



**MOTOR COACH**  
INDUSTRIES

May 28, 2010

«Customer\_Name»  
ATTENTION: TECH SERVICE DEPT/MAINT  
«Address»  
«Address\_2»  
«City», «State» «Zip»  
«ctry»

**SUBJECT: SAFETY RECALL OF ARVINMERITOR ADAPTER PLATE BOLT  
UNDER-TORQUE**

Ref.: **ARVINMERITOR NHTSA # 10E-014**  
**MCI NHTSA # 10V-199**  
**TRANSPORT CANADA #TC 2010-153**  
**MCI Service Bulletins 345 & 346**

Attention Owner:

This notice is sent to you in accordance with the National Traffic and Motor Vehicle Safety Act and the Canadian Motor Vehicle Safety Act.

Motor Coach Industries, Inc. ("MCI") has decided that a defect which relates to motor vehicle safety exists in certain MCI D, E, and J series coaches containing an ArvinMeritor Unitized Wheel End ("UWE") steer or tag axle identified by ArvinMeritor as potentially containing the safety-related defect. ArvinMeritor has reported that certain UWE steer and tag axles may have had an improper amount of torque applied to the hub/rotor/wheel adapter plate bolts during the assembly process. ArvinMeritor has further advised that insufficient bolt torque could result in a wheel off condition, which in turn could result in a crash or otherwise cause personal injury or property damage. Please see the enclosed ArvinMeritor's Part 573 Defect Information Report dated April 30, 2010, customer notification letter dated May 7, 2010, and Technical Bulletin TP-10110, and MCI Service Bulletins 345 and 346, for further information.

The vehicles that are subject to this notice are the following model year 2010 MCI D, E, and J series coaches (last five VIN digits):

<b>59196 – 59419</b>
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<b>65487 - 65597</b>
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MCI is conducting a recall to check the torque of the affected hub/rotor/wheel adapter plate bolts and replace the bolts as necessary. Please see the enclosed ArvinMeritor materials and MCI Service Bulletins 345 and 346 for further information. The recall work will be provided at no cost to you.

MCI records indicate that you are the owner or operator of the following vehicle(s) included in this recall:

«Unit\_Numbers»

MCI strongly urges you to have the recall work performed on your vehicle(s) as quickly as possible.

You may contact the MCI Customer Service Line at 1-800-241-2947 if you have any questions about this recall campaign or wish to make arrangements to have your vehicle(s) repaired at an authorized MCI service center. Submittal of MCI Warranty Claim Forms may be completed on MCI's website at <http://fleetsupportiw.mcicoach.com/iwarranty/signon> (click on Customer Care System), or a photocopy of the Warranty Claim Form found in the Warranty Manual can be mailed / faxed to the MCI Warranty Department. Please refer to Service Bulletins 345 and 346, and your OWNER LIMITED WARRANTY MANUAL, for more detailed information.

After contacting MCI Customer Service, if you are still unable to have the safety defect remedied without charge and within a reasonable time, you may submit a complaint:

For the U.S.:

The Administrator  
National Highway Traffic Safety Administration  
1200 New Jersey Avenue, SE.,  
Washington, DC 20590;  
or call the toll-free Vehicle Safety Hotline at 1-888-327-4236; (TTY: 1-800-424-9153); or go to <http://www.safercar.gov>.

For Canada:

Road Safety and Motor Vehicle  
Regulation Directorate  
Transport Canada  
Tower C, Place de Ville  
330 Sparks Street  
Ottawa, Ontario  
K1A 0N5  
or call the Transport Canada's Information Centre at 1-800-333-0371.

If you are the lessor of the vehicle(s) identified above, Federal law requires that you forward this notice by first class mail to the most recent lessee(s) known to you, within ten days of your receipt of this notice.

If you have sold or otherwise transferred the vehicle(s) identified above, please contact the MCI Customer Service Line at 1-800-241-2947 with all of the information you have regarding the current owner/operator of the vehicle(s).

If you had your vehicle repaired for this condition prior to receipt of this notice and incurred any costs, you may be eligible for reimbursement. Please contact the MCI Customer Service Line at 1-800-241-2947 for further information in that regard.

We regret the inconvenience this may cause you, but urge you to implement the recall procedures with respect to your vehicle(s) as soon as possible for your added safety and satisfaction.

Sincerely,

*Motor Coach Industries*  
Warranty Department

Enclosures: ArvinMeritor Part 573 Defect Information Report dated April 30, 2010  
ArvinMeritor customer notification letter dated May 7, 2010  
ArvinMeritor Technical Bulletin TP-10110  
MCI Service Bulletins 345 & 346



2135 W. Maple Rd  
arvinmeritoinc.com  
Troy, MI 48084

10E-014  
(3 pages)

April 30, 2010

Administrator of Enforcement  
Office of Defects Investigation  
National Highway Traffic Safety Administration  
400 Seventh Street S.W.  
Washington, D.C. 20590

Fax: 202-366-7882

Re: Defect Information Report, in accordance with 49 CFR §573.6, concerning certain front and tag axles shipped to ArvinMeritor customers between August 10, 2009 and April 6, 2010.

ArvinMeritor File: C10AA

NHTSA File: Unassigned

Dear Sir /Madam:

ArvinMeritor, Inc. submits this Defect Information Report in accordance with 49 CFR §573.6. The information is presented to correspond to the sub-paragraphs of section §573.6(c).

Information Requested under §573.6(c)(1)

This report is submitted by:  
ArvinMeritor, Inc.  
2135 West Maple Road  
Troy, Michigan 48084-7186

Information Requested under §573.6(c)(2):

The affected motor vehicle equipment are front and tag axles assembled at ArvinMeritor Newark, Ohio facility located at 444 Hebron Road, Heath, Ohio 43055, and shipped to ArvinMeritor customers between August 10, 2009 and April 6, 2010. A list of affected customers and quantities is contained in Appendix A of this notice.

The population of potential affected axles was determined by shipment records maintained by ArvinMeritor's Heath facility.

Information Requested under §573.6(c)(3):

ArvinMeritor has determined that approximately 685 axles were shipped during the suspect period. The axles may have had incorrect torque applied to the wheel adapter during the assembly process

Information Requested under §573.6(c)(4):

ArvinMeritor has determined that approximately 100% of the above mentioned population of axles may exhibit the conditions described in the paragraphs immediately below.

Information Requested under §§573.6(c)(5):



The suspect axles may have had improper amount of torque applied to the wheel adapter during the assembly process. A reduced bolt torque potentially reduces the clamp force which, in turn, could lead to a vibration loosening concern. Complete loss of clamp load could result in a wheel off condition. There is also a concern that the operational loads could be greater than the bolt clamping forces, which can lead to possible bolt fatigue issues

Information Requested under §§573.6(c)(6):

- April 8, 2010 – MCI reported an incident where one bolt backed out of wheel adapter / rotor / hub bearing joint. This incident happened on a new vehicle completing an initial shakedown test run.
- April 8, 2010 – Containment started at ArM assembly plant to verify torque on all axles
- April 9, 2010 – MCI and Newark bolt torque verification checks revealed that other new production axles have bolts that were measured lower than the torque specification.

Information Requested under §573.6(c)(7):

There is no impact of this issue towards non-compliance with a motor vehicle standard.

Information Requested under §573.6(c)(8):

ArvinMeritor is in process of developing the Defect Information Notice to its customers and will submit that information to NHTSA as soon as available. The following is an approximate schedule for the program:

5/30/10            Complete notification to affected customers.

In addition, ArvinMeritor has determined that none of the suspect axles have been remedied prior to this notification and, therefore, that no general pre-notification reimbursement remedy program is required.

We trust that the information provided in this document is fully responsive to the requirements of 49 CFR §573.5. All additions or modifications to any of the information given will be reported promptly to NHTSA. Any questions with respect to the information provided should be directed to the undersigned.

Respectfully Submitted,

Nirav Parikh  
Regional Quality Manager &  
Project Manger - Product Safety and Compliance  
ArvinMeritor

Enclosures



Appendix A: Summary of affected customer.

Motor Coach Industries  
1475 Clarence Avenue  
Winnipeg, MB R3T 1T5 Canada

May 7, 2010

Antoinette McKee  
Sourcing Manager  
Motor Coach Industries  
1700 East Golf Road  
Schaumburg, IL 60173

**NOTICE:** Defect Information Report, in accordance with 49 CFR §573.6, concerning certain front and tag axles shipped to ArvinMeritor customers between August 10, 2009 and April 6, 2010.

ArvinMeritor File: C10AA

NHTSA File: 10E-014

Dear Sir /Madam

This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act.

ArvinMeritor has determined that a defect which relates to motor vehicle safety exists in certain of its FH 941 and FH946 Front Non-Drive Steer Axles, and MC14 and MC16 Series Tag Axles axles. The affected motor vehicle equipment are front steer and rear tag axles assembled at ArvinMeritor Heath, Ohio facility located at 444 Hebron Road, Heath, Ohio 43055, and shipped to ArvinMeritor customers between August 10, 2009 and April 6, 2010. A list of affected axle and serial numbers is contained in Appendix A of this notice.

The population of potential affected axles was determined by shipment records maintained by ArvinMeritor's Heath facility.

### **Description of Defect**

The suspect axles may have had improper amount of torque applied to the hub/rotor/wheel adapter bolts during the assembly process. A reduced bolt torque potentially reduces the clamp force which, in turn, could lead to a vibration loosening concern. Complete loss of clamp load could result in a wheel off condition. There is also a concern that the operational loads could be greater than the bolt clamping forces, which can lead to possible bolt fatigue issues.

### **NHTSA Notification & Safety Recall Obligations**

According to our records, affected units were shipped to your company. If those units were installed as original equipment on vehicles manufactured at your facility, and you agree that they contain a safety defect, your company must notify the National Highway Traffic Safety Administration (NHTSA) within 5 business days and conduct a safety recall of those vehicles. It is critical that the NHTSA guidelines are followed in a timely manner and that your customers are notified to conduct the remedy described below.

**IMPORTANT:** Some of the affected vehicles may still be in your inventory. Federal law requires you to complete the recall service on these vehicles before delivery. ArvinMeritor will provide replacement or repair for these units prior to delivery to your customers.



You must also submit your draft version of your dealer and customer notices to NHTSA for approval at least 5 days prior to mailing such notification to dealers and owners of potentially affected wheel ends. You may contact NHTSA with questions by sending an email to [rmd.odi@dot.gov](mailto:rmd.odi@dot.gov).

**IMPORTANT:** Dealer notification by Certified Mail is required by Federal law for all safety recalls. Responsible dealership personnel should be instructed to sign for this Certified Mail without hesitation as it contains urgent safety recall information. Notifications to owners of potentially affected vehicles are by first class mail. Please be advised that the outside of each envelope containing an owner notification letter must be marked “SAFETY RECALL NOTICE” all in capital letters, either in boldface or underlined, and in type that is larger than that used in the address section. A sample of the envelope must be submitted to NHTSA for approval at least 5 business days before mailing to owners.

### **Recommended Action**

ArvinMeritor recommends that owners of vehicles originally equipped with ArvinMeritor axle assemblies containing the suspect axles use the inspection procedure provided in ArvinMeritor Technical Publication TP-10110. The repair procedure within this technical bulletin can be used to inspect torque and replace bolts that have had an improper amount of torque applied.

**NOTE:** Not all bolts will need to be replaced. Only replace bolts that are identified as having a torque value of less than 150 ft-lbs in the procedure outlined within the TP-10110.

The affected vehicles should be inspected and repaired as soon as feasible by a vehicle manufacturers’ authorized repair facility or end-user. This inspection program will be managed by ArvinMeritor, and will be at no expense to vehicle owners.

### **Identification of Affected Parts**

The suspect population information containing the suspect axle serial numbers is attached with this notification.

Vehicle manufacturers are requested to provide VIN information and Vehicle In-Service Dates for the corresponding suspect axle serial numbers for traceability and reporting purposes. The requested information is to be forwarded to:

Anthony Seppey  
Anthony.Seppey@ArvinMeritor.com  
Specialty Service Manager – Troy, MI  
Ph 248.435.0896 Fax 248-435-1208

Inspection of the adaptor plate bolt torque, will determine if bolt replacement is required during the torque validation of the bolts. Additional details for inspection and replacement values are described in the ArvinMeritor Technical Publication TP-10110, attached to this notice.



## **Availability of Replacement Parts and Service Instructions**

Replacement part 10-X-1711 is currently available at ArvinMeritor's aftermarket distribution center in Florence, KY.

## **Parts, Labor and Handling Allowance**

The following are the details of allowances relating to parts, labor and handling available to vehicle manufacturers' (OEM):

- Parts and labor cost will be reimbursed through standard warranty.
- ArvinMeritor will reimburse as the standard repair time (SRT) of 1/4 hour per wheel end for inspection and an additional 1/10<sup>th</sup> hour per 1-2 bolts for replacement.

## **Removed Material Disposition**

Repair facilities should change identified suspect bolts that have had improper amount of torque applied to the wheel adapter only on an identified vehicle axle. Removed bolts should not be reused. The removed fasteners should be destroyed and discarded.

## **Claims for Credit**

ArvinMeritor will accept warranty claims for inspecting bolt torque and replacing a bolt that has had an improper amount of torque applied to the wheel adapter associated with this notice directly from the vehicle manufacturers (OEM). To obtain credit for the claim; the repair facility should file with their OEM and the OEM will reimburse the repair facility for the work. ArvinMeritor will reimburse the OEM through its standard warranty process.

In order to receive proper credit, such warranty claims must contain the following information at the time of submission:

- Reference to ArvinMeritor Campaign ID Number: C10AA
- Reference to NHTSA Campaign ID Number: 10E-014
- Reference to the vehicle manufacturer's campaign number (optional)
- 17-digit vehicle identification number (VIN)
- Axle serial number
- Vehicle owner's name, address, and telephone number
- Vehicle in-service date
- Vehicle repair date
- Vehicle mileage at the time of repair
- Dealer work order number
- Repairing facility name, address, and telephone number
- Total labor hours required performing the work, not to exceed agreed formula
- Repair facilities hourly rate
- Filled out data sheet within TP-10110
- Tracking number for shipment of returned suspect studs.

Failure to provide complete information will delay processing of the warranty claim.



**Communication**

If you conclude that ArvinMeritor has not enabled you to remedy this condition in a reasonable time, you may submit a complaint to the:

Administrator  
National Highway Traffic Safety Administration  
1200 New Jersey, S.E.  
Washington, D.C. 20590

- or -

Call the toll free Vehicle Safety Hotline: 1-888-327-4236; (TTY: 800-424-9153  
or go to <http://www.safercar.gov>

We regret any inconvenience that this situation may cause. ArvinMeritor wants to assure you that we are concerned for customer safety and your continued satisfaction with our products.

Sincerely,

ArvinMeritor

A handwritten signature in cursive script that reads "Frank Cookson".

Frank Cookson  
Manager of Customer Service

Attachments:



# Service Bulletin No. 345

<b>MODEL</b> D Series Coaches	<b>TYPE</b> Field Change Program	<b>SECTION/GROUP</b> 15 – Wheel	<b>DATE</b> May 28, 2010
<b>SUBJECT</b> ARVINMERITOR WHEEL ADAPTER CAPSCREWS ON UWE AXLES			
<b>CONDITIONS</b>			

Ref. ARVINMERITOR NHTSA Recall No.: 10E–014

Ref. MCI NHTSA Recall No.: 10V–199

Ref. Transport Canada Recall No.: TC 2010–153

### Customer Complaint:

ArvinMeritor has reported to Motor Coach Industries ( MCI ) that a defect which relates to motor vehicle safety exists in wheel end adapter capscrews on certain front steer and rear tag axles. The suspect axles may have had improper amount of torque applied to the hub/rotor/wheel adapter capscrews during the assembly process. A reduced capscrew torque potentially reduces the clamp force which, in turn, could lead to a vibration loosening concern. The potential may also exist whereas the operational loads could be greater than the capscrew clamping forces, which can lead to possible capscrew fatigue issues. Complete loss of clamp load could result in a wheel off condition.

### Cause:

ArvinMeritor reports that the suspect front and tag axles may have had improper amount of torque applied to the wheel adapter during the assembly process.

### Corrective Action:

MCI and ArvinMeritor recommend that the front and tag axle wheel adapter capscrews on affected coaches be inspected and replaced as recommended as soon as feasible in order to eliminate any unexpected wheel conditions. Inspection of the adaptor plate capscrew torque will determine if bolt replacement is required during the torque validation of the bolts. Additional details for inspection and replacement procedures are described in this bulletin and in the ArvinMeritor Technical Publication TP – 10110 with MCI Coach – UWE Bolt Torque – Inspection Chart attached to this bulletin.

The MCI coach models that need to be inspected for this defect are the following:

-D4000, D4000ISTV and D4005 models ( front axle only ) with the following VIN's ( inclusive ) : 59196 to 59419

-D4500 and D4505 models ( front and tag axle ) with the following VIN's ( inclusive ) : 59196 to 59419

-E4500 model ( front and tag axle ) with the following VIN's ( inclusive ) : 65501 to 65519

-J4500 and J4500C ( front and tag axle ) model with the following VIN's ( inclusive ) : 65487 to 65597

Accordingly, MCI is instituting a field change program to inspect and replace, if necessary, the ArvinMeritor front and tag axle wheel adapter capscrews in all of the coaches listed above. This bulletin describes the procedure to inspect and replace, if necessary, the ArvinMeritor front and tag axle wheel adapter capscrews in the D series coaches.

**MCI's Service Bulletin 346 describes the procedure to inspect and replace, if necessary, the ArvinMeritor front and tag axle wheel adapter capscrews in E and J models.**

### Parts

<u>Qty.</u>	<u>New P/N</u>	<u>Description</u>
1	15-02-1047	Capscrew
1	15-02-1060	Kit, Wheel Adapter, UWE Axles
		<i>Kit Contents Are:</i>
12		Capscrew
12		Washer
a/r		Torque Seal

### Service Procedure:



**Read this entire procedure before beginning work.**

**Use Safe Shop Practices At All Times.**

1. Open the engine doors. Position the ENGINE RUN and ENGINE START switches on the engine compartment remote control box to the OFF position. Chock both sides of the tires.
2. Locate the twelve ( 12 ) wheel adapter capscrews on the front axle ( refer to Figure 1 ).



**Figure 1.**

3. Using a torque wrench with a dial indicator, check and record the torque value of all twelve ( 12 ) wheel adapter capscrews on the MCI Coach–UWE Bolt Torque–Inspection Chart.

## **NOTICE**

***Upon inspection, if one ( 1 ) capscrew is found at a torque less than 150 ft-lbs, the capscrew needs to be replaced with p/n 15-02-1047, and properly torqued. Discard existing capscrew.***

***Upon inspection, if two ( 2 ) or more capscrews are found at a torque less than 150 ft-lbs, all twelve ( 12 ) capscrews need to be replaced with Kit p/n 15-02-1060, and properly torqued.***

4. Using a torque wrench, tighten all twelve ( 12 ) capscrews to 250 to 300 ft–lbs, in a star pattern. Apply torque seal from the face of the capscrew to the face of the wheel adapter.
5. Proceed to the opposite side of the front axle. Repeat Steps 2. to 4. in their entirety.
6. Proceed to the tag axle. Repeat Steps 2. to 4. in their entirety to both sides of the tag axle.
7. Position the ENGINE RUN and ENGINE START switches on the engine compartment remote control box to the ON position. Close the engine doors.

*Procedure complete.*

Mail or fax the completed warranty claim form and the MCI Coach–UWE Bolt Torque–Inspection Chart to MCI's warranty department, or photo copy and mail to:

MCI Fleet Support  
Attn: Warranty Department  
7001 Universal Coach Drive  
Louisville, KY 40258  
Fax Number 1-800–360–8886

to receive credit for the hours used to complete this task. Contact the MCI Fleet Support Technical Center at 1-800-241-2947 for any further information.

***Field Change Program Conditions:***

The parts required for this change will be supplied without charge.

A labor allowance of 0.25 hour will be granted for each wheel end inspected on the front axle only, for the procedure of inspecting the specified part in this bulletin on D4000, D4000ISTV and D4005 model coaches.

A labor allowance of 0.25 hour will be granted for each wheel end inspected on the front and tag axle, for the procedure of inspecting the specified part in this bulletin on D4500 and D4505 model coaches.

An additional labor allowance of 0.1 hour will be granted, for the procedure of replacing 1–2 wheel adapter capscrews on D series coaches. A labor allowance of 0.6 hour will be granted, for the procedure of replacing all 12 wheel adapter capscrews, if necessary, on D series coaches.

This labor allowance will be credited to your MCI Fleet Support Parts Account on receipt of the MCI Coach–UWE Bolt Torque–Inspection Chart and a "Warranty Claim Form" as detailed in your Owner Warranty manual to MCI's Warranty department.

Motor Coach apologizes for any inconvenience resulting from this campaign, but urges you to have your affected coaches inspected and repaired as necessary as soon as possible.

Sincerely,

*Motor Coach Industries*  
U.S. and Canadian Service Departments.



MOTOR COACH  
INDUSTRIES

## MCI FIELD CAMPAIGN VERIFICATION

CONTACT INFORMATION	
CUSTOMER NAME: _____ (PLEASE PRINT)	
FCP INFORMATION – ONE FORM PER UNIT	
FCP#:	
UNIT#:	DATE COMPLETED __ / __ / __
MILEAGE:	
<b><u>IMPORTANT:</u> VERIFICATION FORM TO BE RETURNED UP ON COMPLETION OF THE F.C.P.</b>	
SUBMITTED BY: (Please Print) _____	DATE __ / __ / __
SIGNATURE: _____	
COMMENTS:	

FAX TO: 1-502-318-8183

**MAILING ADDRESS:**

**MOTOR COACH INDUSTRIES  
ATTN: WARRANTY DEPT.  
7001 UNIVERSAL COACH DRIVE  
LOUISVILLE, KY 40258**

**MERITOR®**  
an **ArvinMeritor** brand

## Technical Bulletin

### Inspect for Under-Tightened Hub/Rotor/Adapter Plate Bolts on Meritor Front Non-Drive Steer Axles and Tag Axles Equipped with Unitized Wheel Ends Installed on Motor Coach Industries (MCI) Coaches

All Meritor FH941 and FH946 Front Non-Drive Steer Axles, and MC14 and MC16 Series Tag Axles

### Hazard Alert Messages

Read and observe all Warning and Caution hazard alert messages in this publication. They provide information that can help prevent serious personal injury, damage to components, or both.

#### **WARNING**

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

Park the vehicle on a level surface. Block the wheels to prevent the vehicle from moving. Support the vehicle with safety stands. Do not work under a vehicle only supported by jacks. Jacks can slip or fall over. Serious personal injury and damage to components can result.

#### **CAUTION**

A unitized wheel end is sealed and greased for life and does not require lubrication. If you disassemble, or attempt to repair or lubricate a unitized wheel end assembly, the Meritor warranty will be void, and damage to components can result.

A unitized wheel end is not adjustable. Do not attempt to set or adjust end play. Damage to components can result.

### How to Obtain Additional Maintenance and Service Information

Refer to Maintenance Manual MM-0409, Wheel-End Components; Maintenance Manual 23, Bus and Coach Front Axles; and Maintenance Manual MM-0467, DiscPlus™ EX225 Air Disc Brake. To obtain these publications, visit Literature on Demand at [arvinmeritor.com](http://arvinmeritor.com).

### How to Obtain Hub/Rotor/Adapter Plate Bolts (ArvinMeritor Part Number 10X1711)

Contact the original equipment manufacturer (OEM) or the ArvinMeritor OnTrac™ Performance Plus Call Center (phone: 866-668-7221/Fax: 248-435-5580/Email [ontrac@arvinmeritor.com](mailto:ontrac@arvinmeritor.com)).


### Inspection and Service Procedures

#### Check Hub/Rotor/Adapter Plate Bolt Torque on the Unitized Wheel Ends

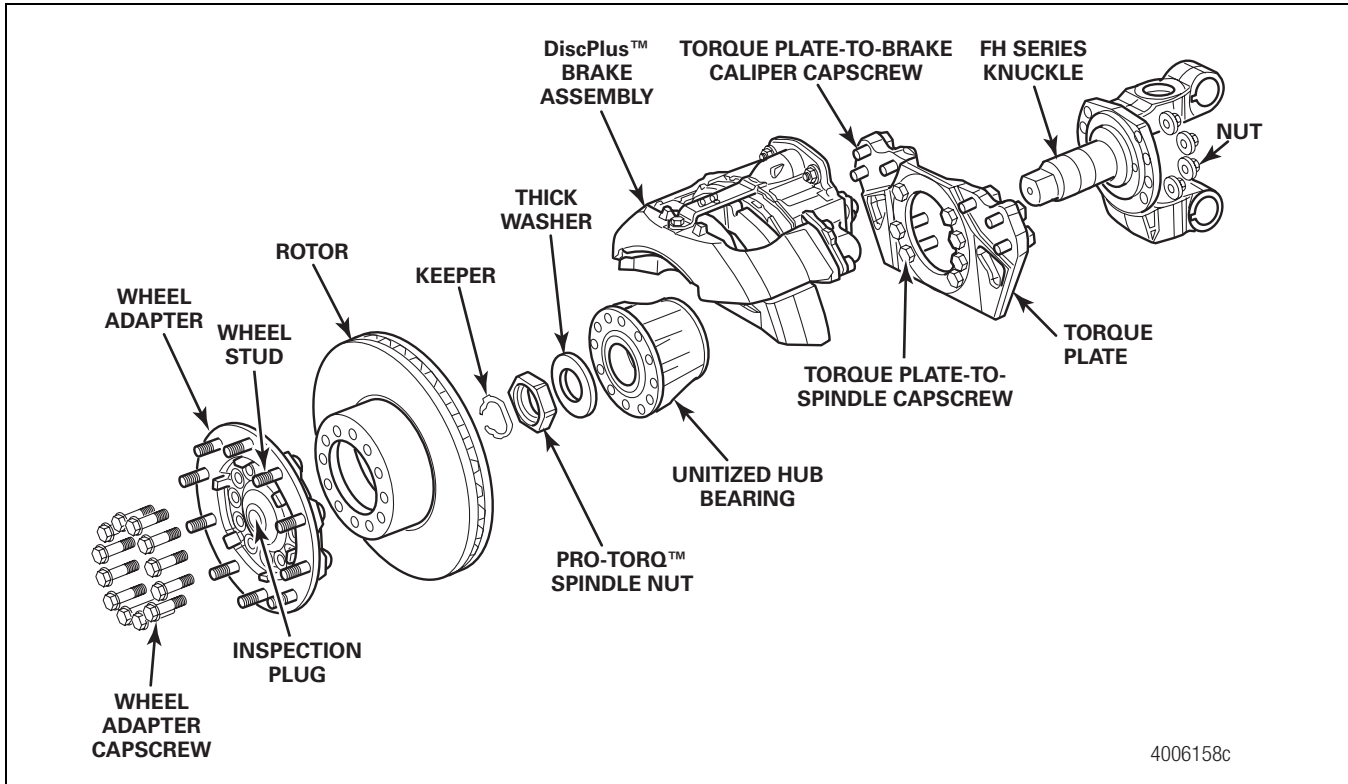
1. Wear safe eye protection.
2. Park the vehicle on a level surface. Block the wheels to prevent the vehicle from moving.

#### **WARNING**

When you install new hub/rotor/adapter plate bolts (ArvinMeritor part number 10X1711) as instructed in this technical bulletin, discard the old bolts. Do not reuse the bolts. A reused bolt will not tighten correctly, which can cause the wheel to loosen and separate from the vehicle. Serious personal injury and damage to components can result.

3. Use a torque wrench with a dial indicator to check hub/rotor/adapter plate bolt torque on all 12 bolts on each unitized wheel end. The bolt torque must not be less than 150 lb-ft (203 N•m). Record the torque on the Inspection Sheet included in this bulletin. 
  - **If hub/rotor/adapter plate bolt torque on any one of the 12 bolts on each unitized wheel end is less than 150 lb-ft (203 N•m):** Replace the bolt using ArvinMeritor part number 10X1711. Discard the bolts that were removed. Do not reuse old bolts. Record the bolt replacement on the Inspection Sheet included in this bulletin.

- **If any two or more bolts in the same bolt circle on a wheel end are less than 150 lb-ft (203 N•m):** Replace all 12 bolts on the untized wheel end using ArvinMeritor part number 10X1711. Remove, replace and tighten each bolt one at a time to maintain the correct clamp load on the wheel end. Discard the bolts that were removed. Do not reuse old bolts. Record the bolt replacement and torque in the Inspection Sheet included in this bulletin.



4. Use a click torque wrench to tighten all remaining bolts and any replacement bolts in a star pattern to  $275 \pm 25$  lb-ft ( $373 \pm 34$  N•m). Record the torque on the Inspection Sheet included in this bulletin. When you have tightened all of the bolts, recheck the torque of all 12 bolts in a star pattern. **T**
5. Mark a stripe on all of the tightened bolts. Use a different color than the color already used.

# MCI Coach – UWE Bolt Torque – Inspection Chart

<b>VIN:</b>	<b>In-Service Date:</b>	<b>Repair Date:</b>	<b>Mileage:</b>
Torque Wrench Dial Indicator – Calibration # Torque Click Wrench – Calibration #		Inspect By:	
<b>Right Front Non-Drive Steer Wheel End                  Axle Serial Number:</b>		<b>Left Front Non-Drive Steer Wheel End</b>	
<b>Bolt #</b>	<b>Original Torque</b>	<b>Bolt Replaced (Yes/No)</b>	<b>New Torque</b>
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
<b>Comments:</b>		<b>Comments:</b>	

Bolt #	Right Tag Wheel End Axle Serial Number:			Left Tag Axle Wheel End		
	Original Torque	Bolt Replaced (Yes/No)	New Torque	Original Torque	Bolt Replaced (Yes/No)	New Torque
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
	Comments:			Comments:		

**ArvinMeritor™**

**Meritor Heavy Vehicle Systems, LLC**  
2135 West Maple Road  
Troy, MI 48084 USA  
800-535-5560  
arvinmeritor.com

Information contained in this publication was in effect at the time the publication was approved for printing and is subject to change without notice or liability. Meritor Heavy Vehicle Systems, LLC, reserves the right to revise the information presented or to discontinue the production of parts described at any time.

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Printed in USA

TP-10110  
Issued 05-10  
(16579)



# Service Bulletin No. 346

<b>MODEL</b> E / J Series Coaches	<b>TYPE</b> Field Change Program	<b>SECTION/GROUP</b> 15 – Wheel	<b>DATE</b> May 28, 2010
<b>SUBJECT</b> ARVINMERITOR WHEEL ADAPTER CAPSCREWS ON UWE AXLES			
<b>CONDITIONS</b>			

Ref. ARVINMERITOR NHTSA Recall No.: 10E–014

Ref. MCI NHTSA Recall No.: 10V–199

Ref. Transport Canada Recall No.: TC 2010–153

### Customer Complaint:

ArvinMeritor has reported to Motor Coach Industries ( MCI ) that a defect which relates to motor vehicle safety exists in wheel end adapter capscrews on certain front steer and rear tag axles. The suspect axles may have had improper amount of torque applied to the hub/rotor/wheel adapter capscrews during the assembly process. A reduced capscrew torque potentially reduces the clamp force which, in turn, could lead to a vibration loosening concern. The potential may also exist whereas the operational loads could be greater than the capscrew clamping forces, which can lead to possible capscrew fatigue issues. Complete loss of clamp load could result in a wheel off condition.

### Cause:

ArvinMeritor reports that the suspect front and tag axles may have had improper amount of torque applied to the wheel adapter during the assembly process.

### Corrective Action:

MCI and ArvinMeritor recommend that the front and tag axle wheel adapter capscrews on affected coaches be inspected and replaced as recommended as soon as feasible in order to eliminate any unexpected wheel conditions. Inspection of the adaptor plate capscrew torque will determine if bolt replacement is required during the torque validation of the bolts. Additional details for inspection and replacement procedures are described in this bulletin and in the ArvinMeritor Technical Publication TP – 10110 with MCI Coach – UWE Bolt Torque – Inspection Chart attached to this bulletin.

The MCI coach models that need to be inspected for this defect are the following:

-D4000, D4000ISTV and D4005 models ( front axle only ) with the following VIN's ( inclusive ) : 59196 to 59419

-D4500 and D4505 models ( front and tag axle ) with the following VIN's ( inclusive ) : 59196 to 59419

-E4500 model ( front and tag axle ) with the following VIN's ( inclusive ) : 65501 to 65519

-J4500 and J4500C ( front and tag axle ) model with the following VIN's ( inclusive ) : 65487 to 65597

Accordingly, MCI is instituting a field change program to inspect and replace, if necessary, the ArvinMeritor front and tag axle wheel adapter capscrews in all of the coaches listed above. This bulletin describes the procedure to inspect and replace, if necessary, the ArvinMeritor front and tag axle wheel adapter capscrews in the E / J series coaches.

**MCI's Service Bulletin 345 describes the procedure to inspect and replace, if necessary, the ArvinMeritor front and tag axle wheel adapter capscrews in D models.**

### Parts

<u>Qty.</u>	<u>New P/N</u>	<u>Description</u>
1	15-02-1047	Capscrew
1	15-02-1060	Kit, Wheel Adapter, UWE Axles
		<i>Kit Contents Are:</i>
12		Capscrew
12		Washer
a/r		Torque Seal

### Service Procedure:



**Read this entire procedure before beginning work.**

**Use Safe Shop Practices At All Times.**

1. Open the engine door. Position the ENGINE RUN and ENGINE START switches on the engine compartment remote control box to the OFF position. Chock both sides of the tires.

## **NOTICE**

***If coach is not equipped with hub covers ( refer to Figure 1 or 2 ), proceed to Step 4.***

***If coach is equipped with hub covers, proceed to Step 2. or Step 3. , as applicable to coach configuration.***

***Failure to follow the hub cover removal procedure in Step 2. may result in damage to the hub cover.***

2. Locate the one piece hub cover on the front axle wheel end. Visually locate the notch on the side of the hub cover. Insert the hub cover removal tool, reference p/n 15-01-1216, into the notch on the side of the hub cover ( refer to Figure 1 ). Using the removal tool, in a rotating action carefully separate the hub cover away from the wheel face. Place aside to be re–installed at a later step in this procedure.



**Figure 1. Front / tag axle one–piece hub cover with removal tool.**

## **NOTICE**

*If coach is not equipped with hub covers ( refer to Figure 1 or 2 ), proceed to Step 4.*

*Failure to follow the hub cover removal procedure in Step 3. may result in damage to the hub cover.*

3. Locate the 11–piece hub cover on the front axle wheel end. Insert the removal tool on a lug nut cover ( refer to Figure 1 ). Using the removal tool, in a back and forth action carefully separate the lug nut cover from the lug nut. Repeat to remaining nine ( 9 ) lug nut covers until the center hub cover is released. Place aside to be re–installed at a later step in this procedure.



**Figure 2. Front / tag axle 11–piece hub cover with removal tool.**

4. Locate the twelve ( 12 ) wheel adapter capscrews on the front axle ( refer to Figure 3 ).



**Figure 3.**

5. Using a torque wrench with a dial indicator, check and record the torque value of all twelve ( 12 ) wheel adapter capscrews on the MCI Coach–UWE Bolt Torque–Inspection Chart.

## **NOTICE**

***Upon inspection, if one ( 1 ) capscrew is found at a torque less than 150 ft-lbs, the capscrew needs to be replaced with p/n 15-02-1047, and properly torqued. Discard existing capscrew.***

***Upon inspection, if two ( 2 ) or more capscrews are found at a torque less than 150 ft-lbs, all twelve ( 12 ) capscrews need to be replaced with Kit p/n 15-02-1060, and properly torqued.***

6. Using a torque wrench, tighten all twelve (12 ) capscrews to 250 to 300 ft–lbs, in a star pattern. Apply torque seal from the face of the capscrew to the face of the wheel adapter.
7. Proceed to the opposite side of the front axle. Repeat Steps 4. to 6. in their entirety.
8. Proceed to the tag axle. Repeat Steps 4. to 6. in their entirety to both sides of the tag axle.
9. If coach is so equipped, use a short handle rubber mallet and controlled force on the lug nut feature in a counter–clockwise patter to re-install the hub covers. When hub cover is fully installed, there is no gap between the hub cover and the wheel face.
10. Position the ENGINE RUN and ENGINE START switches on the engine compartment remote control box to the ON position. Close the engine door.

*Procedure complete.*

Mail or fax the completed warranty claim form and the MCI Coach–UWE Bolt Torque–Inspection Chart to MCI's warranty department, or photo copy and mail to:

MCI Fleet Support  
Attn: Warranty Department  
7001 Universal Coach Drive  
Louisville, KY 40258  
Fax Number 1-800–360–8886

to receive credit for the hours used to complete this task. Contact the MCI Fleet Support Technical Center at 1-800-241-2947 for any further information.

***Field Change Program Conditions:***

The parts required for this change will be supplied without charge.

A labor allowance of 0.25 hours will be granted for each wheel end inspected on the front and tag axle, for the procedure of inspecting the specified part in this bulletin on E / J series coaches.

An additional labor allowance of 0.1 hour will be granted, for the procedure of replacing 1–2 wheel adapter capscrews on E / J series coaches. A labor allowance of 0.6 hour will be granted, for the procedure of replacing all 12 wheel adapter capscrews, if necessary, on E / J series coaches.

This labor allowance will be credited to your MCI Fleet Support Parts Account on receipt of the MCI Coach–UWE Bolt Torque–Inspection Chart and a "Warranty Claim Form" as detailed in your Owner Warranty manual to MCI's Warranty department.

Motor Coach apologizes for any inconvenience resulting from this campaign, but urges you to have your affected coaches inspected and repaired as necessary as soon as possible.

Sincerely,

*Motor Coach Industries*  
U.S. and Canadian Service Departments.



MOTOR COACH  
INDUSTRIES

## MCI FIELD CAMPAIGN VERIFICATION

CONTACT INFORMATION	
CUSTOMER NAME: _____ (PLEASE PRINT)	
FCP INFORMATION – ONE FORM PER UNIT	
FCP#:	
UNIT#:	DATE COMPLETED __ / __ / __
MILEAGE:	
<b><u>IMPORTANT:</u> VERIFICATION FORM TO BE RETURNED UP ON COMPLETION OF THE F.C.P.</b>	
SUBMITTED BY: (Please Print) _____	DATE __ / __ / __
SIGNATURE: _____	
COMMENTS:	

FAX TO: 1-502-318-8183

**MAILING ADDRESS:**

**MOTOR COACH INDUSTRIES  
ATTN: WARRANTY DEPT.  
7001 UNIVERSAL COACH DRIVE  
LOUISVILLE, KY 40258**

**MERITOR®**  
an **ArvinMeritor** brand

## Technical Bulletin

### Inspect for Under-Tightened Hub/Rotor/Adapter Plate Bolts on Meritor Front Non-Drive Steer Axles and Tag Axles Equipped with Unitized Wheel Ends Installed on Motor Coach Industries (MCI) Coaches

All Meritor FH941 and FH946 Front Non-Drive Steer Axles, and MC14 and MC16 Series Tag Axles

### Hazard Alert Messages

Read and observe all Warning and Caution hazard alert messages in this publication. They provide information that can help prevent serious personal injury, damage to components, or both.

#### **WARNING**

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

Park the vehicle on a level surface. Block the wheels to prevent the vehicle from moving. Support the vehicle with safety stands. Do not work under a vehicle only supported by jacks. Jacks can slip or fall over. Serious personal injury and damage to components can result.

#### **CAUTION**

A unitized wheel end is sealed and greased for life and does not require lubrication. If you disassemble, or attempt to repair or lubricate a unitized wheel end assembly, the Meritor warranty will be void, and damage to components can result.

A unitized wheel end is not adjustable. Do not attempt to set or adjust end play. Damage to components can result.

### How to Obtain Additional Maintenance and Service Information

Refer to Maintenance Manual MM-0409, Wheel-End Components; Maintenance Manual 23, Bus and Coach Front Axles; and Maintenance Manual MM-0467, DiscPlus™ EX225 Air Disc Brake. To obtain these publications, visit Literature on Demand at [arvinmeritor.com](http://arvinmeritor.com).

### How to Obtain Hub/Rotor/Adapter Plate Bolts (ArvinMeritor Part Number 10X1711)

Contact the original equipment manufacturer (OEM) or the ArvinMeritor OnTrac™ Performance Plus Call Center (phone: 866-668-7221/Fax: 248-435-5580/Email [ontrac@arvinmeritor.com](mailto:ontrac@arvinmeritor.com)).


### Inspection and Service Procedures

#### Check Hub/Rotor/Adapter Plate Bolt Torque on the Unitized Wheel Ends

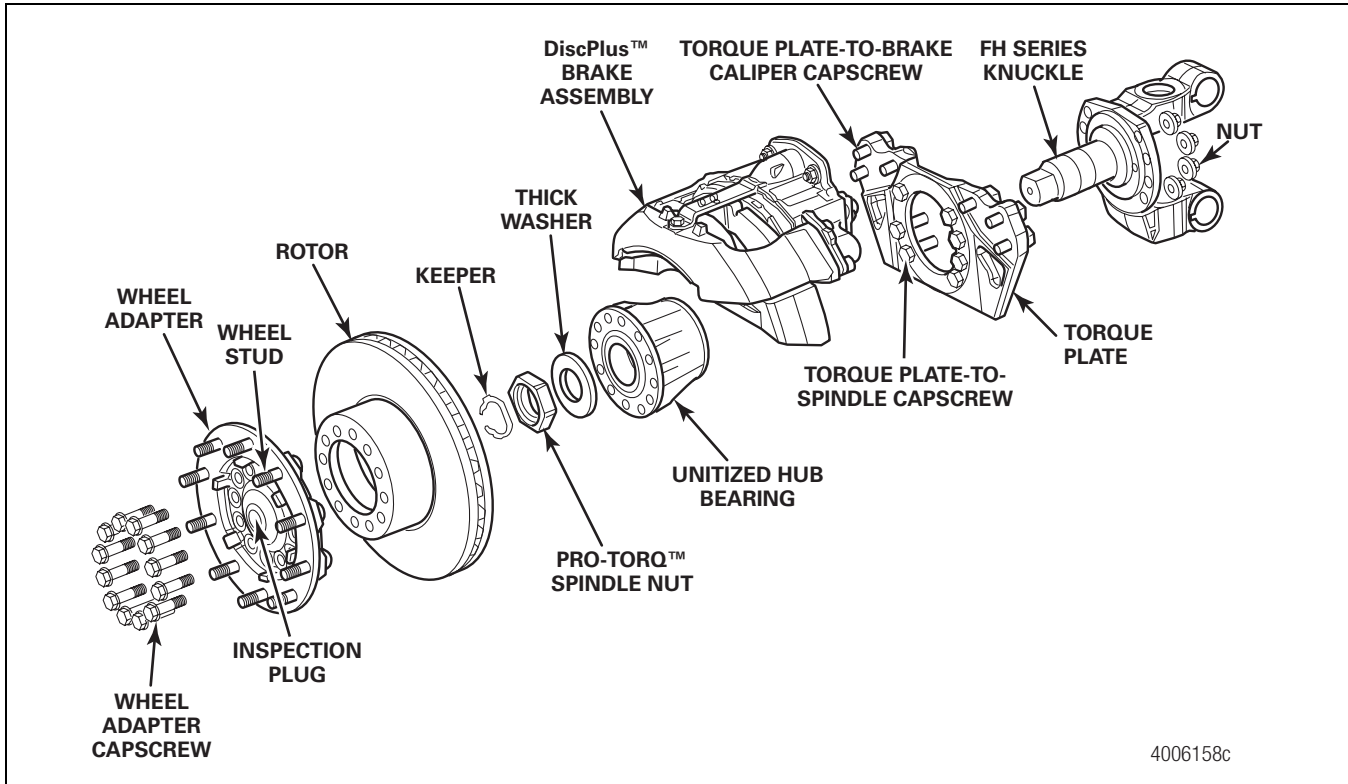
1. Wear safe eye protection.
2. Park the vehicle on a level surface. Block the wheels to prevent the vehicle from moving.

#### **WARNING**

When you install new hub/rotor/adapter plate bolts (ArvinMeritor part number 10X1711) as instructed in this technical bulletin, discard the old bolts. Do not reuse the bolts. A reused bolt will not tighten correctly, which can cause the wheel to loosen and separate from the vehicle. Serious personal injury and damage to components can result.

3. Use a torque wrench with a dial indicator to check hub/rotor/adapter plate bolt torque on all 12 bolts on each unitized wheel end. The bolt torque must not be less than 150 lb-ft (203 N•m). Record the torque on the Inspection Sheet included in this bulletin. 
  - **If hub/rotor/adapter plate bolt torque on any one of the 12 bolts on each unitized wheel end is less than 150 lb-ft (203 N•m):** Replace the bolt using ArvinMeritor part number 10X1711. Discard the bolts that were removed. Do not reuse old bolts. Record the bolt replacement on the Inspection Sheet included in this bulletin.

- **If any two or more bolts in the same bolt circle on a wheel end are less than 150 lb-ft (203 N•m):** Replace all 12 bolts on the untized wheel end using ArvinMeritor part number 10X1711. Remove, replace and tighten each bolt one at a time to maintain the correct clamp load on the wheel end. Discard the bolts that were removed. Do not reuse old bolts. Record the bolt replacement and torque in the Inspection Sheet included in this bulletin.



4. Use a click torque wrench to tighten all remaining bolts and any replacement bolts in a star pattern to  $275 \pm 25$  lb-ft ( $373 \pm 34$  N•m). Record the torque on the Inspection Sheet included in this bulletin. When you have tightened all of the bolts, recheck the torque of all 12 bolts in a star pattern. **T**
5. Mark a stripe on all of the tightened bolts. Use a different color than the color already used.

# MCI Coach – UWE Bolt Torque – Inspection Chart

<b>VIN:</b>	<b>In-Service Date:</b>	<b>Repair Date:</b>	<b>Mileage:</b>
Torque Wrench Dial Indicator – Calibration # Torque Click Wrench – Calibration #		Inspect By:	
<b>Right Front Non-Drive Steer Wheel End Axle Serial Number:</b>		<b>Left Front Non-Drive Steer Wheel End</b>	
<b>Bolt #</b>	<b>Original Torque</b>	<b>Bolt Replaced (Yes/No)</b>	<b>New Torque</b>
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
<b>Comments:</b>		<b>Comments:</b>	

Bolt #	Right Tag Wheel End Axle Serial Number:			Left Tag Axle Wheel End		
	Original Torque	Bolt Replaced (Yes/No)	New Torque	Original Torque	Bolt Replaced (Yes/No)	New Torque
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
	Comments:			Comments:		

**ArvinMeritor™**

**Meritor Heavy Vehicle Systems, LLC**  
2135 West Maple Road  
Troy, MI 48084 USA  
800-535-5560  
arvinmeritor.com

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