

Service record book -
MAN marine Diesel engines for yachts

Service Bordbuch -
MAN Schiffsdieselmotoren für Yachten

Libro de a bordo de servicio -
Motores Diesel marinos MAN para yates

Manuel Après-Vente de bord -
Moteurs Diesel marins MAN pour yachts

Libretto di bordo assistenza -
Motori marini Diesel MAN per panfili



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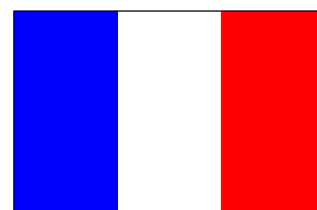
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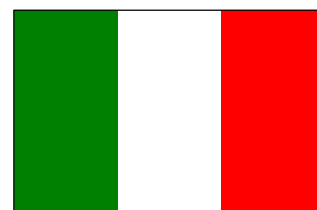
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Hand Over Inspection Data on warranty



1) Name and address of owner	
2) Data on drive system	
3) Engine model	4) Output in kW:
5) Works number	6) Date of commission:
7) Engine number Starboard engine	rpm (as tested)
8) Engine number Center engine, stb	rpm (as tested)
8) Engine number Center engine, p	rpm (as tested)
9) Engine number Port engine	rpm (as tested)
10) Gearbox Make / model	
11) Name of MAN agent	
Date Signature	
12) Boat details	
13) Boat type	14) Boat name
15) Boat number 16) Year of construction 17) Measurements: V (cm): H _m (cm): H _s and H _b (cm):	
18) Place and date of Hand Over Inspection Signature of owner	

For translation of this form see overleaf

	(D)	(E)	(F)	(I)
	Angaben zur Gewährleistung	Datos para una garantía	Données relatives de garantie	Dati sulla garanzia
1	Name des Eigners & Adresse	Nombre y dirección del propietario	Nom et adresse du possesseur	Nome ed indirizzo del proprietario
2	Angaben zur Antriebsanlage	Datos referente a la instalación de propulsión	Données relatives aux moteurs	Dati sull'impianto propulsore
3	Motortyp	Tipo de motor	Type de moteur	Tipo motore
4	Leistung in kW	Potencia en kW	Puissance en kW	Potenza in kW
5	Werknummer	Número de fábrica	No. d'Usine	Numero serie stabilimento
6	Datum der Inbetriebnahme	Fecha de puesta en marcha	Date de mise en service	Data della messa in servizio
7	Motornummer Steuerbordmotor	Número de motor Motor de estribor	Numéro du moteur tribord	Numero matricola motore destro
8	Motornummer Mittelmotor	Número de motor Motor en el centro	Numéro du moteur moteur central	Numero matricola motore centrale
9	Motornummer Backbordmotor	Número de motor Motor de babor	Numéro du moteur babord	Numero matricola motore sinistro
10	Getriebe Fabrikat / Typ	Caja de cambios Marca / tipo	Boîte de renvoi Marque / type	Riduttore, marca e modello
11	Name des MAN-Vertreters, Datum, Unterschrift	Nombre del representante MAN, Fecha, Firma	Nom du représentant MAN	Nome rappresentante MAN, Data, Firma
12	Angaben zum Schiff	Datos referentes al barco	Données relatives au bateau	Dati sull'imbarcazione
13	Schiffstyp	Tipo de barco	Type de bateau	Tipo imbarcazione
14	Schiffsname	Nombre del barco	Nom du bateau	Nome imbarcazione
15	Baunummer	Número de construcción	No. de construction	Numero di serie
16	Baujahr	Año de construcción:	Année de construction	Anno di costruzione
17	Maße	Medidas	Cotes	Quote
18	Ort und Datum der Übergabe-Inspektion, Unterschrift des Eigners	Lugar y fecha de la inspección de entrega, Firma del propietario	Lieu et date de la inspection de remise, Signature du détenteur	Luogo e data del tagliando di consegna, Firma del proprietario

Hand Over Inspection Data on warranty



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**Service record book
MAN marine Diesel engines
for yachts**



Dear Customer,

Congratulations on your decision to equip your new boat with MAN marine Diesel engines. These engines boast top performance and operational reliability while requiring only a minimum of maintenance. However, to ensure faultless operation, some checks and maintenance work are necessary at regular intervals.

This handbook provides an overview of all specified maintenance work ("Maintenance plan").

According to this plan the maintenance work is to be carried out by an MAN-authorized workshop either after a certain number of operating hours has been clocked up or at least once a year.

To make it easier for you to handle your new engine system correctly, the following publications are on board the boat:

- Operating Instructions for MAN Marine Diesel Engines (one for each engine)
- Fuels, Lubricants and Coolants for MAN Diesel Engines (one for each engine)
- Spare-parts catalogue (one for each engine)
- List of service points (one per boat)

We shall be pleased to answer your questions on aspects which cannot be clarified with these publications. When submitting an enquiry, please always indicate **the 14-digit engine number** which you can find on the form "Hand Over Inspection – Data on warranty" **on page 1**, on the model plate on the engine or in the documents from your shipyard.

Yours faithfully,

MAN Nutzfahrzeuge Aktiengesellschaft
Nuremberg Works

Subject to change to keep abreast with technological progress.

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Execution of maintenance work on the basis of operating hours clocked up

General notes on the execution of service work

All service work to be routinely performed for up to 4,000 operating hours is listed on the following pages.

If the number of operating hours allocated to the respective service has not been clocked up within one year, service work is to be carried out at yearly intervals.

Each and every service job (routinely performed on the basis of operating hours clocked up or at yearly intervals) is entered in the chapter "Service record" of this booklet.

At each service the MAN-authorized workshop will confirm with stamp and signature that the work as per maintenance plan has been carried out correctly.

It must be ensured that all entries are complete, correct and legible.

After each service the maximum engine speed (max. boat speed) which can be achieved under load is to be ascertained in a trial run. This engine speed ought not to be below the rated speed (see model plate). This test is to be regarded as proof of maximum engine output.

Peripheral conditions for the engine speed test:

- Boat under load (tanks filled, equipment on board)
- No encrustation on hull, propeller or shaft system

Remarks on work and / or repairs deemed necessary or performed may also be noted down.

The service after 20-60 operating hours

This first service is imperative.

In the context of the first maintenance the form "Hand Over Inspection – Data on warranty" on page 1 is to be filled in by the MAN-authorized workshop.

The form is to be sent to MAN Nutzfahrzeuge AG, Nuremberg Works, dept. MVMS.

Only after arrival of this form at MAN Nutzfahrzeuge AG will the warranty for the engine continue to be valid.

This form is also needed by the MAN-authorized workshop for settling the maintenance work performed.

General

- Exchange worn seals.
- Tighten screwed connections for which tightening torques are specified (see “Service Data”), always using a torque wrench.
- Clean removed parts before refitting them, and check them for damage unless exchange is mandatory.

When checking the engine oil level or changing the engine oil

- The procedure for changing engine oil and oil filters is described in the Operator’s Manual in the chapter “Maintenance and care”.
- Keep vicinity of filler orifices and of dipsticks clean, so that no dirt can get into the oil pan.
- **Caution:** Do not fill up with oil beyond the max. notch on the dipstick.
Overfilling causes damage to engine.
- If loss of oil is due to leaks, ascertain and eliminate cause.

When checking the coolant level

- Top up with missing quantity of fluid, ensuring that the concentration of the antifreeze / anti-corrosion agent is correct (see Operating Instructions, chapter “Maintenance and care” and the publication “Fuels, Lubricants and Coolants for MAN Diesel Engines”).
- Ascertain and eliminate cause of loss of coolant.

When changing the coolant

- Drain and fill up with coolant and bleed cooling system as described in the Operating Instructions, chapter “Maintenance and care”.
- For antifreeze / anti-corrosion agents see publication “Fuels, Lubricants and Coolants for MAN Diesel Engines”.

When checking for leaks of oil, coolant and fuel

- Carry out visual check of engine exterior (crankshaft, cylinder heads etc.) for emergence of oil.
- Carry out visual check of all fluid-containing parts (reservoirs, pipes, hoses) for leaks.
- Carry out visual check of pipes and hoses to see whether they are correctly routed or show chafing marks.



Caution:
Observe safety regulations in Operating Instructions.



Maintenance plan

Service on the basis of operating hours

	Maintenance service					
after ... hours of operation	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:

	Maintenance service						
according to chronological intervals	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.) 	M2	Cleaning	<ul style="list-style-type: none"> ● Fuel pre-filter ● Draining water from auxiliary fuel filter
	M3	Changing		<ul style="list-style-type: none"> ● Fuel filter cartridges²⁾ 	
	M4	Changing		<ul style="list-style-type: none"> ● Engine oil ● Engine oil filter cartridge ● Filter element of crankcase breather ● 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⁾ 	
	A1	Changing		<ul style="list-style-type: none"> ● Both valve caps on expansion tank 	Cleaning
A2	Changing	<ul style="list-style-type: none"> ● Coolant ● All hoses (e.g. fuel supply and return lines, gearbox oil cooler) 			



Caution:

Checking the injectors of Common Rail engines is not specified.

- 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.

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.



The warranty conditions

Extent of warranty

MAN warrants that within the period of the warranty all D 28 engine components identified as being faulty will, at MAN's discretion, be either replaced or repaired, the warranty conditions being decisive for this.

Repairs

For execution of the necessary work the customer has to

- grant the necessary time and opportunity,
- provide at his own expense helpers, machinery and equipment and carry out secondary work,
- perform at his own expense any work above and beyond the original extent of the order.

Depending on the kind of damage, MAN will assume to a reasonable amount both the travelling expenses arising for authorised service technicians and the necessary dispatch costs for spare and replacement parts. Extra costs in connection with particular travelling and dispatch expenses are to be borne by the customer.

Repairs will be performed within normal, regular working hours. Extra costs for work outside regular working hours are to be borne by the customer. If engine removal and installation work is necessary, MAN will bear, at most, the labour costs of 32 man-hours per ship. Additional labour costs are to be borne by the customer.

The warranty does not include

- the exchange of wearing parts such as filters, V-belts and service products (oil, anti-freeze and anti-corrosion agents),
- the costs of the execution of the normal service work to be carried out at regular intervals,
- damage resulting from the use of unsuitable service products or from improper handling / operation,
- indirect costs of loss of use, of loss of time, of expenses for board and lodging, of freight charges, of mooring fees, of fuel and of all other consequential costs which may be incurred in connection with warranty cases.

Service record
Service-Nachweis
Comprobante de servicio
Carnet d'entretien
Tagliandi



Date / Datum / Fecha / Date / Data	
Place / Ort / Lugar / Lieu / Luogo	
Operating hours / Betriebsstunden Horas de servicio / Heures de service Ore de servizio	
Carried out / Durchgeföhrt wurde Se realizó / Exécuté / Eseguita	Yes	no
Service yearly / Service jährlich Servicio anual / Maintenance annuel Manutenzione 12 mesi	<input type="radio"/>	<input type="radio"/>
Service on the basis of operation hours / Service nach Betriebsstunden / Servicio conforme a horas de servicio / Maintenance au bout de ... heures de service / Manutenzione in base ore di servizio	<input type="radio"/>	<input type="radio"/>
Max. engine speed at full load / Max. Drehzahl bei Vollast / Régimen máx. bajo plena / Régime maxi à pleine charge / Prove regime massimo a carico		
Starboard engine / Steuerbordmotor / Motor de estribor / Moteur tribord / Motore destro	rpm
Center engine / Mittelmotor / Motor en el centro / Moteur central / Motore centrale	rpm
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Port engine / Backbordmotor / Motor de babor / Moteur babord / Motore sinistro	rpm
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