

Safety Recall

INTERNATIONAL

G—00511A

U.S., Export

Date: June, 2001

Subject File: BRAKES

Subject: Replacement of the Bendix EC-17 1030R Electronic Control Unit (ECU) for Air Brakes on 2000, 4000, 5000, 8000 and 9000 Model TRACTORS with Code 04092

Model: 2000

Start Date: 03/01/1998 End Date: 07/11/2000

Model: 4000

Start Date: 03/01/1998 End Date: 07/11/2000

Model: 5000

Start Date: 03/01/1998 End Date: 07/11/2000

Model: 8000

Start Date: 03/01/1998 End Date: 07/11/2000

Model: 9000

Start Date: 03/01/1998 End Date: 07/11/2000

DEFECT DESCRIPTION

Print ready (PDF file) copy of the dealer letter

Print ready (PDF file) copy of the customer letter

SPECIAL NOTE: ACTION REQUIRED! This letter was written to replace the original recall letter G-00511 Dated April 2001. Please scrap all copies of G-00511 in your facility and replace with copies of this letter. Revisions were made to the "SERVICE PROCEDURE" section and the "PARTS INFORMATION" section. The revisions are due to part application changes and special issues that have arisen since the initial release of this campaign. No changes were made in any other sections of this letter. Please read these sections and familiarize yourself with the changes.

This defect involves the Bendix EC-17 1030R electronic control unit (ECU) which controls the Antilock Braking System (ABS). The ECU can misinterpret erratic signals that can be generated by one of two conditions: 1. A chafed wheel speed sensor wire on a rotating part, or 2. An incorrect gap between a tone ring and a wheel speed sensor. Either of these conditions can cause the air ABS ECU to exhaust the air at the air brake modulators for one or more of the wheels. During the above described conditions, the ABS warning indicator light may not come on to warn the driver of an ABS malfunction and the driver can experience an extended stopping distance without warning when the vehicle is decelerating from 8 to 4 miles per hour. If an extended stopping distance occurs, **the vehicle could be involved in an accident, which could result in property damage, personal injury, or death.**

MODELS INVOLVED

This Safety Recall includes 2000, 4000, 5000, 8000 and 9000 model **TRACTORS ONLY** (04092) built within the following build date ranges:

- Springfield Plant: vehicles built from 3/1/98 to 6/16/00
- Chatham Plant: vehicles built from 3/1/98 to 6/27/00
- Escobedo Plant: vehicles built from 3/1/98 to 6/20/00
- Garland Plant: vehicles built from 3/1/98 to 7/11/00.

OWNER NOTIFICATION

In September of 2000 International notified customers and dealers of this Safety Recall and projected part availability for April 2001. Parts are now available and the official customer notification letters were mailed in late April 2001. 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 since 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.

REPLACEMENT PROCEDURE FOR THE BENDIX AIR BRAKE ECU

Introduction

The following instructions are for replacing the original ECU with a revised EC-17 or an EC-30. All vehicles in this campaign have 4-sensor systems. There are special instructions for vehicles with Automatic Traction Control or split shaft PTO. If there are problems with the ABS system after the new ECU is correctly installed, refer to the CTS 5000 Master Service Manual section CTS-5292 for further information.

DOES THE VEHICLE HAVE A SPLIT SHAFT PTO?

FOR SPLIT SHAFT PTO APPLICATIONS: If you install ECU part number 8900072R91, 8900073R91, or 8900075R91 and the vehicle has a split shaft PTO or a transfer case that drives something for the body equipment while the truck is stationary, there will be a problem with the ABS light latching ON. To correct this problem a wiring change is necessary; therefore, please call the TECH SERVICE HELP LINE AT **1-800-336-4500** to get instructions for the modification.

Before performing the service, please read and understand the following instructions completely.



WARNING – To prevent serious eye injury, ALWAYS wear safe eye protection when you perform vehicle maintenance or service.



WARNING – Block the wheels to prevent the vehicle from moving. Support the vehicle with safety stands. Do not work under a vehicle supported only by jacks. Jacks can slip or fall over resulting in serious personal injury or death.

Please read the following steps carefully before proceeding.

REPLACEMENT PROCEDURE FOR THE BENDIX AIR BRAKE ECU (CONT.)

Removing the Original EC-17

1. Check the "WPID" screen in DDEW or check ISIS to see if the vehicle is marked for the ABS sensor wire inspection Safety Recall 00505. If the VIN is marked for 00505 but 00505 has not been completed, perform the procedure for 00505. If the VIN is not marked for 00505, do not do the inspection for 00505.
2. Locate the EC-17 on the inside of the left or right frame rail, near the rear axle or under the cab.
3. Remove as much contamination as possible from the assembly's exterior. Keep the contamination away from the electrical connections.
4. Vehicles built in the last couple weeks of the build date ranges above may have had a revised ECU installed at the plant. Only replace ECU's that have one of the following two Bendix numbers on the bar code sticker: 5002767 (with LED) or 5002927 (without LED), **OR** one of the following five International part numbers on the ECU: 3518871C1, 3520190C91, 3521228C91, 3527451C91 or 3533409C1.

DO NOT replace the ECU if it has:

- A. A green dot sticker on top of the ECU housing,
 - B. A white or green adhesive stripe across the top of the ECU housing,
 - C. The number 5008311 on the bar code sticker (for ECU's with LED's), or
 - D. The number 5008313 on the bar code sticker (for ECU's without LED's).
5. Note and mark the mounting position of the EC-17 on the valve or the bracket. **Do not use an impact wrench to remove the ECU mounting bolts on valve mounted models.** For valve mounted ECU's, it is very important to tap on the heads of the ECU mounting bolts, before removing the bolts, to help eliminate the risk of the bolts breaking off in the valve. Loosen, remove and save the mounting hardware that attaches the controller to the valve or bracket. On some vehicles it may be necessary to remove the frame-mounted bracket, the valve and the ECU as an assembly.

Installing the New ECU

(instructions are for both the EC-17 and the EC-30)

1. Reference the "**PART INFORMATION**" section in this letter to determine which ECU should be installed.
2. Remount the ECU in the proper orientation with the original mounting hardware and torque the bolts to 98 in-lbs or 11 Nm.
3. Reconnect the electrical connections to the ECU and torque the connector retaining bolts to 15-20 in-lbs or 1.7-2.3 Nm.
4. **BEFORE TURNING THE IGNITION SWITCH ON IN STEP 5, PICK THE CORRECT INDICATOR LAMP FLASH SEQUENCE BELOW IN EITHER A OR B FOR YOUR APPLICATION. IF THE VEHICLE HAS AUTOMATIC TRACTION CONTROL, MAKE SURE THE AUTOMATIC TRACTION CONTROL (ATC) SWITCH IS IN THE ENABLED POSITION BEFORE TURNING THE IGNITION ON IN STEP 5.** All straight trucks with ATC were configured from the factory for both torque limiting and differential braking. Upon power-up, one of the following two dash indicator-lamp flash sequences will occur.

REPLACEMENT PROCEDURE FOR THE BENDIX AIR BRAKE ECU (CONT.)

- A. **For EC-17's with or without traction control:** The ABS lamp and the Traction Control lamp (if equipped with ATC) will **come on initially and then flash on and off twice**. This means the ECU is configured correctly. If the lamp flash sequence does not flash as described, go to step 5.
 - B. **For EC-30's with or without traction control:** The ABS lamp and the Traction Control lamp (if equipped with ATC) will **come on for 2.5 seconds and then go out**. This means the ECU is configured correctly. If the Traction Control lamp flashes once or twice instead of staying on for 2.5 seconds, the ECU is not configured correctly and must be reconfigured (go to step 5).
5. Turn the ignition switch ON and watch for the correct indicator lamp sequence from step 4, bring the air system pressure up to governor cut-out, and then turn the ignition switch to the OFF position. If the indicator lamp sequence was not correct as described in step 4, proceed to step 6 for reconfiguration.
6. If the indicator lamp sequence was not correct as described in step 4, one of the following methods may be used to reconfigure the ECU. With the ignition in the ON position, perform one of the following.
 - A. Press the DCI reset switch for about 20 seconds (until the LED's begin to flash rapidly), then release the switch. Turn OFF ignition switch and repeat step 5 and then go to step 7.
 - B. Hold a magnet on the reset location of the diagnostic display for about 20 seconds (if ECU has LED's, they will begin to flash rapidly), then remove the magnet. Turn OFF ignition switch and repeat step 5 and then go to step 7.
7. After the ECU is properly configured, depress the brake pedal and turn the ignition switch to the ON position. The ABS system should cycle through a series of short bursts of air from the modulators. You should hear the air released in the following sequence: Right Front, Left Front, Right Rear and Left Rear. The air burst sequence will automatically be repeated one more time.
8. No lights should stay on if the system is functioning properly, but if they do, refer to Master Service Manual, "Initial Start-up Procedure" in section CTS-5292.
9. Check to make sure the brakes are functioning properly.
10. Return the removed ECU as instructed in the "PART INFORMATION" section of this letter. The ECU's will be requested as usual by the R-5185 Parts Disposition Authorization.

PARTS INFORMATION

THIS SECTION INCLUDES:

1. WHICH ECU SHOULD YOU ORDER?
 - A. If you are the selling dealer.
 - B. If you are not the selling dealer.
2. PART NUMBER HISTORY AND USAGE
3. IDENTIFYING NEW ECU'S
4. RETURNING THE OLD PARTS AND IDENTIFYING DEFECTIVE ECU'S

PARTS INFORMATION (CONT.)

Table 1 Eaton Automated Manual Transmission Codes

AutoShift	AutoShift 2	AutoSelect
13GJU, 13GJV, 13GJW	13GKU, 13GKV, 13GKW, 13GKX, 13GKY 13GMG, 13GMH, 13GMT, 13GMU, 13GMV, 13GMW 13GNR, 13GNS, 13GNT, 13GNU, 13GNV, 13GNW	13GJE, 13GJG, 13GJH, 13GJJ, 13GJK, 13GJL, 13GJM, 13GJN
13GKP, 13GKR		

1. WHICH ECU SHOULD YOU ORDER? (Please read section 1 completely.)

- A. **If you are the selling dealer**, order the ECU part number provided in the green bar report with this revision. Due to the complexity of determining which ECU is required for each vehicle, International has provided, in this dealer revision mailing, a special green bar report that gives the ECU part numbers, to selling dealers, for vehicles that were not completed as of June 2001. **Note:** the part numbers in this special green bar report are recommended for vehicles “**as they were built**”. Body companies may have added a split shaft PTO that would require a wiring change (see **SPECIAL NOTE FOR SPLIT SHAFT PTO APPLICATIONS** in B. below). Reference the green bar report supplied with this letter to order the correct part for a VIN. To allow the Parts Distribution Centers to manage inventory, please limit your order quantities to the number of ECU's that can be installed in a short period of time. If you are not the selling dealer for the vehicle you are servicing, you can either call the selling dealer and ask them to reference their green bar report or you must follow the rules, in B below, to determine which ECU to install.
- B. **If you are not the selling dealer**, you can call the selling dealer and ask them to reference the green bar report **OR** follow the guidelines below and use the “**WPIE**” screen in DDEW to search for the build codes below.

To determine which part to order, refer to the following questions.

1. Was the vehicle built with an Eaton Automated Manual Transmission listed in Table 1 above? If yes, then stop and you **MUST USE THE EC-30** (8900075R91). If no, then continue to question 2 below.
2. Was the vehicle built with Traction Control brake code 04AZD or 04AZJ? If yes, then stop and you **MUST ORDER THE EC-30** (8900075R91). An EC-17 with LED's (8900072R91) cannot be ordered anymore but will work if you have one at your location. If no, then continue to question 3 below.
3. Was the vehicle built with brake codes 04AZM or 804AZA (804AZA would be found towards the bottom of the code list, not with the 04 codes)? If yes, then stop and order the EC-30 (8900075R91). An EC-17 with LED's (8900072R91) cannot be ordered anymore but will work if you have one at your location. If no, proceed to step 4 below.
4. Was the vehicle built with brake code 04AZN? If yes, then stop and you **MUST** order the EC-30 (8900075R91). If no, then use 8900073R91. **Note:** There were only 50 VINS built with code 04AZN and all for the same customer. If you have not determined that the EC-30 is required from answering questions 1 through 4, then you should use the 8900073R91.

PARTS INFORMATION (CONT.)

2. **PART NUMBER HISTORY AND USAGE:** Parts Distribution Centers (PDC's) have supplied three ECU part numbers for this campaign, two "revised EC-17 part numbers", and one EC-30 part number. However, production of the revised EC-17 with LED's (8900072R91) has stopped and this part has been replaced by the EC-30 (all EC-30's have LED's). **ONLY 10%** of the vehicles in this campaign should need the EC-30. Do not order all EC-30's just because they work for all applications. Stock of the EC-30 is limited. No more EC-17's will be manufactured by Bendix; however, PDC's have a large quantity of the EC-17 without LED's, which must be used. Reference the special green bar report for the correct part number or follow the part selection guidelines provided in number 1. WHICH ECU SHOULD YOU ORDER?
 - A. **8900072R91: NO LONGER AVAILABLE.** Bendix quit making this part number. This ECU is the revised EC-17 with LED's. The EC-30 (8900075R91) will automatically be substituted when 8900072R91 is ordered. The 8900072R91 is still a good part and should be used, if you have any in stock at your location. **Do Not** use with the specific EATON AUTOMATED SHIFT TRANSMISSIONS listed in Table 1 because the shift points can be affected.
 - B. **8900073R91:** This is the EC-17 without LED's. Most or 90% of the vehicles in this campaign should use this ECU. Use for vehicles that originally had no LED's or traction control. **DO NOT** use for vehicles with 04AZJ, 04AZM, or 804AZA. **Do Not** use with the specific EATON AUTOMATED SHIFT TRANSMISSIONS listed in Table 1 because the shift points can be affected.
 - C. **8900075R91:** This is the EC-30. All EC-30's have LED's. The EC-30 will be substituted for all orders for the discontinued 8900072R91.
3. **IDENTIFYING NEW ECU'S:** All replacement ECU's can be easily identified with a white or green adhesive stripe across the top of the ECU housing and/or a green sticker on the top of the housing.
4. **RETURNING THE OLD PARTS AND IDENTIFYING DEFECTIVE ECU'S:** Return all removed (defective) parts. Defective parts can be identified by one of the following bar code sticker numbers: 5002767 (with LED) or 5002927 (without LED) **OR** by International part numbers 3518871C1, 3520190C91, 3521228C91, 3527451C91 or 3533409C1. Defective parts will not have the white or green adhesive stripe or the green dot sticker on the ECU housing. If you have further questions on how to identify an ECU, please call Bendix at 1-800-AIR-BRAK. All shipments of parts in the U. S. less than 150 lbs. are to be shipped collect via UPS (account A7T 571). Shipments over 150 lbs. are to be shipped collect via Yellow Freight. Ship to:

**Bendix ABS Recall
901 Cleveland Street
Elyria, OH 44036**

Table 2 Labor Information

Operation No.	Description	Time
A40-00511-1	Replace ABS ECU	0.8 hr.

CAMPAIGN IDENTIFICATION LABEL

CAMPAIGN IDENTIFICATION LABEL

Each vehicle corrected in accordance with this Campaign will require a CTS-1075 Campaign Identification Label.

Attach the CTS-1075 label on a clean surface next to the vehicle identification number (VIN) plate.



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, 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.

In order 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.

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)	WARRANTY (Warranty Code) Enter 40.	TYPE PART Enter P for type part causing failure.	PAD Enter 100
		1. Inspected (No repair required).			
		2. Inspected and repaired.			
		3. Defective part from parts stock.			

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, 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 Recall **G-00511**.

Distribution: All Dealers