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Preventive maintenance

Preventive maintenance periods

These preventive maintenance periods apply to average conditions of operation. Check the periods given by the manufacturer of the equipment in which the engine is installed. If necessary, use the shorter periods. When the operation of the engine must conform to the local regulations, these periods and procedures may need to be adapted to ensure correct operation of the engine.

The service intervals can be reduced for operation in adverse conditions. The intervals must not be extended unless Perkins Engines Company Limited have approved the changes as indicated in the Perkins Warranty.

It is good preventive maintenance to check for leakage and loose fasteners at each service. These maintenance periods apply only to engines that are operated with fuel and lubricating oil which conform to the specifications given in this handbook.

Schedule for engines in normal use

The preventive maintenance operations must be applied at the interval (hours or months) which occurs first.

- | | | | |
|----------|----------------------------|----------|-------------------|
| A | Every 10 hours or daily | D | Every 2000 hours |
| B | At pre-delivery inspection | E | Every 10000 hours |
| C | Every 400 hours | | |

A	B	C	D	E	Operation
●	●				Check the restriction indicator for the air filter and, when necessary, renew the filter element
●	●				Check the pressure of the lubricating oil at the gauge, if fitted
●	●				Check the level of the lubricating oil
●	●				Check the amount of coolant
●					Drain all water/sediment from the primary fuel filter
	●	●			Check the condition and the tension of all drive belts
		●			Renew the lubricating oil
		●			Renew the canisters of the lubricating oil filter
		●			Renew the rotor of the by-pass filter for the lubricating oil, if fitted
		●			Renew the canister of the main fuel filter
		●			Check the specific gravity and the pH value of the coolant
		●			Ensure that the nuts which retain the turbocharger(s) are tightened securely
			●		Ensure that the fuel injectors are checked and corrected, or renewed if necessary ⁽¹⁾
			●		Ensure that the tappet clearances are checked, and adjusted if necessary ⁽¹⁾
			●		Loosen and tighten the bolts and the nuts of the cylinder heads to the correct torque only in accordance with the instructions given in "How to tighten the bolts of the cylinder head" on page 50. See the 'Note' at the beginning of this operation.
				●	Ensure that the turbocharger(s), the coolant pump, the alternator, and the starter motor are checked ⁽¹⁾
				●	Ensure that the belt tensioner pulley, the engine damper, and the air compressor (if fitted) are checked ⁽¹⁾
				●	Engine overhaul
					- Intermediate 8 000 to 10 000 hours
					- Full 16 000 to 20 000 hours
					Use the instructions given in the Workshop Manual

⁽¹⁾ By a person who has had the correct training.

In addition to the operations listed above, the operations listed below must be applied at 12 month intervals:

- Drain and flush the coolant system and renew the coolant mixture.
- Check that the intercooler and the radiator are clean and free from debris.

Schedule for engines in intermittent use

For engines which are in use for a total of less than 400 hours in every twelve months, the schedule below must be used:

The preventive maintenance operations must be applied at the interval (hours or months) which occurs first.

- A Every month
- B Every 200 hours or 12 months
- C Every 1000 hours or 24 months

A	B	C	Operation
●			Check the amount of coolant
●			Check the level of the lubricating oil
●			Check the restriction indicator for the air filter and, when necessary, renew the filter element
●			Drain all water/sediment from the primary fuel filter
●			Start and run the engine until normal temperature of operation is reached. If the engine has not been run for more than a month, add oil to the turbocharger(s) before the engine is started, see "How to prepare a new or an overhauled engine" on page 15
	●		Check the condition and the tension of all drive belts
	●		Renew the lubricating oil
	●		Renew the canisters of the lubricating oil filter
		●	Renew the rotor of the by-pass filter for the lubricating oil, if fitted
	●		Renew the canister of the main fuel filter
		●	Ensure that the fuel injectors are checked and corrected, or renewed if necessary ⁽¹⁾
		●	Ensure that the tappet clearances are checked, and adjusted if necessary ⁽¹⁾

⁽¹⁾ By a person who has had the correct training.

In addition to the operations listed above, the operations listed below must be applied at 12 month intervals:

- Check the coolant pump, drain and flush the coolant system and renew the coolant mixture.
- Check the turbocharger(s) and give it/them a service if necessary ⁽¹⁾. Ensure that the nuts which retain the turbocharger(s) are tightened securely.
- Ensure that the alternator and the starter motor are checked, and corrected if necessary ⁽¹⁾.
- Ensure that the belt tensioner pulley, the engine damper and the air compressor (if fitted) are checked ⁽¹⁾.
- Check that the intercooler and the radiator are clean and free from debris.