Maintenance eLogbook

Date started

Date completed

Companion to *MARINE DIESEL BASICS* 1

Maintenance eLogbook

Created and Illustrated by Dennison Berwick

companion book to Marine Diesel Basics 1

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v1.1

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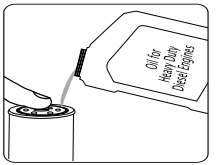
some links do not work because the pages are missing from this sample

Welcome to your Maintenance eLogbook

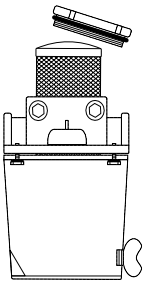
This interactive eLogbook is designed to more easily maintain your marine diesel system. See what needs to be done, keep model and serial numbers in one convenient place, record completed tasks; verify inspections and make any necessary conversions and calculations. Features include:



Drawings - more than 40 scalable drawings of important inspections. See the List of Drawings

Inventory - keep part numbers and model numbers in one place to make maintenance easier; eg. fuel filter replacement numbers, battery installation dates, propeller size and direction etc.

MSchedule - interactive checklists of basic maintenance tasks, by day, week, month etc. Tick off jobs done and write in next service dates



Inspections - clear drawings show what to look for when making inspections of belts, impeller, etc.

Logbook - record all the work done of any part of your system - what, who, when and any follow-ups

Summaries - jump from the Logbook to specific summary pages for oil changes, impeller checks etc. This helps ensure records of the most important tasks don't get lost in pages and pages of details

Measures - easy-to-use, interactive calculators and formulae for all common measurements, including metric & inch equivalent sizes, drill holes and tap sizes

Index - full index of all topics in the eLogbook

Navigating and Using Your eLogbook

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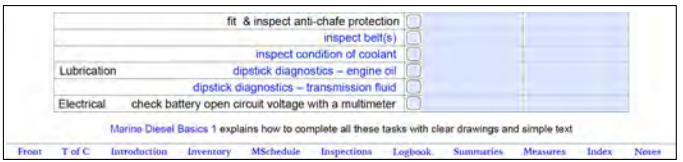

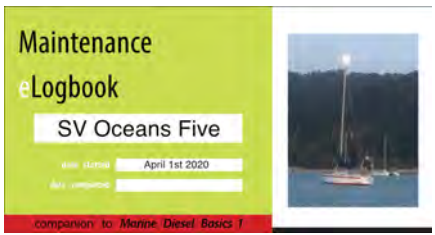

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FAQ

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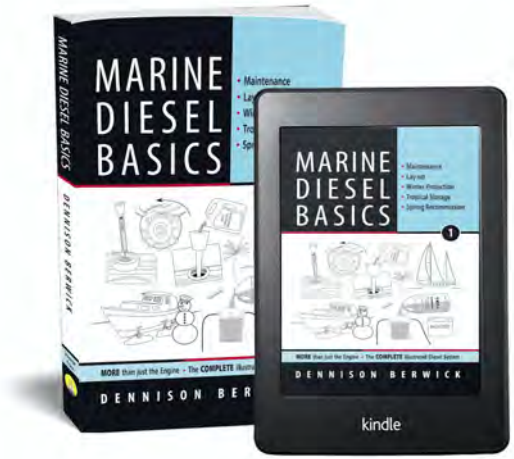
Marine Diesel Basics 1

visual companion to this eLogbook



- 300+ simple, clear drawings
- 64 maintenance tasks
- 66 winterize/lay-up tasks
- 53 recommission tasks

- 222 pages
- index
- paperback and ebook
- US$15.99 £9.99 €12.99

". . . The best guide on the subject I've seen, this book has a place on every diesel-equipped boat. "
Sail Magazine

". . . a huge asset for those wishing to get a little more hands on in the engine room due to its simple, visual directions...it is essential material for anybody just starting out on diesel engines due to its clear illustrations. . . I highly recommend it."
Good Old Boat

"The author's excellent illustrations (there are more than 300 of them) make understanding the text very easy. Every single step of regular maintenance, trouble-shooting, laying up and recommissioning are covered. I particularly liked the structure of this book. . . Highly recommended."
Australian Sailing

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Diesel System Inventory

Vessel make and model _____ Licence / Registration _____

Year built _____ Hull Number _____ Number of seacocks (all boat) _____

Engine make & model _____ Power (HP kW) _____ Year _____

Rotation _____ # cylinders _____ Serial Number _____

Engine hours _____ Overhaul/Rebuilt _____

Diesel Fuel Tanks Number _____ Injection pump make & model _____

Capacity _____ Type of fuel injection ◯ mechanical - inline

◯ mechanical - distributor

Primary fuel filter make & model _____ ◯ electronic - common rail

Secondary fuel filter part # _____ ◯ electronic - rotary distributor

Main fuel pump ☐ engine-driven ☐ electric Auxiliary fuel pump ◯ fitted ◯ not fitted Type

notes _____

Propeller Shaft

Shaft material _____ Shaft diameter _____

○ mm ○ inches*

shaft taper measurements - see Propeller page 17

*use decimal inches for greatest accuracy

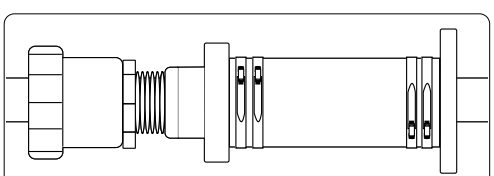
Stern Gland

Seal type
- ○ stuffing box
- ○ dripless **lip** seal
- ○ dripless **face** seal

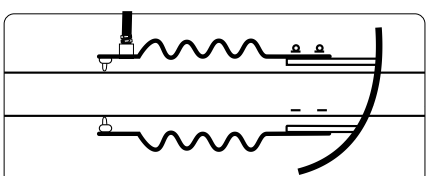
Make & model _____

Date installed _____ Last serviced _____

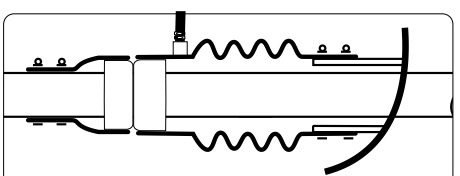
Sizes _____



stuffing box



lip seal



face seal

notes _____

3 Months		date done	next service
Diesel Fuel	inspect fuel deck fill	☐	
	add biocide to the fuel tank(s) (when filling tanks)	☐	
Breathing	check adequate air flow through engine room	☐	
Drive Train	check coupling between transmission & prop shaft	☐	
	inspect the stern gland (stuffing box)	☐	

Seasonal	date done	next service
change the engine oil & filter (see engine manual)	☐	
change the transmission fluid	☐	
check condition of the engine mounts	☐	
grease the control cable ends and engine mount threads	☐	
check injection pump & governor dipstick (if fitted)	☐	

6 Months		date done	next service
Raw Water Cooling	check and change heat exchanger anode(s)	☐	
Drive Train	inspect the propeller anode	☐	
	inspect the anode on a feathering propeller	☐	

Marine Diesel Basics 1 explains how to complete all these tasks with clear drawings and simple text

Inspections

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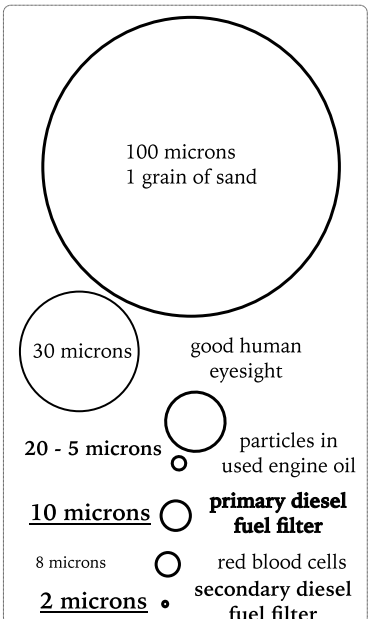
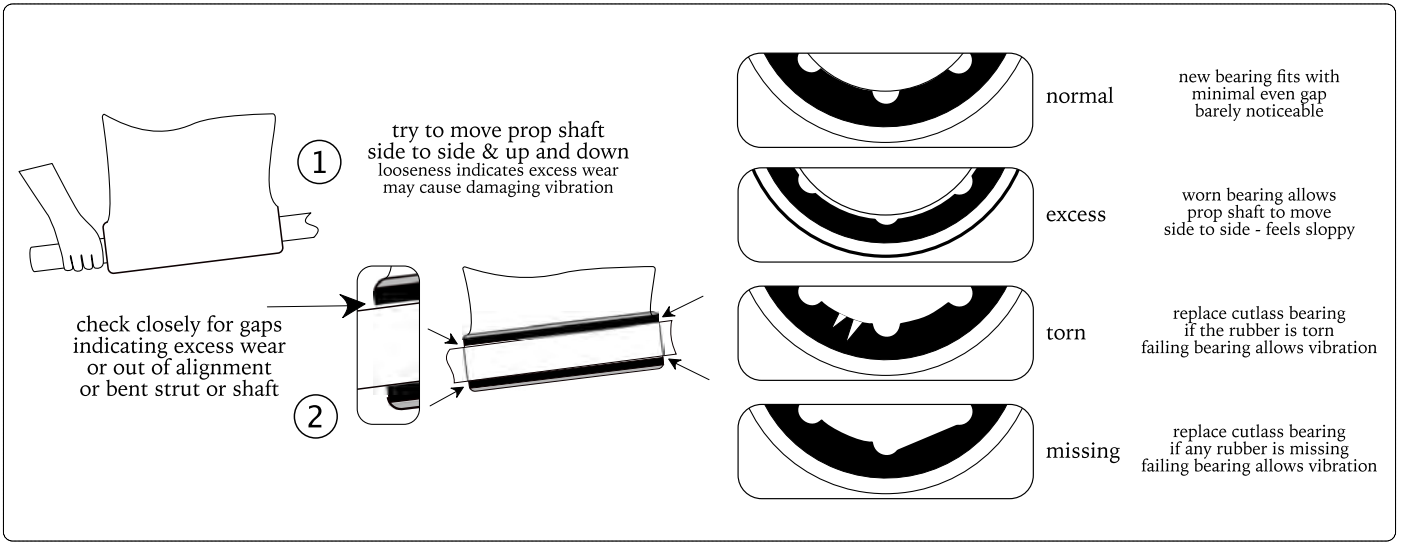
Dirt in the primary fuel filter is often too small to see



Inspecting a Rubber Cutlass Bearing



Marine Diesel Basics 1 explains how to complete all these inspections and much more with 300+ clear drawings and simple text

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To make navigation easier, the Logbook is divided into four sections. Enter the date a section is started, then jump to that section by clicking on the page number.

Date	Item	Notes
Apr 2	Raw Water	replaced raw water pump impeller - few tears in old impeller
	Oil	changed oil and oil filter
Apr 3	Cooling	topped up coolant 1 cup
Apr 20	Belts	inspected belts and pulleys. Tightened alternator belt
May 1	Gearbox	checked gearbox ATF level - up to max, cherry red
May 16	Oil	checked oil - at max
	Belts	checked alternator belt
May 17	Oil	checked oil - at max
	Belts	checked alternator belt

Logbook pages 1 - 20 started on _____

jump to summaries

this is page 42

date	item	notes

Diesel Fuel Log

date	engine hours	tank #	quantity fuel added	pre filtered	where obtained/fuel bought	new total fuel in the tank	logbook page
May 2	1258	#1 port	60 Lts	yes	Best Service Marine	250 Lts	89

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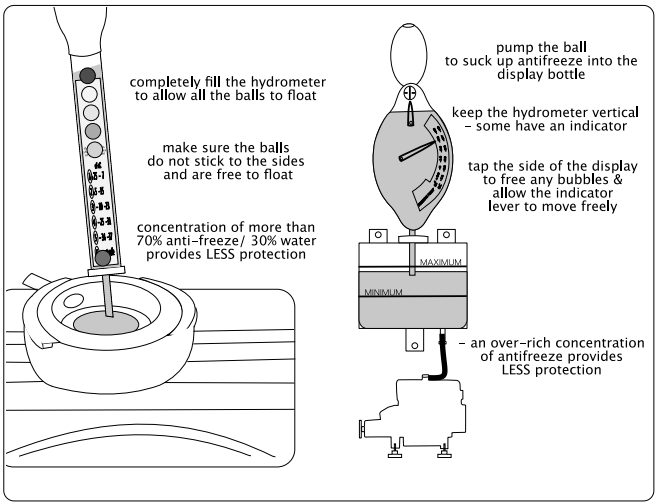


Pressure - metric and imperial

enter number	formula	result
Pa 8000	0.000145	= 1.16 psi

enter number	multiply by	result
Pa	0.000145	= 0.00 psi
Pa	0.0075	= 0.00 mmHg
Pa	0.00029	= 0.00 inHg
kPa	0.145	= 0.00 psi
kPa	7.5	= 0.00 mmHg
kPa	0.295	= 0.00 inHg
MPa	145.04	= 0.00 psi
MPa	10	= 0.00 bar
mmHg	133.30	= 0.00 Pa
mmHg	0.1333	= 0.00 kPa

enter number	multiply by	result
psi	6,895	= 0.00 Pa
psi	6.895	= 0.00 kPa
bar	14.504	= 0.00 psi
bar	100,000	= 0 Pa
bar	0.10	= 0.00 MPa
bar	750.062	= 0.00 mmHg
bar	29.53	= 0.00 inHg

inHg = inches of mercury
mmHG = millimetres of mercury
kPa = 1000 pascals
Mpa = 1,000,000 pascals
Pa = pascal
psi = pounds per square inch

Atmospheric pressure (atm) at sea level
= ± 14.7 psi
= ± 760.00 mmHg
= ± 29.921 inHg
= 101.325 kPa

Torque - metric and imperial

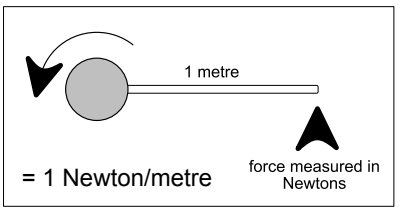
enter number		formula		result	
N	*6*	0.225	=	1.349	lbf

enter number	multiply by		result	
N	0.225	=	0.00	lbf
lbf	4.448	=	0.00	N
N m	0.738	=	0.00	ft lbf
Ft lbf	1.356	=	0.00	N

ft lbf = foot pounds
lbf = pound force
N = Newton
N m = Newton metre

Torque

= force required to rotate an object (such as a shaft)



1 Newton = force required to move 1 kg a distance of 1 metre per second per second

(per second per second is the standard measurement of the speed of acceleration)

1 Newton metre is 1 kg force (1 Newton) applied with a 1 metre lever to move or rotate an object

1 foot-pound is 1 lb of force applied with a one-foot lever to move or rotate an object

Tap and Drill Hole Sizes in Millimetres, Inches and Decimal Inches

mm tap size	mm drill size	inch drill size
2	1.5	1/16
3	2.5	3/32
4	3.5	9/64
5	4.5	11/64
6	5	13/64
7	6	15/64
8	7	9/32
10	9	23/64
12	10.5	13/32
14	12.5	31/64

inch tap size	inch drill size	mm drill size
1/8	3/32	2.38
1/4	7/32	5.5
5/16	9/32	7
3/8	5/16	8
1/2	15/32	12
5/8	35/64	14
3/4	11/16	17.5
7/8	13/16	20.5
1	7/8	22

NOTE: drill sizes given are common equivalents
(1.6 mm drill bits are not found on many boats!)

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Additional Notes

FUTURE PUBLICATIONS

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- checklists
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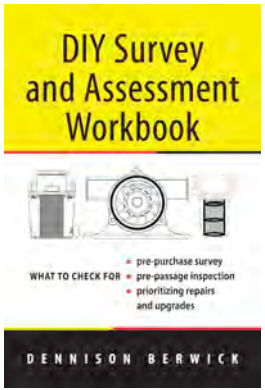

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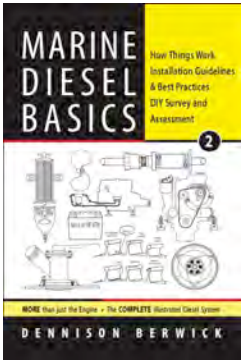
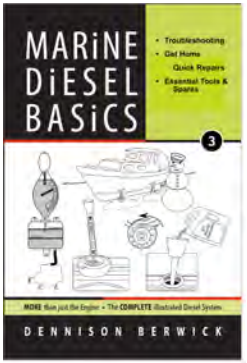


Marine Diesel Basics 2

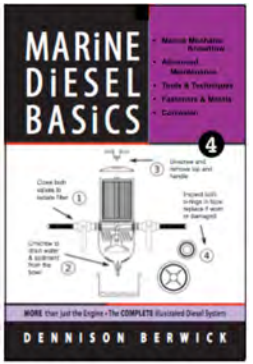
- How Things Work
- Installation Guidelines
- DIY System Survey

coming late 2020



Marine Diesel Basics 3

- Troubleshooting
- Get Home - Quick Repairs
- Essential Tools & Spares



Marine Diesel Basics 4

- Advanced Maintenance
- Techniques & Tools
- Fasteners & Metals
- Corrosion