



RAIDER Outboards

**Raider Outboard Motor
Basic Operator's Course**



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Forward

The Raider Outboard Motor Basic Operator's Course provides participants with the necessary skills and knowledge to successfully operate the Raider Outboard Motor in the highly-demanding dynamic conditions of the maritime environment.

The course of instruction focuses on providing Operators with the minimum baseline knowledge required to successfully operate the Raider Outboard Motor. Special emphasis is placed on the fundamentals of operation, general and Raider-specific outboard motor knowledge, the proper performance of the Dewatering process, and proper performance of post-submersion procedures.

The course utilizes both instructor lead hands on presentation and practical exercises evaluating performance to ensure that each participant adequately displays knowledge of the basic principals of operation of the Raider Outboard Motor.

Course Title

Raider Outboard Motor Basic Operator's Course

Course Mission Statement

This course is not a pass/fail course of instruction. The basis of this course is to provide participants with the baseline knowledge and understanding of the Raider Outboard Motor in order to operate the motor, understand and properly perform the Dewatering Procedure, and understand and perform Post-Submersion Procedures.

Course Overview

The Raider Outboard Motor 4-Hour Instruction Course can be taught at any training location. It is designed to provide participants with an overview of the Raider Outboard Motor, dewatering procedure, and post-submersion procedures.

Training focuses on the skills needed to successfully operate the Raider Outboard Motor, including proper fuel-oil mixture, non-start condition procedures, dewatering procedure, and post-submersion procedures.

Participants will also take part in a practical evolution, incorporating the basic elements of operation along with hands-on training in proper dewatering procedure and practice in returning the motor to operation after submersion.

Classroom lessons and performance evolutions work hand-in-hand across the curriculum to further develop personal mastery and problem-solving techniques. Training evolutions emphasize and reiterate classroom presentations, discipline, attention to detail, while always focusing on overall mission accomplishment and the safety of personnel.

Academic Training Overview

- 1.1 Introduction and Administration
- 1.2 Motor Overview
- 1.3 Systems
- 2.1 Principles of Operation
- 2.2 Submersion and Dewatering

Performance/Laboratory Evolutions

- 2.1 Principals of Operation
- 2.2 Submersion and Dewatering

Course Design & Structure:

The Course Master Schedule will comprise the following blocks of activities: Basic: (half day)

- 2 hours academic training or professional development
- 2 hours of practical evolutions

LESSON NUMBER	TITLE	CLASS PERIODS	LAB PERIODS	TOTAL PERIODS
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Unit 1.0 General information

1.1	Introduction and Administration	0.5	0	0.5
1.2	Motor Overview	0.5	0	0.5
1.3	Systems	0.5	0	0.5

LESSON NUMBER	TITLE	CLASS PERIODS	LAB PERIODS	TOTAL PERIODS
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Unit 2.0 Standard Operating Procedures

2.1	Principles of Operation	0.5	0	0.5
2.2	Submersion and Dewatering	0.5	1.5	2.0

Title Of Course	Total Class Periods	Total Lab Periods	Total Periods
Basic Operator's Course	2.5	1.5	4

Terminal and Enabling Objectives

Unit 1.0 General Information

Terminal Objective(s):

Upon completion of this unit of instruction, the participant will demonstrate thorough understanding of the course goals and objectives. Be familiar with the Characteristics, Capabilities, and Limitations of the Raider Outboard Motor and the unique and innovative design features. Further demonstrate basic operating procedures for the Raider Outboard Motor. This includes the proper mixtures of fuel and oil, motor mounting, starting and securing and underway operations.

Lesson 1.1 Introduction and Administration

Enabling Objectives(s):

- 1.1.1 **DISCUSS** Raider Outboard Motor Basic Operator's Course Overview.
- 1.1.2 **DISCUSS** Raider Outboards Inc.
- 1.1.3 **DISCUSS** Class Material and Schedule.
- 1.1.4 **DISCUSS** the Course Critique Form and methods for delivering course input.
- 1.1.5 **DISCUSS** Class Safety and MISHAP plans/procedures.

Lesson 1.2 Motor Overview

Enabling Objectives(s):

- 1.2.1 **DISCUSS** the capabilities and specifications of the Raider Outboards 50HP.
- 1.2.2 **STATE** and **DESCRIBE** the different sections of and the Raider Outboards 50HP.
- 1.2.3 **STATE** and **DESCRIBE** the purpose of the Components and Controls of the Raider Outboards 50HP.
- 1.2.4 **DISCUSS** the Raider Outboard Motor Owner's, Parts and Assembly, and Service Manuals.
- 1.2.5 **DESCRIBE** the procedures for contacting Raider Outboards Technical Support

Lesson 1.3 Systems

Enabling Objectives(s):

- 1.3.1** **DISCUSS** the Raider Outboards 50HP Intake and Exhaust System.
- 1.3.2** **DISCUSS** the Raider Outboards 50HP Fuel System.
- 1.3.3** **DISCUSS** the Raider Outboards 50HP Electrical System.
- 1.3.4** **DISCUSS** the Raider Outboards 50HP Cooling System.
- 1.3.5** **DISCUSS** the Raider Outboards 50HP Dewatering System.

Unit 2.0 Standard Operating Procedures

Terminal Objective(s):

Upon completion of this unit of instruction, the participant will be able to demonstrate the standard operating procedures for the Raider Outboard Motor for maritime operations to include Pre/Post Operations Checks, Submersion and Dewatering.

Lesson 2.1 Principals of Operation

Enabling Objectives(s):

- 2.1.1** **DESCRIBE** the Principles of Operation of the Raider Outboards 50HP.
- 2.1.2** **STATE** the proper fuel-oil mixture ratios for normal operations with the Raider Outboards 50HP.
- 2.1.3** **DESCRIBE** the proper procedures for mounting the Raider Outboards 50HP.
- 2.1.4** **DESCRIBE** and **DEMONSTRATE** the proper procedures for starting the Raider Outboards 50HP.
- 2.1.5** **DESCRIBE** and **DEMONSTRATE** the proper procedures for adjusting the trim of the Raider Outboards 50HP.
- 2.1.6** **DESCRIBE** and **DEMONSTRATE** the proper procedures for Shallow Water Running with the Raider Outboards 50HP.
- 2.1.7** **DISCUSS** the general safety precautions that should be implemented for operating the Raider Outboards 50HP.

Lesson 2.2 50HP Submersion and Dewatering

Enabling Objectives(s):

- 2.2.1** **DESCRIBE** the proper procedure for Pre-Submersion, Submersion, and Dewatering for the Raider Outboards 50HP.
- 2.2.2** **STATE** the purpose of the Raider Outboards 50HP Dewatering System and the function of the individual components.
- 2.2.3** **DEMONSTRATE** when directed identify the Raider Outboards 50HP Dewatering System individual components.
- 2.2.4** **PERFORM** the Pre-Submersion procedure in accordance with the Raider Outboards 50HP Owner's Manual.
- 2.2.5** **PERFORM** the Submersion procedure in accordance with the Raider Outboards 50HP Owner's Manual.

2.2.6 **PERFORM** the Dewatering procedure in accordance with the Raider Outboards 50HP Owner's Manual.

2.2.7 **PERFORM** the Post-Submersion procedure in accordance with the Raider Outboards 50HP Owner's Manual.

Course Master Schedule

Day 1:

Topic Title	Length
Introduction and Administration	50
Motor Overview	50
Systems	50
Principles of Operation	50
Submersion and Dewatering	200

Resource Requirement Listing

Motors Required

- One (1) motor per boat crew

Equipment Required

- Motor stands, one (1) per motor
- Water tank of sufficient size to submerge entire motor
- Fresh water supply
- Hose flush connector (ears, earmuffs)

Hazmat Required

- Gasoline, 87 octane, 1 bladder pre-mixed with oil per motor
- NMMA certified TC-W3 2-Stroke oil, one (1) quart per six (6) gallons fuel

Tools Required

- Emergency Field Kit, EFK-50(40)

Part No.	Description	Qty
R- 4919	sparkplugs	3(2)
R-841150	m10 deep socket 3/8 dr	1
R-841156	m16 deep socket 3/8 dr	1
R-841153	m13 deep socket 3/8 dr Modified	1
R-2292340	6 way screwdriver	1
R-67149	crescent wrench	1
R-63818	pliers	1
R-52735A45	3/8 hex drill socket	1
R-106988	3/8 ratchet	1
R-5009238	pelican case 1150	1
R-203561746	#5.5 starter cord (7ft)	1
R-25002	2 oz marine grease	1

Consumables Required

Item	Part #	QTY
Carb/Throttle Cleaner 13.5oz	79567300137	1
CORROSION ZERO 16oz	2596427	1
CRC Marine Premium Dielectric Grease 3.8oz	6113	1
Friction Surface Marine Grease	300417	1
Liquid Electrical Tape 4oz	7315001126	1
Loctite Paste Anti-Seize Lubricant 8oz	299175	1
NMMA certified TC-W3 oil 1GA	773735	1
SALT-A-WAY 1GA	B0000AXVG9	1
Sta-Bil® 360°™ Marine™ 8oz	22239-AD	1
WD-40 12oz	79567490050	1
White Lithium Grease 10oz	79567300243	1

Instructional Management Plan

Instructor to Student Ratios

1. Instructor Presentation 1:50
2. Student Practical/Performance Evolution: 1:10

TTO PROCEDURES

A Training Time Out (TTO) may be called by any student or instructor in any training situation where they are concerned for their own or another's safety, or they request clarification of it, procedures or requirements. TTO is also an appropriate means for a student to obtain relief if he or she is experiencing pain, heat stress, or other serious physical discomfort. The purpose of the TTO is to correct the situation of concern, provide clarifying information, or remove the student or instructor from the possible hazardous environment. A TTO may be signaled with the abbreviation TTO, the words Training Time Out, crossed hands in a (T), a raised clenched fist, or other specific signals which will be briefed prior to a specific lab, test, or exercise. If the TTO signal is not acknowledged, the signaler shall shout "Time Out" (or other action as required by the training activity). The instructor shall attempt to relieve and remove the student from the possible hazardous environment. If an adequate number of instructors are available to allow training to continue safely, the lead instructor may elect to do so. However, if this is not practical, training will be stopped until the situation is corrected.

