Cummins Inc.
Box 3005
Columbus, Indiana
47202-3005

February 6, 2003

03E-009 (1/11)

Mr. Kenneth Weinstein
Associate Administrator for Safety Assurance
U.S. Department of Transportation
National Highway Traffic Safety Administration
400 Seventh Street, S.W.
Washington, DC 20590

Dear Mr. Weinstein:

In accordance with the procedures outlined in 49 CFR Part 573.5, we are submitting the attached safety defect information report. This recall involves 7618 Cummins ISB Model engines installed in school buses manufactured by Blue Bird Corporation and Freightliner Custom Chassis. The defect involves an alternator support brace and alternator support bracket that Cummins installs on the engine before shipment to the bus manufacturer. The bus manufacturer then installs an alternator and belt to complete the assembly in their chassis. Our investigation shows that alternators heavier than envisioned and designed for are being installed, thus resulting in failures of the brace and bracket. These failures can then lead to electrical sparking and potentially a fire. We have had 3 fires reported to us with no reported injuries. Cummins will conduct a safety recall to install new, higher capability brackets and brace. All supporting details are outlined in the attached Report.

In addition, we have included a draft of the letter we would propose to send to our customers, as well as a copy of the envelope.

Cummins, Inc. will await your input on next steps. As always, if you have any questions, please contact me.

Sincerely,

Steven R. Butler
Engine Certification Director

Phone: 812-377-3713
Fax: 812-377-8739
Email: steven.r.butler@cummins.com

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OFFICE OF DEFECTS INVESTIGATION

Phone: 812-377-5000
Facsimile: 812-377-3334

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PART 573 Defect and Noncompliance Report[1]

On February 5, 2003, Cummins Inc. decided that (a defect which relates to motor vehicle safety)(a noncompliance with Federal Motor Vehicle Safety Standard No. _____) exists in items of motor vehicle equipment listed below, and is furnishing notification to the National Highway Traffic Safety Administration in accordance with 49 CFR Part 573 Defect and Noncompliance Reports.

Date this report was prepared: February 6, 2003

Furnish the manufacturer's identification code for this recall (if applicable): 0305

1. Identify the full corporate name of the fabricating manufacturer/brand name/trademark owner of the recalled item of equipment. If the recalled item of equipment is imported, provide the name and mailing address of the designated agent as prescribed by 49 U.S.C. §30164.

Cummins Inc.

Identify the corporate official, by name and title, whom the agency should contact with respect to this recall.

Steven R. Butler, Engine Certification Director

Telephone Number: 812-377-3713 **Fax No.:** 812-377-8739

Name and Title of Person who prepared this report.

Steven R. Butler, Engine Certification Director

Signed: Steven R Butler

[1]Each manufacturer must furnish a report, to the Associate Administrator for Safety Assurance, for each defect or noncompliance condition which relates to motor vehicle safety.

This guide was developed from 49 CFR Part 573, "Defect and Noncompliance Reports" and also outlines information currently requested. Any questions, please consult the complete Part 573 or contact Mr. Jon White at (202) 366-5226 or by FAX at (202) 366-7882.

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I. Identify the Recalled Items of Equipment

2. Identify the Items of Equipment involved in this Recall, *for each make and model or applicable item of equipment product line (provide illustrations or photographs as necessary to describe the item of equipment), provide:*

Generic name of the Item: Alternator Support Brace (Lower)

Make: _____ **Model:** Used on alternators with Cummins ISB engines.

Part Number: Cummins P/N 3942821 **Size:**

Function: Lower mounting brace for the alternator to engine.

Other information which characterizes/distinguishes the items of equipment to be recalled: When such brace is used with Alternator Support Bracket (upper) P/N 3942819 with Alternators weighing 17 lbs or more.

Generic name of the Item: Alternator Support Bracket (Upper)

Make: _____ **Model:** Used on alternators with Cummins ISB engines.

Part Number: P/N 3942819 **Size:**

Function: Upper mounting bracket for the alternator to engine.

Other information which characterizes/distinguishes the items of equipment to be recalled: When such bracket is used with Alternator Support Brace (lower) P/N 3942821 with Alternators weighing 17 lbs or more.

(Attached is a schematic view of the engine showing the suspect parts.)

Identify the approximate percentage of the production of all the recalled models manufactured by your company between the inclusive dates of manufacture provided above, that the recalled model population represents. For example, if the recall involved Widgets equipped with certain items of equipment from January 1, 1996, through April 1, 1997, then what was the percentage of the recalled Widgets of all Widgets manufactured during that time period.

Between inclusive dates, this recall represents 4.73% of all ISB engines produced with the recalled items.

II. Identifying the Recall Population

3. Furnish the total number of items of equipment recalled potentially containing the defect or noncompliance.

Model	Year	Number of Items Potentially Involved
ISB 6 Cylinder Engines	Mar. 98 – Feb. 99	7618
Engines built at CDC: ESN 45480143 - 45818756		
Engines built at CMEP: ESN 56438052 - 56561699		
(CDC is our manufacturing plant located in Rocky Mount, North Carolina)		
(CMEP is our manufacturing plant located in Columbus, Indiana)		

Total Number Potentially Affected by the Recall 7618

4. Furnish the approximate percentage of the total number of items of equipment estimated to actually contain the defect or noncompliance: We are pursuing 100% of the 4.73% recall of all ISBs.

Identify and describe how the recall population was determined--in particular how the recalled models were selected and the basis for the beginning and final dates of manufacture of the recalled items of equipment:

The recall population includes ISB engines manufactured with the combination of lower alternator support brace (p/n 3942621) and upper alternator support bracket (p/n 3942819) between March 1998 thru February 1999 and installed into school buses manufactured by Blue Bird Corporation and Freightliner Custom Chassis, which use alternators over 17lbs.

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III. Describe the Defect or Noncompliance

5. Describe the defect or noncompliance. The description should address the nature and physical location of the defect or noncompliance. Illustrations should be provided as appropriate.

The combination of the old alternator bracket and alternator brace is not capable of holding some of the heavy alternators (>17 lbs.). In most of the failures this will lead to loosening of the mounting hardware (bolts) or breakage of the lower brace. This can release the alternator and let it fall. The damage will vary, depending on which side breaks first.

Describe the cause(s) of the defect or noncompliance condition.

The root cause is due to OEM's installing alternators that are heavier than the support brackets are designed to carry, and the lack of instructions to the OEMs defining the weight limitations of the brackets.

Describe the consequence(s) of the defect or noncompliance condition.

When used with alternators over 17lbs, the lower alternator support brace or mounting hardware may loosen or break possibly causing the upper alternator support bracket to also fail resulting in the alternator dropping to the engine. Under these conditions electrical wiring harness damage and the possibility of engine compartment fire may exist.

Identify any warning which can (a) precede or (b) occur.

(a) Possible squealing noise from engine compartment caused by alternator belt misalignment. (b) Alternator indicator light will illuminate.

If the defect or noncompliance is in a component or assembly purchased from a supplier, identify the supplier by corporate name and address.

The defects are related to the bracket and brace designed and purchased by Cummins Inc. and installed on the engine at a Cummins factory. The OEM installs their own supplied alternator at their location. The OEM supplied alternator may weigh 17lbs or more, which may lead to a bracket failure.

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Identify the name and title of the chief executive officer or knowledgeable representative of the supplier:
Steven R. Butler, Engine Certification Director, Cummins Inc.

IV. Provide the Chronology in Determining the Defect/Noncompliance

If the recall is for a defect, complete item 6, otherwise item 7.

6. With respect to a defect, furnish a chronological summary (including dates) of all the principle events that were the basis for the determination of the defect. The summary should include, but not be limited to, the number of reports, accidents, injuries, fatalities, and warranty claims.
~~**7. With respect to a noncompliance, identify and provide the test results or other data (in chronological order and including dates) on which the noncompliance was determined.**~~

There have been three failures reported that caused excessive damage. The first occurring in April of 2001 followed by the second in January of 2002. The last report occurred in May of 2002. In all three cases the alternator positive terminal has made contact with the oil filter head shorting out wires and causing an electrical fire in the engine compartment. In one of these cases the alternator punctured a hole in the oil filter and caused an oil fire in the engine compartment. To date, no one has been injured due to this issue. An engineering analysis was initiated in July 2002 and was concluded in November 2002. The results indicated the combination of brace and bracket were not capable of supporting alternators over 17 lbs. A redesigned bracket was selected and verified to be capable of supporting alternators weighing in excess of 17 lbs. In mid December 2002. It was also concluded this situation was an unreasonable risk and the decision to conduct a safety campaign was made on February 5, 2003.

V. Identify the Remedy

8. Furnish a description of the manufacturer's remedy for the defect or noncompliance. Clearly describe the differences between the recall condition and the remedy.

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The remedy for current and future production is to install the updated upper alternator support bracket on engines produced. In addition, Cummins is conducting a service campaign to replace the existing upper alternator support bracket with the new design and replace the existing lower alternator support brace and all mounting hardware on units where the OEM has installed an alternator weighing 17 or more pounds.

Clearly describe the distinguishing characteristics of the remedy component/assembly versus the recalled component/assembly.

The remedy used in the service campaign is an updated upper alternator support bracket that has been redesigned to support alternators with a gross weight of 17 pounds or more. We have also established OEM instructions defining weight limitations.

Identify and describe how and when the recall condition was corrected in production. If the production remedy was identical to the recall remedy in the field, so state. If the product was discontinued, so state.

The recall remedy used in production was the same as the field remedy. Engines built at CDC after ESN 45818756 (September 28, 1998) and engines built at CMEP after ESN 56581539 (February 2,1999) have the updated upper alternator support bracket installed.

VI. Identify the Recall Schedule

Furnish a schedule or agenda (with specific dates) for notification to other manufacturers, dealers/retailers, and purchasers. Please, identify any foreseeable problems with implementing the recall.

OEM notification – within 5 working days of receiving your approval of our draft communication
Customer notification – to commence within 5 working days of receiving your approval of our draft communication.
Repairs beginning – on commencement of letters received and customers contacting our repair facilities (estimated to be early- to mid-March)

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VII. Furnish Recall Communications

9. **Furnish a final copy of all notices, bulletins, and other communications that relate directly to the defect or noncompliance and which are sent to more than one manufacturer, distributor, or purchaser. This includes all communications (including both original and follow-up) concerning this recall from the time your company determines the defect or noncompliance condition on, not just the initial notification. *A DRAFT copy of the notification documents should be submitted to this office by Fax (202-366-7882) for review prior to mailing.***

A draft copy of the letters to our customers is attached, along with a copy of the envelope to be used.

Note: These documents are to be submitted separately from those provided in accordance with Part 573.8 requirements.

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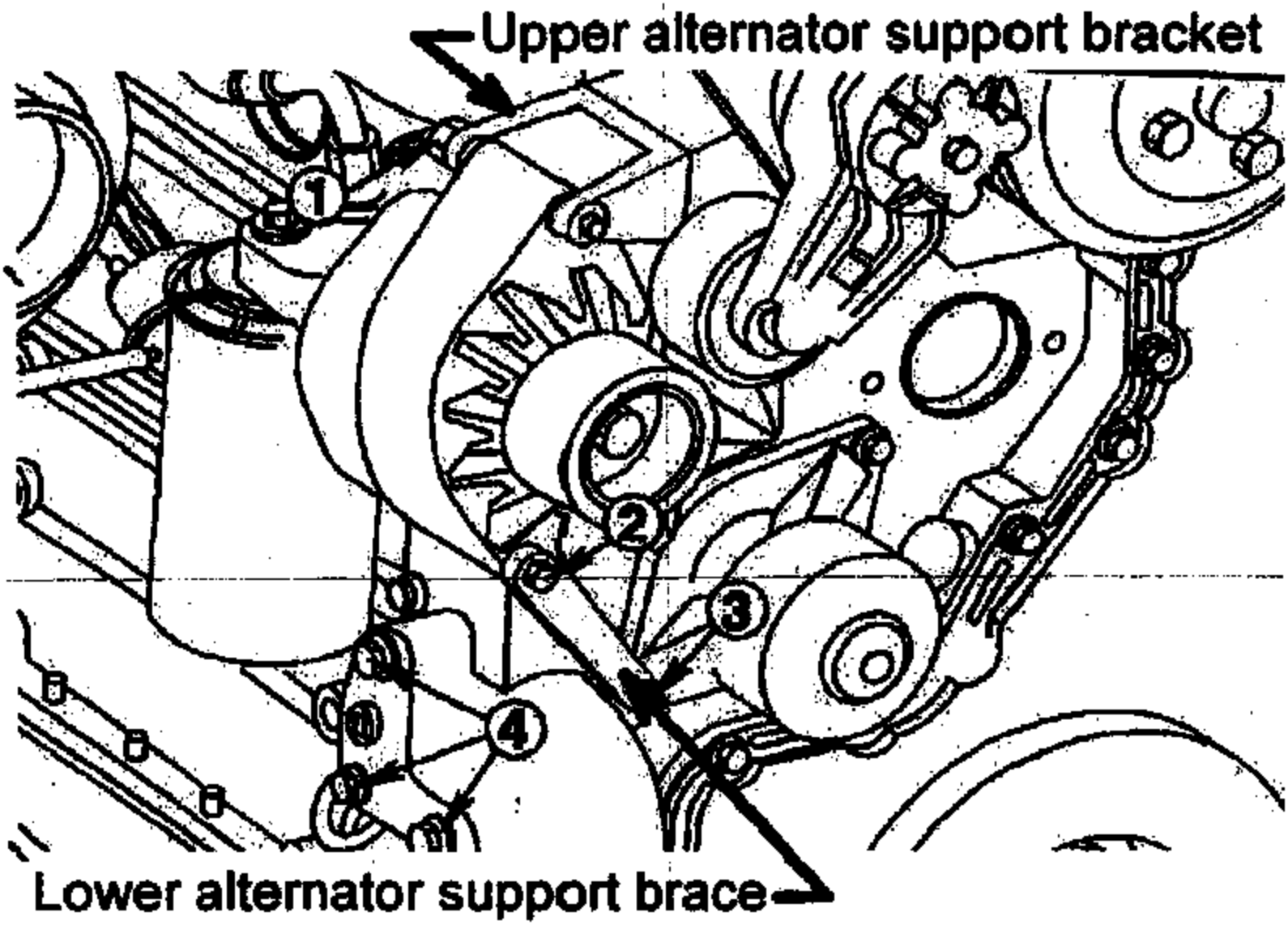
Upper alternator support bracket
1
2
3
4
Lower alternator support brace

Cummins Inc.
Box 3005
Columbus, Indiana
47202-3005

DATE:

03E-009 10/11

Dear Customer,

IMPORTANT SAFETY NOTICE

This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act. Cummins Inc. has determined that a defect that relates to motor vehicle safety exists in school buses manufactured by Blue Bird Corporation and Freightliner Custom Chassis that are powered by a Cummins 5.9 L ISB engine.

Cummins Inc. has determined that the ISB lower alternator support brace and upper alternator support bracket may pose a risk to vehicle safety on engines installed in school buses manufactured by Blue Bird Corporation and Freightliner Custom Chassis. The affected engines were built from March 1998 through February 1999, and have an Engine Serial Number within the range of 45489143 to 45818756 or 56436052 to 56561539.

The defect involves the potential for the lower alternator support brace or mounting hardware to loosen or break which has led to the upper alternator support bracket breaking and the alternator dropping to the engine. Under these conditions electrical wiring harness damage and the possibility of fire may exist.

Until the lower alternator support brace and upper alternator support bracket have been replaced, it is recommended that you inspect the lower brace and upper bracket for signs of cracks. Also check both brace and bracket mounting hardware for proper torque of 18 ft-lbs.

Cummins Inc. urges you to immediately contact your nearest Cummins Distributor for corrective action. This will be done without charge to you. The time needed to perform the corrective action is approximately 1.2 hours. The lower alternator support brace and mounting hardware will be removed and replaced. The upper alternator support bracket will be removed and replaced with a new design.

Should you have any questions or difficulties regarding this program, please contact our Customer Assistance Center by calling our toll-free number 1-800-343-7357 (1-800-DIESEL-8).

Should you have a complaint relative to the correction of the engine, you may wish to report that to:

Administrator, National Highway Traffic
Safety Administration
400 Seventh Street, S.W.
Washington, DC 20590

Or you may call the toll free Auto Safety Hotline at 1-800-424-9393.

We regret the inconvenience this recall may cause you.

Regards,

Bryan Rathert
Executive Director of Powercare
Service Engineering
Cummins Inc

Phone: 812-377-5000
Facsimile: 812-377-3334

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SAFETY RECALL NOTICE

Cummins Engine Company, Inc.
Box 3005
Columbus, Indiana
47202-3005