**

P.O. Box 937 – 402 Blue Bird Blvd – Fort Valley, Georgia – (478) 825-2021

If you are not an authorized Ricon dealer or service center, the nearest Ricon dealer/service center may be located by visiting Ricon Corporation's website and selecting "Dealer Locator" at the bottom left of Ricon's home page. You may also contact Dante Deleo at [Ddeleo@wabtec.com](mailto:Ddeleo@wabtec.com) or you may call Dante at (818)267-3009.

It is the dealers responsibility to verify that the correct owner name, address and telephone number is provided for each listed vehicle. Any corrections or updates should be made on BBOND. Addresses that cannot be updated on BBOND should be forwarded to the Recall Administrator.

If you have in your possession or have sold a vehicle that was purchased from another dealer that may be affected by this recall, please notify me at 478-822-2242.

Federal law requires that any vehicle lessor receiving this recall notice must forward a copy of this notice to the lessee within ten days.

Dealers are reminded of their responsibilities under section 154 of The National Traffic and Motor Vehicle Safety Act of 1991. Dealers are required to complete modifications or repairs on units in their inventory before delivering to the final owner. Reference Blue Bird Body Company Distributor Memo No. 42-92.

Questions regarding this recall campaign should be directed to me at (478) 822-2242.

Thank you,

A handwritten signature in cursive script that reads "Bill Coleman".

Bill Coleman  
Corporate Recall Administrator  
Blue Bird Body Company  
478-822-2242  
[bill.coleman@blue-bird.com](mailto:bill.coleman@blue-bird.com)



R14XN

IMPORTANT SAFETY RECALL NOTICE

NHTSA RECALL NO. 14V-510 SCHOOL BUS  
NHTSA RECALL NO. 14V-511 NON-SCHOOL BUS

October 01, 2014

Dear Blue Bird Owner:

This important safety recall notice applies to your buses identified by both Blue Bird body number and Vehicle Identification Number (VIN) on the attached pink reply sheet.

This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act. Blue Bird Body Company has decided that a safety related defect exists in certain Blue Bird school bus and non-school bus models identified below equipped with a Ricon S-Series model platform wheelchair lift.

2007 through 2015 model year All American model  
2007 through 2011 model year Micro Bird model  
2007 through 2015 model year Vison model  
2007 through 2008 model year conventional model

Under certain conditions present in some applications, the platforms included on the subject S-Series model platform wheelchair lifts can exhibit cracking of the platform pivot plate while in the stowed position which, if left unchecked, can propagate to the point where separation of the rear portion of the pivot plate occurs rendering the lift potentially inoperable and possibly unsafe for the operator. Blue Bird is conducting a recall to notify you of this defect.

To correct this condition you will need to contact your nearest Ricon Corporation wheelchair lift dealer. Ricon will provide parts required to modify the platform pivot plate at no charge to the owner. The Ricon recall number is 14E-041.

**You can locate your nearest Ricon wheelchair servicing dealer by using the Ricon Dealer Locator at the lower left of the Ricon Website [www.riconcorp.com](http://www.riconcorp.com). You may also contact Dante Deleo at [Ddeleo@wabtec.com](mailto:Ddeleo@wabtec.com) or you may call Dante at (818)267-3009.**

If you no longer own the subject bus(es), please complete the appropriate section of the yellow cover sheet and return to Blue Bird in the enclosed pink postage prepaid envelope.

**BLUE BIRD BODY COMPANY**

P.O. Box 937 – 402 Blue Bird Blvd – Fort Valley, Georgia – (478) 825-2021

**When the recall remedy has been performed on your Ricon wheelchair lift(s) complete and return the enclosed R14XN Recall Completion Reply Sheet so we may update our records. This will prevent you from receiving additional follow up notices.**

If the remedy directed by this notification was provided for your bus(es) prior to the receipt of this recall notification, complete and sign the pink recall reply sheet and return to Blue Bird Attn: Recall Administrator. Mail the documents in the pink self-addressed postage paid envelope. included with this recall notification.

Federal law requires that any vehicle lessor receiving this recall notice must forward a copy of this notice to the lessee within ten days.

If after contacting Ricon Corporation, do not received replacement parts in a reasonable time and without charge you may contact:

ADMINISTRATOR  
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION  
1200 NEW JERSEY AVENUE, SE  
WASHINGTON, D.C. 20590

or you may call The National Highway Traffic Safety Administration toll free at:

1-888-327-4236  
TTY: 1-800-424-9153  
or go to: <http://www.safercar.gov>

Questions regarding this recall campaign should be directed to me at (478) 822-2242.

Thank you,



Bill Coleman  
Corporate Recall Administrator  
BLUE BIRD BODY COMPANY



## Recall Completion Reply Sheet

### Blue Bird Body Company Recall R14XN (Ricon #14E-041) Ricon Lift Platform Pivot Plate Recall

When the Ricon repair parts for your Ricon wheelchair lift(s) affected by above recall campaign, have been installed, please complete the form below and return to Blue Bird in the pink reply envelope provided. **Completing and returning this form will prevent you from receiving additional follow up notices on this recall.**

Blue Bird Body Number	Ricon Lift Serial Number	Date Ricon Pivot Plate Parts Installed	Parts Installed by:

Form Completed by: \_\_\_\_\_  
(Print Name)

School/Company: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_ Zip: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_



BLUE BIRD

**R10RV**

**DATE: APRIL 28, 2010**

**TO: U.S. DEALERS**

**SUBJECT: RECALL R10RV RICON MODEL S & K SERIES L-MODEL  
WHEELCHAIR LIFT PLATFORM OVERRUN**

This notice is sent to you in accordance with the requirements of The National Traffic and Motor Vehicle Safety Act.

Blue Bird Corporation has decided that in certain 2010 model year Blue Bird All American, Vision and Micro-Bird school buses manufactured from April 24, 2009 through November 14, 2009 and equipped with a Ricon Corporation Series model S or K L-model platform lift that a defect exists in the lift "Up" function software.

If the wheelchair lift "Up" function switch is released before the floor level limit switch is activated, the lift may continue its upward travel for approximately 1 second before stopping. This continued upward travel may overrun the floor level cut off point. When the platform overruns the vehicle floor level and stops at an angle of 15-20 degrees, it is possible for a person in a wheelchair to tip over and for someone standing on the platform to fall. This condition could cause personal injury.

Blue Bird is conducting a recall to notify you of this defect. Blue Bird is working with Ricon Corporation and Ricon will be contacting all affected owners and will provide, at no cost to owners, a bulletin outlining proper wheelchair lift operation and a DVD-based training aid. **Dealers and owners will be provided with a recall completion reply sheet which must be completed for each body number/lift indicating the bulletin has been received and reviewed and the DVD based training aid has been received and reviewed. This reply sheet must be returned to Blue Bird Att: Recall Administration. Failure to return the completed reply sheet will result in follow up notices being mailed.**

A printout is enclosed with the body numbers of the buses that were delivered in your service area which may have the subject lifts installed. **You must enter the wheelchair lift serial number on the Ricon website to determine if the wheelchair lift installed is affected by the campaign. The Ricon recall number is 09E-061.**

**BLUE BIRD BODY COMPANY**

P.O. Box 937 – 402 Blue Bird Blvd – Fort Valley, Georgia – (478) 825-2021

If you are not an authorized Ricon dealer or service center, you can find the nearest Ricon dealer/service center by visiting Ricon Corporation's website and selecting "Dealer Locator" at the bottom left of Ricon's home page. You may also call Ricon at (800) 322-2884 Daniel Mata-Recall Coordinator -ext. 3374.

It is the dealers responsibility to verify that the correct owner name, address and telephone number is provided for each listed vehicle. Any corrections or updates should be made on BBOND. Addresses that cannot be updated on BBOND should be forwarded to the Recall Administrator.

If you have in your possession or have sold a vehicle that was purchased from another dealer that may be affected by this recall, please notify me at 478-822-2242.

Federal law requires that any vehicle lessor receiving this recall notice must forward a copy of this notice to the lessee within ten days.

Dealers are reminded of their responsibilities under section 154 of The National Traffic and Motor Vehicle Safety Act of 1991. Dealers are required to complete modifications or repairs on units in their inventory before delivering to the final owner. Reference Blue Bird Body Company Distributor Memo No. 42-92.

Questions regarding this recall campaign should be directed to me at (478) 822-2242.

Thank you,

A handwritten signature in cursive script that reads "Bill Coleman".

Bill Coleman  
Corporate Recall Administrator  
Blue Bird Corporation  
478-822-2242  
bill.coleman@blue-bird.com



BLUE BIRD

R10RV

April 28, 2010

Dear Blue Bird Owner:

This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act.

Blue Bird Corporation has decided that in certain 2010 model year Blue Bird All American, Vision and Micro-Bird school buses manufactured from April 24, 2009 through November 14, 2009 and equipped with a Ricon Corporation Series model S or K L-model platform lift that a defect exists in the lift "Up" function software.

If the wheelchair lift "Up" function switch is released before the floor level limit switch is activated, the lift may continue its upward travel for approximately 1 second before stopping. This continued upward travel may overrun the floor level cut off point. When the platform overruns the vehicle floor level and stops at an angle of 15-20 degrees, it is possible for a person in a wheelchair to tip over and for someone standing on the platform to fall. This condition could cause personal injury.

The body numbers of your Blue Bird buses which **may** have the subject lifts installed are indicated on the attached yellow cover sheet. You can enter the wheelchair lift serial number(s) on the Ricon website to determine if the wheelchair lift installed in your bus(es) is affected by this campaign. The Ricon recall number is 09E-061.

If your Ricon wheelchair lift serial number is one of the affected lifts, you should contact Ricon Corporation immediately by calling Ricon Customer service at (800) 322-2884 or by emailing Daniel Mata, Recall Coordinator, at [dmata@wabtec.com](mailto:dmata@wabtec.com) or you can locate your nearest servicing dealer by using the Ricon Dealer Locator at the lower left of the Ricon Website [www.riconcorp.com](http://www.riconcorp.com).

Ricon is developing a software solution for this issue. In the interim, Ricon will be providing, at no charge to you, both a bulletin outlining proper wheelchair lift operation and a DVD-based training aid. The software solution will be forwarded to you at no charge by Ricon Corporation when complete.

**Attached is a recall completion reply sheet which must be completed for each body number/lift indicating the bulletin has been received and reviewed and the DVD-based training aid has been received and reviewed. This reply sheet must be returned to Blue Bird Att: Recall Administration. Failure to return the completed reply sheet will result in follow up notices being mailed.**

**BLUE BIRD BODY COMPANY**

P.O. Box 937 – 402 Blue Bird Blvd – Fort Valley, Georgia – (478) 825-2021

If you no longer own the subject bus(es), please complete the appropriate section of the yellow cover sheet and return to Blue Bird in the enclosed pink postage prepaid envelope.

If the remedy directed by this notification was provided for your bus(es) prior to the receipt of this recall notification, complete and sign the recall reply sheet and return to Blue Bird Attn: Recall Administrator. Mail the documents in the pink self-addressed postage paid envelope included with this recall notification. If there were cost associated with obtaining the Ricon bulletin and Ricon DVD-based training aid you may be eligible to receive reimbursement for that cost. Include a copy of the invoice with the recall completion reply sheet for reimbursement consideration.

Federal law requires that any vehicle lessor receiving this recall notice must forward a copy of this notice to the lessee within ten days.

If after contacting Ricon Corporation, your warning decal and DVD based training aid are not received in a reasonable time and without charge you may contact:

ADMINISTRATOR  
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION  
1200 NEW JERSEY AVENUE, SE  
WASHINGTON, D.C. 20590

or you may call The National Highway Traffic Safety Administration toll free at:

1-888-327-4236  
TTY: 1-800-424-9153  
or go to: <http://www.safercar.gov>

Questions regarding this recall campaign should be directed to me at (478) 822-2242.

Thank you,



Bill Coleman  
Corporate Recall Administrator  
BLUE BIRD CORPORATION



## Recall Completion Reply Sheet

### Blue Bird Body Company Recall R10RV (Ricon #09E-061) Ricon Lift Platform Overrun

When you have received and installed the warning decal and reviewed the DVD based training aid for your Ricon wheelchair lift(s) affected by above recall campaign, please complete the form below and return to Blue Bird in the pink reply envelope provided. **Completing and returning this form will prevent you from receiving follow up notices on this recall.**

Blue Bird Body Number	Ricon Lift Serial Number	Date Ricon Bulletin Reviewed	Date Ricon DVD Based Training Aid Reviewed

Form Completed by: \_\_\_\_\_  
(Print Name)

School/Company: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_ Zip: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_



**R15YI**

**IMPORTANT SAFETY RECALL NOTICE**

**NHTSA RECALL NO. 15V-730 SCHOOL BUS  
NHTSA RECALL NO. 15V-731 NON-SCHOOL BUS**

**DATE: DECEMBER 1, 2015**

**TO: U.S. DEALERS**

**SUBJECT: RECALL R15YI RICON WHEELCHAIR LIFT LINK ARM PIVOT HOLES**

Dear Blue Bird Dealer:

This important safety recall notice applies to your buses identified by both Blue Bird body number and Vehicle Identification Number (VIN) on the attached white coversheet.

This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act. Blue Bird Body Company has decided that a safety related defect exists in certain Blue Bird school bus and non-school bus models identified below equipped with a Ricon S-Series model platform wheelchair lift.

2007 through 2015 model year All American model  
2007 through 2011 model year Micro Bird model  
2007 through 2015 model year Vison model  
2007 through 2008 model year Conventional model

Under certain conditions present in some applications, the platforms included on the S-Series Model Wheelchair Lifts (S2005, S2010, S5005, S5010, S5505, S5510) can exhibit cracking of the platform pivot plate while in the stowed position. If left unchecked, the crack can propagate to the point where separation of the rear portion of the pivot plate occurs rendering the lift potentially inoperable and possibly unsafe for the operator. In the event the crack occurs on both sides of the platform and is allowed to propagate to the point of material separation on both sides it is possible for the lift platform to lean against the vehicle lift door(s) and fall out of the vehicle when the door(s) is (are) opened putting the lift operator at risk. The holes in the folding link arms may have been manufactured oversized allowing a substantial amount of free play in the platform. Replacing the link arms does alleviate the issue.

The link arms should be inspected for damage or bearings moved out of position. If damage is found Ricon Corporation will provide parts required to remedy the issue at no cost. The Ricon recall number is 15E-068.

**BLUE BIRD BODY COMPANY**  
P.O. Box 937 – 402 Blue Bird Blvd – Fort Valley, Georgia – (478) 825-2021

A printout will be sent to you with the body numbers and VINs of the buses that were delivered in your service area which may have the subject lifts installed. The Ricon recall number is 15E-068.

If you are not an authorized Ricon dealer or service center, the nearest Ricon dealer/service center may be located by visiting Ricon Corporation's website and selecting "Dealer Locator" at the bottom left of Ricon's home page. **You may also contact Gerald Quimpe, Customer Support Manager, [gquimpe@wabtec.com](mailto:gquimpe@wabtec.com) or you may call Gerald at (818) 267-3033 or Customer Service at (800) 322-2884 or (818) 267-3000.**

It is the dealers responsibility to verify that the correct owner name, address and telephone number is provided for each listed vehicle. Any corrections or updates should be made on BBOND. Addresses that cannot be updated on BBOND should be forwarded to the Recall Administrator.

If you have in your possession or have sold a vehicle that was purchased from another dealer that may be affected by this recall, please notify me at 478-822-2242.

Federal law requires that any vehicle lessor receiving this recall notice must forward a copy of this notice to the lessee within ten days.

Dealers are reminded of their responsibilities under Section 154 of The National Traffic and Motor Vehicle Safety Act of 1991. Dealers are required to complete modifications or repairs on units in their inventory before delivering to the final owner. Reference Blue Bird Body Company Distributor Memo No. 42-92.

Questions regarding this recall campaign should be directed to me at [lisa.hancock@blue-bird.com](mailto:lisa.hancock@blue-bird.com)

Regards,

*Lisa Hancock*

Lisa Hancock  
Corporate Recall Administrator  
402 Blue Bird Blvd.  
Fort Valley, GA 31030  
Phone: 478-822-2242  
[lisa.hancock@blue-bird.com](mailto:lisa.hancock@blue-bird.com)



BLUE BIRD

**R10RT**

**DATE: APRIL 27, 2010**

**TO: U.S. DEALERS**

**SUBJECT: RECALL R10RT RICON MODEL S & K SERIES  
WHEELCHAIR LIFT RESTRAINT BELT  
LATCH DEFECT**

This notice is sent to you in accordance with the requirements of The National Traffic and Motor Vehicle Safety Act.

Blue Bird Corporation has decided that in certain 2008 through 2011 model year Blue Bird All American, Vision and Micro-Bird school buses manufactured from December 13, 2007 through January 18, 2010 and equipped with a Ricon Corporation Series model S or K platform lift a defect exists in the lift restraint belt buckle latch.

The restraint belts on these lifts were designed to prevent the lift from moving, unless the tongue of the belt is fully engaged and latched it the buckle. Ricon discovered however, that it is possible for the operator to insert the belt tongue into the buckle without fully engaging the latching mechanism. In this case, the restraint belt would appear to be latched, and the operator could run the lift. This situation could cause personal injury.

Blue Bird is conducting a recall to notify you of this defect. Blue Bird is working with Ricon Corporation and Ricon will be contacting all affected owners and will provide, at no cost to owners, a warning decal and a DVD-based training aid to promote the "Click and Tug" campaign. **Dealers and owners will be provided with a recall completion reply sheet which must be completed for each body number/lift indicating the warning decal and DVD based training aid has been received, the decal applied and the training aid reviewed. This reply sheet must be returned to Blue Bird Att: Recall Administration. Failure to return the completed reply sheet will result in follow up notices being mailed.**

A printout is enclosed with the body numbers of the buses that were delivered in your service area which may have the subject lifts installed. **You must enter the wheelchair lift serial number on the Ricon website to determine if the wheelchair lift installed is affected by the campaign. The Ricon recall number is 09E-060.**

**BLUE BIRD BODY COMPANY**

P.O. Box 937 – 402 Blue Bird Blvd – Fort Valley, Georgia – (478) 825-2021

If you are not an authorized Ricon dealer or service center, you can find the nearest Ricon dealer/service center by visiting Ricon Corporation's website and selecting "Dealer Locator" at the bottom left of Ricon's home page. You may also call Ricon at (800) 322-2884 Daniel Mata-Recall Coordinator –ext. 3374.

It is the dealers responsibility to verify that the correct owner name, address and telephone number is provided for each listed vehicle. Any corrections or updates should be made on BBOND. Addresses that cannot be updated on BBOND should be forwarded to the Recall Administrator.

If you have in your possession or have sold a vehicle that was purchased from another dealer that may be affected by this recall, please notify me at 478-822-2242.

Federal law requires that any vehicle lessor receiving this recall notice must forward a copy of this notice to the lessee within ten days.

Dealers are reminded of their responsibilities under section 154 of The National Traffic and Motor Vehicle Safety Act of 1991. Dealers are required to complete modifications or repairs on units in their inventory before delivering to the final owner. Reference Blue Bird Body Company Distributor Memo No. 42-92.

Questions regarding this recall campaign should be directed to me at (478) 822-2242.

Thank you,



Bill Coleman  
Corporate Recall Administrator  
Blue Bird Corporation  
478-822-2242  
bill.coleman@blue-bird.com



BLUE BIRD

R10RT

April 27, 2010

Dear Blue Bird Owner:

This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act.

Blue Bird Corporation has decided that certain 2008 through 2011 model year Blue Bird All American, Vision and Micro-Bird school buses manufactured from December 13, 2007 through January 18, 2010 and equipped with a Ricon Corporation Series model S or K platform lift has a defect that exists in the lift restraint belt buckle latching mechanism.

The restraint belts on these lifts were designed to prevent the lift from moving, unless the tongue of the belt is fully engaged and latched it the buckle. Ricon discovered however, that it is possible for the operator to insert the belt tongue into the buckle without fully engaging the latching mechanism. In this case, the restraint belt would appear to be latched, and the operator could run the lift. This situation could cause personal injury. Blue Bird is conducting a recall to notify you of this defect.

The body numbers of your Blue Bird buses which **may** have the subject lifts installed are indicated on the attached yellow cover sheet. You can enter the wheelchair lift serial number(s) on the Ricon website to determine if the wheelchair lift installed in your buse(es) is affected by this campaign. The Ricon recall number is 09E-060.

If your Ricon wheelchair lift serial number is one of the affected lifts, you should contact Ricon Corporation immediately by calling Ricon Customer service at (800) 322-2884 or by emailing Daniel Mata, Recall Coordinator, at [dmata@wabtec.com](mailto:dmata@wabtec.com) or you can locate your nearest servicing dealer by using the Ricon Dealer Locator at the lower left of the Ricon Website [www.riconcorp.com](http://www.riconcorp.com).

Ricon will be providing, at no charge to you, a warning decal and a DVD-based training aid to promote their "Click and Tug" campaign.

**Attached is a recall completion reply sheet which must be completed for each body number/lift indicating the warning decal and DVD based training aid has been received, the decal applied and the training aid reviewed. This reply sheet must be returned to Blue Bird Att: Recall Administration. Failure to return the completed reply sheet will result in follow up notices being mailed.**

BLUE BIRD BODY COMPANY

P.O. Box 937 – 402 Blue Bird Blvd – Fort Valley, Georgia – (478) 825-2021

If you no longer own the subject bus(es), please complete the appropriate section of the yellow cover sheet and return to Blue Bird in the enclosed pink postage prepaid envelope.

If the remedy directed by this notification was provided for your bus(es) prior to the receipt of this recall notification, complete and sign the recall reply sheet and return to Blue Bird Attn: Recall Administrator. Mail the documents in the pink self-addressed postage paid envelope, included with this recall notification. If there were cost associated with obtaining the Ricon warning decal and the Ricon DVD-based training aid you may be eligible to receive reimbursement for that cost. Include a copy of the invoice with the recall completion reply sheet for reimbursement consideration.

Federal law requires that any vehicle lessor receiving this recall notice must forward a copy of this notice to the lessee within ten days.

If after contacting Ricon Corporation, your warning decal and DVD based training aid is not received in a reasonable time and without charge you may contact:

ADMINISTRATOR  
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION  
1200 NEW JERSEY AVENUE, SE  
WASHINGTON, D.C. 20590

or you may call The National Highway Traffic Safety Administration toll free at:

1-888-327-4236  
TTY: 1-800-424-9153  
or go to: <http://www.safercar.gov>

Questions regarding this recall campaign should be directed to me at (478) 822-2242.

Thank you,



Bill Coleman  
Corporate Recall Administrator  
BLUE BIRD CORPORATION



## Recall Completion Reply Sheet

### Blue Bird Body Company Recall R10RT (Ricon #09E-060) Ricon Lift Restraint Buckle Latch

When you have received and installed the warning decal and reviewed the DVD based training aid for your Ricon wheelchair lift(s) affected by above recall campaign, please complete the form below and return to Blue Bird in the pink reply envelope provided. **Completing and returning this form will prevent you from receiving follow up notices on this recall.**

Blue Bird Body Number	Ricon Lift Serial Number	Date Ricon Warning Decal Applied	Date Ricon DVD Based Training Aid Reviewed

Form Completed by: \_\_\_\_\_  
(Print Name)

School/Company: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_ Zip: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_



BLUE BIRD

### Recall Completion Reply Sheet

#### Blue Bird Body Company Recall R10RT (Ricon #09E-060) Ricon Lift Restraint Buckle Latch

When you have received and installed the warning decal and reviewed the DVD based training aid for your Ricon wheelchair lift(s) affected by above recall campaign, please complete the form below and return to Blue Bird in the pink reply envelope provided. **Completing and returning this form will prevent you from receiving follow up notices on this recall.**

Blue Bird Body Number	Ricon Lift Serial Number	Date Ricon Warning Decal Applied	Date Ricon DVD Based Training Aid Reviewed

Form Completed by: \_\_\_\_\_  
(Print Name)

School/Company: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_

Zip: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



Service Information System

Shutdown SIS

Previous Screen

< Product: NO EQUIPMENT SELECTED  
Model: NO EQUIPMENT SELECTED  
Configuration: NO EQUIPMENT SELECTED

Service Letter

PRODUCT IMPROVEMENT PROGRAM FOR REPLACING COOLANT IN CERTAIN C7S ENGINES  
IN SCHOOL BUSES

Media Number -REBE7838-00

Publication Date -23/12/2011

Date Updated -23/12/2011

CONFIDENTIAL

REBE7838-00



SERVICE LETTER

23Dec2011

U-588  
A-475  
D-504  
O-514  
TT-15

Safety

PRODUCT IMPROVEMENT PROGRAM FOR REPLACING  
COOLANT IN CERTAIN C7S ENGINES IN SCHOOL BUSES

1350 1395

PI10883

NOTE:

This Program must be administered as soon as possible. When reporting the repair, use "PI10883" as the Part Number and "7751" as the Group Number, "56" as the Warranty Claim Description Code and "T" as the SIMS Description Code. Exception: If the repair is done after failure, use "PI10883" as the Part Number, "7751" as the Group Number, "96" as the

Warranty Claim Description Code, and "Z" as the SIMS Description Code.

## PROBLEM

This Product Improvement Program is a Safety Recall in accordance with the US National Motor Vehicle Safety Act and the Canadian Motor Vehicle Safety Act. Cooling system coolant in this application can degrade, which may cause engine components to prematurely deteriorate and a coolant leak could be experienced. If coolant leaks are observed, they should be immediately remedied. Failure to remedy a coolant leak, in conjunction with other factors or circumstances, may create the potential for a crash hazard.

It is a violation of US Federal law for a dealer to deliver a new motor vehicle or new or used engine covered by this Safety PIP until the PIP has been completed.

## AFFECTED PRODUCT

Model	Identification Number
C7	C7S00422, 722, 726, 981, 998, 1003, 1461, 1464-1465, 1467, 1472-1474, 1481, 1487, 1490, 1492, 1494, 1496-1497, 1500, 1502-1505, 1507, 1511, 1514, 1516, 1518, 1523, 1526, 1528, 1530, 1533, 1537, 1539-1540, 1543, 1547, 1549, 1553-1554, 1558-1559, 1562, 1564, 1566, 1571, 1575, 1577, 1579, 1581-1582, 1585-1586, 1588-1592, 1594-1601, 1603-1605, 1607-1609, 1612, 1614, 1617-1642, 1644-1646, 1648-1650, 1652, 1654-1655, 1658-1664, 1666-1675, 1677-1683, 1685-1691, 1693-1725, 1727-1733, 1735-1736, 1738-1740, 1742-1745, 1747-1767, 1769-1771, 1774-1778, 1780, 1782-1789, 1791-1792, 1794-1798, 1800-1802, 1804-1808, 1810-1811, 1814-1815, 1817-1818, 1820-1827, 1829-1834, 1836, 1838-1858, 1860-1861, 1863-1867, 1869-1904, 1906-1907, 1909-1914, 1916-1918, 1920, 1922-1925, 1927-1930, 1932, 1936-1937, 1939-1944, 1946-1955, 1957-1966, 1968-1971, 1973-1980, 1982-1995, 1999-2001, 2003, 2005-2017, 2019-2022, 2025-2031, 2033-2039, 2041-2069, 2071, 2073-2074, 2076-2085, 2087, 2089-2101, 2103-2105, 2108-2112, 2114-2118, 2120-2137, 2139, 2141-2145, 2147-2155, 2157, 2159-2164, 2167-2171, 2173-2176, 2178-2181, 2183-2195, 2197-2200, 2203-2216, 2219, 2221, 2223, 2228, 2239, 2243, 2261, 2264-2265, 2274, 2276, 2279, 2283, 2286, 2290, 2293, 2296, 2303, 2305-2316,

2318-2320, 2322-2324, 2326, 2328-2332, 2334, 2336-2379,  
2381-2383, 2385-2416, 2419-2427, 2429, 2431-2434, 2439,  
2443, 2445-2447, 2452-2457, 2459-2460, 2462-2463, 2466-  
2468, 2471-2472, 2475-2478, 2481-2482, 2485-2486, 2488,  
2490-2491, 2493, 2495, 2497-2498, 2500-2505, 2508-2510,  
2513-2515, 2517-2519, 2521, 2523-2524, 2526-2533, 2538-  
2539, 2541, 2543-2548, 2551, 2553-2554, 2556-2576, 2578  
-2594, 2596-2600, 2602-2606, 2608-2650, 2652-2672, 2674  
-2675, 2679, 2681-2682, 2684, 2686, 2688-2690, 2692,  
2694-2696, 2699-2703, 2706-2708, 2710, 2712-2713, 2715,  
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2876-2878, 2880-2888, 2891-2904, 2906-2911, 2913, 2915-  
2921, 2923-2935, 2938-2939, 2941, 2943, 2946-2952,  
2956, 2958-2959, 2961-2962, 2965, 2967-2971, 2973,  
2976, 2978, 2980, 2982-2986, 2990, 2993-2997, 2999,  
3001-3002, 3004-3005, 3007-3008, 3011-3017, 3019, 3021-  
3022, 3025, 3031-3034, 3037-3043, 3045, 3048-3049, 3051  
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3094, 3096-3097, 3099-3101, 3103, 3105-3107, 3111-3112,  
3119, 3122, 3124-3125, 3127-3129, 3132-3137, 3139, 3141  
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6173, 6176, 6188, 6238, 6255, 6295, 6305, 6321, 6333,  
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8748-8750, 8752, 8755-8758, 8763, 8766-8768, 8770, 8774  
-8775, 8777, 8779-8786, 8788-8789, 8794-8799, 8807,  
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8985, 8988, 8990-9000, 9002, 9005-9006, 9030-9031,  
9035, 9037-9038, 9040-9051, 9053-9060, 9089-9095, 9097,  
9100-9103, 9106, 9113-9118, 9120-9125, 9127-9139, 9141-  
9143, 9145, 9147-9149, 9151-9154, 9156-9161, 9163-9176,  
9178-9181, 9183-9235, 9237-9257, 9259, 9261-9274, 9276-  
9279, 9284-9286, 9298, 9301, 9307, 9310, 9315-9316,  
9318, 9320, 9336-9339, 9342-9345, 9348-9350, 9352-9357,  
9359-9362, 9364-9369, 9373, 9380-9381, 9384, 9386, 9388  
-9389, 9391, 9394, 9396-9397, 9400, 9402, 9404-9405,  
9407, 9410-9418, 9421-9423, 9447-9451, 9455-9456, 9459,  
9461, 9463-9465, 9469-9470, 9480-9482, 9490, 9492-9498,  
9536, 9556-9564, 9566-9567, 9569-9572, 9574, 9579,  
9582, 9587, 9632, 9635, 9640, 9642, 9645-9649, 9652-  
9661, 9663-9668, 9671-9672, 9674, 9678, 9683-9684,  
9688, 9693, 9696-9697, 9699, 9703-9704, 9708, 9713-  
9715, 9719, 9727, 9738, 9740, 9742-9745, 9747-9751,  
9855, 9858-9859, 9892, 9913-9932, 9934-9942, 9947-9952,  
9954-9957, 9959, 9961-9962, 9964-9977, 9979, 9981-9985,  
9987-9998

## PARTS NEEDED

No parts needed for this program

## ACTION REQUIRED

1. Drain all the coolant from the system.
2. Fill the system with CAT ELC coolant.
3. Bring the engine to operating temperature.
4. Add additional coolant if necessary.
5. Take a level 2 coolant sample and send for analysis.
6. Return the bus to service.

## OWNER NOTIFICATION

U.S. and Canadian owners will receive the attached Owner Notification.

## SERVICE CLAIM ALLOWANCES

Caterpillar		Dealer Suggested		Customer Suggested	
Parts %	Labor Hrs%	Parts %	Labor Hrs%	Parts %	Labor Hrs%
100%	100%	0%	0%	0%	0%
NOTE: This is a 1.0-hour job					
Claim 7 gallons of bulk coolant @ \$12.00/gal for standard fill. Claim up to an additional 3 gal of bulk coolant @ \$12.00/gal if additional heaters have been installed in the bus. 1395 081 Claim \$24.00 for the level 2 coolant sample.					

## PARTS DISPOSITION

Handle the parts in accordance with your Warranty Bulletin on warranty parts handling.

MAKE EVERY EFFORT TO COMPLETE THIS PROGRAM AS SOON AS POSSIBLE.

COPY OF OWNER NOTIFICATION FOR U.S. AND CANADIAN OWNERS

XYZ Corporation  
3240 Arrow Drive  
Anywhere, YZ 99999

SAFETY - RECALL - PROGRAM FOR COOLANT REPLACEMENT

MODELS INVOLVED - CERTAIN C7 SCHOOL BUS ENGINES

Dear Caterpillar Product Owner:

This notice is sent to you in accordance with the requirements of

the U.S. National Traffic and Motor Vehicle Safety Act. This notice is also in accordance with the requirements of the Canadian Motor Vehicle Safety Act. Caterpillar has decided that a defect, which relates to motor vehicle safety, exists in school buses equipped with certain Caterpillar C7 engines.

Cooling system coolant in this application can degrade, which may cause engine components to prematurely deteriorate and a coolant leak could be experienced. As prescribed in the Operations and Maintenance Manual, a daily walk-around inspection should be conducted to check for coolant leaks. If coolant leaks are observed, they should be immediately remedied. Failure to remedy a coolant leak, in conjunction with other factors or circumstances, may create the potential for a crash hazard.

Caterpillar will change the coolant in the engine serial numbers listed in this letter and provide new instructions for coolant sampling to determine the correct coolant maintenance and change interval for your application in an updated Operation and Maintenance Manual. Caterpillar will perform this service for you free of charge.

Contact your local Caterpillar dealer immediately to schedule this service. The dealer will advise you of the time required to complete this service.

Contact Caterpillar at this toll free number 1-800-447-4986 to request the number of updated Operation and Maintenance Manuals needed for your operation. Provide the shipping addresses and the manuals will be mailed to you.

If you are a lessor of these vehicles, you must forward this letter to your lessee within ten days.

If you have had your vehicle repaired for this condition prior to receipt of this notice and incurred any costs, you may be eligible for reimbursement. Please contact Caterpillar at this toll free number 1-800-447-4986.

If you no longer own the truck with this engine, please contact Caterpillar at this toll free number 1-800-447-4986.

If the dealer is unable to have the inspection or repair made, please contact:

Caterpillar Inc.  
Peoria, IL 61629-2490  
Attn: Americas Distribution Services Division  
Truck Engine Call Center  
Telephone: 1-800-447-4986

If you are unable to have the inspection or repair made within 60 days or without charge, you may submit a complaint to:

In the U.S.  
Administrator  
National Highway Traffic Safety Administration  
1200 New Jersey Avenue, S.E.  
Washington, D.C. 20590  
Telephone: 1-888-327-4236 (TTY:1-800-424-9153) or go to  
<http://www.safercar.gov>

In Canada  
Transport Canada  
Defects Investigations and Recalls  
Telephone: 1-800-333-0510

Please refer the dealer to their Service Letter dated 23Dec2011 when scheduling this service.

We regret the inconvenience this may cause you, but urge you to have this service performed for your added safety and satisfaction.

Caterpillar Inc.

Identification #(s)

Attached to 23Dec2011 Service Letter

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Wed Jan 11 11:02:21 EST 2012



**\*\*\* IMPORTANT SAFETY RECALL \*\*\*  
NHTSA Recall No. 15E-073**

October XX, 2015

Mr. Joe Customer  
XXXX CENTRAL AVE  
ALBANY NY 12205-2457

Dear Cummins Customer:

This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act.

Cummins Inc. has decided that a defect which relates to motor vehicle safety exists in certain Cummins ISB6.7, ISL9, ISX12 and ISX15 engines manufactured between July 23, 2015 and August 7, 2015.

This notice applies to your Cummins engine as identified below:

Engine Serial Number	Vehicle Manufacturer	Vehicle Serial Number
XXXXXXXXXX	John's Truck Manufacturer	1XYZZYXZY123456789

**WHY IS A RECALL BEING CONDUCTED?**

The Engine Control Module (ECM) may develop an internal electrical short circuit, possibly resulting in an engine stall without warning, leading to an increased risk of a crash.

**WHAT ARE WE DOING ABOUT THE PROBLEM?**

Cummins has released field Campaign C1698 "ISB6.7, ISL9, ISX12, ISX15, QSX T4 CM2350 Safety Campaign" to correct this condition by replacing the Engine Control Module. This campaign is currently available at Cummins Distributors and Cummins-authorized Warranty Dealers. The repair will be completed free of charge and most applications will require approximately 2 hours to complete.

**WHAT SHOULD YOU DO?**

Contact the nearest Cummins Distributor or Cummins-authorized Warranty Dealer to arrange to have this campaign performed on your engine. The distributor or dealer will work with you to schedule the best date to complete this repair.

Federal law requires vehicle lessors receiving this recall notice to forward a copy of this notice to the lessee within ten (10) days. Also, it is a violation of Federal law for a dealer to deliver a new vehicle covered by this recall notice under a sale or lease until the defect has been remedied.

If you previously paid to have this recall performed on your vehicle, you may be eligible for reimbursement. Please contact the Cummins Customer Assistance Center at the number below for more information.

**WHO SHOULD YOU CONTACT IF YOU HAVE FURTHER QUESTIONS OR CONCERNS?**

If you have questions or concerns about this recall, please contact your local Cummins Distributor. You may also contact the Cummins Customer Assistance Center at 1-800-DIESELS (1-800-343-7357).

If you have a complaint relative to this recall, you may report it to the following:

Administrator  
National Highway Traffic Safety Administration  
1200 New Jersey Avenue, SE  
Washington, DC 20590

You may also call the toll free Vehicle Safety Hotline at 1-888-327-4236 (TTY: 1-800-424-9153); or go to <http://www.safercar.gov>.

Cummins is taking this action in the interest of your personal safety and satisfaction with our products. We apologize for any inconvenience and thank you for your attention to this matter.

Sincerely,

Campaign Administrator  
Cummins Inc.