



Fire Protection Training

Procedures Handbook 4300

HOSE APPLIANCES & TOOLS

TOPIC: Inspection and Maintenance of Nozzles and Hose Appliances

TIME FRAME: 1 Hour

LEVEL OF INSTRUCTION:

BEHAVIORAL OBJECTIVE:

Condition: A written quiz

Behavior: The student will describe the maintenance procedures for nozzles and hose appliances.

Standard: With a minimum of 70% accuracy

MATERIALS NEEDED:

- Examples of nozzles and hose appliances
- Appropriate visual aids and supplies

REFERENCES:

- IFSTA, Essentials of Fire Fighting, 2nd Edition, Chapter 10
Manufacturer's specifications

PREPARATION: Proper maintenance of nozzles and hose appliances will ensure proper functioning and, as a result, will provide maximum protection for the nozzle operator. Maintenance can also help ensure a long service life.



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INSPECTION AND MAINTENANCE OF NOZZLES AND HOSE APPLIANCES

PRESENTATION	APPLICATION
<p>I. INSPECTION AND NOZZLE MAINTENANCE PROCEDURES</p> <p>A. Cleaning</p> <ol style="list-style-type: none">1. Thoroughly clean with soap and warm water2. Using a soft bristle brush3. On a regular basis <p>B. Inspection of Female Swivel</p> <ol style="list-style-type: none">1. Check the condition of female threads2. Check the female swivel circumference (round or egg-shaped). Egg shaped couplings are damaged and need replacement.3. Check for free swivel action and full rotation.<ol style="list-style-type: none">a. Lubricate with graphite4. Check gasket for cracks and deterioration.<ol style="list-style-type: none">a. Replace as needed5. or repair worn parts<ol style="list-style-type: none">a. Female threadb. Female swivel	<p>How does one clean a nozzle?</p> <p>What does one look for when inspecting a nozzle?</p> <p>According to manufacturer's specifications</p>



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PRESENTATION	APPLICATION
<ul style="list-style-type: none">c. GasketsC. Inspection of Nozzle Barrel<ul style="list-style-type: none">1. External<ul style="list-style-type: none">a. Check for cracks or visible damage2. Internal<ul style="list-style-type: none">a. Check for debrisb. Check for visible damagec. Check center nut for tightness3. Verify correct action of internal nozzle parts4. Replace worn or damaged partsD. Inspection of Bale<ul style="list-style-type: none">1. Check for complete stroke through open and closed positions2. Check for ease of operation<ul style="list-style-type: none">a. Use graphite as needed3. Replace worn or damaged partsE. Inspection of Handle<ul style="list-style-type: none">1. Check for external damage2. Check for cracksF. Inspection of Gallonage Adjustment Ring<ul style="list-style-type: none">1. Check for free rotation to all positions	<p>According to manufacturer's specifications</p>



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<ul style="list-style-type: none">a. Use graphite as needed b. Replace worn or damaged gallonage adjustment ring G. Inspection of Spinning Teeth<ul style="list-style-type: none">1. Check teeth for damage2. Check for full rotation of spinning teeth H. Inspect Pattern Adjustment<ul style="list-style-type: none">1. Check for free rotation from shut off position to full fog or purge2. Check for debris I. Inspection of Attachments<ul style="list-style-type: none">1. Piercing tip<ul style="list-style-type: none">a. Check for burrsb. Check for debris in tool orificesc. Check for straightness of nozzle2. Broken stream nozzles<ul style="list-style-type: none">a. Check for free rotation of nozzle tipb. Check for debris in orifices J. Inspection of Master Stream Nozzles (additional inspection items)<ul style="list-style-type: none">1. Elevation control	<p>According to manufacturer's specifications</p>



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<ul style="list-style-type: none"> a. Check for full rotation of adjustment handle to all positions b. Check for proper locking pin operation c. Lubricate with graphite d. Replace worn or damaged parts <p>2. Horizontal control</p> <ul style="list-style-type: none"> a. Check for full rotation b. Check for debris in bearings c. Lubricate with graphite d. Replace worn or damaged parts 	<p>According to manufacturer's specifications</p> <p>According to manufacturer's specifications</p> <p>According to manufacturer's specifications</p> <p>According to manufacturer's specifications</p>
<p>II. INSPECTION AND MAINTENANCE OF HOSE APPLIANCES</p> <p>A. Swivels</p>	<p>What are some parts of appliances we may need to maintain?</p>



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<ul style="list-style-type: none">1. Check female couplings<ul style="list-style-type: none">a. If egg shaped<ul style="list-style-type: none">(1) Repair or replace2. Check bearings<ul style="list-style-type: none">a. Missing or worn<ul style="list-style-type: none">(1) Replaceb. Difficult to rotate<ul style="list-style-type: none">(1) Lubricate using graphite(2) Never use oil or grease which will collect dust/debrisB. Valves<ul style="list-style-type: none">1. Check gate<ul style="list-style-type: none">a. Check handle for:<ul style="list-style-type: none">(1) Free play(2) Proper alignment(3) Adjust as necessaryC. Threads<ul style="list-style-type: none">1. Check for debris2. Check for broken or flattened spots<ul style="list-style-type: none">a. Repair or replace3. Check for nicks, burrs or gouges	<p>What is the major area of concern for thread maintenance?</p>



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<ul style="list-style-type: none">a. Repair or replaceD. Body<ul style="list-style-type: none">1. Check for rough surface or cracks<ul style="list-style-type: none">a. Repair or replaceE. Gaskets<ul style="list-style-type: none">1. Cracked2. Missing3. Hard (non pliable)4. Out of round (egg shaped)<ul style="list-style-type: none">a. Replace	
<p>III. CLEANING HOSE APPLIANCES</p> <ul style="list-style-type: none">A. Warm Water and Soap<ul style="list-style-type: none">1. Brush off dirt<ul style="list-style-type: none">a. Soft bristled brush2. Dry thoroughlyB. Lubricate	<p>Per manufacturer's specifications</p>



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SUMMARY:

Well maintained nozzles and appliances not only ensure the proper functioning of these tools, but also offer maximum protection for the nozzle operator.

EVALUATION:

A written quiz.

ASSIGNMENT:

To be determined by instructor(s).