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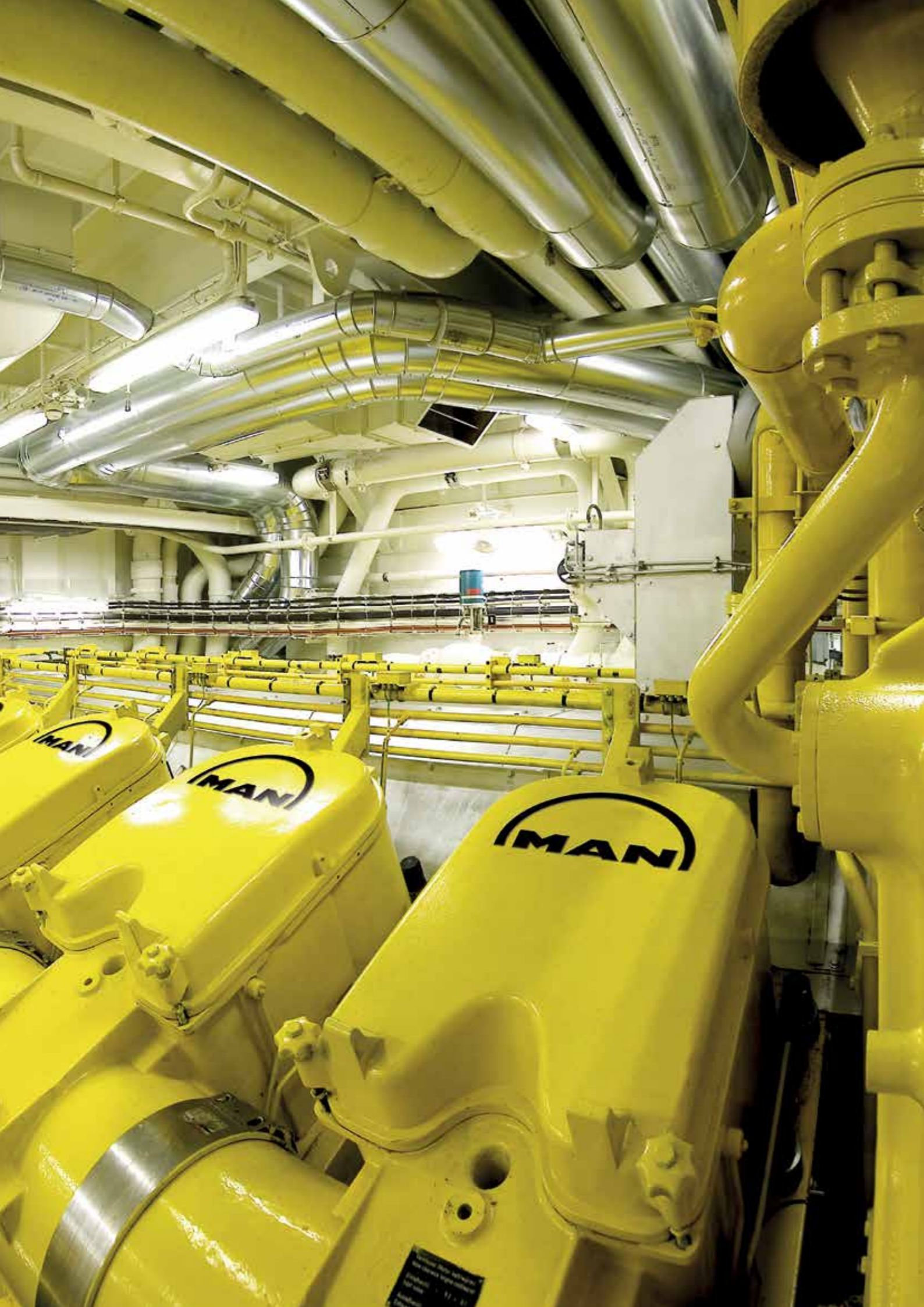
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# PrimeServ O&M

## Service Agreements





## Engineering the Future – since 1758.

MAN PrimeServ offers a wide range of service and spare parts agreements for the electric power generation, marine and offshore business sectors. Whether it is as simple as supplying spare parts and supervision for major overhauls or as comprehensive as managing complete power stations, there is something in our portfolio for every type of customer or application need.

As equipment continues to get more sophisticated and competition increases, success is driven by superior efficiency and reliability. It comes from knowing your business and paying attention to detail. At PrimeServ O&M, our business is operating, maintaining and managing marine diesel engines, gensets and complete power stations. PrimeServ O&M is unrivaled in its capability to service MAN products. With access to the OEM knowledge center in the headquarters where the MAN worldwide service experience is consolidated, together with the global reach of more than 115 MAN PrimeServ Service Hubs, we are able to successfully deliver proven industry practices to any locality in order to maximize the investment returns from your equipment.

Staying ahead of the competition is a full time job. The service solutions in our portfolio are flexible and tailored to fit individual needs. Partnering with PrimeServ O&M allows you to focus on your core business, knowing that our team of professionals delivers outstanding service.

# PrimeServ O&M – Service Agreements

## Flexible solutions to meet unique project needs

# LTSA

## Long Term Service Agreements

PrimeServ O&M has a wide portfolio of Service Agreements tailored to the marine, power and oil & gas sectors. Basic agreements are flexible so that they can be adapted to meet the specific needs of any project. The portfolio is divided into Long Term Service Agreements and Operation & Maintenance Agreements.

		Agreed Terms & Conditions	Execution of Logistic Works	Higher Availability	Faster Troubleshooting	Onsite Support	Performance Commitments
Marine	<b>Long Term Service Agreements</b>	<b>LTSA</b>					
	Time and Material Agreement	—	—	—	—	—	—
	Basic Maintenance Agreement	—	—	—	—	—	—
	Accelerated Maintenance Agreement	—	—	—	—	—	—
	Performance Maintenance Agreement	—	—	—	—	—	—
Power Plant	<b>Operation &amp; Maintenance Agreements</b>	<b>O&amp;MA</b>					
	O&M Support Agreement	—	—	—	—	—	—
	O&M Management Agreement	—	—	—	—	—	—
	Full Operation & Maintenance Agreement	—	—	—	—	—	—

█ included    █ optional



### Additional PrimeServ Solutions

- Performance Assessment (Audit)
- Online Service
- Computerized Maintenance Management System (CMMS)
- PrimeServLube®
- PrimeServLab®
- PrimeServClean®
- PrimeServGran®
- PrimeServProtect

### Long Term Service Agreements (LTSA)

The LTSA program is a series of long-term contractual relationships, with PrimeServ providing maintenance services and spare parts for engines and turbochargers. The portfolio ranges from a frame agreement like the Time and Material Agreement to tailor-made Maintenance Agreements in which PrimeServ plays a larger support role in the logistics planning. The Maintenance Agreements range from a Basic Maintenance

Agreement covering preventive maintenance services and spare parts to the Performance Maintenance Agreement in which PrimeServ acts in partnership with the customer to manage engine downtime and achieve superior operational availability.

# LTSA

## Long Term Service Agreements

### Time and Material Agreement (TMA)

Under a TMA the customer has a dedicated point of contact within the PrimeServ after sales network. Typically, a frame agreement is made outlining the terms and conditions for any services or supplies ordered by the customer. The customer is responsible for logistics planning and orders spares and service when needed. Since the commercial relationship has already been developed and terms of service are predefined, administration is reduced and orders are processed faster.

#### Benefits of a TMA

- Pre-agreed terms and conditions
- Reduced order processing times
- Price predictability

### Basic Maintenance Agreement (BMA)

The Basic Maintenance Agreement (BMA) is the first level in our Maintenance Agreements. With a BMA the customer is assigned a designated contract manager who is responsible for the scheduling and logistics of each maintenance, as well as monitoring customer needs and work execution. It is a long term arrangement covering the supply of spare parts and superintendent services at site for specified planned maintenance intervals within a predefined period. Alternative payment structures are available such as fixed monthly fees, monthly variable fees or a combination of each. Typical contract terms are for 35,000 – 40,000 running hours per engine or five years.

#### Benefits of the BMA package

- Preferred pricing
- Key account relationship
- Collaborative maintenance planning
- MAN responsibility for spares and service logistics
- Regular meetings on management level

### Accelerated Maintenance Agreement (AMA)

The AMA is designed for customers who place a premium on reducing engine outages for planned maintenance by using a pit-stop-style approach. Strategic spares are kept in stock at site for rapid exchange during maintenance, reducing the scheduled outage time. After the exchange, the engine is returned to service and the removed spare parts undergo reconditioning and quality inspection before being added to the strategic stock of spare parts. In addition to the scope and services provided in the BMA, the customer benefits from preferential pricing on an initial stock of strategic rotational spare parts.

#### Additional Benefits of the AMA package

- Reduced downtime for planned maintenance
- Preferential pricing on strategic spares packages
- Option for full maintenance crew from MAN
- Strategic stock for reducing unscheduled maintenance outages

### Performance Maintenance Agreement (PMA)

The PMA is the most comprehensive offering in the LTSA program covering both planned and unplanned maintenance. The contract is structured so that the customer and PrimeServ O&M are aligned and incentivized to meet certain defined performance goals. The PMA typically includes online monitoring, periodic on-site support, priority access to spare parts, as well as logistics support to minimize unscheduled events.

#### Additional benefits of the PMA package

- Availability commitments
- Price predictability for scheduled and unscheduled maintenance
- Priority access to spare parts with long lead times
- Faster troubleshooting and fault elimination
- Regular data reporting and analysis sharing



# O&MA

## Operation & Maintenance Agreements

### Operation & Maintenance Agreements (O&MA)

The O&MA program is a series of long term contractual relationships in which PrimeServ O&M plays larger roles in the management and operation of complete power plant facilities on top of the maintenance services. All O&MA products include a BMA covering the long term provision of spare parts and superintendent services. The product portfolio ranges from advisory management support to full management, operation and maintenance of a power plant.

### O&M Support Agreement (OMSA)

The OMSA is an advisory agreement in which PrimeServ O&M offers one or more operation and maintenance specialists to provide guidance to the customer during the mobilization and operations of the power plant. The scope can be tailored to include support modules for management, operations, maintenance and administration of the power plant, its staff, the feedstock agreements and other contractual obligations.

#### Benefits of an OMSA

- Management and supply of spare parts and service
- On-site support from experienced professional(s)
- On-the-job mentoring
- Proven methods and procedures

### O&M Management Agreement (OMMA)

The OMMA embeds PrimeServ O&M staff into key management positions in the customer's operation and maintenance organization. The scope may include the provision of a mobilization manager who will hire the staff, manage the outfitting of the organiza-

tion and plant, the establishment of the computerized maintenance management system, and development of standard procedures on behalf of the customer. During the operations period PrimeServ O&M staff will assume the key positions and authority to manage the customer's organization in the execution of all administration, operation and maintenance activities. PrimeServ O&M is committed to the performance of the power plant for the duration of the contract term. Contract terms typically range from three to ten years.

#### Benefits of an OMMA

- Management responsibility of the entire facility on a 24/7 basis
- On-site mentoring
- Management and supply of all plant spare parts and related services
- Downtime commitments for scheduled maintenance

### Full Operation & Maintenance Agreement (FOMA)

The FOMA is the most comprehensive offering in the PrimeServ after-sales program. It is a holistic solution in which PrimeServ O&M manages, operates and maintains the complete facility on behalf of the customer.

The scope typically includes mobilization services prior to the start of commercial operations such as the hiring of the staff, staff and plant outfitting, establishment of a computerized maintenance management systems, and development of standard procedures. From the start of commercial operations PrimeServ O&M is responsible for the management, operations



and maintenance of the full power plant facility including daily operations, routine maintenance, major overhauls, feedstock and inventory management. Contract terms typically range from three to ten years.

#### Benefits of a FOMA

- Responsibility for the entire facility, 24/7
- Performance commitments
- Proven operation & maintenance practices
- Single point of responsibility
- Local solution, global support

# Additional PrimeServ Solutions

## Products for Superior Performance



PrimeServ's portfolio features several additional solutions. They can be included in any of the Service Agreements or ordered separately.

### Performance Assessment (Audit)

PrimeServ O&M's Performance Assessment Modules include the evaluations of technical equipment, the organizational structure, staff skills and competency, operations and maintenance practices. Assessments start with performance benchmarking and end with the design of an optimization plan to return the facility to a target level of sustainable performance.

#### Benefits

- Professional unbiased evaluation
- Written report and implementation plan
- Knowledge transfer of proven O&M methods

### Online Service

The PrimeServ Online Service securely transfers key engine data from any place in the world to PrimeServ headquarters. Engine experts analyze this data and provide the customer with written recommendations. The experts can also provide engine operators with remote support by accessing real-time engine data.

#### Benefits

- Monthly reports with engine records
- Early detection of sub-optimal performance indicators
- Faster troubleshooting and fault elimination
- Enhanced predictive maintenance capabilities

### Computerized Maintenance Management System (CMMS)

A CMMS is a software program which helps optimize maintenance planning. Selected modules are setup to organize all data and processes related to maintenance activities including the planning of spare parts requirements and workflows, as well as the simplification of warehouse management and purchasing control.

#### Benefits

- Improved warehouse management and spare parts inventory control
- Simplified purchasing, budgeting and financial planning
- Documentation for maintenance schedules and all relevant task descriptions within the system

### PrimeServLube®

MAN Diesel & Turbo can supply premium lubricating oil that is recommended for its modern, four-stroke power plant engines. The service includes planning and logistics of all deliveries, in addition to periodic testing of lubricating oil quality.

#### Benefits

- Provision of the best lubricating oil for each application
- Full-service planning and supply
- Accurate forecasting of lubricating oil costs

### PrimeServLab®

MAN Diesel & Turbo performs analysis of engine fluids and non-metallic materials such as fuel, lubricating oil and cooling water. Testing is conducted in accordance with recognized standards for operating fluids such as ISO 8217 for fuels. Typical packages cover a specified number of tests at defined intervals over a given contract term.

#### Benefits

- Enhanced management and control of fluid quality
- Verification of fuel and lube oil separator efficiency
- OEM recommendations for improved performance

### PrimeServClean®

We offer two cleaning agents, MAN C 0186 and MAN C 0249, designed for use in dip tanks and turbo-charger compressors combined with ultrasonic cleaning. They efficiently remove contamination without damaging sensitive components.

#### Benefits

Clean 0186: designed for dip tanks (with or without ultrasonic cleaning):

- Phosphate-free neutral cleaner
- Non-aggressive to sealing materials
- Non-corrosive

Clean 0249: removes grease and oil sediments, gummy deposits, soot and other contaminants from sensitive materials, such as aluminum alloys:

- Removes contamination efficiently without damaging sensitive components
- Contains only biodegradable, low-foaming, and neutral detergents
- Non-aggressive to materials and the skin

# Additional PrimeServ Solutions

## Products for Superior Performance

### PrimeServGran®

The condition and cleanliness of an exhaust gas turbocharger turbine can have a decisive influence on the efficiency and performance of the combustion process. This has a direct impact on the engine's service data. The exhaust gas turbocharger turbine can be cleaned at operating load using PrimeServGran, delivering optimal operating parameters. What's more, PrimeServGran is made from 100% natural products, making it an eco-friendly cleaning solution.

### Benefits

A clean exhaust gas turbocharger turbine that is in good condition offers:

- Reduced fuel consumption
- Consistent engine efficiency
- Less susceptibility to damage

The turbine can be cleaned very fast (in approximately 20 minutes) at full load – so the engine's operational readiness is completely unaffected.

### PrimeServProtect

PrimeServProtect is a highly effective, eco-friendly and silicone-free solution. It protects metal against corrosion, extending the life of your engine and cutting downtime. The product is delivered in a ready-to-use form, and can be applied easily with a pressurized spray gun or using immersion baths. It offers reliable short and mid-term protection – for individual parts or entire engines. Even a very thin coating forms a robust shield against corrosion. What's more, parts treated with PrimeServProtect can be used immediately, without being cleaned first.

### Benefits

- VOC-free, is not subject to Directive 1999/13/EG
- Flash point > +100°C
- Silicone-free
- Free from acids and resins



# World-Class Service

Marine propulsion, gensets and stationary plants



## The PrimeServ offering

The MAN Diesel & Turbo Group offers worldwide, round-the-clock service, 365 days a year. In addition to MAN Diesel & Turbo's service headquarters in Augsburg, Copenhagen, Frederikshavn, Saint-Nazaire, Hamburg and Stockport, service centers on all continents provide comprehensive and continuous support.

MAN Diesel & Turbo engines are renowned for their quality and durability. We are a global organization with a strong local presence, delivering exceptional field service management, tailor-made solutions, and first-class technical support.

PrimeServ provides advice and assistance to customers throughout the product lifecycle, from delivery to resale. With our far-reaching network of service centers, we respond rapidly to customer needs. What's more, we offer outstanding service and unrivalled technical expertise. Plus, we only use genuine spare parts – safeguarding the longevity of your engine.

## PrimeServ's aim is to provide:

- Prompt delivery of high-demand OEM spare parts within 24 hours
- Fast, reliable and competent customer support
- Individually tailored O&M contracts
- Ongoing training and qualification of operation and maintenance workers
- Global service, open 24 hours a day, 365 days a year
- Diagnosis and troubleshooting with our high-performance Online Service

