



Technical Service Bulletin

GROUP ENGINE	NUMBER 22-EM-010H
DATE JULY 2022	MODEL ALL MODELS

SUBJECT INTAKE AND EXHAUST SYSTEM INSPECTION AND REPLACEMENT GUIDELINES DURING ENGINE REPLACEMENT

This TSB supersedes TSB 17-EM-001 with revisions for Intake Manifold replacement criteria.

Description:

Follow the guidelines outlined in this bulletin to inspect and clean or replace certain components of the engine intake system accordingly during engine short block or sub-assembly replacement.

NOTICE

Failure to follow this TSB may result in reoccurring damage to the new engine assembly. If the short engine assembly is being replaced, refer to TSB 10-EM-003 (ENGINE OIL PUMP REPLACEMENT GUIDELINES DURING ENGINE REPLACEMENT) for additional information.

Applicable Vehicles:

- All engine equipped models

Inspection and Recommended Service Action:

Engine Condition	Recommended Action	Applicable Components
Any physical damage to one or more combustion chambers, valves, cylinder walls, and/or piston tops due to internal engine issue.	<u>MUST REPLACE</u>	<ul style="list-style-type: none"> Intake Manifold Engine Oil Pump/Balance Shaft Module
	<u>REPLACE</u> if debris is found inside	<ul style="list-style-type: none"> Air Intake Filter Air Intake Carbon Trap (if equipped), Intercooler (if equipped) Exhaust Manifold w/Catalyst Assembly
	Inspect and <u>CLEAN</u> (Replace, if damaged or debris is stuck.)	<ul style="list-style-type: none"> Throttle body PCV System / Valve Cover Baffle Air Intake Hose / Pipe MAF Sensor, Exhaust Manifold (Non-Catalyst Type) Intercooler Pipe (if equipped) Turbocharger (if equipped)
Engine oil consumption and/or excessive combustion blow by due to reduced seal between cylinder walls and piston rings.	Inspect and <u>CLEAN</u>	<ul style="list-style-type: none"> Intake Manifold Throttle Body PCV System / Valve Cover Baffle Air Intake Hose / Pipe Intercooler Pipe (if equipped) Intercooler (if equipped)

Circulate To: General Manager, Sales Manager, Service Manager, Parts Manager, Warranty Manager, Service Advisors, Technicians, Body Shop Manager, Fleet Repair

NOTICE

- **Must Replace:** If severe physical internal engine damage is observed (such as broken pistons/valves, connecting rod interference to cylinder block, seized crank, large debris/fragments in the oil pan), do not reuse the intake manifold or the oil pump/BSM.
 - **Replace the intake manifold and the oil pump/BSM (if not supplied with replacement engine) for any of the above conditions.**
- **Inspect and Clean:** Inspect the component for any debris and clean using an appropriate cleaning agent (such as a degreaser), then drain/remove any residual liquids. Be sure to fully dry with shop air. Replace if any debris is stuck inside and cannot be fully cleaned.
- **Service Procedure:** Refer to applicable Shop Manual for the required service procedures.

Warranty Information:

Normal warranty applies.