TOYOTA

INDUSTRIAL EQUIPMENT

Service Manual

7HBW30, 7HBE30, 7HBE40, 7HBC30, 7HBC40, and 7TB50

Serial Numbers 30,001 and up

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INDUSTRIAL EQUIPMENT

SERVICE MANUAL

Pallet Trucks

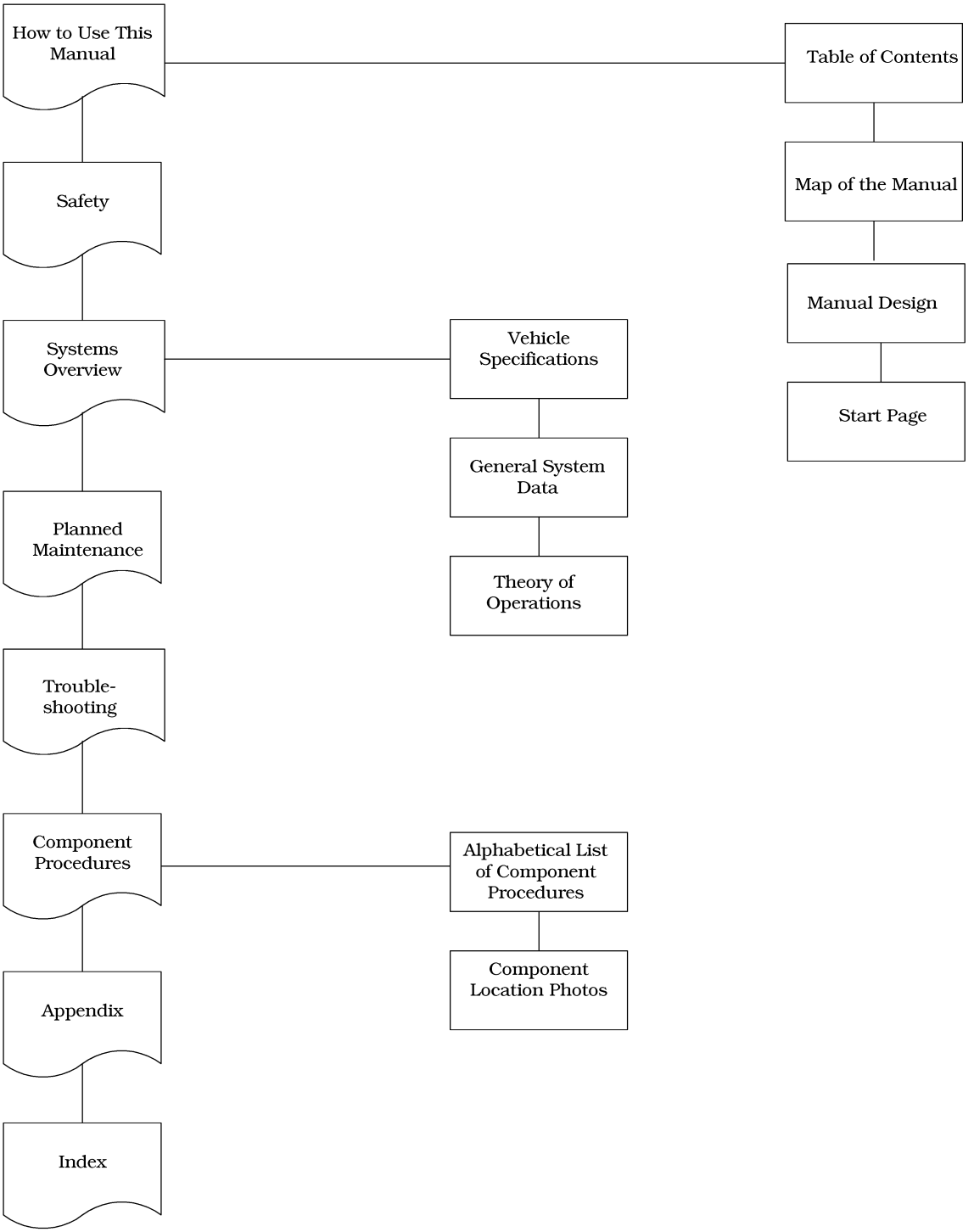
7HBW30	**30,001 and up**	**7HBE30**	**30,001 and up**
7HBE40	**30,001 and up**	**7HBC30**	**30,001 and up**
7HBC40	**30,001 and up**	**7TB50**	**30,001 and up**

00700-CL390-05, 15 March 2005

Table of Contents

Section 1. How to Use This Manual

Map of the Manual



Manual Design

The Toyota Pallet Truck Service Manual is designed with the following objectives in mind:

- Provide technical coverage for expected levels of user expertise
- Anticipate your needs and reduce your decisions regarding maintenance
- Reduce page flipping through a "one-stop shopping" approach

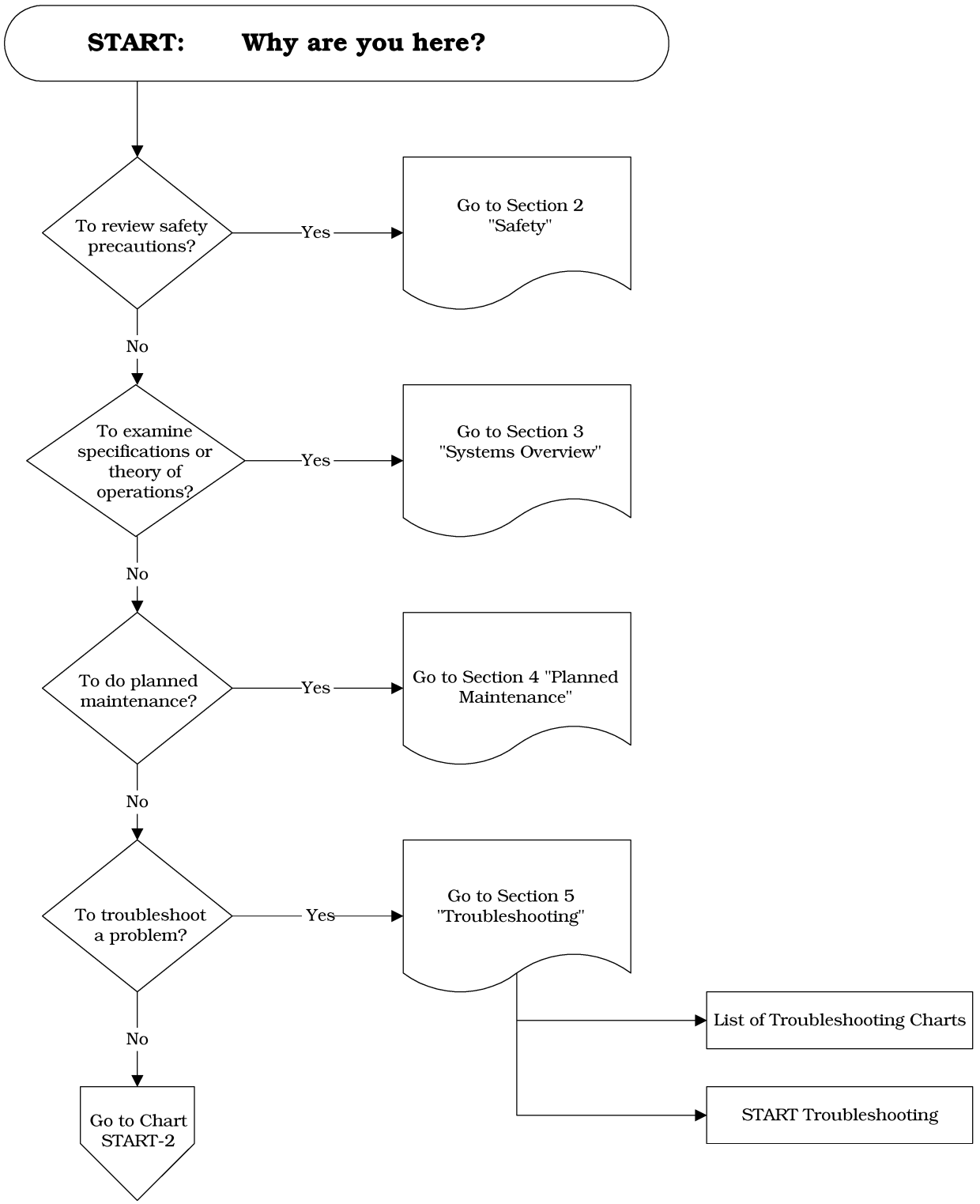
The two-line running page header at the top of each page tells you:

- Name of the manual (Toyota Pallet Truck Service Manual)
- Current Chapter Title (for example, this page *How to Use This Manual*)
- Current topic (for example, this page *Manual Design*)

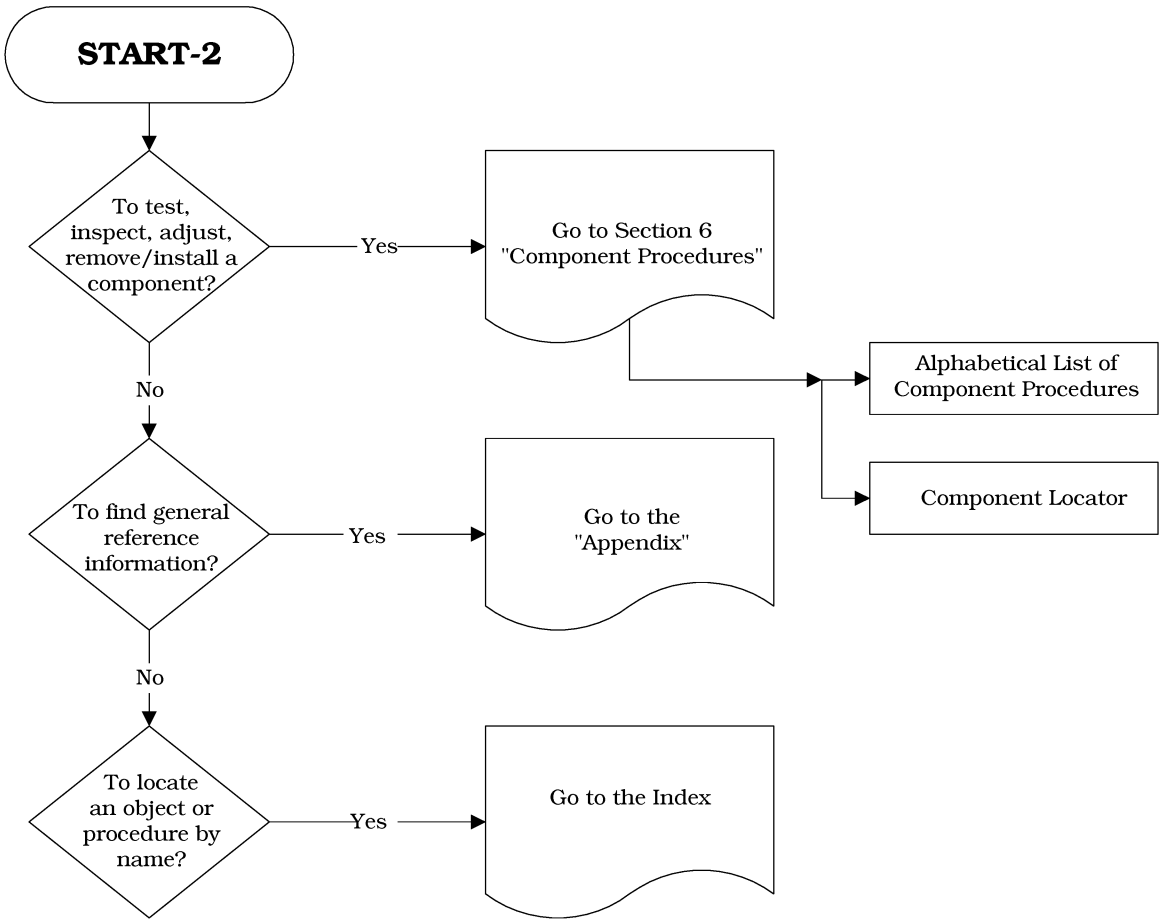
It is recommended that you go to the START page for guidance to the correct chapter.

- **How to Use This Manual** explains the manual format and design and contains the Table of Contents and START page.
- **Safety** explains warning and caution notes, general safety rules and safety rules for batteries, static, jacking, and welding.
- **Systems Overview** includes truck specifications and theory of operation information.
- **Planned Maintenance** outlines the recommended schedule of preventive services to keep your truck working most efficiently.
- **Troubleshooting** is a set of "decision-tree" charts and tables designed to take you from a symptom to a specific sequence of tests in order to isolate a failing component.
  - Chart **"TS1: START TROUBLESHOOTING" on page 5-22** will guide you to the individual troubleshooting symptom chart you need.
  - When you're familiar with the symptoms listed, you may instead simply find the symptom chart. See **"List of Troubleshooting Charts" on page 5-19**.
  - When you complete a troubleshooting procedure, be sure to follow the steps in chart **"END1: End of Troubleshooting Procedure" on page 5-24**.
- **Component Procedures** gives step-by-step procedures for testing, removal, installation, and adjustment of individual truck components. Components are listed in an order which considers:
  - Frequency of attention
  - Physical attachment (for example, brake must be removed before drive motor)
  - Functional relation (for example, drive motor and drive unit components are grouped together)

  To find a component procedure, you may use one of three methods:
  - Look up the component name in the **"List of Component Procedures" on page 6-2**.
  - Find the component in the **"Component Locators" on page 6-5**.
  - Look up the component name in the maintenance manual Index.
- **Appendix** contains reference information such as torque values, lubricants and schematics.
- **Index** lists subjects alphabetically.


START: Why are you here?
To review safety precautions?
Yes
Go to Section 2 "Safety"
No
To examine specifications or theory of operations?
Yes
Go to Section 3 "Systems Overview"
No
To do planned maintenance?
Yes
Go to Section 4 "Planned Maintenance"
No
To troubleshoot a problem?
Yes
Go to Section 5 "Troubleshooting"
List of Troubleshooting Charts
START Troubleshooting
No
Go to Chart START-2

START Page


START-2
To test, inspect, adjust, remove/install a component?
Yes
Go to Section 6 "Component Procedures"
Alphabetical List of Component Procedures
Component Locator
No
To find general reference information?
Yes
Go to the "Appendix"
No
To locate an object or procedure by name?
Yes
Go to the Index

Section 2. Safety

Definitions

Throughout this manual, you will see two kinds of safety reminders:

⚠ WARNING

Warning means a potentially hazardous situation exists that, if not avoided, could result in death or serious injury.

⚠CAUTION

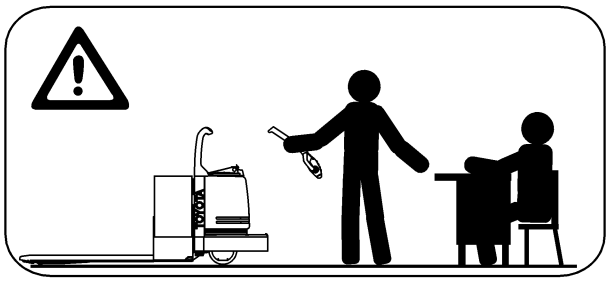
Caution means a potentially hazardous situation exists that, if not avoided, could result in minor or moderate injury or in damage to the truck or nearby objects.

General Safety

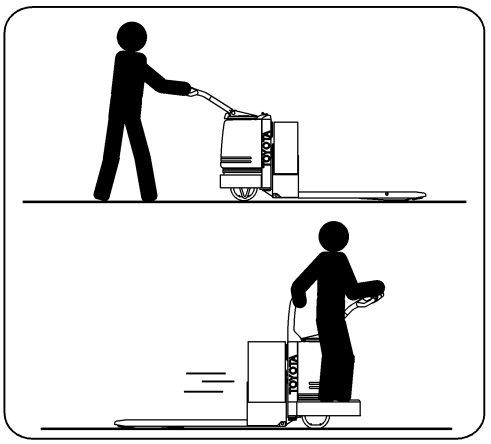
Do *not* operate or work on this truck unless you are trained, qualified and authorized to do so.

Know the truck's controls and what they do.

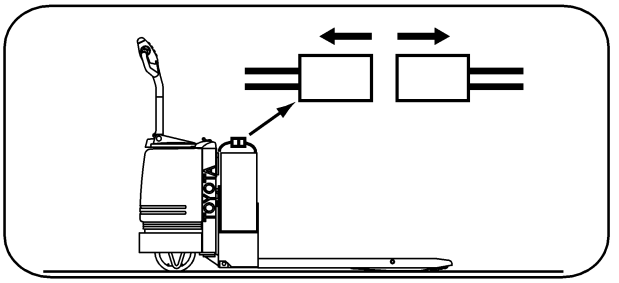
Do *not* operate this truck if it needs repair or if it is in any way unsafe.



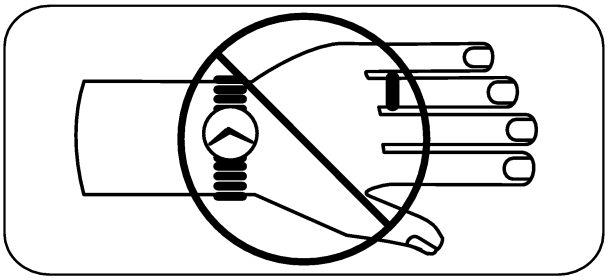
Operate this truck only from the operator's position.



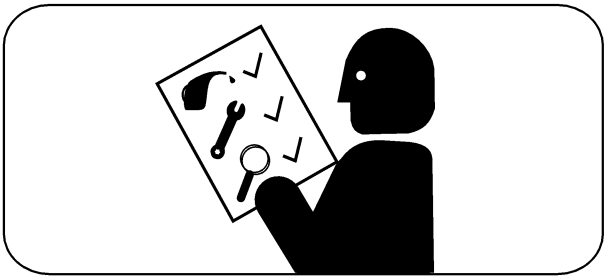
Before working on this truck, always turn the key switch to OFF and disconnect the truck's battery connector (unless this manual tells you otherwise).



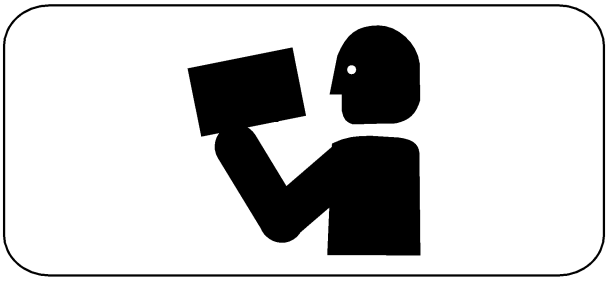
Do *not* wear watches, rings, or jewelry when working on this truck.



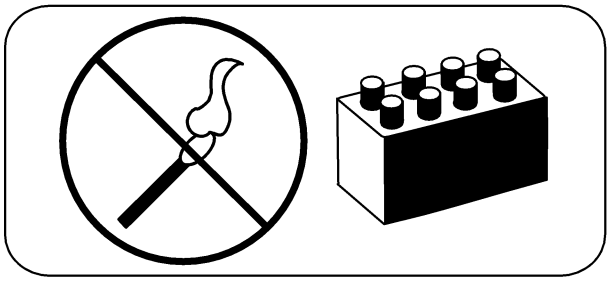
Follow the scheduled lubrication, maintenance and inspection steps.



Follow exactly the safety and repair instructions in this manual. Do *not* take "shortcuts."



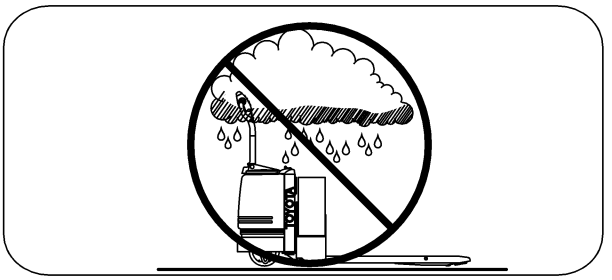
Do *not* use an open flame near the truck.



Do *not* use gasoline or other flammable liquids for cleaning parts.

Clean up any hydraulic fluid, oil or grease that has leaked or spilled on the floor.

Always park this truck indoors.



Do *not* wash this truck with a hose.

Do *not* add to or modify this truck until you contact your local Toyota Dealer to receive written manufacturer approval.

Battery Safety

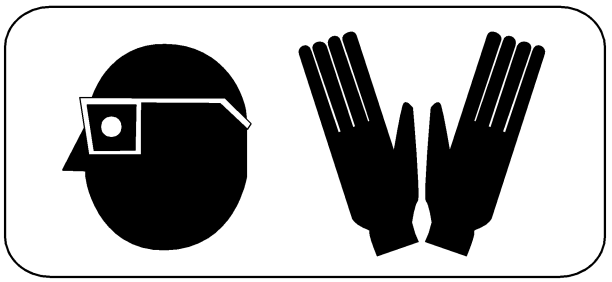
⚠ WARNING

As a battery is being charged, an explosive gas mixture forms within and around each cell. If the area is not properly ventilated, this explosive gas can remain in or around the battery for several hours after charging. Be sure there are no open flames or sparks in the charging area. An open flame or spark can ignite this gas, resulting in serious damage or injury.

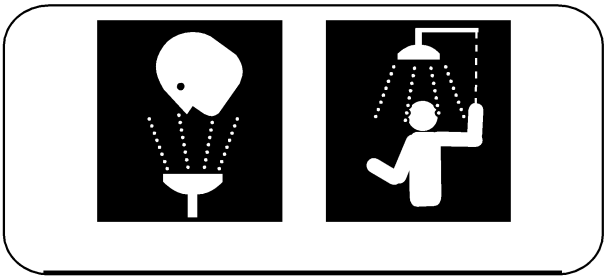
⚠ WARNING

Battery electrolyte is a solution of sulfuric acid and water. Battery acid causes burns. If any electrolyte comes in contact with your clothing or skin, flush the area immediately with cold water. If the solution gets on your face or in your eyes, flush the area with cold water and get medical help immediately.

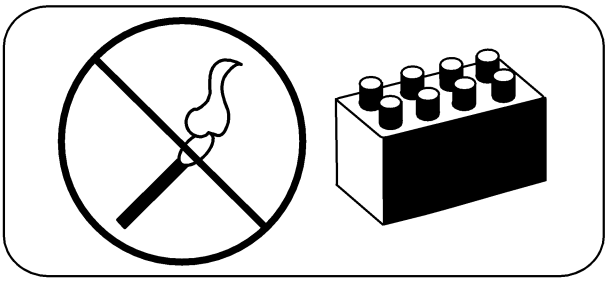
Wear personal protective equipment to protect eyes, face and skin when checking, handling or filling batteries. This equipment includes goggles or face shield, rubber gloves (with or without arm shields) and a rubber apron.



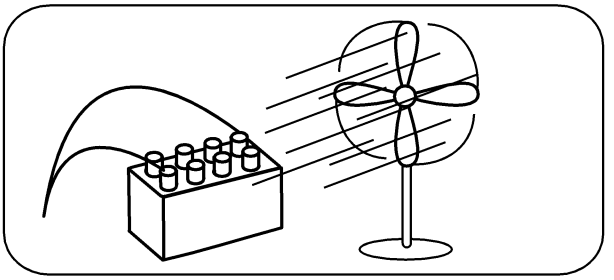
Make sure a shower and eyewash station are nearby in case there is an accident.



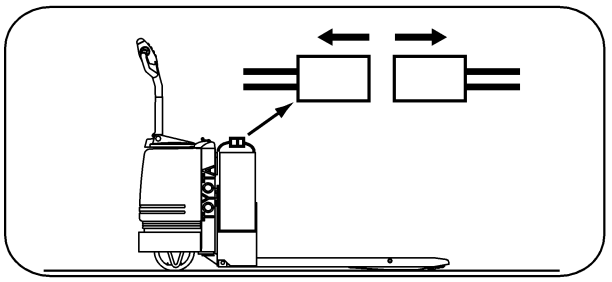
A battery gives off explosive gases. *Never* smoke, use an open flame, or use anything that gives off sparks near a battery.



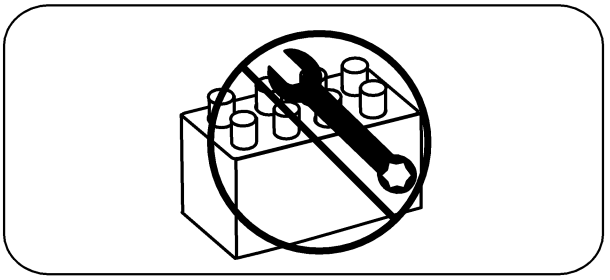
Keep the charging area well-ventilated to avoid hydrogen gas concentration.



Turn the key switch OFF *before* disconnecting the battery from the truck at the battery connector. Do *not* break live circuits at the battery terminals. A spark often occurs at the point where a live circuit is broken.

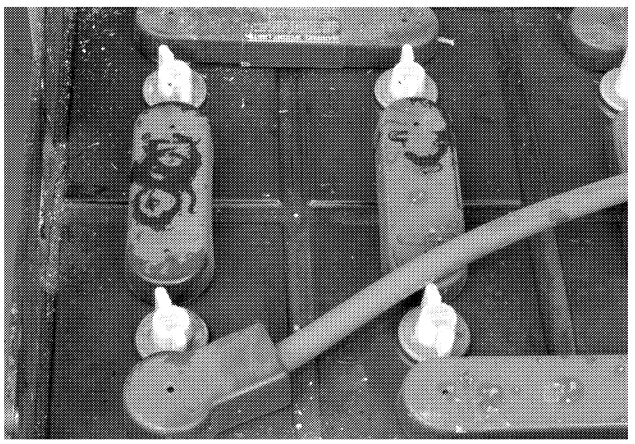


Do *not* lay tools or metal objects on top of the battery. A short circuit or explosion could result.



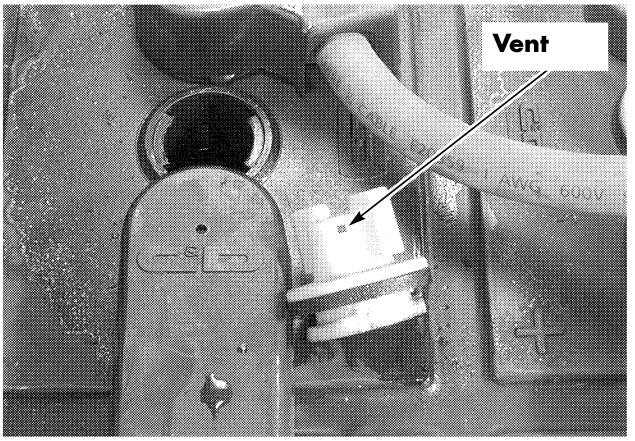
Keep batteries clean. Corrosion causes shorts to the frame and possibly sparks.

Keep plugs, terminals, cables and receptacles in good condition to avoid shorts and sparks.



Keep filler plugs firmly in place at all times *except* when the electrolyte level is checked, when water is added to the cells, or when the specific gravity is checked.

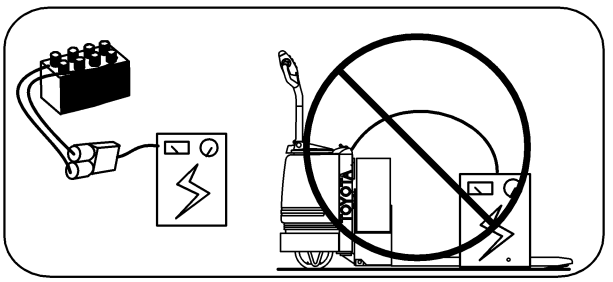
Make sure the vent holes in the filler plugs are open to permit the gas to escape from the cells.



Do *not* permit cleaning solution, dirt or any foreign matter to enter the cells.

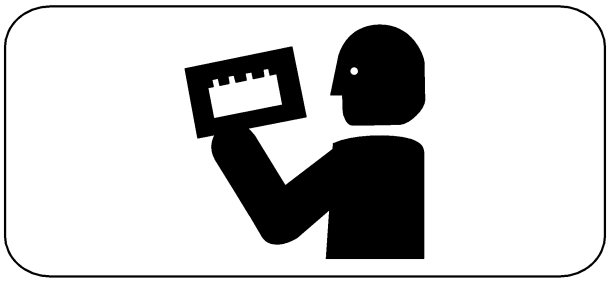
Make sure you install the correct size battery. A smaller or lighter weight battery could seriously effect truck stability. See the truck's specification plate for more information.

Never plug a battery charger into the truck's battery connector. Plug the battery charger only into the battery connector from the battery.



Battery Safety

Follow the charging procedures in the Battery Instruction Manual and in the Battery Charger Instruction Manual.



Thank you very much for your reading.

Please click here and go back to the website.

Then, you can download the complete manual instantly.

No waiting.

Jacking Safety

You may need to jack up the truck off the floor to perform maintenance procedures. When doing so, observe the correct safety precautions:

1. Lower the forks completely. Remove any load.
2. Place all controls in neutral.
3. Block the wheels to prevent movement of the vehicle.
4. Disconnect the battery connector.
5. Place the jack under the designated jacking points. See Figure 2-2.

⚠ WARNING

Use extreme care when the truck is jacked up. Keep hands and feet clear from vehicle while jacking the truck. After the truck is jacked, place solid blocks beneath it to support it. DO NOT rely on the jack alone to support the truck.

Fork Section

6. Using the lift button, raise the forks to maximum height.
7. Block the fork section as shown in Figure 2-1. The tractor section will remain on the floor.

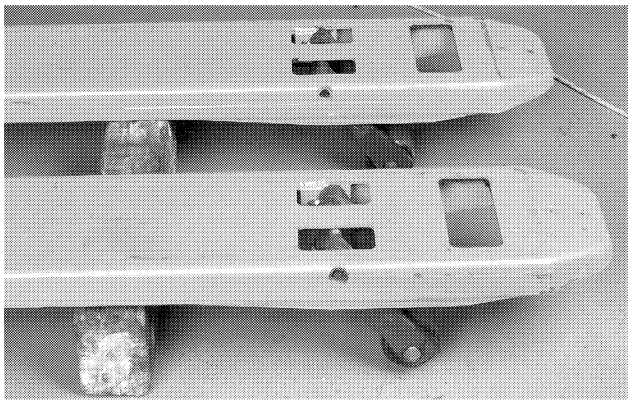


Figure 2-1. Blocking the Fork Section

8. Lower the forks on the blocks.
9. Turn the key switch OFF and disconnect the battery connector.

Tractor

10. Place the jack in the designated jacking position. See Figure 2-2.

Figure 2-2. Jacking Tractor Section

11. Jack one side of the truck so that the drive tire is off the floor no more than 1 in. (25.4 mm).
12. Block that side of the truck in place.
13. Jack up the other side of the truck level with the first side.
14. Block that side of the truck in place.

NOTE: After working on a vehicle, test all controls and functions to assure correct operation.

Tie-down for Transport

To transport your Toyota pallet truck in an over-the-road vehicle or rail car, follow these steps:

1. Lower the forks and locate the truck in the center of the transport vehicle.
2. Using suitable lifting device, remove the battery. See “Battery” on page 6-8.
3. Position the adjustable chain over and through the battery compartment.
4. Position an additional adjustable chain over and through the battery compartment.
5. Position the chain ends of one chain toward the front of the vehicle bed and the chain ends of the other chain to the rear of the vehicle bed and draw taut.

NOTE: This will secure the truck to the vehicle bed and prevent tip-over and forward or backward movement.

6. Secure the battery according to the battery manufacturer’s instructions. If equipped, remove the battery cover or storage tray from the top of the battery and store separately.