

# **EXPRO National Manual for Projects Management**

## **Volume 11, Chapter 3**

### **Project Powered Industrial Trucks Procedure**

Document No. EPM-KSS-PR-000017 Rev 003



## Project Powered Industrial Trucks Procedure

### Document Submittal History:

| Revision: | Date:      | Reason For Issue |
|-----------|------------|------------------|
| 000       | 21/09/2017 | For Use          |
| 001       | 03/12/2017 | For Use          |
| 002       | 29/11/2018 | For Use          |
| 003       | 09/08/2021 | For Use          |



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## Project Powered Industrial Trucks Procedure

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# Project Powered Industrial Trucks Procedure

## 1.0 PURPOSE

The purpose of this procedure is to outline the safety requirements for the protection, maintenance and to operate powered industrial trucks.

## 2.0 SCOPE

The scope of this procedure applies to all works performed under all Government Construction Contracts executed throughout the Kingdom of Saudi Arabia.

## 3.0 DEFINITIONS

| Definitions      | Description                                                                                           |
|------------------|-------------------------------------------------------------------------------------------------------|
| Competent Person | Person who has through training, knowledge and experience to perform a task                           |
| JHA              | Job Hazard Analysis                                                                                   |
| OHP              | Overhead protection engineered reinforced roof to protect the operators from falling objects.         |
| Operator         | Person who has been trained to use a machine                                                          |
| PPE              | Personal Protective Equipment                                                                         |
| ROP              | Roll-over protection. Designed to protect operators from injuries caused from overturns or rollovers. |
| WMS              | Work Method Statement                                                                                 |

## 4.0 REFERENCES

- Occupational Safety and Health Standards 1910.178 - Powered Industrial Trucks

## 5.0 RESPONSIBILITIES

### 5.1 Manager

The Manager is responsible to ensure that adequate resources, people, equipment, and training are made available to facilitate the requirements of this procedure, and for ensuring that the requirements of this procedure are properly implemented.

### 5.2 Supervisor

The responsible supervisor shall be knowledgeable of the requirements of this procedure, and shall verify that operators of powered industrial trucks are properly trained and have been deemed competent to operate the equipment.

### 5.3 Personnel/Operators

All personnel are responsible and accountable for complying with the requirements set out in this procedure. No operator shall operate a machine that they have not been trained or been assessed as being competent on. In addition, all personnel are responsible for the following:

When machines are operated nearby:

- Clearly understand everyone's task.
- Look out for other machines using the area.
- Remember operators cannot always see pedestrians.
- Stay away from machines unless the task requires to be in the vicinity.
- Stay out of the machine blind spots. (an area around a car, truck, etc., that the driver cannot see)
- Obtain permission from the operator before approaching the machine.



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When operating a machine:

- Inspect the equipment before operating.
- Obey speed limits and other rules.
- Be aware of pedestrians and other equipment in the area.
- Avoid reversing when possible.
- Use a guide when reversing or operating in a congested area.
- If in doubt regarding the safe operation or movement, stop and verify that the operation can be done safely, before proceeding.

## 6.0 RISK ASSESSMENTS

Before any Project/Work Activity/ commences it is important that Risk Assessments are completed prior to beginning any work.

Risk assessments must be conducted at the Planning Stage:

- Project Risk Assessment.
- Work Method Statements (WMS)
- Job Hazard Analysis (JHA).

It is imperative that prior to beginning of any work activity, a pre-start briefing occurs to discuss the contents of the WMS/JHA which includes mitigations of for other hazards noted by the crew at the jobsite. The discussion shall also include job steps, expected hazards associated with the activity, and the mitigation and protection methods that shall be implemented to prevent incidents.

The Hierarchy of control shall be used to reduce the likelihood of an incident occurring.

- **Elimination** (Remove the Hazard)
- **Substitution/Isolation** (Replacing material, process or hazard with a lower risk one/ separate people from the hazard (such as through guarding, distance, etc.)
- **Engineering Controls** (Redesign or replacement of plant and equipment)
- **Administration Controls** (Procedures, training, signage)
- **PERSONAL PROTECTIVE EQUIPMENT PPE**

No work is to commence until the above has been implemented and signed by the relevant Supervisor in charge

## 7.0 PROCESS

### 7.1 General

The aim of the Powered Industrial Truck Procedure is to provide guidance on how to eliminate or minimize risk associated with powered industrial trucks operations. The procedure provides knowledge required for personnel to adopt the appropriate safe work practices while working around or operating powered industrial trucks.

This procedure sets out a scheme which establishes the minimum safety requirements for:

- Identifying, managing and controlling hazards relating to operation of equipment.
- Assigning qualified operators.
- Operator training.
- Inspection and maintenance of equipment.
- Minimizing personnel exposure to potential hazards relating to use of equipment.
- Preventing injury and damage related to equipment operation.



### 7.2 Material Handling Requirements

Powered equipment is designed to and used to push, carry, pull, lift, stack, or tier material and normally operated from ground level with unrestricted routes of travel.

Only trained personnel who have been deemed competent are authorized to operate powered industrial trucks. The following requirements shall apply:

- Adequate ventilation shall be provided when operating internal combustion-powered vehicles are used. In closed areas.
- When operating in enclosed areas, internal combustion-powered engines shall be shut down when not in operation.
- Operators are not permitted to use mobile phones when operating equipment.
- Trucks shall not be driven up to anyone standing in front of a bench, wall, or other fixed object.
- No person is to stand or pass under any elevated portion of the truck whether it be loaded or not.
- It is prohibited for any person to ride on the truck unless a designed passenger seat from the manufacturer is installed and seat belt is fitted.
- All arms and legs are to stay within the confines of the machine.
- When leaving the machine un-attended the machine is to be parked in a flat level and safe area, the park brake applied, transmission in the neutral position, attachments lowered to the ground, engine shut off, isolator turned to the off position, and key removed. If a flat level area is not available wheels are to be chocked.
- Always check that the operating surface the machine operates on is able to withstand the weight plus the load.
- Ensure that the operator takes care to avoid damage to overhead structures to ensure no there is sufficient headroom under overhead installations, lights, sprinkler systems etc....
- Overhead Protection (OHP) shall be fitted to machine to protect the operator against falling objects.
- Roll Over Protection (ROP) shall be fitted to machine to protect the operator in case machine rolls over. This is to be fitted from manufacturer only.
- A load backrest extension shall be used whenever necessary to minimize the possibility of the load or part of the load falling rearward onto the operator.
- Only approved industrial machines are to be used within hazardous areas.
- Only loads within the rated capacity of the machine shall be handled.
- Only stable or safely arranged loads shall be handled. Caution shall be exercised when handling off-center loads that cannot be centered.
- Long or high loads which may affect the machines stability/capacity, shall be adjusted.
- Extreme care shall be taken when tilting the mast rearward to avoid objects falling.

### 7.3 Traveling

When travelling the following requirements are to be adhered to:

- All traffic regulations shall be observed.
- Maintain a safe distance between machines (approximately (3) machine lengths).
- Give way to any emergency vehicles.
- The operator shall be required to look in the direction of travel and keep a clear view at all times.
- When approaching intersections where vision is obstructed, the operator is to sound the horn to alert any persons or other equipment approaching.
- When ascending or descending grades, caution shall be taken.
- When grades exceed 10 degrees, machines carrying loads shall have the loads facing uphill.
- On wet or slippery surfaces, operators shall slow down.
- Bridge plates or dock boards shall be rated for the capacity of the machine and shall be secured to prevent movement.
- When negotiating turns, extreme caution is to be adhered to. Always turn in a smooth rate without jerky movements.



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When travelling operators shall travel with the load attachments as close to the ground as possible so as to clear any obstacles.

### 7.4 Operation

Operators are to operate the machine in accordance with the manufactures manual. The following shall also apply:

- If at any time the machine is found to have a fault, and is in need of repair that could make the machine un-safe to operate, the machine is to be taken out of service until the fault can be rectified by a suitably trained person (mechanic).
- All machines are to have a daily inspection prior to use.
- When re-fueling, engine is to be shut off and the keys re-moved from the ignition.
- Care shall be taken to ensure no spillages occur during the re-fueling process. A fire extinguisher shall be close by.
- All machines shall be inspected regularly to ensure that build-up of grease or any other material is removed that could create a fire hazard.

### 7.5 Maintenance

It is important to maintain machines at all times. The following will assist in ensuring that the machines are kept in a serviceable condition:

- Any machine that is not in a safe working condition, shall be removed from service.
- Only authorized personnel can make repairs to any machine.
- No repairs to be undertaken in a hazardous environment.
- When working on the electrical system, the battery shall be dis-connected prior to any repairs taking place.
- A full inspection shall take place before the machine is placed back into service.
- Log books/maintenance books are to be maintained and kept up to date.
- A daily inspection sheet must be maintained by the operator. An example can be seen in (Attachment 1)
- If machines are operated round the clock, inspections shall be completed at the beginning of each shift. If faults are found immediately report to the responsible supervisor.
- If the temperature of the machine increases over the normal operating temperature, shut the machine down and remove machine from service. Machine is not to be returned to service till the cause of the overheating has been rectified.

#### 7.5.1 Tires

Special care must be taken when operating machines with Tires.

##### ***Traction-treaded cushion Tires:***

Replace the Tire when the tread pattern is worn to the point of disappearing.

##### ***Plan-treaded cushion Tires:***

Replace the Tire when wear reaches the wear indicator. (this is often the top of the brand identification lettering on the wall of the Tire.

##### ***Pneumatic Tires:***

Replace the Tires when the tread pattern disappears. Always ensure that the correct Tire pressure is maintained.

When changing Tires, (especially Tires that are air filled) personnel changing Tires shall place Tire in a purpose built cage when inflating Tires.

When selecting the type of Tire for the machine, it should be determined by the terrain that the machine has to operate in.





### 8.0 TRAINING

Only authorized personnel who have been assessed as being competent can operate Powered Industrial Trucks. All training records are to be maintained and be available upon request.

All operators shall be certified for particular powered industrial trucks from recognized third party

All operator training and evaluation shall be conducted by persons who have the knowledge, training, and experience to train powered industrial truck operators and evaluate their competence.

Training shall consist of a combination of formal instruction (e.g., lecture, discussion, interactive computer learning, video tape, written material), practical training (demonstrations performed by the trainer and practical exercises performed by the trainee), and evaluation of the operator's performance in the workplace.

### 9.0 ATTACHMENTS

1. EPM-KSS-TP-000003 - Daily Pre-Start Checklist
2. Powered Industrial Trucks.



## Project Powered Industrial Trucks Procedure

### Attachment 1 - EPM-KSS-TP-000003 - Daily Pre-Start Checklist

|              |
|--------------|
| COMPANY NAME |
|--------------|

#### WEEKLY PLANT INSPECTION LOG

PLANT IDENTIFICATION #:

DATE START:

| SER     | ITEM TO BE CHECKED                   | CONDITION |   |     |   |     |   |     |   |     |   |     |   |     |   |
|---------|--------------------------------------|-----------|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|
|         |                                      | SAT       |   | SUN |   | MON |   | TUE |   | WED |   | THU |   | FRI |   |
|         |                                      | ✓         | x | ✓   | x | ✓   | x | ✓   | x | ✓   | x | ✓   | x | ✓   | x |
| 1       | FLUID LEVELS                         |           |   |     |   |     |   |     |   |     |   |     |   |     |   |
| 2       | OPERATING LEVERS                     |           |   |     |   |     |   |     |   |     |   |     |   |     |   |
| 3       | LIGHTS                               |           |   |     |   |     |   |     |   |     |   |     |   |     |   |
| 4       | HAZARD BEACON                        |           |   |     |   |     |   |     |   |     |   |     |   |     |   |
| 5       | REVERSING ALARM                      |           |   |     |   |     |   |     |   |     |   |     |   |     |   |
| 6       | WINDOWS                              |           |   |     |   |     |   |     |   |     |   |     |   |     |   |
| 7       | HORN                                 |           |   |     |   |     |   |     |   |     |   |     |   |     |   |
| 8       | TIRES / TRACKS                       |           |   |     |   |     |   |     |   |     |   |     |   |     |   |
| 9       | SEATBELT                             |           |   |     |   |     |   |     |   |     |   |     |   |     |   |
| 10      | FIRE EXTINGUISHER                    |           |   |     |   |     |   |     |   |     |   |     |   |     |   |
| 11      | FOOT BRAKE                           |           |   |     |   |     |   |     |   |     |   |     |   |     |   |
| 12      | HAND BRAKE                           |           |   |     |   |     |   |     |   |     |   |     |   |     |   |
| 13      | MIRRORS                              |           |   |     |   |     |   |     |   |     |   |     |   |     |   |
| 14      | VISIBILITY                           |           |   |     |   |     |   |     |   |     |   |     |   |     |   |
| 15      | ATTACHMENTS<br>(bucket/blade/ripper) |           |   |     |   |     |   |     |   |     |   |     |   |     |   |
| REMARKS |                                      |           |   |     |   |     |   |     |   |     |   |     |   |     |   |

INSPECTED BY:

OPERATOR  
PLANT MANAGER



## Project Powered Industrial Trucks Procedure

### Attachment 2 - Powered Industrial Trucks



15 Tonne Forklift



3 Tonne Forklift



## Project Powered Industrial Trucks Procedure



Container Lifter



Tele Handler