



RAIDER OUTBOARDS, INC.
1885 ARMSTRONG DRIVE
TITUSVILLE, FL. 32780

MULTI-FUEL SUBMERSIBLE ELECTRIC START OUTBOARD ENGINES
PART NO. (R50-ES-001)

Multi-Fuel

Dependent upon fuel available. The Raider Model 50 Outboard Motor is capable of using multiple fuel sources for operation. Gasoline is the recommended fuel, but should the mission or situation dictate various types of Heavy Fuel combined with the Raider Additive may be used. Regardless of fuel type utilized for operations there still exists the requirement for mixing with 2 cycle oil at the ratio of 50:1.

Submersible

Allows for full submersion, in salt water, without bagging to a depth greater than 65ft for periods exceeding 24 hours.

Dewatering

Upon recovery to the surface fully operational within 10 minutes. Easy instructions for dewatering are provided affixed to each engine cowling of every outboard motor. Most operators, with practice and adherence to the provided instructions, restore the motor to operations within two minutes of surfacing. Skilled operators are able to achieve lite off in as few as 30 seconds.

Air Deployable

When required is capable of being dropped from both fixed wing and rotary aircraft. Battery cutoffs are available to preserve start battery life in drop packages for over 180 days. Prior to drop, the operator enables the start battery should expeditious start be required on the drop zone.

Lightweight

Maneuverable through the hatch of a Submarine or mounting when underway. The motor is easily maneuvered by two personnel through the hatches of ships or submarines by using the installed reinforced no slip grab handles and rails. The special rail design allows the motor to be stowed in an upright position of the deck or pallet instead of laying on its side.

Electric Start

Provides fast starting in duress situations and aids in dewatering. The installed Acid Glass Matt Battery adds the ability to start the motor without the use of the recoil starter. This capability may prove to be invaluable where starting the motor is not practical via the primary method due to motor damage, operator injury, or prevailing environmental conditions will not afford such. When used with dewatering it rapidly expels any water through the decompression valves.

Tactical Communications Power Interface (option)

Power and charge tactical communications systems. Various types of connectors may be installed per the requirement of the operator. Power tactical radio systems through battery eliminators, charge cell phones or even power a spotlight.

Battery Disconnect (option)

Removes the start battery from the system preserving charge for extended periods of time when motor must be stored in jump or submersion configuration packages.

Bolt on Safety Jet (accessory)

Prevents injury to personnel from inadvertent contact with the propeller. Moreover, provides increased reliability during beaching or Search and Rescue applications supporting hurricane relief and emergency response. Protects crafts propulsion systems when transiting through shallow and flooded areas from unseen obstructions that when struck would normally render a craft dead in the water.

Transportation Cage and Cart (accessory)

Allows for safe secure storage of motor when not in use or being transported over the road or by air. Raider provides two-part system, consisting of a cart and cage. The cart provides a mobile mount for the performance of maintenance actions and repairs. For safe secure storage, the cart maybe locked into place inside the Transportation Cage. This provides extra protection when conducting movement via land or by Military Air ensuring your motor arrives in theater ready for immediate operations.

Engine Cover (accessory)

Protects motor from prevailing environmental conditions should the need require stowage in less-than-ideal conditions or outside. A specially designed breathable material allows moisture to evaporate.

Transom Plates (accessory)

Provides a means for repetitive, expeditious, safe, and secure mounting of the motor on any marine craft transom. These plates provide a guide for the stern bracket of the motor that will automatically center the Raider 40 or 50 to the keel (center line) of the craft. Then simply tighten the stern bracket screws.

Twin Motor Mount System (accessory)

A dual control mounting system that supports two Raider Outboards on the same transom. In conjunction with the Raider Transom Plate the dual control system can be attached quickly allowing operation of both steering and throttle control using a single tiller arm. The tiller arm may be extended for easier movement by adding the tiller extension.

ITEM	RAIDER Model 50 (R50-ES-001) NSN 3H 2805-01-652-3076
Horse Power	55 HP
Overall length	45.1 inches (1145 mm)
Overall width	13 inches (330.2 mm)
Overall height	55.6 inches (1413 mm) (Long Shaft)
Weight	178 lbs. (80.7 kg)
Transom length	21.7 inches (550 mm)
Engine type	2-Stroke
Piston Displacement	42.5 in ³ (697cc)
Bore and Stroke	2.68 Inches x 2.52 Inches (68 mm x 64 mm)
Number of cylinders	3
W.O.T.	5000 – 5800 rpm
Exhaust System	Through Hub
Cooling System	Water cooling (Rotary rubber impeller)
Ignition System	Flywheel Magneto C.D. Ignition
Starting System	Pull Start; Battery; emergency rope start
Intake System	Reed Valve
Lubrication System	Fuels pre-mixed with additives
Cooling System	Forced Water-cooling
Water temperature control	Thermostat (with pressure relief valve)
Gear Reduction Gear Ratio	12:23 1.92
Firing Order	1-2-3
Spark Plug	R-NGK4919 GAP “.035”
Alternator	12V 280W (Maximum) (13.6 volts regulated)
Battery	Acid Glass Mat (AGM), 12VDC @ 10Ah with 175CCA
Trim Angle	4-24 degrees
Trim Angle settings	6 degrees
Maximum tilt-up angle	75 degrees
Transom board thickness	1.22 - 2.76 inches (31-70 mm)
Maximum steering angle	80 degrees
Gear shift	Dog clutch (F-N-R) – front location
Electric Start	Push button
Throttle Control	Tiller Handle
Fuel Bladder/Tank	Organizational Dependent
Heavy Fuels	50:1 mix, Raider Elixir Additive
Gasoline	50:1 mix
Engine Oil	TC-W3 Semi-Synthetic Marine Oil
Gear Oil	Synthetic Blend API GL5, SAE#80 to #90 16.89 fl. Oz. (500 ml)

