



PRE-DOCKING INSPECTION

Get a head start on dry-docking



POWERING THE WORLD – RESPONSIBLY

MAN Diesel & Turbo is the world's leading provider of large-bore diesel engines and turbomachinery. Our product portfolio includes two-stroke and four-stroke engines for marine and stationary applications, turbochargers and propellers, as well as gas and steam turbines, compressors and chemical reactors.

We are committed to minimizing fuel consumption while meeting the most advanced emission regulations. The MAN PrimeServ brand supports our customers all around the world with a comprehensive range of after-sales services.



**WE MEET
YOUR
NEEDS**

Pre-docking Inspection for two-stroke engines.

MAN PrimeServ now offers a Pre-docking Inspection to provide you with the insight you need to avoid unforeseen findings during dry docking.

As an engine designer and developer, MAN Diesel & Turbo can provide you with knowledge and expertise across engine types, designs and licensees.

Based on the Pre-docking Inspection, MAN PrimeServ provides recommendations for the upcoming dry-docking based on the actual engine condition.

Knowing the actual engine condition is knowing the actual scope of work, thereby enabling diligent planning. Planning ensures that the right parts are available on time, thereby reducing downtime and costs.

In short: Pre-docking Inspections give valuable input to your dry-docking planning.



Condition-based maintenance

With a Pre-docking Inspection, MAN will provide you with parts recommendations based on the actual engine condition. The recommendations ensure that you do not replace parts that are still in good condition. Furthermore, you will not be ordering unnecessary parts nor will you be missing parts during dry docking. You will have exactly what your engine needs, when you need it.

Knowing the actual work scope and the cost also gives you the opportunity to plan the budget and delegate resources needed for your dry dock well in advance.

Upgrades & cost optimization

As part of the Pre-docking Inspection package, you will receive a recommendation on a retrofit and upgrades solution based on your specific engine, operational pattern, and needs. Often the suggestions will be to change or add components that is due for overhauling, and with upgraded components you will be able to either save fuel, save lube oil, increase your reliability, reduce emissions etc. Retrofits and upgrades recommendations will allow you to cost optimize your engine and save money in the long run.

Diagnosing the engine

A Pre-docking Inspection is performed by two experienced superintendent engineers regardless of engine size in a time frame of up to 48 hours.

They board the vessel at the location of your choice and thoroughly inspect the engine. You receive an engine health check in the form of an objective and documented report giving you a true picture of the engine condition. With the report, you will also receive relevant spare parts recommendations and retrofit recommendations.



Benefits of a Pre-docking Inspection – Advantages for you and your vessel

Save man resources and time: By letting MAN PrimeServ perform the inspection prior to dry docking, you save a significant on-board work load and delegate responsibility to MAN Diesel & Turbo to ensure delivery of the right spare parts in the right place at the right time.

Avoid unforeseen findings during dry docking: The Pre-docking Inspection includes an assessment of all wear parts and retrofit equipment to make sure that no stone is left unturned. This means that every item recommended for replacement will be delivered to the yard. It also means that you can rely on wear parts not recommended for replacement until the time comes.

Cost savings: Condition-based maintenance saves costs. You can find the time intervals for replacing spare parts in the engine manuals. This does not, however, tell you about the actual condition of the wear parts. By requesting a Pre-docking Inspection by MAN PrimeServ, you may find you can postpone investment in wear parts based on their condition.

Expert know-how: The superintendent engineers serving you have full access to the vast repertoire of know-how and service experience gathered by MAN PrimeServ over many years in all corners of the world. In addition, your Superintendent Engineers possess detailed knowledge of the latest engine designs and service information.

Effective docking: With a Pre-docking Inspection, you get a complete work scope, enabling you to plan all maintenance activities during dry docking. And with the needed parts at hand, your dry docking will go more smooth and effective.

Performance and cost optimisation: The inspection will reveal what needs to be done now, and MAN PrimeServ will also look into what can be done to optimize your vessel's performance and help your vessel reduce fuel consumption through a retrofit solution.

Pre-docking Inspection – It's all about performance and peace of mind

As the engine designer, MAN Diesel & Turbo specifies the requirements for each engine part. All MAN Diesel & Turbo spare parts fulfil these high standards in order to ensure the highest level of reliability and operational performance.

MAN Diesel & Turbo is the only partner with detailed knowledge of the engine design and any modifications or updates. By ordering genuine spare parts from MAN PrimeServ you can be sure that your spare parts for each individual engine are fully up-to-date. This may not be the case if you source spare parts from other suppliers who are not aware of changes during the service life of the engine, leaving you with spare parts that you cannot use.

We are here to ensure you gain the most optimal performance of your engine through dedicated service.

PRE-DOCKING INSPECTION

MC/MC-C series: Carried out by MAN PrimeServ superintendent engineers

Visual inspection of the following:

- Ball joints for pull rods to governor, fuel rack, and maneuvering gear
- Surfaces of all cams/rollers through the inspection hole in the camshaft housing
- Exhaust high-pressure piping
- Chain drive and guide bars
- Moment compensator
- Water mist catcher
- Thrust bearing
- Earthing device
- Cylinder lubricating system
- Check up on spare parts
- Exhaust Valve drop down test
- Accumulator pressure test

Inspection and measurement of the following:

- Cylinder liners, pistons, piston rings (port inspection)
- VAK measuring of cylinder liners and combustion chambers ¹⁾
- Video inspection of cylinder liners and combustion chambers as required ¹⁾

To be carried out by vessel crew

Tasks to be completed within three months before inspection:

- Engine performance test ²⁾
- Crankcase inspection, including checks of bearing clearance, guide rails and piston rods ³⁾
- Crankshaft deflection ³⁾

Supplied by crew during attendance:

- Running hours of various components to be collected (list will be provided by the attending superintendent engineers).

ME/ME-C series: Carried out by MAN PrimeServ superintendent engineers

Visual inspection of the following:

- Exhaust high-pressure piping
- Fuel oil boosters
- Hydraulic pumps
- Chain drive and guide bars
- Moment compensator
- Thrust bearing
- Water mist catcher
- Earthing device
- Cylinder lubricating system
- Tacho system
- Check up on spare parts
- Exhaust Valve drop down test
- Accumulator pressure test

Inspection and measurement of the following:

- Cylinder liners, pistons, piston rings (port inspection)
- VAK measuring of cylinder liners and combustion chambers ¹⁾
- Video inspection of cylinder liners and combustion chambers as required ¹⁾

To be carried out by vessel crew

Tasks to be completed within three months before inspection:

- Engine performance test ²⁾
- Crankcase inspection, including checks of bearing clearance, guide rails and piston rods ³⁾
- Crankshaft deflection ³⁾

Supplied by crew during attendance:

- Running hours of various components to be collected (list will be provided by the attending superintendent engineers).

ME-B series: Carried out by MAN PrimeServ superintendent engineers

Visual inspection of the following:

- Surfaces of all cams/rollers through the inspection hole in the camshaft housing
- Fuel oil boosters
- Hydraulic pumps
- Chain drive and guide bars
- Moment compensator
- Water mist catcher
- Thrust bearing
- Earthing device
- Cylinder lubricating system
- Tacho system
- Check up on spare parts
- Exhaust Valve drop down test
- Accumulator pressure test

Inspection and measurement of the following:

- Cylinder liners, pistons, piston rings (port inspection)
- VAK measuring of cylinder liners and combustion chambers ¹⁾
- Video inspection of cylinder liners and combustion chambers as required ¹⁾

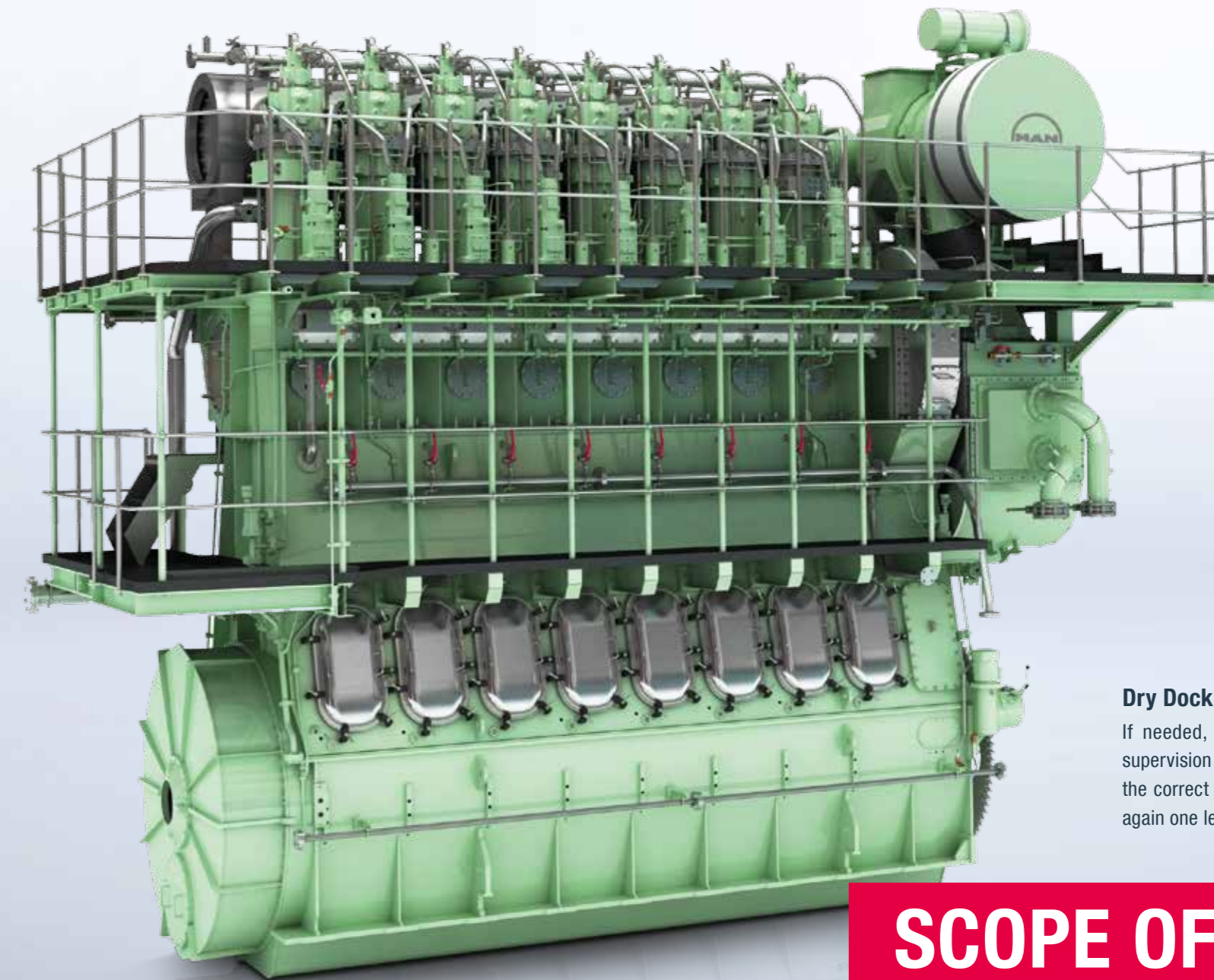
To be carried out by vessel crew

Tasks to be completed within three months before inspection:

- Engine performance test ²⁾
- Crankcase inspection, including checks of bearing clearance, guide rails and piston rods ³⁾
- Crankshaft deflection ³⁾

Supplied by crew during attendance:

- Running hours of various components to be collected (list will be provided by the attending superintendent engineers).

**Dry Docking Supervision**

If needed, MAN PrimeServ can conduct a supervision during dry docking to secure that the correct installations are made, giving you again one less thing to worry about.

SCOPE OF WORK

WORLD- WIDE SERVICE

MAN PrimeServ

Represented in all key markets and major ports, with a network of more than 100 service centers, and with skilled field service managers at the ready to provide first-class technical support, MAN PrimeServ is fully primed to provide 24/7 service, wherever you are. In power plants, engines & marine systems and turbomachinery, offering reliable technical support when you need it most, our service solutions include OEM spare parts, engine and machinery maintenance and repairs, customized service agreements and individual consulting.

We also offer retrofitting and upgrade services to bring engines and turbochargers already in service up to the very latest standards of performance and efficiency. Using the latest digital technology, we enable you to maximize the performance and availability of your MAN equipment by accessing real-time data analysis, remote support and rapid solutions. We also offer an extensive range of training courses at MAN PrimeServ academies around the world.

For more information please visit: www.man.eu/primeserv



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MAN PrimeServ – the service brand of MAN Diesel & Turbo