Subject: Idle Rattle issue

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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.