



Technical Information Bulletin

E191



Section

Engine

Subject

PACCAR MX-13 EPA2017 MY2017 Engine Brake Rocker Inspection

Release Date

8/7/2018

Condition

Operators may complain of low power and/or indicator lamps with Torque Contribution faults.

Chassis Affected

5367 (4532 U.S. and 835 Canada) T680, T880, T800, and W900 chassis built from 01/16/2017 through 01/02/2018 equipped with PACCAR MX-13 EPA2017 MY2017 engines. See the attached chassis list for specific chassis.

Action

CAMPAIGN

Service all chassis affected that enter your dealership, even if the customer has no issue with the chassis.

1. Review the attached chassis list for your dealer code and schedule your customer(s) for service if their chassis is on the list.
2. If you are not using Service Management to start repair orders, review the DWWC or SIR for "Complete" next to the "E191" campaign code prior to performing this repair.
3. Follow the procedures below to inspect the engine brake rocker assembly and make appropriate repairs.

Warranty

Through Standard Warranty (excludes Extended Warranty) or for repairs completed by 09/01/2019, whichever is greater, Kenworth will pay for parts at dealer net plus applicable mark-up and labor:

- Inspect and replace springs (chassis with less than 100,000 miles), use quick claim E191A (T680/T880):
 - 3.5 hours includes:
 - R and R Air Cleaner 0.3 hr.
 - R and R Valve Cover 0.2 hr.
 - R and R Injector harness casing 0.4 hr.
 - R and R both Rocker Assemblies 1.6 hrs.
 - Rocker Arm Brake Capsule Spring Inspection and R and R, 2 assemblies 0.4 hr
 - Engine diagnostic road test 0.5 hr.
 - Connect DAVIE4, pull codes 0.1 hr.
- Inspect and replace springs (chassis with less than 100,000 miles), use quick claim E191B (T800/W900):
 - 3.8 hours includes:
 - R and R Air Cleaner 0.6 hr.
 - R and R Valve Cover 0.2 hr.
 - R and R Injector harness casing 0.4 hr.
 - R and R both Rocker Assemblies 1.6 hrs.
 - Rocker Arm Brake Capsule Spring Inspection and R and R, 2 assemblies 0.4 hr.
 - Engine diagnostic road test 0.5 hr.
 - Connect DAVIE4, pull codes 0.1 hr.
- Inspect and replace springs and valve cover gasket (chassis with over 100,000 miles ONLY), use quick claim E191C (T680/T880):
 - 3.5 hours includes:
 - R and R Air Cleaner 0.3 hr.
 - R and R Valve Cover 0.2 hr.
 - R and R Injector harness casing 0.4 hr.
 - R and R both Rocker Assemblies 1.6 hrs.
 - Rocker Arm Brake Capsule Spring Inspection and R and R, 2 assemblies 0.4 hr.
 - Engine diagnostic road test 0.5 hr.
 - Connect DAVIE4, pull codes 0.1 hr.
- Inspect and replace springs and valve cover gasket (chassis with over 100,000 miles ONLY), use quick claim E191D (T800/W900):
 - 3.8 hours includes:
 - R and R Air Cleaner 0.6 hr.
 - R and R Valve Cover 0.2 hr.
 - R and R Injector harness casing 0.4 hr.
 - R and R both Rocker Assemblies 1.6 hrs.
 - Rocker Arm Brake Capsule Spring Inspection and R and R, 2 assemblies 0.4 hr.
 - Engine diagnostic road test 0.5 hr.
 - Connect DAVIE4, pull codes 0.1 hr.
- Eaton Service Tool kit, use quick claim E191E
 - Reimbursement for the Eaton Service Kit required to perform this repair. **One kit is required per dealer. No more than one kit per dealer may be claimed per dealer.**
- File a long form claim if rocker arms must be replaced. Include the following in the long form claim:
 - Use the information in the Claim Coding table below.
 - For SRT 045-640: You may add an additional 0.1 hr. if replacing more than one rocker arm assembly. Total

SRT not to exceed 0.2 hr. for one engine brake rocker assembly.

- Rocker Arm(s) parts.
- File an additional claim for extraordinary circumstances. A quick claim for standard labor must be filed first.

Kenworth dealers may perform E191 repairs on Peterbilt chassis, but Quick Claims do not apply. For Peterbilt chassis repairs, use the long claim input form in DWWC selecting "Draft/Offline Claims", the "General" tab, in the "Type of Claim" drop down box, select "PACCAR Engine Claim", then manually enter claim codes (Campaign #, Failure type, and SRT).

Take-Off Parts Disposition: Ship take-off parts to supplier per ship code EC

CLAIM CODING			
Failure Location:	043-005-001	Work Accomplished:	20
Failure Type:	295	Responsibility Code:	05
SRT Code:	041-001 (Inspect R and R air cleaner (2.1M 0.3 hr., 1.9M 0.6 hr.) 045-600 R and R Valve Cover 044-686 Injector harness casing R and R (Does not include air cleaner or valve cover R and R) 045-630 R and R Rocker Assy (for 2) 045-639 Rocker Arm Brake Capsule Spring Inspection and R and R (2 Assemblies) 045-640 R and R Rocker Arm 100-501 (diagnostic road test) 045-989 DAVIE 4-Connect Davie, pull codes. All steps included.	Claim Type:	F
Vendor Code:	E191		

Parts

Parts are available from PACCAR Parts.

Table 1 Parts Required

Quantity	Part Number	Description
As required, up to 6	2188202PE	Eaton Spring Repair Kit

1 ml	Locally Sourced	Loctite 243 (for rocker arm replacement only)
2 oz.	Locally sourced	Engine oil for lubrication (for rocker arm replacement only)
As required	2177656PE	Exhaust Rocker Arm (for rocker arm replacement only)

Table 2 Additional Parts Required for engines with over 100,000 miles

Quantity	Part Number	Description
1	2105834PE	Valve Cover Gasket. Replace if engine has over 100,000 miles
1	2105835PE	Valve Train Casing Gasket. Replace if engine has over 100,000 miles

Table 3 Special Tool Requirement

Quantity	Part Number	Description
1	2188200PE	Eaton Service Tool Kit. One kit is required per dealership to perform this repair.

Procedure

A video of this procedure is available [here](#).

You are encouraged to watch this 12 minute video prior to performing this procedure for the first time.

- Use the attached Engine Brake Rocker Inspection procedure to inspect the Engine Brake Rocker spring capsules and make needed repairs.
- Re-use the valve cover gasket and valve train casing gasket if the engine has less than 100,000 miles.
- An Eaton Service Tool Kit is required to perform this procedure.

Attachments

 [Dealer\Chassis List](#)

 [Engine Brake Rocker Inspection](#)

 [Customer Letter](#)

Authored by: OF

Access to PACCAR's Enterprise Portal is provided as a benefit of doing business with PACCAR. All applications and content accessed through this system are confidential and proprietary and the property of PACCAR Inc and its suppliers, and must be kept strictly confidential pursuant to the contract licensing such access. Disclosure, publication, release or distribution of any material found on PACCAR systems to any person other than employees with a need to know such information is strictly prohibited. All activity on this system is monitored. If PACCAR suspects or discovers any unauthorized activity, access may be immediately terminated without prior notification. Violators may be subject to legal action.

© Copyright 2018 PACCAR Inc. All rights reserved. We welcome your [feedback](#) on this page. For technical questions or

concerns about this page, please contact the [DealerNet Webmaster](#).



Kenworth Truck Company
Customer Service Department
PO Box 1000
Kirkland, Washington 98083-1000
(425) 828-5000

Date TBD

[First VIN]
Customer Name
Address
City, State Zip

Subject: ESB E191: PACCAR MX-13 EPA2017 MY2017 Engine Brake Rocker Assembly Inspection

Dear Kenworth Customer,

Your vehicle (listed within this letter) is eligible for a campaign to inspect and repair the Engine Brake Rocker Assembly. The assembly was built with out of spec springs, and broken springs can lead to loss of engine brake function, and eventually to engine damage.

Please contact a Kenworth dealership to schedule an appointment for this work. If you have already had this work performed, please disregard this letter. You can find your nearest Kenworth dealer at Dealer Locator on the website www.Kenworth.com.

When contacting your selected Kenworth dealer, refer to campaign E191 and the VIN listed on this letter. The repair will take approximately **4.0 hours**, depending on vehicle configuration and dealer scheduling. There will be no charge to you if completed within Standard Warranty (excludes Extended Warranty) or for upgrades completed by **09/01/2019**, whichever is greater. We apologize for this inconvenience but ask for your cooperation to ensure your continued satisfaction with Kenworth products.

If you require further information about this campaign, reimbursement of a pre-notification remedy associated with this campaign or experience any difficulty in making arrangements for this repair, please contact:

Email: Kenworth.Customer.Service@paccar.com with the bulletin number in the subject line.

OR

Mail: Kenworth Truck Company, P.O. Box 1000, Kirkland, WA 98083-1000, Attn: Customer Service Department

OR

Phone: 425-828-5000.

If you no longer own this vehicle, we would appreciate your advising us of the new owner if you know their name.

Thank you,

A handwritten signature in black ink, appearing to read 'Shondip Chakravarty', is written over a white background.

Shondip Chakravarty
Director of Customer Service
Kenworth Truck Company

VIN: [VIN List]

Eaton Service Tool Kit 2188200PE, containing

Qty	Description
1	12V power supply and jumper wire
2	Oil hole plugs
2	Bolts with washers to retain the oil hole plugs

Repair procedure

A video of this procedure is available at:

- Kenworth DealerNet Service | Standard Repair Times | Kenworth SRT Videos | Video Catalog | Engine Components | MX13-17 Exhaust Rocker Plunger Spring Inspection and R&R, Rocker Arm R&R.
- Peterbilt DealerNet

You are encouraged to watch this 12 minute video prior to performing this procedure for the first time.



CAUTION

Keep the work area clean during this procedure. Dirt and debris may result in engine brake failure.

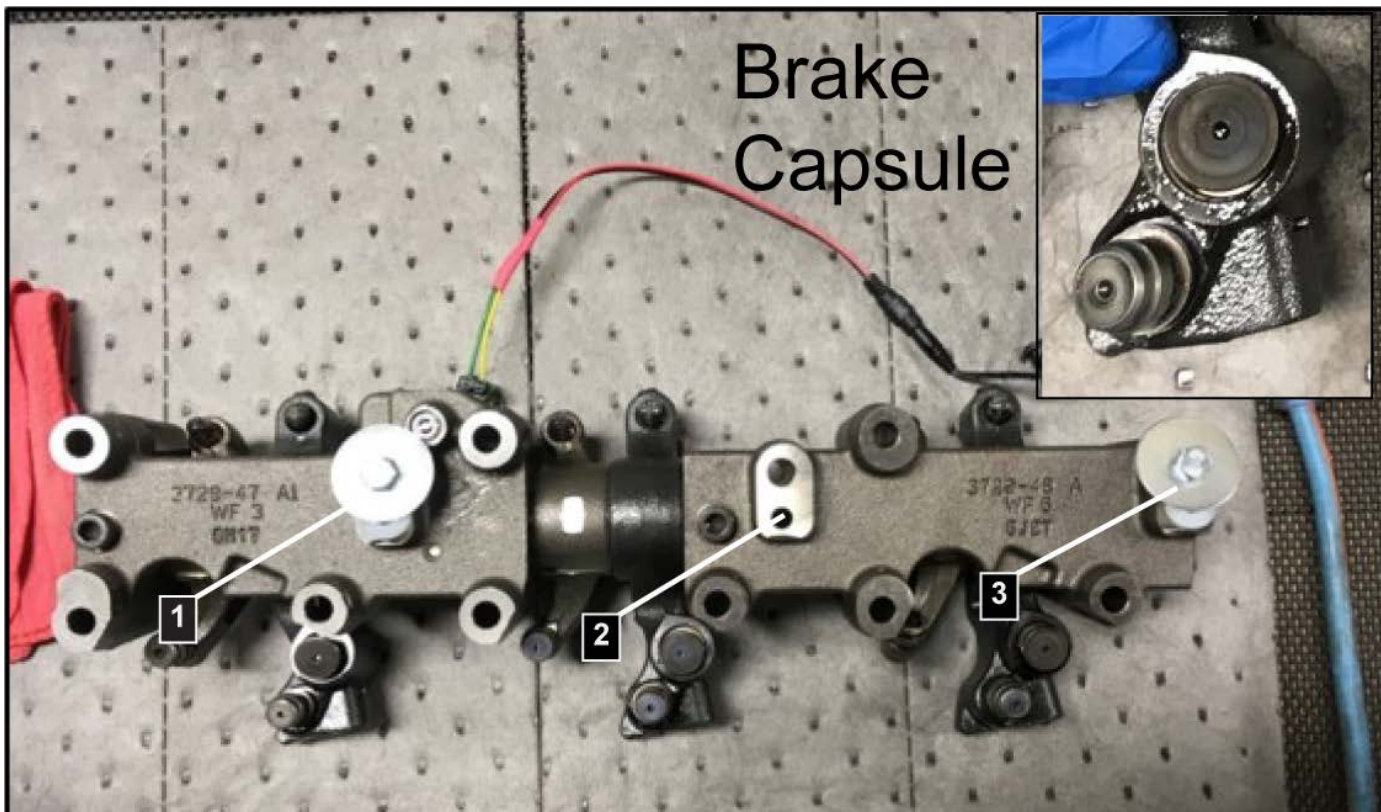
1. Use procedures found in Engine Rapido to remove the engine brake assembly.
2. Place the engine brake assembly on a clean work area.

PACCAR MX-13 Engine Brake Capsule Replacement

3. Clean residual oil from the outermost oil holes (1 & 3) and then firmly insert the rubber plugs into the oil holes (1 & 3) as shown in the figure below. Install the supplied bolts and fender washers finger tight, as shown in the following figure, to retain the plugs.

i NOTE

Oil hole (2) is left open to supply air.



4. Connect the 12-volt power source and supplied jumper wire to the Oil Control Valve (OCV). Connect the power source to a 120V source. A distinct click will be heard from the OCV when power is applied to it.
5. Place clean shop rags over the plugged oil holes (1 & 3 in the image above) to capture any potential oil spray during the procedure.
6. Place shop rags underneath the brake capsule foot to be removed.

PACCAR MX-13 Engine Brake Capsule Replacement

7. Using a rubber tipped blow gun, continuously apply light air pressure to the middle oil hole (2) while alternating between firmly pushing down and pulling out on the brake capsule foot to remove the brake capsule from the rocker arm bore.



CAUTION

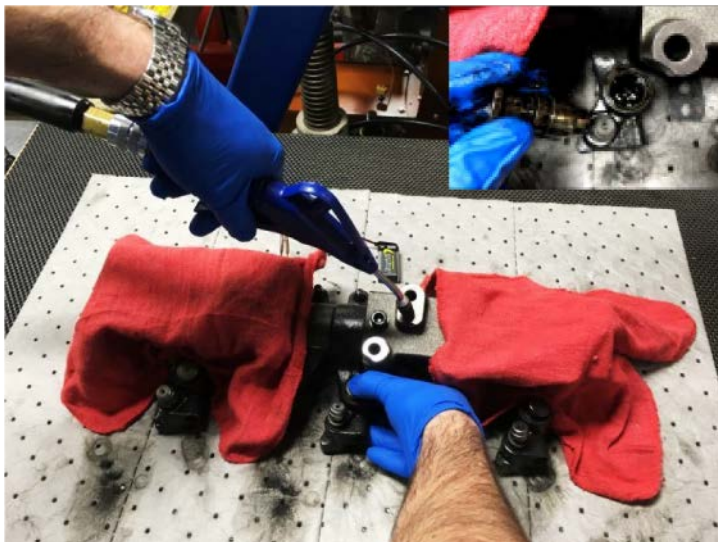
Use extreme caution when applying air pressure. Depending on how the capsule releases, it may release with significant velocity. A full face shield should be worn for this Step.

Always firmly grasp the capsule while using shop air.



NOTE

If the brake capsule is completely collapsed (i.e. no spring return) this is an indication of a broken spring and the entire exhaust rocker arm will need to be removed and replaced.



PACCAR MX-13 Engine Brake Capsule Replacement

8. Separate the plunger from the brake capsule body to inspect the condition of internal return spring.
 - SPRING OK: Proceed to [STEP 9](#).
 - SPRING BROKEN: If the brake capsule return spring is broken then the affected rocker must be replaced. Proceed to [STEP 12](#) after all other capsules have been inspected.

NOTE

If you are having difficulty separating the plunger from the body, depress the check ball in the plunger to relieve internal stiction!



9. Insert a new spring into the brake capsule body and reinstall the plunger.
10. Install the repaired brake capsule into the rocker arm bore:
 - a. Press firmly on brake capsule foot until the latch engages to lock it in place.
 - b. Verify the brake is securely installed by pulling on the foot.



11. Return to [STEP 6](#) and repeat the procedure for the remaining rocker arms.

PACCAR MX-13 Engine Brake Capsule Replacement

12. Remove the M10 dowel bolts (1 or 2) of the affected rocker assembly.



13. Slide the casting assembly off of the shaft until the damaged exhaust rocker arm can be removed and replaced with a new rocker arm.



NOTE

Index the components to be removed so they can be reinstalled in the same location/orientation.

14. Reinstall the casting with the new rocker arm. Use engine oil to lubricate the mating surfaces.
15. Clean the dowel bolt and mating threads.
16. Align the casting to the slot on the shaft, apply Loctite® 243 threadlocker to the threads of the dowel bolt, and the install and torque the dowel bolt to 48 lb-ft (65 N·m).
17. After all the exhaust rocker arms have been repaired or replaced, remove both of the oil hole plugs, the 12-volt power supply, and the jumper wire.
18. Install repaired engine brake assemblies onto engine following the recommended service procedure found in Engine Rapido.
19. Test drive the vehicle to verify engine brake function and performance.