Meritor, Inc.
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Troy, Michigan 48084-721 USA
800-535-5560 Tel

meritor.com

3/28/2013

Michael Guidry Jr.
Ferrara Fire Apparatus Inc.
27855 James Chapel Road North
Holden, LA 70744

NOTICE: Defect Information Report, in accordance with 49 CFR §573.6, concerning certain MGM Type 24 J-Series Piston Parking Brake Actuators shipped to Meritor and installed on axles manufactured between November 23, 2010 and October 22, 2012.

Meritor File: C13AA NHTSA File: 13E-012

Dear Sir/Madam:

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

Meritor, Inc. ("Meritor") has decided that a defect which relates to motor vehicle safety exists in Meritor axles equipped with Meritor DiscPlus EX225 Air Disc Brakes, and Q Plus Cam Brakes manufactured between November 23, 2010 and October 22, 2013 that utilize certain MGM Type 24 J-Series Piston Parking Brake Actuators ("Actuator").

Description of Defect

MGM Brakes, a Division of Indian Head Industries, Inc. ("MGM Brakes") informed Meritor that it implemented a design change that, according to field reports, inadvertently allows for intermittent leakage of air past a seal in the Actuator. If insufficient air pressure exists, a spring within the Actuator becomes "uncaged" and applies force to the brake. Depending on the amount of leakage, the brake can drag while the vehicle is in service or prevent the wheel from rotating, thereby resulting in elevated operating temperatures and/or could result in wheel-end fire.

Axles containing suspect Actuators were assembled at Meritor's facility located at Meritor Newark (Heath), Ohio facility and also distributed through out Florence, Kentucky. The affected axle part numbers are contained in the following chart.

E2-3276X24	E8-3276X24	
E3-3276X24	A71-3276P16	
E4-3276X24	A79-3276X16	
E5-3276X24	A72-3276P24	
E7-3276X24	B98-3276D30	

Axles containing suspect Actuators were produced between November 23, 2010 and October 22, 2012 and shipped to Meritor customers during the same time period.

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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. Meritor 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 drivelines. You may contact NHTSA with questions by sending an email to 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

Vehicles that potentially contain axles with suspect Actuators should be inspected as soon as feasible by a vehicle manufacturers' authorized repair facility using Meritor Technical Publication No. TP-1338 (copy enclosed). If the vehicle contains a suspect Actuator, the dealer will change it out and any other affected components. This program will be managed by Meritor, and will be at no expense to vehicle owners.

Identification of Affected Parts

Serial numbers of axles that may contain suspect Actuators and corresponding chassis number have been included with this notification.

Vehicle manufacturers are requested to provide VIN information and Vehicle In-Service Dates for traceability and reporting purposes. The requested information is to be forwarded to:

Dave Walters
David.Walters@Meritor.com
Technical Manager OnTrac Customer Service Center – Troy, MI
Ph 248.435.1158 Fax 248.435.1393

Availability of Replacement Parts and Service Instructions

Replacement parts are currently available and if needed will be provided by Meritor at no cost. Vehicle manufacturers' (OEM) or repair facilities should obtain replacement parts by contacting Meritor's OnTrac Performance Plus Call Center using any of the below methods:

Phone: 1-866-668-7221
Fax: 248-435-5580
Email: ontrac@Meritor.com.

Parts, Labor and Handling Allowance

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

- Part and labor cost will be reimbursed through standard warranty.
- Meritor will reimburse at the OEM SRT for checking the air chamber and replacement if necessary.

Removed Material Disposition

Repair facilities should return removed Actuators to Meritor Central Material Return Center, 7975 Dixie Hwy, Florence, Kentucky 41042. The OnTrac customer service center (866-668-7221) can arrange for return shipping of the Actuator upon request. The removed Actuators should not be reused.

Claims for Credit

Meritor will accept warranty claims for installing replacement Actuators 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. Meritor 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 Meritor Campaign ID Number: C13AA
- Reference to NHTSA Campaign ID Number : 13E012
- Reference to the vehicle manufacturer's campaign number (optional)
- 17-digit vehicle identification number (VIN)
- Vehicle owner's name, address, and telephone number
- Vehicle in-service date

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- 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
- Tracking number for shipment of returned material

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

Communication

If you conclude that Meritor 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. Meritor wants to assure you that we are concerned for customer safety and your continued satisfaction with our products.

Sincerely,

Charles Smith
Director of Quality, North America
Meritor, Inc.

Enclosures:
Axle serial number and/or VIN List
Meritor Technical Publication No. TP-1338

CUSTOMER	SHIP TO LOCATION	GL_DATE	PRODUCT NUMBER	Axle Serial Number	Chamber Part Number	QUANTITY
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	02/02/11	RD25160NFKF235 614	NWK00298250	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	02/02/11	RD25160NFKF235 614	NWK00298252	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	02/02/11	RD25160NFKF235 614	NWK00298248	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	02/02/11	RD25160NFKF235 614	NWK00298249	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	02/02/11	RD25160NFKF235 614	NWK00298251	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	02/02/11	RR25160NFKF391 614	NWK00298255	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	02/02/11	RR25160NFKF391 614	NWK00298256	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	02/02/11	RR25160NFKF391 614	NWK00298254	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	02/02/11	RR25160NFKF391 614	NWK00298253	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	02/02/11	RR25160NFKF391 614	NWK00298257	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	02/23/11	RD25160NFKF235 614	NWK00306964	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	02/23/11	RD25160NFKF235 614	NWK00306965	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	02/23/11	RD25160NFKF235 614	NWK00306966	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	02/23/11	RD25160NFKF235 614	NWK00306962	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	02/23/11	RD25160NFKF235 614	NWK00306963	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	02/23/11	RR25160NFKF391 614	NWK00306959	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	02/23/11	RR25160NFKF391 614	NWK00306961	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	02/23/11	RR25160NFKF391 614	NWK00306957	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	02/23/11	RR25160NFKF391 614	NWK00306958	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	02/23/11	RR25160NFKF391 614	NWK00306960	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	03/23/11	RD25160NFKF235 614	NWK00316690	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	03/23/11	RD25160NFKF235 614	NWK00316686	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	03/23/11	RD25160NFKF235 614	NWK00316689	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	03/23/11	RD25160NFKF235 614	NWK00316688	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	03/23/11	RR25160NFKF391 614	NWK00316695	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	03/23/11	RR25160NFKF391 614	NWK00316691	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	03/23/11	RR25160NFKF391 614	NWK00316694	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	03/23/11	RR25160NFKF391 614	NWK00316693	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	03/28/11	RD25160NFKF235 614	NWK00316687	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	03/28/11	RR25160NFKF391 614	NWK00316692	E2 3276X24	2

FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	04/27/11	RD23160NFK2475-614	NWK00324928	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	04/27/11	RR23160NCK3759-614	NWK00324927	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	07/13/11	RD25160NFKF235 614	NWK00346169	E2 3276X24	1
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	07/13/11	RR25160NFKF391 614	NWK00346168	E2 3276X24	1
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	08/12/11	RD25160NFKF240-563	NWK00352860	E2 3276X24	1
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	08/12/11	RR25160NFKF397-563	NWK00352861	E2 3276X24	1
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	08/24/11	RD25160NFKF235 614	NWK00356056	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	08/24/11	RD25160NFKF235 614	NWK00356054	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	08/24/11	RD25160NFKF235 614	NWK00356053	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	08/24/11	RR25160NFKF391 614	NWK00356051	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	08/24/11	RR25160NFKF391 614	NWK00356050	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	08/24/11	RR25160NFKF391 614	NWK00356049	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	08/26/11	RD25160NFKF235 614	NWK00356055	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	08/26/11	RR25160NFKF391 614	NWK00356052	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	09/22/11	RD25160NFKF235 614	NWK00363549	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	09/22/11	RD25160NFKF235 614	NWK00363550	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	09/22/11	RD25160NFKF235 614	NWK00363548	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	09/22/11	RD25160NFKF235 614	NWK00363551	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	09/22/11	RR25160NFKF391 614	NWK00363555	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	09/22/11	RR25160NFKF391 614	NWK00363553	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	09/22/11	RR25160NFKF391 614	NWK00363552	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	09/22/11	RR25160NFKF391 614	NWK00363554	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	10/25/11	RD25160NFKF235 614	NWK00370776	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	10/25/11	RR25160NFKF391 614	NWK00370772	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	10/26/11	RD25160NFKF235 614	NWK00370774	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	10/26/11	RD25160NFKF235 614	NWK00370777	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	10/26/11	RD25160NFKF235 614	NWK00370775	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	10/26/11	RR25160NFKF391 614	NWK00370770	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	10/26/11	RR25160NFKF391 614	NWK00370773	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	10/26/11	RR25160NFKF391 614	NWK00370771	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	11/09/11	RD25160NFKF235 614	NWK00375993	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	11/09/11	RD25160NFKF235 614	NWK00375990	E2 3276X24	2

FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	11/09/11	RD25160NFKF235 614	NWK00375991	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	11/09/11	RR25160NFKF391 614	NWK00375988	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	11/09/11	RR25160NFKF391 614	NWK00375986	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	11/09/11	RR25160NFKF391 614	NWK00375989	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	11/14/11	RD25160NFKF235 614	NWK00375992	E2 3276X24	1
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	11/14/11	RR25160NFKF391 614	NWK00375987	E2 3276X24	1
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	12/14/11	RD25160NFKF235 614	NWK00385077	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	12/14/11	RD25160NFKF235 614	NWK00385078	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	12/14/11	RR25160NFKF391 614	NWK00385082	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	12/14/11	RR25160NFKF391 614	NWK00385081	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	12/19/11	RD25160NFKF235 614	NWK00385076	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	12/19/11	RD25160NFKF235 614	NWK00385075	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	12/19/11	RR25160NFKF391 614	NWK00385080	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	12/19/11	RR25160NFKF391 614	NWK00385079	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	05/02/12	RD25160NFKF235 614	NWK00418282	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	05/02/12	RD25160NFKF235 614	NWK00418283	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	05/02/12	RD25160NFKF235 614	NWK00418284	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	05/02/12	RD25160NFKF235 614	NWK00418285	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	05/02/12	RR25160NFKF391 614	NWK00418286	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	05/02/12	RR25160NFKF391 614	NWK00418287	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	05/02/12	RR25160NFKF391 614	NWK00418288	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	05/02/12	RR25160NFKF391 614	NWK00418289	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	06/06/12	RD25160NFKF235 614	NWK00430781	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	06/06/12	RR25160NFKF391 614	NWK00430778	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	06/08/12	RD25160NFKF235 614	NWK00430783	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	06/08/12	RR25160NFKF391 614	NWK00430780	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	06/12/12	RD25160NFKF235 614	NWK00430782	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	06/12/12	RR25160NFKF391 614	NWK00430779	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	07/13/12	RD25160NFKF235 614	NWK00440251	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	07/13/12	RD25160NFKF235 614	NWK00440252	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	07/13/12	RD25160NFKF235 614	NWK00440253	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	07/13/12	RR25160NFKF391 614	NWK00440248	E2 3276X24	2

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FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	07/13/12	RR25160NFKF391 614	NWK00440249	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	07/13/12	RR25160NFKF391 614	NWK00440250	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	07/31/12	RD23160NFK2421-563	NWK00445161	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	07/31/12	RR23160NCK3700-563	NWK00445165	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	08/09/12	RD25160NFKF235 614	NWK00449014	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	08/09/12	RD25160NFKF235 614	NWK00449015	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	08/09/12	RD25160NFKF235 614	NWK00449016	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	08/09/12	RR25160NFKF391 614	NWK00449011	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	08/09/12	RR25160NFKF391 614	NWK00449012	E2 3276X24	2
FERRARA FIRE APPARATUS	NWK/HOLDEN/FFA	08/09/12	RR25160NFKF391 614	NWK00449013	E2 3276X24	2
					Total Shipped	**202**

MERITOR®

Technical Bulletin

MGM Brake Chamber Inspection and Replacement

Vehicles Equipped with MGM Type 24 J-Series Piston Parking Brake Actuators, and Meritor DiscPlus™ EX225 Air Disc Brakes or Q Plus™ Cam Brakes/Rear Axles Only

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 supported only by jacks. Jacks can slip and fall over. Serious personal injury and damage to components can result.

Before you service a spring chamber, carefully follow the manufacturer's instructions to compress and lock the spring to completely release the brake. Verify that no air pressure remains in the service chamber before you proceed. Sudden release of compressed air can cause serious personal injury and damage to components.

Remove dry brake dust with a vacuum brush or wipe the areas with a damp cloth. Never use an air line to blow dust from the brake and rotor area. Never try to accelerate drying time by using an air line. Serious personal injury and damage to components can result.

⚠ ASBESTOS AND NON-ASBESTOS FIBERS WARNING

Some brake linings contain asbestos fibers, a cancer and lung disease hazard. Some brake linings contain non-asbestos fibers, whose long term effects to health are unknown. You must use caution when you handle both asbestos and non-asbestos materials.

How to Obtain Additional Maintenance, Service and Product Information

Refer to Maintenance Manual MM-0467, DiscPlus™ EX225 Air Disc Brake; and Maintenance Manual 4, Cam Brakes and Automatic Slack Adjusters. To obtain these publications, visit Literature on Demand at meritor.com.

Contact the OnTrac Customer Service Center at 866-668-7221 (United States and Canada); 001-800-889-1834 (Mexico); or email OnTrac@meritor.com.

How to Obtain Additional Parts

Contact Meritor's Commercial Vehicle Aftermarket at 888-725-9355.

MGM Brake Chamber Inspection and Replacement

This technical bulletin provides procedures for inspecting and replacing MGM Type 24 J-Series parking brake chambers that have date codes between November 23, 2010, and March 31, 2012.

Call the OnTrac Customer Service Center Before Starting the Inspection Procedures

Contact the OnTrac Customer Service Center for authorization to proceed with the inspection and chamber replacement. If you cannot locate a qualified repair station, OnTrac will work with you and the local Meritor district manager to find a repair facility for you. In some circumstances, Meritor may authorize an end user or other repair facility to conduct the inspection and chamber replacement.

Call the OnTrac Customer Service Center at 866-668-7221 (US and Canada) between 8:00 AM and 8:00 PM ET Monday through Friday, and between 9:00 AM and 6:00 PM ET on Saturday. After selecting "preferred language," select option 1 for axles and braking systems and refer to Program number C13AA.

The OnTrac Customer Service Center requires the following information to assign the repair facility or end user a case number and permission to proceed with the work.

- Reference to Meritor's Program number C13AA
- Complete 17-digit vehicle identification number (VIN)
- Vehicle owner's name, address and telephone number
- Axle model and serial number. Figure 1.
- Vehicle in-service date
- Repair facility's name, address and telephone number
- Repair facility's hourly rate

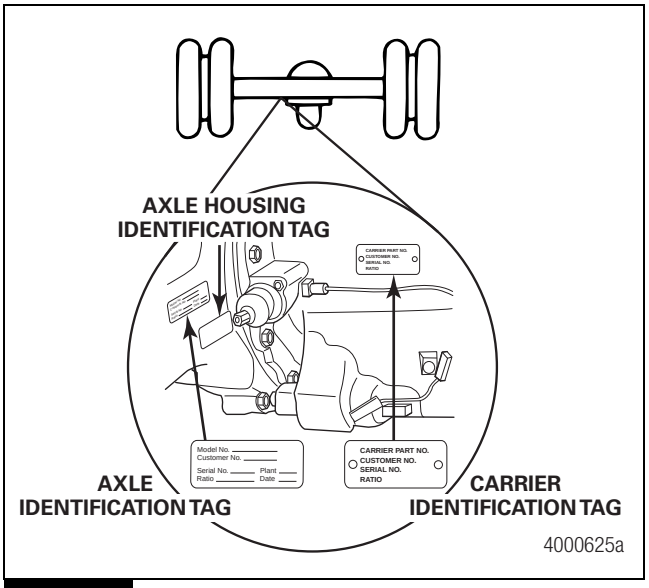

Figure 1

Labor Time Allowances

Table A: Labor Time Allowances

Description	SRT
Inspection time	0.6 hour per axle wheel end
Repair time if required	1.75 hours per axle wheel end

Replacement Parts

Table B: Replacement Parts

Part Number	Description	Quantity per Axle
E2 3276X24	Disc Brake Chamber	As Required
E3 3276X24	Disc Brake Chamber	As Required
E4 3276X24	Disc Brake Chamber	As Required
E5 3276X24	Disc Brake Chamber	As Required
E7 3276X24	Disc Brake Chamber	As Required
E8 3276X24	Disc Brake Chamber	As Required
A71-3276P16	Drum Brake Chamber	As Required
A72-3276P16	Drum Brake Chamber	As Required
A73-3276P16	Drum Brake Chamber	As Required
B98-3276D30	Drum Brake Chamber	As Required

Replacement parts can be ordered from your local parts supplier.

You must disable a chamber that requires replacement by using a cutting tool, such as a die grinder with a cutting wheel, to remove both brake chamber mounting studs at the face of the brake chamber. Figure 2.

OnTrac will require confirmation that the chamber has been disabled before a warranty claim is approved.

Once the brake chamber mounting studs are removed, dispose of the chamber according to the chamber manufacturer's guidelines.

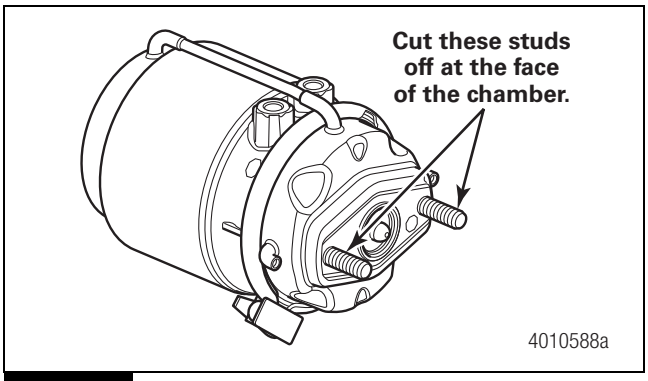

Figure 2

Required Tools

- Appropriate Capacity Safety Stands
- Appropriate Capacity Jack
- Appropriate Caliper Lifting Device
- Air Tools
- Hand Tools

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- 1-1/2-inch Lug Nut Socket
- Torque Wrench up to 150 lb-ft (200 N•m)
- Torque Wrench up to 450 lb-ft (600 N•m)

Identify the Brake Chambers for Replacement

Use the following procedure to check the date code on the brake chamber identification tag to determine if the brake chamber requires replacement. Brake chambers which have date codes falling on or between November 23, 2010 and March 31, 2012 must be replaced. If the date code found on the chamber identification tag is outside that date range, the inspection is complete.

If you are inspecting a brake chamber that is not mounted to a vehicle, follow the procedure to identify the brake chamber and only replace stock if the date code on the chamber being inspected falls within the suspect range.

1. Wear safe eye protection. Park the vehicle on a level surface. Block the wheels to prevent the vehicle from moving.
2. Locate the identification tag on the brake chamber. Figure 3.

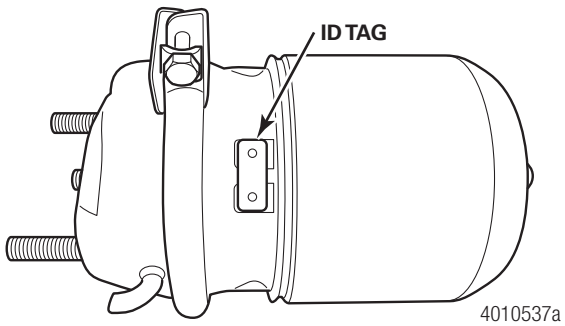

Figure 3

3. Check the identification tag for a date code falling on or between the date range of November 23, 2010 and March 31, 2012. As an example, the date code shown in Figure 3 (C051911 centered in ID tag) means "built on May 19, 2011". In this example, the chamber requires replacement. Figure 4.
   - **If the date code on the brake chamber identification tag is on or between the date range of November 23, 2010 and March 31, 2012:** Replace the brake chamber using the disc or drum brake procedures in this technical bulletin.
   - **If the date code on the brake chamber identification tag is not within the date range:** The chamber does not require replacement. Continue checking the rest of the brake chamber identification tags on the vehicle.

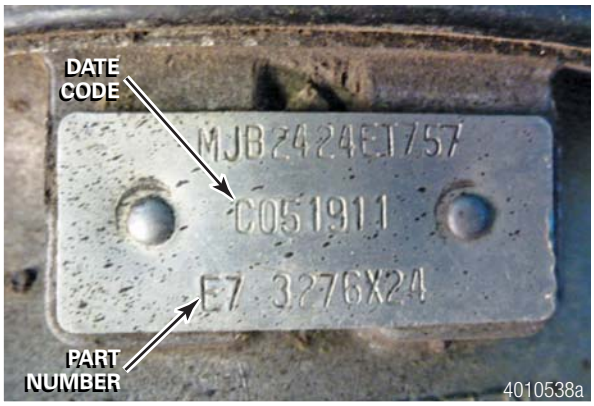

Figure 4

Disc Brake Chamber Replacement and Inspection Procedures

Remove the Brake Chamber from the Caliper Assembly

1. Raise the axle of the wheel end you are servicing. Support it with safety stands.
2. Remove the tire and wheel assembly according to the manufacturer's instructions.
3. Follow the brake chamber manufacturer's instructions to completely release the brake. This may require manually caging the park brake spring assembly using the manual caging screw.
4. In order to prevent debris from entering the caliper assembly, use a vacuum brush or damp cloth to remove any dirt from the brake assembly.
5. Disconnect the air lines connected to the brake chamber ports according to the vehicle manufacturer's instructions.
6. Use the correct wrench to remove the air chamber nuts and washers. Figure 5.

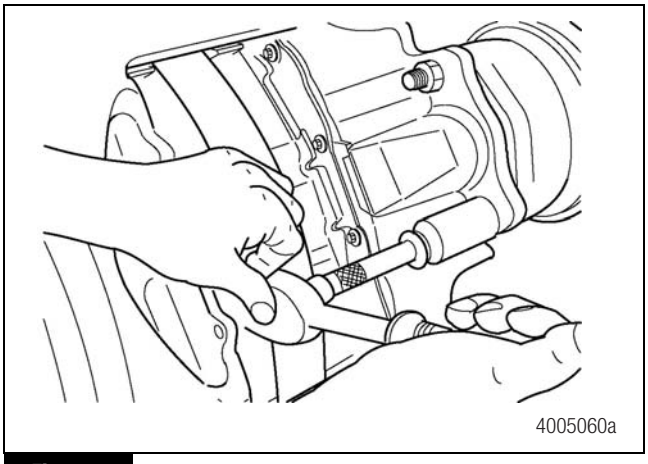

Figure 5

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7. Remove the air chamber assembly from the brake caliper.

Inspect the Brake Assembly

Perform the following inspections during the brake chamber replacement process.

1. Inspect the brake assembly for signs of overheating according to the instructions in Maintenance Manual MM-0467 and described in the following steps.
   - **If any issues are found during the inspection:** Contact the OnTrac Customer Service Center using the instructions at the beginning of this bulletin before the removal and replacement of any brake component.
2. Use a vacuum brush or damp cloth to remove any dirt from the brake assembly.
3. Inspect the brake assembly for the following signs of overheating. This may require component replacement. Contact the OnTrac Customer Service Center before you replace any parts.

Items that may require replacement

- Burnt or melted caliper piston boots. Figure 6.
- Cracks in the rotor that extend 25% into the thickness of the outer edge of the rotor. Figure 7.
- Heavy Heat Checking — Heavy heat checking is surface cracks that have width and depth. Replace the rotor if the heat checks have a width greater than 0.02-inch (0.5 mm), depth greater than 0.04-inch (1 mm) and extend across the surface more than 75% in the radial direction. Figure 8.
- Brake pads deteriorated from a severe overheating condition. Figure 9 and Figure 10.
- **If you find heavy heat checking on the rotor, cracks in the rotor, deteriorated brake pads, or burnt or melted caliper piston boots:** Component replacement may be required. Contact the OnTrac Customer Service Center using the instructions at the beginning of this bulletin before the removal and replacement of any suspect overheated brake component. OnTrac will advise you as to additional functional checks and parts replacement that may be required.

Items that do not require replacement

Blue Marks or Bands — Blue marks or bands indicate that the rotor was very hot. This does not require rotor replacement. If blue marks or bands are consistently found during scheduled maintenance inspections, it is recommended the brake system be inspected for correct operation and balance. Figure 13.

- **If the brake rotor shows light heat checking or blue marks or bands:** The brake rotor will not require replacement.
- Light Heat Checking — Cracks on the surface of the rotor that result from light heat checking are small and fine and do not require rotor replacement. Figure 11 and Figure 12.

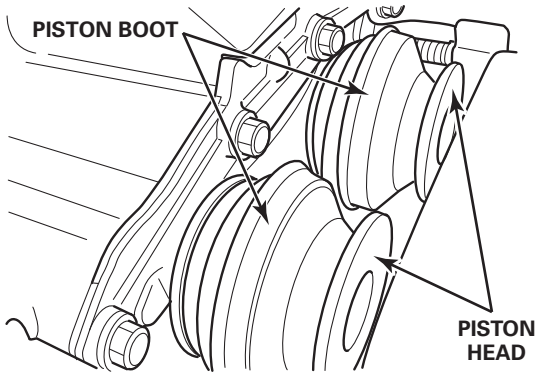
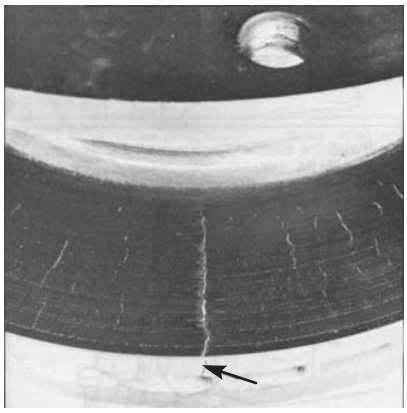
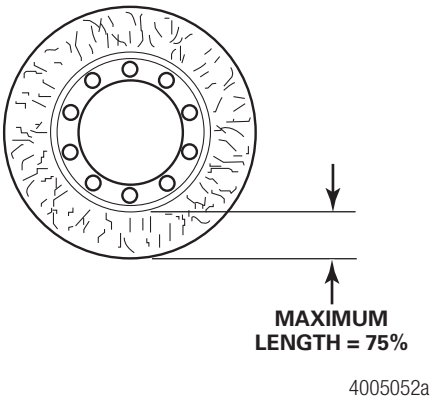


Figure 6



CRACK

Figure 7



HEAVY HEAT CHECKING

Figure 8

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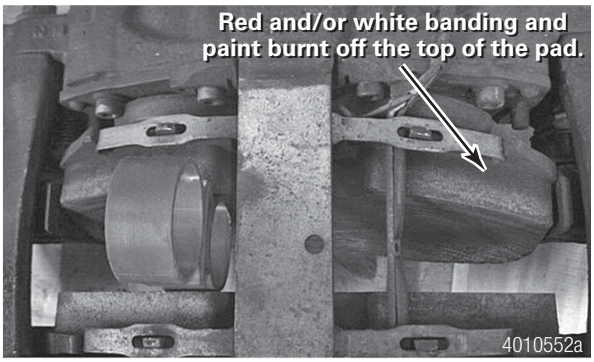
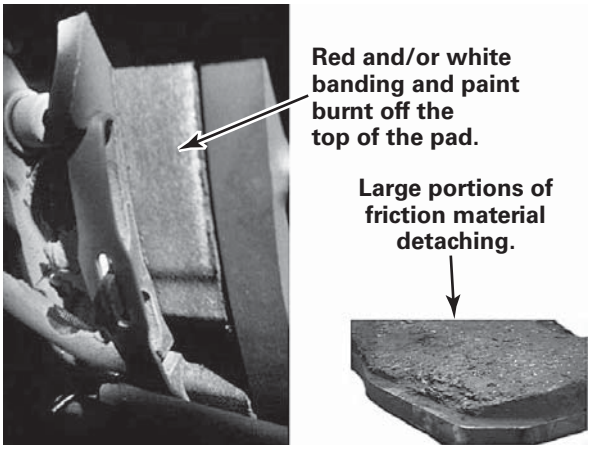


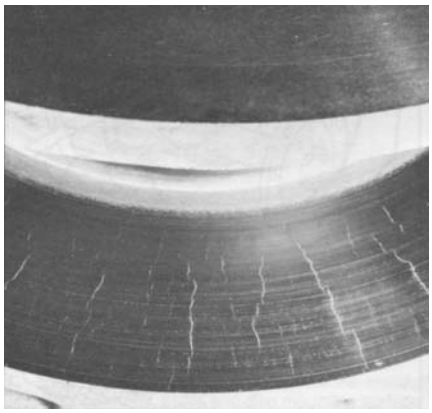
EFFECT OF OVERHEATING ON PADS

Figure 9



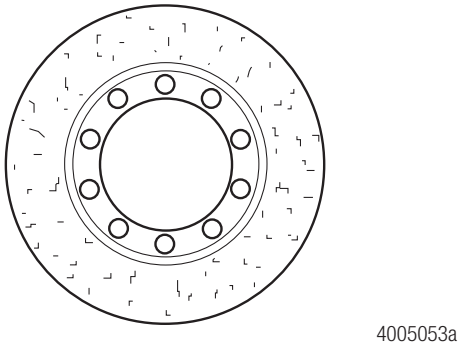
EFFECT OF OVERHEATING ON PADS

Figure 10



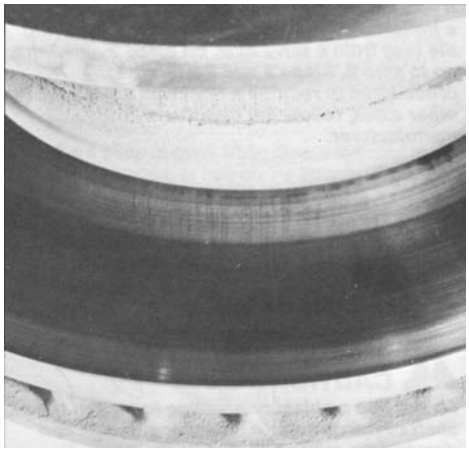
HEAT CHECKING

Figure 11



LIGHT HEAT CHECKING

Figure 12



BLUE MARKS AND BANDS

Figure 13

Install the New Brake Chamber onto the Caliper Assembly

1. Check the date code on the replacement chamber identification tag as previously described in this technical bulletin. Verify the replacement chamber does not have a date code that falls within the suspect range before installing.

   NOTE: Typically, new brake chambers are shipped caged.

2. If the replacement brake chamber is not caged, carefully cage and lock the chamber spring. Always work from the side or front of a spring brake. Do not work from behind the brake. Follow the brake chamber manufacturer's instructions to release the brake.

3. Verify the brake chamber seal is seated correctly, is free of debris, and is not damaged. Verify the brake caliper seal surface and the mounting surface are free of oil, grease and debris, and are not damaged.

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- **If you find debris on the brake chamber or caliper seal:** Use a vacuum brush or damp cloth to remove any dirt from the brake assembly.

4. Position the brake chamber onto the caliper. Determine which of the two possible brake chamber orientations places the air ports in the original location.

   For brake chambers equipped with elbows, the brake chamber must be oriented in such a way that any two elbows will easily allow water and contaminants to drain from the brake chamber. Figure 14.

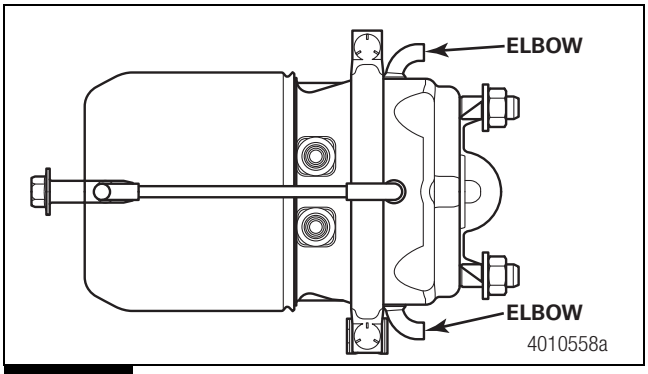

Figure 14

5. As you position the brake chamber onto the caliper, visually check to ensure the chamber push rod is nesting in the pocket of the operating shaft.
6. Firmly hold the brake chamber onto the brake caliper by hand. Place the two washers and nuts onto the mounting studs. Be sure to work from the side or front of the caliper, not in back of it.
7. Use a 24 mm wrench to tighten the nuts in an alternating sequence.
   A. Tighten the nuts until the mating surfaces of the brake chamber and brake caliper meet. Use minimal torque on the two nuts to seat the mating surfaces.
   B. Use a torque wrench to tighten each nut, first to 59-75 lb-ft (80-100 N•m) and then finally to 133-155 lb-ft (180-210 N•m).

⚠ WARNING

If the brake chamber is supplied with removable breather plugs and the bottom-most breather plugs are not removed, the caliper may become contaminated which can cause damage to the internal parts of the caliper. The brakes can seize resulting in serious personal injury and damage to components.

8. If removable breather plugs are supplied with the brake chamber, locate the bottom-most breather plug and remove it from the chamber. Figure 15.

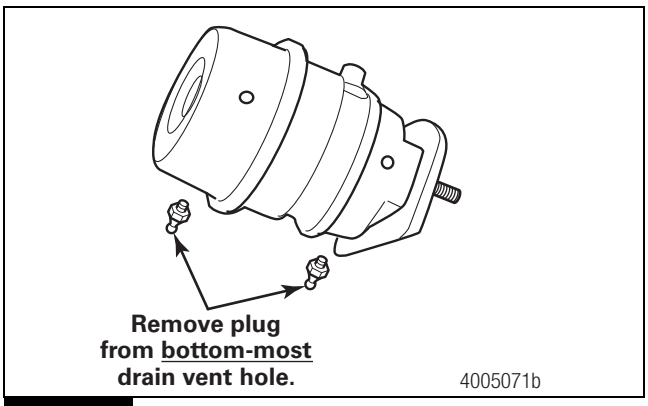

Figure 15

9. Install the air hoses to the brake chamber ports. Refer to the manufacturer's instructions.
10. Set the initial brake pad-to-rotor running clearance using the following procedure.

⚠ CAUTION

Always set the initial brake pad-to-rotor running clearance with the air chamber installed. Damage to components can result.

   A. Remove the adjuster cover. Figure 16.

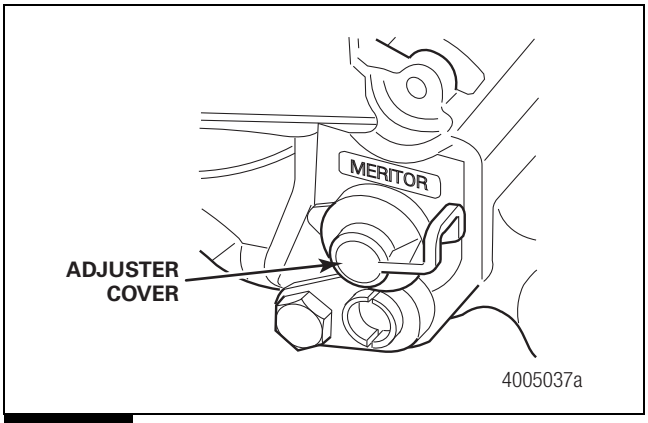

Figure 16

   B. Use a 10 mm wrench to rotate the manual adjuster stem CLOCKWISE so that the brake pad-to-rotor clearance is ZERO. Figure 17.

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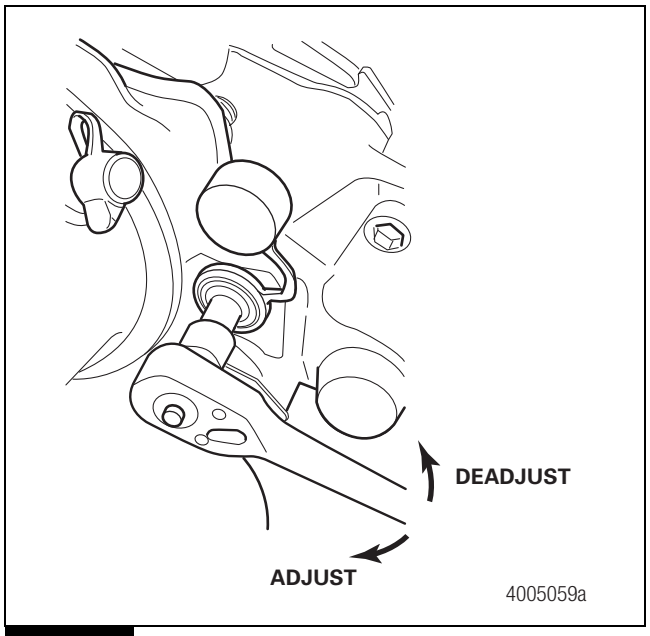

Figure 17

C. Deadjust the manual adjuster stem one half turn COUNTERCLOCKWISE to set the initial running clearance. Reinstall the adjuster cover. Figure 17.

11. Carefully uncage and unlock the spring. Follow the brake chamber manufacturer's instructions.
12. Install the tire and wheel assembly according to the manufacturer's instructions.
13. Remove the safety stands and lower the vehicle.
14. Remove the blocks from the wheels.
15. Perform a post-service brake function test and inspection according to the fleet maintenance guidelines.
16. Contact the OnTrac Customer Service Center as described at the end of this technical bulletin.
17. Return the vehicle to service.

Drum Brake Chamber Replacement and Inspection Procedures

Remove the Brake Chamber from the Drum Brake Assembly

1. Raise the axle of the wheel end you are servicing. Support it with safety stands.
2. Remove the tire and wheel assembly following the manufacturer's instructions.
3. Follow the brake chamber manufacturer's instructions to completely release the brake. This may require manually caging the park brake spring assembly using the manual caging screw.
4. Disconnect the air lines that are connected to the brake chamber according to manufacturer's instructions.
5. Remove the clevis pin(s) from the clevis on the automatic slack adjuster and rotate the slack adjuster away from the clevis. Figure 18.

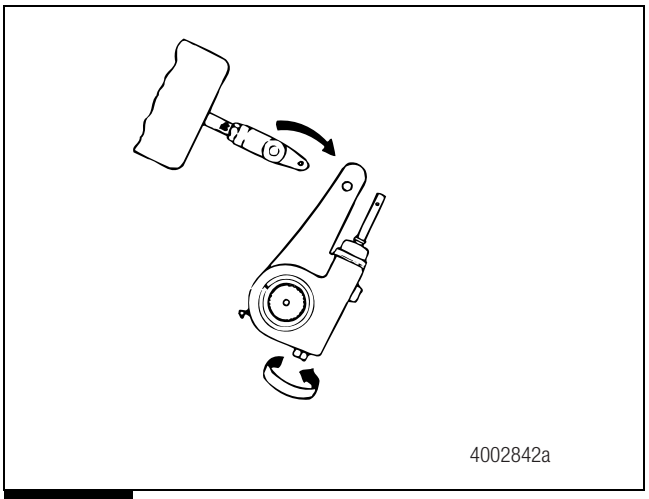

Figure 18

6. Use the correct wrench to remove the air chamber nuts and washers. Figure 19.

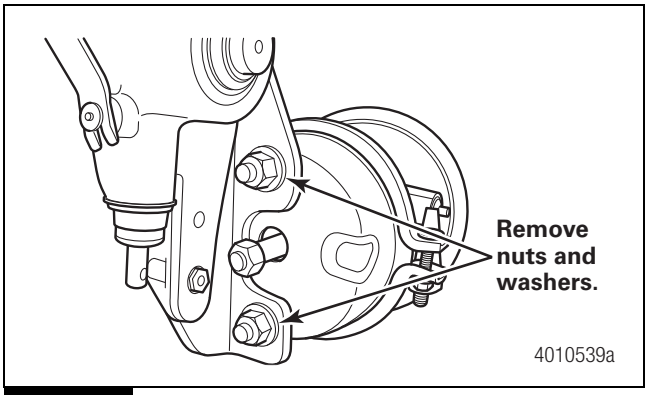

Figure 19

7. Remove the air chamber assembly from the brake chamber bracket assembly.

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Inspect the Brake Assembly

Refer to Maintenance Manual 4 for complete inspection, replacement and adjustment of components.

1. Inspect the brake according to the instructions in Maintenance Manual 4.
2. Inspect the brake assembly for the following conditions.
   - Cracks in the brake drum. Figure 20.
   - Heavy heat crazing that covers over 75% of the brake shoe width. Figure 21.
   - Brake linings deteriorated from a severe overheating condition.
   - **If the brake assembly shows any signs of overheating as described above:** Contact the OnTrac Customer Service Center following the instructions in the beginning of this bulletin before the removal and replacement of any suspect overheated brake component.

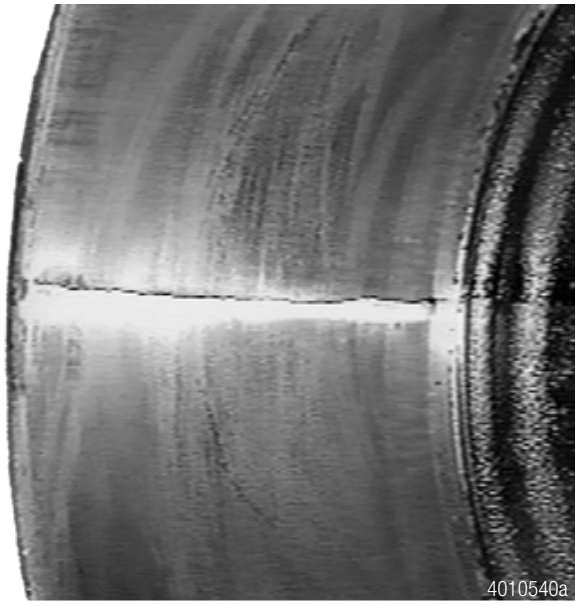

Figure 20

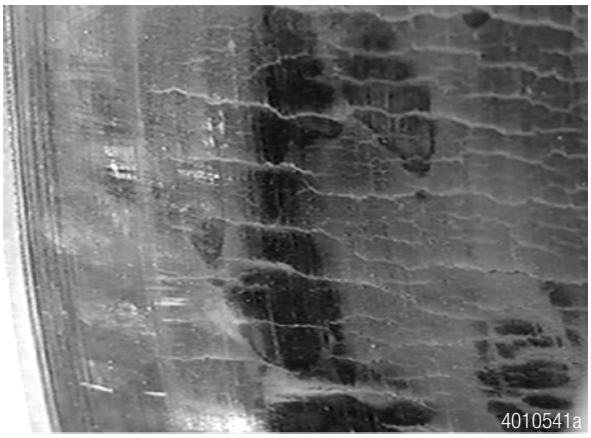

Figure 21

Install the New Brake Chamber onto the Chamber Bracket Assembly

1. Check the date code on the replacement chamber identification tag as previously described in this technical bulletin. Verify the replacement chamber does not have a date code that falls within the suspect range before installing.
2. If the replacement brake chamber is not caged, carefully cage and lock the spring of the chamber. Follow the brake chamber manufacturer's instructions completely to release the brake. Typically, new brake chambers are shipped caged.
3. Verify that the brake chamber bracket assembly mounting surface is free of oil, grease and debris, and is not damaged.
4. Follow the instructions in Maintenance Manual 4 for the correct set-up and adjustment of the brake chamber push rod.
5. Attach the slack adjuster clevis to the brake chamber push rod according to instructions in Maintenance Manual 4 when using a Meritor slack adjuster.
   - **If a Meritor slack adjuster is not used:** Refer to the vehicle manufacturer's instructions for correct set-up procedures.
6. Position the brake chamber onto the chamber bracket assembly. Determine which of the two possible brake chamber orientations places the ports in the most accessible position.
7. Hold the brake chamber onto the brake chamber bracket assembly by hand. Place the two washers and nuts onto the mounting studs. Be sure to work from the side or front of the brake chamber, not behind it.
8. Use an appropriate wrench to tighten the nuts in an alternating sequence as follows.

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A. Tighten the nuts until the mating surfaces of the brake chamber and brake chamber bracket meet. Use minimal torque on the two nuts to seat the mating surfaces.

B. Use a torque wrench to tighten each nut to the correct torque value. Refer to Table C for the correct torque value.

9. When using a Meritor slack adjuster, follow the instructions in Maintenance Manual 4 for the correct set-up and adjustment of the Meritor automatic slack adjuster.

   - **If a Meritor slack adjuster is not used:** Refer to the OEM for set-up and adjustment instructions.

10. Install the air hoses to the brake chamber ports. Refer to the manufacturer's instructions.
11. Uncage and unlock the parking brake spring. Follow the brake chamber manufacturer's instructions.
12. Install the tire and wheel assembly according to the manufacturer's instructions.
13. Remove the safety stands and lower the vehicle.
14. Remove the blocks from the wheels.
15. Perform a post-service brake function test and inspection as per fleet maintenance guidelines.
16. Contact the OnTrac Customer Service Center as described at the end of this technical bulletin.
17. Return the vehicle to service.

Table C: Torque Specifications

Bolt Size	Torque, lb-ft (N•m)
7/16″-20	60-75 (81-102)
1/2″-20	85-115 (115-156)
9/16″-18	130-165 (176-224)
5/8″-18	180-230 (244-312)
3/4″-16	350-450 (474-610)
3/4″-10	270-350 (366-474)

Call the OnTrac Customer Service Center After Completing the Inspection and Replacement Procedures

Contact the OnTrac Customer Service Center at 866-668-7221 (US and Canada) between 8:00 AM and 8:00 PM ET Monday through Friday, and between 9:00 AM and 6:00 PM ET on Saturday. After selecting "preferred language," select option 3 for foundation brake products and refer to Program number C13AA.

The repair facility or end user will be paid directly by Meritor. Once the repairs have been completed, call the OnTrac Customer Service Center with the following information to receive payment. You may contact the OnTrac Customer Service Center if you have any questions on the above reimbursements or repair procedures.

- Vehicle repair date
- Vehicle mileage at the time of the repair
- Repair facility work order number
- Total labor hours required to perform the repairs
- Axle serial number
- Returned shipping information (confirmation that the removed brake chambers have been shipped back to Meritor)

MERITOR

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