State of Oregon
Department of Public Safety Standards and Training

NFPA Machinery Rescue

Task Book

Task Book Assigned To:

Name | DPSST Fire Service #

Agency Name | Date Initiated

Signature of Agency Head or Training Officer | Date Completed

Department of Public Safety Standards and Training
4190 Aumsville Hwy SE.
Salem, Oregon 97317
(503) 378-2100

Additional copies of this document may be downloaded from the DPSST web site:
http://www.oregon.gov/DPSST/FC/FireCertFormFree.shtml

Revised June 2021

NFPA Machinery Rescue Signature Page

This signature page is a tool for your agency to document completed tasks. The signature page and documentation should be kept on file at your agency. Please **do not** submit the Task Book or signature page to Department of Public Safety Standards and Training. Only a certified NFPA Technical Rescuer in that specialty area may sign off the Task Book.

Attest: The information contained in this Task Book is true and correct to the best of my knowledge. I understand that falsification of information on this document is subject to penalty under ORS 162.055, et al, and ORS 162.305 and is cause to deny or revoke DPSST fire service professional certification(s).

Technical Rescuer Evaluators: Each Evaluator must document the following information:

Initials	DPSST Fire #	NFPA Technical Rescuer Certification Level	Printed Name	Signature

Task Book Qualification Record Books (Task Book) have been developed for various certification levels within the Oregon Department of Public Safety Standards and Training (DPSST) system. Each Task Book lists the job performance requirements (JPRs) for the specific certification level in a format that allows a candidate to be trained and evaluated during three (3) sequential sessions. Successful performance of all tasks, as observed and recorded by a qualified and approved evaluator will result in the candidate's eligibility for DPSST certification.

Before a job performance evaluation can be taken, all requisite knowledge and skills must be satisfied. In addition, all task book evaluations must be checked off by a qualified evaluator. When all prescribed requirements have been met, an application for Certification may be forwarded to DPSST. All certificates are mailed to the Training Officer at his/her Fire Service Agency.

TASK BOOK SPECIFICATIONS:
To successfully complete this task book, only an evaluator certified as an NFPA Machinery Rescue may sign off on the JPR's. 'Requisite Knowledge' sections may be completed during class and signed by the instructor. 'Requisite Skills' sections may be conducted and signed at the candidate's fire agency.

NFPA TASK BOOK INFORMATION:
The JPRs covered in this Task Book meet or exceed all NFPA published standards for this certification level at the time of this publication. Mention of NFPA and its standards do not, and are not intended as adoption of—or reference to—NFPA standards. For more information on the complete job performance requirements and data, see the individual DPSST Task Book for that certification level.

HOW TO EVALUATE PERFORMANCE:

Each JPR has one to three corresponding boxes to the right in which to confirm a candidate's success. The evaluator must indicate successful passing by the candidate of each JPR by initialing and dating.

Example:

13.1.1 Size up a machinery rescue incident, given background information and applicable reference materials, so that the scope of the rescue is determined, the number of victims is identified, the last reported location of all the victims is established, witnesses and reporting parties are identified and interviewed, resource needs are assessed, primary search parameters are identified, and information required to develop an initial incident action plan is obtained.	KMB / 4-25-21		

TASK BOOK QUALIFICATION RECORD

FOR THE CERTIFICATION LEVEL OF

NFPA Machinery Rescue

Prior to becoming certified in this position, the candidate must successfully complete the following Job Performance Requirements (JPR). For each JPR there are requisite knowledge and skill requirements. The evaluator must initial and date in the box provided to indicate the meeting of those requirements.

13.1 Awareness Level. Prior to qualification at the awareness level in machinery rescue, the individual shall meet the requirements defined in Section 13.1.

13.1.1 Size up a machinery rescue incident, given background information and applicable reference materials, so that the scope of the rescue is determined, the number of victims is identified, the last reported location of all the victims is established, witnesses and reporting parties are identified and interviewed, resource needs are assessed, primary search parameters are identified, and information required to develop an initial incident action plan is obtained. ☐ ☐ ☐

(A) Requisite Knowledge. Types of reference materials and their uses, availability and capability of the resources, elements of an incident action plan and related information, relationship of the size-up to the incident management system, information gathering techniques and how that information is used in the size-up process, and basic search criteria for machinery rescue incidents. ☐

(B) Requisite Skills. The ability to read technical rescue reference materials, gather information, use interview techniques, relay information, and use information-gathering sources. ☐

13.1.2 Recognize incident hazards and initiate isolation procedures, given scene control barriers, personal protective equipment (PPE), requisite equipment, and available specialized resources, so that all hazards are identified; resource application fits the operational requirements; hazard isolation is considered; risks to rescuers, bystanders, and victims are minimized; and rescue time constraints are taken into account. ☐ ☐ ☐

(A) Requisite Knowledge. Resource capabilities and limitations; types and nature of incident hazards; equipment types and their use; isolation terminology, ☐

methods, equipment, and implementation; operational requirement concerns; common types of rescuer and victim risks; risk/benefit analysis methods and practices; hazard recognition, isolation methods, and terminology; methods for controlling access to the scene; and types of technical references.

(B) Requisite Skills. The ability to identify resource capabilities and limitations, identify incident hazards, assess potential hazards to rescuers and bystanders, place scene control barriers, and operate control and mitigation equipment. ☐

13.1.3 Recognize the need for technical rescue resources at an operations- or technician-level incident, given AHJ guidelines, so that the need for additional resources is identified, the response system is initiated, the scene is secured and rendered safe until additional resources arrive, and awareness-level personnel are incorporated into the operational plan. ☐ ☐ ☐

(A) Requisite Knowledge. Operational protocols, specific planning forms, types of incidents common to the AHJ, hazards, incident support operations and resources, and safety measures. ☐

(B) Requisite Skills. The ability to apply operational protocols, select specific planning forms based on the types of incidents, identify and evaluate various types of hazards within the AHJ, request support and resources, and determine the required safety measures. ☐

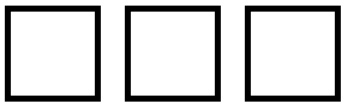
13.1.4 Support an operations- or technician-level incident, given an incident, an assignment, an incident action plan, and resources from the tool kit, so that the assignment is carried out, progress is reported to command, environmental concerns are managed, personnel rehabilitation is facilitated, and the incident action plan is supported. ☐ ☐ ☐

(A) Requisite Knowledge. AHJ operational protocols, hazard recognition, incident management, PPE selection, resource selection and use, and scene support requirements. ☐

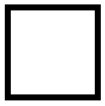
(B) Requisite Skills. The ability to apply operational protocols, function within an incident management system, follow and implement an incident action plan, and report the task progress status to a supervisor or incident command. ☐

13.2 Operations Level. The job performance requirements defined in Sections 13.1 and 13.2 shall be met prior to or during operations-level qualification in machinery rescue.

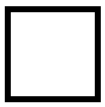
13.2.1 * Preplan for a small machinery incident, given agency guidelines, planning forms, and an operations-level machinery incident or simulation, so that a standard approach is used during training and operational scenarios; initial and ongoing size-ups are being completed; emergency situation hazards are identified; isolation methods and scene security measures are considered; fire suppression and safety measures are identified; machinery stabilization needs are evaluated; and resource needs are identified and documented for future use.



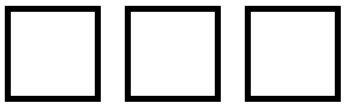
(A) Requisite Knowledge. Operational protocols, specific planning forms, types and machinery common to the AHJ boundaries, machinery hazards, incident support operations and resources, machinery anatomy, and fire suppression and safety measures.



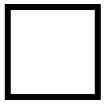
(B) Requisite Skills. The ability to apply operational protocols, select specific planning forms based on the types of machinery, identify and evaluate various types of machinery within the AHJ boundaries, request support and resources, identify machinery anatomy, and determine the required fire suppression and safety measures.



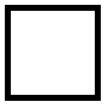
13.2.2 * Establish "scene" safety zones, given scene security barriers, incident location, incident information, and PPE, so that hot, warm, and cold safety zones are designated; zone perimeters are consistent with incident requirements; perimeter markings can be recognized and understood by others; zone boundaries are communicated to incident command; and only authorized personnel are allowed access to the rescue scene.



(A) Requisite Knowledge. Use and selection of PPE, traffic control flow and concepts, types of control devices and tools, types of existing and potential hazards, methods of hazard mitigation, organizational standard operating procedure, and types of zones and staffing requirements.



(B) Requisite Skills. The ability to select and use PPE, apply hazard control concepts, identify and mitigate existing or potential hazards, and apply zone identification and personal safety techniques.



13.2.3 * Establish fire protection, given an extrication incident and fire control support, so that fire and explosion potential is managed and fire hazards and rescue objectives are communicated to the fire suppression crew.

(A) Requisite Knowledge. Types of fire and explosion hazards, IMS, types of extinguishing devices, agency policies and procedures, types of flammable and combustible substances and types of ignition sources, and extinguishment or control options.

(B) Requisite Skills. The ability to identify fire and explosion hazards, operate within the IMS, use extinguishing devices, apply fire control strategies, and manage ignition potential.

13.2.4 * Stabilize a small or simple machine, given a machinery tool kit and PPE, so that the machinery is prevented from moving during the rescue operations; entry, exit, and tool placement points are not compromised; anticipated rescue activities will not compromise machinery stability; selected stabilization points are structurally sound; stabilization equipment can be monitored; and the risk to rescuers is minimized.

(A) Requisite Knowledge. Types and rated capacities of stabilization devices, mechanism of small machinery movement, types of stabilization points, types of stabilization surfaces, AHJ policies and procedures, and types of machinery construction components as they apply to stabilization.

(B) Requisite Skills. The ability to select, operate, and monitor stabilization devices.

13.2.5 * Isolate potentially harmful energy sources, given machinery tool kit and PPE, so that all hazards are identified; systems are managed; beneficial system use is evaluated; and hazards to rescue personnel and victims are minimized.

(A) Requisite Knowledge. Types and uses of PPE, types of energy sources, system isolation methods, specialized system features, tools for disabling hazards, and policies and procedures of the AHJ.

(B) Requisite Skills. The ability to select and use hazard-specific PPE, identify hazards, operate beneficial systems in support of tactical objectives, and operate tools and devices for securing and disabling hazards.

13.2.6 Determine small machinery access and egress points, given the structural and damage characteristics and potential victim location(s), so that victim location(s) is identified; access and egress points for victims, rescuers, and equipment are designated; flows of personnel, victims(s), and equipment are identified; existing entry points are used; time constraints are factored; selected entry and egress points do not compromise stability; chosen points can be protected; equipment and victim stabilization are initiated; and AHJ safety and emergency procedures are enforced.

(A) Requisite Knowledge. Small machinery construction/features, access and egress points, routes and hazards operating systems, AHJ standard operating procedure, and emergency evacuation and safety signals.

(B) Requisite Skills. The ability to identify access and egress points and probable victim locations, and to assess and evaluate impact of machine stability on the victim.

13.2.7 Create access and egress openings for rescue from a small or simple machine, given a machinery tool kit, specialized tools and equipment, PPE, and an assignment, so that the movement of rescuers and equipment complements victim care and removal; the technique chosen is expedient; victim and rescuer protection is afforded; and stability is maintained.

(A) Requisite Knowledge. Small machinery construction and features; electrical, mechanical, hydraulic, pneumatic, and alternative access and egress equipment; points and routes of ingress and egress; techniques and hazards; agency policies and procedures; and emergency evacuation and safety signals.

(B) Requisite Skills. The ability to identify common small machinery construction features, select and operate tools and equipment, apply tactics and strategy based on assignment, apply victim care and stabilization devices, perform hazard control based on techniques selected, and demonstrate safety procedures and emergency evacuation signals.

13.2.8 Disentangle victim(s), given an extrication involving a small or simple machine, a machinery tool kit, PPE, and specialized equipment, so that undue victim injury is prevented; victim protection is provided; and stabilization is maintained.

(A) Requisite Knowledge. Tool selection and application, stabilization systems, protection methods, disentanglement points and techniques, and dynamics of disentanglement. ☐

(B) Requisite Skills. The ability to operate disentanglement tools, initiate protective measures, identify and eliminate points of entrapment, and maintain incident stability and scene safety. ☐

13.2.9 * Identify potential emergency incidents involving mechanical equipment, given the associated structural and damage characteristics, so that incident-specific resources are identified and hazard control plans are developed. ☐ ☐ ☐

(A) Requisite Knowledge. Types of stabilization devices, mechanism of machinery movement and travel, types of stabilization points, types of energy sources, system isolation and release methods, access and egress points, specialized system features, tool selection and application, and special features of unique machinery systems and accompanying subject matter experts. ☐

(B) Requisite Skills. The ability to identify access and egress points and probable victim locations, identify common energy control devices and construction, perform hazard control based on techniques selected, apply tactics and strategy based on assignment, select and operate tools and equipment specific to machinery rescue, apply victim care and stabilization devices, and demonstrate safety procedures. ☐

13.2.10 Designate access and egress points for victim(s) and rescuer(s), given a machinery rescue tool kit and hazard-specific PPE, so that all machinery involved is stabilized and isolated, and chosen points can be protected. ☐ ☐ ☐

(A) Requisite Knowledge. Types of stabilization devices, mechanism of machinery movement and travel, types of stabilization points, types of energy sources, system isolation and release methods, access and egress points, specialized system features, tool selection and application, and special features of unique machinery systems. ☐

(B) Requisite Skills. The ability to identify access and egress points and probable victim locations, identify common energy control devices and construction, perform hazard control based on techniques selected, apply tactics and strategy based on assignment, select and operate tools and equipment specific to machinery rescue, apply victim ☐

care and stabilization devices, and demonstrate safety procedures.

13.2.11 Control the hazards presented by the release of fluids or mechanical release devices; given an entrapment within machinery, so that mechanical processes are secured, the position of machinery is determined to optimize the removal of victim(s), and chosen points do not compromise the removal of a victim or rescuer.

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(A) Requisite Knowledge. Types of stabilization devices, mechanism of machinery movement and travel, types of stabilization points, types of energy sources, system isolation and release methods, access and egress points, specialized system features, tool selection and application, and special features of unique machinery systems.

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(B) Requisite Skills. The ability to identify access and egress points and probable victim locations, identify common energy control devices and construction, perform hazard control based on techniques selected, apply tactics and strategy based on assignment, select and operate tools and equipment specific to machinery rescue, apply victim care and stabilization devices, and demonstrate safety procedures.

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13.2.12 Initiate stabilization of energized equipment, given an entrapment within machinery, so that undue injury is prevented and safety guideline points are followed.

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(A) Requisite Knowledge. Types of stabilization devices, mechanism of machinery movement and travel, types of stabilization points, types of energy sources, system isolation and release methods, access and egress points, specialized system features, tool selection and application, and special features of unique machinery systems.

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(B) Requisite Skills. The ability to identify access and egress points and probable victim locations, identify common energy control devices and construction, perform hazard control based on techniques selected, apply tactics and strategy based on assignment, select and operate tools and equipment specific to machinery rescue.

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13.2.13 * Utilize specific information from a subject matter expert (SME), given a machinery rescue event and an SME capable of supplying event- or system-specific technical guidance, so that the technical guidance supports decision making and operational considerations applied during the event.

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(A) Requisite Knowledge. Operational protocols, data collection, and data interpretation. ☐

(B) Requisite Skills. Interviewing, note taking, diagram/technical drawing interpretation. ☐

13.2.14 Remove a packaged victim to a designated safe area, as a member of a team, given a victim transfer device, a designated egress route, and PPE, so that the team effort is coordinated, the designated egress route is used, the victim is removed without compromising victim packaging, undue injury is prevented, and stabilization is maintained. ☐ ☐ ☐

(A) Requisite Knowledge. Patient handling techniques; operation of IMS; types of immobilization, packaging, and transfer devices; types of immobilization techniques; and uses of immobilization devices. ☐

(B) Requisite Skills. Use of immobilization, packaging, and transfer devices for specific situations; use of immobilization techniques; application of medical protocols and safety features to immobilize, package, and transfer; and use of all techniques for lifting the patient. ☐

13.2.15 * Terminate an incident, given PPE specific to the incident, isolation barriers, and tool kit, so that rescuers and bystanders are protected and accounted for during termination operations, the party responsible is notified of any modification or damage created during the operational period, documentation of loss or material use is accounted for, scene documentation is performed, scene control is transferred to a responsible party, potential or existing hazards are communicated to that responsible party, debriefing and postincident analysis and critique are considered, and command is terminated. ☐ ☐ ☐

(A) Requisite Knowledge. PPE characteristics, hazard and risk identification, isolation techniques, statutory requirements identifying responsible parties, accountability system use, reporting methods, and postincident analysis techniques. ☐

(B) Requisite Skills. Selection and use of hazard-specific PPE, decontamination of PPE; use of barrier protection techniques, data collection and record-keeping/reporting protocols, postincident analysis activities. ☐

13.3 Technician Level. The job performance requirements defined in Sections 13.2 and 13.3 shall be met prior to or during technician-level qualification in machinery rescue.

13.3.1 * Plan for a large machinery incident, and conduct initial and ongoing size-up, given agency guidelines, planning forms, and operations-level machinery incident or simulation, so that a standard approach is used during training and operational scenarios; emergency situation hazards are identified; isolation methods and scene security measures are considered; fire suppression and safety measures are identified; machinery stabilization needs are evaluated; and resource needs are identified and documented for future use.

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(A) Requisite Knowledge. Operational protocols, specific planning forms, types of large, commercial/heavy machinery common to the AHJ boundaries, machinery hazards, incident support operations and resources, machinery anatomy, and fire suppression and safety measures.

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(B) Requisite Skills. The ability to apply operational protocols, select specific planning forms based on the types of large machinery, identify and evaluate various types of large machinery within the AHJ boundaries, request support and resources, identify large machinery anatomy, and determine the required fire suppression and safety measures. Awareness level rescue skills are applicable to vehicle or machinery events that involve simple or small machinery, are limited to digital entrapment of the victim, and involve environments where rescuer intervention does not constitute a high level of risk to either the victim or rescuers based on the environment or other factors. Operations level skills apply to those incidents that involve heavy machinery, complex extrication processes, multiple uncommon concurrent hazards, or more than digital entrapment of a victim.

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13.3.2 * Stabilize large machinery, given a machinery tool kit and PPE, so that the machinery is prevented from moving during the rescue operations; entry, exit, and tool placement points are not compromised; anticipated rescue activities will not compromise machinery stability; selected stabilization points are structurally sound; stabilization equipment can be monitored; and the risk to rescuers is minimized.

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(A) Requisite Knowledge. Types and rated capacities of stabilization devices, mechanism of machinery movement, types of stabilization points, types of stabilization surfaces, AHJ policies and procedures, and types of machinery construction components as they apply to stabilization.

(B) Requisite Skills. The ability to select, operate, and monitor stabilization devices.

13.3.3 Determine large machinery access and egress points, given the structural and damage characteristics and potential victim location(s), so that victim location(s) is identified; access and egress points for victims, rescuers, and equipment are designated; flows of personnel, victim(s), and equipment are identified; existing entry points are used; time constraints are factored; selected entry and egress points do not compromise machinery stability; chosen points can be protected; equipment and victim stabilization are initiated; and AHJ safety and emergency procedures are enforced.

(A) Requisite Knowledge. Large machinery construction/features, access and egress points, routes and hazards, operating systems, AHJ standard operating procedure, and emergency evacuation and safety signals.

(B) Requisite Skills. The ability to identify access and egress points and probable victim locations and to assess and evaluate impact of large machinery stability on the victim(s).

13.3.4 Create access and egress openings for rescue from large machinery, given a machinery tool kit, specialized tools and equipment, PPE, and an assignment, so that the movement of rescuers and equipment complements victim care and removal; an emergency escape route is provided; the technique chosen is expedient; victim and rescuer protection is afforded; and stability is maintained.

(A) Requisite Knowledge. Large machinery construction and features; electrical, mechanical, hydraulic, and pneumatic systems; alternative access and egress equipment; points and routes of ingress and egress; techniques and hazards; agency policies and procedures; and emergency evacuation and safety signals.

(B) Requisite Skills. The ability to identify large machinery construction features, select and operate tools and equipment, apply tactics and strategy based on assignment, apply victim care and stabilization devices,

perform hazard control based on techniques selected, and demonstrate safety procedures and emergency evacuation signals.

13.3.5 Disentangle victim(s), given an extrication incident, a machinery tool kit, PPE, and specialized equipment, so that undue victim injury is prevented; victim protection is provided; and stabilization is maintained. ☐ ☐ ☐

(A) Requisite Knowledge. Tool selection and application, operation of stabilization systems, protection methods, disentanglement points and techniques, and dynamics of disentanglement. ☐

(B) Requisite Skills. The ability to operate disentanglement tools, initiate protective measures, identify and eliminate points of entrapment, and maintain incident stability and scene safety. ☐