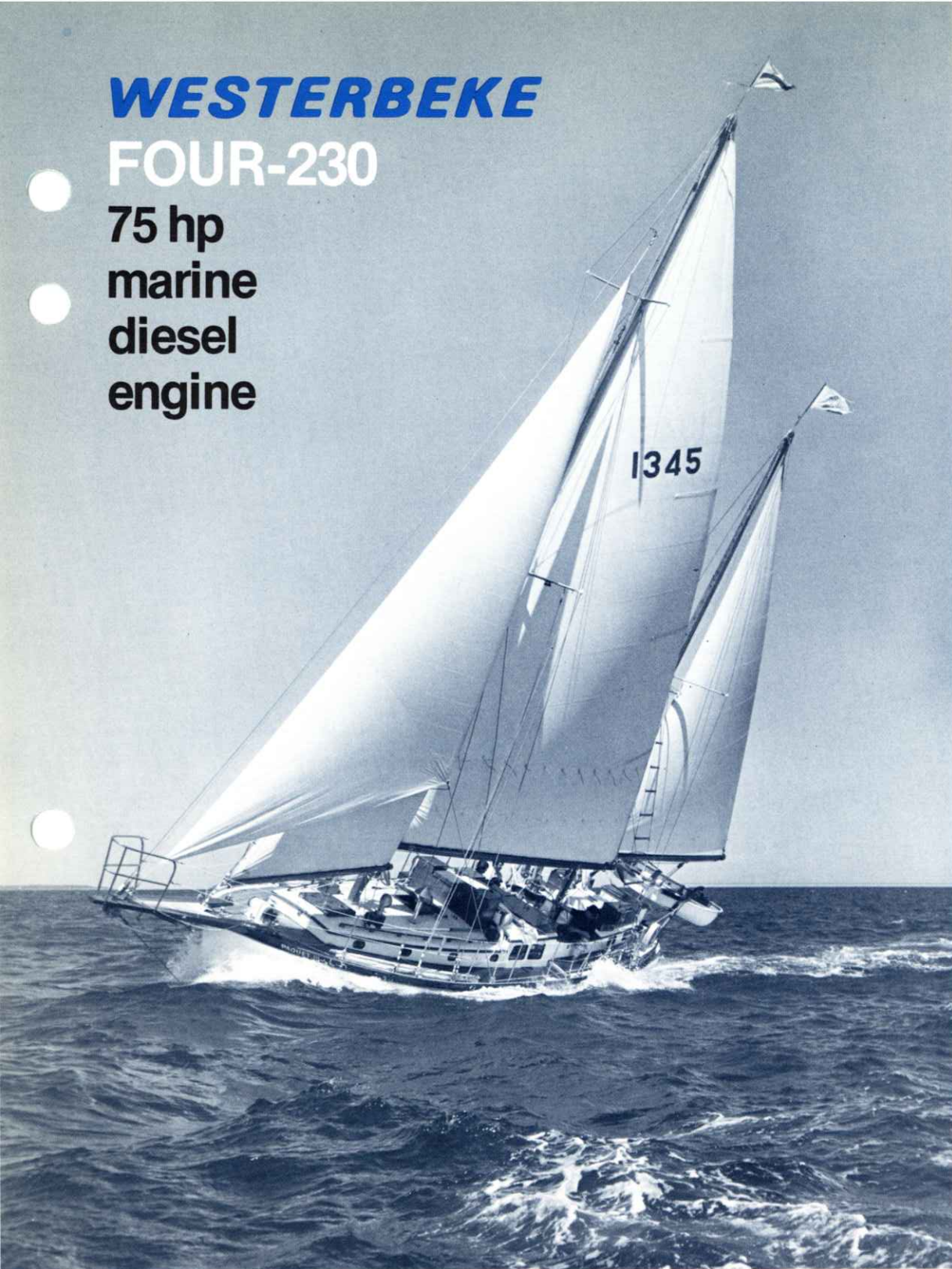


# WESTERBEKE

## FOUR-230

75 hp  
marine  
diesel  
engine



PAQUET III by F. Spaulding Dunbar

Norman Fortier Photo

### FEATURES

#### CLEAN

Engine rated at maximum horsepower with no visible exhaust emissions.

#### QUIET

Power rating includes modern standards of noise level and fuel consumption. A re-designed combustion chamber reduces diesel "bark", ensures complete burning of fuel.

#### POWERFUL

Engine rating is with all necessary accessories working. It represents real horsepower.

#### SMOOTH

Crankshaft is statically and dynamically balanced.

#### EASY TO SERVICE

Accessories and piping are located high on the block and do not interfere with each other.

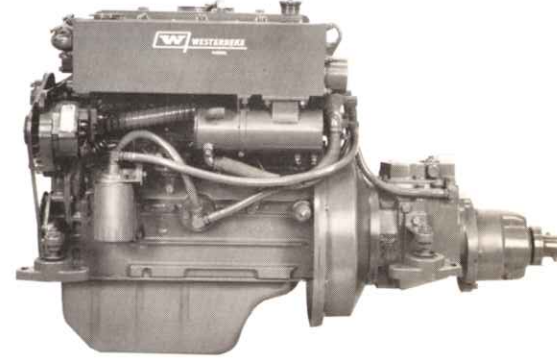
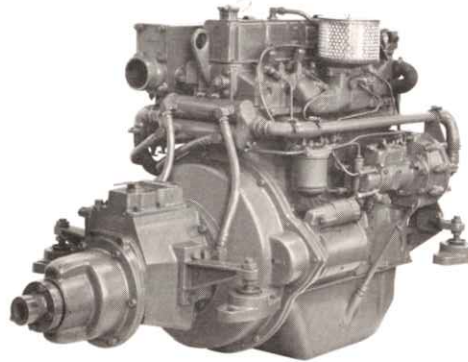
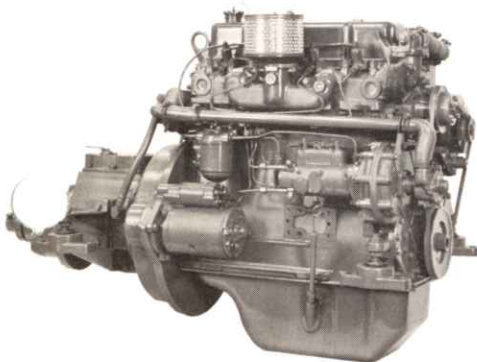
#### LONG LASTING

Designed to extend intervals between major overhauls, and to facilitate these with easily replaceable parts.

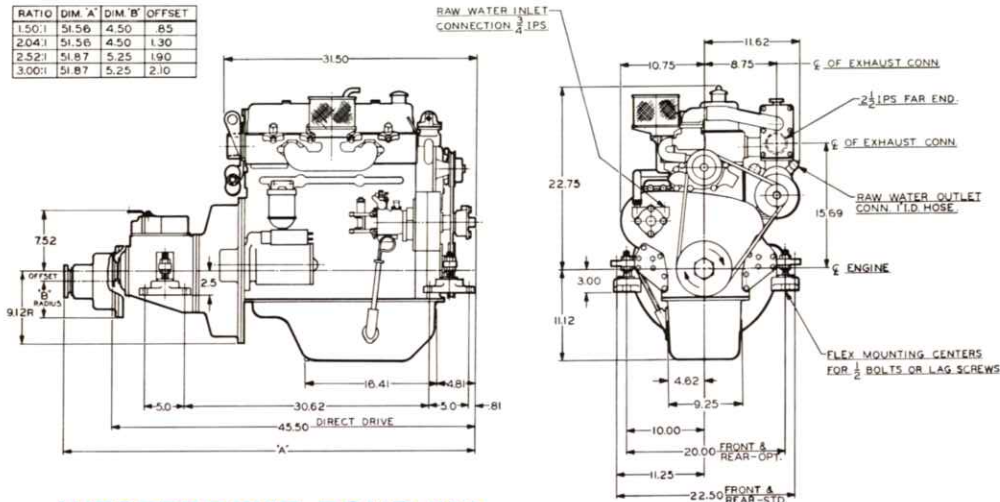
#### ECONOMICAL

Excellent fuel economy, low service and repair costs, long life, high resale value.

The Westerbeke **FOUR-230** is a safe dependable diesel, quiet and smooth enough for the most discriminating yachtsman, economical enough for the commercial fisherman.



RATIO	DIM. A'	DIM. B'	OFFSET
1.50:1	51.56	4.50	.85
2.04:1	51.56	4.50	1.30
2.52:1	51.87	5.25	1.90
3.00:1	51.87	5.25	2.10



## WESTERBEKE FOUR-230 SPECIFICATIONS

**Type:** Direct injection, naturally aspirated, four cycle, four cylinder in line, fresh water cooled marine diesel engine.

**Displacement:** 230.2 cu. in. Bore 3.86 inches (98mm), Stroke 4.92 inches (125mm).

**Power:** 75 hp at 2600 rpm. [Certified rating in accordance with BSAU 141a (1971) — See power curve.]

**Compression ratio:** 16.5:1.

**Weight:** 943 lbs. direct drive.

**Cylinder block:** Cast iron monobloc, ribbed for rigidity, with wet-type cast iron cylinder liners and five replaceable main bearings.

**Cylinder head:** Cast iron with renewable valve guides.

**Crankcase:** Nylon-coated steel for longer life.

**Crankshaft:** Special alloy steel forging, dynamically and statically balanced.

**Camshaft:** Steel forging with integral cams in five bearings.

**Pistons:** Forged aluminum with toroidal combustion chamber, three combustion rings with one scraper ring.

**Connecting rods:** Drop forged and obliquely split for removal up through cylinder bore.

**Timing gear:** The camshaft and auxiliaries are driven by a simple train of helical gears of generous width, hardened and ground. Backlash is closely controlled for long life and quiet operation.

**Fuel system:** Distributor type injection pump with mechanical governor. Fuel transfer pump, hand primer, and single stage fuel filter.

**Lubrication system:** Pressure lubrication with engine-driven gear pump, piston type relief valve, full flow lube oil filter with spin-on element, and an efficient oil cooler. A by-pass safeguards oil supply in case of a choked filter element.

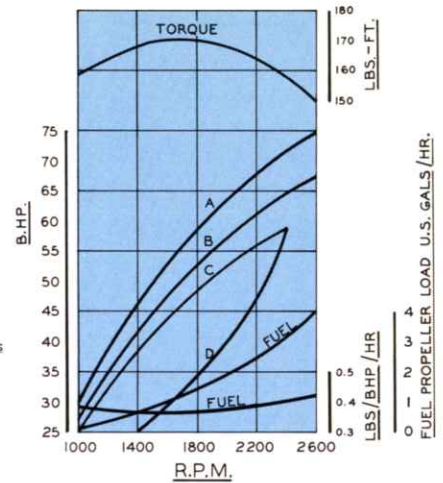
**Cooling system:** Fresh water cooling by engine-mounted heat exchanger and rubber impeller raw water pump. Exhaust manifold fresh water cooled for longer life.

**Electric system:** 12 volt starter motor. 12 volt 55 ampere alternator. Pre-wiring is available.

**Reverse and reduction gears:** Hydraulic actuated with multiple disc clutch for forward operation; full capacity reverse band requiring no adjustment; large oil cooler to provide correct operating oil temperature. Ratios 1:1, 1.5:1, 2:1, 2.5:1, and 3:1, by Paragon or Warner. V-drives also available.

**Rotation:** Most gears turn a left hand propeller. (See price list.)

**Installation data:** Mounting Centers 22½" or 20". Installation angle 15° maximum. Seawater pump inlet ¾ IPS. Fuel inlet 5/16". Fuel return ¼". Oil pressure connection 1/8" IPS. Water temperature connection ½" IPS. Exhaust 2½" IPS flange.



**POWER CURVE** (A) BSAU 141a (1971) is an up-to-date and meaningful engine rating system used in response to environmental requirements and the desire to be factual. Engines are rated for maximum horsepower and rpm with all necessary auxiliaries working. They must comply with modern standards of noise level, exhaust emissions and fuel consumption. Curve (B) shows the power available for intermittent use. Curve (C) shows the power available for continuous use. Curve (D) is the propeller law curve.

## STANDARD EQUIPMENT

Fresh water cooling system with surge tank and pump mounted on engine; raw water pump and heat exchanger mounted on engine; 12 volt, 55 amp alternator with transistor regulator; adjustable flexible mounts 22½" or 20" centers; propeller shaft coupling; hydraulic reverse gear; full flow lube oil filter with spin-on element; secondary fuel filter; fuel pump hand primer; flexible hoses for fuel inlet and return; key switch panel; sump pump and hose; threaded exhaust flange; instruction manual.

## OPTIONAL EQUIPMENT

All electric instrument panel with tachometer, hour meter, ammeter, water temperature and oil pressure gages; engine pre-wiring; engine alarm system; high capacity primary fuel filter; extra 85 or 120 amp alternator; flexible shaft coupling; keel cooling; extra crankshaft pulleys; spare parts kits.

## WESTERBEKE DIESEL ECONOMICS

The design of the Westerbeke FOUR-230 follows an earlier model with years of dependable performance. It has been redesigned and updated to conform to the most modern environmental, power, and service standards. In redesigning, major improvements were made in valve size, combustion chamber and injectors, resulting in better breathing, smoother combustion, better efficiency and fuel economy, clean exhaust and improved cold starting. Unusual care was given to simplifying service, and extending the periods between major overhauls.

The block of the FOUR-230 lends itself nicely to marine use. Its clean lines permit placement of piping and accessories most logically, where they are out of the bilge and do not interfere with work on other parts of the engine. This makes the FOUR-230 easy and inexpensive to service. Easily replaceable internal parts reduce the cost of major overhauls.

Longer intervals between routine service and between major overhauls means lower service costs and more time on the job. The dependability, durability, safety, and resale value of the FOUR-230 make it an economical engine for any boat, commercial or pleasure.

*Westerbeke engines are sold and serviced by Westerbeke distributors in major port cities in the United States.*



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