

Engine trouble has many causes,
as shown below.



Globally reliable

ENGINE TROUBLE TRACER

EXCESSIVE OIL CONSUMPTION

OIL LEAKING INTO THE INTAKE
AND EXHAUST SYSTEM

OIL LEAKING INTO
COMBUSTION CHAMBER

OIL FAILING

		Turbocharger		Piston Ring					Piston			Cylinder		Valve	Valve guide	Valve seal			
																			
Problem		Worn shaft	Sealing degradation	Scuffing	Excessively closed gap	Breakage	Deformation	Decreased PT	Anomalous wear	Ring sticking	Carbon deposition on top land	Piston scuffing	Worn ring groove of piston	Deformation	Wear	Wear	Wear	Degradation	Wear
Inappropriate use	Intake dust	●	●	✕	✕	✕		✕	●	✕	✕		●		●	●	●	✕	●
	Foreign matter in the fuel			✕	✕	✕		✕	●	✕	✕		●		●				
	Unsuitable oil	●	●	●	✕	✕		✕	●	●	●		●		●	●	●	✕	●
	Inferior fuel			✕					✕	✕	●		●		●			✕	●
	Overloading			✕				✕	✕	✕	✕	●			✕				
	High-load low engine speed							✕	●	✕	✕	●			✕				
	Overrevving			✕		●						●	✕						
	Overheating			✕		✕		✕		✕	✕	●						✕	
Inadequate Maintenance	Engine oil																		
	Deterioration	✕	✕	✕	✕	✕		✕	●	✕	✕	✕	✕		●	●	●	✕	●
	Foreign matter mingling	●	●		✕	✕		✕	●	✕	✕				●	●	●		●
	Insufficient quantity	✕	✕					✕	●										
	Intake																		
	Dust contamination	●	●		✕	✕		✕	●	✕	✕				●	✕		✕	●
	Cleaner clogging	●	●		✕	✕		✕	●	✕	✕				●	✕		✕	●
Cooling water																			
Insufficient quantity			●				✕	✕	✕		●			✕					
Anomaly			✕		✕				✕		●	●							
Others	Past its life span				✕		●			✕				●	✕	✕	✕	✕	✕
	Parts	Misassembly			✕		✕	✕	✕	✕			✕	●					✕
	Wrong part assembled			✕	●	✕	✕	✕	✕	✕		✕							

● direct cause ✕ indirect cause