



**\*\* SOLUTION \*\***

Title	Turbo Compound (TC) Hot Side Noise Diagnostic Information
<b>Mack Models</b>	
<b>Mack Model</b>	AN - Anthem , GR - Granite , PI - Pinnacle
<b>Volvo Models</b>	
<b>Volvo Model</b>	VN , VNL , VNR , VNX , VAH , VHD
<b>Emission Standard</b>	
Emission Standard	US17+OBD16 , US17+OBD18 , US17+OBD19
<b>Engine family</b>	
Engine family	13L Engine , MP8

**\*\* SOLUTION \*\***

<b>Cause</b>	Information to use when diagnosing a report of noise from the hot side of the turbocharger on turbo-compound engines.
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<b>Solution</b>	<b>Information</b>
	<p>3 typical turbo compound hot side noises:</p> <ol style="list-style-type: none"> <li>Bearing spin down (Snap Throttle then Key Off ) <ul style="list-style-type: none"> <li>This is normal for fixed geometry turbos on TC engines. No diagnostics is necessary.</li> </ul> </li> <li>Closed loop butterfly (CLB) application noise from gaskets or CLB itself (During warm hold or Engine braking) <ul style="list-style-type: none"> <li>Smoke test exhaust for any leaks around the CLB pipe section</li> </ul> </li> <li>Fluttering/Exhaust leak under load <ul style="list-style-type: none"> <li>Visual inspection of the exhaust system for soot tracking. ( A mirror is necessary )</li> <li>Smoke test for leaks if no soot tracking found.</li> </ul> </li> </ol>

**Diagnosis**

<b>IMPORTANT</b>
<b>Contact Tech Support via eService before removing <u>major</u> components.</b>

<b>NOTE</b>
Soapy water is not recommended for hot side leak detection.

**If no soot tracking or leaks from smoke machine are found:**

- Unplug the EGR valve.

**If the noise goes away or gets quieter:** Focus on the EGR Hot pipe.

**If the noise gets louder or worse:** Focus on the manifold.



Flange weld at EGR cooler inlet



Cracks in Manifold or warped face causing leaks at gasket

2. Perform a Soot Regen.

**If the noise gets louder or worse:** Focus on the diffuser pipe (between TC unit and turbo)



<b>Function Group</b>	
Function Group	255 turbocharger
<b>Customer effect</b>	
Main customer effect	noise
<b>Administration</b>	
Author	A257217
Dealer ID	A257217
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