

M176/M177/M178 Series Engine with CEL for Misfire

Topic number	LI07.61-P-073583
Version	1
Function group	07.61 - ME fuel injection/ ignition system
Date	9/14/21
Validity	All vehicles equipped with M176, M177, M178 engine
Reason for change	

Complaint

Customer complains of CEL on in instrument cluster. May also complain of rough running.

Cause

There can be multiple causes for this complaint. One of them is the exhaust clamps after the turbochargers not sealing properly. From the factory, the clamps are one piece and torqued to specification. Over time they may leak due to age or from being taken off and then reinstalled (they cannot be reused once removed).

Remedy

If misfire codes are present, seal the exhaust tips with tape. Then perform the following:

- Working one bank at a time, remove the primary O2 sensor port.
- Feed the smoke machine into the O2 sensor bung and seal around it with tape
- Let the smoke machine run until smoke emanates from the intake of the engine
- Look for leaks. Begin at the welds upstream of the catalytic converter, then inspect the clamps after the turbochargers, and continue upstream
- NOTE: Leakage from the wastegate arm bore at the center of the turbocharger is normal when the engine is cold
- If no leaks are found please ensure all clamps from air filter housing to turbocharger and all charge air hose clamps are torqued to the specs provided by BA09.41-P-1000-01X
- Inspect the exhaust clamps after the turbochargers.
- If one piece clamps are found, please replace the via the relevant document found when searching AR09.40-P-6018-01*.
- If two piece clamps are found, please review this AR document to ensure that they are properly installed/torqued.
- NOTE: There should be no tension between the exhaust and the turbo. Exhaust should sit flush on the turbo with the clamp removed. Manipulation of the exhaust may be necessary to achieve this, but it should be done prior to installing the new clamps.

If the above does not remedy the complaint, please reference LI07.61-P-070707 and proceed with the measure therein.

WIS-References

XENTRY TIPS

Document number	Title	Note
BA09.41-P-1000-01X	WIS Table of Contents	.
AR09.40-P-6018-01*	Align clamp between turbocharger and catalytic converter	.

Symptoms

Power generation > Engine management > Indicator lamp > Engine diagnosis > lit

Parts

Part number	ES1	ES2	Designation	Quantity	Note	EPC
A0009956133			PROFILE CLAMP, EXH. SYST. EXHAUST SYSTEM AT LEFT AND RIGHT TO TURBOCHARGER	2		X
A0009956233			PROFILE CLAMP, EXH. SYST. EXHAUST SYSTEM AT LEFT AND RIGHT TO TURBOCHARGER	2		X
A0009905510			SCREW PROFILE CLAMP; M8X40	2		X

Control unit/fault code

Control unit	Fault text
N3/10 - Motor electronics 'MED1775' for combustion engine 'M178' (ME)	P030027 - Combustion misfiring has been detected. The signal change rate is above the permissible limit value. P030800 - Combustion misfiring of cylinder 8 has been detected. _ P030700 - Combustion misfiring of cylinder 7 has been detected. _ P030600 - Combustion misfiring of cylinder 6 has been detected. _ P030500 - Combustion misfiring of cylinder 5 has been detected. _ P030400 - Combustion misfiring of cylinder 4 has been detected. _ P030300 - Combustion misfiring of cylinder 3 has been detected. _ P030200 - Combustion misfiring of cylinder 2 has been detected. _ P030100 - Combustion misfiring of cylinder 1 has been detected. _ P030885 - Combustion misfiring of cylinder 8 has been detected. There is a signal above the permissible limit value.

	P030785 - Combustion misfiring of cylinder 7 has been detected. There is a signal above the permissible limit value. P030685 - Combustion misfiring of cylinder 6 has been detected. There is a signal above the permissible limit value. P030585 - Combustion misfiring of cylinder 5 has been detected. There is a signal above the permissible limit value. P030485 - Combustion misfiring of cylinder 4 has been detected. There is a signal above the permissible limit value. P030385 - Combustion misfiring of cylinder 3 has been detected. There is a signal above the permissible limit value. P030285 - Combustion misfiring of cylinder 2 has been detected. There is a signal above the permissible limit value. P030185 - Combustion misfiring of cylinder 1 has been detected. There is a signal above the permissible limit value. P030022 - Combustion misfiring has been detected. The signal amplitude is greater than the maximum amplitude.
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Operation numbers/damage codes				
Op. no.	Operation text	Time	Damage code	Note