



Maintenance plan

Service on the basis of operating hours

| after ... hours of operation | Maintenance service | | | | | |
|---------------------------------|---------------------|----|----|----|----|----|
| | M1 | M2 | M3 | M4 | M5 | M6 |
| 20-60 or after commissioning | X | X | | | | X |
| 200 | X | X | X | | | X |
| 400* | X | X | X | X | X | X |
| 600 | X | X | X | | | X |
| 800 | X | X | X | X | X | X |
| 1000 | X | X | X | | | X |
| 1200 | X | X | X | X | | X |
| 1400 | X | X | X | | | X |
| 1600 | X | X | X | X | X | X |
| 1800 | X | X | X | | | X |
| 2000 | X | X | X | X | | X |
| 2200 | X | X | X | | | X |
| 2400 | X | X | X | X | X | X |
| 2600 | X | X | X | | | X |
| 2800 | X | X | X | X | | X |
| 3000 | X | X | X | | | X |
| 3200 | X | X | X | X | X | X |
| 3400 | X | X | X | | | X |
| 3600 | X | X | X | X | | X |
| 3800 | X | X | X | | | X |
| 4000 | X | X | X | X | X | X |

* Retighten cylinder head bolts

In addition to the service on the basis of operating hours clocked up the following maintenance work according to chronological intervals are necessary:

| according to chronological intervals | Maintenance service | | | | | | |
|--------------------------------------|---------------------|----|----|----|----|----|----|
| | M1 | M2 | M3 | M4 | A1 | A2 | M6 |
| yearly | X | X | X | X | | | X |
| 2 years | | | | | X | | X |
| 4 years | | | | | | X | X |

Maintenance service

| | | | |
|-----------|---|-----------|---|
| M1 | Checking <ul style="list-style-type: none"> ● Engine exterior for loss of oil and coolant¹⁾ ● Coolant level ● Concentration of antifreeze / anti-corrosion agents ● Engine oil level / gearbox oil level¹⁾ ● Engine alarms ● Functioning of instruments¹⁾ ● Coolant hoses for leaks ● Fuel lines for leaks ● V-belt tension, retightening if necessary V-belt(s) ● Condition of impeller ● Water hose clamps, pipe connections and bolts for security, retightening if necessary ● Alignment of the shaft system (In the event of abnormal vibrations, since the elastic engine mounts may have settled.) | M3 | Changing <ul style="list-style-type: none"> ● Fuel filter cartridges²⁾ ● Engine oil, Works Standard 270 und 271 ● Engine oil filter cartridge ● Filter element of crankcase breather, see page 12 |
| M2 | Cleaning <ul style="list-style-type: none"> ● Fuel pre-filter ● Draining water from auxiliary fuel filter | M4 | Changing <ul style="list-style-type: none"> ● Engine oil, Works Standard 3275 and 3277 ● Engine oil filter cartridge ● Filter element of crankcase breather, see page 12 ● Air filter |
| | | M5 | Checking / Setting <ul style="list-style-type: none"> ● Valve clearance |
| | | M6 | Trial run <ul style="list-style-type: none"> ● Engine speed test with boat under full load³⁾ |

1) Daily visual checks are to be carried out by the captain in the course of on-board routine jobs

2) Fuel filters need changing more often if contamination is present in the fuel system

3) Full load means: Water and fuel tanks are filled, boat equipment complete incl. dinghy

Once the respective number of operating hours has been clocked up (see page 10), the aforementioned maintenance work M1 to M6 is to be carried out by an MAN-authorized workshop.

| | |
|----|--|
| A1 | Checking / Replacing |
| | <ul style="list-style-type: none"> ● Injectors (opening pressure, tightness, spray pattern) |
| | Changing <ul style="list-style-type: none"> ● Both valve caps on expansion tank |
| | Cleaning <ul style="list-style-type: none"> ● Intercooler / charge-air pipes / turbocharger ● Heat exchanger (pipe cluster) |

Caution:
 Checking the injectors of Common Rail engines is not specified.

| | |
|----|--|
| A2 | Changing <ul style="list-style-type: none"> ● Coolant ● All hoses (e.g. fuel supply and return lines, gearbox oil cooler) |
|----|--|

Jobs A1 and A2 due every year or every other year must be performed irrespective of the number of operating hours clocked up at the respective time.

Note on crankcase breather

Change the filter element ② of crankcase breather type ①. Crankcase breather type ③ is maintenance-free.

