AORSI-100-RECV Workbook

Overview

This course prepares participants for safe recovery operations when vehicles become stuck, disabled, or overturned. Focus is on safe use of recovery gear, winching, and teamwork. Participants will gain hands-on experience in recovery techniques while learning how to minimize risks to people, vehicles, and the environment.

Learning Objectives

- Identify recovery equipment and its uses.
- Perform safe winching and towing operations.
- Understand anchor points and rigging safety.
- Apply decision-making in real-world recovery scenarios.

Module 1: Recovery Equipment Overview (Winches, Straps, Jacks, Boards)

Recovery equipment forms the backbone of safe operations. Winches provide mechanical pulling power, recovery straps allow controlled towing, jacks lift vehicles for repairs or repositioning, and traction boards provide grip in mud, sand, or snow. Students should learn not only what each tool does, but also its safe working load and proper application.

Course Design Suggestion: Set up equipment stations where students handle each type of recovery gear, reviewing strengths and limitations.

Exercise: Create a checklist of essential recovery gear for a standard off-road vehicle.

Reflection Question: Why is understanding equipment limitations just as important as knowing how to use them?

Module 2: Rigging Safety & Load Calculations

Rigging involves setting up winches, straps, pulleys, and anchors to recover a vehicle. Miscalculations or poor setups can lead to snapped lines, damaged vehicles, or serious injuries. Students must learn how to calculate load forces, select appropriate anchor points, and use safety equipment like damper blankets. This module should emphasize both theory and hands-on rigging practice.

Course Design Suggestion: Teach students how to calculate line pull requirements based on vehicle weight and terrain. Include hands-on rigging drills.

Exercise: Calculate the line pull required to recover a 5,000 lb vehicle stuck in mud with a 25% resistance factor.

Reflection Question: How does using a snatch block change the effective load on a winch line?

Module 3: Self-Recovery vs Assisted Recovery

Self-recovery relies on the operator’s equipment and techniques, while assisted recovery involves help from other vehicles or teams. Students should learn when each method is appropriate, as well as the risks of attempting recovery alone. Communication and coordination are essential in assisted recovery, requiring clear hand signals, radios, and role assignments.

Course Design Suggestion: Organize field scenarios where students attempt both self-recovery and assisted recovery operations.

Exercise: Write down three advantages of assisted recovery compared to self-recovery.

Reflection Question: Why is communication critical during assisted recovery operations?

Module 4: Field Scenarios & Case Studies

Case studies provide valuable lessons by analyzing real-world recovery incidents. Students can learn from both successful and failed recoveries, gaining insight into decision-making, equipment use, and safety considerations. Field scenarios allow practice in realistic conditions, building confidence through repetition and teamwork.

Course Design Suggestion: Present case studies of recovery incidents with group discussions on what went right or wrong.

Exercise: Develop a recovery plan for a vehicle overturned on a steep slope.

Reflection Question: How can studying past recovery incidents improve future performance and safety?

Final Assessment

Task: Participate in a practical recovery drill where students demonstrate safe use of winches, straps, and anchors in realistic conditions. Perform a safety checklist review to ensure compliance with recovery standards. Additionally, answer the following sample written questions:

1. What is the purpose of a recovery damper blanket?

2. How can improper anchor point selection increase recovery risks?

3. When is self-recovery preferable to assisted recovery?

4. What calculation is required to determine proper line pull for a winch?

5. Why is teamwork vital in complex recovery scenarios?

Duration: 8 hours (hands-on training required)