

**SB-10045240-4449**

Technical Information Bulletin

E055

Section

Inlet/Exhaust

Subject

PACCAR MX Engine Turbo Oil Blow-by

Release Date

7/9/2012

Condition

PACCAR MX engine oil blow-by, evidenced by oil collection at the CAC intake pipe, may be caused by an imbalance in turbocharger pressures (see Background for more detail).

- a preliminary repair includes cleaning and reconnecting pipes
 - a corrective repair includes engine software update (see bulletin E056)
 - a decision to replace the turbo should include Engine Support Group authorization
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Chassis Affected

T660s, T700s, T800s, and W900s with build dates to 04/20/12, powered by PACCAR MX Engines, that have not yet had engine software updates described in campaign E056 (or subsequent software campaign).

Action

If a customer comes into your dealership and demonstrates the condition above, clean, inspect and update engine software (campaign E056 or subsequent software campaign referenced in bulletin E056) using the

procedure below.

Note: Technicians need to involve the PACCAR Engine Support Group (by SupportNet case) in any decision to replace a PACCAR MX engine turbo.

Warranty

This bulletin describes a repair strategy. This bulletin is not a statement of warranty or an authorization to undertake repairs. Standard warranty time, mileage and other considerations apply.

Parts

Parts necessary for engine repairs are listed in ECAT and Engine Rapido. Parts necessary for engine repairs are available from PACCAR Parts.

Background

In certain operating conditions and for PACCAR MX Engines equipped with software prior to April 20, 2012, turbocharger operating speeds may create an imbalance of pressures between the turbo bearing housing and the turbocharger compressor housing. Low turbo speeds create low pressure and higher pressure in the bearing housing can result in oil being pushed past the turbo seal and into the air intake piping, and possibly into the charge air cooler. In most cases, this does not indicate that the internal seals have failed.

Engine software updates implemented April 20, 2012 include a turbocharger pressure control program correction to eliminate this potential.

Evidence of oil at the turbocharger discharge is not an indication of a defect that requires turbocharger replacement.

Procedure

In the chassis affected population, small amounts of oil by-pass may be related to engine programming. Ensure the chassis has the latest software, per instruction of campaign bulletin E056. In addition, repairs should include the following steps.

For oil deposits around the intake piping joints between turbocharger compressor and the Charge Air Cooler (CAC):

1. Tighten the hump hose clamps on all joints to 115-120 in-lb.
2. Clean oil deposits from the pipe and joint surfaces.
3. Return the truck to service

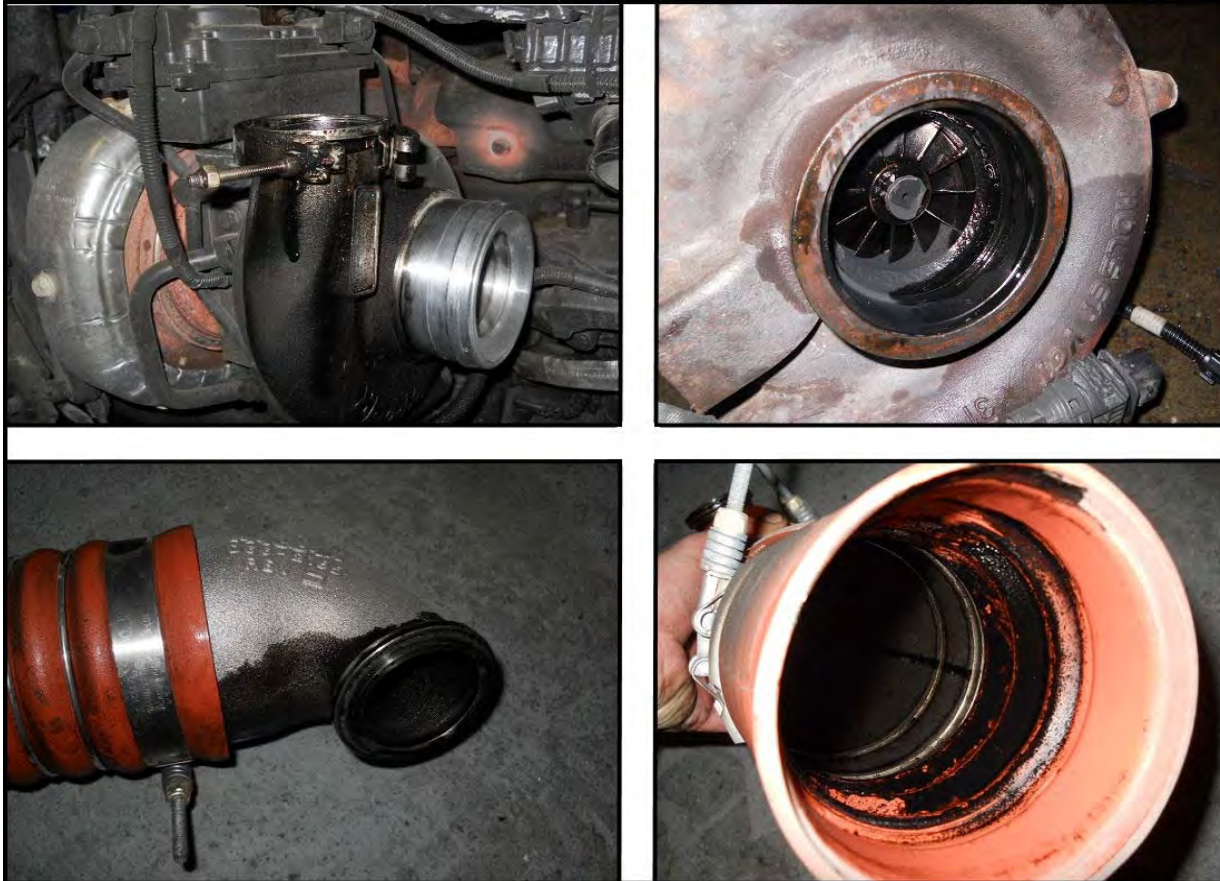
For oil deposits around the intake piping joints between the CAC and engine intake blender pipe:

1. Remove the piping from the CAC tank
2. Use a dip tube in the CAC tank to measure captured oil.
 - a. If less than one inch of oil is measured, continue to step 3. It is not recommended that the CAC be cleaned unless there is a check engine light or there is an engine malfunction beyond the symptoms of leakage.
 - b. If more than one inch of oil is measured, clean the CAC, then continue to step 3

3. Clean all piping joints and tighten the hump hose clamps 115-120 in-lb.
4. Return the truck to service

Kenworth has determined that the amounts of oil by-pass related to pressure differences from engine programming will not have an adverse effect on the engine or its performance. If more extensive damage is identified, particularly requiring turbo replacement, contact the PACCAR Engine Support Group to validate that decision.

Examples of oil by-pass related to pressure differences:



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