



Fire Protection Training

Procedures Handbook 4300

HOSE APPLIANCES & TOOLS

TOPIC: Inspection and Maintenance of Nozzles and Hose Appliances

TIME FRAME: :30

LEVEL OF INSTRUCTION: Level I

BEHAVIORAL OBJECTIVE:

Condition: A written quiz

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

Standard: With a minimum of 80% accuracy

MATERIALS NEEDED:

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

REFERENCES:

- IFSTA, Essentials of Fire Fighting, 5th Edition, Chapters 13 and 14
- 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 replacement3. Check for free swivel action and full rotation<ol style="list-style-type: none">a. Lubricate with graphite<ol style="list-style-type: none">(1) Oil and grease attract dirt and grit4. Check gasket for cracks and deterioration<ol style="list-style-type: none">a. Replace as needed5. Repair worn parts<ol style="list-style-type: none">a. Female threadb. Female swivelc. Gaskets <p>C. Inspection of nozzle barrel</p> <ol style="list-style-type: none">1. External<ol style="list-style-type: none">a. Check for cracks or visible damage	<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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<ul style="list-style-type: none">2. 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<ul style="list-style-type: none">a. Use graphite as neededb. Replace worn or damaged gallonage adjustment ringG. Inspection of spinning teeth<ul style="list-style-type: none">1. Check teeth for damaged or missing teeth2. Check for full rotation of spinning teethH. Inspect pattern adjustment	<p>According to manufacturer's specifications</p> <p>According to manufacturer's specifications</p>



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<ul style="list-style-type: none">1. Check for free rotation from shut off position to full fog or purge2. Check for debrisI. 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 orificesJ. Inspection of Master Stream nozzles (additional inspection items)<ul style="list-style-type: none">1. Elevation control<ul style="list-style-type: none">a. Check for full rotation of adjustment handle to all positionsb. Check for proper locking pin operationc. Lubricate with graphited. Replace worn or damaged parts2. Horizontal control<ul style="list-style-type: none">a. Check for full rotationb. Check for debris in bearingsc. Lubricate with graphite	<p>According to manufacturer's specifications</p> <p>According to manufacturer's specifications</p> <p>According to manufacturer's specifications</p>



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<p>d. Replace worn or damaged parts</p> <p>II. INSPECTION AND MAINTENANCE OF HOSE APPLIANCES</p> <p>A. Swivels</p> <ol style="list-style-type: none">1. Check female couplings<ol style="list-style-type: none">a. If egg shaped<ol style="list-style-type: none">(1) Repair or replace2. Check bearings<ol style="list-style-type: none">a. Missing or worn<ol style="list-style-type: none">(1) Replaceb. Difficult to rotate<ol style="list-style-type: none">(1) Lubricate using graphite(2) Never use oil or grease which will collect dirt/grit <p>B. Valves</p> <ol style="list-style-type: none">1. Check gate<ol style="list-style-type: none">a. Check handle for:<ol style="list-style-type: none">(1) Free play(2) Proper alignment(3) Adjust as necessary <p>C. Threads</p> <ol style="list-style-type: none">1. Check for debris	<p>According to manufacturer's specifications</p> <p>What are some parts of appliances we may need to maintain?</p> <p>What is the major area of concern for thread maintenance?</p>



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<ul style="list-style-type: none">2. Check for broken or flattened spots<ul style="list-style-type: none">a. Repair or replace3. Check for nicks, burrs or gouges<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 the maximum protection for the nozzle operator.

EVALUATION:

A written quiz.

ASSIGNMENT:

To be determined by instructor(s).