

E316: PACCAR MX-13 EPA 2021 Main Bearing Cap Bolts - Proactive Bolt Upgrade

Number	 Edit  Clone
E316	
Subject	
PACCAR MX-13 EPA 2021 Main Bearing Cap Bolts - Proactive Bolt Upgrade	
Date	
5/20/2024	
Revision	

- 07/09/2026:** The Condition, Chassis Affected, Service Action, Warranty, and Procedure sections have been updated to include the latest prognostics bulletin verbiage.
- 05/23/2025:** Updated condition section to align with 5/2/2025 chassis warranty qualification information.
- 05/02/2025:** Updated Chassis warranty qualification information.
- 04/22/2025:** Additional 4,852 chassis added to chassis list.
- 04/17/2025:** Additional 15 chassis added to chassis list.
- 04/03/2025:** Additional 122 chassis added to chassis list.
- 03/28/2025:** Additional 34 chassis added to chassis list.
- 03/17/2025:** Additional 17 chassis added to chassis list.
- 02/27/2025:** Additional 22 chassis added to chassis list.
- 02/13/2025:** Additional 297 chassis added to chassis list.
- 09/04/2024:** Updated affected engine serial number cutoff.
- 08/23/2024:** Added information on alternative products for locally sourced items.
- 08/16/2024:** Added oil pan gasket and plug to parts list. Included QR code for Torque Tool instructional videos.
- 05/21/2024:** Updated title, and updated verbiage in bulletin to clarify when to perform repair.
- 07/23/2024:** Updated verbiage in bulletin/procedures to reflect change to name of “Nut Runner Tool” to

“Programmable Torque Tool”.

Condition

Schedule this proactive upgrade with the next service event. A complimentary oil change is included.

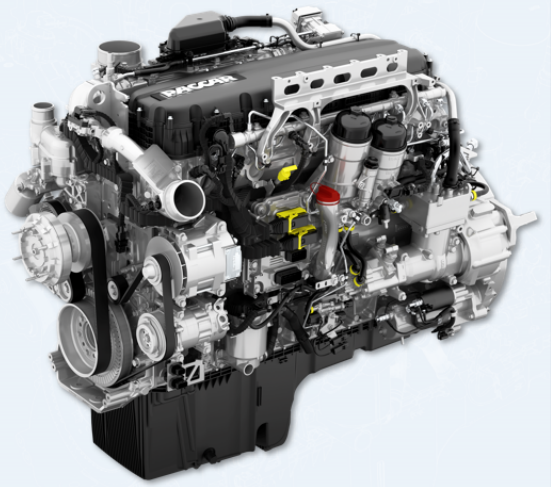
Leveraging PACCAR’s advanced Prognostic prediction algorithms, certain chassis equipped with PACCAR EPA 2021 MX-13 engines will receive proactive replacement instructions for the main bearing cap bolts to maximize uptime and maintain optimal performance.

E316 must be flagged and open in SIR at the time of the repair order (RO) open date to qualify.

Only trucks with an active standard or applicable extended warranty will be included in this campaign. Trucks flagged in SIR whose warranty expires will be removed. If a repair is performed on a chassis flagged in SIR after warranty expiration, PACCAR will consider payment on a case-by-case basis.

Improvement Identified

-  Proactive Upgrade During Free Oil Service
-  Upgraded Bolts
-  Powered By Prognostics
-  Covered Under MX Warranty



MX-13

Chassis Affected

Certain T680, T880, and W990 chassis equipped with PACCAR MX-13 EPA 2021 engines with engine serial number Y314580 and earlier will be identified through the Prognostic Program in SIR as described

above.

Action

Campaign

Schedule this proactive upgrade with the next service event. A complimentary oil change is included.

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. In Service Management, select campaign **E316** to add it to the case. If the unit is released back into service without performing the repair, make sure to also release the campaign in Service Management
3. If you are not using Service Management to start repair orders, review SIR for Complete next to the **E316** campaign code prior to performing this repair.
4. Follow the procedures in the Links section to inspect, remove and, replace the main bearing cap bolts.

Warranty

Starting on **05/20/2024** Kenworth will pay for parts at dealer net plus applicable mark-up and labor:

PACCAR will identify and load chassis to PRWS and SIR.

E316 must be flagged and open in SIR at the time of the RO open date to qualify.

- **3.8 hours** labor to replace the main bearing cap bolts WITHOUT Programmable Torque Tool, no broken bolts found. Select Recommended Repair Code **E316A**.
- **3.0 hours** labor to replace the main bearing cap bolts WITH Programmable Torque Tool, no broken bolts found. Select Recommended Repair Code **E316B**.
- **3.8 hours** labor to replace the main bearing cap bolts WITHOUT Programmable Torque Tool, with broken bolt(s) found. Select editable Recommended Repair Code **E316C**. Edit the recommended repair to include the number of broken bolts found and inspections performed. This recommended repair only applies if **ALL inspections were level 0**.
- **3.0 hours** labor to replace the main bearing cap bolts WITH Programmable Torque Tool, with broken bolt(s) found. Select editable Recommended Repair Code **E316D**. Edit the recommended repair to include the number of broken bolts found and inspections performed. This recommended repair only applies if **ALL inspections were level 0**.
- **1.1 hours** to access the main cap bolts if broken bolt(s) are found. Edit the claim to include the actual time used for completing the attached Broken Bolt Inspection. Select editable

Recommended Repair Code **E316E**. Use this recommended repair if damage level 1-3 is found on ANY main or rod bearings during the inspection. Includes time to open a TCS365 case.

- File an additional claim for extraordinary circumstances. A recommended repair for standard labor must be filed first.
- Kenworth dealers may perform E316 repairs on Peterbilt chassis, but Recommended Repair Codes do not apply. For Peterbilt chassis repairs, use the long form claim.
- If filing a claim for cross-division repairs, be sure to select the Peterbilt specific SRT code shown in the PRWS Claim Coding table below.
- File the claim within 14 days in accordance with the Warranty Policy.

Take off parts disposition: Destroy 30 days after claim is paid

PRWS CLAIM CODING				
Campaign Code:	E316	Campaign Type:	Field Repair	
Claim Category:	Engine	Repair Type:	Proactive	
Customer Concern Code:	203	Causal Code:	12	
Corrective Action Code:	03	Responsibility Code:	Camp	
Failure Location:	045-002-009	Causal Part:	2295490PE	
Supplier Code:	N/A	SRT Code:	Kenworth SRT Code: B24-19A 3.8 hrs E316 PACCAR MX-13 Main Bearing Cap	Peterbilt SRT Code: B24-21A 3.8 hrs R&R main bearing cap bolts per E316 repair

Bolt per bulletin procedure (Hand Torque)	procedure (Hand Torque)
Kenworth SRT Code: B24-19B	Peterbilt SRT Code: B24- 21B
3.0 hrs E316 PACCAR MX- 13 Main Bearing Cap Bolt per bulletin procedure (with programmable torque tool)	3.0 hrs R&R main bearing cap bolts per E316 repair procedure (with programmable torque tool)
Kenworth SRT Code: B24-19C	Peterbilt SRT Code: B24- 21C
0.1 hrs Inspect 1 main bearing cap mating surfaces and bearing per bulletin inspection procedure.	0.1 hrs Inspect 1 main bearing cap mating surfaces and bearing per bulletin inspection procedure.
Kenworth SRT Code: B24-19D	Peterbilt SRT Code: B24- 21D
0.3 hrs Inspect 1 connecting rod cap and bearing surfaces per bulletin	0.3 hrs Inspect 1 connecting rod cap and bearing surfaces per bulletin inspection procedures.
	Peterbilt SRT Code: B24- 21E
	1.1 hrs Access to main cap bolts per Bulletin Procedure E316 –

			inspection procedures.	Broken Bolts Found
			Kenworth SRT Code: B24-19E	
			1.1 hrs	

For campaign filing questions, reference *Kenworth bulletin CB077*.
Access to
main cap bolts

per Bulletin

Parts

Procedure

E316 –

Parts are available from PACCAR Parts.
Broken Bolts
Found

Quantity	Part Number	Description
14	2295490PE	BOLT, MAIN BEARING CAP, M18X180
2	1608394PE	RING-SEALING
2	1608393PE	RING-SEALING
1	2234788PE	PACCAR OIL ELEMENT
1	2111441	SEALING RUBBER, OIL SUMP (OIL PAN GASKET))
1	1982821	DRAIN PLUG (OIL PAN PLUG)
11	257000-990	CHV DELO 400XLE SYNB 10W30 CK-4 BULK
1	Locally Sourced	6ml Loctite 243
1	Locally Sourced	Loctite 7063 or equivalent • https://docs.rs-online.com/4984/0900766b8003142c.pdf • Alternative: use a non-chlorinated brake cleaner • Example: https://www.autozone.com/brake-and-power-steering-fluid-additives/brake-cleaner/p/crc-brakleen-non-chlorinated-brake-parts-cleaner-14oz/219615_0_0?searchText=brake+clean
1	Locally Sourced	Loctite SI 5970 or equivalent • LOCTITE® SI 5970 Henkel Adhesives (henkel-adhesives.com) • Alternative: use an oil-resistant silicone gasket maker that is rated for higher

Quantity	Part Number	Description
		frequencies or flexing Example: https://www.autozone.com/sealants-glues-adhesives-and-tape/sealant/p/permatex-ultra-black-rtv-silicone-maximum-oil-resistance-gasket-maker-3oz/554295_0_0?searchText=silicone+gasket+maker
Up to 5	Locally Sourced	Cable Ties

An Ingersoll Rand MX Programmable Torque Tool Kit is now available to order via PACCAR Parts to reduce labor time and increase the torque accuracy when installing the main bearing cap bolts. **This tool is NOT reimbursable through this bulletin.**

Scan the QR code below to learn more about this new tool:



[PACCARMPIQX – Rhino Tool House](#)

Procedure



WARNING!

Repair or maintenance procedures may pose a safety risk in limited circumstances. You must read all procedure steps before performing any work and follow all dealership safety procedures or precautions. Failure to comply may result in death, personal injury, equipment damage, or property damage.

Please see the Links section below for procedures on inspecting, removing, and replacing the main

bearing cap bolts.

Links

[E316: PACCAR MX-13 EPA 2021 Main Bearing Cap Bolts - Proactive Bolt Upgrade - Chassis List](#)

[E316: PACCAR MX-13 EPA 2021 Main Bearing Cap Bolts - Proactive Bolt Upgrade - Procedures Document – WITHOUT Programmable Torque Tool](#)

[E316: PACCAR MX-13 EPA 2021 Main Bearing Cap Bolts - Proactive Bolt Upgrade - Procedures Document – WITH Programmable Torque Tool](#)

[E316: PACCAR MX-13 EPA 2021 Main Bearing Cap Bolts - Proactive Bolt Upgrade - Broken Bolt Inspection Procedures](#)

Authored by: BDS / JB3

E316: PACCAR MX-13 EPA 2021 Main Bearing Cap Bolts - Proactive Bolt Upgrade

[Edit](#) [Clone](#)

Number

E316

Subject

PACCAR MX-13 EPA 2021 Main Bearing Cap Bolts - Proactive Bolt Upgrade

Date

5/20/2024

Revision

07/09/2026: The Condition, Chassis Affected, Service Action, Warranty, and Procedure sections have been updated to include the latest prognostics bulletin verbiage.

04/30/2025: Warranty section updated to clarify how to file a claim when broken bolt damage inspection results are level 1 or higher. Also clarifies claim filing if engine is replaced with a short block or a long block.

04/18/2025: Added 4,989 chassis. Total chassis count 15,867

03/24/2025: Added 13 chassis. Total chassis count 10,878.

03/21/2025: Added 1,470 chassis. Total chassis count 10,865.

03/19/2025: Broken bolt inspection procedure added, and repair procedures updated to include reference to inspection if broken bolts are found. Updated warranty claim Recommended Repair and SRT codes.

12/20/2024: Added 1 chassis. Total chassis count 9,395

11/13/2024: 1 chassis removed from list. Total chassis count 9,394.

10/31/2024: Warranty section updated with 2 additional Recommended Repairs (E316C and E316D) to account for differences in engine oil part numbers and quantities between U.S. and Canadian repairs. Parts table updated with Canadian oil part number 257000-990C.

10/01/2024: Added 174 chassis. Total chassis count 9,395.

09/18/2024: Added 6,316 chassis. Total chassis count 9,221.

09/04/2024: Affected engine serial number cutoff updated FROM Y313946 TO Y314580.

08/29/2024: Added 391 VINs to chassis list. Total chassis count 2,905.

08/16/2024: Added oil pan drain plug (1982821PE) to parts list and included QR code to access

information about Programmable Torque Tool.

08/01/2024: Added 572 VINs to the chassis list. Total chassis count 2,514.

07/23/2024: Updated verbiage in bulletin/procedures to reflect change to name of "Nut Runner Tool" to "Programmable Torque Tool."

07/10/2024: Added oil pan gasket (2111441PE) to parts list.

07/01/2024: Added 1,295 VINs to the chassis list. Total chassis count 1,942.

06/25/2024: Updated verbiage in bulletin/procedures to reflect change to name of "Nut Runner Tool" to "Programmable Torque Tool".

05/21/2024: Updated title, and updated verbiage in bulletin to clarify when to perform repair.

05/20/2024: Added 647 VINs to the chassis list. Total chassis count 647.

Condition

Schedule this proactive upgrade with the next service event. A complimentary oil change is included.

Leveraging PACCAR's advanced Prognostic prediction algorithms, certain chassis equipped with PACCAR EPA 2021 MX-13 engines will receive proactive replacement instructions for the main bearing cap bolts to maximize uptime and maintain optimal performance.

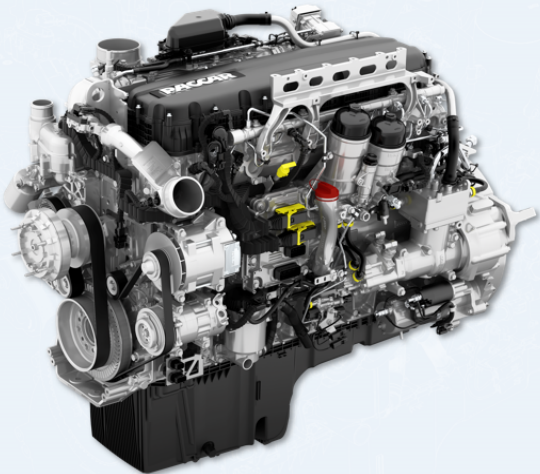
E316 must be flagged and open in SIR at the time of the repair order (RO) open date to qualify.

Only trucks with an active standard or applicable extended warranty will be included in this campaign. Trucks flagged in SIR whose warranty expires will be removed. If a repair is performed on a chassis

flagged in SIR after warranty expiration, PACCAR will consider payment on a case-by-case basis.

Improvement Identified

-  Proactive Upgrade During Free Oil Service
-  Upgraded Bolts
-  Powered By Prognostics
-  Covered Under MX Warranty



MX-13

Chassis Affected

Certain Peterbilt model 365, 389, 567, and 579 chassis equipped with PACCAR MX-13 EPA 2021 engines with engine serial number Y314580 and earlier will be identified through the Prognostic Program in SIR as described above.

Action

Campaign

Schedule this proactive upgrade with the next service event. A complimentary oil change is included.

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. In Service Management, select campaign **E316** to add it to the case. If the unit is released back into service without performing the repair, make sure to also release the campaign in Service

Management.

3. If you are not using Service Management to start repair orders, review SIR for Complete next to the **E316** campaign code prior to performing this repair.
4. Follow the procedures in the Links section to inspect, remove, and replace the main bearing cap bolts.

Warranty

Starting on **05/20/2024** Peterbilt will pay for parts at dealer net plus applicable mark-up and labor:

PACCAR will identify and load chassis to PRWS and SIR.

E316 must be flagged and open in SIR at the time of the RO open date to qualify.

FOR U.S. REPAIRS (US oil part number and oil qty in gallons)

- **3.8 hours** labor to replace the main bearing cap bolts WITHOUT Programmable Torque Tool, no broken bolts found. Select Recommended Repair Code **E316A**. (oil part # 257000-990)
- **3.0 hours** labor to replace the main bearing cap bolts WITH Programmable Torque Tool, no broken bolts found. Select Recommended Repair Code **E316B**. (oil part # 257000-990)
- **3.8 hours** labor to replace the main bearing cap bolts WITHOUT Programmable Torque Tool, with broken bolt(s) found. Select editable Recommended Repair Code **E316E** (oil part # 257000-990).
Edit the recommended repair to include the number of broken bolts found and inspections performed. This recommended repair only applies if ALL inspections were level 0.
- **3.0 hours** labor to replace the main bearing cap bolts WITH Programmable Torque Tool, with broken bolt(s) found. Select editable Recommended Repair Code **E316F** (oil part # 257000-990).
Edit the recommended repair to include the number of broken bolts found and inspections performed. This recommended repair only applies if ALL inspections were level 0.

FOR CANADIAN REPAIRS (Canadian oil part number and oil qty in liters)

- **3.8 hours** labor to replace the main bearing cap bolts WITHOUT Programmable Torque Tool, no broken bolts found. Select Recommended Repair Code **E316C**. (oil part # 257000-990C)
- **3.0 hours** labor to replace the main bearing cap bolts WITH Programmable Torque Tool, no broken bolts found. Select Recommended Repair Code **E316D**. (oil part # 257000-990C)
- **3.8 hours** labor to replace the main bearing cap bolts WITHOUT Programmable Torque Tool, with broken bolt(s) found. Select editable Recommended Repair Code **E316G** (oil part # 257000-990C).
Edit the recommended repair to include the number of broken bolts found and inspections performed. This recommended repair only applies if ALL inspections were

level 0.

- **3.0 hours** labor to replace the main bearing cap bolts WITH Programmable Torque Tool, with broken bolt(s) found. Select editable Recommended Repair Code **E316H** (oil part # 257000-990C).
Edit the recommended repair to include the number of broken bolts found and inspections performed. This recommended repair only applies if ALL inspections were

level 0.**FOR U.S. OR CANADIAN REPAIRS WHERE BROKEN MAIN CAP BOLTS ARE FOUND AND DAMAGE IS LEVEL 1 OR HIGHER.**

- Use editable Recommended Repair Code **E316J**.
 - Use SRT **B24-21C** for each main bearing cap removed and inspected.
 - Use SRT **B24-21D** for each connecting rod bearing cap removed and inspected.
 - **Edit Recommended Repair to include number of broken bolts found and inspections performed. This Recommended Repair only applies if ALL inspections were Level 1 or higher.**
- File a supplemental claim for engine R&R and input **E316** in the campaign code section.
 - **Short block R&R includes all labor required to access the main bearing cap bolts. If a long block was installed, please use SRT B24-21E for main bearing cap bolt access.**
- File an additional claim for extraordinary circumstances. A recommended repair for standard labor must be filed first.
- Peterbilt dealers may perform E311 repairs on Kenworth chassis, but Recommended Repair Codes do not apply. For Kenworth chassis repairs, use the long form claim.
- If filing a claim for cross-division repairs, be sure to select the Kenworth specific SRT code shown in the PRWS Claim Coding table below.
- File the claim within 14 days in accordance with the Warranty Policy.

Take-Off Parts Disposition: Destroy 30 days after claim is paid.

PRWS CODING TABLE				
Campaign Code:	E316	Campaign Type:	Field Repair	
Claim Category:	Engine	Repair Type:	Proactive	
Customer Concern Code:	203	Causal Code:	12	
Corrective Action Code:	03	Responsibility Code:	Camp	
Failure Location:	045-002-009	Causal Part:	2295490PE	
Supplier	N/A	SRT Code:	<u>Peterbilt SRT</u>	<u>Kenworth</u>

Code:

<u>Code</u> B24-21A 3.8 hours R&R main bearing cap bolts per E316 repair procedure (Without Programmable Torque Tool)	<u>SRT Code:</u> B24-19A 3.8 hours R&R main bearing cap bolts per E316 repair procedure (Without Programmable Torque Tool)
<u>Peterbilt SRT</u> <u>Code:</u> B24-21B 3.0 hours R&R main bearing cap bolts per E316 repair procedure (With Programmable Torque Tool)	<u>Kenworth</u> <u>SRT Code:</u> B24-19B 3.0 hours R&R main bearing cap bolts per E316 repair procedure (With Programmable Torque Tool)
<u>Peterbilt SRT</u> <u>Code:</u> B24-21C 0.1 hours Inspect 1 main bearing cap mating surfaces and bearing per bulletin inspection procedure.	<u>Kenworth</u> <u>SRT Code:</u> B24-19C 0.1 hours Inspect 1 main bearing cap mating surfaces and bearing per bulletin inspection procedure.
<u>Peterbilt SRT</u> <u>Code:</u> B24-21D 0.3 hours Inspect 1 connecting rod cap and bearing surfaces per bulletin	<u>Kenworth</u> <u>SRT Code:</u> B24-19D 0.3 hours Inspect 1 connecting rod cap and bearing surfaces per bulletin

			inspection procedures.	inspection procedures.
			<u>Peterbilt SRT Code:</u> B24-21E 1.1 hours Access to main cap bolts per Bulletin Procedure E316 – Broken Bolts Found.	<u>Kenworth SRT Code:</u> B24-19E 1.1 hours Access to main cap bolts per Bulletin Procedure E316 – Broken Bolts Found.

For campaign filing questions, reference Peterbilt Warranty Procedure Manual – Section 8.

Parts

Parts are available from PACCAR Parts.

Quantity	Part Number	Description
14	2295490PE	Bolt, Main Bearing Cap, M18X180
2	1608394PE	Ring-Sealing
2	1608393PE	Ring-Sealing
1	2234788PE	PACCAR Oil Element
11 Gallons	257000-990	(U.S Part Number) CHV DELO 400XLE SYNB 10W30 CK-4 BULK
42 Liters	257000-990C	(Canadian Part Number) CHV DELO 400XLE SYNBLN10W
1	2111441PE	Gasket, Oil Pan
1	1982821PE	Drain Plug (Oil Pan Plug)
Partial Container Used	Source Locally	6mL Loctite 243 or equivalent
Partial	Source	Loctite 7063 or

Container Used	Locally	equivalent
Partial Container Used	Source Locally	Loctite SI 5970 or equivalent
Up to 5	Source Locally	Cable Ties

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Scan the QR code below to learn more about this new tool:



[PACCARMPIQX - Rhino Tool House](#)

Procedure



WARNING!

Repair or maintenance procedures may pose a safety risk in limited circumstances. You must read all procedure steps before performing any work and follow all dealership safety procedures or precautions. Failure to comply may result in death, personal injury, equipment damage, or property damage.

Please see the Links section below for procedures on inspecting, removing, and replacing the main bearing cap bolts.

Links

[E316: PACCAR MX-13 EPA 2021 Main Bearing Cap Bolts - Proactive Bolt Upgrade - Procedure - Without Programmable Torque Tool](#)

[E316: PACCAR MX-13 EPA 2021 Main Bearing Cap Bolts - Proactive Bolt Upgrade - Procedure - With Programmable Torque Tool](#)

[E316: PACCAR MX-13 EPA 2021 Main Bearing Cap Bolts - Proactive Bolt Upgrade - Broken Bolt Inspection](#)

[E316: PACCAR MX-13 EPA 2021 Main Bearing Cap Bolts - Proactive Bolt Upgrade - Chassis List](#)