

00/246-105



VEHICLE RECALL

G-00512
October, 2000

**SUBJECT: SAFETY RECALL (U.S., EXPORT)
TRW Tie Rod Ends On Certain 2000, 4000, 8000 and
9000 model series built from 7/5/1999 through
11/31/1999.**

DEFECT DESCRIPTION

Certain TRW tie rod ends were produced with less than specified material hardness, which can result in separation of the ball stud from the ball socket. The tie rods ends should be inspected for the suspect date codes and replaced in pairs if built within the suspect date codes provided in the Service Procedure. If a tie rod end separates, the driver could experience a loss of steering control and cause a vehicular accident, which could result in property damage, personal injury, or death.

MODELS INVOLVED

This Safety Recall involves certain 2000, 4000, 8000 and 9000 model series built from 7/5/1999 through 11/31/1999.

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 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.

SERVICE PROCEDURE

REQUIRED

DATE CODE INSPECTION: Read the date code on the end cover, near the grease zerk, on both tie rod ends. Replace both tie rod ends if one of the date codes is 9G1, 9G2, 9G3, 9G4, 9H1, 9H2, 9H3, 9H4, 9H5, 9J1, 9J2, 9J3 or 9J4. The date code must start with a 9 and match one of the codes above to be replaced using this campaign.

REMOVING THE TIE ROD ASSEMBLY AND INSTALLING THE NEW TIE ROD ENDS

1. Park the vehicle on level ground, set the parking brake and shut off the engine.
2. **WARNING: Block the wheels to prevent the vehicle from moving. If the vehicle rolls unexpectedly, the result could be serious personal injury or death.**
3. Remove the tie rod assembly if determined necessary from the "DATE CODE INSPECTION" above.
4. Note the position of the tie rod ends and the tube clamps.
5. Before removing the tie rod ends, measure the total length of the assembly from one end to the other and then remove the clamp bolts and remove the tie rod ends from the tube.
6. Thread the tie rod ends into the tube equal amounts on each end until the original total length of the assembly is obtained as measured in step 5 above.
7. Reposition the tie rod ends to the original position, align both tie rod ends, double check the total length of the assembly and tighten the clamps in the original position.

INSTALLING THE TIE ROD ASSEMBLY

1. Make sure tie rod arm holes and ball stud surfaces are clean.
2. Install the tie rod assembly and torque both ball stud nuts to 100-125 ft-lbs. If the cotter pins cannot be installed, tighten the castle nuts to the next opening (do not back off), install the cotter pins and bend pins to the locking position.
3. Grease both tie rod ends.

SETTING TOE-IN

NOTES:

- If electronic equipment is used to set toe-in, the equipment must be in proper calibration to insure an accurate toe reading.
- Set front axle toe-in to 1/16 inch \pm 1/16 inch. Toe-in should be set only by trained technicians.

TOE-IN PROCEDURE: The following procedure may be used to set toe-in when electronic alignment equipment is not available. To obtain an accurate reading, two trained technicians are required to insure that the pointers are always placed or adjusted to be exactly in front of the line scribed on both tires. Toe-in is the amount in fractions of an inch that the front wheels are closer together at the front than at the back (Figure 1, on the next page).

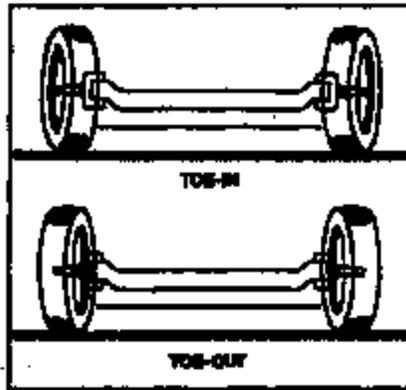


Figure 1: Viewed From The Front Of The Vehicle

1. Block rear wheels.
2. Jack up front axle.
3. Wipe off excess dirt and moisture from the center of both front tire treads (complete 360°). Use a piece of chalk or white spray paint to mark the center area of both tires around the complete circumference.
4. Put a scribe or pointed instrument against the center of the whitened area of each tire and rotate the tires 360°. The scribe must be held in place so that a single thin straight line is marked all the way around the tires.
5. Put a floating radius gauge plate under each wheel. Lower the vehicle and remove the lock pins from the radius gauge plates to allow the front wheels to return to the normal operating position. If full floating radius gauge plates are not available, lower the vehicle to the floor and roll it forward 12 to 15 feet (3.65 to 4.57 m) to neutralize the front suspension. Neutralizing the front suspension is extremely important, especially if the vehicle has been jacked up to scribe the tires; otherwise, the front wheels will not return to the normal operation position due to the tires gripping the floor surface when the vehicle is lowered.
6. Set the sliding scale end of the trammel bar to zero (Figure 2) and lock the scale in place.

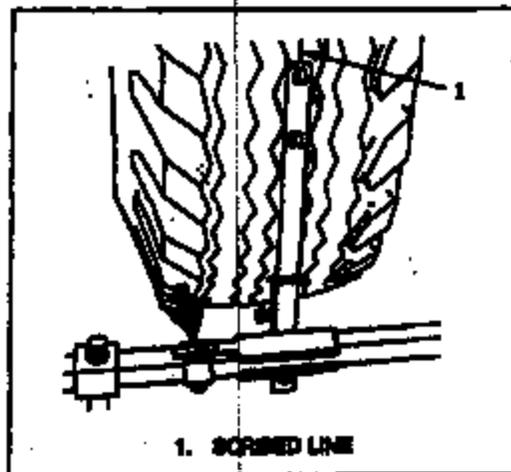


Figure 2

7. Put the trammel bar at the rear of the front tires so that the sliding scale that was set to zero in step 6 is centered against the scribed line on one of the tires (Figure 2).
8. Adjust the pointer on the end of the trammel bar opposite the sliding scale so it lines up with the scribed line on the rear of the opposite front tire. Lock the pointer in place on the trammel bar. Remove the trammel bar, being careful not to contact either of the pointers.
9. Put the trammel bar against the front of the tires so the pointer end is aligned against the scribed line on the front tire. Loosen and remove the sliding scale pointer on the opposite end of the trammel bar so it is also aligned against the scribed line on the opposite tire. Lock the scale in place (Figure 3).

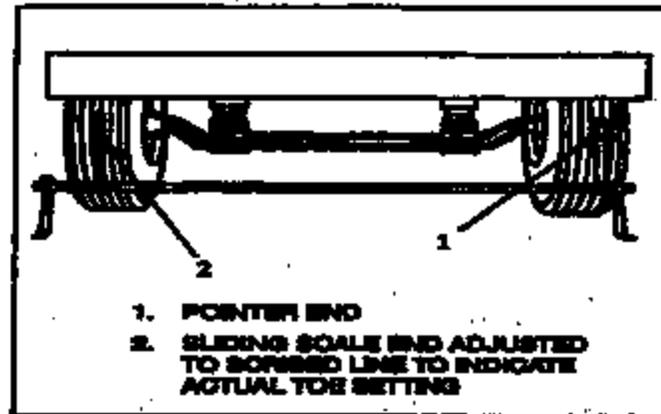


Figure 3

10. Read the toe-in or toe-out on the sliding scale. If toe-in is correct, it will read $1/16 \pm 1/16$ inch (0 - $1/8$ inch toe-in). If toe-in is not within specification, proceed to adjust as outlined in steps 1 through 5 below.
11. If toe-in is within the specification, position and tighten tie-rod clamps to 40-60 ft-lbs. If toe-in adjustment is necessary, use the following procedure:
 1. Loosen the tie rod clamps that secure the tie rod ends in position in the tie rod.
 2. Turn the tie rod to set the toe-in.
 3. Turn the steering wheel in each direction to center the steering linkage (if the vehicle has power steering, start the engine before turning wheel). Make sure the front wheels are in a straight-ahead position. Stop engine, and re-check the toe-in setting by repeating "SETTING TOE-IN" steps 6 through 10.
 4. Repeat steps 2 and 3 until the toe-in reading is $1/16 \pm 1/16$ inch.
 5. Position and tighten tie rod clamps to 40-60 ft-lbs.
 6. **WARNING:** If repositioning the tie rod clamps, make sure the clamp bolts have adequate clearance to avoid interference with all other components. If the clamps do not have adequate clearance with other components as the vehicle makes full right and left turns, the result could be serious personal injury or death.

PART INFORMATION

Replace both tie rod ends if one of the tie rod ends has the suspect date code as described in the Service Procedure. There is one kit number (8900074R91) that contains two tie rod ends and is to be used for all the vehicles in this campaign.

LABOR INFORMATION

<u>Operation Number</u>	<u>Description</u>	<u>Time</u>
A40-00512-1	Inspection only	0.2 hrs
A40-00512-2	Inspect and replace two tie rods ends	1.2 hrs

CAMPAIGN IDENTIFICATION LABEL

Each vehicle corrected in accordance with Campaign letter G-00512 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 a vehicle or refund the purchase price less a reasonable allowance for depreciation, every effort must be made to promptly schedule an appointment with each owner to repair his or her vehicle as soon as possible.

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 Recall Number 00512	NOUN: Leave Blank.	C: (CAUSE) Enter either 1, 2, or 3. 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, 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 letter G-00512.

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



INTERNATIONAL TRUCK AND ENGINE CORPORATION

465 NORTH CITYFRONT PLAZA DRIVE, CHICAGO, IL 60611

TELEPHONE 312-838-2000

TRUCK GROUP

SAFETY RECALL 00512

November, 2000

Dear International Customer:

This Safety Recall is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act. International has determined that a defect which relates to motor vehicle safety exists in the tie rod ends used on 2000, 4000, 8000 and 9000 model series built from 7/5/1999 through 11/31/1999. If you are not the owner, we need your help finding the current owner; please read paragraph number 4 under "ACTIONS YOU SHOULD TAKE."

REASON FOR THIS RECALL

DEFECT DESCRIPTION: This defect involves the tie rod ends on your vehicle. Some TRW tie rod ends were produced with less than specified material hardness, which can result in separation of the ball stud from the ball socket.

RISK TO MOTOR VEHICLE SAFETY: You could lose steering control while driving your vehicle under normal driving conditions and without warning. If a tie rod end separates you could lose steering control and your vehicle could be involved in an accident which could result in property damage, personal injury, or death.

ACTIONS YOU SHOULD TAKE

1. Our records show that you are the owner of the vehicle identified on the enclosed card. If you are not the owner, please read paragraph number 4 on the next page.
2. Please contact your local International dealer, with your recall card in hand, to schedule an appointment to have your tie rod ends inspected and replaced if necessary. This inspection and any repair will be performed without charge to you and will require approximately one hour of time.
3. If the vehicle will not or cannot be corrected, please mark on the enclosed card under "CHECK ONE", the box which best describes why the vehicle will not be repaired, and return the postage-prepaid card to us.

4. In the event you do not own the vehicle described on the card, please complete the card, fill in the new customer name and address if known, and return it to us. This information will allow us to update our records so we can contact the new owner and you will not be contacted again regarding this recall.

IF YOU NEED ASSISTANCE

If you take your vehicle to your International dealer on a mutually agreed upon service date, and the dealer does not remedy this condition without charge on that date or within five days, you can obtain assistance by following the procedure described in the Owner Assistance Guide section in your Owner's Manual, or by calling toll free 1-800-448-7825.

You may also wish to submit a complaint to the Administrator, National Highway Traffic Safety Administration, 400 Seventh Street, S.W., Washington, D.C., 20590, or call the Administration's toll-free Auto Safety Hot-Line at 1-888-327-4236 if your International dealer fails to repair or is unable to remedy this condition without charge or within a reasonable time.

We urge your prompt attention to the correction of this safety defect and apologize for any inconvenience this may cause.

INTERNATIONAL TRUCK AND ENGINE CORPORATION



00V-246.105

VEHICLE RECALL

**G-00512 REVISION
October, 2001**

**SUBJECT: SAFETY RECALL (U.S., EXPORT)
TRW Tie Rod Ends On Certain 2000, 4000, 8000 and
9000 model series built from 7/5/1999 through
11/31/1999.**

SPECIAL NOTES: THIS SAFETY RECALL HAS BEEN REPLACED!

- Campaign 00512 has been canceled and replaced by 01510.
- Campaign 01510 includes all the vehicles in campaign 00512.
- Customers that had the tie rod ends replaced in 00512 were not notified for 01510.
- All original copies of 00512 at your DEALERSHIP MUST HAVE THE FOLLOWING NOTE WRITTEN ON THE FIRST PAGE:

**THIS CAMPAIGN HAS BEEN REPLACED BY 01510.
WARRANTY CLAIMS WILL NOT BE APPROVED
FOR 00512 AFTER OCTOBER 1, 2001.**

- This letter will also replace letter G-00512 on ISIS.
- Refer to G-01510 to make repairs for this Safety Recall.
- G-01510 instructs dealers to replace all tie rod ends in pairs for involved vehicles.

DEFECT DESCRIPTION

Certain TRW tie rod ends were produced with less than specified material hardness, which can result in separation of the ball stud from the ball socket. In the original G-00512 letter, dated October of 2000, there was an inspection for certain date codes; however, International is now replacing all tie rod ends. There is no inspection option. All tie rod ends must be replaced in pairs under the new Safety Recall 01510. If a tie rod end separates, the driver could experience a loss of steering control and cause a vehicular accident, which could result in property damage, personal injury, or death.

MODELS INVOLVED

Safety Recall 00512 involved certain 2000, 4000, 8000 and 9000 model series built from 7/5/1999 through 11/31/1999. The new 01510 Safety Recall covers all these models in addition to 5000 models and the build date range was expanded to cover from 6/15/1999 through 8/15/2000.

INTERNATIONAL TRUCK AND ENGINE CORPORATION