



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

**MULTI-FUEL SUBMERSIBLE ELECTRIC START OUTBOARD ENGINES**  
**PART NO. (R40-ES-002)**

*Multi-Fuel*

Dependent upon fuel available. The Raider Model 40 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 40 (R40-ES-002) NSN 3H 2805-01-652-3067
<b>Horse Power</b>	40 HP
<b>Overall length</b>	38.18 inches (919 mm)
<b>Overall width</b>	13 inches (330.2 mm)
<b>Overall height</b>	49 inches (1245 mm) (Long Shaft)
<b>Weight</b>	148 lbs. (67kg)
<b>Transom length</b>	20.9 inches (530 mm) (Long Shaft)
<b>Engine type</b>	2-Stroke Throttle Body
<b>Piston Displacement</b>	30.1 in <sup>3</sup> (493 cc)
<b>Bore and Stroke</b>	2.76 inches x 2.52 inches (70 mm x 64 mm)
<b>Number of cylinders</b>	2
<b>W.O.T.</b>	5200 – 5800 rpm
<b>Exhaust System</b>	Through Hub
<b>Cooling System</b>	Water cooling (Rotary rubber impeller)
<b>Ignition System</b>	Flywheel Magneto C.D. Ignition
<b>Starting System</b>	Pull Start; Battery; emergency rope start
<b>Intake System</b>	Reed Valve
<b>Lubrication system</b>	Fuels pre-mixed with additives
<b>Water temperature control</b>	Thermostat (with pressure relief valve)
<b>Gear Reduction Gear Ratio</b>	13:25 1.85
<b>Spark Plug</b>	R-NGK4919 GAP “.035”
<b>Alternator</b>	12V 280W (Maximum) (13.6 volts regulated)
<b>Battery</b>	Acid Glass Mat (AGM), 12VDC @ 10Ah with 175CCA
<b>Trim Angle</b>	4-24 degrees
<b>Trim Angle settings</b>	6 degrees
<b>Maximum tilt-up angle</b>	75 degrees
<b>Transom board thickness</b>	1.22 – 2.76 inches (31-70 mm)
<b>Maximum steering angle</b>	80 degrees
<b>Gear shift</b>	Dog clutch (F-N-R) – front location
<b>Electric Start</b>	Push button
<b>Throttle Control</b>	Tiller Handle
<b>Fuel Bladder/Tank</b>	Organizational Dependent
<b>Heavy Fuels</b>	50:1 mix, Raider Elixir Additive
<b>Gasoline</b>	50:1 mix
<b>Engine Oil</b>	TC-W3 Semi-Synthetic Marine Oil
<b>Gear Oil</b>	Synthetic Blend API GL5, SAE#80 to #90 16.89 fl. Oz. (500 ml)

