



VEHICLE RECALL

G-04507
June 2004

SUBJECT: SAFETY RECALL (U.S., EXPORT)
Kelsey-Hayes (Lucas Varity or TRW) Anti-Lock Brake (ABS) Electronic Control Unit on 3400, 3800, RE, FE, and CE bus models built 2/28/1999 thru 4/5/2004

This recall is the final remedy and supercedes Safety Recall G-02510.

This recall is for bus models only. The truck recall will be released at a later date.

DEFECT DESCRIPTION

The anti-lock brake system (ABS) electronic control unit may misinterpret a corrupt wheel speed signal. The corrupt wheel speed signals may improperly activate the ABS, instead of deactivating the ABS. This may result in the driver experiencing a hard pedal feel and a decrease in deceleration at the end of the stop, resulting in extended stopping distances which could cause a vehicle crash, possibly resulting in **property damage, personal injury, or death.**

MODELS INVOLVED

This Safety Recall involves 3400, 3800, RE/FE, CE and IC bus models with hydraulic brakes and a Kelsey-Hayes (Lucas Varity or TRW) ABS electronic control unit built 2/28/1999 thru 4/5/2004.

OWNER NOTIFICATION

International Truck and Engine Corporation will notify owners of these vehicles about this campaign. A copy of the owner letter is attached. During the recall process, a listing of owner names and addresses will be furnished to the involved dealers to enable dealers to follow up with owners and have the vehicles corrected. You must limit the use of this listing 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.

Many vehicles involved in this recall are also involved in Safety Recall G-03502. The owners of vehicles who are involved in BOTH recalls were sent a special notification letter that informed them of both recalls. The Authorization for Recall Service cards were also printed with both recall numbers on them.

The owners involved in this recall that are NOT part of Safety Recall G-03502, received a standard owner notification. Copies of both owner notifications are attached at the end of this document.

PARTS INFORMATION

The part required for this recall is:

| Part Number | Part Description | Quantity |
|--------------------|------------------------------|-----------------|
| 8900100R91 | Recall Service Kit, ECU Only | 1 |

There may be a reason to replace the entire electronic control unit (ECU) **AND** hydraulic control unit (HCU) assembly (EHCU). Please refer to the SERVICE PROCEDURE to determine under which conditions the EHCU assembly is to be replaced. The EHCU part information is as follows:

| Part Number | Part Description | Quantity |
|--------------------|---|---|
| 8900134R91 | Recall Service Kit, EHCU Assembly (HCU and ECU) | 1 -- only as required per service procedure |

SERVICE PROCEDURE



WARNING:

TO PREVENT SERIOUS EYE INJURY, ALWAYS WEAR SAFE EYE PROTECTION WHEN YOU PERFORM VEHICLE MAINTENANCE OR SERVICE.



WARNING:

TO PREVENT UNEXPECTED MOVEMENT OF THE VEHICLE AND POSSIBLE SERIOUS PERSONAL INJURY OR DEATH, BLOCK THE WHEELS TO PREVENT THE VEHICLE FROM MOVING IN BOTH DIRECTIONS.

1. Disconnect the negative battery terminal.
2. Locate the EHCU assembly on the driver's side frame rail.

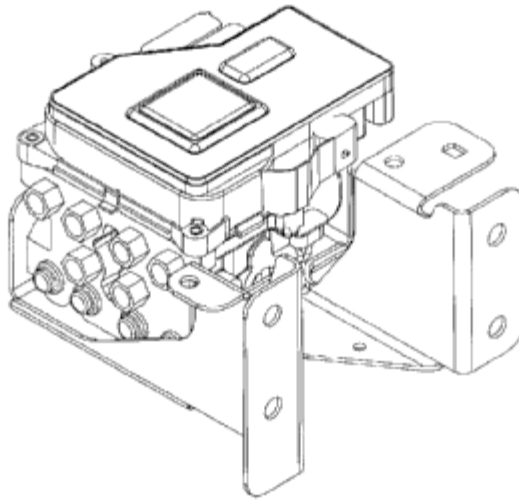


Figure 1

3. Remove dirt from the EHCU assembly with a dry soft brush or cloth. Blow loose particles and dust away with low-pressure shop air. **Do not use water or chemical cleaners.**
4. Disconnect the 2-way and 24-way connectors from the ECU.

IMPORTANT: *Avoid touching the pins of the electrical connectors on the ECU. Damage could occur, due to electrostatic discharge.*

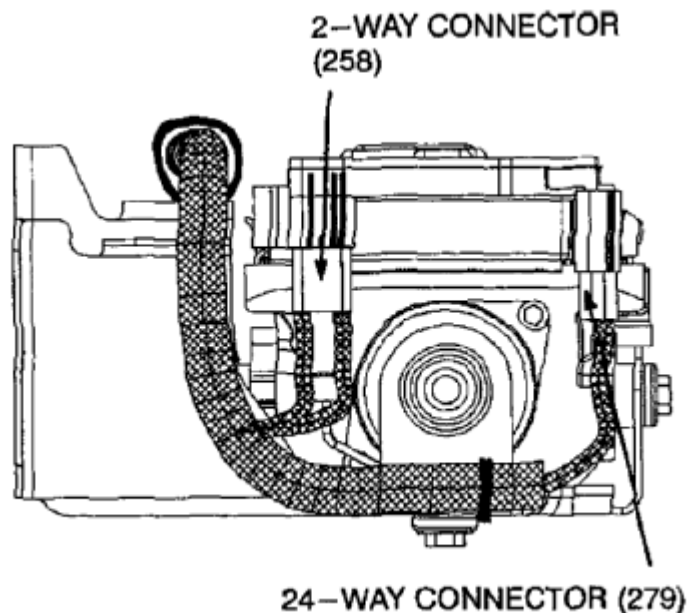


Figure 2 -- View from Rear of Vehicle

5. Disconnect the 2-way connector from the electrical interconnect between the ECU and HCU (it is located on the side of the EHCUC that was next to the frame rail).
6. With a small hammer, lightly tap the four T-25 Torx® bolts which fasten the ECU to the HCU. Remove the bolts cautiously, so as to ensure they are not broken during removal.
 - a. If bolts cannot be removed due to corrosion, or stripped heads, or if they become broken off, replace entire EHCUC assembly. This is the only condition in which EHCUC assembly replacement will be necessary.
 - Refer to Master Service Manual for proper EHCUC removal and re-installation instructions.

IMPORTANT: *Do not pry on the ECU or HCU with a mechanical aid. Excessive force will cause damage to the units.*

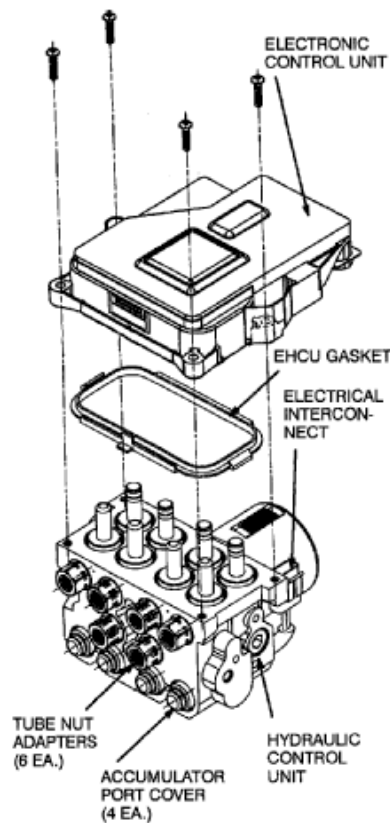


Figure 3

7. Carefully remove the ECU from the HCU. A light amount of force may be required. Ensure no dirt falls into the HCU.

8. Remove EHCU gasket.

IMPORTANT: Always insure hydraulic connections and components are kept clean to prevent contamination.

IMPORTANT: Do not reuse the ECU gasket or mounting bolts. Always install new gasket and mounting bolts with the replacement ECU.

9. Install a new ECU gasket onto the HCU.

IMPORTANT: Do not use RTV or any other type of sealant on the ECU gasket or mating surfaces.

10. Mate the ECU with the HCU.
11. Install four new Torx® T-25 ECU bolts and tighten them to 5 Nm (39 LbF-in.) in an X pattern.
12. Connect the 2-way connector from the interconnect on the HCU to the ECU (it is located on the side of the EHCU that will face the frame rail).
13. Connect the 2-way and 24-way electrical connectors to the ECU .
14. Re-connect the negative battery terminal.

IMPORTANT NOTE

- Once installed, the new ECU may activate the ABS warning lamp even though the lamp was not activated prior to the ECU replacement. Should this occur, the *MASTER SERVICE MANUAL* should be consulted to troubleshoot the cause of the ABS fault.
- The new ECU contains software algorithms that can identify marginal system components, such as worn sensors, connectors, wiring, and tone rings. If a marginally performing system component exists, the ECU may set a fault and turn the ABS lamp on. This situation requires proper troubleshooting to identify and repair the marginal component according to the Service Manual.
- Any labor or parts associated with troubleshooting are not part of this recall and are the responsibility of the vehicle owner.

END OF SERVICE PROCEDURE


LABOR INFORMATION

| <u>Operation No.</u> | <u>Description</u> | <u>Time</u> |
|-----------------------------|--|--------------------|
| A40-04507-1 | <i>Remove and Replace ECU</i> | 0.6 Hr |
| A40-04507-2 | <i>Remove and Replace EHCUC Assembly</i> | 1.5 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.

A black rectangular label with white text. At the top and bottom, it says "DO NOT REMOVE". In the center, there is a white rectangular area with black text. Inside this area, it says "INTERNATIONAL" at the top, followed by "Campaign No.", "VIN", "Eng.#", "COMPLETED", and "Service Location Code #".

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

ADMINISTRATIVE/DEALER RESPONSIBILITIES (U.S. & POSSESSIONS)

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 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.

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.

However, consistent with the customer notification, dealers are expected to complete the repairs on the mutually agreed upon service date.

To avoid having to replace an owner vehicle or refund the purchase price, every effort must be made to promptly schedule an appointment with each owner to repair his or her vehicle as soon as possible.

POSSIBLE CUSTOMER REIMBURSEMENT

There may be an occasion when a customer was charged for repairs related to this recall prior to the recall being released. The customer letter contains a statement for the customer to contact the Dealer if they believe they are entitled to reimbursement costs. The Dealer should follow the Customer Reimbursement guidelines in Warranty Policy Letter 03-001G. The Warranty Procedures and Administrative Policies manual (CTS1100) is in the process of being updated to include the information in Policy Letter 03-001G.

WARRANTY CLAIMS

Refer to Dealer Warranty Manual for procedures to conduct Recall Campaigns.

It is important that the Recall Coding be completed properly to assist in processing the warranty claim. Complete instructions will be found in the Warranty Manual, Section 7-1. Special attention should be given to Items 39 through 44:

| | GROUP | NOUN | C | WARR. | TP | PAD |
|--|-------|------|---|-------|----|-----|
| GROUP Enter number G— | | | | | | |
| NOUN Leave blank | | | | | | |
| C (CAUSE) Enter either 1, 2, 3. (see below) | | | | | | |
| 1. Inspected (No repair required). | | | | | | |
| 2. Inspected and repaired. | | | | | | |
| 3. Defective part from parts stock. | | | | | | |
| WARRANTY (Warranty Code) Enter 40. | | | | | | |
| TYPE PART Enter P for type part causing failure. | | | | | | |
| PAD Enter 100 | | | | | | |

ADMINISTRATIVE/DISTRIBUTOR RESPONSIBILITY (EXPORT)

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 from your distributor location.

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

We ask for your full cooperation and follow-up to this important subject matter. If you have any questions or need further assistance, please contact the Regional Service Manager at your regional office.

INTERNATIONAL TRUCK AND ENGINE CORPORATION