

PACCAR MX engines

MX300 - MX340 - MX375



The PACCAR MX engine range is the result of 50 years DAF experience in developing heavy duty diesel engines, combined with the latest technologies and design techniques. A compact design and advanced materials ensure a low weight and maximum durability. High performance and massive torque combine to deliver an exceptional driving experience.

Engine	Output * kW (hp)	Torque** Nm
MX300	300 (408)	2000
MX340	340 (462)	2300
MX375	375 (510)	2500

* at rated engine speed 1500 - 1900 rpm

** at rated engine speed 1000 - 1410 rpm

General information

Six-cylinder in-line turbocharged diesel engine with intercooling. Clean combustion with Selective Catalytic Reduction (SCR) aftertreatment for Euro 5 emission levels.

Bore x stroke	130 x 162 mm
Piston displacement	12.9 litres
Compression ratio MX265, MX300, MX340.....	17.7 to 1
Compression ratio MX375	16.5 to 1

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Details

Main construction

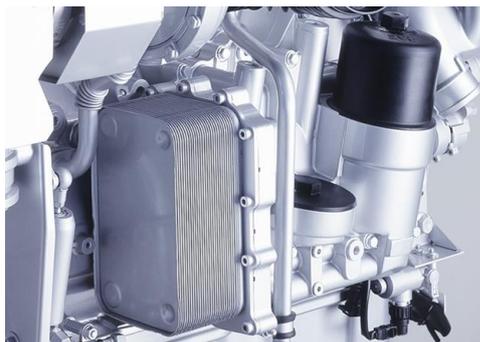
Cylinder block	compact graphite iron (CGI) integrated housing for the Unit Pump system aluminium ladder frame for a high crankcase stiffness
Cylinder head	one-piece cylinder head with integrated intake manifold composite valve cover
Valves	four valves per cylinder inlet valves with single valve springs exhaust valves with double valve springs
Cylinder liners	wet 'top-stop' liners
Pistons	oil cooled piston with three piston rings each
Crankshaft	'stepped-die' forged steel crankshaft without contra-weights
Oil sump	sheet steel extruded oil sump, with fully elastic mounting against the cylinder block
Distribution gear	low-noise rear mounted distribution drive with straight gears

Fuel injection and induction

Fuel injection	Electronic Unit Pump (EUP) injection system pump unit solenoids integrated for low vulnerability
Injectors	SMART injectors with variable needle opening pressure
Injection timing	smart precisely timed multi-point injection
Injection pressure	max. 2000 bar
Induction	turbocharged with charge cooling (intercooling)
Turbocharger	compact single-stage turbocharger with by-pass control
Intercooler	aluminium, single-row, transverse-type intercooler

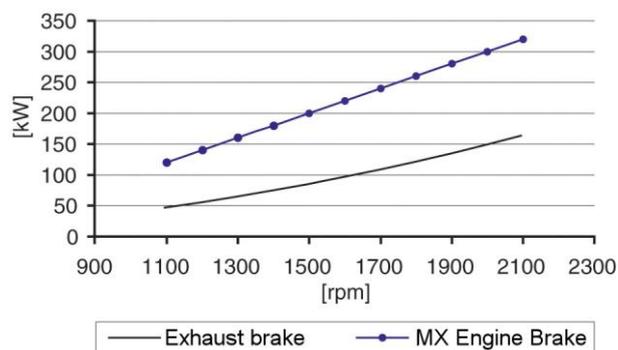
Lubrication

Oil module	pre-assembled module, containing oil filters, oil cooler, thermostat, valves and tubing
Oil filters	full-flow main oil filter centrifugal by-pass filter for extended service intervals
Oil cooler	fully recyclable filter cartridges thermostatically controlled plate-type heat exchanger
Oil pump	gear-type pump with integrated suction control



Auxiliaries and exhaust brake/engine brake

Auxiliary drive	primary and secondary poly-V belt drives low-energy air compressor and combined steering pump/fuel feed pump unit driven from the distribution gears
Exhaust brake	pneumatically operated butterfly valve in the exhaust duct
MX Engine Brake	optional hydraulically operated decompression brake integrated in the valve rocker groups



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General

Reliability and durability

State-of-the art techniques, first class materials and extensive functional integration result in high reliability and long durability. Water and oil feeds, low pressure fuel lines and the high pressure fuel injection pump housing are integrated in the cylinder block.

The cylinder block has been designed without side covers for maximum stiffness and low noise generation.

The one-piece cylinder head has an integrated inlet manifold. The oil filter, oil thermostat and oil cooler have been combined in a single oil module.

Performance

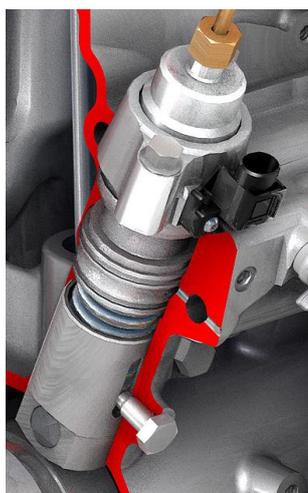
All PACCAR MX engines deliver excellent torque at low engine speeds and a high performance is available over a wide rev range.

The optional, very powerful MX Engine Brake offers optimum driveability on long gradients.

The integration of the MX Engine Brake in the service brake operation results in improved driving safety and reduced brake lining wear.



Fuel efficiency



The SMART fuel injection technology is used to deliver high injection pressures combined with precise injection timing and multi-point injection.

The outcome is an optimum combustion process with excellent fuel efficiency.

Low operational engine speeds due to the good

torque characteristics also contribute to a first-class fuel economy.

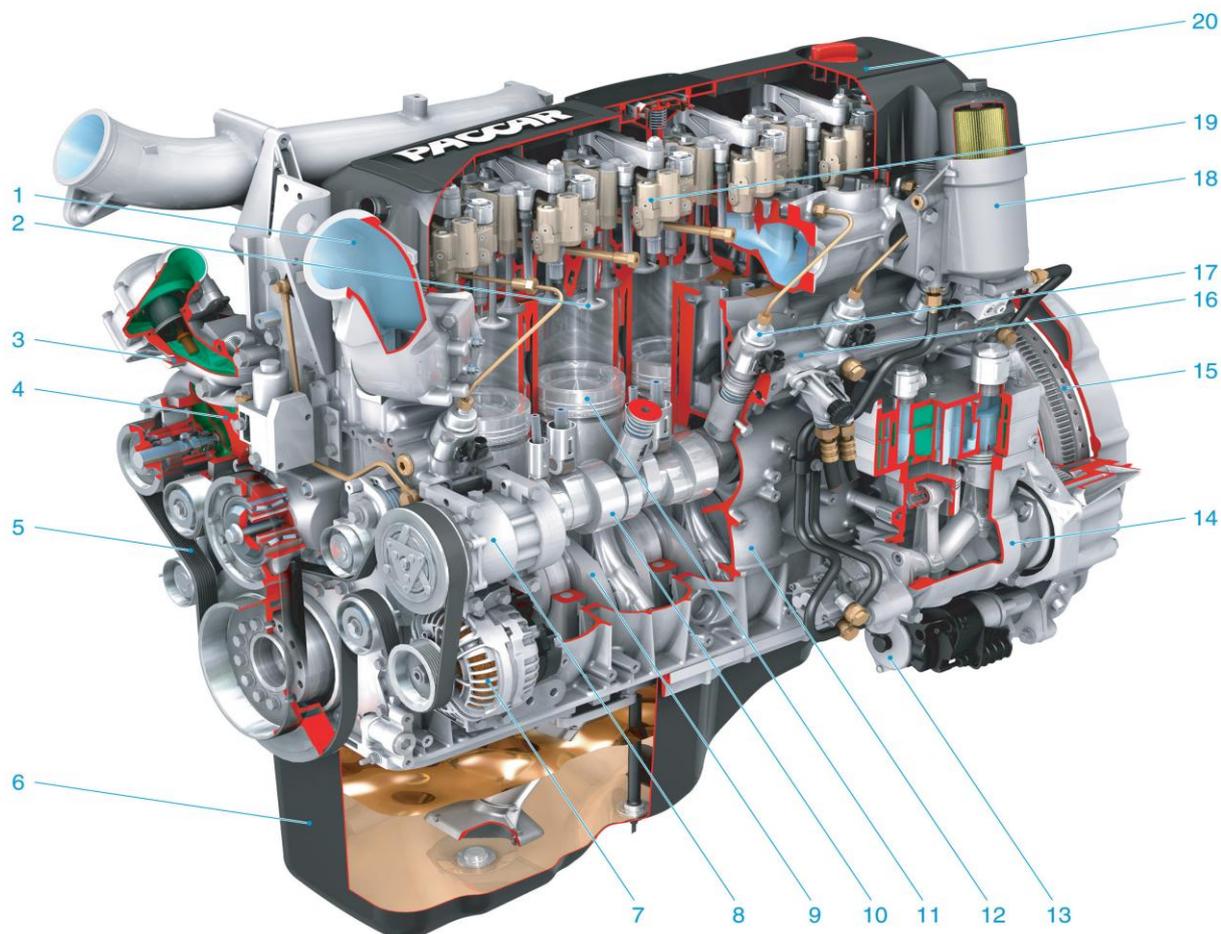
Environment

PACCAR MX engines use SCR technology to comply with the Euro 5 requirements for exhaust gas emissions.

The SCR technology does not interfere with the combustion process, which therefore can be optimised for high performance with low fuel consumption and low emission of particulate matter. MX engines allow for long service intervals, which reduces the total oil waste over the truck's service life.

PACCAR MX engine

Lay-out



Legend:

- | | |
|-----------------------------|-------------------------------|
| 1. Air intake pipe | 11. Piston |
| 2. Valve | 12. Engine block |
| 3. Thermostat housing | 13. Starter engine |
| 4. Water pump | 14. Air compressor |
| 5. Poly-V belt | 15. Flywheel |
| 6. Oil sump | 16. Low pressure fuel gallery |
| 7. Alternator | 17. Unit pump |
| 8. Air condition compressor | 18. Fuel filter |
| 9. Crankshaft | 19. MX Engine Brake |
| 10. Camshaft | 20. Valve cover |