List of spare parts, unrestricted service

Spare parts are **requested** by the following Classification Society only: NK, while just **recommended** by: ABS, DNV, CRS, KR, LR and RS, but neither requested nor recommended by: BV, CCS and RINA.

The final scope of spare parts is to be agreed between the owner and engine builder/yard.

Cylinder Cover, Plate 2272-0300 (901 and more)

1 Cylinder cover complete with fuel, exhaust and starting valves, indicator valve, cooling jacket and sealing rings (disassembled)
½ set Studs for 1 cylinder cover

Piston and Piston Rod, Plates 2272-0400/0420/0500 (902)

1 Piston complete (with cooling pipe), piston rod, piston rings and stuffing box, studs and nuts
1 set Piston rings for 1 cylinder

Cylinder liner, Plate 2272-0600 (903)

1 Cylinder liner complete, including cooling jacket, non-return valves, sealing rings and gaskets (assembled)

Cylinder lubricating Oil System, Plates 3072-0600,6670-0100 (903) [1])

1 Lubricator complete
1 set O-rings and seals
2 Lubricator backup cable

Connecting Rod, and Crosshead Bearing, Plates 1472-0300,2572-0300/0200 (904)

1 Telescopic pipe with bushing for 1 cylinder
1 Crankpin bearing shell (1 upper and 1 lower part) with studs and nuts
1 Crosshead bearing shell lower part with studs and nuts
2 Thrust piece

Thrust block, plate 2572-0600 (905)

1 set Thrust pads, complete FWD set for 'Ahead'
1 set For KR and NK also 1 set 'Astern' if different from 'Ahead'

HPS , Hydraulic Power Supply, Plates 4572-1000/0750,4572-1100/1200/1250 (906) [1 and 2])

1 Proportional valve for hydraulic pumps
1 Leak indicator
1 Drive shaft for hydraulic pump, of each type (length)
1 Membrane plus seals for accumulator
1 set Minimess for accumulator
1 Compensator, fluid type
6 Chain links. Only for ABS, LR and NK
1 set Flexible hoses, one of each size and length

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1 set High-pressure gasket kit
1 Hydraulic pump
1 Coupling for start-up pump

ME Filter, Plate 4572-0800

1 set Filter cartridges for redundancy filter.
Cartridge filtration ability, minimum $Beta_6$=16.

Engine Control System, Plates 4772-1500/1550,7072-0800/1100/1250 [2])

1. For engine with Triton control system:

   set Controller spares:

   1 Base module
   1 CPU module
   1 Power supervision module
   1 Modbus module
   1 Digital I/O module (DI, DO, DRO)
   1 Analog I/O module
   1 Digital I/O module (DI, DO)
   1 Combi I/O module (AI/DO) Only GI
   1 ID-key for Triton

2. For engine with MPC control system:
   MPC controller
   MPC 10 controller (if MPC10 controllers are used as CCU)

   ID-key for MPC

3. Common for both controller types:
   Trigger sensor for tacho system. (if trigger ring and no angular encoder on fore end
   Encoder, steel compensator and bearing set (if angular encoder on fore end and no trigger ring)
   Marker sensor for tacho system
   Tacho signal amplifier (TCA)

Starting Valve, Plates 3472-0200/0250 (907)

1 Starting valve, complete [2])
(Included in the Cylinder cover complete)
1 Solenoid valve [1])

Hydraulic Cylinder Unit, Plates 4572-0500/0550/0100/0900,4272-0500 (906, 907) [1 and 2])

HCU standard and HCU TCEV edition:

1 Fuel booster top cover, complete with plunger
1 ELFI + ELVA valves complete, or FIFA if applied.
1 Suction valve complete
1 20 %* Flexible high-pressure hoses, one of each size and length. *) Only for DNV
1 High-pressure pipe kit, one of each size and length
1 set Membrane plus seals for accumulator, 1 set for 1 HCU

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1 Packing kit (O-rings, square seals and bonded seals)
1 Fuel booster position sensor
1 Exhaust actuator complete incl. non-return valve

Exhaust Valve, Plates 2272-0200/0210/0240 (908)

TCEV edition and standard edition

TCEV
1 Exhaust valves complete incl. HCU & accumulators (HCU without control valves)
1 Exhaust valve without HCU (1 valve mounted in cylinder cover)
1 Exhaust valve position sensor
1 Pressure relief valve
2 Complete packing kit for HCU incl. control valve seals
1 High-pressure pipe from distributor block to TCEV + seal kit
1 High-pressure pipe from distributro block to main supply pipe (assembly) + seal kit
1 Exhaust valve position sensor

For stand edition only
1 Safety valve

Fuel Valve, Plates 4272-0200 (909)

1 set Fuel valves of each size and type fitted, complete with all fittings, for 1 engine
a) engines with 1 or 2 fuel valves: 1 set of fuel valves for all cylinders on the engine
b) engines with 3 and more fuel valves per cylinder: 2 fuel valves complete per cylinder, and a sufficient number of valve parts, excluding the body, to form, with those fitted in the complete valve, a full engine set

Fuel Oil high-pressure Pipes, Plate 4272-0100 (909)

1 set High-pressure pipe, from fuel oil pressure booster to fuel valve

Turbocharger, Plate 5472-0700 (910)

1 set Maker's standard spare parts
1 a) Spare rotor for 1 turbocharger, including compressor wheel, rotor shaft with turbine blades and partition wall, if any

Bedplate, Plates 1072-0400, 2572-0400 (912)

1 Main bearing shell (1 upper and 1 lower part) of each size
1 set Studs and nuts for 1 main bearing

[1]) MAN ES required spare parts.
[2]) All spare parts are requested by all Classes.
a) Only required for RS. To be ordered separately as option: 4 87 660 for other classification societies

Note: Plate numbers refer to the Instruction Manual containing plates with

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spare parts (older three-digit numbers are included for reference)

Fig. 19.06.01b: List of spare parts, unrestricted service: 4 87 601

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