

OXE300
INSTALLATION MANUAL

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1 ABOUT THIS MANUAL

This manual provides information to install the 300 HP OXE Diesel outboard.

When installing the OXE Diesel outboard, it is recommended to have access to:

- OXE Diesel outboard Service Book
- OXE Diesel outboard User Manual
- Applicable accessory manuals, such as a Control Head or Display Manual.



NOTE

Specifications and descriptions are subject to change without notice.



NOTE

Be sure to fill in the **Delivery and warranty** form at the rear of this manual to activate warranty coverage according to the Global Warranty Policy.

Submit documents to your local dealer or registration@oxemarine.com.

For **Emission Control Warranty Statement**, refer to OXE Diesel outboard User Manual.

2 WARNING SIGNS AND REGULATIONS

Important instructions which concern technical safety and protection of persons are emphasized as shown below.

2.1 SYMBOLS AND SIGNS



DANGER

This indicates a hazardous situation, which if not avoided, will result in death or serious injury.



WARNING

This indicates a hazardous situation, which if not avoided, could result in death or serious injury.



CAUTION

This indicates a hazardous situation, which if not avoided, could result in minor or moderate injury.



NOTE

Important information.

2.2 REGULATIONS FOR PREVENTION OF ACCIDENTS WITH PERSONAL INJURY

Inspection, adjustment and repair work may only be performed by authorized and skilled personnel.

- Prior to installation work, switch off the battery master switch.
- When carrying out maintenance and repair work, ensure that the engine cannot be accidentally started from the bridge by unauthorized personnel.
- The engine may only be started and operated by authorized personnel.
- When the engine is running, keep a safe distance to the rotating parts.
- Wear close-fitting working clothes.
- Wear safety work clothes and footwear.
- Do not touch hot engine with bare hands. Risk of burns!
- Keep area surrounding engine, ladders and stairways free of oil and grease. Accidents caused by slipping inflict serious injury.
- Only work with tools in good condition. Worn spanners/wrenches slip cause danger of injury.
- Personnel must not stand under an engine suspended on a crane hook. Keep lifting gear in order.
- Open the coolant circuit only when the engine has cooled down. If opening the coolant circuit while the engine is hot is unavoidable, observe the instructions in the "Maintenance" chapter in the User Manual.
- Do not tighten or undo pipes and hoses under pressure (lubricating oil circuit, coolant circuit and any downstream hydraulic oil circuits). Undoing pressurized hoses can inflict serious injury to the body.
- When working on the electrical system, disconnect the negative cable from the battery first. When reconnecting the battery power cables, reconnect the negative cable last to reduce the risk of electrical damage to personnel and engine.
- Follow the manufacturer's instructions for handling batteries. Battery acid is toxic, caustic and battery gases are explosive.

2.3 REGULATIONS TO PREVENT DAMAGE TO ENGINE AND PREVENT WEAR

- Clean the engine thoroughly prior to repairs. Ensure that dirt, sand or foreign matter will not enter the engine during repair work.

- If engine operation is abnormally, immediately determine the cause of the disruption, rectify the cause prior to restart in order to prevent further damage to the outboard.
- Always use genuine OXE Diesel parts only. Installation of “equally” good parts from other suppliers may cause severe damage. Global Warranty Policy is void, and the installing workshop is held liable for costs of damage to outboard and people.
- Never allow the engine to run dry, i.e. without lubricant or coolant. Appropriate notices must be attached to engines that are not ready for operation.
- Modern components of diesel injection consist of high-precision parts which are exposed to extreme stresses. The high-precision technology requires the utmost cleanliness during all work on the fuel system. Even the smallest particle of dirt can lead to the failure of components.
- Use only OXE Diesel approved service products (fuel, engine oil, anti-freeze and anti-corrosion agent). Pay attention to cleanliness. Diesel fuel must be free of water.
- Do not fill engine oil beyond the maximum level mark of the dipstick. Do not exceed the maximum permissible tilt of the engine. Serious damage to the engine may result if these instructions are not adhered to.
- Control and monitoring devices (charge control, oil pressure, coolant temperature) must be in perfect working order.

2.4 PREVENTION OF ENVIRONMENTAL DAMAGE

2.4.1 ENGINE OIL AND FILTER ELEMENTS/CARTRIDGES, FUEL FILTERS

- Dispose of used oil according to local environmental legislation.
- Take strict precautions to ensure that no oil or diesel fuel contaminates soil or drainages.



CAUTION

Risk of contamination of drinking water!

- Filter elements are classed as dangerous waste and must be treated as such.

2.4.2 COOLANT

- Treat undiluted corrosion protection agents and/or antifreeze as hazardous waste.
- When disposing of used coolant, the environmental legislation issued by the relevant local authorities must be adhered to.

2.4.3 NOTES ON SAFETY IN HANDLING USED ENGINE OIL

Prolonged or repeated contact between the skin and any kind of engine oil dries out and increases the risk of skin-related illnesses such as eczema. Common effects in the exposed skin are dry sensations, irritation and inflammation. Drying, irritation or inflammation of the skin may therefore occur. Used engine oil also contains hazardous substances that have caused skin cancer in tests on animals. If the basic principles of work safety and hygiene are followed, handling used engine oil does not represent a health hazard.

2.4.4 PRECAUTIONARY MEASURES TO PROTECT YOUR HEALTH

- Avoid prolonged or repeated skin contact with used engine oil.
- Protect your skin by means of suitable agents (creams etc.) or wear protective gloves.
- Clean the skin which has been in contact with engine oil.
 - Wash thoroughly with soap and water. A nailbrush provides effective assistance here.
 - Special hand cleaning agents make it easier to clean dirty hands.
 - Do not use petrol (gasoline), diesel fuel, gas oil or solvents as washing agents.
- After washing, apply a fatty skin cream to the skin.

- Change clothing and shoes that are soaked in oil.
- Do not put oily cloths in your pockets.

Ensure that used engine oil is disposed of in an appropriate manner. Engine oil is a substance that endangers the water supply.

Do not let engine oil get into the ground, waterways, drains, or sewers. Violations of local environmental legislation are punishable by law.

Carefully collect and dispose of used engine oil. Information on collection points can be obtained from retailers, the supplier or the local authorities.

3 IMPORTANT INFORMATION



WARNING

The OXE Diesel outboard is normally delivered without any fluids and has to be filled up before start-up. Use fluids of quality and volume, listed in the table below.

3.1 RECOMMENDED FLUIDS AND GREASE

Fluid	Quality	Quantity	
		Metric	US units
Fuel	EN 590 (with national environmental and cold weather standards) ASTM D 975 No. 1 and No. 2 JIS KK 2204 NATO Code F54 and F75	—	—
Engine oil	OXE Engine Oil (300) or BMW Longlife -04/API SL, API SM ¹⁾ or BMW Longlife -01 ¹⁾ or BMW Longlife -98 ¹⁾	8 liters	8.5 quarts
Gearbox and primary transmission oil ²⁾	OXE Gearbox Oil or Fully Synthetic Dual Clutch Transmission Fluid - DCT	2.5 liters	2.6 quarts
Coolant	OXE Coolant or Frostox - HT12	10.0 liters approx.	10.6 quarts approx.
Grease	OXE Grease or DIN 51502:KP2.5K-20 ISO 6743: ISO-L-XBCEB2.5	—	—
PTT (Power Trim and Tilt unit) oil	OXE PTT Oil or FORD WSS-M2C204-A	0.5-0.7 liters	0.5-0.7 quarts
Lower unit oil	OXE Belt Oil or Fully Synthetic Transmission Fluid - ATF	2.0 liters	2.1 quarts

¹⁾ For cold climate, select viscosity according to Section 3.3 "Engine oil viscosity", [page 10](#).

²⁾ The lubrication system is combined for the gearbox and the primary transmission.



NOTE

The fuel must meet national and international standards.



NOTE

Only use fuel, lubricants, etc., in accordance with OXE Marine AB regulations. Otherwise, the manufacturer's liability for defects will not apply!

3.2 DIESEL FUELS

The composition of the fuel is vital for the operation of the OXE outboard, its service life, and emissions. To meet the performance specified and to run the boat cleanly and quietly, it is important that fuel, as recommended in Section 3.1 "Recommended fluids and grease", [page 9](#) is used.

If national emission regulations permit, OXE Diesel engines can be operated on commercially available diesel fuels with **less than 0.05% sulfur content**.

Fuel sulfur content	≤0.05% (≤500 ppm)	>0.05%–0.5% (>500–5000 ppm ²⁾)
Engine oil change intervals	200 h or one year	100 h or one year ¹⁾

1) If the sulfur content is higher than 0.05%, the intervals between engine oil changes should be halved or determined by frequent oil sampling.

2) If the sulfur content is higher than 0.1%, an engine lubrication oil with suitable TBN (Total Base Number) shall be used.



NOTE

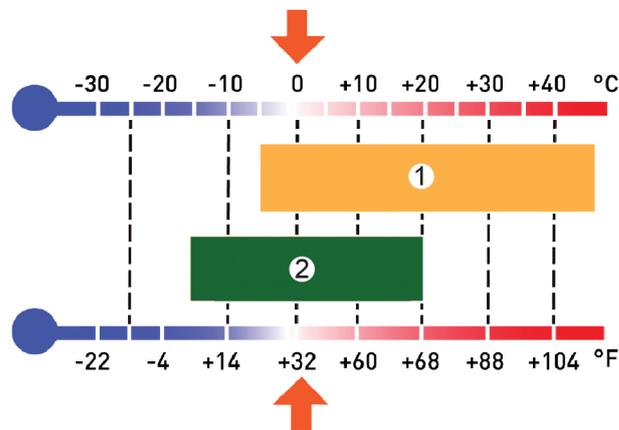
Do not use fuel with more than 0.5% sulfur content! Using fuel with high sulfur content will increase the outboard's emission levels and cause excessive wear and a shorter lifetime.

Large differences in composition occur in local fuel specification. This can result in higher fuel consumption, higher emissions, and less power output.

3.3 ENGINE OIL VISCOSITY

Select viscosity according to the following graphic.

The temperature values refer to stable ambient temperatures.



1 Engine oil 5W/30

2 Engine oil 0W/30

3.4 AVOIDING FUEL FLOW RESTRICTIONS



WARNING

Adding additional components to the fuel supply system such as filters, valves, fittings, etc., may restrict the fuel flow. This could cause engine stalling at low speed and/or a lean fuel condition at high rpm that could cause engine damage.

3.5 TECHNICAL DATA

	Specification	
	Metric	US units
Engine type	In-line 6-cylinder, Diesel	
Displacement	2993 cc	182.6 cu in
Intake	Bi VGT turbocharged, intercooled	
Maximum power at engine speed 4000–4200 rpm	224 kW	300 HP

	Specification	
	Metric	US units
Maximum engine torque at engine speed 1750 rpm	680 Nm	502 lb-ft
Fuel	Diesel	
Dry weight	410 kg	904 lb
Alternator output	180 A	
Rig length	25" or 33"	
Cooling	Closed cooling circuit, heat exchanger/seawater	
Starting	Electric	
Steering	Customisable, recommended electronic power steering	
Shift	CAN bus, Electro-hydraulic	
Clutch	Hydraulic multi-friction plate	
Gear ratio	1.39:1	
Dimensions, L×H×W:		
25" leg	1150×2090×703 mm	45.3×82.3×27.7 in
33" leg	1150×2293×703 mm	45.3×90.3×27.7 in
Bore	84 mm	3.3 in
Stroke	90 mm	3.5 in
Compression Ratio	16.5:1	
Idle Speed	720 ±50 rpm	
Firing Order	1-5-3-6-2-4	
Engine height – oil pan to air intake assembly	821 mm	32.2 in
Engine length – seawater filter to heat exchanger	1003 mm	39.4 in

3.6 ACCESSORIES

Genuine OXE Diesel parts and accessories have been specifically designed and tested for OXE outboards.

Some accessories not manufactured or sold by OXE Diesel may not be designed to be safely used with OXE outboards or OXE outboard operating systems. Obtain and read the Installation, Operation, Maintenance, and Accessories manuals for all selected accessories.

4 UNPACKING INSTRUCTIONS

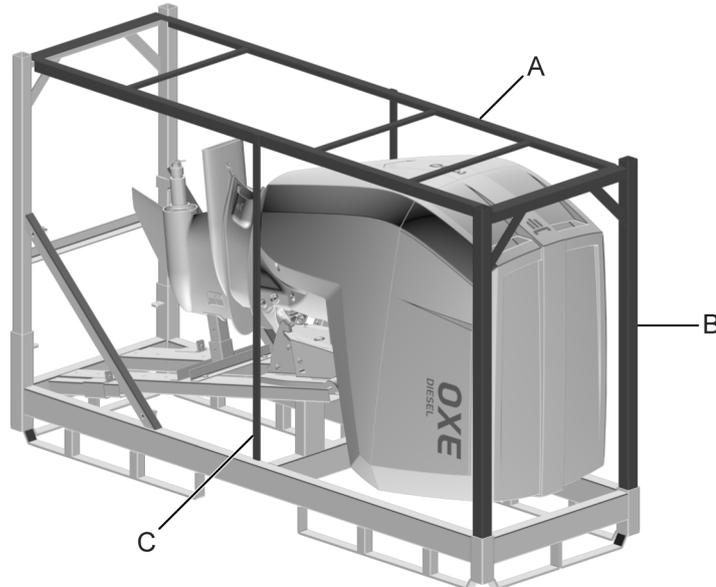
- 1 Move the OXE outboard box with a pallet/forklift truck.



CAUTION

Follow instructions on the OXE outboard box.

- 2 Remove the lid (A) and side parts (B, C) from the crate.



- 3 Remove and take care of the box containing installation accessories.
- 4 Remove and take care of the document folder placed on the right side of the engine.



NOTE

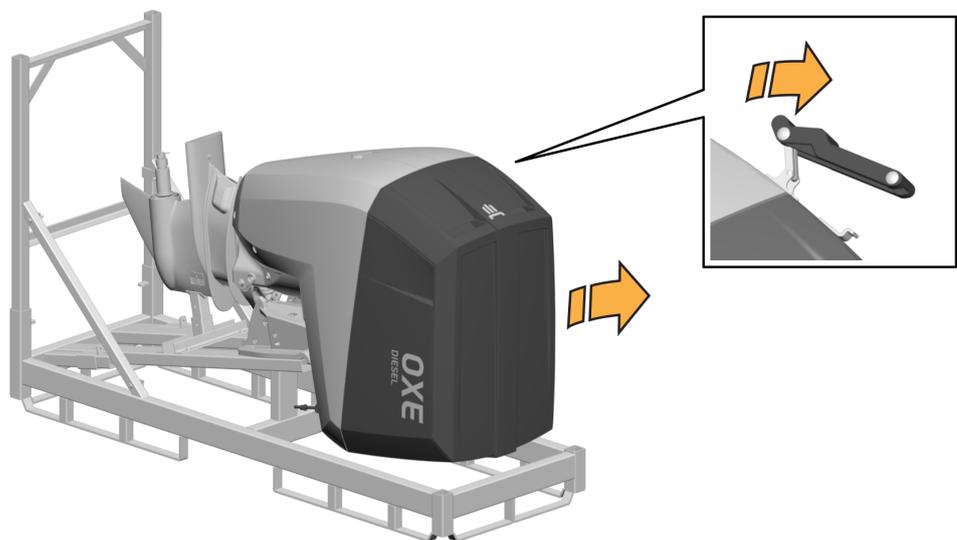
These documents are delivered with the OXE outboard and always passed on to the next owner!

- 5 Remove the OXE outboard top cowling.



CAUTION

Do not damage the outboard surface.

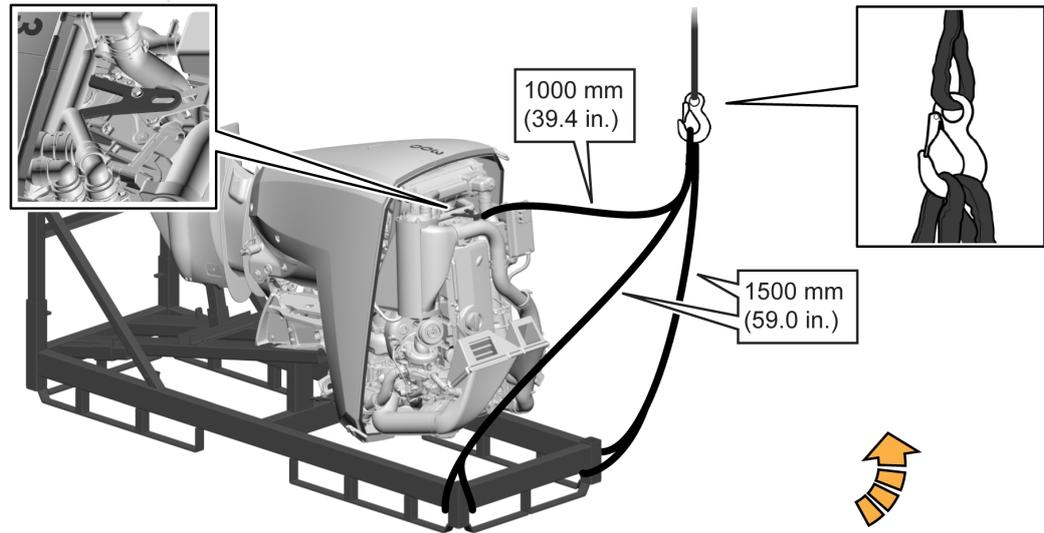


- 6 Mount shackles and lifting straps, certified according to weight, to the crates lifting lugs, as shown in the following graphic.



DANGER

Do not unbolt the OXE outboard from the crate.



- 7 Use the lifting lugs in the crate. Slowly lift the OXE outboard and the crate into an upright position. Use extra caution when the crate lifts from the foundation as the crate may move (swing). Make sure the foundation under the crate is stable before removing any lifting lug. Make sure that the crate is well balanced during the lift. If not, interrupt the lift and re-arrange the straps for proper balance.



DANGER

Do not remove the OXE outboard from the crate before lifting operation.



CAUTION

This is a two-person operation.

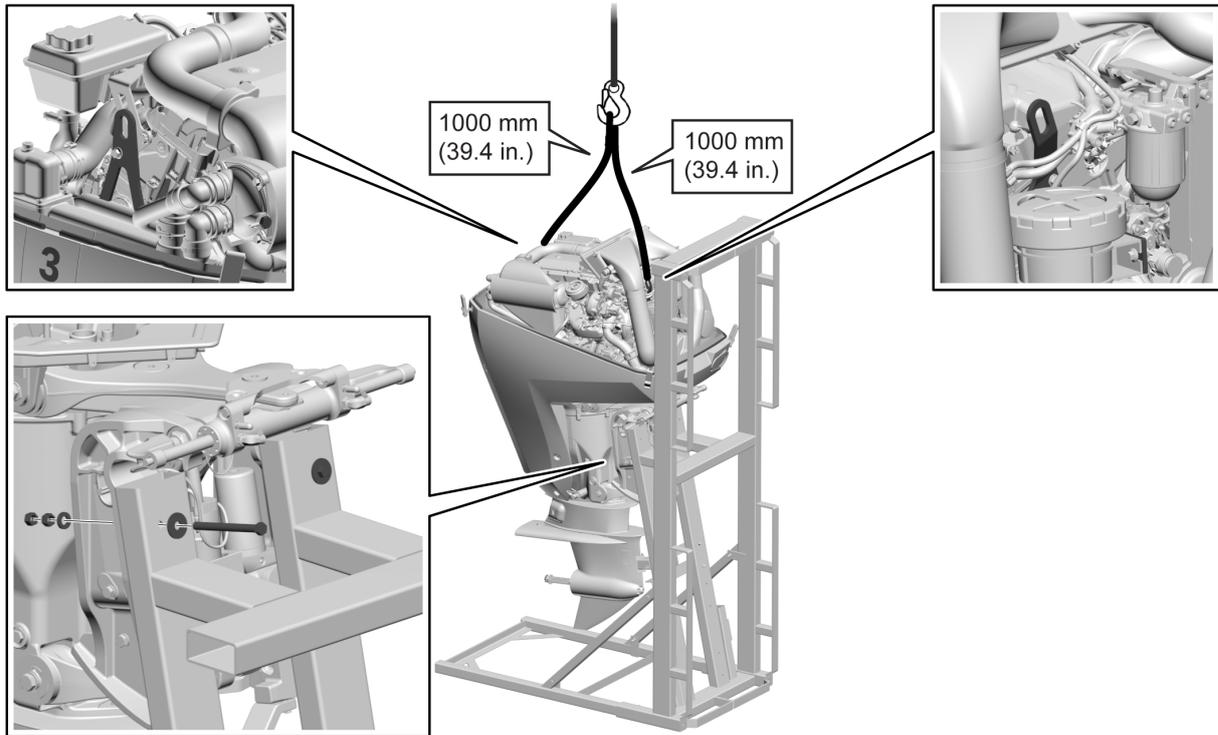
- 8 Mount shackles and lifting straps, certified according to weight, to the engine lifting eyes. Make sure the straps are long enough to avoid interference with air filter box and charge air pipe.



CAUTION

Do not damage the paint coat of the transom unit.

- 9 Please see recommended strap length 2 x 1000 mm below or use a suitable lifting bar to avoid any damage. Tighten the strap until the engine and crate almost lift from the foundation, make sure the straps are clear and not damaging any surrounding parts. Then remove screws, spacers, and nuts carefully. Make sure to hoist or lower the lifting hook as deemed necessary for proper removal of bolts, spacers, and nuts.



- 10 Carefully remove the outboard from the crate. Hold the outboard in order to keep it from swinging.



CAUTION

This is a two-person operation.

Now the outboard is ready for assembly on the transom of the boat.

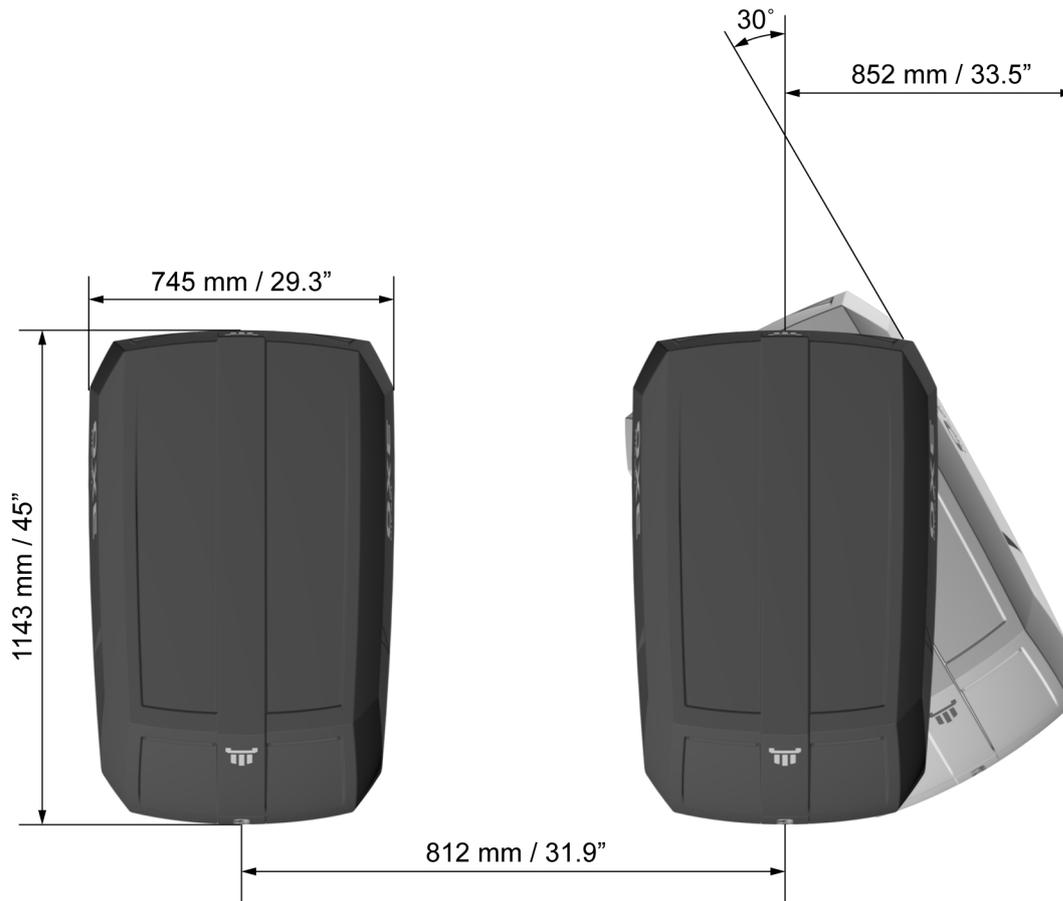
4.1 ACCESSORY BOX CONTENT

Part number	Description	QTY	Reference	Kit
30-0114-444	Pump, external fuel pump	1	Refer to Installation Manual, Fuel system	External fuel pump kit
– 30-0114-458	– Fuel pump bracket	1	Refer to Installation Manual, Fuel system	
– 30-0116-132	– Harness for external fuel pump	1	Refer to Installation Manual, Electrical components	
– 30-0122-254	– Connector for fuel hose	2	Refer to Installation Manual	
– 30-0122-052	– Hose clamp	4	For the external pump	
– 30-0121-052	– Copper, washer	2	Used in installation with 30-0122-254	
– 30-0130-270	– Nut M6, Nylock	1	Used with 30-0114-458	
– 30-0130-191	– Washer M6	1	Used with 30-0114-458	
– 30-0130-292	– Bolt M6 x 40	1	Used with 30-0114-458	
– 30-0190-011	– Loctite 542	1	Used to seal and secure fitting when installing to the external pre-filter, external fuel pump.	
30-0190-006	Prefilter fuel assembly	1	Refer to Installation Manual	Fuel prefilter kit
– 30-0122-052	– Hose clamp	6	Refer to Installation Manual	
– 30-0114-497	– ¼" UF to 10mm hose connector	2	Refer to Installation Manual	
30-0190-304	Fuel feed hose 5M	1	Refer to Installation Manual	
30-0190-303	Fuel return hose 5M	1	Refer to Installation Manual	
30-0122-049	Hose clamp	2	Return line	
30-0140-032	Man overboard switch, kill cord	1	Refer to Installation Manual	Individually packed
30-0122-246	Cable tie	10	Used for installation on fuel hose	
30-0190-909	Water-In-Fuel sensor (WIF)	1	Used with 30-0190-006 in installation	
30-0140-100	Rigging sleeve (hose) incl. flange	1	Refer to Installation Manual	
Doc. kit	Documents and manual kit	1		Doc. kit
– 30-0160-036	– Drill template	1	Refer to Installation Manual	
– ODM6012	– Accessory box content list	1		
– ODM6006	– Service Book	1		
– ODM6005	– User Manual	1		

5 INSTALLATION DIMENSIONS

When mounting the OXE outboard, ensure there is clearance for the engine moving from port to starboard and during trim and tilt operations.

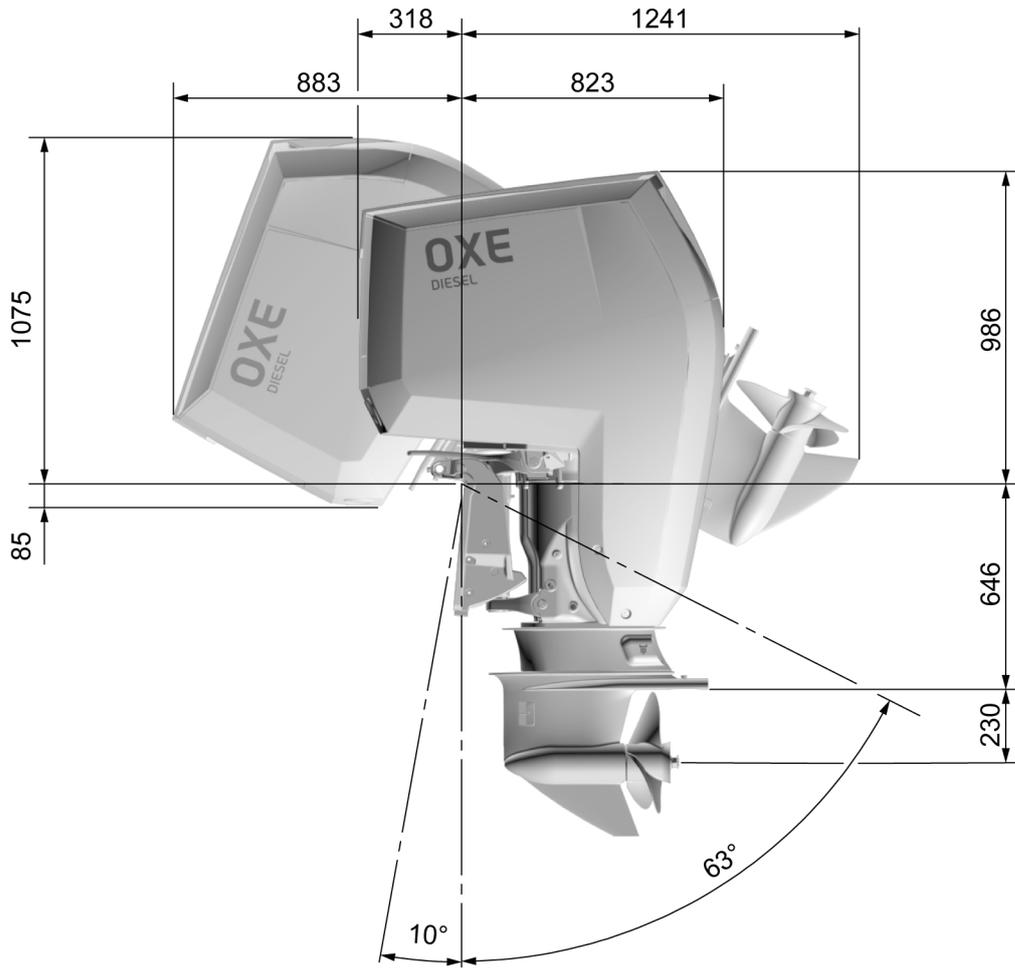
Clearance needed for the OXE outboard moving from port to starboard



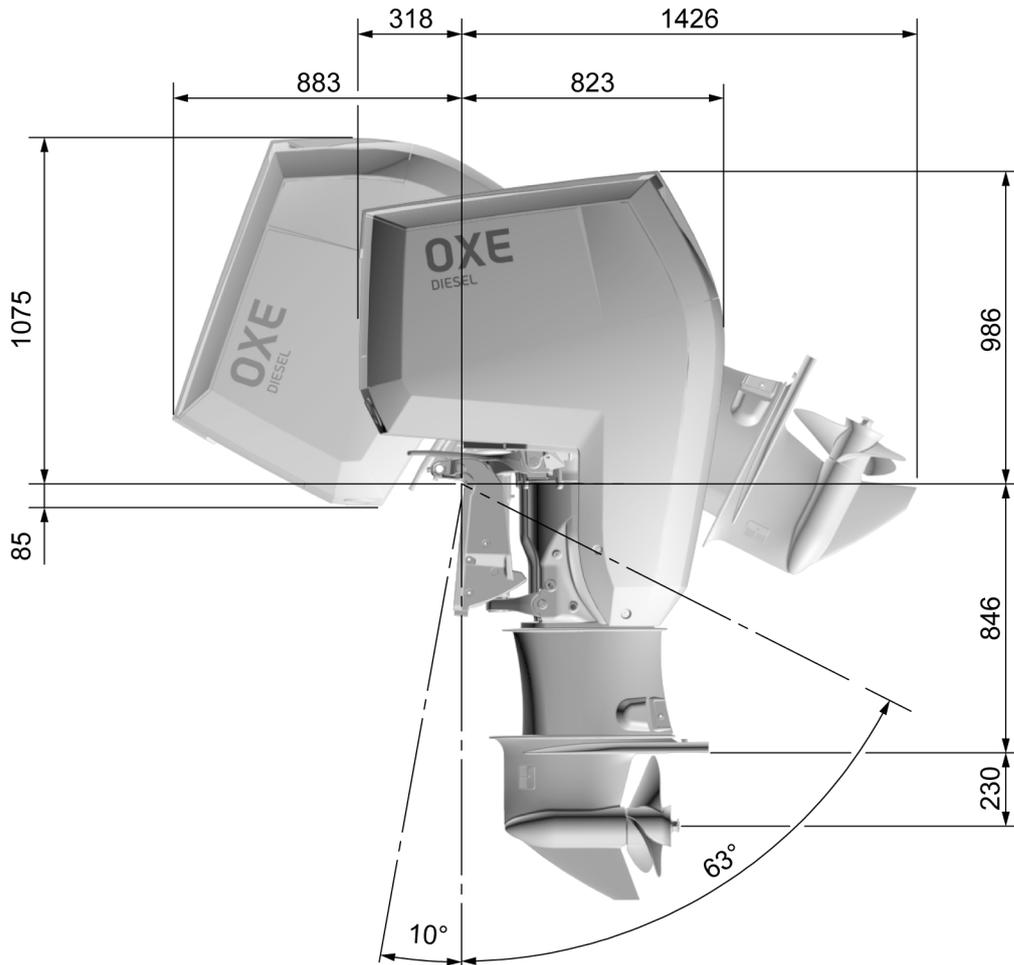
NOTE

Steering with joystick (as described in Section 7.2 "Electric steering with joystick", [page 27](#)) requires a minimum clearance of 927 mm (36.5 in.).

Clearance needed for the OXE outboard trim and tilt operation - rig 25"



Clearance needed for OXE outboard trim and tilt operation - rig 33"



NOTE

The 63 tilt angle can be electronically limited by the engine parameters settings.

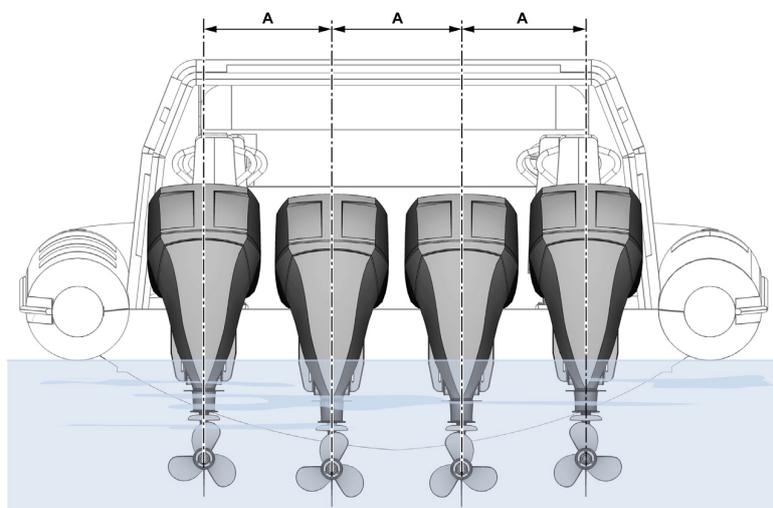
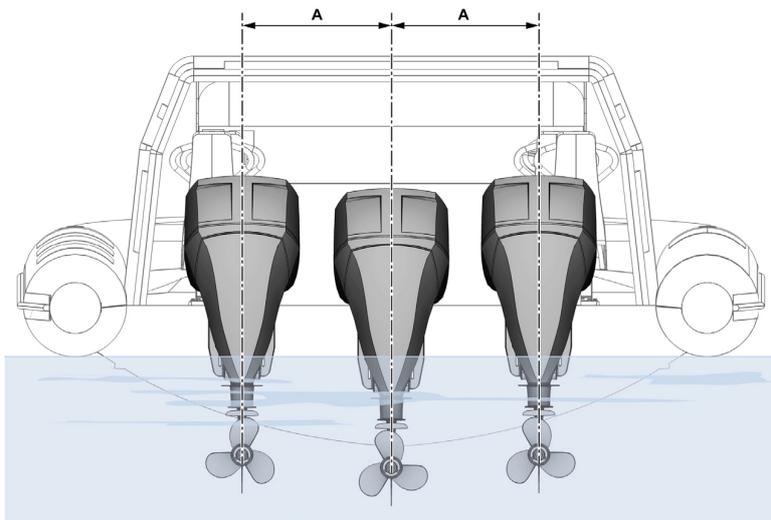
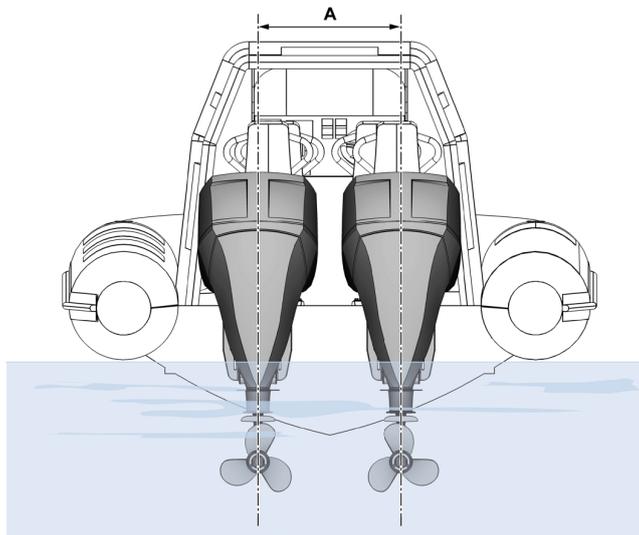
Minimum clearance between outboard centerline (C/L)

A	Installation	mm	inch
	Twin/Triple/Quad	812	31.9



NOTE

Steering with joystick (as described in Section 7.2 "Electric steering with joystick", [page 27](#)) requires a minimum clearance of 927 mm (36.5 in.).



6 MOUNTING



WARNING

Overpowering a boat may cause severe instability. Never install an outboard that exceeds the maximum boat horsepower rating or weight capacity. Always check with your dealer!

Improper mounting of the OXE outboard could result in hazardous conditions, such as poor handling, loss of control or fire hazards. Only authorized personnel should mount the OXE outboard.

Minimum height between water surface and transom bracket seating point

Model	Min. height (H)	
OXE Diesel 300 HP	150 mm	5.9 in

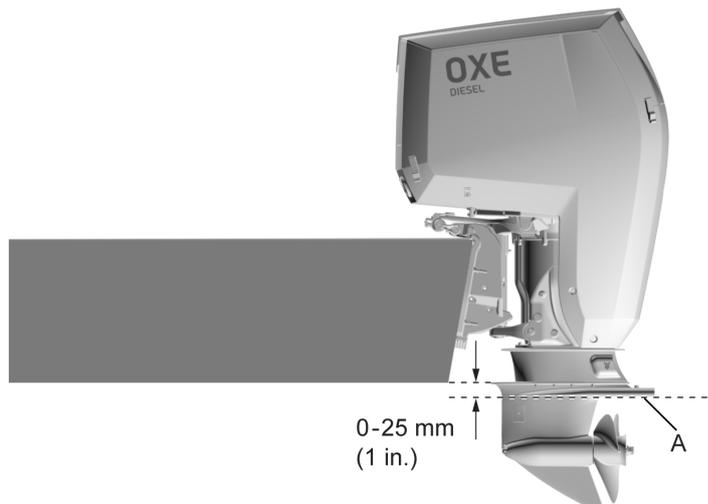
Maintain the minimum allowable height (H), shown in the illustration, between the water surface and the clamp bracket seating point while the vessel is fully loaded and not moving. Check and adjust the height if you change center gravity (CG) or increase maximum boatload.



Oxe outboard mounting height (H)

General application

- 1 Adjust the OXE outboard height so that the anti-cavitation plate (A) is aligned with, or lowered, within 25 mm (1 in.), the boat transom bottom.

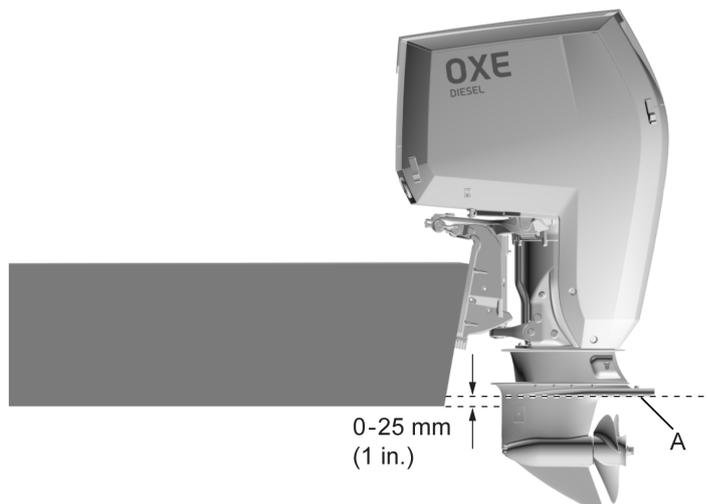


OXE outboard mounting height, general application

High speed application

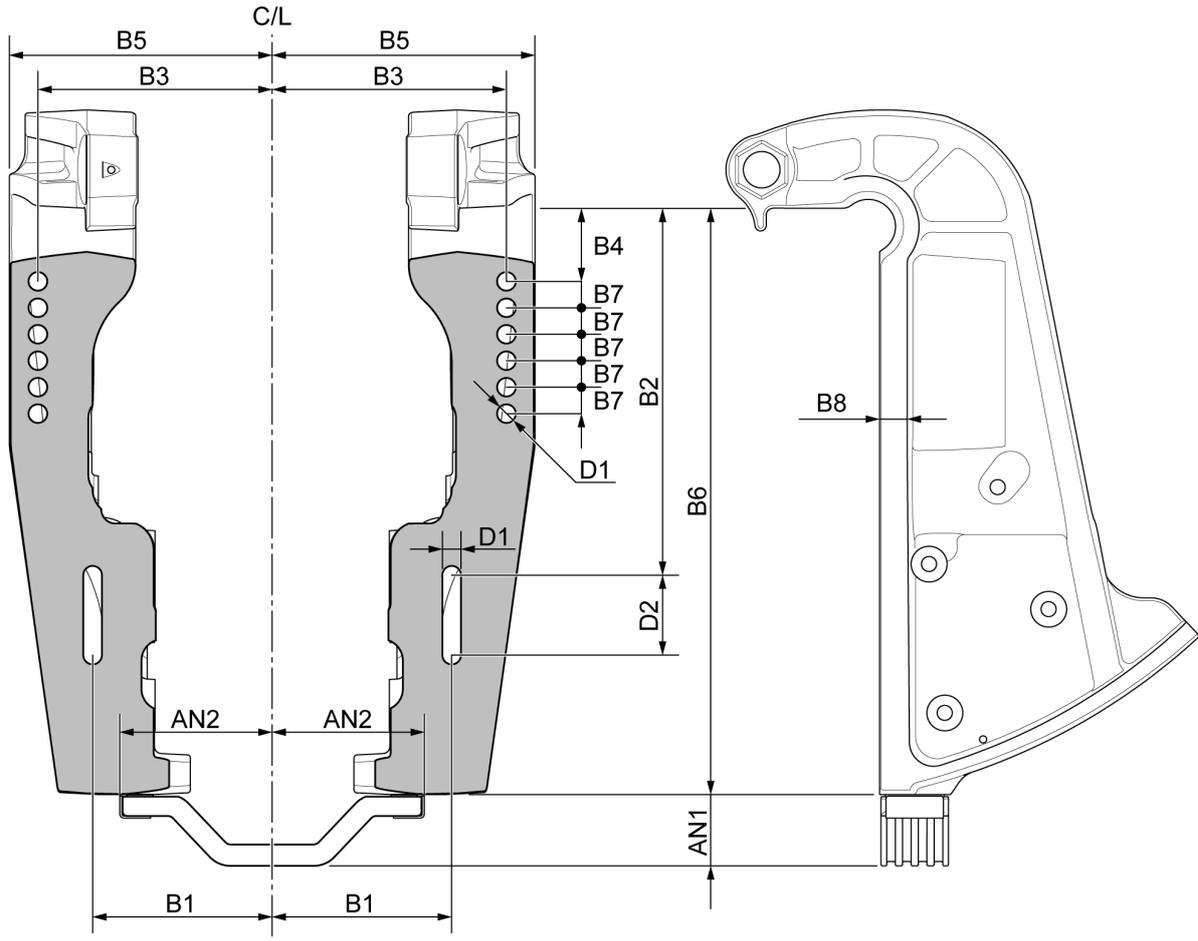
- 1 For high speed applications, a higher mounting position, approximately 25 mm (1 in.) above the boat transom bottom might provide better performance.

In comparison to other manufacturers' equivalent outboard engines, take note that the OXE is one more inch in between the prop shaft and the cavitation plate to accommodate for a larger diameter propeller.



OXE outboard mounting height, high speed application

6.1 TRANSOM MOUNT



Transom mount, measurements and bolt pattern.



NOTE

Do not use as a template!

Symbol	mm (in.)	Symbol	mm (in.)	Symbol	mm (in.)	Symbol	mm (in.)
B1	125.4 (4.9)	B5	180 (7.1)	D1	13 (0.5)	AN1	52 (2.0)
B2	257 (10.1)	B6	411 (16.2)	D2	56 (2.2)	AN2	102 (4.0)
B3	163.5 (6.4)	B7	18.5 (0.7)				
B4	50.8 (2.0)	B8	23 (0.9)				



OXE outboard drilling template



Heavy-duty fixture



NOTE

For an accurate result, use the enclosed OXE outboard drilling template when installing the transom mount. A heavy-duty fixture is available to order from your local dealer.

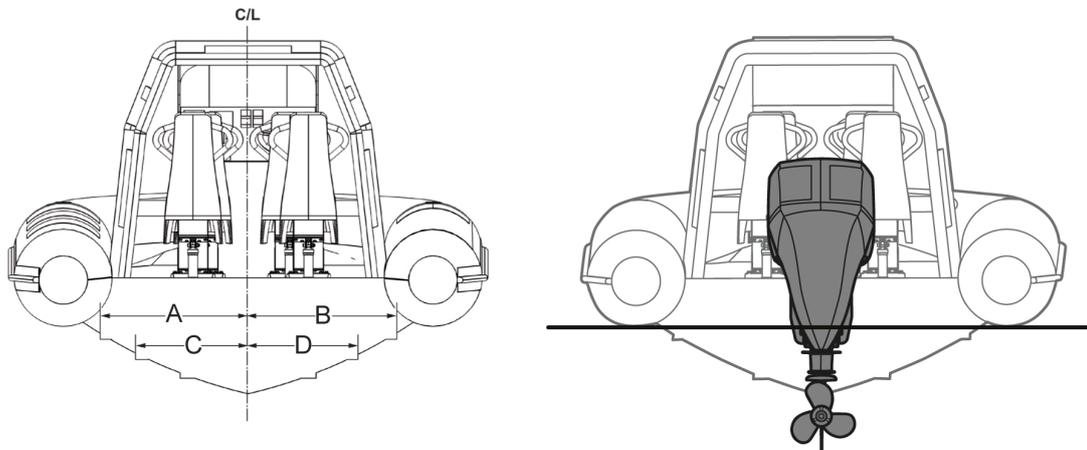
6.2 DETERMINING BOAT TRANSOM VERTICAL CENTERLINE (C/L)

Take the measurements (A), (B), (C) and (D). Measurements (A) and (B) should be equal and so should measurements (C) and (D).



NOTE

Recheck the measurements and verify that the transom vertical centerline position is straight!



Centerline measurements

6.3 OXE OUTBOARD TWIN INSTALLATION

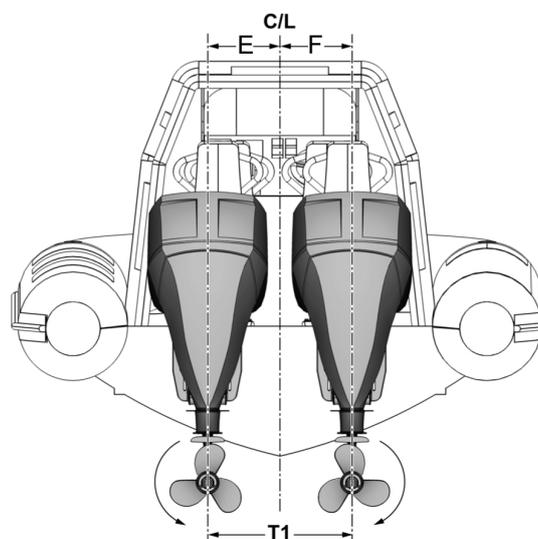
Mount both OXE outboards so that the distance of each outboard centerline to the transom centerline is equal on both sides, i.e. measurements (E) and (F) should be equal. Ensure to maintain a minimum distance (A) between both vertical centerlines of the OXE outboards. Refer to Section 5 "Installation dimensions", [page 16](#).



CAUTION

Ensure that distance (E) and (F) are equal.

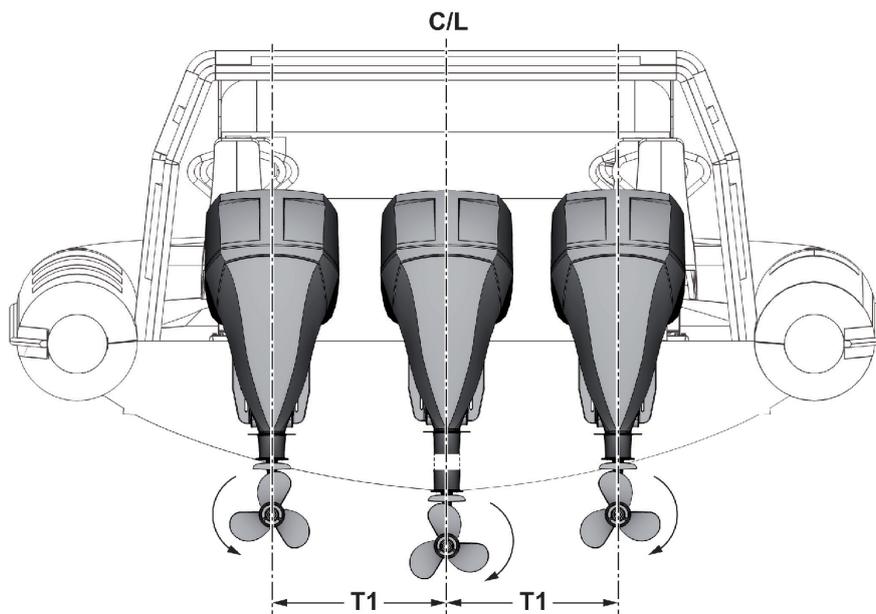
T1 must be equal to (E) plus (F) and no less than the minimum distance (A), refer to Section 5 "Installation dimensions", [page 16](#). Check dimensions.



Transom centerline - twin installation

6.4 OXE OUTBOARD TRIPLE INSTALLATION

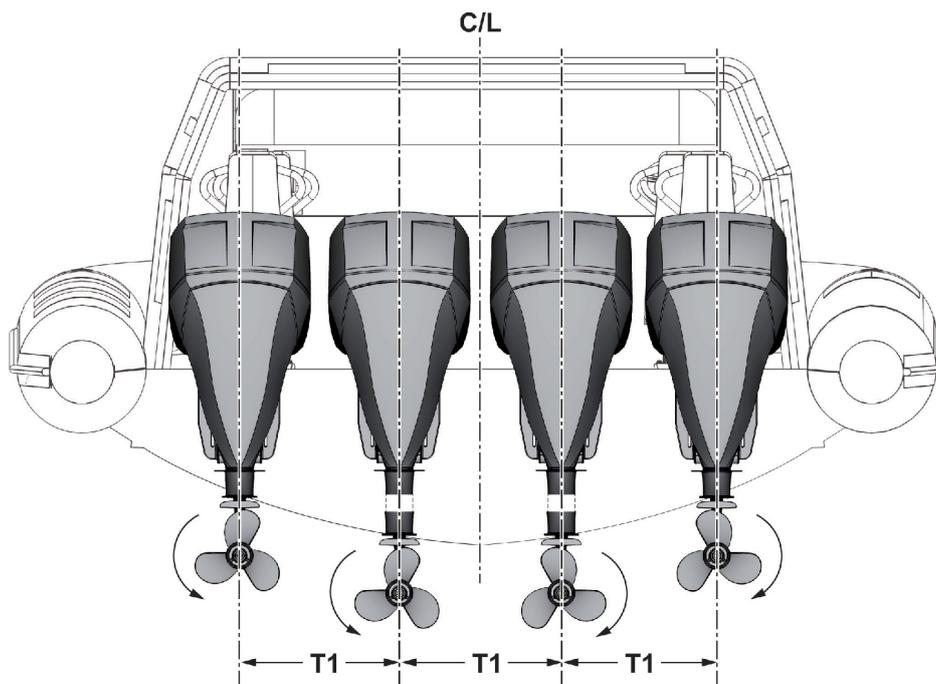
Set outboards as shown in figure below. The center outboard should be equipped with a longer rig than the outer OXE outboards.



Transom centerline - triple installation

6.5 OXE OUTBOARD QUAD INSTALLATION

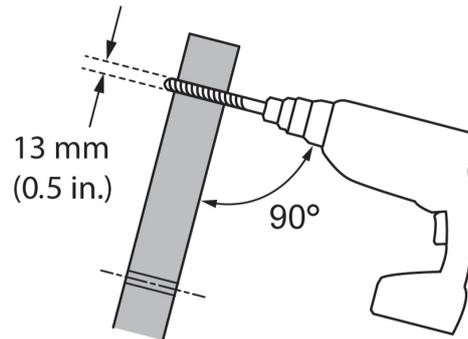
Set outboards as shown in figure below. The center outboards should be equipped with a longer rig than the outer OXE outboards.



Transom centerline - quad installation

6.6 INSTALLING TRANSOM MOUNT

- 1 After determining the transom mount position, mark the preferable mount hole positions on the boat transom. Drill mount holes, 13 mm (0.5 in) perpendicular to boat transom.



NOTE

Use OXE installation bolts or equivalent, 10.9 grade.



NOTE

During sea trailing, four bolts (two on each side) are required. When one ultimate height has been established, install a total of six bolts. Two upper and one lower on each side.

Apply marine sealer to the shanks of the bolts, not the threads! Secure the outboard with supplied mounting hardware.



WARNING

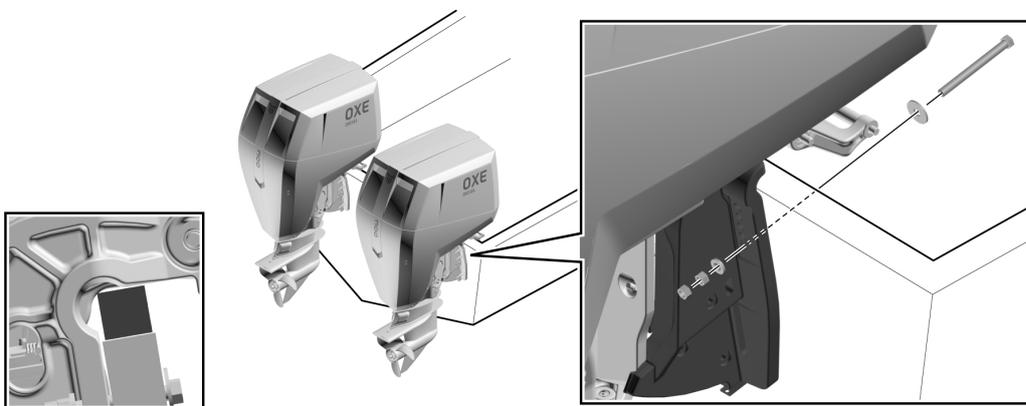
No free play is allowed between transom surface and clamp bracket. The clamp bracket or transom could break.

- 2 Apply marine sealer to the mounting holes and under the washers.
- 3 Tighten mounting bolts at a suitable torque suited for the transom material. First tighten the inner nut, followed by the outer nut. The outer nut will act as a locknut.



NOTE

It is recommendable that any vertical clearance between the transom and the clamp brackets is eliminated with a suitable spacer.



NOTE

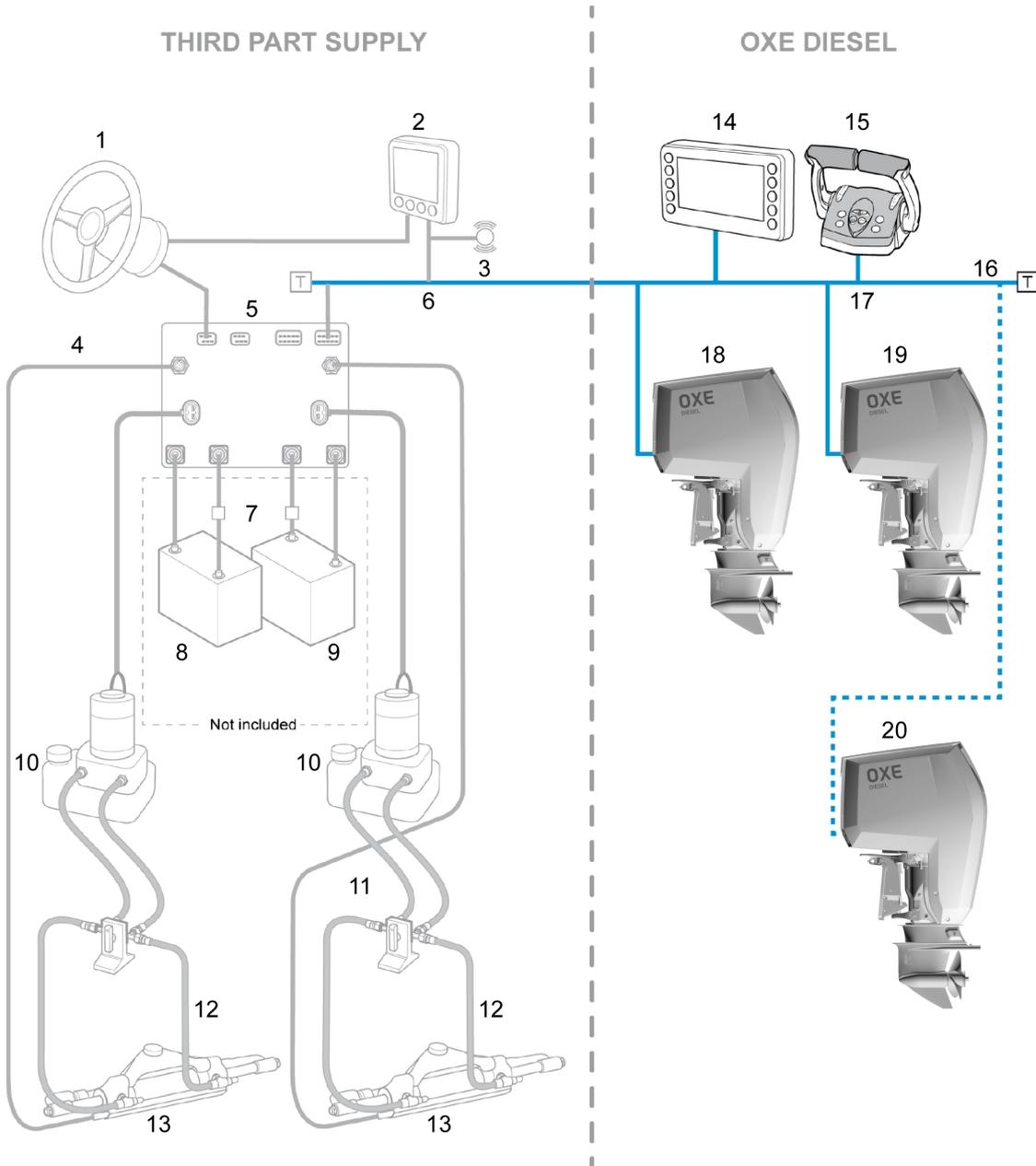
If you install the engine in a way that makes the engine's emission control information label hard to read during normal engine maintenance, you must place a duplicate label on the vessel, as described in 40 CFR 1068.105. Environmental Protection Agency.

Contact your local OXE Marine dealer for a duplicate label.

7 STEERING

The following diagrams illustrate different types of steering. Consult your engine/boat supplier when selecting a steering appliance for the best engine/boat performance.

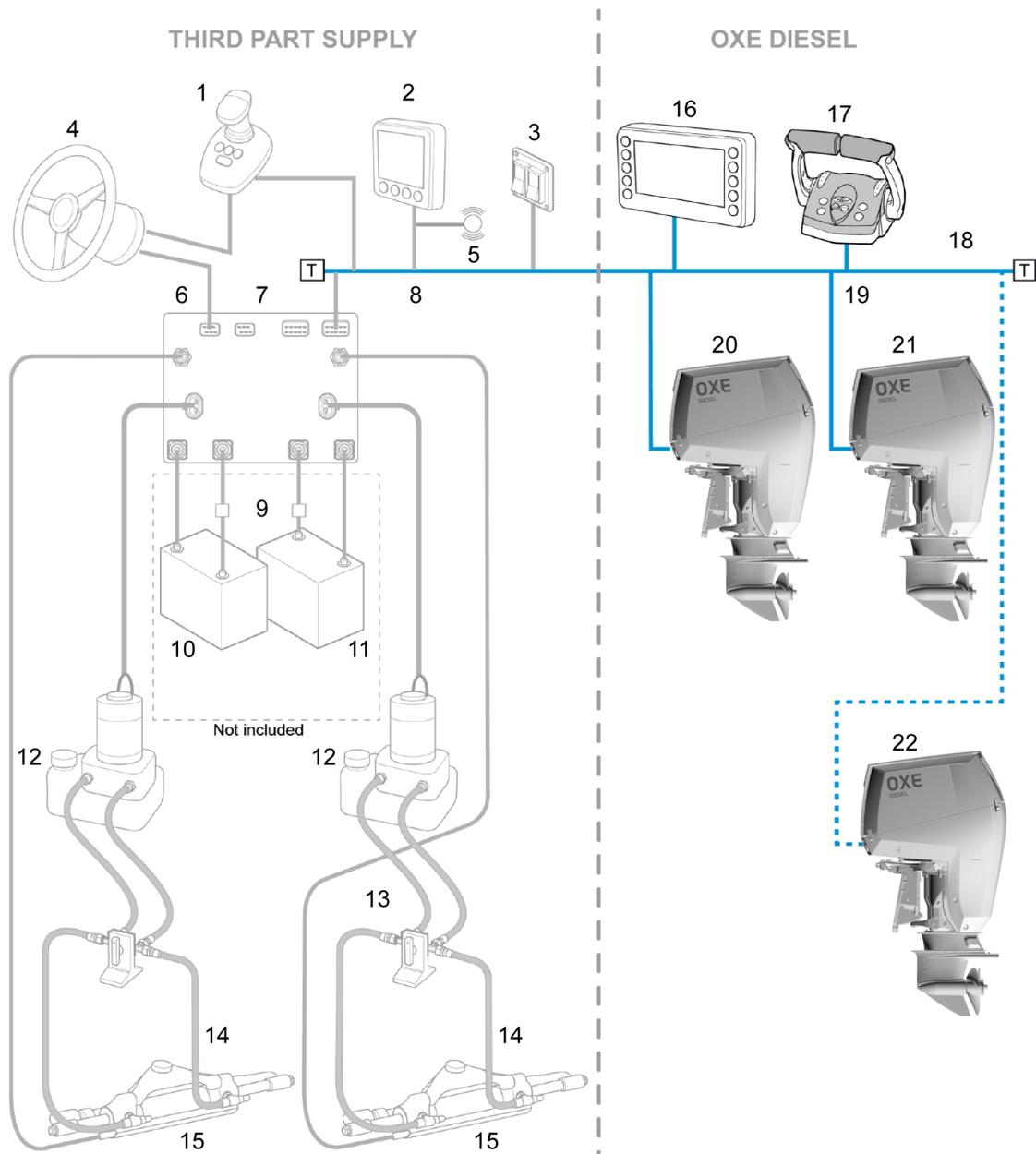
7.1 ELECTRIC STEERING WITHOUT JOYSTICK



- 1 Helm
- 2 Steering display
- 3 Buzzer
- 4 CAN 1 Network
- 5 PCM
- 6 CAN 2 Network
- 7 Breakers
- 8 Port power source
- 9 Starboard power source
- 10 Hydraulic pump

- 11 Service valve
- 12 Hydraulic hose
- 13 Smart cylinder
- 14 Engine display
- 15 Control head
- 16 Network terminator × 2
- 17 OXE-E-CAN Network
- 18 OXE Diesel #1
- 19 OXE Diesel #2
- 20 OXE Diesel #3, 4 ...

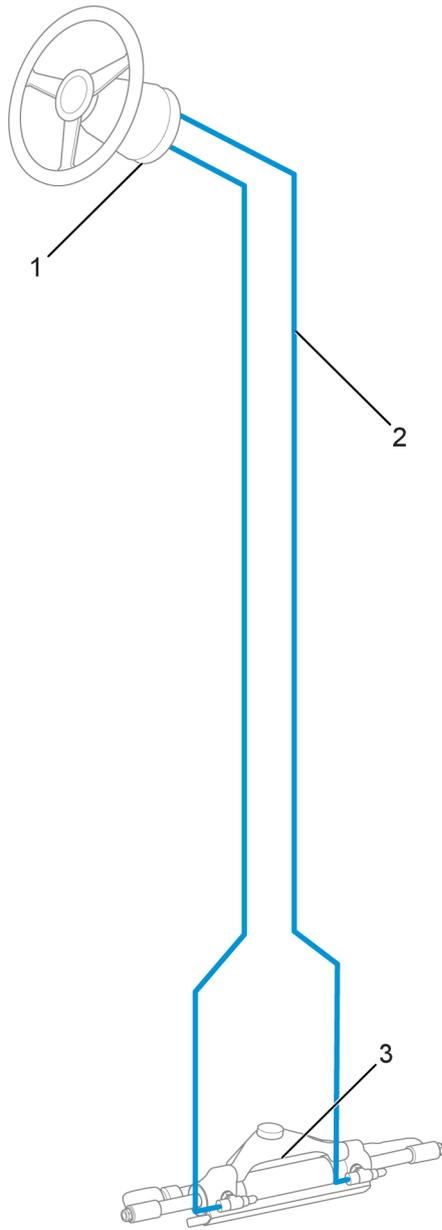
7.2 ELECTRIC STEERING WITH JOYSTICK



- 1 Joystick
- 2 Engine display
- 3 Independent trim/tilt switch
- 4 Helm
- 5 Buzzer
- 6 CAN 1 Network
- 7 PCM
- 8 CAN 2 Network
- 9 Breakers
- 10 Port power source
- 11 Starboard power source

- 12 Hydraulic pump
- 13 Service valve
- 14 Hydraulic hose
- 15 Smart cylinder
- 16 Engine display
- 17 Control head
- 18 Network terminator × 2
- 19 OXE-E-CAN Network
- 20 OXE Diesel #1
- 21 OXE Diesel #2
- 22 OXE Diesel #3, 4 ...

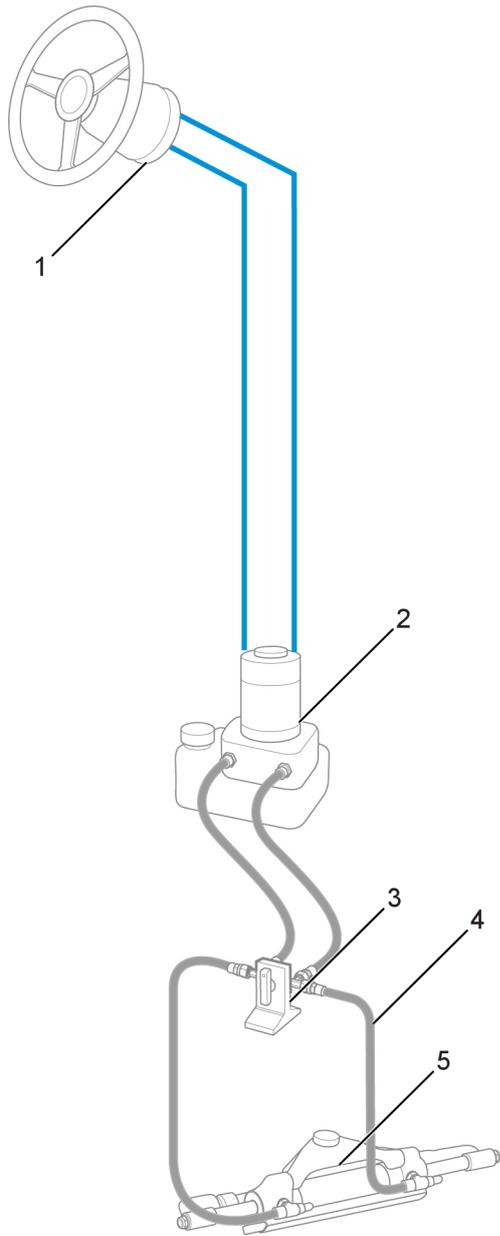
7.3 POWER STEERING



- 1 Helm
- 2 Hydraulic hose

- 3 Steering cylinder

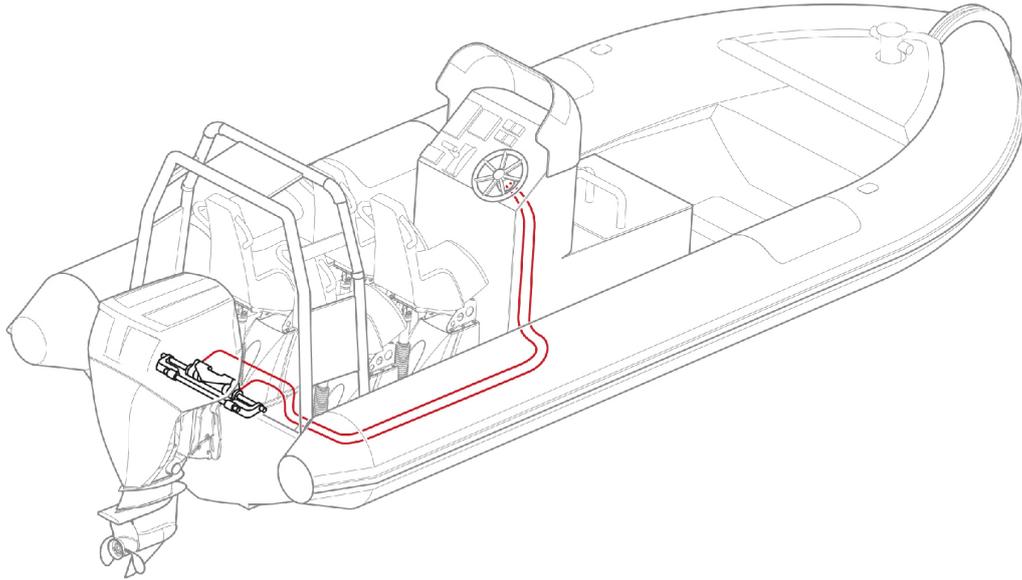
7.4 POWER STEERING SERVO ASSISTED



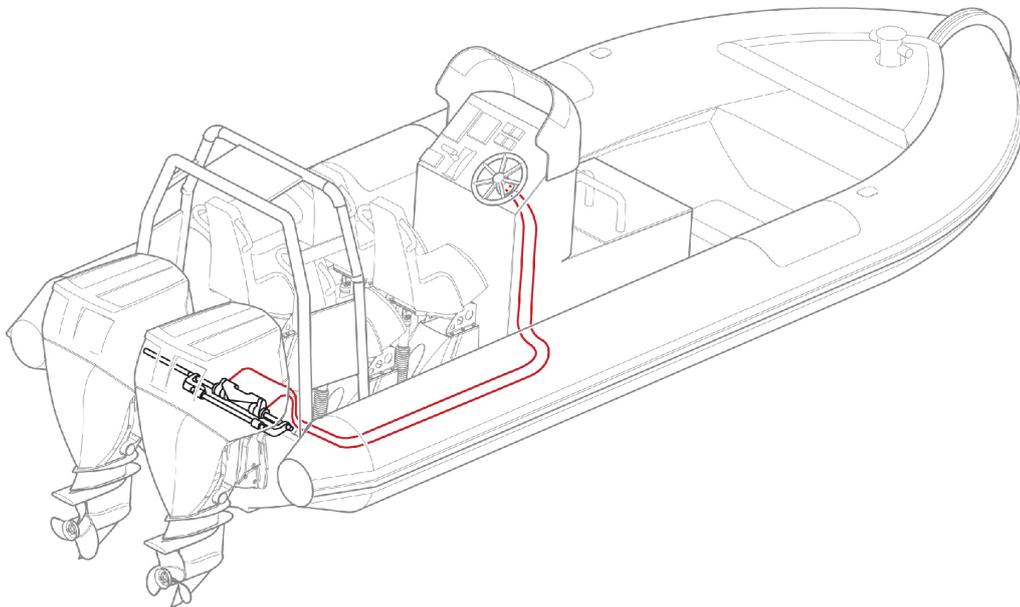
- 1 Helm
- 2 Hydraulic pump
- 3 Service valve

- 4 Hydraulic hose
- 5 Steering cylinder

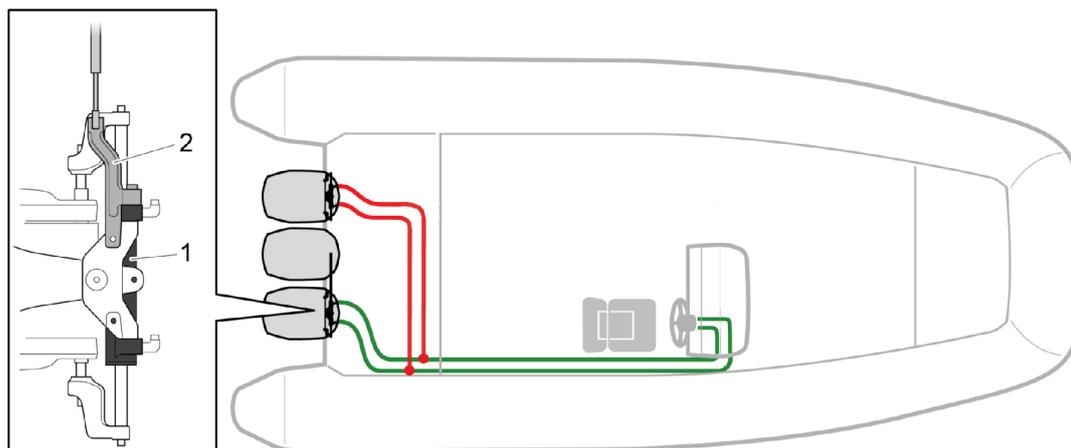
7.5 STEERING CYLINDER IN SINGLE ENGINE APPLICATION



7.6 STEERING CYLINDER AND TIE BAR IN TWIN ENGINE APPLICATION



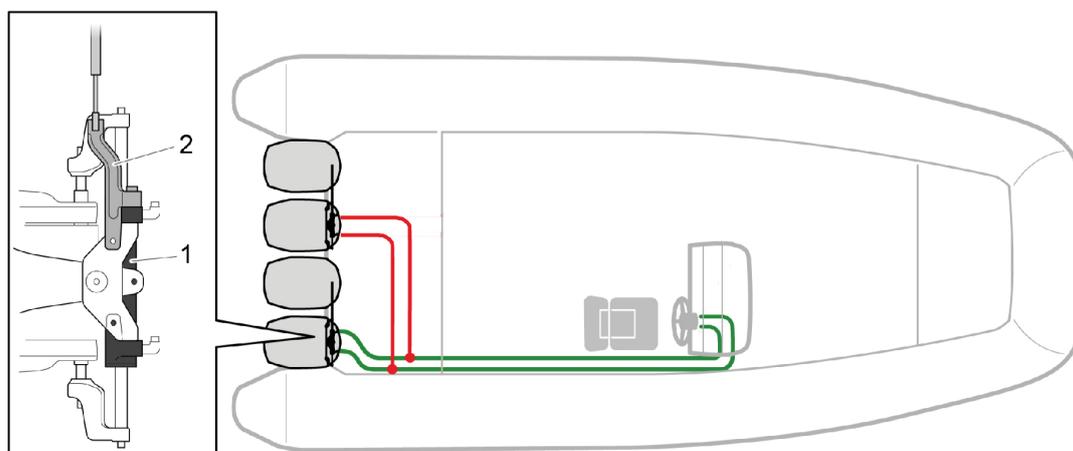
7.7 TWO STEERING CYLINDERS AND ONE TIE BAR IN TRIPLE ENGINE APPLICATION



1 Steering cylinder

2 Tie bar

7.8 TWO STEERING CYLINDERS AND TWO TIE BARS IN QUAD ENGINE APPLICATION



1 Steering cylinder

2 Tie bar

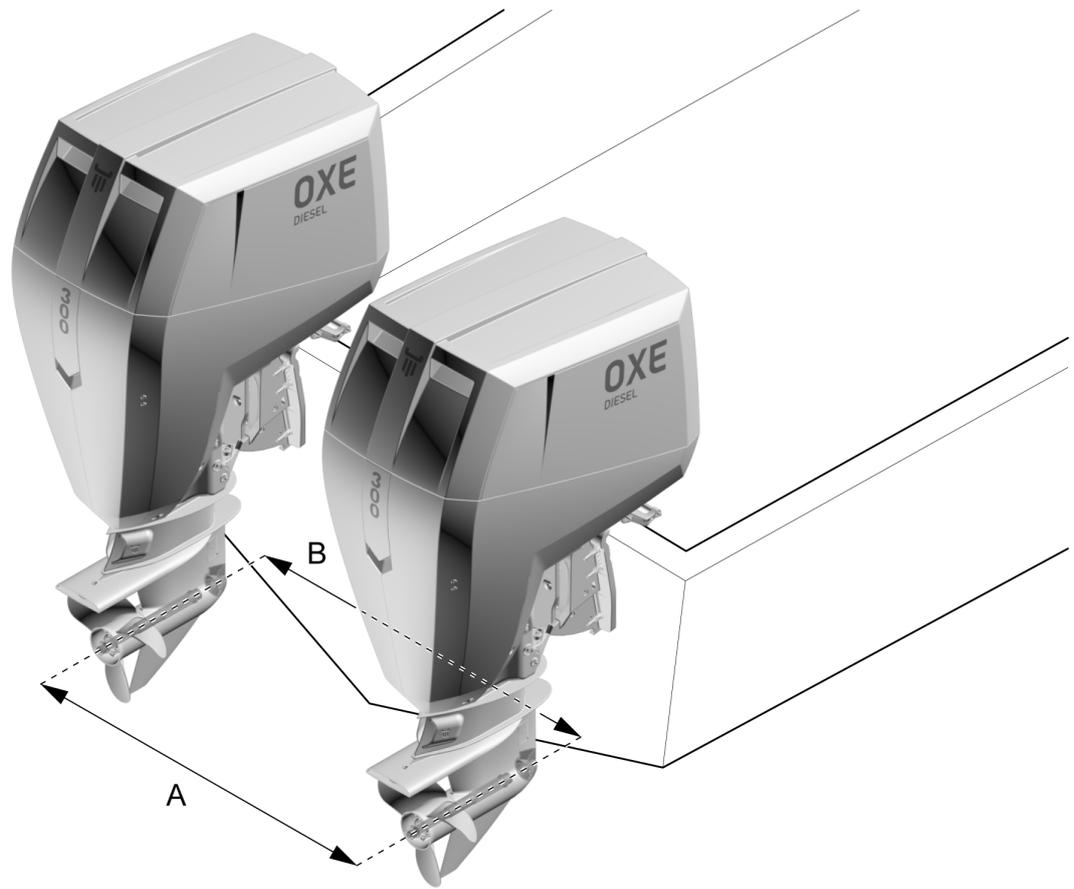
7.9 OXE OUTBOARD ALIGNMENT, TOE-IN AND TOE-OUT POSITION

In order to achieve a parallel installation of two or more outboards, the distance (A) between the propeller shafts and distance (B) between centerlines of the water inlet or steering arm bolt holes have to be the same. If an outboard toe-in position is required, distance (A) should be somewhat longer than (B). If an outboard toe-out position is required, distance (A) should be shorter than (B). The difference between toe-in and toe-out position is normally just about an inch.

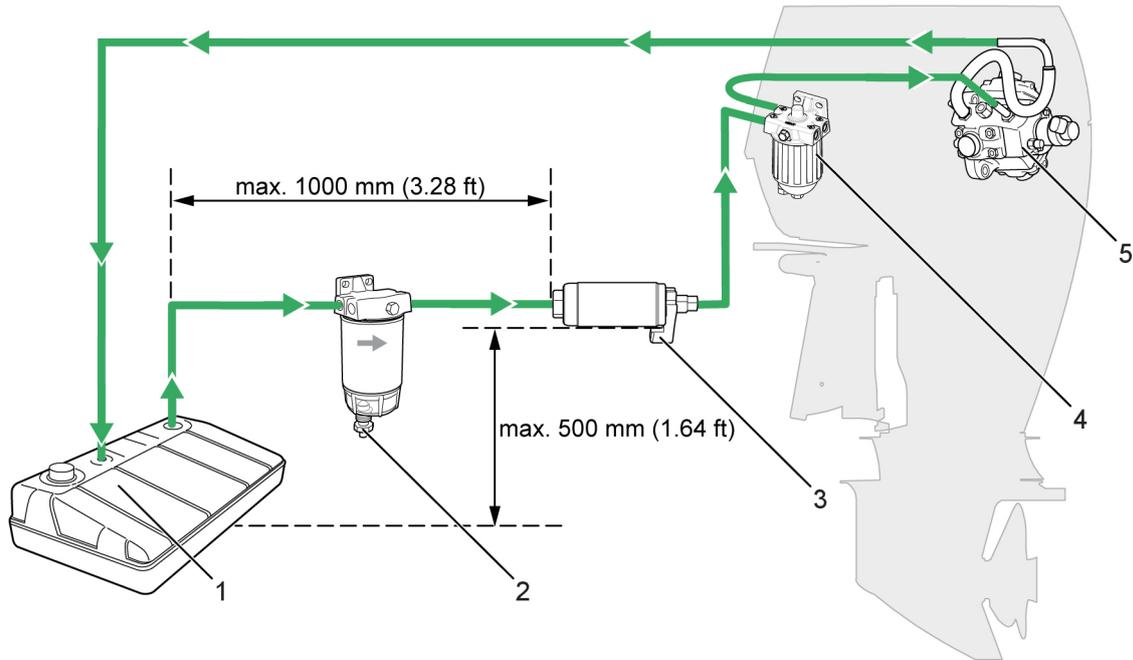


NOTE

We recommend a parallel mount of the engines in order to achieve optimum performance of interaction between engine and boat. For further information, please contact your propeller and/or boat supplier.



8 FUEL SYSTEM



- | | |
|------------------------|----------------------------------|
| 1 Fuel tank | 4 Fuel filter |
| 2 External fuel filter | 5 Engine fuel rail pressure pump |
| 3 Fuel pump | |

Fuel system dimensions		Metric	US units
Fuel line	Quality	Certified diesel resistant	
	Inner diameter fuel feed	10 mm	0.39 in
	Inner diameter fuel return	12 mm	0.47 in
	Length between tank and pump	max. 1000 mm	max. 39.37 in
	Feed hose, length	5 m	16 ft 4.85 in
	Return hose, length	5 m	16 ft 4.85 in
Fuel pump	Mounting height above tank	500 mm	19.68 in
Fuel tank	Volume	min. 100 l	min. 26.42 gallon

The fuel enters the engine via the pre-fuel filter and external fuel pump.

The mechanical fuel injection pump output is controlled by the Engine Control Unit (ECU), and provides fuel at the pressure required by the fuel injectors. The fuel injectors supply fuel directly to the combustion chambers of the engine.

The mechanical fuel injection pump, fuel rail pressure, fuel injection timing, and injection duration are all controlled by the ECU.

8.1 FUEL PRE-FILTER

The 30-micron fuel filter is equipped with a water separator and installed after the fuel tank, on the suction side of the fuel system, between the fuel tank and the electrical fuel feed pump. **A water-in-fuel sensor is included in the accessory box and must be installed.**

8.2 EXTERNAL FUEL FEED PUMP

The electrical fuel feed pump is mounted outside the fuel tank and is operated by the Engine Control Unit (ECU) of the engine. The electrical pump motor pushes fuel from the fuel tank to the engine through fuel lines.

**NOTE**

Use only OXE supplied electrical harness and electrical fuel feed pump.

8.3 ENGINE FUEL FILTER

The fuel filter is a dual function fuel filter water separator with a cartridge-type filter suited for diesel engines equipped with high-pressure injection systems. An optional water-in-fuel sensor is available and can be ordered separately. The filter cartridge is a two micron-like size type.

8.4 FUEL RAIL HIGH-PRESSURE PUMP

The fuel rail pressure pump is a mechanical high-pressure pump. Fuel is pumped to the fuel rail at a specific pressure. Fuel pressure is regulated by the fuel pressure regulator, which is controlled by the Engine Control Unit (ECU) and returned through the return fuel line.

8.5 FUEL RAIL ASSEMBLY

The fuel rail assembly attaches to the cylinder head. The fuel rail distributes pressurized fuel to the fuel injectors through the fuel lines.

8.6 FUEL TANK

There are no requirements on fuel tank volume to prevent heating of fuel since the OXE 300 is equipped with a return fuel cooler system. OXE Marine AB recommends a minimum size of 100 L.

8.7 FUEL RAIL SENSOR

The fuel rail pressure sensor gives the ECU an indication of fuel pressure. The ECU uses this information to regulate fuel pressure, by commanding the fuel pressure regulator open or closed on the inlet of the fuel injection pump.

8.8 FUEL INJECTORS

A fuel injector is a piezoelectric device controlled by the ECU that injects pressurized fuel into each engine cylinder. Fuel from the injector tip is sprayed directly into the combustion chamber in the compression stroke of the engine.

The control functions for the fuel injection system are integrated in the ECU.

8.9 QUICK-CONNECT FITTING

Quick-connect fittings provide a simplified means of installing and connecting fuel system components. The fittings consist of a unique female connector and a compatible male pipe end. O-rings, located inside the female connector, provide the seal. Integral locking tabs, inside the female connector, hold the fittings together.

8.10 FUEL PIPE O-RINGS

O-rings seal the connections in the fuel system. Fuel system O-ring seals are made of a special material. Service the O-rings seals with the correct service parts.

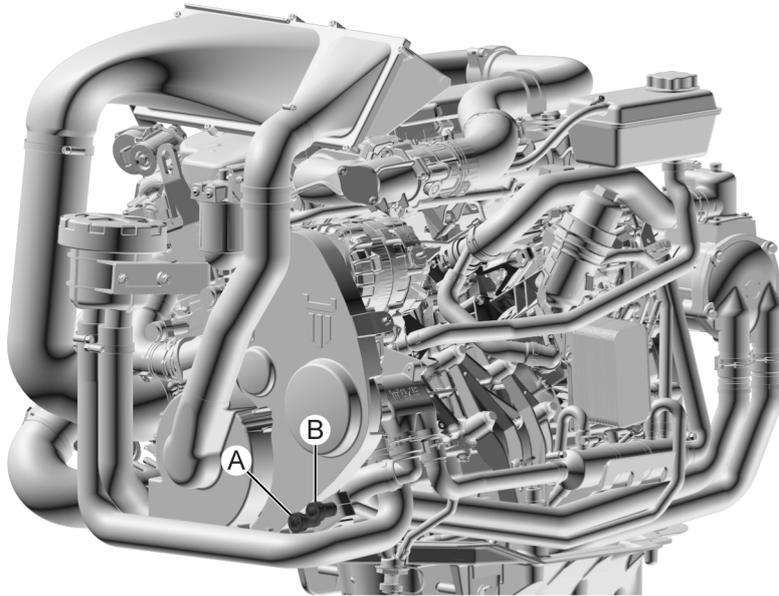
8.11 INSTALLING FUEL LINES

- 1 Fit the fuel RETURN line with the quick connector and hose clamp supplied, and connect to the BLACK female connector on the engine (A).
- 2 Fit the fuel SUPPLY line with the quick connector and hose clamp supplied, and connect to the BLUE female connector on the engine (B).



WARNING

Keep the fuel lines clear from moving parts!



- 3 Lead the fuel lines through the right middle cowling outlet into the boat.

8.12 BLEEDING THE FUEL SYSTEM



NOTE

In order for the diesel fuel system to work correctly, the fuel lines must be full of fuel and contain no air. If air gets into the fuel lines, it will be necessary to evacuate the air from the system before operating the outboard.

Air could enter the fuel system in any of the following ways:

- The outboard has just been installed.
- The engine ran out of fuel.
- The fuel lines have been damaged and or leaking joints.
- The fuel filter was removed for service or replacement.
- The fuel lines were removed or disconnected for servicing.
- The fuel lines are poorly connected.
- The fuel pump was removed for servicing.
- The fuel pre-filter water drain cock was opened while the engine was running.

If one or more of the above occurs, and air has entered the fuel system, you have to evacuate the air from the system prior to operating the OXE outboard!

8.12.1 BLEEDING PROCEDURE

- 1 Turn the ignition key **ON**.

The fuel pump will run for 20 seconds.



NOTE

Do **not** turn the ignition key to **START**. This could damage the injection pump.

- 2 Switch off the ignition key and wait for 25 seconds.

- 3 Turn the ignition key **ON**.

The fuel pump will run for 20 seconds.

- 4 Turn the ignition key to **START**, run for 15 seconds.



NOTE

If the outboard does not start, switch off the ignition key and wait for 25 seconds.

Repeat steps 1-4 three times until the pump is filled with fuel and no more air is left.

If the outboard does **not** start after three attempts, go through the list of reasons for air entering the system above before making any further attempts to start the outboard! Failure to observe this recommendation may lead to damage to the injector pump!

9 PROPELLER

9.1 SELECTING THE CORRECT GEAR RATIO AND PROPELLER FOR YOUR APPLICATION

Choosing the right propeller is the most important to get the best performance from the OXE outboard engine. Propeller choice can affect boat top speed by as much as 5 to 10 knots. It also has a direct effect on acceleration, cornering, pulling power and fuel economy.

An improper propeller choice can significantly affect the performance of your boat and could result in damage to the outboard engine.

The OXE Diesel engine, in comparison to a gasoline outboard engine, delivers more torque at the propeller shaft, and therefore it is possible to select a larger propeller blade surface area to maximize performance.

9.2 NUMBER OF PROPELLER BLADES

In general, three-blade propellers offer good all-around performance and are suitable for high speed.

Four or five-blade propellers are in general faster to plane and more efficient at cruising speeds but lack the top-end speed of a three-blade propeller. Four or five-blade propellers may also function better with heavier applications.

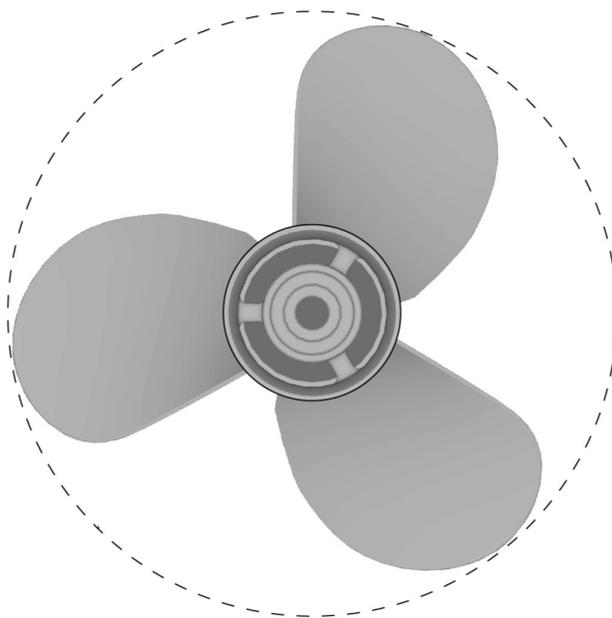
9.3 PROPELLER ROTATION

OXE outboards are delivered right-hand or left-hand rotation. To move the boat forward, the propeller rotates in a right-hand (clockwise) direction as viewed from the rear.

9.4 DIAMETER AND PITCH

Diameter

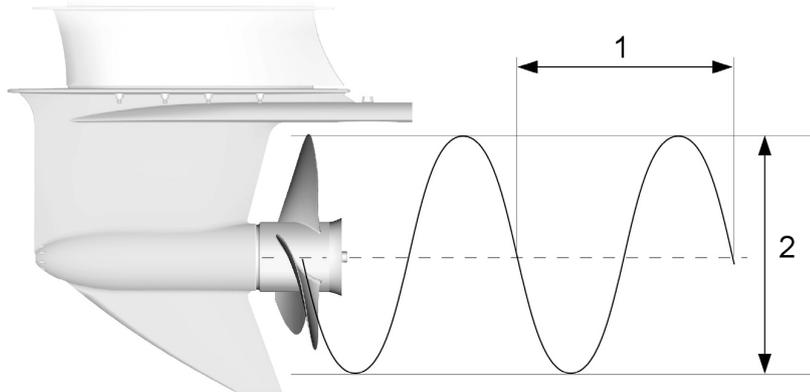
The diameter is the distance across the imaginary circle that is made when the propeller rotates.



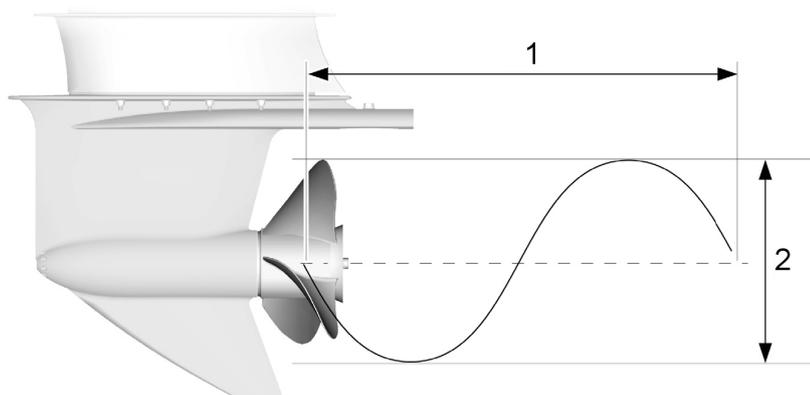
In comparison to other manufactures' equivalent outboard engines, the OXE has a larger distance between the prop shaft and the cavitation plate to accommodate up to a 17" diameter propeller.

Pitch

Pitch is the theoretical distance a propeller will travel in one complete revolution. For example, a 21 in. propeller would ideally move 21 inches forward with each revolution. In practice, the actual distance traveled is less than the pitch because of "slip" which is necessary to produce thrust.



Pitch - lower: More power and less speed

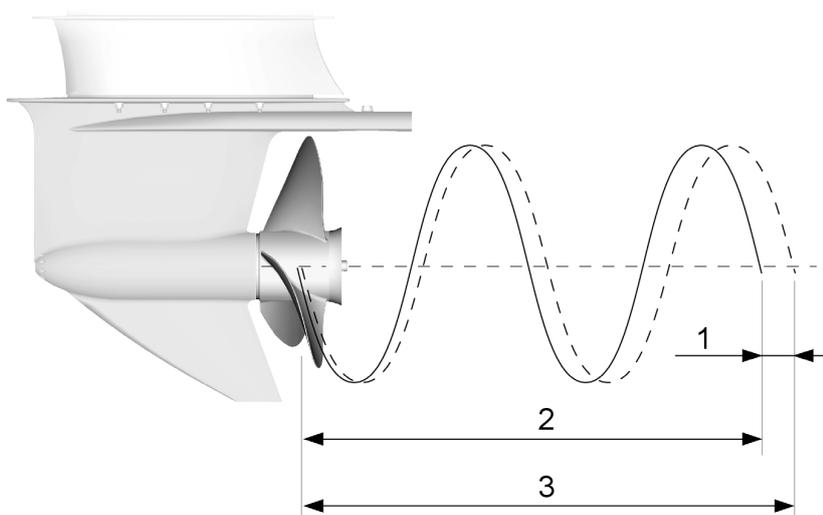


Pitch - higher: More speed and less power

- 1 The distance a propeller travels in one revolution
- 2 Propeller diameter

9.5 PROPELLER SLIPPAGE

Slippage depends on vessel weight, number of engines, propeller surface area, and number of blades.



- 1 Slip
- 2 Real distance
- 3 Theoretical distance

Slip examples

Light weight, high-speed vessel average 10-15% slip. Using 14.5 – 16” diameter propellers.

Heavy medium speed vessel 3-3.5 ton per engine 10-20% slip. Using 15.5 – 17” diameter propellers.

9.6 PROPELLER TESTING AND OPTIMIZATION

Choose a propeller for your application that will allow the engine to operate within the specified full throttle operating range. When operating the boat at full throttle under normal load conditions, the engine rpm should be in the upper half of the recommended full-throttle rpm range. Refer to **Specifications**. If engine rpm is above that range, select a propeller of increased pitch in order to reduce engine rpm.

If engine rpm is below the recommended range, select a propeller of reduced pitch to increase engine rpm.

A target of 4100 rpm \pm 100 rpm at W.O.T during full loaded conditions. This may need to be adjusted if vessel conditions change.

Diameters between 14.5” and 16” have proven to be the best overall performing with the OXE Diesel outboard.

17-22” pitch have proven to be the best for high speed.

14-19” pitch have proven to be the best for low-speed heavy load performing.

9.7 ENGINE UNDER OR OVERLOADING



NOTE

This may affect warranty coverage according to the Global Warranty Policy.

Overloading of the engine with a propeller with too much pitch is the most common source of fuel inefficiency and engine damage. Overloading can also result from the use of a propeller with too large diameter, but that is less common. Overloading can result in severe engine damage. With a diesel engine, it is the load and not the rpm that determines fuel consumption. Therefore, continuous overloaded operation results in an unnecessarily high fuel consumption, increased maintenance costs and **void** Global Warranty Policy.

- If the propeller blades have too much pitch, the engine will operate below the normal range at full throttle.
- If the propeller blades have too little pitch, the engine will operate above its normal rpm range and damage from over-speeding can occur.

9.8 THEORETICAL SPEED CALCULATIONS

$((\text{rpm} / \text{gear ratio}) \times \text{propeller pitch}) / 1396) - \text{slip \%} = \text{theoretical speed in Knots.}$

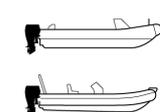
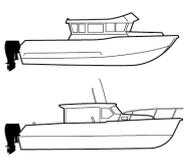
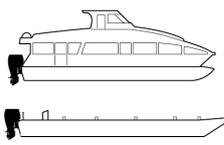
Example

$((4200 / 1.39) \times 21) / 1396) - 10 \% = 40.9 \text{ knots}$

In this example, the engine is operating at 4200 rpm. The gear ratio is 1.39:1 reducing the propeller shaft speed to 3021.5 rpm.

With a pitch of 21”, the theoretical speed is 45.4 knots. Minus 10% slip = 40.9 knots

9.9 GENERAL PROPELLER AND APPLICATION TABLE

Application	Vessel type	Diameter	Pitch	Number of blades
<ul style="list-style-type: none"> - Lightweight - Planing - Lightweight 		14.5 - 16"	17 - 26"	3/4
<ul style="list-style-type: none"> - Medium weight - Intermediate speed - Planing or displacement 		15-17"	15-21"	3/4/5
<ul style="list-style-type: none"> - Heavyweight - Low speed - Displacement 	 <p>Pontoon/Barge</p>	15.5-17"	11-17"	3/4/5



NOTE

Contact your local OXE Marine dealer if you would like a list of proven propellers that have been tried and tested and may match your application.



CAUTION

During commissioning, it is important to test the vessel in a fully loaded condition.

9.10 PROPELLER INSTALLATION



WARNING

Rotating propellers can cause serious injury or death. Never operate the OXE Diesel engine out of the water with a propeller installed. Before installing or removing a propeller, place the drive unit in neutral and engage the kill cord stop switch to prevent the engine from starting.



NOTE

Always use a new hub kit when installing a propeller. Please refer to your OXE Diesel dealer or propeller manufacturer for a suitable hub kit and propeller parts.

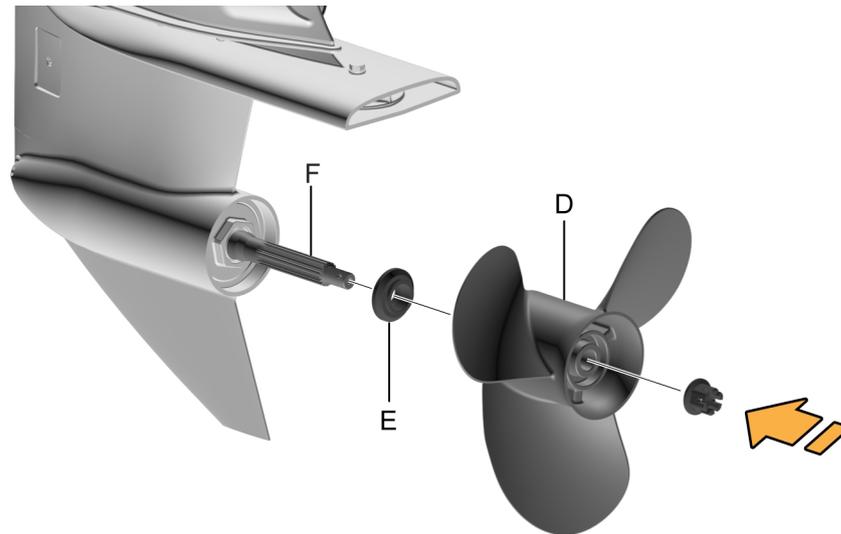


NOTE

In twin, or more installations, one propeller should be for right-hand rotation and the other one should be for left-hand rotation. Both should be of the same brand, diameter and have the same pitch.

- 1 Apply marine grease (according to Section 3.1 "Recommended fluids and grease", [page 9](#)) to the propeller shaft (F) before installing the propeller. This aids future removal and corrosion resistance.

- 2 Install the propeller washer (E) and the propeller (D) on the propeller shaft (F).



NOTE

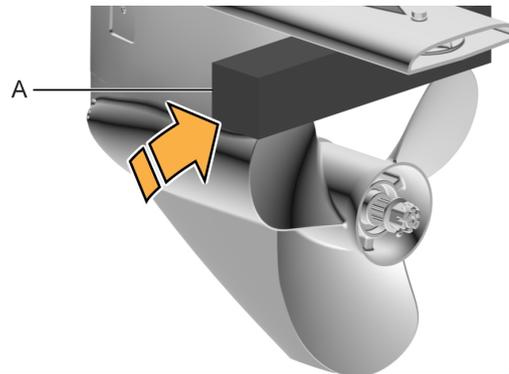
Be sure to install the propeller washer (E) before installing the propeller. Otherwise, the lower case and propeller boss could be damaged.

- 3



WARNING

Do not use your hand to hold the propeller when loosening or tightening the propeller nut. Secure the propeller with a wooden block (A) according to the illustration below.



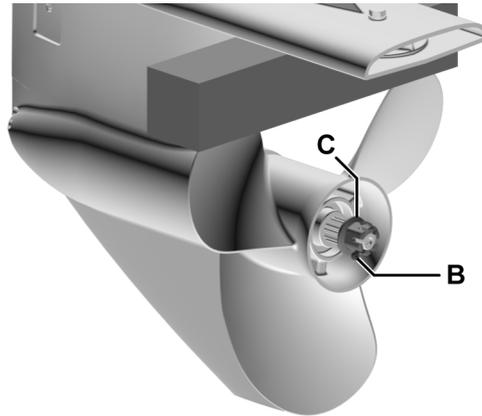
Tighten the propeller nut (C) to a tightening torque of 120 Nm (88.5 lb-ft).

- 4 Align the propeller nut with the propeller shaft hole. Insert a new cotter pin (B) in the hole and bend the cotter pin ends.



CAUTION

Be sure to use a new cotter pin and bend the ends over securely! Otherwise, the propeller could come off during operation!



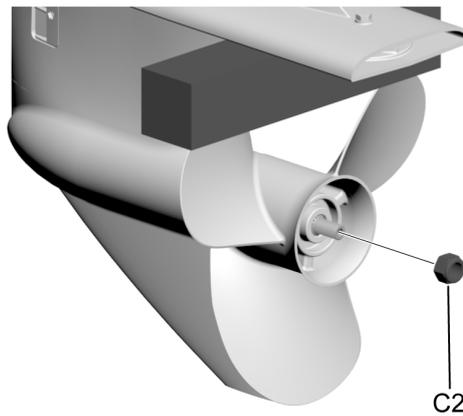
NOTE

If the propeller nut does not align with the propeller shaft cotter pin hole after tightening to the specified torque, tighten the nut further to align it with the hole.



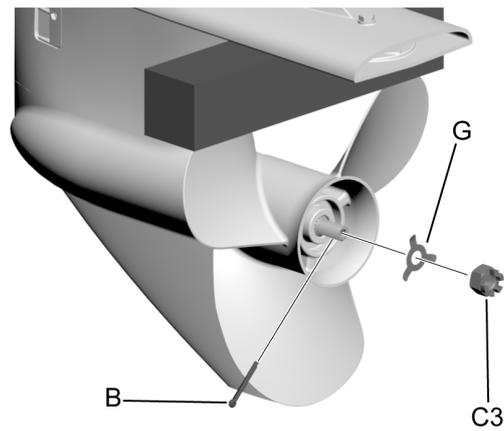
NOTE

Some outboards are equipped with a Nyloc locking nut (C2) and do not have a cotter pin. Do **not reuse** a Nyloc locking nut!



**NOTE**

Some models use a retainer (G) and a castellated nut (C3) combined with a cotter pin (B).



After having attached all parts and fastened the propeller nut to the correct tightening torque:

- Loosen the wooden block.
- Ensure that the propeller is undamaged and rotates freely of the lower housing.

**NOTE**

Always have an extra propeller, including necessary tools on board.

10 INSTALLATION WIRING



NOTE

When installing the helm harness built for the OXE Diesel, it is important not to connect any peripheral devices to the OXE Diesel INTERNAL CAN system.



NOTE

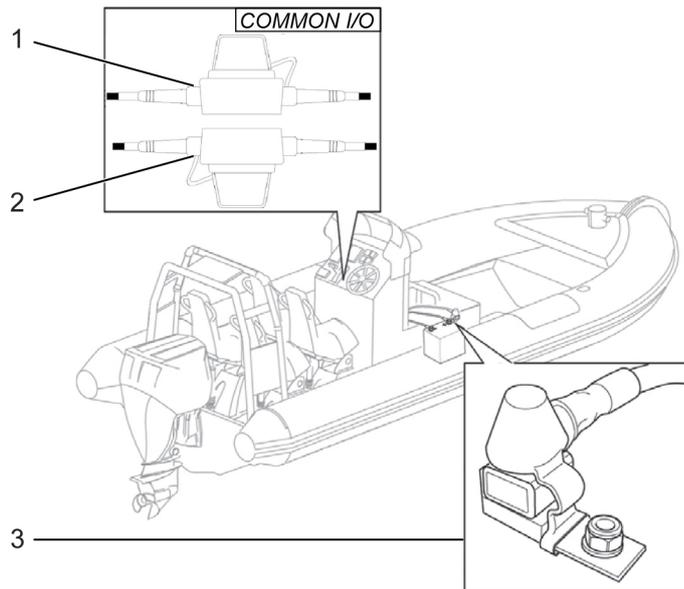
Any peripheral equipment should be connected to the separate CAN system (user NMEA system).



NOTE

Connecting any peripheral equipment to the helm harness (OXE Diesel INTERNAL CAN system) will void the Global Warranty Policy.

10.1 USER IGNITION SIGNAL, 1 A FUSE (INTERNAL NMEA2000, 1 A FUSE)



Placement in the boat

1. Internal NMEA2000, ATO 1 A fuse

This fuse will NOT be premounted, but supplied with the COMMON I/O harness. The NMEA2000, 1 A fuse is powering the INTERNAL NMEA2000 network. The internal NMEA fuse is NOT to be installed if the CAN-bus is POWER supplied by another source, e.g. via Seastar PCM.

2. User ignition signal, ATO 1 A fuse

This fuse will be premounted and supplied with the COMMON I/O harness. The "User ignition signal, 1 A" is designed to only drive low-power applications that require an ignition signal, e.g. relays (NOT power supply). Therefore a separate fused relay must be used to supply currents greater than 0.75 A. If a relay is used, the relay signal ground and power supply must be connected directly to the battery.

Fuse size: 1 A

3. Use a **100 A fuse** on the power supply (thin red cable). Use a **350 A fuse** on the starter motor power supply (thick red cable).

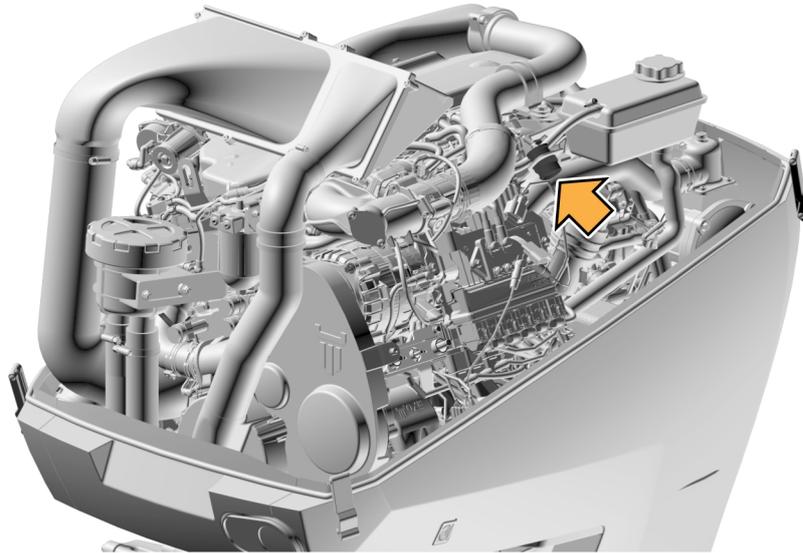


NOTE

There should be no fuse on the common power supply!

10.2 ENGINE - HELM HARNESS ENGINE CONNECTOR

- 1 Connect all applicable helm related devices to the helm harness (items applicable):
 - Ignition key (s)
 - Emergency stop (s)
 - Throttle handle (s)
 - Display (s)
 - Diagnostic adapter harness (es) (preferred in order to perform a pre-start-up control)



Engine connector

- 2 Connect the helm harness to the engine connector.
- 3 Complete a final inspection of all connections.

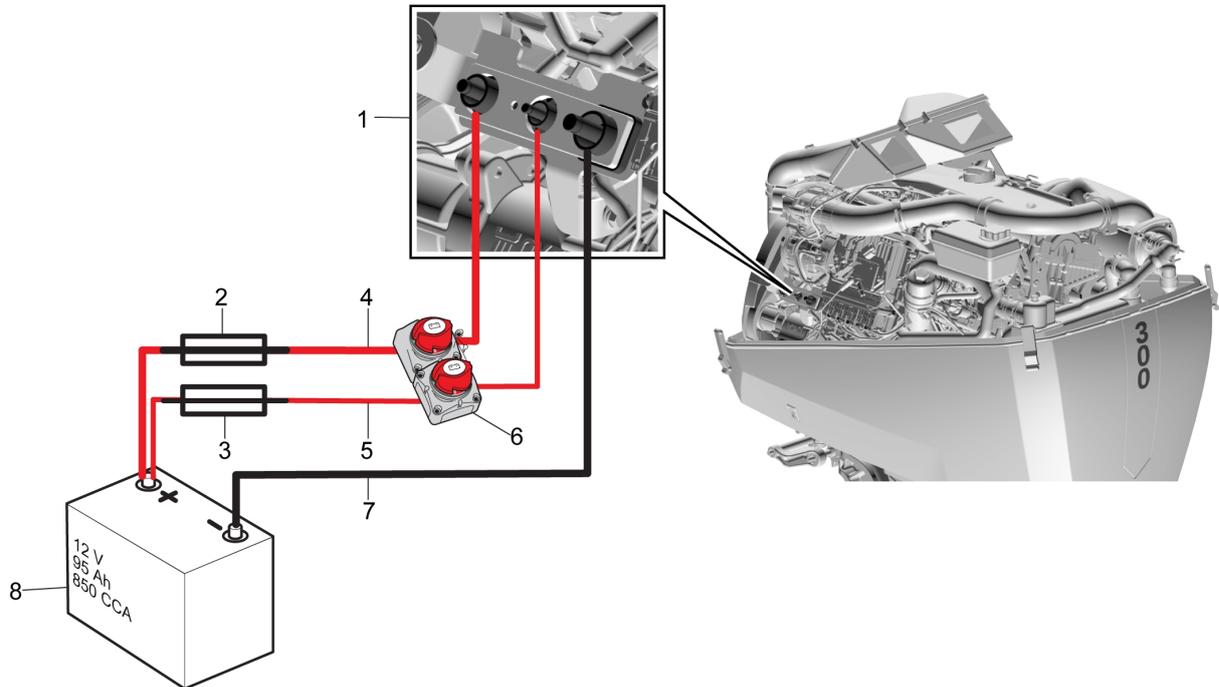
10.3 12 V ELECTRICAL POWER CONNECTION

- 1 Install a main electric power switch on the (B+) side. (See specifications of cable length between battery and switch in the diagrams on the following pages).

From the main battery power switch:

- 2 Install the (B+) starter supply cable to the engine starter power connector. (See layout and specifications of the cables in the engine application schematics to follow).
- 3 Install the control (B+) power supply cable to the ECU & helm power connector on the engine's power cable connector terminal. (See layout and specifications of the cables in the engine application schematics to follow).

- 4 Prior to installing the ground cable – ensure that the main electric power switch and the ignition key are in the off position.
- 5 Connect the ground cable to the battery GND terminal and torque to specification. Connect the other end for the (B-) Ground to the engine's battery power connector terminal. Connect a common ground cable (wire size same as engine battery cables) between negative (–) terminals on all starting batteries.



- | | |
|---|------------------------|
| 1 Engine power cable connector terminal | 5 Control supply cable |
| 2 Fuse, 350 A | 6 Master switch |
| 3 Fuse, 100 A | 7 GND cable |
| 4 Starter supply cable | 8 Battery |

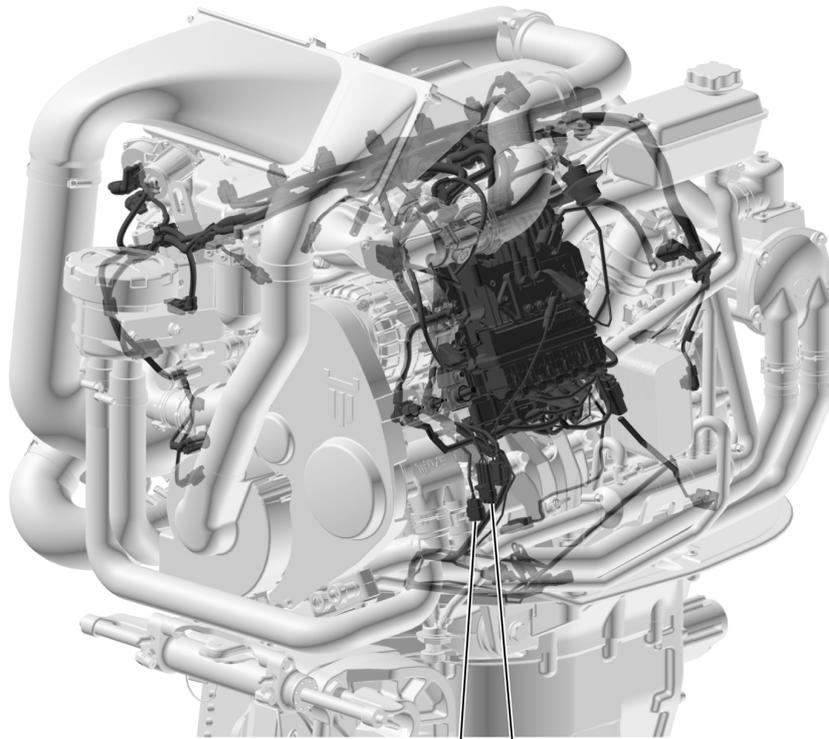


NOTE

The battery main switches to the engine must always be disconnected if a battery charger is to be used or connected to the 12-volt circuit.

Failing to disconnect the main switches will permanently damage the sensitive electronic circuits for the engine!

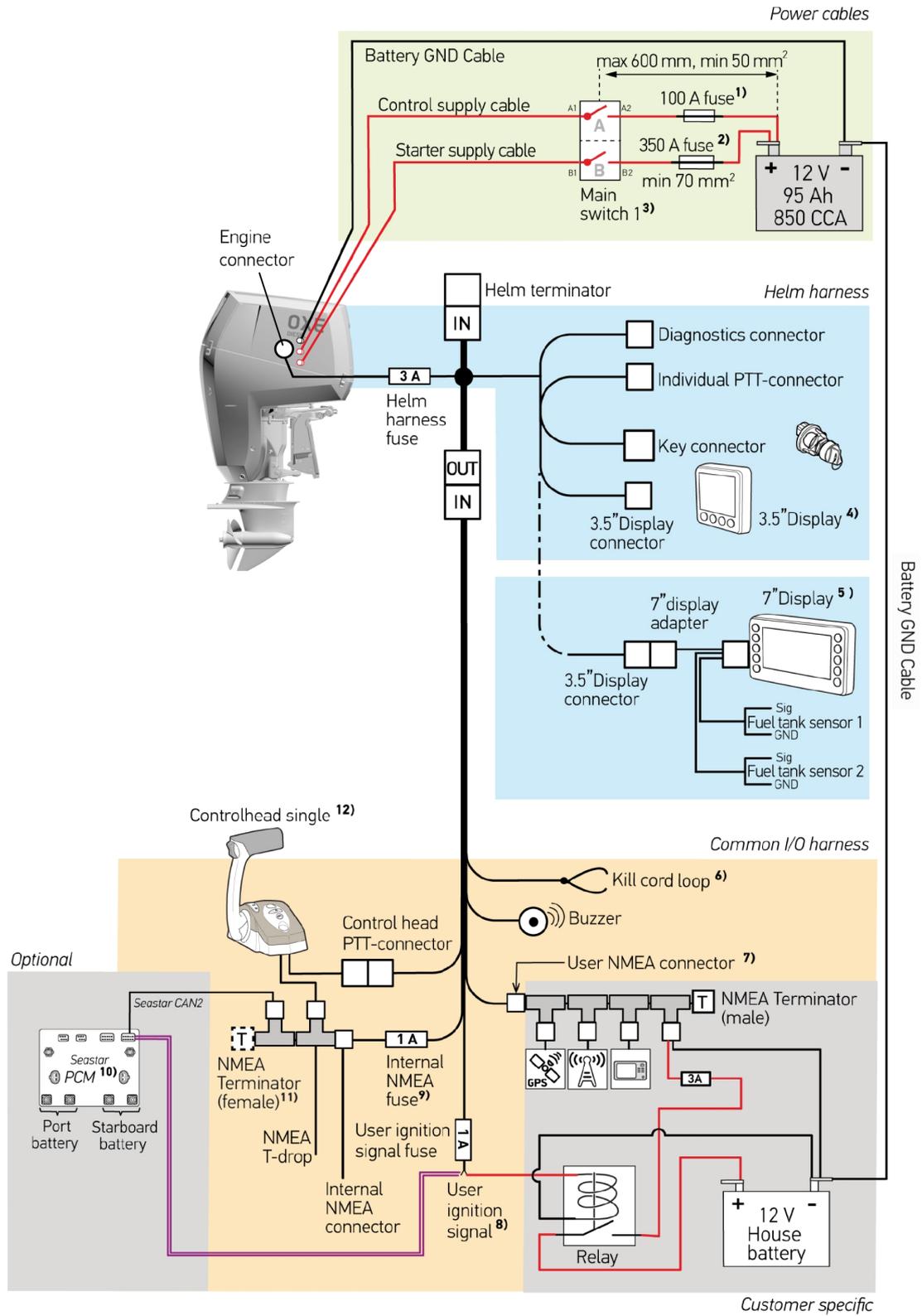
10.4 ELECTRICAL COMPONENTS



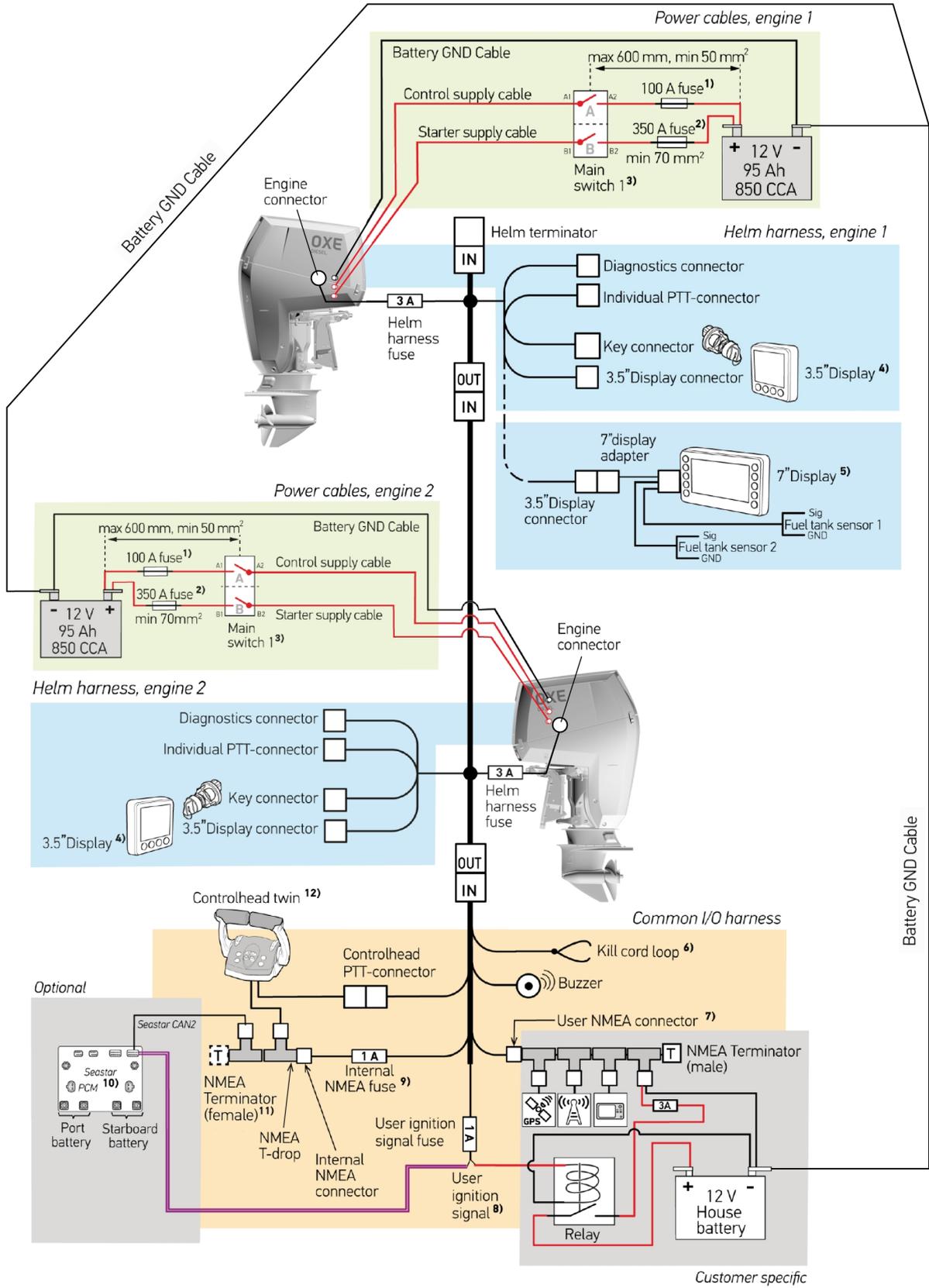
1 External fuel pump connector

1 2
2 Water in fuel connector

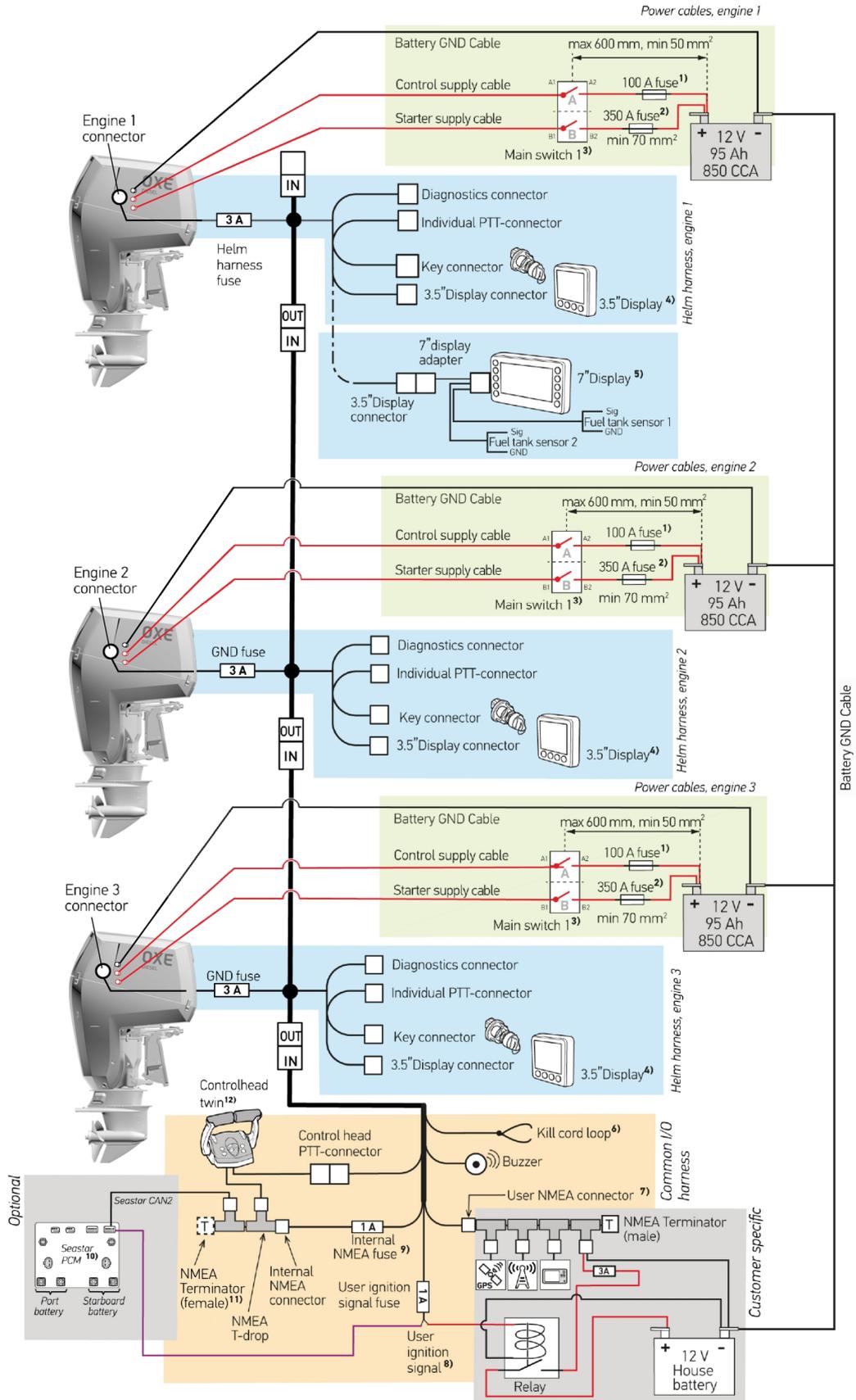
10.5 G4 - SINGLE ENGINE APPLICATION



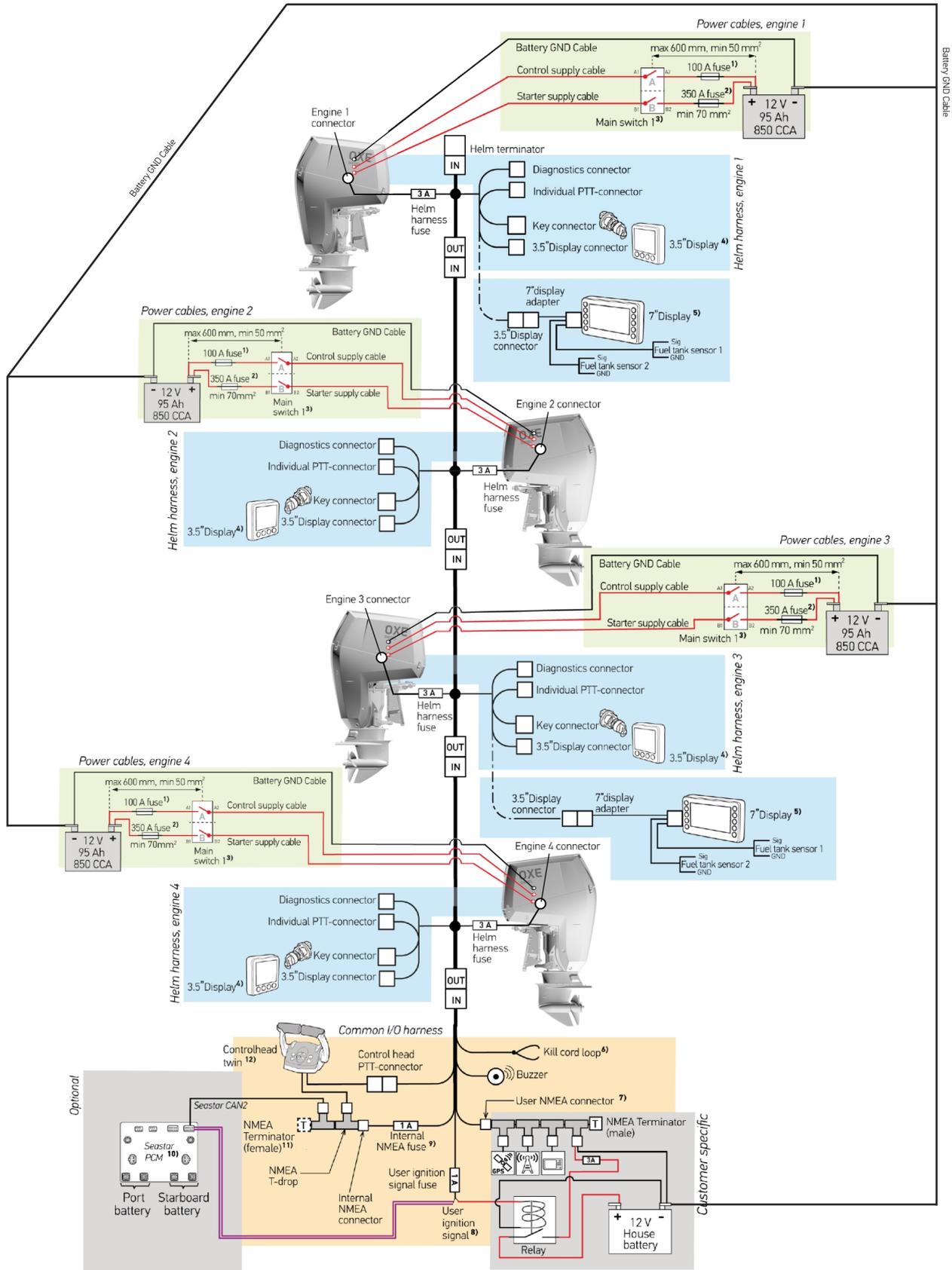
10.6 G4 - TWIN ENGINE APPLICATION



10.7 G4 - TRIPLE ENGINE APPLICATION



10.8 G4 - QUAD ENGINE APPLICATION



10.9 REFERENCE, INSTALLATION WIRING G4



NOTE

Only OXE Diesel approved components are permitted to be connected to the internal CAN-Bus.

1. Use a 100 A fuse on the control supply cable.
2. Use a 350 A fuse on the starter supply cable.
3. Use two separate single-channel switches or one dual-channel switch.
4. The 3.5" display is standard equipment (one display per engine).
5. The 7" display is optional and replaces the 3,5" display(s). One 7" display is needed in a single, dual, or triple engine application, and two 7" displays are required in the quad engine application.
6. Open wiring loop at delivery. The kill cord loop at the helm harness must be closed to enable fuel injection/engine start.
Open loop = fuel injection disabled.
Closed loop = fuel injection enabled.
7. Use the USER NMEA2000 connector to connect your external equipment such as GPS, VHF, plotter, etc.
8.  **CAUTION**
If used, the **user ignition signal** should never power user applications directly, but always control a relay that powers the user application, such as **User NMEA**, lights, etc.
To enable the **user ignition signal**, a max. 1 A fuse must be installed in the **user ignition signal fuse 1 A socket**.
9. The Internal NMEA fuse is not to be installed if the CAN-bus is supplied by another source, e. g. via Seastar PCM.
10. Refer to the **Seastar Manual** for further information.
11. Connection point for dual station application. Refer to Section 10.10 "Dual station", [page 52](#) for different OXE outboard applications.
12. Refer to Section 10.11 "Controlhead throttle and shift behavior", [page 53](#).

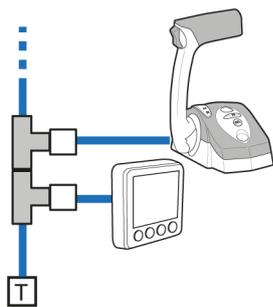
Color codes, cable harness

	Helm harness
	Common I/O harness
	Power cables
	Customer specific

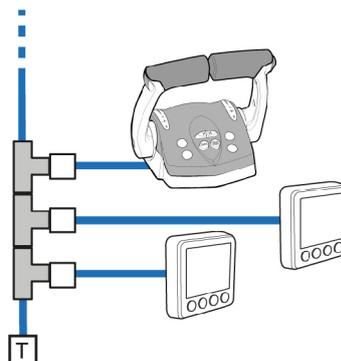
10.10 DUAL STATION

In dual station application, the backbone can be extended maximum 10 meters. Only the second station controlhead (single 30-0116-712, twin 30-0116-713) and 3.5" displays are supported.

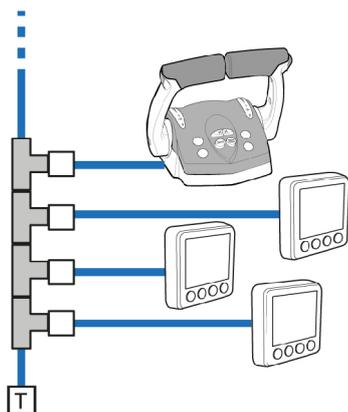
Single engine application



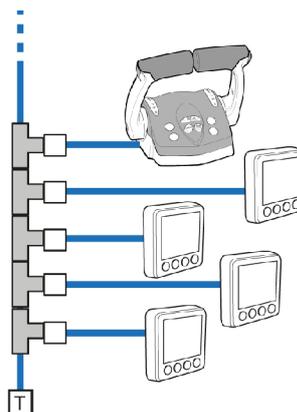
Twin engine application



Triple engine application



Quad engine application



10.11 CONTROLHEAD THROTTLE AND SHIFT BEHAVIOR

In single and twin outboard applications, the corresponding controlhead lever controls the outboard.

10.11.1 TRIPLE OUTBOARD APPLICATION

The center outboard receives control commands from both port and starboard engines, including gear selection and throttle request as follows:

- Neutral gear unless both port and starboard are requesting the same gear, then that gear is also requested for center outboard.
- The center engine follows the lowest throttle request of the port or starboard engine.

The center outboard is reporting control faults to the port outboard.

10.11.2 QUAD OUTBOARD APPLICATION

The port and port center outboards are paired together and controlled by the port controlhead lever. The same applies to the starboard outboard pair. The center outboards are reporting any control fault to their corresponding outer outboard.

11 ENGINE SETUP



NOTE

OXE Diesel outboards are delivered standard as a single-engine installation. If used in a single-engine application, no engine setup is required.

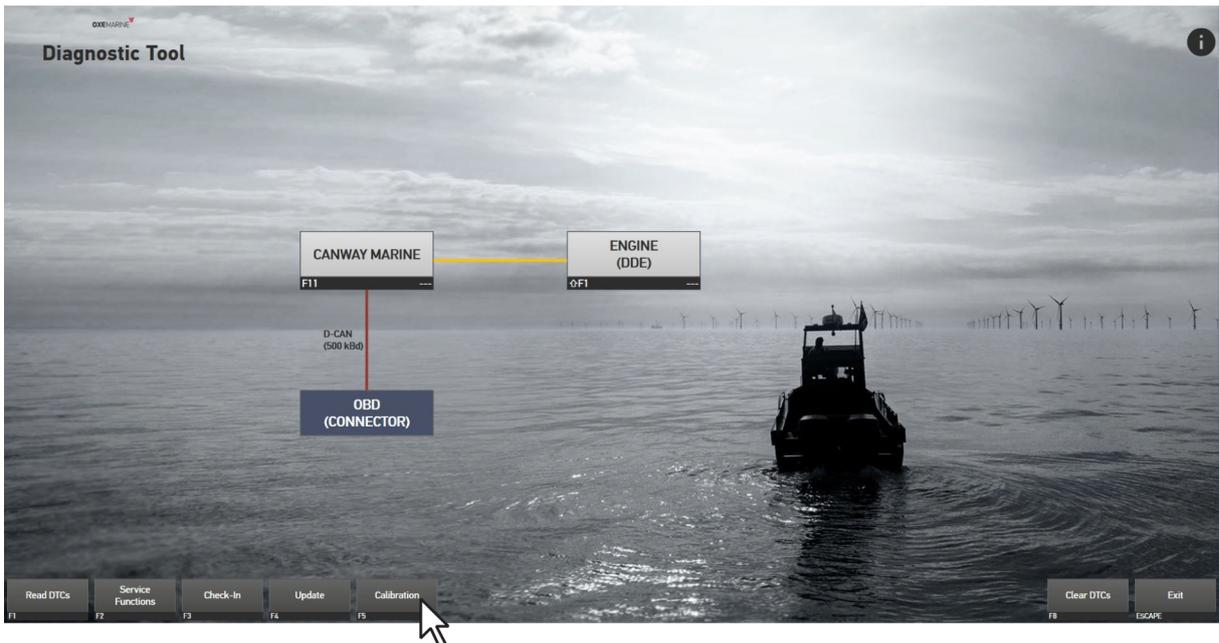
11.1 SETTING ENGINE ROTATION, ENGINE LOCATION, NUMBER OF ENGINES, AND ENGINE TRIM LIMITATION

Connect to the engine using ODT - the OXE Diagnostic Tool.

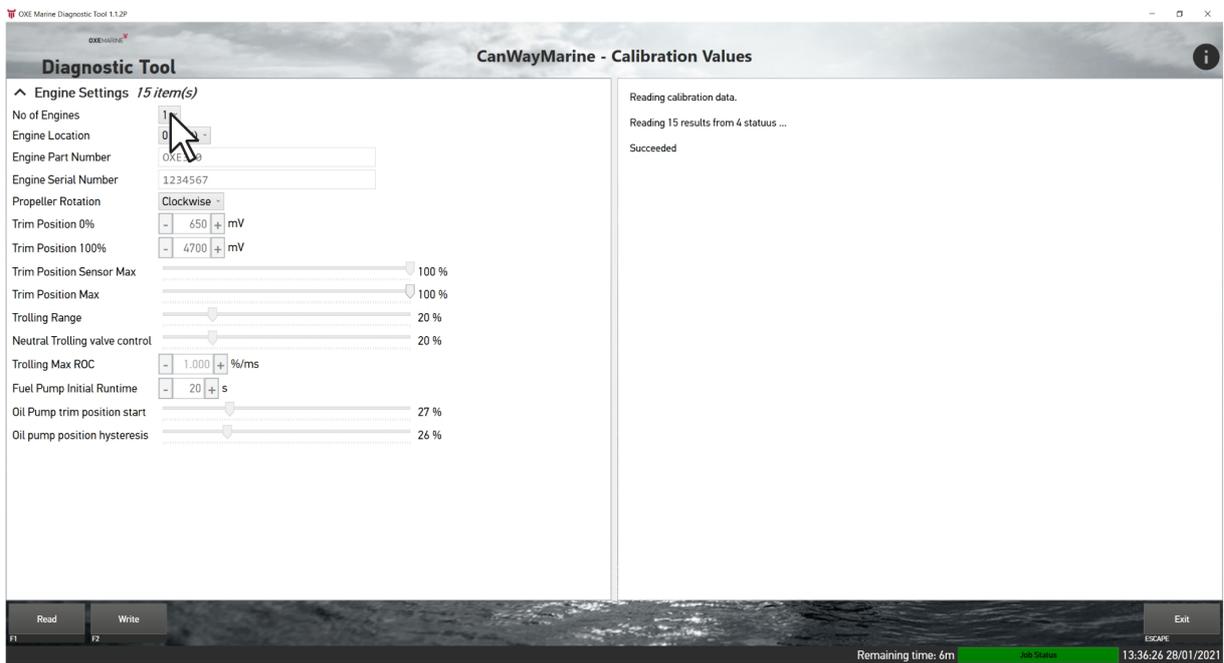
For assistance and help, please refer to your training material or contact your local OXE Marine dealer.

11.2 SETTING NUMBERS OF ENGINES

- 1 Go to **Calibration** tab to manage engine settings.



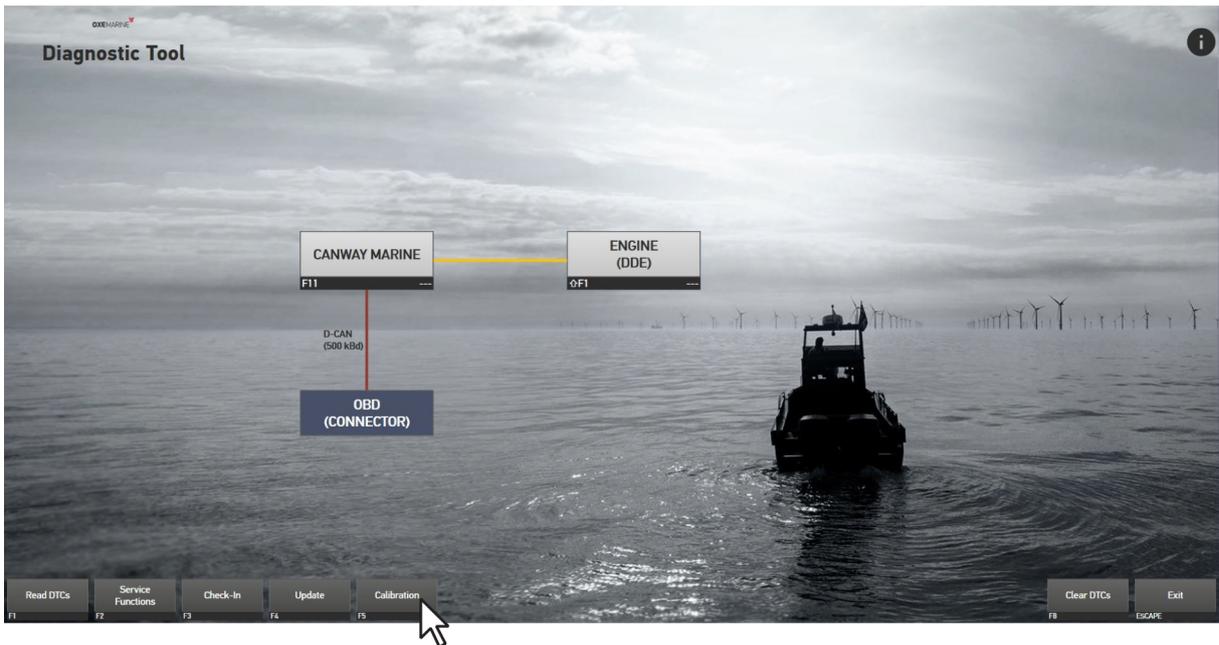
- 2 Select **Number of engines**.



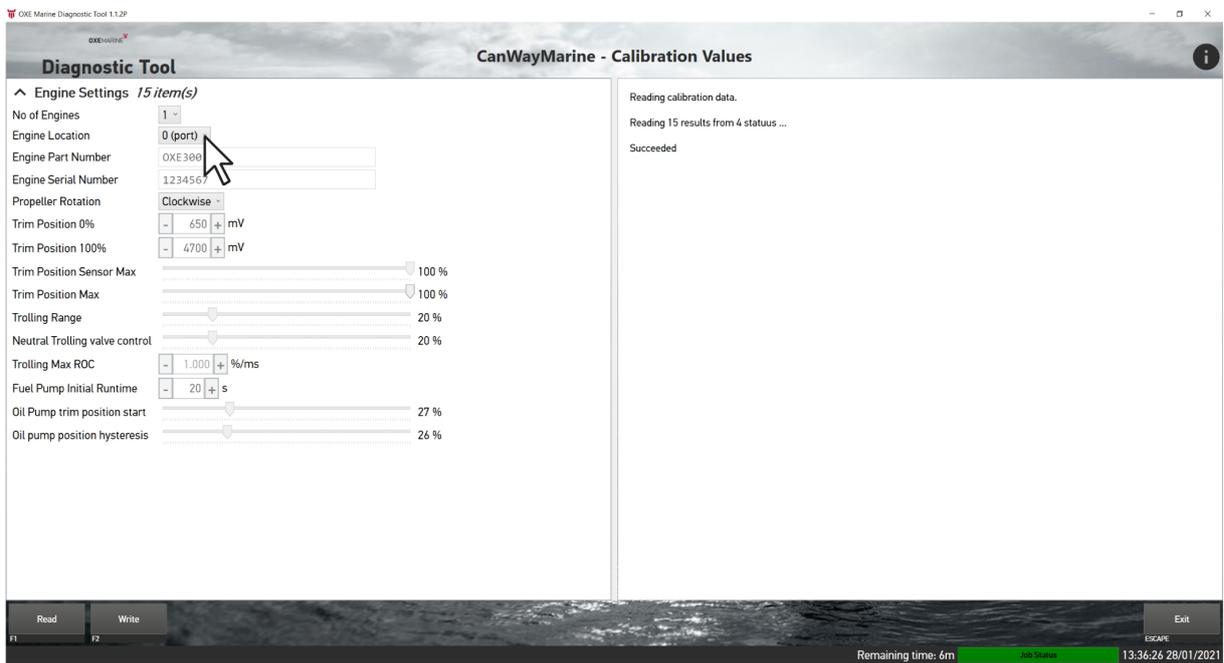
- 3 Double tap and enter **Number of engines**, finalize **acknowledge** by pressing **Enter**.

11.3 SETTING ENGINE LOCATION

1 Go to Calibration tab to manage engine settings.



2 Select Engine Location.

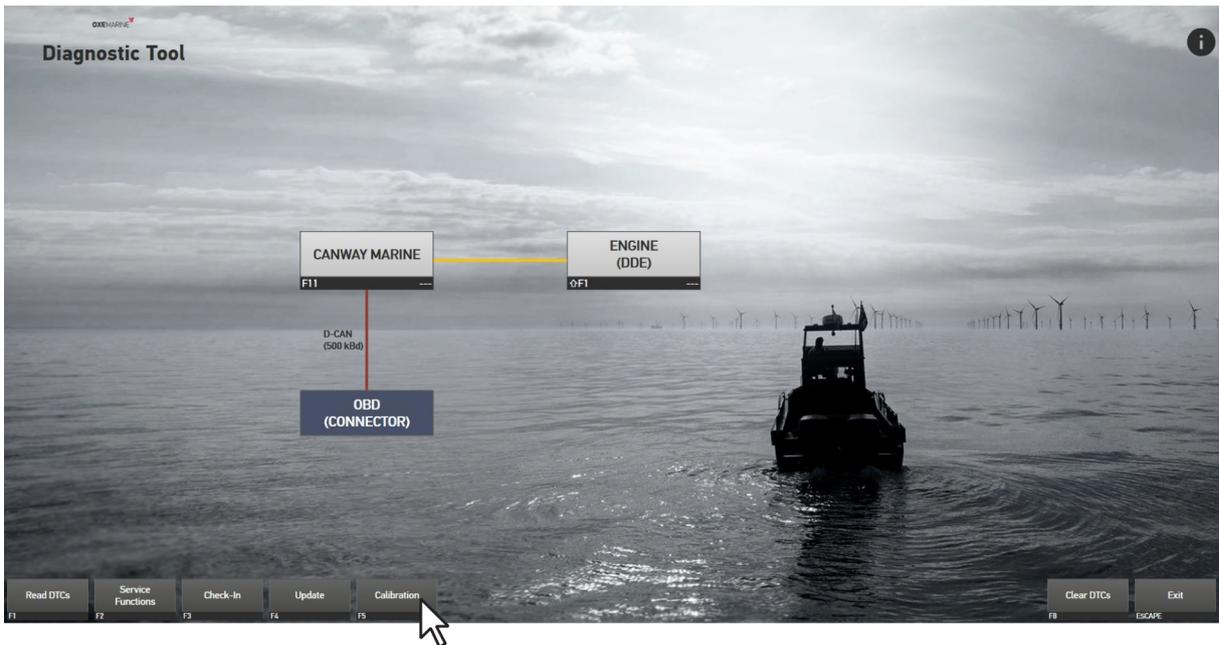


3 Double tap and enter **Engine Location**, finalize **acknowledge** by pressing **Enter**.

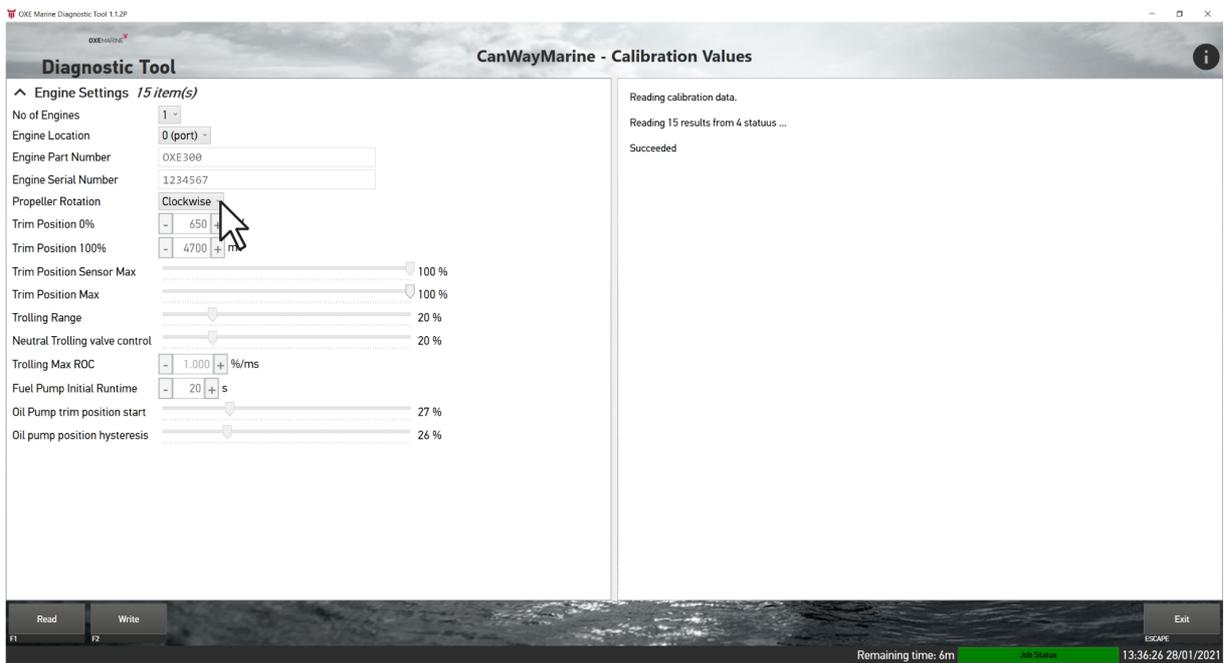
	Engine Location				
Engine No. of Engines	Port	Port Center	Center	Starboard Center	Starboard
1	0	-	-	-	-
2	0	-	-	-	1
3	0	-	1	-	2
4	0	1	-	2	3

11.4 SETTING ENGINE ROTATION

1 Go to Calibration tab to manage engine settings.



2 Select Propeller Rotation.



- 3 Double tap and enter **Propeller Rotation**, finalize **acknowledge** by pressing **Enter**.

CW = Right hand rotation

CCW = Left hand rotation



CAUTION

Prior to adjusting the rotation electronically, it has to be adjusted mechanically. Refer to Service and Workshop Manual for further details.



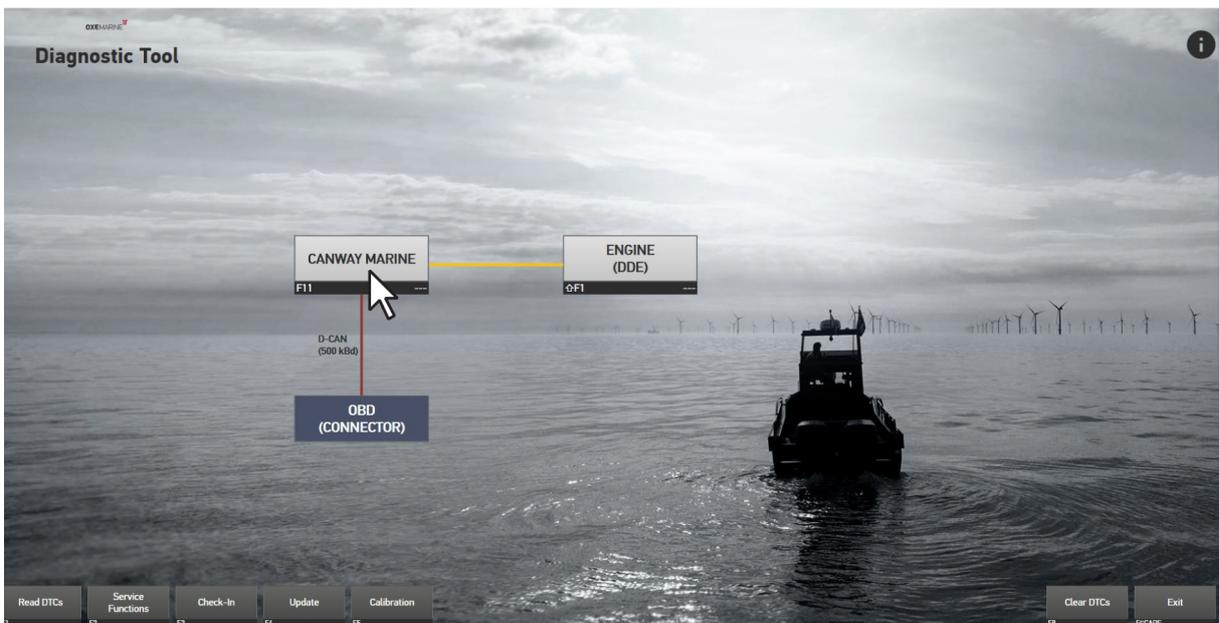
NOTE

Please refer to the **Mounting** chapter in the Installation Manual for further info regarding rotation option in multiple engine installation.

11.5 SETTING TRIM ANGLE LIMITATION (IF APPLICABLE)

To set the max trim position in applications where the trim angle needs to be limited due to vessel interference, refer to the following steps.

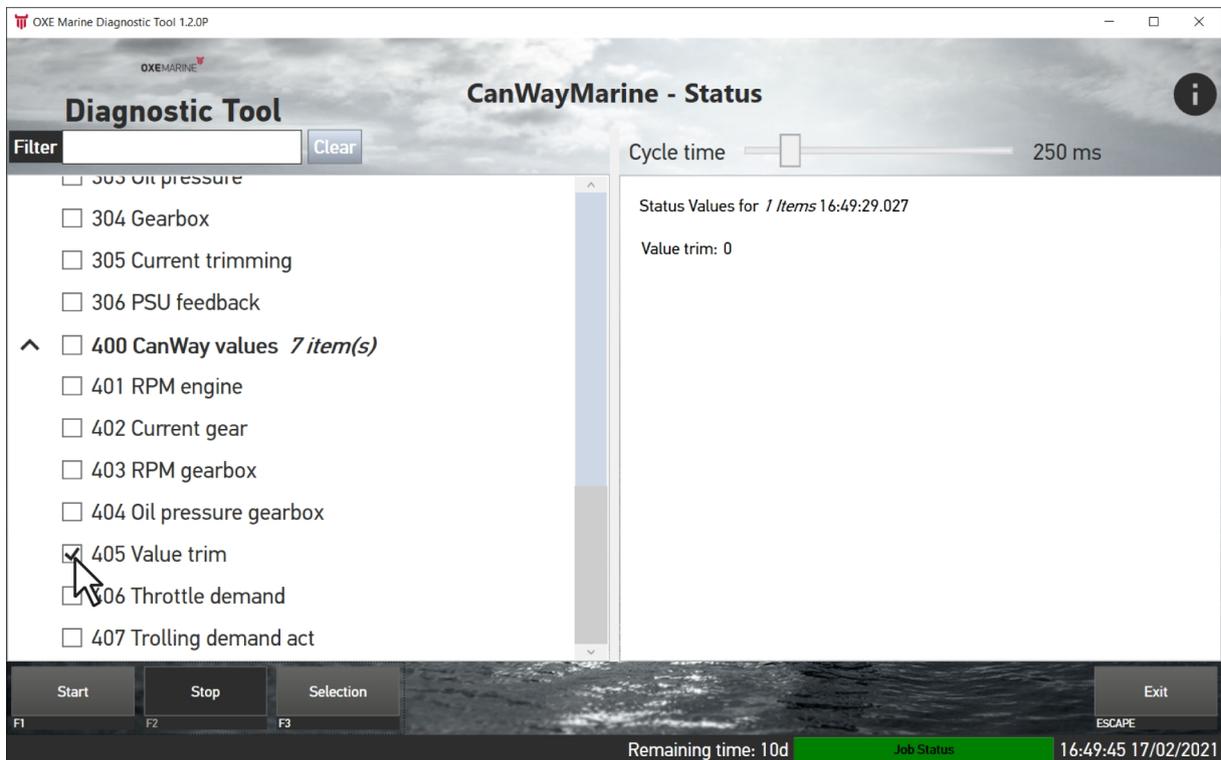
- 1 Select **CANWAY MARINE**.



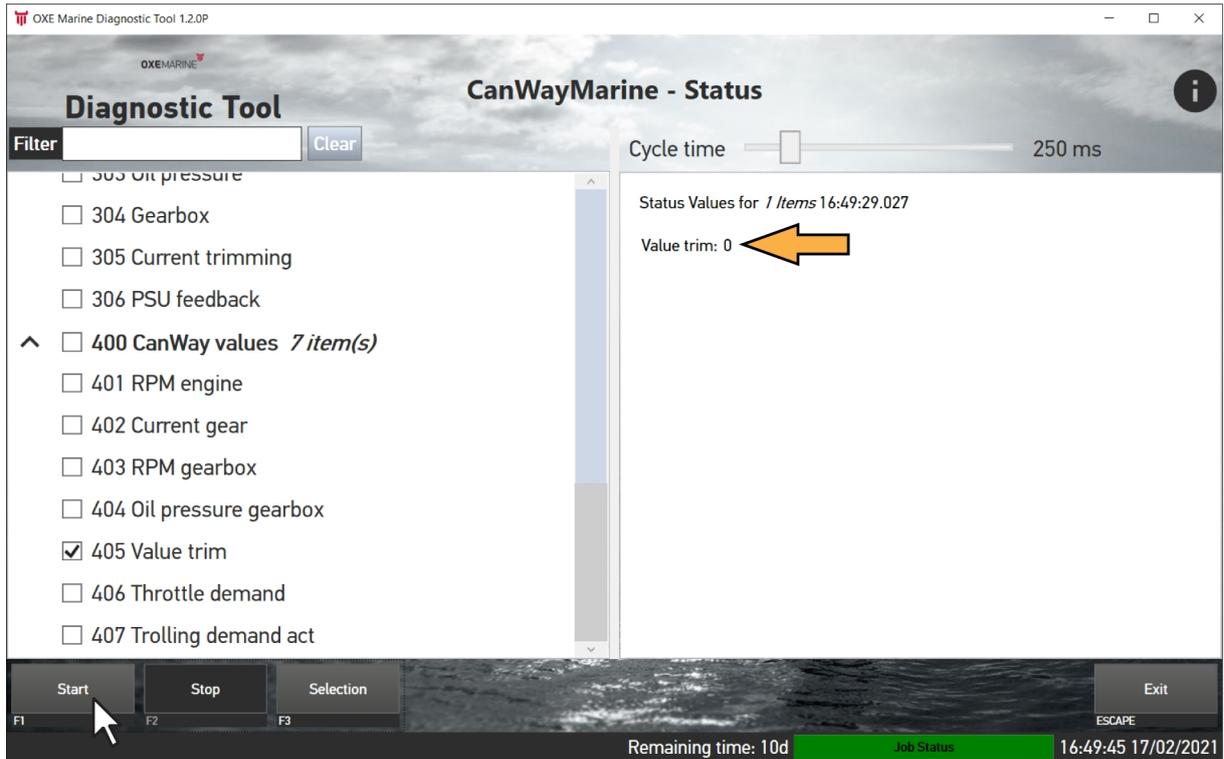
2 Select **Status**.



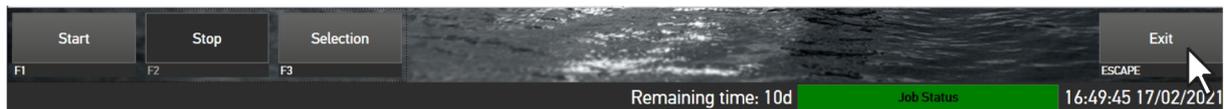
3 Select **405 Value trim** check box.



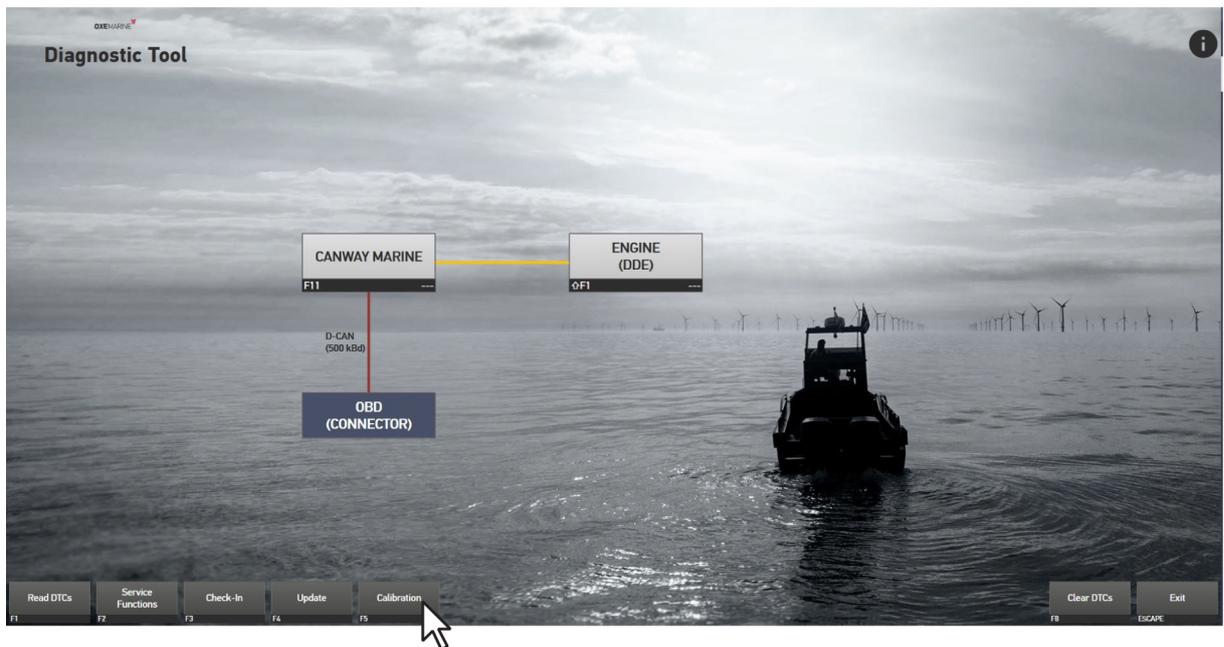
- 4 Select **Start** and monitor the **Value trim** percentage. Carefully trim the engine to desired max position without interference. Take a note of the percentage in **Value trim**.



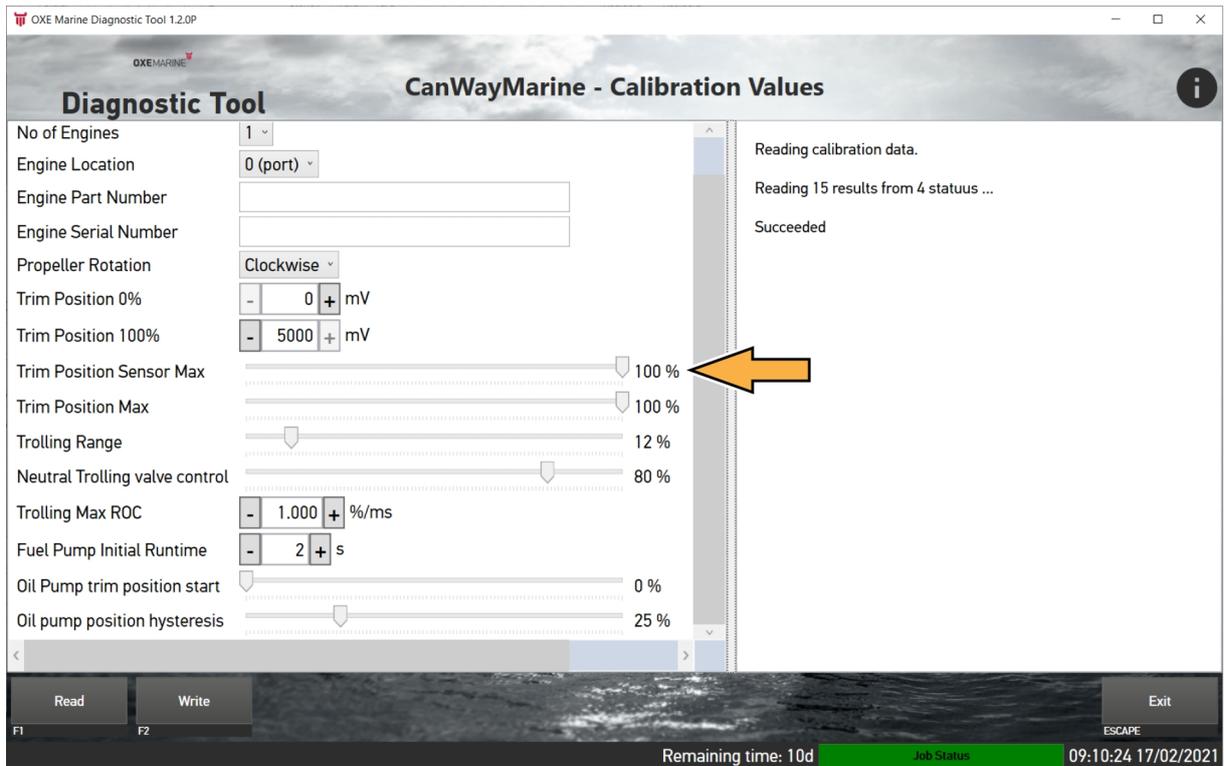
- 5 Select **Exit** to go back to the main page.



- 6 Select **Calibration**.



7 Adjust **Trim Position Max** to desired max according to previous reading in step 4.



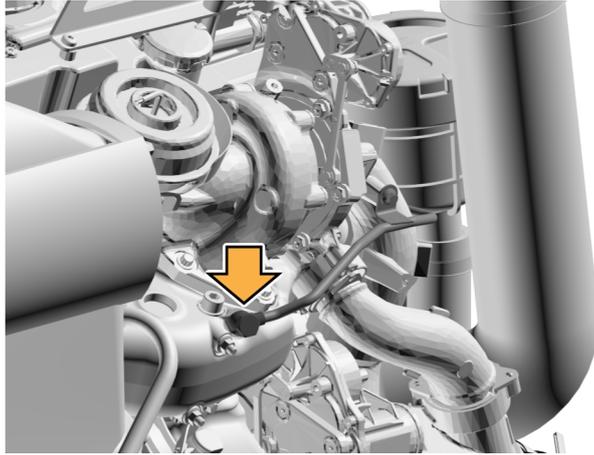
NOTE

To undo this setting and return to 100% range (factory setting), simply adjust the **Trim Position Max** to 100%.

12 SAMPLE EXHAUST EMISSION

It is possible to sample exhaust emissions from the engine.

- 1 Fit a double banjo connector at the position of the exhaust pressure single banjo connector.



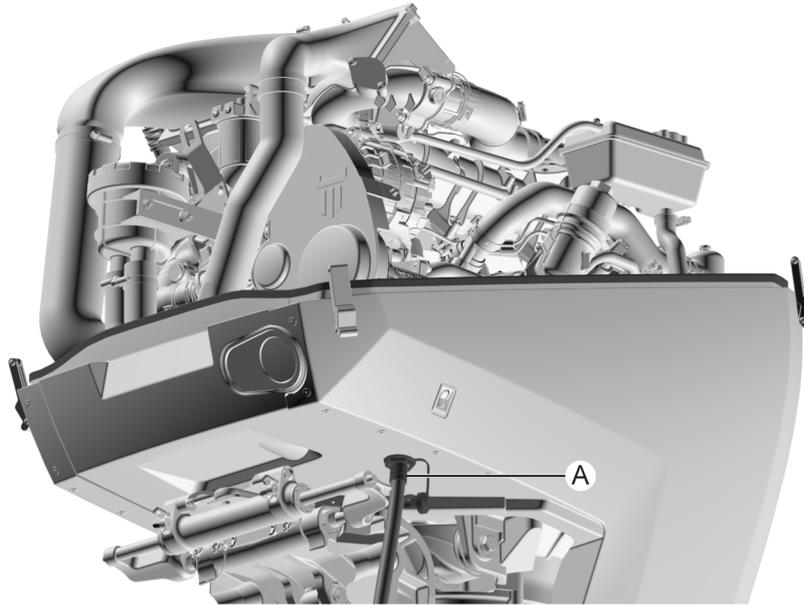
- 2 From the double banjo connector, an exhaust gas analysis instrument can be connected to perform emission measurement.

13 START/TEST RUNNING ON LAND

There are three different methods to test run the OXE outboard on land.

Method one

- 1 Connect a 1/2" thread hose connector to the flush valve connector on the port side of the cowl (A).
- 2 Connect a hose between the hose connector and a freshwater supply.
- 3 Open the freshwater supply and start the engine.

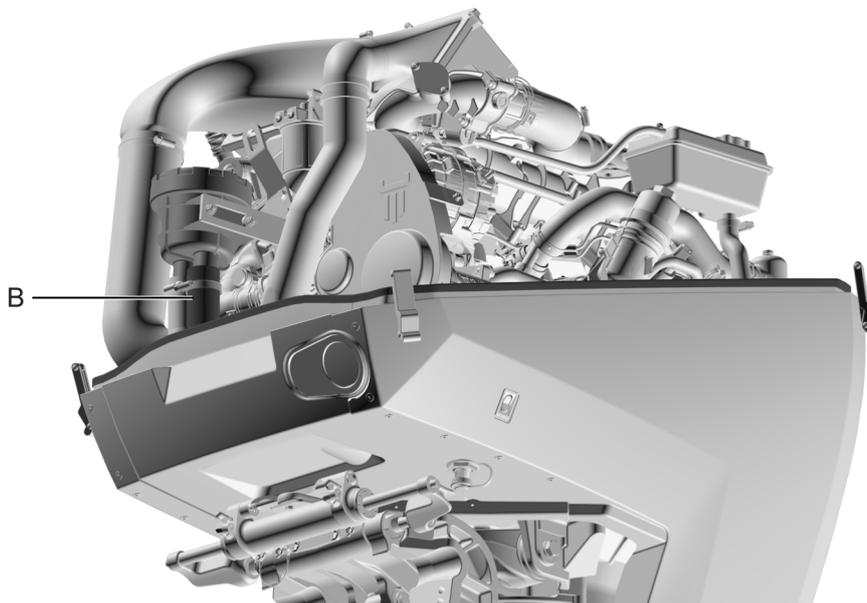


NOTE

When connected to the three way valve engine, RPM should be kept at IDLE speed only.

Method two

- 1 Connect a flexible hose to the seawater strainer inlet hose (B).
- 2 Connect the other end of the hose to a freshwater supply.
- 3 Open the freshwater supply and start the engine.



Method three

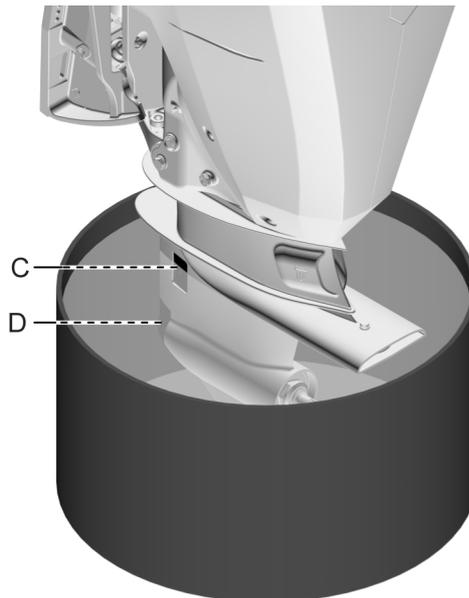
- 1 Fill up a container with water.
- 2 Lower the engine into the container with the water intake points below the waterline and start the engine.
- 3 Start the outboard and run the engine while observing the water level in the container carefully.



NOTE

- If the nosecone water intake (D) is open and the side water intakes (C) are blocked, make sure the water level in the container remains above the nosecone water intake (D) during the procedure! If needed, add water.
- If the side water intakes (C) are open and the nosecone water intake (D) is blocked, make sure the water level in the container remains above the side water intakes (C) during the procedure! If needed, add water.

Failure to observe these instructions may result in air entering the system and impeller damage!



15 DELIVERY AND WARRANTY REGISTRATION

Vessel	
<i>Make/model</i>	
<i>Hull number</i>	
<i>Length/width/weight</i>	
<i>Location</i>	
<i>Speed information Max and Cruise @rpm</i>	
<i>Propeller selection make, model, size, diameter Mandatory info.</i>	
<i>Additional information:</i>	

Engine serial number/s		Engine position (e. g. PORT)
#1 Engine		
#2 Engine		
#3 Engine		
#4 Engine		

End-user informed and given training in the following	
<i>End-user trained in operation of the vessel and OXE diesel outboard.</i>	
<i>End-user trained in daily checkpoints and maintenance procedures.</i>	
<i>End-user received necessary manuals, Service book etc.</i>	

Signing	
<i>Harbor acceptance test, Sea acceptance test and Delivery approved by/Inspector signature</i>	<i>Commissioning/Warranty registration agent signature</i>
_____	_____
_____	_____
<i>Name of signee</i>	<i>Name of signee</i>
<i>Distributor name and address</i>	<i>Dealer name and address</i>
<i>Telephone or email</i>	<i>Telephone or email</i>
<i>Date</i>	<i>Date</i>

This form (all 5 pages) has been submitted to OXE Marine AB
by: _____ Date: _____

Please submit through your local OXE Marine dealer or distributor or send this form to registration@oxemarine.com.

15.1 HARBOR ACCEPTANCE CHECKLIST

HARBOR ACCEPTANCE CHECKLIST (HAT)		
<i>Refer to Installation manual for further instructions</i>		
Installation checklist		
<i>General visual inspection for damages to the OXE outboard and the supplied accessories</i>		
<i>Steering installation and function, general overlook according to supplier manual</i>		
<i>Mechanical</i> <input type="checkbox"/> <i>Electrical</i> <input type="checkbox"/> <i>Hydraulic</i> <input type="checkbox"/>		
Make: _____ Model: _____		
<i>External fuel pump and filter installed according to manual - Prefilter must be installed before external pump</i>		
<i>Fuel tank capacity - 100 L minimum</i>		<i>L</i>
<i>Fuel-lines ID (Feed/Return) 10 mm minimum</i>	<i>mm</i>	<i>mm</i>
<i>Distance between fuel tank and external fuel pump</i>		<i>mm</i>
<i>Battery Size Ah</i>		<i>Ah</i>
<i>ECU and starter fuse 100 A/350 A installed</i>	<i>ECU 100A</i>	<i>Starter 350A</i>
<i>Battery Cold Cranking Amps (CCA)/Marine Cranking Amps (MCA) Min. rec. CCA 850 or MCA 1050</i>	<i>CCA</i>	<i>MCA</i>
<i>Battery cable installation/routing/main switch</i>		
<i>Battery(s) fully charged/secured/connections tight (hex nuts & lock-washers used)</i>		
<i>Fuel line/connections properly installed (hoses free from any moving parts)</i>		
<i>Clearance around the engine, verify full steering movement without interference</i>		
<i>Killcord installed/Coast key installed</i>		
<i>Primary transmission setting</i>	<i>High speed</i>	<i>High torque</i>
<i>Propeller selection</i>		
<i>Additional information regarding installed equipment and accessories:</i>		
Before start, check all fluid levels. Refer to installation manual for specification and qty.		
<i>Engine coolant level</i>		
<i>Engine oil level - chosen oil brand and model</i>		
<i>Gearbox oil level - chosen oil brand and model</i>		
<i>Upper transmission oil level (primary transmission) - chosen oil brand and model</i>		
<i>Lower belt oil level (lower housing) - chosen oil brand and model</i>		
<i>Power trim and tilt fluid level - chosen fluid brand and model</i>		
<i>Air bled from fuel system</i>		
<i>Trim and tilt function with adequate clearance</i>		
<i>Throttle function/range (monitor value in display 0%-100%)</i>		

<i>Instrument and gauges function control</i>	
<i>Additional information:</i>	

After start checklist					
<i>Engine idle speed</i>	<i>RPM</i>				
<i>Engine oil pressure</i>	<i>KPa</i>				
<i>Gearbox oil pressure</i>	<i>KPa</i>				
<i>Fuel pressure at IDLE</i>	<i>MPa</i>				
<i>Verify seawater circulation (seawater strainer and telltale)</i>					
<i>Verify alternator charging voltage</i>	<i>V</i>				
<i>Check for fuel/oil/water/exhaust leaks</i>					
<i>Verify gearshifting function</i>					
<i>Verify steering function</i>					
<i>Check propeller rotation in FWD gear (Adjust rotation in ODT, see Installation Manual) CW/CCW</i>	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; height: 20px;"></td> </tr> </table>				
<i>Test killcord/coast key functionality</i>					
<i>Test start-in-gear protection function</i>					
<i>Additional information:</i>					

<i>Pre-launch test approved by / inspector signature</i> <hr/> <hr/>	<i>Commissioning agent signature</i> <hr/> <hr/>
<i>Name of signee</i>	<i>Name of signee</i>

Please submit through your local OXE Marine dealer or distributor or send this form to registration@oxemarine.com.

15.2 SEA TRIAL CHECKLIST (SAT)



Prepare by taking the time to read the Break-in section for the OXE diesel outboard in the installation manual before sea trials. Failing to follow the procedure could shorten the life of the OXE or void the Global Warranty Policy.

Idle/low speed checklist	
Engine idle speed - record at the bottom of this form section. – OXE 125 HP to 200 HP - Factory set idle speed 850 rpm – OXE 300 HP - Factory set idle speed 720 rpm	RPM
Engine oil pressure	KPa
Gearbox oil pressure	KPa
Engine coolant operating temperature	°C
Voltage at idle	V
Fuel pressure at idle	MPa
Verify seawater circulation (telltale)	
Check for fuel/oil/water/exhaust leaks, use caution around moving parts	
Trim function	
Steering function	

WOT/high speed		
<i>Factory recommended W.O.T rpm target 4100 +/-100 rpm</i>		
Engine oil pressure	KPa	
Gearbox oil pressure	KPa	
Fuel pressure at WOT	MPa	
Engine Coolant operating temperature WOT	°C	
Intake air temperature WOT	°C	
Voltage WOT	V	
Engine rpm	Idle	WOT
#1		
#2		
#3		
#4		
Maximum speed	Knot	
Cruise speed/cruise rpm	Knot	RPM
Trim level at maximum speed	%	

<i>Propeller selection</i>					
<i>Make, model, material</i>					
Sea trial condition notes					
<i>Ex: seastate, wind, ambient temp, seawater temp.</i>					
<i>Sea trial approved by/inspector signature</i>			<i>Commissioning agent signature</i>		
_____			_____		
_____			_____		
<i>Name of signee</i>			<i>Name of signee</i>		

Please submit through your local OXE Marine dealer or distributor or send this form to registration@oxemarine.com.

16 REPORT FORM

Do you have any complaints or comments about this manual?

Please, write your comments down and send a copy of the form to info@oxemarine.com.

We prefer if you would write in English.

From _____

Refers to publication _____

Publication No. _____ *Issued* _____

Suggestion/reason _____

OXE Marine AB,
Hortensiagatan 6
SE-256 68 Helsingborg
SWEDEN
info@oxemarine.com

Date _____

Name _____



OXE Marine AB

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www.oxe-diesel.com

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