Chapter 48: Powered Industrial Vehicles

Quick Start Summary

1 Who needs to know about these requirements

The requirements of Powered Industrial Vehicles apply to workers (as operators, spotters, and custodians), supervisors, and Fleet Services. They cover selecting, inspecting, maintaining, and using forklifts and other powered industrial vehicles (PIVs) and associated attachments.

2 Why

The misuse of PIVs can result in property damage, severe injury, or death from equipment roll-overs or from personnel or property being caught in between the equipment and a solid object.

3 What do I need to know

Only workers who are physically and mentally fit and qualified may operate this equipment and handle the loads. Qualification includes thorough training, both classroom and practical, the latter emphasizing experience with specific models of PIVs.

PIVs themselves must meet applicable standards, be maintained and stored properly, and pass an initial inspection, conducted by a custodian, when first brought on-site and a pre-use inspection, conducted by the operator, before each shift.

Special requirements apply for use of PIVs on roadways and a spotter is required when the operator’s view is obstructed by the load or when operating in a congested area. If a spotter is required, the operator and spotter must conduct a pre-lift review.

4 When

These requirements take effect 2 March 2015.

5 Where do I find more information

SLAC Environment, Safety, and Health Manual (SLAC-I-720-0A29Z-001)

- Chapter 48, “Powered Industrial Vehicles”

Or contact the program manager.
Chapter 48

Powered Industrial Vehicles

1 Purpose

The purpose of this program is to ensure forklifts and other powered industrial vehicles (PIVs) meet applicable standards, are kept in good working order, and are used safely and properly. It covers selection, inspection, maintenance, and use of PIVs and associated attachments. It applies to workers (as operators, spotters, and custodians), supervisors, and Fleet Services.

Additional requirements may apply to a task involving PIVs. For example, fall protection requirements for a man lift using a PIV are in Chapter 45, “Fall Protection”, while use of a PIV indoors is covered under Chapter 13, “Traffic and Vehicular Safety”.

Excluded from this chapter are requirements for mobile cranes, human-powered pallet movers (jacks), extensible and/or articulating boom aerial devices, and approved rigging gear used in conjunction with forklifts (see Chapter 41, “Hoisting and Rigging”, and Chapter 47, “Mobile Elevating Work Platforms”).

2 Roles and Responsibilities

Functional roles and general responsibilities for each are listed below. More detailed responsibilities and when they apply are provided in the procedures and requirements.

The roles may be performed by one or more individuals and one individual may play more than one role, depending on the structure of the organizations involved, and responsibilities may be delegated.

2.1 Operator

- Has a valid California driver’s license or a California-recognized license issued by another state or by a foreign jurisdiction of which the operator is a resident if driving on-site (see Traffic and Vehicular Safety: Traffic Safety Requirements)
- Completes required training and demonstrates proficiency in safe PIV operation
- Inspects PIV before use
- Conducts pre-lift review with spotter
- Is knowledgeable of safety requirements and PIV operation instructions and adheres to them
- Wears personal protective equipment (PPE) as required
- Reports operating malfunctions or problems to the PIV custodian immediately and ensures equipment is tagged out of service
2.2 Spotter

- Is required during the use of PIVs when the operator’s view is obstructed by the load or when operating in a congested area
- Participates in pre-lift review with operator
- Communicates with the operator on hazards in the path
- Ensures no unauthorized personnel encroach on the work area

2.3 Custodian

- Completes required training
- Secures PIVs to prevent unauthorized use
- Conducts initial inspection when PIV is first brought on-site and after service, maintenance, or repair
- Maintains a supply of blank inspection checklists in a weatherproof container on each PIV
- Maintains completed inspection checklists for 12 months
- Ensures PIVs that do not pass inspection are tagged out and removed from service
- Works with Fleet Services to ensure PIVs are properly serviced and maintained

2.4 Supervisor

- Assigns training and authorizes workers to operate only PIVs they are qualified to operate
- Revokes an operator’s authorization if he or she violates safety requirements. Operators in violation of safety requirements are not to be allowed to continue the operation of PIVs until retrained and reauthorized.
- Designates qualified operators to provide on-the-job training
- Designates a person to act as spotter if required
- Designates PIV custodians and ensures that they maintain the necessary skills required for custodianship
- Considers having an expensive, delicate, large, or otherwise difficult to lift or move load transported by Facilities

2.5 Fleet Services

- Performs or arranges for all procurement, maintenance, and servicing of SLAC-owned PIVs
- Ensures maintenance and usage records are kept and available upon request

2.6 Program Manager

- Assists in the interpretation of standards in support of compliance and safety improvement efforts
- Identifies, develops, and maintains appropriate training
Assists with the qualification and authorization of trainers
Maintains this chapter and associated documents
Periodically assesses program
Ensures that subcontractors have a compliant program
Ensure that operating rules are posted in accordance with Cal/OSHA (8 CCR 3664)

3 Procedures, Processes, and Requirements

These documents list the core requirements for this program and describe how to implement them:

- **PIV: Operating Requirements** (SLAC-I-730-0A21S-011). Describes requirements for use of powered industrial vehicles
- **PIV: Equipment Requirements** (SLAC-I-730-0A21S-057). Describes requirements for powered industrial vehicles
- **PIV: Inspection Procedures** (SLAC-I-730-0A21C-009). Describes process for initial and pre-use inspections of powered industrial vehicles

4 Training

4.1 Operator

An operator must be authorized by his or her supervisor and complete all required classroom, on-the-job and practical training before using a PIV. Classroom training and hands-on, equipment-specific operational proficiency testing must be completed a minimum of once every three years to maintain qualification.

4.1.1 Classroom and Web-based

The classroom portion is required initially for all forklift operators and can either be taken via classroom or web-based thereafter.

- ESH Course 283, Forklift Operator Training ([ESH Course 283](#))
- ESH Course 168, Powered Pallet Jack Operator Training ([ESH Course 168](#))

4.1.2 On-the-Job

Newly assigned operators will receive on-the-job training (OJT) as directed by their supervisor and will be instructed by a qualified PIV operator who has been specifically designated by line management. This training should only occur after the operator has completed a classroom session of Forklift Operator Training ([ESH Course 283](#)). When the operator and the OJT instructor agree that the new operator is ready, the performance evaluation ([ESH Course 283PRA](#)) may be scheduled.
4.1.3 Practical

The hands-on performance evaluation is performed by a trainer qualified on the type of forklift the operator will use. The practical session should only occur after the operator has completed Forklift Operator Training (ESH Course 283). These evaluations are assigned and recorded under the course listing ESH Course 283PRA. The following courses are available:

- ESH Course 283APR, Forklift Operator Practical – Standard Internal Combustion or Electric Engine
- ESH Course 283CPR, Forklift Operator Practical – Greater than 6000 Lbs.
- ESH Course 283DPR, Forklift Operator Practical – Stand-up
- ESH Course 283EPR, Forklift Operator Practical – Rough Terrain/Variable Reach
- ESH Course 168PRA, Powered Pallet Jack Operator Practical (ESH Course 168PRA)

To arrange practical training contact the PIV program manager or one of the other trainers listed under ESH Course 283PRA.

4.2 Custodian

Custodians must complete the classroom or web-based training above for the device in question but are not required to pass a performance evaluation.

5 Definitions

Attachment, removable. An attachment that can be mounted on the forks or on the carriage in place of the forks by means of such conventional fasteners as bolts and pins and that does not require disassembling any other portion of the lifting system for installation or removal

Custodian. A person who is responsible for a PIV (whether SLAC-owned, rented, or leased)

Inspection, pre-use. A thorough inspection of equipment and area conducted before each shift, before using equipment

Spotter. Designated person assisting a vehicle operator / driver reverse his or her vehicle safely

Stability. A condition of a load in which the sum of the moments, which tends to overturn the unit is less than the sum of the moments tending to resist overturning

Truck, industrial forklift. A high-lift truck with load carriage and forks for transporting and stacking loads. Industrial forklift trucks may be powered by gasoline, diesel fuel, batteries, or propane (LP gas)

Vehicle, powered industrial (PIV). A mobile, power-driven vehicle used to carry, push, pull, lift, or stack material (not including vehicles intended primarily for earth moving). This definition includes forklifts, powered industrial trucks, and powered pallet jacks.
6 References

6.1 External Requirements

The following are the external requirements that apply to this program:

  - Section 3650, “Industrial Trucks – General” (*8 CCR 3650*)
  - Section 3657, “Elevating Employees with Lift Trucks” (*8 CCR 3657*)
  - Section 3664, “Operating Rules” (*8 CCR 3664*)
  - Article 109, “Hazardous Substances and Processes”, Section 5185, “Changing and Charging Storage Batteries” (*8 CCR 5185*)
- The following industry-accepted consensus standards:

6.2 Related Documents

**SLAC Environment, Safety, and Health Manual** (SLAC-I-720-0A29Z-001)

- Chapter 13, “Traffic and Vehicular Safety”
- Chapter 41, “Hoisting and Rigging”
- Chapter 45, “Fall Protection”
- Chapter 47, “Mobile Elevating Work Platforms”

Other

- California Department of Industrial Relations, Operating Rules for Industrial Trucks (S-503)
Chapter 48: Powered Industrial Vehicles

Operating Requirements

1 Purpose

The purpose of these requirements is to ensure powered industrial vehicles (PIVs) are operated safely. They cover the use of PIVs. They apply to workers (as operators and spotters), and supervisors.

2 Requirements

2.1 Personnel

Only qualified and authorized workers may operate a PIV. A spotter is required when the operator’s view is obstructed by the load or when operating in a congested area.

2.2 Pre-use Inspection

Before each shift conduct a pre-use inspection (see PIV: Inspection Procedures).

2.3 Pre-lift Review

Review with spotter, if required, planned lift, evaluate and resolve any concerns, and establish a means of communication to be used during the lift.

2.4 Loading

Stay within the rated capacity
Keep the heavy end of load toward the backrest
Tip the load back slightly and check load stability before travel
Do not exceed two layers of a loose load
Know what’s behind the load
Keep forks as wide as possible under a load
Secure load to pallet rest or backrest if traveling on SLAC roadways
Assess the lift to be performed and determine if the load needs to be secured
2.5 Using Lifting Fixtures and Extensions

- Use lifting fixtures according to manufacturer’s instructions
- Include fixture (except fork extensions) when calculating total mass of load
- When a lift truck is used to elevate personnel, comply with Cal/OSHA regulation (8 CCR 3657)

2.6 Using

2.6.1 With or without a Load

- Wear seatbelt
- Travel with forks just high enough to clear obstructions
- Make sure hands are clean and dry
- Stay three truck lengths behind other vehicles
- Avoid and warn pedestrians
- Avoid approaching folks near fixed objects
- Keep hands and feet inside the forklift

2.6.2 Without a Load

- Going uphill or downhill, travel with forks pointed in direction of travel
- Carry no passengers
- Limit speed to about five miles per hour in buildings; 15 on roadways

2.6.3 With a Load

- Going downhill, travel in reverse, with forks pointed uphill and load tilted back
- Limit speed to about five miles per hour
- With a vision-blocking load, drive in reverse or use a spotter (see Section 2.6.4, “On Roadways”)
- Be careful to keep load below overhead obstacles like doorways, roll-up doors, and sprinklers
- Do not raise or lower load while traveling
- Allow plenty of room to maneuver and brake
- When on traveling SLAC roadways, secure load to the PIV

2.6.4 On Roadways

- Consider having the load transported by Facilities, if it is expensive, delicate, large, or otherwise difficult to lift or move
- Evaluate the travel path and ensure roadway conditions and other factors that may cause problems are assessed. The roads and pathways at SLAC are variable, and may be steep, uneven, potholed, or paved with asphalt. Consider current road closure status, the location of blind spots, narrow roads/pathways, and construction projects that may cause damage or restrict movement.
Transport the load on a flatbed or other vehicle instead of transporting it by forklift, if possible and appropriate (contact Fleet Services). Use of a truck over a forklift may be a better option when the load
- Would affect the drivability of the forklift
- Is not easily secured to the forklift
- Could possibly be damaged due to road conditions or travel path

Consider moving the materials/equipment during off hours to avoid interactions with vehicles or pedestrians and bicyclists

Use an escort/pilot vehicle when the load
- Obscures the operator’s vision
- Can endanger pedestrians and/or bicyclists or vehicles because of its size (for example, extends the width of a lane)
- Requires the forklift to travel very slowly to transport the item safely

Consider using an escort/pilot vehicle when the forklift needs to be driven backwards either because the operator’s vision is obstructed or the grade requires it

Note  An escort/pilot vehicle in both the front and back is desirable. If only one is available, position it in front. The travel path must be clearly understood by both drivers, a method of communication agreed to before moving the load, and the escort/pilot vehicle should have flashing lights. SLAC Site Security can provide this service.

Select a forklift appropriate for the task. Forklifts operated on shared roadways must have appropriate tires (not designed for warehouse use only and with treads); brake lights; turn signals; and if operating at dusk or night front and rear headlights

Forklift operators driving on roadways must not wave vehicles by. If determined appropriate, they should pull over and stop so vehicles can safely pass.

A spotter is required when
- When the operator’s view is obstructed by the load or
- When operating in a congested area

Note  The spotter does not need to be an additional person with the sole purpose of spotting. Spotters should wear high visibility safety clothing, for example, a safety yellow or orange vest or jacket. A handheld stop/yield sign can help the spotter communicate with pedestrians, bicyclists, and other vehicles.

2.7 If the PIV Starts to Tip

- DO NOT JUMP from a PIV during a tip-over
- Press the wheel hard to press yourself in your seat
- Brace yourself with your feet
- Go with the tip
2.8 Parking

- Park forklifts
  - Without a load
  - Legally
  - Out of traffic
  - With the tips of the tines directly on the ground

- After parking a PIV
  - Neutralize the controls
  - Apply parking break
  - Chock wheels (when on incline)
  - Remove and secure keys

2.9 Using Pallet Movers (Jacks)

- Push (rather than pull) loads
- Avoid pinching yourself or others between load and wall
- Enter tight spaces load first

3 Forms

The following are forms required by these requirements:

- None

4 Recordkeeping

The following recordkeeping requirements apply for these requirements:

- None

5 References

SLAC Environment, Safety, and Health Manual (SLAC-I-720-0A29Z-001)

- Chapter 48, “Powered Industrial Vehicles”
  - PIV: Inspection Procedures (SLAC-I-730-0A21C-009)

Other Documents

- Title 8, California Code of Regulations, “Industrial Relations”, Division 1, “Department of Industrial Relations”, Chapter 4, “Division of Industrial Safety”, Subchapter 7, “General Industry Safety Orders”,
1 Purpose

The purpose of these requirements is to ensure that powered industrial vehicles (PIVs) meet applicable standards and are maintained in good working order. They cover inspection, storage, maintenance, marking, and modification of PIVs and associated attachments. They apply to workers (as operators and custodians), and Fleet Services.

2 Requirements

PIVs must be designed and manufactured in accordance with applicable standards (ASME B56.1-2004) and marked, stored, and maintained following the requirements below.

2.1 Inspection

PIVs must pass an initial inspection, conducted by a custodian, when first brought on-site and a pre-use inspection, conducted by the operator, before each shift (see PIV: Inspection Procedures).

2.2 Storage

Unattended PIVs must be parked away from high traffic areas and effectively barricaded where necessary. The fork tines will be lowered with tips on the floor or ground. The keys must not be left in parked PIVs.

2.3 Maintenance

PIV custodians in coordination with Fleet Services will establish and follow a program of regular maintenance to ensure that PIVs remain in a safe operating condition.

Only employees of Fleet Services or a third-party approved by it are permitted to maintain or repair PIVs.

2.3.1 Battery-charging Stations

Battery-charging stations for use with PIVs must meet the requirements of Cal/OSHA (8 CCR 5185) except that no eye wash or emergency shower is required since no battery maintenance is conducted in these areas.
2.4 Marking

Each PIV will have a conspicuously displayed, legible plate or other legible marking verifying that it is designed and manufactured in accordance with applicable standards. At a minimum, the marking must contain the following data:

1. Make, model, and manufacturer’s serial number
2. Rated capacity
3. Caution and/or restriction of operation

2.5 Modification

No modifications or additions to PIVs will be performed without written authorization from the manufacturer.

2.6 Attachments

Some attachments mount on the forks and others mount directly on the back rest. Modifications and additions including attachments that affect capacity and safe operation may not be performed without the manufacturer’s prior written approval. In the event the forklift manufacturer responds in the negative or does not respond, a qualified engineer can evaluate the attachment and determine if it can be used (see 8 CCR 3650). Capacity, operation, and maintenance instruction plates, tags, or decals must be changed to reflect the change in PIV weight, capacity, and center of gravity. The markings will show the approximate weight of the truck and attachment combination at maximum elevation with load laterally centered.

2.6.1 Fork Extensions

Manufacturer-approved fork extensions are only appropriate for specific tasks. The use of non-factory installed extensions requires the approval of the manufacturer or, as stated above, a qualified engineer. A rated load test will be documented and conducted every two years, and will be marked with the date of the last inspection. (See Chapter 41, “Hoisting and Rigging”, for lifting devices and inspection criteria.)

Extensions must be inspected before use for

- Bending
- Overloading
- Excess corrosion
- Cracking
- Other deterioration

2.7 Non-SLAC Equipment

Before bringing a leased or rented PIV onto SLAC property, the PIV custodian will verify that the vehicle meets the minimum requirements of this program.
3 Forms

The following are forms required by these requirements:

- None

4 Recordkeeping

The following recordkeeping requirements apply for these requirements:

- The custodian will ensure maintenance records are kept and made available for inspection upon request.

5 References

SLAC Environment, Safety, and Health Manual (SLAC-I-720-0A29Z-001)

- Chapter 48, “Powered Industrial Vehicles”
  - PIV: Inspection Procedures (SLAC-I-730-0A21C-009)
  - PIV: Operating Requirements (SLAC-I-730-0A21S-011)

- Chapter 41, “Hoisting and Rigging”

Other Documents


Chapter 48: Powered Industrial Vehicles

Inspection Procedures

1 Purpose

The purpose of these procedures is to ensure that a powered industrial vehicle (PIV) is safe to operate before it is used. They cover initial inspections, when the PIV is first brought on-site and immediately after service, maintenance, or repair, and pre-use inspections before each shift. They apply to workers (as operators and custodians).

2 Procedures

2.1 Initial

<table>
<thead>
<tr>
<th>Step</th>
<th>Person</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Custodian</td>
<td>Conducts initial inspection when PIV is first brought on-site and after service, maintenance, or repair, using the PIV: Inspection Checklist or a device-specific checklist</td>
</tr>
<tr>
<td>2.</td>
<td>Custodian</td>
<td>If the PIV does not pass inspection</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Tags it DANGER – DO NOT OPERATE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Removes it immediately from service</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Contacts Fleet Services for repair</td>
</tr>
<tr>
<td>3.</td>
<td>Custodian</td>
<td>Keeps checklist for a minimum of one year and makes available upon request</td>
</tr>
</tbody>
</table>

2.2 Pre-use

<table>
<thead>
<tr>
<th>Step</th>
<th>Person</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Operator</td>
<td>Before using checks that PIV has been inspected before each shift, and if no inspection has been done, conducts one using the PIV: Inspection Checklist or a device-specific checklist</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- If PIV passes inspection, places completed checklist in a weatherproof enclosure on the PIV, where it must remain throughout the shift, and skips to step 4.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- If the PIV does not pass inspection, tags it DANGER – DO NOT OPERATE, removes it immediately from service, and contacts the custodian</td>
</tr>
<tr>
<td>2.</td>
<td>Custodian</td>
<td>Checks that PIV has been properly tagged out and contacts Fleet Services for</td>
</tr>
</tbody>
</table>
3 Forms

The following forms are required by this procedure:

- **PIV: Inspection Checklist** (SLAC-I-730-0A21J-012). Checklist for guiding and documenting required inspections of powered industrial vehicles
- **PIV: EnerSys Enforcer Battery Charging Trailer Inspection Checklist** (SLAC-I-730-0A21J-050). Checklist for guiding and documenting required inspections for subject powered industrial vehicle
- **PIV: Powered Pallet Jack Inspection Checklist** (SLAC-I-730-0A21J-051). Checklist for guiding and documenting required inspections for subject powered industrial vehicle

4 Recordkeeping

The following recordkeeping requirements apply for this procedure:

- The custodian keeps inspection checklists for a minimum of one year and makes them available upon request.

5 References

[SLAC Environment, Safety, and Health Manual](SLAC-I-720-0A29Z-001) (SLAC-I-720-0A29Z-001)

- Chapter 48, “Powered Industrial Vehicles”

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### Table: Inspection Procedures

<table>
<thead>
<tr>
<th>Step</th>
<th>Person</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.</td>
<td>Custodian</td>
<td>Conducts initial inspection after repair</td>
</tr>
<tr>
<td>4.</td>
<td>Operator</td>
<td>Performs work and returns completed checklist to PIV custodian once work or shift is completed</td>
</tr>
<tr>
<td>5.</td>
<td>Custodian</td>
<td>Keeps checklist for a minimum of one year and makes available upon request</td>
</tr>
</tbody>
</table>
Chapter 48: Powered Industrial Vehicles

Inspection Checklist

Powered industrial vehicles (PIVs) must be inspected by either the custodian or operator before each shift and by the custodian when the PIV is first brought on-site and immediately after service, maintenance, or repair (see PIV: Inspection Procedures [SLAC-I-730-0A21C-009]). This checklist is to be completed to document the inspection. The completed checklist is to be kept in a weatherproof enclosure on the PIV, where it must remain throughout the shift, and delivered to the custodian at the end of the shift. The custodian keeps it for one year from date of inspection.

Custodian name:  
PIV type:  
Date/time:  
Custodian number:   
Model #:  
Shift:  
Inspected by:  
Vehicle #:  
Hours metered:  

<table>
<thead>
<tr>
<th>Inspection Item</th>
<th>Result</th>
<th>Comment</th>
<th>Reported to (name)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluid levels: oil, radiator, fuel</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Tires: condition and pressure</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Forks, top clip retaining pin and heel: condition</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Load backrest extension: solid attachment</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Finger guards: attached</td>
<td></td>
<td></td>
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<tr>
<td>Safety warnings: attached and legible</td>
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<tr>
<td>Operator's manual: located on vehicle and legible</td>
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<tr>
<td>Capacity plate: attached, information matches model and serial numbers and attachments</td>
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<tr>
<td>Seat belt: buckle and retractor working smoothly</td>
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<tr>
<td>Operational inspection: report all unusual noises</td>
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<tr>
<td>Accelerator linkage</td>
<td></td>
<td></td>
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<tr>
<td>Parking brake: forward and reverse</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Tilt control: forward and back –interlocks and safety devices are in place for lifts capable of tilting forward for transportation purposes</td>
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</tr>
<tr>
<td>Hoist and lowering control</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attachment control</td>
<td></td>
<td></td>
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<tr>
<td>Horn</td>
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<td></td>
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<tr>
<td>Lights</td>
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<tr>
<td>Back-up alarm</td>
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<tr>
<td>Fuel/battery charge sufficient?</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Steering work?</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Hour meter</td>
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</tr>
</tbody>
</table>
Chapter 48: **Powered Industrial Vehicles**

Taylor-Dunn C-425 Electric Tow Tractor Inspection Checklist

Product ID: 650 | Revision ID: 1595 | Date Published: 20 February 2014 | Date Effective: 20 February 2014


Powered industrial vehicles (PIVs) must be inspected by either the custodian or operator before each shift and by the custodian when the PIV is first brought on-site and immediately after service, maintenance, or repair (see PIV: Inspection Procedures [SLAC-I-730-0A21C-009]). This checklist is to be completed to document the inspection. The completed checklist is to be kept in a weatherproof enclosure on the PIV, where it must remain throughout the shift, and delivered to the custodian at the end of the shift. The custodian keeps it for one year from date of inspection.

| Custodian name: | PIV type: Electric Tow Tractor | Date/time: |
| Custodian number: | Model #: Taylor-Dunn C-425 | Shift: |
| Inspected by: | Vehicle #: | Hours metered: |

<table>
<thead>
<tr>
<th>Inspection Item</th>
<th>Result</th>
<th>Comment</th>
<th>Reported to (name)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visual walk-around: dents, scratches, damage</td>
<td>☐ Pass ☐ Fail</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rear wheels: chocked</td>
<td>☐ Pass ☐ Fail</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tires: condition and pressure</td>
<td>☐ Pass ☐ Fail</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operator’s manual: located on vehicle and legible</td>
<td>☐ Pass ☐ Fail</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capacity plate: attached, information matches model and serial numbers and attachments</td>
<td>☐ Pass ☐ Fail</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Driver's seat: adjusted properly</td>
<td>☐ Pass ☐ Fail</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seat belt: buckle and retractor working smoothly</td>
<td>☐ Pass ☐ Fail</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parking brake: forward and reverse</td>
<td>☐ Pass ☐ Fail</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interlock key and seat switches: functional</td>
<td>☐ Pass ☐ Fail</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instrument gauges: functional</td>
<td>☐ Pass ☐ Fail</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Battery charge: sufficient (minimum for limited use, 15-30 minutes’ drive time, is 25% or 3 bars)</td>
<td>☐ Pass ☐ Fail</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lights/turn signals</td>
<td>☐ Pass ☐ Fail</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hazard lights</td>
<td>☐ Pass ☐ Fail</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Horn</td>
<td>☐ Pass ☐ Fail</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pedal operation: brake and accelerator</td>
<td>☐ Pass ☐ Fail</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Back-up alarm</td>
<td>☐ Pass ☐ Fail</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Steering: functional</td>
<td>☐ Pass ☐ Fail</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluids or grease: leaking</td>
<td>☐ Pass ☐ Fail</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tow hitch/coupler and hitch safety pin and lock</td>
<td>☐ Pass ☐ Fail</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Powered Industrial Vehicles

#### EnerSys Enforcer Battery Charging Trailer Inspection Checklist

Product ID: 653 | Revision ID: 1596 | Date Published: 20 February 2014 | Date Effective: 20 February 2014

URL: [http://www-group.slac.stanford.edu/esh/eshmanual/references/pivChecklistInspectBatteryCharger.pdf](http://www-group.slac.stanford.edu/esh/eshmanual/references/pivChecklistInspectBatteryCharger.pdf)

Powered industrial vehicles (PIVs), including battery charging trailers, must be inspected by either the custodian or operator before each shift and by the custodian when the PIV is first brought on-site and immediately after service, maintenance, or repair (see PIV: Inspection Procedures [SLAC-I-730-0A21C-009]). This checklist is to be completed to document the inspection. The completed checklist is to be kept in a weatherproof enclosure on the PIV, where it must remain throughout the shift, and delivered to the custodian at the end of the shift. The custodian keeps it for one year from date of inspection.

<table>
<thead>
<tr>
<th>Custodian name:</th>
<th>PIV type: Battery Charging Trailer</th>
<th>Model #: EnerSys Enforcer</th>
<th>Date/time:</th>
<th>Shift:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Custodian number:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inspected by:</td>
<td>Vehicle #: (circle one) PC23625 or PC23626</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Inspection Item</th>
<th>Result</th>
<th>Comment</th>
<th>Reported to (name)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visual walkaround of charger for dents, scratches, damage</td>
<td></td>
<td>Pass</td>
<td>Fail</td>
</tr>
<tr>
<td>Wheels chocked</td>
<td></td>
<td>Pass</td>
<td>Fail</td>
</tr>
<tr>
<td>Tires: condition/pressure</td>
<td></td>
<td>Pass</td>
<td>Fail</td>
</tr>
<tr>
<td>Operator’s manual: located on vehicle and legible</td>
<td></td>
<td>Pass</td>
<td>Fail</td>
</tr>
<tr>
<td>Manufacturer nameplate and safety labels: attached and legible</td>
<td></td>
<td>Pass</td>
<td>Fail</td>
</tr>
<tr>
<td>Area temperature and relative humidity: starting temp &lt;90 °F and RH &lt;70%</td>
<td></td>
<td>Temp ___°F and RH ___%</td>
<td></td>
</tr>
<tr>
<td>Charging location: away from flammable materials (25 feet)</td>
<td></td>
<td>Pass</td>
<td>Fail</td>
</tr>
<tr>
<td>Charging location: away from liquid drips or running water</td>
<td></td>
<td>Pass</td>
<td>Fail</td>
</tr>
<tr>
<td>Charging location: adequately ventilated (for hydrogen production during late-stage battery charging)</td>
<td></td>
<td>Pass</td>
<td>Fail</td>
</tr>
<tr>
<td>Electrical plug connector: housing intact (no chips or cracks in plastic parts)</td>
<td></td>
<td>Pass</td>
<td>Fail</td>
</tr>
<tr>
<td>Electrical plug connector: pins/sockets in serviceable condition (all pins/sockets present with no burn markings, discoloration or damage)</td>
<td></td>
<td>Pass</td>
<td>Fail</td>
</tr>
<tr>
<td>Trailer flashing light: operates when input power connected</td>
<td></td>
<td>Pass</td>
<td>Fail</td>
</tr>
<tr>
<td>Trailer audible alarm: functional</td>
<td></td>
<td>Pass</td>
<td>Fail</td>
</tr>
<tr>
<td>Instrument gauges/indicator lights: working properly</td>
<td></td>
<td>Pass</td>
<td>Fail</td>
</tr>
</tbody>
</table>
Powered industrial vehicles (PIVs) must be inspected by either the custodian or operator before each shift and by the custodian when the PIV is first brought on-site and immediately after service, maintenance, or repair (see PIV: Inspection Procedures [SLAC-I-730-0A21C-009]). This checklist is to be completed to document the inspection. The completed checklist is to be kept in a weatherproof enclosure on the PIV, where it must remain throughout the shift, and delivered to the custodian at the end of the shift. The custodian keeps it for one year from date of inspection.

<table>
<thead>
<tr>
<th>Custodian name:</th>
<th>PIV type:</th>
<th>Powered Pallet Jack</th>
<th>Date/time:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Custodian number:</td>
<td>Model #:</td>
<td>Shift:</td>
<td></td>
</tr>
<tr>
<td>Inspected by:</td>
<td>Vehicle #:</td>
<td>Hours metered:</td>
<td></td>
</tr>
</tbody>
</table>

**Inspection Item**  | **Result** | **Comment** | **Reported to (name)**
--- | --- | --- | ---
**Motor Off Checks**
Fluid leaks on floor below vehicle | Pass | Fail |
Forks: condition | Pass | Fail |
Tires/wheels: condition/pressure |
Hand guards: attached | Pass | Fail |
Safety warnings: attached | Pass | Fail |
Operator’s manual: located on vehicle and legible | Pass | Fail |
Capacity plate: attached | Pass | Fail |
**Motor On Checks**
Unusual noises | Pass | Fail |
Brakes: functional | Pass | Fail |
Drive operations: forward and reverse | Pass | Fail |
Horn: functional | Pass | Fail |
Hour meter: functional | Pass | Fail |
Hoist and lowering control: functional, smooth | Pass | Fail |
Battery discharge indicator: functional | Pass | Fail |
Lights and alarms: functional | Pass | Fail |