



Powered Mobile Equipment Standard

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1.0 Purpose

This purpose of this standard is to define Cenovus's minimum requirements regarding *Powered Mobile Equipment* to enable the development of functional level execution plans and procedures, and/ or to verify the working procedures of contractors to meet Cenovus's requirements.

2.0 Scope

This standard applies to all Cenovus worksites (temporary and permanent) and encompasses all Cenovus work activities in Alberta and British Columbia. This standard also applies to all Cenovus staff and contractors and service providers.

Powered mobile equipment (PME) refers to self-propelled machines that assist with the movement or transportation of materials, or a machine that provides a work platform for the worker.

Examples of PMEs include, but are not limited to, bucket loaders, scrapers and graders, tracked and rubber-tired bulldozers, backhoes, excavators, front-end loaders, dump trucks, packers, pavers, forklifts, concrete pumpers, pile-driving equipment, aerial work platforms and skid steers.

This standard does not apply to the following:

1. Motor vehicles (cars and trucks)
2. Cranes
3. Off-highway vehicles (OHV)
4. This standard does not include vehicle or equipment requirements under either the Alberta or British Columbia Traffic Safety Act, in respect of operating or transporting PME on public roads or highways.

3.0 Roles and Responsibilities

The following responsibilities apply to this standard:

Table 1: Roles and Responsibilities

Role	Description
Functional Leaders and Functional Supervisor	<ul style="list-style-type: none"> • Communicate and implement this standard at their operations or functional areas of authority. • Demonstrate ownership and leadership by actively setting a positive example. • Allocate and make available the necessary financial and human resources that are required to functionally implement this document. • Confirm all workers are aware of their roles and responsibilities outlined in the standard requirements section of this document by verifying the existence of work level procedures/ plans. • Confirm workers are trained on this subject. • Coach and correct workers who do not understand or comply with the requirements of this document. • Provide feedback to the document owner or representative concerning proposed changes or improvements to this document.
HSER Programs & Reporting Team	<ul style="list-style-type: none"> • Monitor and collect feedback related to this document to verify program effectiveness. • Lead document reviews and revisions as per the expectations described in this document. • Provide subject matter expertise when requested by Business Leaders or other functional teams.
HSER Field Team	<ul style="list-style-type: none"> • Conduct worksite observations and assessments on a regular basis to verify compliance with the expectations described in this document. • Assist with the implementation and communication of the documented requirements. • Provide feedback to the document owner or representative concerning proposed changes or improvements to this document.
Enterprise, Assurance, Compliance & Audit	<ul style="list-style-type: none"> • Lead, organize, and conduct audits to verify compliance, identify gaps, and suggest improvement opportunities.

4.0 Standard Requirements

4.1 Work planning

When planning work that requires the use of powered mobile equipment (PME), the functional supervisor and equipment operator must have a clear understanding of work requirements and conditions. A hazard assessment (terrain, weather, work area and seasonal specific hazards) to ensure the proper selection of equipment.

Existing or potential hazards associated with operating, maintaining, or working in proximity to PME are required to be documented in a hazard assessment and appropriately eliminated or controlled.

4.2 General equipment operator requirements

Cenovus employees and contractors operating PME must:

- Be authorized and deemed competent by the equipment operator’s employer (Cenovus or contractor, as applicable) to operate that specific type of equipment.
- Confirm by inspection that, where required by regulation, the appropriate vehicle certificate of registration documentation, proof of vehicle insurance coverage, and an equipment operator’s manual are carried with the vehicle, and a license plate and validation tab are mounted on the vehicle where they remain clearly visible.
- Verify that the number of persons being transported does not exceed the manufacturer’s design specifications or the number of designated seats fitted with seat belts.
- Confirm that all personnel use seatbelts in a properly adjusted and securely fastened manner while the PME is in operation.
- Verify that all personnel riding PME wear the safety protective equipment and clothing as required by the manufacturer, or as designated by Cenovus or the contractor.
- Evaluate the assigned job, select the appropriate attachment(s) to complete the work, and use the attachment(s) solely for their designed task and for no other alternative purpose.
- Maintain or complete any operating logs or records for the equipment, as required by site practice.
- Be fit for duty when operating, maintaining, or working in the vicinity to PME.
- Confirm that, at no time, are persons to be transported on fenders, mounting steps, hooks, forks, pallets or in buckets, or by any other manner, on the equipment other than as designed by the manufacturer for personnel transport.

4.3 Equipment requirements

PME operated on Cenovus worksites should be operated and maintained within the guidelines set forth by the manufacturer and regulatory bodies. Modifications or structural repairs to PME must be completed in accordance with the manufacturer’s specifications or by a certified engineer, including any required testing or inspections. At a minimum, PME must be equipped with the following:

- An emergency stop for any auxiliary equipment driven from the PME (if equipped with an emergency stop)
- An audible warning device
- Seats or anchors for all workers required to work on or ride in the equipment
- A working braking system and parking device

- Head lights and back-up lights for low visibility and darkness (if equipped)
- Windshield wipers and washers (if equipped with a windshield)
- A cab, screen, or guard if there is danger of being hit by a falling object

4.3.1 Manufacturer installed safety devices

4.3.1.1 Rollover Protective Structures (ROPS)

A cab or frame that can support PME in an overturned position, regardless of the direction in which the PME overturns, and that is installed by the manufacturer. The following types of PME weighing over 700 kilograms are required to be equipped with rollover protective structures:

- Tracked or wheeled bulldozers, loaders, tractors or skidders, other than those operating with side booms
- Back hoes with a limited horizontal swing of 180 degrees
- Graders
- Wheeled trenchers

4.3.1.2 Seat belt assembly

All personnel operating a PME, equipped with a seat belt assembly supplied by the manufacturer, will confirm that all personnel riding in the PME use seat belts in a properly adjusted and securely fastened manner. Where installed by the manufacturer, seat belts are not to be removed from the PME.

4.3.1.3 Warning signal

All PME is required to be equipped with an effective means of warning others of its presence and the general movement of the equipment. Warning signals include both audible and visual devices, such as backup alarms and strobe lights. In addition to audible and visual alarms, equipment may be required to be equipped with additional warning devices, such as a buggy-whip, appropriate to the hazards of the worksite.

4.3.2 Equipment guards and screens

When the risk of injury to the equipment operator has been identified by hazards, such as flying, falling, or projecting objects, the powered mobile equipment is required to be equipped with the necessary guards and screen to protect occupants. This can include manufactured installed protective structures, such as a cab, or job/ hazard-specific safety devices such as a removable screen.

When the risk of sinking or tipping exists for PME equipped with a cab or enclosure, the enclosure must be designed with a means to safely escape or have a tool that removes the barrier.

4.3.3 Powered mobile equipment inspection and maintenance

Where Cenovus or contracting companies operate PME, each organization is responsible to comply with the manufacturer's recommended inspection, maintenance procedures, and maintenance records.

All inspections must be documented, and easily accessible by the equipment operator. Contractor PME inspections and maintenance records must be available for review by Cenovus, upon request.

When maintaining equipment, all hazardous energy shall be isolated as per OH&S code and Cenovus's or the contractor's isolation procedures. A hazardous energy test or verification process is required before executing any maintenance activities.

4.3.4 Powered mobile equipment pre-use inspection

Equipment inspection and maintenance is a cornerstone of safely operating PME. The manufacturer has established periodic inspection requirements related to the mechanical reliability of the equipment.

Prior to operating equipment, the equipment operator shall conduct and document a daily pre-use inspection. The equipment operator shall inspect:

- A general conditions inspection (obvious damages)
- Fluids (fuel, lubricants, windshield wash (if fitted) – all topped up with no leaks)
- Suspension
- Hydraulic components
- Chains or drive shaft oiled and clean
- Visual tires/ tracks condition
- Safety equipment fitted (headlights, brakes, seatbelts, fire extinguisher, automatic audible warning device, glass break, etc.)
- Muffler/ exhaust system clear of debris/ vegetation and blockages
- Windshield (if fitted)
- Latches for hatches and doors (if fitted)
- Winch (if fitted)
- Towing hitch (ball) if fitted
- Attachments (buckets, blades, etc.) if fitted
- Applicable documentation (vehicle registration, insurance, and operator's manual)

The equipment operator must report defects and conditions affecting the safe operation of the equipment to their Cenovus supervisor. Any repair or adjustment necessary for the safe operation of the equipment must be made before the equipment is used.

4.4 Safe operating requirements

Operating speed, inattention, unfamiliarity with equipment and obstructed vision have all been shown as key factors in PME incidents. Cenovus requires employee, contractor personnel, and service providers operating powered mobile equipment to employ the following safeguards:

- Operate the PME at speeds, and in a manner, appropriate to the potential hazards of the workplace taking into considerations factors, such as the machine’s balance, the nature of the surface being travelled, the width of tracks or tires, the height of the working load of the machine, as well as the proximity to pedestrians and other equipment or infrastructure.
- Do not move PME into place, in support of any excavation, trench or confined space, when personnel are still inhabiting those workplaces.
- Operate the PME within the machine’s limits when working on slopes or hills.
- Maintain three-point contact when entering/ mounting and exiting/ dismounting the equipment.
- Use hearing, head, and eye protection when exposed to hazards, especially when any windows or hatches are open on the cab.
- Whenever PME is required to move or operate in the immediate vicinity of overhead or underground utilities or transmission systems, the equipment operator is required to work within the limitations of the Overhead Power Line Encroachment Standard and/ or Ground Disturbance Standard.
- If equipment is not in use, the operator must ensure that the equipment is secured against unintended movement, and elevated parts of the equipment including the load are landed and/ or secured in a safe position.
- Select stopping and parking areas with care. Always try to park the equipment on gravel, pavement or hard-packed ground to reduce the risk of soil subsidence that could result in entrapment or potential toppling of the equipment.

4.4.1 Congested work areas and pedestrian traffic

By their design and intended use, most types of PME encounter issues of manoeuvrability and clear sight lines when working in a typically congested workplace. The equipment-pedestrian and the equipment-property interfaces are generally the most challenging safety issues surrounding the use of powered mobile equipment. To mitigate these risks, equipment operators must conduct a hazard assessment that takes into consideration the following controls:

- Use a guide or spotter where equipment design or operating restrictions present blind spots.
- Audible and/ or visual warning devices (e.g. back-up alarm or strobe light) must be installed and operable when reversing.
- Be aware of the position of any person or properties near the PME.
- Alert personnel to the presence and movement of the PME, including the equipment operator(s) of other PME or vehicles in the immediate vicinity.

- Do not operate equipment near workers where a worker could become caught between or struck by a moving part, load, cab, or counterweight of the equipment.

4.4.2 Lifting and handling loads

Equipment operators must ensure that equipment used for lifting and handling loads is of sufficient size, strength and design to perform the function for which they are intended. PME should not be utilized for lifting or handling loads, unless:

- Equipment is equipped with legible load rating charts for the lifting/ hoisting configuration and are available for equipment operator.
- Lifting components are inspected and/ or certified at the interval prescribed by the manufacturer or company practice, whichever is more stringent.
- If the movement of a load creates a danger to workers, supervision must not permit a worker to remain in the range of the load. If the load creates a danger to workers, the operator must not move the load.
- Only use equipment or equipment attachments that have been designed and certified to be utilized in lifting and handling loads.

4.4.3 Transporting powered mobile equipment

Where Cenovus or contractor personnel use vehicle trailers to transport PME, the trailer manufacturer’s recommendations regarding loading, weight-balance, securing and unloading are to be followed.

The maximum height of the load (trailer and PME) must be determined before any equipment is transported. The load must not exceed the height requirements established in transportation and safety regulation for the designated highway corridor or route segments unless proper approval and permits are received by the governing agency. Where the combined height of the equipment and load is greater than 4.15 metres (13 ft. 6 in.), a high load permit and high load move plan is required from the provincial transport agency and utility owner, respectively. The Cenovus Overhead Power Line Encroachment Standard must also be consulted and complied with.

Secure and brace the PME using the appropriately rated tie-down arrangements. Pay attention to parts of the PME that overhang the trailer. Provincial traffic regulations require high-visibility flagging (and/ or lighting) for loads that overhang the sides or ends of trailers.

4.4.4 Powered mobile equipment fuelling

Follow the manufacturer’s instructions for safe fuelling. Always turn off the ignition and allow the engine and exhaust to cool prior to opening the fuel cap and fuelling the equipment. Fuel PME at designated fuelling stations, where possible, to avoid in-field refuelling.

4.4.4.1 Field based refuelling

When refuelling in the field, have a fuel-spill clean-up kit as part of the PMEs cargo. Do not conduct in-field refuelling without this equipment being immediately available. Verify that there is a suitable grounding

wire or bonding strap connecting a metal point on the PME to a metal point on the trailer or truck. Where applicable, follow the site-specific procedure for refuelling equipment.

4.4.5 Elevated work platforms and aerial devices

Elevated work platforms and aerial devices are required to be operated, maintained, and inspected in accordance with manufacturer’s specifications and regulatory requirements. Elevated work platforms and aerial devices are required to be clearly marked with a rated load capacity and have records of inspection and certification by a professional engineer visible.

4.4.5.1 Fall protection

When operating or travelling in an elevated work platform or aerial device, occupants are required to wear a personal fall protection system as outlined in Cenovus Fall Protection Standard. Occupants are required to utilize approved anchorage points as determined by the manufacturer or as by a professional engineer.

5.0 Training and Competency

All personnel involved in supervising or performing work related to powered mobile equipment will have received training related to:

- Occupational Health and Safety regulations governing PME
- The minimum requirements stated within this standard
- All functional and site-specific rules, procedures, and plans associated to PME
- Any relevant service provider’s safe work procedures meant to control the hazards associate to PME

5.1 Operating and maintenance procedures

Cenovus expectations related to development and communication of work instructions are defined within *4.5 Operating and Maintenance Procedures COMS Standard*.

5.2 Training

Cenovus expectations related to training and competency is outlined in *5.4 Training and Competency Assurance COMS Standard*.

5.2.1 Cenovus staff required training

Equipment specific training

Personnel operating PME must be trained in the safe operation of the equipment, be familiar with the equipment’s operating instructions, and demonstrate competency in operating the equipment. Training must include theoretical, practical training, and a competency review to demonstrate that the worker has sufficiently acquired the knowledge or skill.

After initial training, evaluation of workers’ competency needs to be verified at a minimum every three (3) years. This may be accomplished by retraining or by a

competency assessment. Where a competency assessment is used, a worker must be evaluated on both theory (knowledge) and practical (skills) components.

At a minimum, equipment operators should be trained and assessed in the following topics:

- legislative requirements for maintaining and operating the equipment
- equipment specific maintenance and operating procedures
- safe riding practices and strategies
- manufacturers’ specifications and instructions
- hazards and mitigations associated with operating the specific type of equipment
- parts of the equipment
- pre-use inspections
- loading and unloading procedures
- operation guidelines for loaded and unloaded equipment
- attachments and accessories
- practical operations specific to the equipment type
- personal protective equipment
- environmental considerations and issues
- fall protection course (as applicable)

6.0 Program Compliance

6.1 Compliance measurement

Compliance with this standard effectiveness shall be assessed through program assessments and internal audits, or other measurement criteria as specified in the 7.2 Assurance COMS Standard. Measurement can also be accomplished through the tracking of appropriate Key Performance Indicators (KPIs).

Business functions impacted by this standard must include compliance and program effectiveness verifications in their business assurance program.

7.0 References

7.1 Definitions and acronyms

The following terms, definitions and acronyms are specific to this Standard:

Table 2: Terms and Definitions

Term	Definition
Competent	A person who is adequately qualified, suitably trained and with enough experience to safely perform work without supervision or with only a minimal degree of supervision.

Term	Definition
Contractor	A person, partnership or group of persons who, through a contract, an agreement or ownership, directs the activities of one or more employers involved in work at a work site. Also known as a <i>Supplier</i> .
Powered mobile equipment	A self-propelled machine that assists with the movement or transportation of materials, or a machine that provides a work platform for the worker.

Table 3: Acronyms, Initialisms and Abbreviations

Acronym	In Full
AWP	Aerial Work Platform
CSA	Canadian Standards Association
EWP	Elevated Work Platform
OHS	Occupational Health and Safety
OHV	Off-highway Vehicle
PME	Powered mobile equipment
ROPS	Roll-over Protective Structure

7.2 Related Information

The following references support this standard:

- 4.5 Operating and Maintenance Procedures COMS Standard
- 5.4 Training and Competency Management COMS Standard
- 7.2 Assurance COMS Standard
- [Alberta OHS Act, Regulation & Code – Part 19](#)
- [Cold Lake Air Weapons Range – Range Safety](#)
- Cranes, Hoists, and Lifting Devices Standard
- [CSA Standard B352.0-16 Roll-over protective structures \(ROPS\) – General Canadian requirements](#)
- [Energy Safety Canada](#)
- Fall Protection Standard
- [Field Guide to Working Safely on Ice Covers](#)
- Ground Disturbance Standard
- Power Line Encroachment Standard
- Excavation Standard
- Working on Muskeg Guideline
- [WorkSafeBC- Part 16 Mobile Equipment](#)