

POSSIBLE CAUSES	Lacks Power	Black Smoke	Excessive Oil Consumption	Blue Smoke	Noise	Excessive Oil-Compressor	Excessive Oil-Turbine	Drag/Bind In Rotor Assembly	Excess Rotor Play	Damaged Comp. Wheel	Damaged Turbine wheel
<i>Dirty Air Cleaner</i>	•	•		•	•	•					
<i>Plugged Crankcase Breather</i>			•			•	•				
<i>Missing or loose Air filter to turbo</i>					•			•		•	
<i>Collapsed or restricted air pipe to turbo</i>	•	•		•	•	•					
<i>Restricted/Damaged Boost tube</i>	•	•			•	•					
<i>Foreign Object b/w Air Cleaner &amp; Turbo</i>	•	•			•	•		•	•	•	
<i>Foreign Object in Exh. System from Engine</i>	•	•			•		•	•	•		•
<i>Turbo Flange, Clamp or loose bolt</i>	•	•	•	•	•	•	•	•	•	•	•
<i>Inlet Manifold Cracked, Loose Gaskets/Hoses</i>	•	•			•	•					
<i>Exh. Manifold Cracked, Burned/Blown Gasket</i>	•	•			•						
<i>Restricted Exhaust Sys</i>					•						
<i>Oil Lag At Start-Up</i>								•	•		
<i>Insufficient Lubrication</i>								•	•		
<i>Contaminated Lube Oil</i>								•	•		
<i>Improper Lubricating oil type used</i>								•	•		
<i>Restricted Oil Feed Line</i>						•	•	•	•		
<i>Restricted Oil Drain Line</i>			•				•				
<i>Turbine Hsg Damaged or Restricted</i>	•	•			•						•
<i>Turbo Seal Leakage</i>			•	•		•	•				
<i>Worn Journal Bearing</i>	•	•	•		•	•	•	•	•	•	•
<i>Excess Dirt Build-up on Comp. HSG</i>	•	•		•	•	•		•			•

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<b>Excess Carbon Build-up on Turbine HSG</b>	•	•		•	•			•			•
<b>Too Fast Accel at Initial Startup – Oil Lag</b>							•		•	•	
<b>Too Little Warm-up Time</b>									•	•	
<b>Fuel Pump Malfunction</b>	•	•									
<b>Worn/Damaged Injectors</b>	•	•									
<b>Valve Timing</b>	•	•									
<b>Burned Valve(s)</b>	•	•									
<b>Worn Piston Ring(s)</b>	•	•									
<b>Burned Piston(s)</b>	•	•									
<b>Leaking Oil Feed Line</b>								•	•		
<b>Excess Engine Pre-oil</b>				•			•				
<b>Excess Engine Idle</b>			•	•		•					
<b>Coked/Sludged CHRA</b>			•	•			•	•			•
<b>Oil Pump Malfunction</b>									•		
<b>Oil Filter Plugged</b>			•	•	•		•	•	•	•	•
<b>Oil Bath Air Cleaner: Inlet screen restricted</b>	•	•	•	•	•						
<b>Oil Bath Air Cleaner: Oil Pull/Viscosity Low</b>	•	•	•	•	•						
<b>Boost Control Malfunc: Wastegate</b>	•	•	•	•	•	•	•		•	•	•
<b>Boost Control Malfunc: VNT</b>	•	•	•	•	•	•	•		•	•	•
<b>Boost Control Malfunc: Management System</b>	•	•	•	•	•	•	•		•	•	•

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