

Engine Comparison

Comments in table are from Joe DeMers of Sound Marine Diesel LLC

Engine Make and Model	Beta Marine BD1005	Universal M-25XPB	Westerbeke 30B	Yanmar 3GM30
Base Engine	Kubota	Kubota [Same Kubota model as Beta Marine] Universal is a division of Westerbeke.	Mitsubishi	engine & gearbox made by Yanmar. Either raw - or - fresh water cooled engine designation is 3GM30F.
Cylinders	3	3	3	3
Rated Power	28hp @ 3600rpm	26hp @ 3000rpm	27hp @ 3600 rpm	27.3hp @ 3600rpm
Displacement	1 liter displacement	1 liter displacement	.95 liter displacement	.95 liter displacement
Weight	335 pounds, with gearbox	295 pounds, without gearbox	275 pounds, without gearbox	300 pounds, with gearbox
Dimensions	27.5" long, 25" tall, 20" wide	28.5" long, 22" tall, 19" wide	29" long, 19.75" tall, 17.25" wide	29" long, 21.5" tall, 18" wide
Water Pump Location	gear driven raw water pump, faces fwd, easily serviced	gear driven raw water pump, faces fwd, easily serviced	gear driven raw water pump faces aft, is inconvenient to service.	V belt driven raw water pump, faces aft [has the most difficult access of all the engines for changing the impeller] The pump will most likely need to be removed for an impeller change.
Fuel Filter	spin on fuel filter	spin on fuel filter	disassembly required to change fuel filter	disassembly required to change fuel filter
Fuel Pump	mechanical fuel lift pump	electric fuel lift pump	electric fuel pump	mechanical fuel lift pump
exhaust	Combination exhaust manifold / header tank / heat exchanger. Heat exchanger core easily serviced, by removing 2 cap screws. Zinc very easily accessed.	Separate heat exchanger located over trans, with various hoses attached to it.	Separate heat exchanger located over transmission, with many hoses attached.	Combination exhaust manifold / heat exchanger / header tank, Heat exchanger core takes 8 capscrews to remove, they are accessible.
service points	All routine service points located on front of engine [dipstick, oil & fuel filter, fuel pump, fuel bleed point, raw water pump.] Oil change pump mounted on engine.	Zinc is installed low on Heat exchanger. Heat exchanger will have to be removed for major cleaning. Engine dipstick & fuel filter low on starb'd side. lube oil drain hose.	Zinc installed low on heat exchanger. Will have to be removed for major cleaning. Dipstick, lube oil filter, fuel filter, & raw water pump located low on starb'd side. lube oil drain hose.	Dipstick, fuel lift pump, fuel filter located on starb'd side. lube oil change pump optional [I believe it's a portable type, for use via dipstick tube]
Coupling	Flexible coupling standard.	Flexible coupling optional	Flexible coupling optional	No mention of flexible coupling
Shut Down	Engine shut down by electric push button	engine shut down by pull cable.	engine shut down - "manual type" according to sales literature.	engine shut down by pull cable
Alternator	Standard 40 amp alt, optional 65 amp alt. Optional 100 amp alternator & "smart" regulator.	standard 51 amp alt, optional 72 amp.	standard 50 amp alt, no optional alt.	standard alt is 55 amp, no optional alt
Oil Pan	shallow, cast aluminum oil pan standard, sheet metal deep pan optional	No mention of an optional oil pan	No mention of an optional oil pan	No mention of an optional oil pan
Instrument Panel	2 engine panels, with gauges, optional. Standard panel has tachometer & digital hourmeter.	2 engine panels, with gauges, optional. Standard panel has no gauges.	2 engine panels, with gauges, optional. Standard panel has no gauges.	2 engine panels, with gauges, optional. Standard panel has no gauges.
PTO	Power take off optional, to drive refer compressor, bilge pump, etc.	No mention of a PTO.	No mention of a PTO	No mention of a PTO.
Transmission Parts	Transmission parts are available direct from the builder, aftermarket, or Beta Marine.	Transmission parts available from ZF / Hurth, or aftermarket. standard trans is ZF / Hurth, 2:1 ratio "other gear ratios" & "hydraulic transmission" optional. See notes below for details.	Transmission parts available from Westerbeke or trans builder, or aftermarket, I believe. standard trans ratio is 2.47:1, "other gear ratios" are optional	Only Yanmar built transmissions are available, including a V drive [they are copies of ZF / Hurth type]
Engine Parts	All Engine parts are available at a Kubota tractor dealer, marinization parts must be bought from Beta Marine. See notes below for details.	Marinization parts must be bought from Westerbeke. All Engine parts are available at a Kubota tractor dealer, if the Kubota engine model is known.	Engine & marinization parts must be bought from Westerbeke.	All engine, transmission, & marinization parts must be bought from Yanmar
Parts Price Cmparison (Winter 2003)	1. Upper gasket set \$98 2. Thermostat \$22.80 3. Raw water pump [Jabsco] \$188 1. Upper gasket set (all gaskets needed for a valve job) 2. Thermostat 3. Raw water pump	1. Upper Gasket Set \$220. 2. Thermostat \$43 3. Raw water pump \$248.20 (Sherwood)	1. Upper Gasket Set \$235.50 2. Thermostat \$38.60 3. Raw Water Pump \$278.10	1. Upper Gasket Set - N/A, They only offer semi complete sets, total cost is about \$115. 2. Thermostat \$31.91 3. Raw Water Pump \$319.04
Price (Winter 2003)	\$6710 standard engine & trans, no options \$ 7692 with ZF 15 MIV trans from Joe DeMers \$8150 with ZF 15 MIV v-drive with a 2.13:1 reduction from marinedieseldirect.com	\$8475 with ZF 15 MIV v-drive with a 2.13:1 reduction from marinedieseldirect.com	\$8375 with Hurth ZF 15 MIV v-drive with a 2.13:1 reduction costs from marinedieseldirect.com	

Notes (from Joe DeMers)

All engines are 3 cylinders, non turbo charged, fresh water cooled, except for the raw water cooled version of the Yanmar. All engines include flexible mounts. All use a right hand [clockwise] rotating transmission & prop. The Beta Marine engine is available with a left hand rotating transmission. Westerbeke & Universal [really the same company since 1990] make no mention of a V drive, or a saildrive transmission. Yanmar does have saildrive transmissions and offers a V drive transmission

Beta Marine has optional 8 degree downangle, saildrive, & V drive transmissions, from 4 different builders, with assorted reduction ratios. An optional adapter plate to accept Velvet Drive brand [hydraulic] transmissions is available.

Yanmar engines do not use glow plugs, the other 3 engines do use them. The raw water cooled version of the Yanmar can be hand started.

Beta Marine & Universal can be ordered without a transmission.

Only Beta Marine has a replaceable paper air filter / intake air silencer. The others have a silencer only.