



# Pre-docking Inspection

MAN PrimeServ





# We meet your needs

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

As engine designer and engine developer, MAN Energy Solutions can provide you with knowledge and expertise across engine types, designs and licensees.

By performing a Pre-docking Inspection, MAN PrimeServ can provide 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 spare 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 or be missing parts during dry docking. You will have exactly what your engine needs, when you need it.

Knowing the actual work scope and cost also gives you the opportunity to plan the budget and delegate the resources needed for your dry docking 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 are due for overhauling, and with upgraded components you will be able to save fuel, save lube oil, increase reliability, reduce emissions, etc. Retrofit and upgrade recommendations 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 and 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 and retrofit recommendations.

#### 1. Inspection

- Six months ahead of dry docking
- Two superintendent engineers
- Up to 48 hours



#### 2. Evaluation

- Findings
- Performance & measurement data
- Running hours



#### 3. Recommendation

- Condition report with recommendations
- Quotation for required spare parts



# Pre-docking Inspection

**It's all about performance and peace of mind**

## 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 Energy Solutions 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. However, this does not tell you about the actual condition of the wear parts. By requesting a Pre-docking Inspection from 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, our 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 smoothly and effectively.

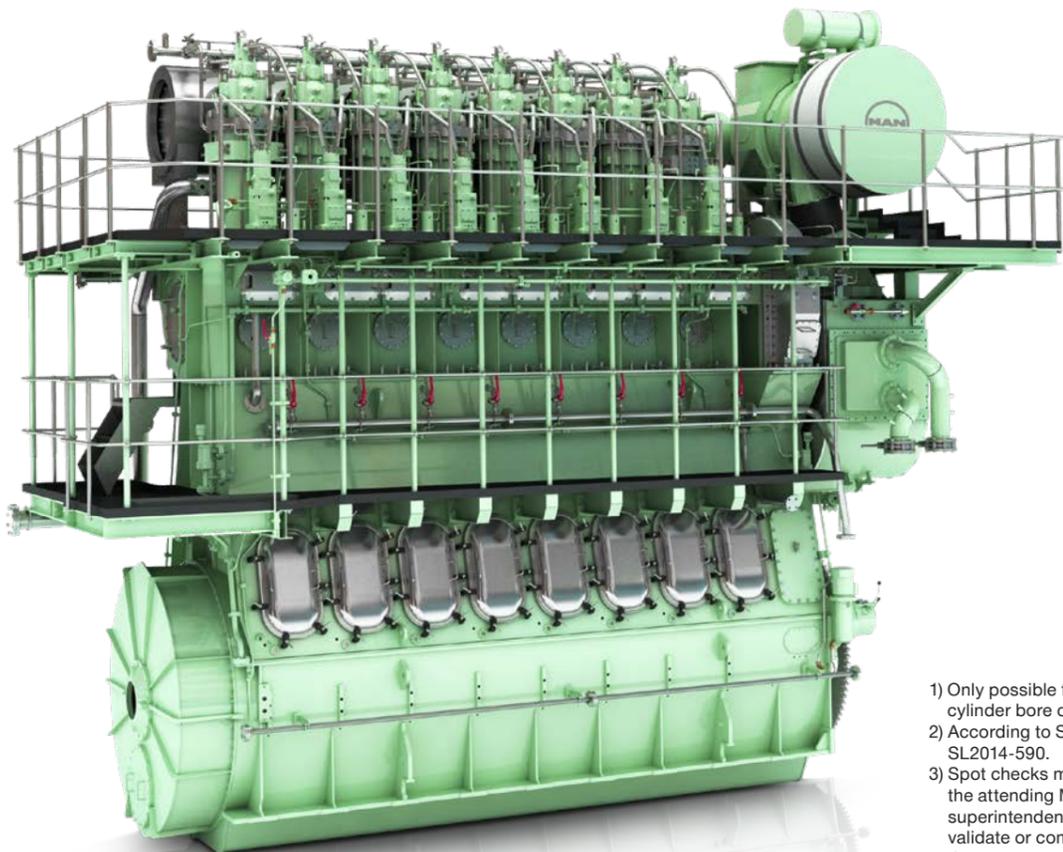
### **Performance and cost optimization:**

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.

# Scope of work

## Dry docking supervision

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



- 1) Only possible for engines with a cylinder bore of 50 cm or larger.
- 2) According to Service Letter SL2014-590.
- 3) Spot checks may be carried out by the attending MAN PrimeServ superintendent engineers in order to validate or compare results found by the crew

## 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 manoeuvring 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)
- Cylinder liner measurement and combustion chambers <sup>1)</sup>
- Video inspection of cylinder liners and combustion chambers as required <sup>1)</sup>

### To be carried out by vessel crew

### Tasks to be completed within three month before inspection:

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

### 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
- 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)
- Cylinder liner measurement and combustion chambers <sup>1)</sup>
- Video inspection of cylinder liners and combustion chambers as required <sup>1)</sup>

### To be carried out by vessel crew

### Tasks to be completed within three month before inspection:

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

### 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)
- Cylinder liner measurement and combustion chambers <sup>1)</sup>
- Video inspection of cylinder liners and combustion chambers as required <sup>1)</sup>

### To be carried out by vessel crew

### Tasks to be completed within three month before inspection:

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

### Supplied by crew during attendance:

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

# Worldwide service

100  
Service centers  
worldwide

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, marine engines & 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.

For existing equipment our holistic retrofit and modernization solutions keep your engines or turbochargers up-to-date and at optimal levels of reliability, availability and economic

efficiency. Through cutting edge digital technology we're able to hike performance and minimize downtimes, while our remote connections enable live data analysis, ensuring quick, effective solutions. MAN PrimeServ Academies provide expert training courses around the world, developing the operational and maintenance skills required.

For more information please visit [www.man-es.com/primeserv](http://www.man-es.com/primeserv)



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