

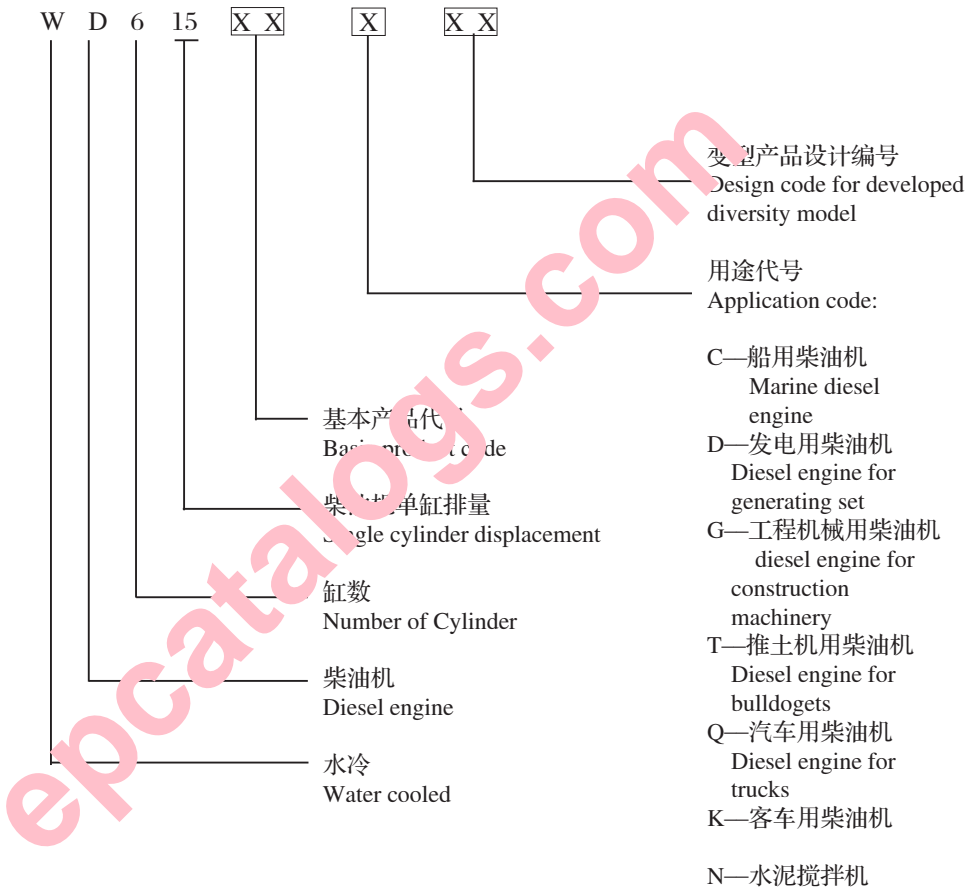


1.柴油机使用说明

Usage Instructions

1.1 WD615系列客车柴油机代号的含义

The signification of the code of WD615 Series Diesel Engines



1.2 新柴油机使用须知

Operating notice for new diesel engine

- 汽车用柴油机，在汽车使用的最初2000km（约60h）内应限制柴油机转速不超过标定转速的80%。

For vehicle engines, the engine's rotating speed should be limited within 80% of its rated speed during its initial 2000km running (approximately 60h).

- 工程机械用柴油机, 在最初使用的 60h 内, 柴油机应在部分负荷 (油门在 3 / 4 位置以下) 工作。

For construction machinery application, the engine should be running under part load (the accelerator should be controlled under 3 / 4 full load) during its initial 60h running.

- 新机经初期使用磨合后, 需要更换机油, 否则可能造成柴油机零件的过度磨损或损坏。正确地维护保养将使您的柴油机有更好的性能、更经济的运转及更长的寿命。

The lubricating oil should be replaced after the primary running period, otherwise the engine parts possibly be over worn or damaged. Proper protection and maintenance will ensure your engine with better performance, more economical and longer service life.

- 首次换油期的规定

对于年行驶里程不到 2 万公里的汽车, 首次换油期: 1000–1500 公里。

对于年行驶里程超过 2 万公里的汽车, 首次换油期: 1500–2000 公里。

每日检查油温表、油压表、报警装置和其它仪表, 确保它们正常能工作。

First oil change period:

For vehicle the annual running mileage is less than 20,000km the first oil change period is 1,000–1,500km.

For vehicle the annual running mileage is less than 20,000km the first oil change period is 1,500–2,000km

按说明书中要求进行日常维护和保养。

Perform daily maintenance work as specified in this manual.

1.3 柴油机的开箱工作

Unpacking the Diesel Engine

- 1、当您打开您的柴油机包装箱之后, 首先按文件清点柴油机及随机附件, 检查柴油机外表有无损伤, 然后进行下述工作:

When opening the packing of engine, you should firstly check the surface of engine and the amount of accessories as per packing list, then proceed on as following;

- 2、擦试外露件的防锈层、防锈剂等。

Clean the anticorrosive coating and preservative of outer parts.

- 3、放出燃油滤清器及燃油系统零件内部油封油 (也允许燃油系统的油封不经入出而启动, 但必须等燃油系统油封油消耗完正常柴油已供应到才允许发动机满负荷运行)。

Drain off the seal diesel oil from fuel filters and fuel supply system (the engine is also allowed to be started before seal diesel oil draining, but not allowed to be operated at full

load until the seal diesel oil of fuel supply system has been used up and the usual fuel has been provided)

4、转动飞轮并向进气管内喷溶剂到驱尽气内油封油为止。

Turn the flywheel and inject solvent to air intake manifold till the seal oil of cylinder has been drained off.

5、向增压器排气口溶剂，直到驱尽油封油为止。

Inject solvent to the air outlet of turbocharger till the seal oil has been drained off.

6、根据厂方与用户的协约，对油底内未注油的应按规定注油。

As per the agreement between Weichai and the customer, the engines supplied with empty oilsumps should be filled with oil.

7、按厂方与用户的协议，出厂据用户需要，已加注冷却液的应检查冷却液的性能，如果防冻能力满足 -30°C 或 -35°C 时，其 pH 值为 7-8 (中性)，总硬度值为 $5-15^{\circ}\text{d}$ [$9-27^{\circ}\text{f}$ (硬度)] 则可以使用这些冷却液，如不合乎要求，则应放出，重新加注含冻剂的冷却液，发动机加约 40 升冷却液。

As per the agreement between Weichai and the customer, and as per customer's requirement before delivery, coolant performance should be checked if the engine has been filled up with coolant. The coolant could be remained to use if its antifreezing performance could meet -30°C or -35°C and pH is 7-8 (litmusless), and its total rigidity number is $5-15^{\circ}\text{d}$ [$9-27^{\circ}\text{f}$ of (rigidity)], otherwise, it should be drained off and replaced by new coolant containing antifreeze. The volume of coolant filled to engine is approximately 40 liter.

1.4 起动前的检查

Inspection before starting

检查冷却液液面

Inspect the coolant level.

检查燃油液面

Inspect the fuel level.

检查发动机机油液面

Inspect the lubricating oil level.

1.5 柴油机的起动

Starting

将电源开关、电钥匙处于起动位置

Put the power switch and starting key at the starting position.

变速杆处于空档位置

Put the gearlever at empty gear-matching position.

踩下离合器踏板和油门踏板，然后拉动过量燃油装置的拉手开关 (若装有此装置的

话),并操纵起动机,当发动机起动后应将过量燃油装置的拉手开关复位,若发动机起动不了,则待约1分钟后再重复上述操作,发动机起动后,机油压力表应立即显示压力,起动热发动机时,可不必使用过量燃油装置。

Step down footplate of clutch and footplate of accelerator, pull the handle of extra fuel supply device for starting(if have), and starting the engine. The handle of the device should be reset after engine's started. If the engine can't be started, repeat the above operating after about 1 minute. Oil pressure gauge should immediately indicate number values after engine started. The extra fuel supply device for auxiliary starting device should not be used during starting in thermal state.

低温起动

Low temperature starting

装有电子控制火焰预热起动装置。

With electronic control flame preheating device

发动机水温低于 -23°C 时,打开钥匙开关,预热指示灯亮,电热塞通电加热,经 50S 后预热指示灯自动闪烁。电热塞已加热到 $850-950^{\circ}\text{C}$,按下起动按钮,接通起动机,电磁阀自动打开油路,给电热塞供油,进行火焰预热起动,可使发动机在 -25°C 下顺利起动。

When the temperature of coolant in the engine is lower than -23°C , turn on the electronic key, the preheating indicator lighting, the heating plug is heated, and the preheating indicator will be automatically flickered after 50S. When the heating plug is heated to $850-950^{\circ}\text{C}$, press down the start button, connect the starter, the electromagnetic valve will be automatically opened, and the heating plug will be provided with fuel to proceed flame preheating, and the engine can be easily started under -25°C .

带有低温辅助起动装置

With low temperature auxiliary starting device

装有低温辅助起动装置的汽车上都备有一瓶起动燃料,它不能在 50°C 以上的温度下保存,在夏季应将它放在阴凉处,注意防火。

One bottle of starting fuel will be provided with the truck which fitted with low temperature auxiliary starting device. It can't be preserved when the ambient temperature is higher than 50°C . To prevent from fire, it should be put at a cool place in summer.

起动过程:

Starting process:

将起动燃料注入驾驶室仪表板下的储液罐里,在接通起动机之前,先将手泵来回泵三下,接通起动机,在发动机转几圈后,连续拉动手泵,直到发动机起动,但不要在发动机起动之前过多拉动手泵;气温很低时,发动机起动后还要继续拉动手泵,直至发动机运转平稳,该装置能使发动机在 -40°C 低温时顺利起动。

Input starting fuel to the tank under the instrument plate in the driver-cab, pull the hand pump three times before connecting the starter, after the engine run several rotations continue to pull the hand-pump till the engine started, but don't pull too many times before starting in the case of very low temperature, continue to pull the hand-pump after starting till the engine runs smoothly. With this auxiliary device, the engine can be started easily under -40°C .

1.6 柴油机的运转

Engine's running

柴油机在低于最大扭矩的转速下, 全油门持续运转不超过 1 min。

When the engine running at the speed lower than the speed of the biggest torque, it is not allowed to continue running on full load over 1 min.

柴油机全负荷运转后, 停车前要怠速运转 3—5 min。

After running on full load, the engine should run in idling speed for 3—5 minutes before stopped.

经常注视油压表及冷却液温度表:

Often watch and check the oil pressure gauge and coolant temperature meter.

若压力和温度不符合规定要求, 应将柴油机停车。

Stop the engine if the pressure and temperature cannot meet the standard requirement.

注意: 在冷却液温度低于 60°C 或高于 100°C 时连续运转将有损于发动机。

Note: Diesel engine can not continue to run when the coolant temperature is lower than 60°C or higher than 100°C because this would damage the engine.

柴油机的停止

Engine's running stop

拉动油门手油门置于零位, 停止发动机, 重新调整手油门。

Pull the hand-accelerograph of injection pump at zero position, stop the engine, and readjust the hand-accelerograph.

注意: 发动机在停止之前以怠速运转 1—2min 后再停车。

Note: The engine should run in idling speed for 1—2 minutes before stopped.

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