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Roadranger
SUPPORT

Subject: Idle Rattle in Heavy-Duty Trucks

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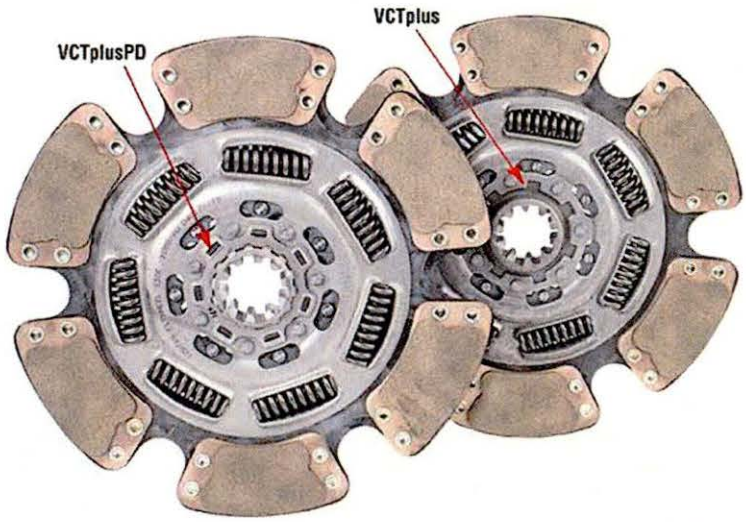
Date: October 18, 2005 **Updated:** April 15, 2013

Issue Description:
Idle rattle or neutral rattle is noise at idle caused by fluctuations in flywheel speed that result in speed variations at the input shaft. This condition can cause the internal gearing to contact both the drive side and coast side, creating a continuous noise. Idle rattle noise can be identified by slowly raising the engine RPM, usually between 700 and 1000 RPMs, until the noise is diminished or eliminated. Check with the engine manufacturer for the recommended idle speed min/max settings. Idle rattle can also be identified by depressing the clutch pedal to remove the free travel. This should diminish or eliminate the noise at idle.

Idle rattle is not a component damaging condition, however it can be annoying to the operator as it creates an abnormal noise.

Containment/Corrective Action:
Eaton has developed the VCT Plus PD (pre-damper) clutch disc that has a special first stage in the damper, which is designed to isolate the engine idle pulsations before the pulsations reach the transmission. The pre-damper disc can be identified by the presence of 7 small springs around the hub.
Possible options that can be implemented as a solution for field complaints:

- Raising the engine idle RPM will change the idle characteristics of the engine and the noise may diminish. Recommended maximum default idle speed is 750 RPM.
- Install the VCT Plus PD (pre-damper) clutch discs, which are available for applications up to 2250 lb-ft with the different Eaton 15.5" clutch models.



Affected Models/Population:
Heavy-Duty Trucks with Mechanical Transmissions and 15.5" clutches.

Field Strategy:
Idle rattle complaints are not the result of defective transmissions or the factory-installed master clutch. If an idle rattle complaint is encountered, the complaint may be resolved by replacing the original clutch discs (front & rear) with the VCT Plus PD discs only. There is no need to replace the intermediate plate or pressure plate, unless damage or wear requires.

- Implement the above corrective actions for problem resolution.
- If the customer chooses to just replace the original clutch discs with the VCT Plus PD discs, provide the following usage information.
  - Applications up to 1860 lb-ft – use disc part number 128716 (front & rear)
  - Applications from 1861 to 2050 lb-ft – use disc part number 128717 (front & rear)
  - Applications from 2051 to 2250 lb-ft – use disc part number 128718 (front & rear)

Clutch Description	Damper Model				Channel (Production vs. Service)
	VCTplus	DDA#	VCTplusPD	DDA#	
EP ADV 1552 1860'#	208925-20	128708	208925-30	128716	BOTH
EP ADV 1552 2050'#	208925-25	128709	208925-35	128717	BOTH
EP ADV 1552 1750#	208925-24	128707	208925-34	128715	BOTH
EP ADV1552 2250'#	208937-32	128710	208937-42	128718	BOTH
SOLO ADV 1552 1860'#	209701-20	128708	209701-30	128716	BOTH
SOLO ADV1552 2050'#	209701-25	128709	209701-35	128717	BOTH
SOLO ADV 1552 1750#	209701-24	128707	209701-34	128715	BOTH
SOLO ADV 1552 2250'#	209708-32	128710	209708-42	128718	BOTH

Warranty Information:
Because idle rattle is not generated from, nor the result of, the clutch and its operation, Eaton will not approve or pay for the replacement of a clutch due to idle rattle complaints.

Warranty Coverage:
None

FSUD: 2005-FSUD-604