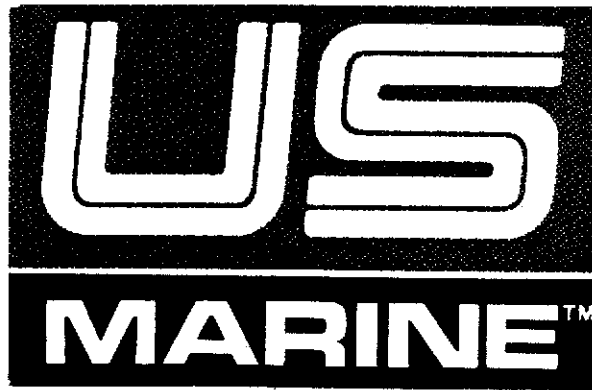


Diesel Engine Manual Models 6-393N and 6-393TI

std EH 700 66² 2P7
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DIESEL ENGINE MANUAL

MODELS 6-393N AND 6-393TI

This manual provides basic information for the operation and maintenance of your US Marine Power Engine. Before starting your engine, we urge you to carefully read this manual and familiarize yourself with its contents. As the owner, you are responsible for following proper operating procedures and fulfilling maintenance requirements. Safe, economical performance and trouble-free cruising are directly related to the proper care of your engine.

Due to our ongoing commitment to product improvement, we reserve the right to change, without notice or other obligation, the specifications or information contained in this manual.

©US MARINE POWER
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A WORD ABOUT YOUR DIESEL ENGINE

US Marine Power purchases diesel engines from Hino Motors, Ltd., of Japan. The engines are manufactured by Hino to meet the special requirements established by US Marine Power for pleasure craft application.

Hino is by no means a "newcomer" to the diesel engine arena.

Founded over 75 years ago, Hino, Japan's oldest manufacturer of motor vehicles, has grown to be an industry leader. For the past eleven years - competing with firms such as Nissan, Isuzu and Mitsubishi - Hino has been number one in Japan for sales of diesel powered medium and heavy duty trucks. Recently Hino achieved the position of second in the world for diesel truck production.

No novice in the marine industry, Hino has produced diesel engines for sales to the commercial fishing business under the Yamaha banner. In addition, production by Hino of passenger cars and light duty trucks for Toyota continues to increase (total production is over 300,000 units per year).

With profitable sales exceeding \$1.65 billion annually, Hino has been able to provide state-of-the-art research, development, test and production facilities for its more than 8000 employees. Anechoic test rooms, photoelastic coating test methods, and x-ray microanalysis are just some of the indications of an industry leader committed to growth, innovation and quality.

Features that distinguish US Marine Power diesels from much of the competition are:

- | | |
|---|---|
| --Direct injection | --Integral oil cooler |
| --Bosch type fuel injection pump | --Designed for durability, |
| --Counterweighted, induction hardened,
die-forged crankshaft | reflecting a commercial
application heritage |
| --Dry-type replaceable cylinders | --High output to weight
ratio |
| --Heat resistant aluminum alloy pistons | |

US MARINE POWER DIESELS designed and manufactured to reliably and efficiently meet your most demanding performance requirements!

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1.0 ENGINE SPECIFICATIONS

MODELS US Marine Power 6-393N
(6-393TI)

TYPE Diesel, 6 Cylinder, 4 Cycle,
Naturally-Aspirated (or Turbo-
charged-Intercooled)

HORSEPOWER 175 @ 3000 RPM (220 for the
"TI")

CYLINDER BORE X STROKE 4.33 in. x 4.45 in./110mm x
113mm

DISPLACEMENT 393.2 cu. in./6.443 liters

COMPRESSION RATIO 17.9:1

FIRING ORDER 1-4-2-6-3-5

DIRECTION OF ROTATION Counterclockwise (viewed from
the flywheel)

INJECTION TIMING 15° BTDC

DRY WEIGHT
(INCL. TRANSMISSION) Approximately 1450 lbs./660
kg. (1600 lbs./730 kg. for
the "TI")

LUBRICATING OIL CAPACITY 10.62 U.S. quarts/8.75 Imp.
qts./10 liters

FRESHWATER COOLING SYSTEM
CAPACITY 25.56 U.S. quarts/21.88 Imp.
qts./25 liters

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1.0 PRESTART INSPECTION

Before starting the engine, check the following:

1.1 Engine oil level (page 13).

1.2 Coolant level page 18).

WARNING! THE HEAT EXCHANGER CAP SHOULD NOT BE REMOVED WHILE THE ENGINE AND COOLING SYSTEM ARE HOT.

1.3 Fuel level.

1.4 Transmission oil level (page 23 or 24).

1.5 Check that the fuel supply (and return, if so equipped) valves are open.

1.6 Check that the seawater intake valves (seacocks) are open.

1.7 Water separators -- visual check for moisture or contamination (page 15).

1.8 Seawater strainers -- visual check for debris.

1.9 V-belt tension (page 19 and 22).

1.10 Visual check for indications of fuel, oil, coolant and exhaust leaks.

2.0 STARTING PROCEDURE

2.1 Turn the battery switch on.

2.2 Place the transmission selector lever in the neutral ("N") position.

2.3 Position the throttle control in the "Start" position.

2.4 Turn on the D.C. ignition breaker switches if the boat is so equipped.

2.5 For a low temperature start (below 14^oF./-10^oC.), use the preheater system. Push the button and hold it in for 15-30 seconds (do not exceed 30 seconds).

2.6 Turn the ignition key clockwise to start the engine.

WARNING! DO NOT CONTINUOUSLY OPERATE THE STARTER FOR MORE THAN 15 SECONDS AT A TIME.