

LESSON PLAN

R41 PTO DRIVEN JAWS POWER UNIT

Lesson Description: The driver operator/firefighter will be shown the proper procedures for operating the PTO driven Jaws power unit on Rescue 41. The driver operator/firefighter will then demonstrate the proper procedures to put this equipment into operation and also to return the Rescue to a ready to respond status.

Lesson Outline:

Classroom

1. Introduction
2. Equipment Location
3. Safety Precautions
4. Generator/Electrical System Operation
5. Hydraulic Power Unit Operation

Practical Skills

1. Generator/Electrical System Operation
2. Power Unit Operation

Objectives: Given equipment information and Rescue 41 apparatus, the driver operator/firefighter shall demonstrate with 100% proficiency the safe operation of the generator/electrical system and the light tower.

Introduction

Rescue 41 is a 2004 Pierce Sabre chassis with an Encore rescue body. This vehicle is equipped with a PTO driven TNT Rescue power unit.

The power unit operates at 10,500 psig. It has hydraulic connections for the use of two tools or two sets of lines operating the tools that are put into service and the end of the lines.

Equipment Location:

1. The Jaws power unit is located in the driver side compartment specified by the inventory sheet.
2. The power unit is operated by use of the PTO and PTO Generator.
3. The switches for engaging the PTO are located in the apparatus cab.
4. The switch to energize to power unit is located at the power unit and labeled.

Safety Precautions:

1. As with any energized safety is of utmost importance.

2. Ensure that the hydraulic lines are not cut or kinked.
3. Ensure that the hydraulic tools are in good working order.
4. Before engaging the generator PTO, ensure that the power unit switch is in the off position.
5. Before disengaging the generator PTO, ensure that the power unit switch is turned to the off position.
6. Circuit breakers not needed should be left in the off position.
7. Before moving the apparatus, ensure that the power unit is not in service and that all lines are properly stowed.

Power Unit Operation:

1. There are several interlocks that must be satisfied before the generator PTO can be engaged. The parking brake must be set; the vehicle transmission must be in the neutral position; the engine must be a normal idle speed (no high idle).
2. Set the parking brake and place the transmission into the neutral position, verify that the engine is at normal idle speed.
3. Locate the generator PTO switch and engage the PTO.
4. Wait about 5 seconds before turning on any electrically operated equipment.
5. Verify by the generator operations panel that the generator is operating at the correct frequency (60Hz) and voltage (240).
6. Verify that the power unit controls are set to the off or “no flow” position.
7. Check the fluid level by sight glass on the end of the unit between the control handles.
8. Turn on the power unit switch to energize the hydraulic unit.
9. At this time you can connect the lines necessary for your operations purpose.

Jaws Operations:

1. Ensure that the PTO and generator are operating.
2. Refer to all training regarding operation of the TNT Jaws appliances.
3. Operations of all tools are the same as past practices.
4. Hydraulic lines “pay out” by manually pulling them out into service. Ensure that they are placed into roller guides and pulled out as straight as possible.
5. To pull line back into stowed position caution is recommended.
6. Wipe lines free of all debris, (glass, dirt, fluids) before reeling in.
7. Reel line by depressing the switch mounted in front of the reel and “pulsing” it in.
8. Reel in such manner that the cord wraps evenly left to right.

Practical Evolutions:

1. Park the rescue and properly put into operation the PTO and vehicle generator.