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2005 AUG -5 A 10 48

# VEHICLE RECALL

OFFICE OF  
DEFECTS INVESTIGATION

G-05508  
August 2005

## SUBJECT: SAFETY RECALL (U.S., EXPORT)

**DRIVELINE on certain RE School and Commercial Bus models with IROS Suspension built between 01-28-2003 and 03-09-2005**

## DEFECT DESCRIPTION

Excessive suspension travel may cause the u-joint straps or strap bolts on either end of the driveshaft to fail as a result of the high working angle. Failure of the u-joint straps will cause part or all of the driveshaft to fall off the bus. This may result in **property damage, personal injury or death.**

## MODELS INVOLVED

This recall involves certain RE School and Commercial Bus models with IROS Suspension built between 01-28-2003 and 03-09-2005.

## PARTS INFORMATION

The parts required are VIN specific and are listed in Table 3 (at end of document).

## SERVICE PROCEDURE

The repair procedure required is dependent on the VIN of the bus. Only charges for the labor and parts that each VIN **requires** will be honored. See attached VIN list (Table 3) for repair variation required.

**One of the following 5 repairs will be completed. These variations are VIN specific.**

- |                      |  |
|----------------------|--|
| <u>VARIATION 1 A</u> | REPLACE AXLE STOPS, REPLACE SHOCKS, REVERSE ORIENTATION OF DRIVESHAFT (TURN END FOR END) & REPLACE U-JOINT STRAPS. |
| <u>VARIATION 1 B</u> | REPLACE AXLE STOPS, REPLACE SHOCKS, REPLACE DRIVESHAFT & REPLACE U-JOINT STRAPS.                                   |
| <u>VARIATION 2 A</u> | REPLACE SHOCKS, REVERSE ORIENTATION OF DRIVESHAFT (TURN END FOR END) & REPLACE U-JOINT STRAPS.                     |
| <u>VARIATION 2 B</u> | REPLACE SHOCKS, REPLACE DRIVESHAFT & REPLACE U-JOINT STRAPS.   |
| <u>VARIATION 3</u>   | REPLACE DRIVESHAFT & REPLACE U-JOINT STRAPS  |

**Driveshaft...**the correct **new** orientation is

**Stub shaft = Male end: goes on axle end**

**Slip shaft = Female end: goes on transmission end**

Not all VINs will have the driveshaft replaced. All VINs will have the **driveshaft orientation changed OR the driveshaft replaced**. The orientation described above should be the **final** orientation of the driveshaft.

**Strap Kit...**because the current driveshaft will be removed in all cases, all VINs will require the straps and strap bolts to be replaced. The correct strap kit will be determined by the current driveshaft if the driveshaft is re-oriented or by the new driveshaft if the driveshaft is replaced.

**Shocks...**these are the same for all VINs, which require shock replacement. Remember that the repair variation is VIN specific and not all VINs require new shocks. If this VIN also needs to have **AFC 04909** performed and it has not been completed yet, the shock part number installed in **this recall supersedes** the shock part number installed in **AFC 04909**. If AFC 04909 has been completed, the shocks must still be replaced.

**Axle Stops...**these are the same for all VINs, which require axle stop replacement. Remember that the repair variation is VIN specific and not all VINs will require new axle stops.



**WARNING:**

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



**WARNING:**

**TO AVOID PROPERTY DAMAGE, PERSONAL INJURY, OR DEATH WHEN SERVICING THE VEHICLE, PARK ON A FLAT LEVEL SURFACE, SET THE PARKING BRAKE, TURN THE ENGINE OFF AND CHOCK THE WHEELS.**

It is not necessary to jack the bus up to complete these procedures.  
BE SURE to use the new nuts or bolts that are supplied in the kits.

<b>Driveshaft Series</b>	<b>Driveshaft ID</b>	<b>Strap Kit P/N</b>	<b>Torque Spec</b>
SPL90	0259Dxxxxxx	2035772C91	50-60 LbF-Ft (68-81 Nm)
1610	0260Dxxxxxx	2035773C91	50-60 LbF-Ft (68-81 Nm)
1710	0270Dxxxxxx	2035774C91	115-135 LbF-Ft (156-183 Nm)

## REORIENT DRIVESHAFT & REPLACE STRAPS

1. Check the orientation of the driveshaft before performing this step.
2. Remove u-joint strap bolts and strap at one end of the driveshaft.
3. Remove u-joint strap bolts and strap at other end of the driveshaft.
4. Reverse the driveshaft orientation end-for-end and attach using **new** straps and **new** bolts. The driveshaft should now be oriented as follows:  
**Stub shaft = Male end: goes on axle end**  
**Slip shaft = Female end: goes on transmission end**
5. Tighten the u-joint strap bolts with a torque wrench according to **Table 1** based on the existing driveshaft part number.

## REPLACE DRIVESHAFT & REPLACE STRAPS

1. Remove u-joint strap bolts and strap at one end of the driveshaft.
2. Remove u-joint strap bolts and strap at the other end of the driveshaft.
3. Attach new driveshaft using **new** straps and **new** bolts. The driveshaft will now be oriented as follows:  
**Stub shaft = Male end: goes on axle end**  
**Slip shaft = Female end: goes on transmission end**
4. Tighten the u-joint strap bolts with a torque wrench according to **Table 1** based on the new driveshaft part number.

## REPLACE SHOCKS

1. Remove left shock and replace with new shock using new bolts.
2. Torque left shock bolt to **148 - 177 LbF-Ft** (200-240 Nm) using a torque wrench.
3. Remove right shock and replace with new shock using new bolts.
4. Torque right shock bolt to between **148 - 177 LbF-Ft** (200-240 Nm) using a torque wrench.

## REPLACE LEFT AXLE STOP – Refer to Figure 1 below

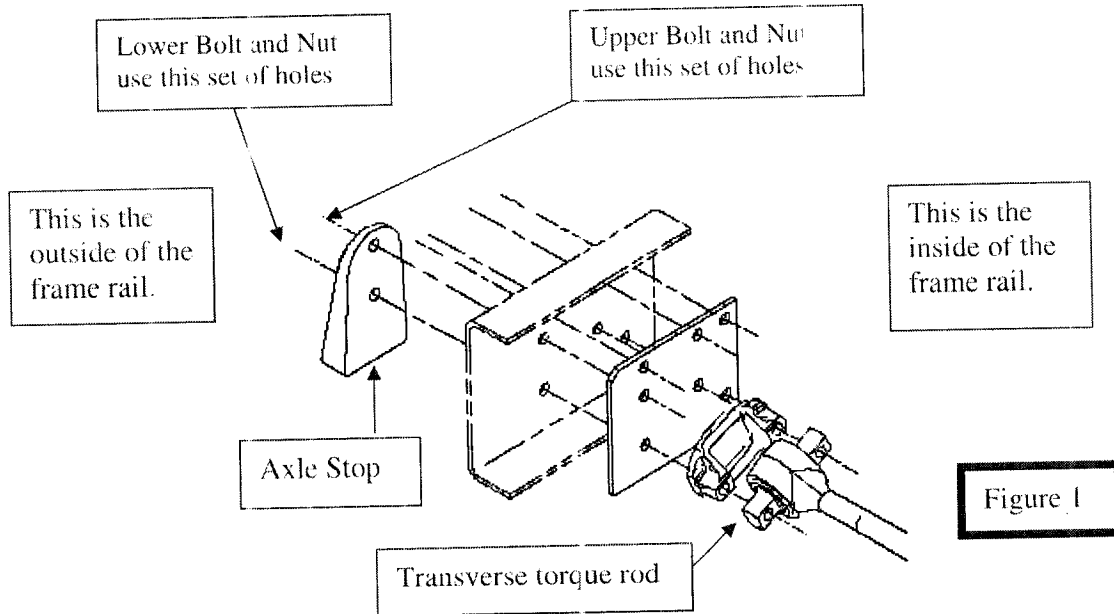
1. Remove Upper Nut and Upper Bolt that holds axle stop to frame rail.
2. Remove Lower Nut and Lower Bolt that holds axle stop to frame rail.
3. Replace axle stop with new one.
4. Replace the axle stop bolts and nuts with the **new** bolts and nuts that are included in the kit. Both bolts for the left side are the same length.
5. Torque the axle stop nuts to **196 - 239 LbF-Ft** (266-324 Nm).

## REPLACE RIGHT AXLE STOP – Refer to Figure 1 below

1. Remove Upper Nut and Upper Bolt that holds axle stop to frame rail.
2. Remove Lower Nut and Lower Bolt that holds axle stop and transverse torque rod to frame rail.
3. Replace the axle stop bolts and nuts with the **new** bolts and nuts that are included in the kit. Both bolts for the right side are **NOT** the same length. Use the **longer** bolt to replace the Lower Bolt that also holds the transverse torque rod to the frame.
4. Torque the axle stop nuts to **196 - 239 LbF-Ft** (266-324 Nm).

**Axle Stops:**

The axle stops are held to the frame rail by 2 sets of bolts and nuts that pass through the frame rail. **Right side** is shown in Figure 1 below. The proper position of the bolts and nuts is to place the bolts into the holes from the inside, so that the nuts are on the outside of the frame rail. This correct position allows sufficient access to the nuts for the torque operation.



**End of Service Procedure**

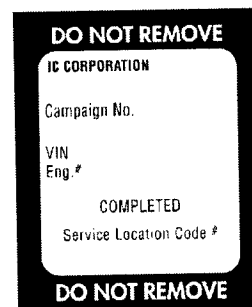
**LABOR INFORMATION**

Labor Code	Description	Time (hours)
A40-05508-01	Inspect, setup & Variation 1A or 1B	1.10
A40-05508-02	Inspect, setup & Variation 2A or 2B	0.80
A40-05508-03	Inspect, setup & Variation 3	0.70

**CAMPAIGN IDENTIFICATION LABEL**

*Each vehicle corrected in accordance with this campaign **must be** marked with a S00109 Campaign Identification Label.*

Complete the label and attach 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, 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.

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.

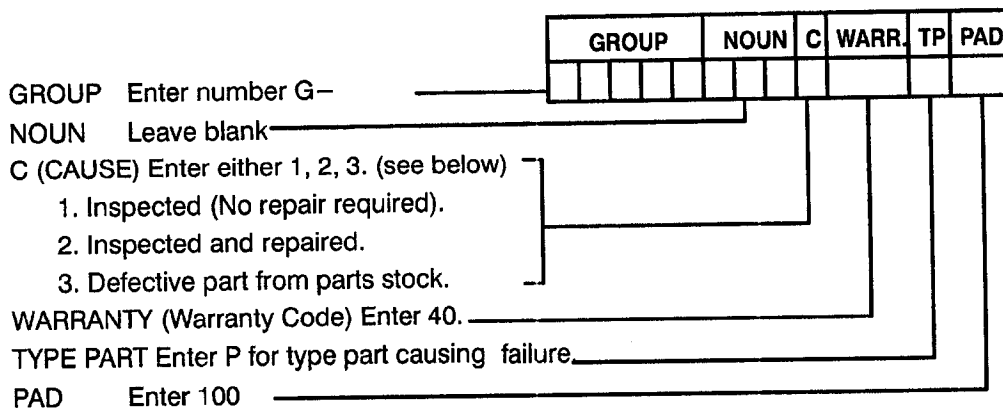
**POSSIBLE CUSTOMER REIMBURSEMENT**

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) includes 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:



**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.

Table 3 - VIN LIST															
Recall 05508 RE bus Driveline (With IROS)															
Repair 1A	Replace stops, shocks, straps, re-orient driveshaft; Stop & shock kits are the same for all VINs														
Repair 1B	Replace stops, shocks, straps, replace driveshaft; Stop & shock kits are the same for all VINs														
Repair 2A	Replace shocks, straps, re-orient driveshaft; Shock kits are the same for all VINs														
Repair 2B	Replace shocks, straps, replace driveshaft; Shock kits are the same for all VINs all the same														
Repair 3	Replace straps, replace driveshaft; Straps are criveshaft specific.														
Drive shaft Codes - P/N and Kit #				Strap Kit P/N (bolts are included) Dependent on driveshaft P/N. See Table 1 for required torque.				Shock Kit #							
0	No replacement							8900151R91							
1	0270DTH1206-Kit 8900149R91							Left Axle Stop Kit #							
2	0270DTH1218-Kit 8900148R91			1	2035772C91 for 0259xxxxx			8900152R91							
3	0270DYA1128-Kit 8900147R91			2	2035773C91 for 0260xxxxx			Right Axle Stop Kit #							
4	0270DYA1135-Kit 8900146R91			3	2035774C91 for 0270xxxxx			8900153R91							
VIN2	Repair	Shaft Code	Strap Code	VIN2	Repair	Shaft Code	Strap Code	VIN2	Repair	Shaft Code	Strap Code	VIN2	Repair	Shaft Code	Strap Code
3A955122	1A	0	1	5A147837	1A	0	3	5A968050	1A	0	1	5A972041	1A	0	1
5A145839	2A	0	3	5A147838	1A	0	3	5A968070	1A	0	1	5A972413	1A	0	2
5A145840	2A	0	3	5A147839	1A	0	3	5A968071	1A	0	1	5A972414	1A	0	2
5A145841	2A	0	3	5A147840	1A	0	3	5A969079	1A	0	3	5A972415	1A	0	2
5A146847	1A	0	3	5A149376	1A	0	3	5A969088	1A	0	1	5A972416	1A	0	2
5A146848	1A	0	3	5A149377	1A	0	3	5A969663	1A	0	1	5A972417	1A	0	2
5A147319	2A	0	1	5A149378	1A	0	3	5A969685	2A	0	3	5A972714	1A	0	3
5A147360	1A	0	3	5A150418	1A	0	3	5A971667	1A	0	3	5A972715	1A	0	3
5A147361	1A	0	3	5A150419	1A	0	3	5A972037	1A	0	3	5A972716	1A	0	3
5A147362	1A	0	3	5A964329	1A	0	3	5A972038	1A	0	3	5A973072	1A	0	3
5A147363	1A	0	3	5A964330	1A	0	3	5A972039	1A	0	3	5A973266	1A	0	3
5A147364	1A	0	3	5A964977	1A	0	1	5A972040	1A	0	1	5A973267	1A	0	3

VIN2	Repair Code	Shaft Strap Code	VIN2	Repair Code	Shaft Strap Code	VIN2	Repair Code	Shaft Strap Code	VIN2	Repair Code	Shaft Strap Code				
5A973268	1A	0	3	5A975083	1A	0	3	5A975809	1A	0	2	5A978148	1A	0	2
5A973565	1A	0	2	5A975084	1A	0	3	5A975810	1A	0	2	5A978149	1A	0	2
5A974449	1A	0	3	5A975085	1A	0	3	5A975811	1A	0	2	5A978150	1A	0	2
5A974733	1A	0	1	5A975086	1A	0	3	5A975812	1A	0	2	5A978151	1A	0	2
5A974734	1A	0	1	5A975088	1A	0	3	5A975813	1A	0	2	5A978152	1A	0	2
5A974735	1A	0	1	5A975089	1A	0	3	5A975887	1A	0	3	5A978153	1A	0	2
5A974736	1A	0	1	5A975090	1A	0	3	5A975983	1A	0	3	5A978154	1A	0	2
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5A975081	1A	0	3	5A975807	1A	0	2	5A978146	1A	0	2	5A978231	1A	0	3
5A975082	1A	0	3	5A975808	1A	0	2	5A978147	1A	0	2	5A978232	1A	0	3

VIN2	Repair Code	Shaft Strap Code	VIN2	Repair Code	Shaft Strap Code	VIN2	Repair Code	Shaft Strap Code	VIN2	Repair Code	Shaft Strap Code
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VIN2	Repair Code	Shaft Code	Strap Code	VIN2	Repair Code	Shaft Code	Strap Code	VIN2	Repair Code	Shaft Code	Strap Code	VIN2	Repair Code	Shaft Code	Strap Code
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5A982855	1A	0	3	5A984211	1A	0	3	5A984961	1A	0	2	5A985694	1A	0	3
5A982856	1A	0	3	5A984212	1A	0	3	5A984962	1A	0	2	5A985695	1A	0	3
5A982857	1A	0	3	5A984213	1A	0	3	5A984963	1A	0	2	5A985696	1A	0	3
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VIN2	Repair	Start	Code	Strap	Code	VIN2	Repair	Start	Code	Strap	Code	VIN2	Repair	Start	Code	Strap	Code	VIN2	Repair	Start	Code	Strap	Code
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5A987693	2A	0	3			5A988630	1A	0	2			6A146902	1B	2	3			6A147086	3	2	3		
5A987694	2A	0	3			5A988631	1A	0	2			6A146903	1B	2	3			6A147087	3	2	3		
5A987728	1A	0	2			5A988632	1A	0	2			6A146904	1B	2	3			6A147088	3	2	3		
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VIN2	Repair	Shail	Code	Strap	Code	VIN2	Repair	Shail	Code	Strap	Code	VIN2	Repair	Shail	Code	Strap	Code				
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6A157838	1B	4	3			6A168717	2B	4	3			6A168917	2B	4	3			6A986881	1A	0	3
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6A162989	2B	1	3			6A168883	3	4	3			6A170972	2A	0	3			6A988674	2A	0	3
6A162990	2B	1	3			6A168884	3	4	3			6A170973	2A	0	3			6A988675	2A	0	3
6A162991	2B	1	3			6A168885	3	4	3			6A170974	2A	0	3			6A988676	2A	0	3
6A163003	2A	0	3			6A168886	3	4	3			6A170975	2A	0	3			6A988821	1B	4	3
6A163780	1A	0	3			6A168887	3	4	3			6A189173	3	2	3			6A989365	2A	0	3
6A164617	2B	2	3			6A168888	3	4	3			6A189174	3	2	3			6A989777	1A	0	3
6A164618	2B	2	3			6A168889	3	4	3			6A189175	3	2	3			6A989940	2B	1	3
6A164772	2A	0	3			6A168890	3	4	3			6A190446	2A	0	3			6A989941	2A	0	3
6A164773	2A	0	3																		