



Fire Protection Training

Procedures Handbook 4300

TOOL & EQUIPMENT

TOPIC: Safety Considerations Associated with Fire Service Jacks

TIME FRAME: 30 Minutes

LEVEL OF INSTRUCTION:

BEHAVIORAL OBJECTIVE:

Condition: A written quiz

Behavior: The student will list and describe ten safety precautions to be followed when utilizing fire service jacks.

Standard: With a minimum of 70% accuracy

MATERIALS NEEDED:

- Examples of department jacks
- Chalkboard and chalk
- Porcelain board and pen
- Appropriate audio visual aids and equipment

REFERENCES:

- IFSTA, Essentials of Fire Fighting, 2nd Edition, Chapter 7
- IFSTA, Fire Service Rescue Practices, 5th Edition, Chapter 1

PREPARATION:

Fire Service jacks can be employed in a variety of ways at emergency incidents. One thing to remember is that unlike tools such as hammers or screw drivers, the jack is usually employed in an unstable, life threatening environment.

The firefighter must thoroughly understand and apply sound safety practices when utilizing jacks in order to insure safe and efficient operations.



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SAFETY CONSIDERATIONS
ASSOCIATED WITH FIRE
SERVICE JACKS

PRESENTATION	APPLICATION
<p>I. REVIEW PURPOSE OF THE JACK</p> <ul style="list-style-type: none">A. To Move or Lift an Object/Weight by Utilizing Mechanical AdvantageB. Mechanical Advantage: a Method by Which Work or Power is Increased <p>II. REVIEW TYPICAL USES OF A JACK</p> <ul style="list-style-type: none">A. Utilize Common SenseB. Utilize Proper Jack for the Job<ul style="list-style-type: none">1. Types of jacks<ul style="list-style-type: none">a. Screwb. Ratchetc. Hydraulic2. Space available3. Load estimate vs. rated capacity4. Set up time	<p>What is the purpose of the jack?</p> <p>What is mechanical advantage?</p> <p>Can you identify how a jack could be used in an emergency?</p> <p>List on board</p> <p>(Discussion)</p>



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PRESENTATION	APPLICATION
<p>C. Safety Consideration When Utilizing/Operating a Jack</p> <ol style="list-style-type: none">1. Always check jacks rated load capacity<ol style="list-style-type: none">a. Manufacturers specification2. Check jacks operating mechanism prior to use<ol style="list-style-type: none">a. Do not use if worn or damaged3. Always have a sound, solid base<ol style="list-style-type: none">a. May require digging, use of cribbing, ground jack plates4. If necessary, utilize a header plate between load and contact point with jack<ol style="list-style-type: none">a. Distributes load evenlyb. Minimizes breaking of load5. Always keep jack at right angle to load and base<ol style="list-style-type: none">a. Offset greatly reduces the jacks capacity and stability6. Operate jack smoothly7. Do not over extend the jack	<p>Discuss/solicit examples. Cite experiences/list on board during this portion</p> <p>What does a header plate do?</p>



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<ul style="list-style-type: none">a. The greater the extension the lower the load ratingb. Take small "bites"; move-crib-lower-raise base-move-crib, etc. <p>8. Always crib as jack moves load</p> <ul style="list-style-type: none">a. If jack fails, all gain is not lost <p>9. Do not place fingers/limbs between load and base</p> <p>10. Do not support a load on a jack for an extended time period.</p> <ul style="list-style-type: none">a. Not designed to be a "shore"b. Utilize crib-lower load to cribc. Do not add weight (load) to extended jack <p>11. When employing jack as a "stabilizing" device, constantly monitor jacks position, security, etc.</p> <ul style="list-style-type: none">a. Should only be done when absolutely necessary (i.e. trench rescue) <p>12. When using jacks with lever type handles do not lean face or body over handle</p> <p>13. Do not leave handle/lever in jack when not in use</p> <p>14. When jacks are used in unison (two on a load);</p>	<p>Movement may be vertical or horizontal</p> <p>What is the advantage of cribbing?</p>



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PRESENTATION	APPLICATION
<ol style="list-style-type: none"><li>1. Emergency operation<li>2. Training exercise	



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SUMMARY:

As with any tool or piece of equipment the firefighter must employ common sense, work area awareness and sound safety practices when utilizing jacks. A regular maintenance program must also be adhered to in order to insure efficient safe operations.

EVALUATION:

A written quiz.

ASSIGNMENT:

To be determined by instructor(s).