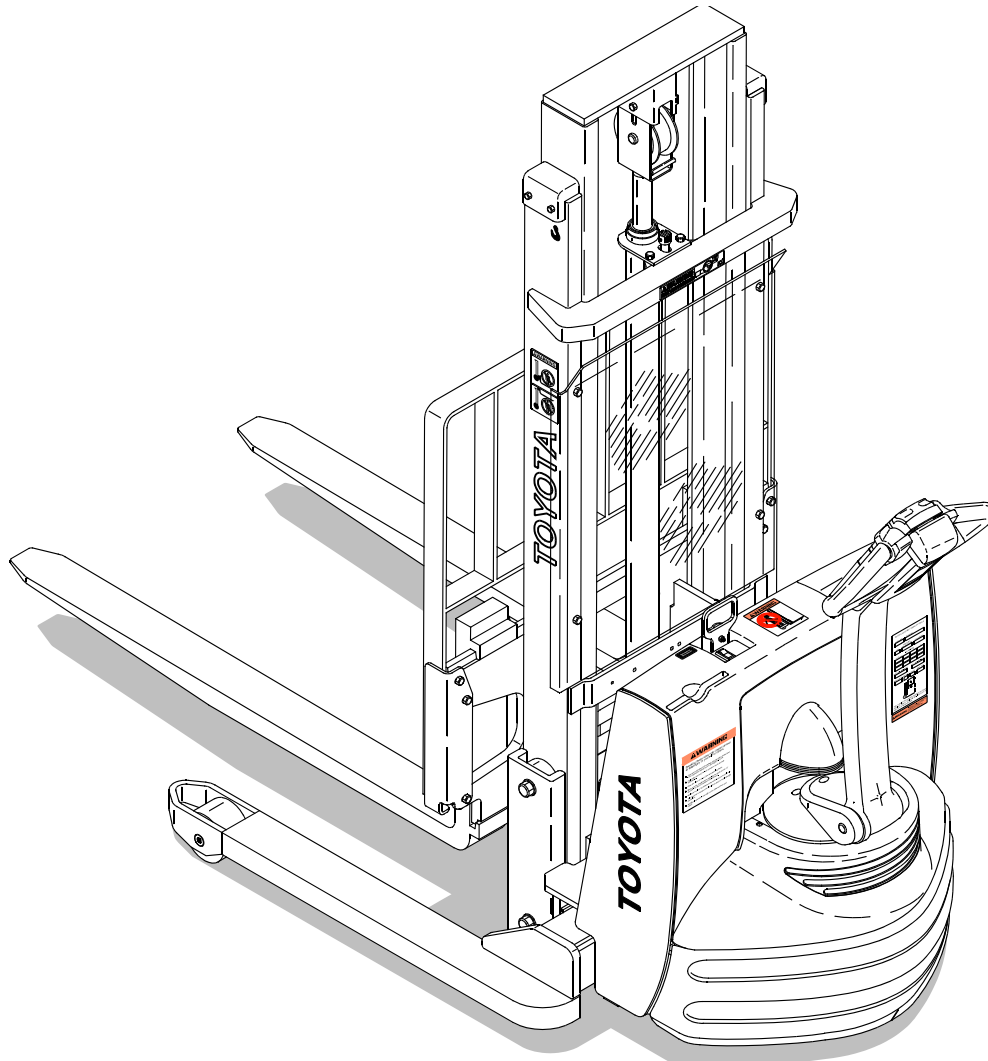




7BWS10/13

Electric Walkie Low-Lift Pallet Truck
Effective Serial Number 40500 - UP



-  **Warning** Read and observe all warnings on this unit before operating it.
-  **Warning** **DO NOT** operate this equipment unless all factory installed guards and covers are properly secured in place.

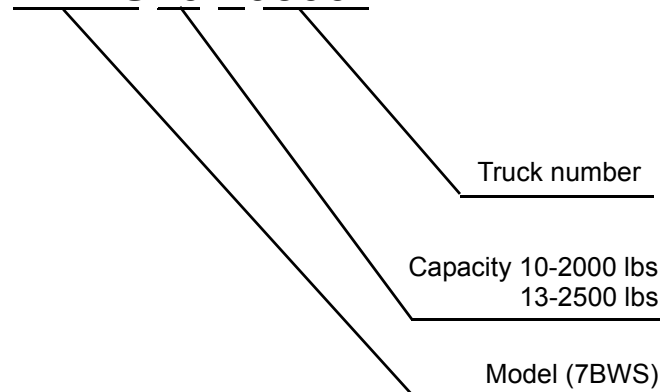
Ordering Spare Parts

Ordering Spare Parts

Supply the following information will assure prompt, efficient handling of the order:

1. Identify truck model and serial number.
2. Refer to Parts Book and locate page with the exploded diagram.
3. Find item number for the part required. Select the column for the actual truck model and serial number.
4. The following is an explanation of a serial number:

7BWS10 40500



CAUTION Although some trucks appear to be similar, component parts may not be interchangeable. If an incorrect part is used, the truck may malfunction.

5. Note part number.
6. Call your local **Toyota Dealer** and state part number.
7. If the truck model, serial number, or article number cannot be found on the truck, call your local **Toyota Dealer** for assistance.

Table of Contents

Ordering Spare Parts	1
Standard Codes	11
Warning Symbols	13
Warning Levels	13
Prohibitory Symbols	14
Ordinance Symbols	14
Safety	15
General Safety	15
Battery Safety	20
Static Discharge Precautions	25
Welding Safety	27
Introduction, Service Manual	29
Contents, Section M	31
Machine Information	31
General Product Information	33
Truck Presentation	33
Truck Side Views	33
Intended Truck Application	33
Prohibited Truck Application	34
Truck Data	34
Dimensions	35
Data Plate	36
Main Components	37
Inch (SAE) and Metric Fasteners	39
Introduction	39
Nomenclature, Threads	40
Strength Identification	41
Truck Torque Specifications	47
Conversion of Metric and English Units	48
Technical Service Data	51
Contents, Section P	55
Planned Maintenance	55
Introduction, Maintenance	57
Jacking Truck Off The Floor	58

<https://www.ebooklibonline.com>

Hello dear friend!

Thank you very much for reading.

Enter the link into your browser.

The full manual is available for immediate download.

<https://www.ebooklibonline.com>

Table of Contents

Elevate Rear of Truck	58
Elevate Either Side of Truck	59
Lubricants	59
Standard	59
Service Schedule	61
Planned Maintenance Schedule	61
Planned Maintenance Procedures	65
General	65
Hardware	65
Noise	65
Leaks	65
Cables and Connections	66
Grease Location Points	66
Services Performed Daily or Every 8 Operating Hours	66
Chassis	66
Brakes	66
Wheels/Tires	66
Tiller Arm	66
Functions/Operations	67
Battery	67
Battery Connector	67
Services Performed Every Six Months or 500 Operating Hours Under Moderate Usage or Three Months or 250 Hours Under Severe Usage	68
Chassis	68
Motors	68
Drive Unit	68
Brake	68
Electrical Control System	69
Battery	69
Electrical Panel	69
Hydraulic System	69
Mast	69
Lifting Devices	69
Services Performed 12 Months or Every 1000 Operating Hours Under Moderate Usage and Six Months or Every 500 Operating Hours Under Severe Usage	70
Drive Unit	70
Hydraulic System	70
Lubrication Chart	71
Oil and Grease Specifications	72
Lubricants	72
Grease Location Points	72
Contents, Section S	73
Service Instructions	73
Stabilizer Support Arms	75
Theory of Operation	76
Maintenance	76

Table of Contents

Support Arm Width Adjustment	76
Inspection, Covers	81
Theory of Operation	82
Maintenance	82
Troubleshooting	82
Repair and Rebuild	82
Decals	83
Decal with Protective Sheet	83
Decal without Protective Sheet	83
Electric Motors	85
Theory of Operation	85
Maintenance	85
Troubleshooting	86
Repair and Rebuild	87
Pump Motor	87
Removal	88
Installation	89
Drive Motor	90
Brush Inspection and Replacement	90
Brush Inspection	90
Brush Replacement	92
Motor Disassembly	93
Motor Assembly	94
Transmission	99
Theory of Operation	101
Maintenance	101
Fluid Changing	101
Troubleshooting	102
Repair and Rebuild	104
Parking Brake System	111
Theory of Operation	112
Maintenance	114
Mechanical Brake Release	114
Brake Adjustment	114
Troubleshooting	115
Repair and Rebuild	116
Drive Wheel	117
Theory of Operation	117
Maintenance	118
Drive Wheel Nut Inspection	118
Troubleshooting	120
Repair and Rebuild	121
Load Wheels	125

Table of Contents

Theory of Operation	126
Maintenance	126
Troubleshooting	126
Repair and Rebuild	126
Tiller Arm Handle	129
Theory of Operation	131
Maintenance	131
Inspection	131
Troubleshooting	131
Repair and Rebuild	132
Tiller Arm Head	135
Theory of Operation	137
Maintenance	137
Troubleshooting	137
Repair and Rebuild	137
Steering Bearing	139
Theory of Operation	140
Maintenance	140
Troubleshooting	140
Repair and Rebuild	140
Electrical Functions	141
Theory of Operation	142
Battery Plugged In With Keypad	142
Battery Plugged In With Key Switch	144
Main ON/OFF Switch/Keypad ON	146
Travel, Low Speed	148
Travel, High Speed	150
Reverser	152
Lift	154
Lower	156
Maintenance	159
Wiring	159
Definitions	159
Shorts to Frame Test	160
Troubleshooting	163
Troubleshooting Flowchart	163
Main Harness Replacement	166
Operator Display and Programming	170
Special Modes	170
Service Display	171
Digital Inputs/Outputs from Transistor Controller	172
Transistor Controller System Mode	173
Changing Driver Accessible Parameters (P)	174
Changing Service Parameters	176
Parameter Description	179
Operating Parameter Programming	183

Table of Contents

Display Part Numbers (Pn)	183
Error Codes (E)	183
Error Code History	183
Truck Fault Codes	184
Troubleshooting Chart Index	194
Travel (Tractor-first / Forks-first) System	194
Wiring System	194
Other Possible Troubleshooting Issues	194
Troubleshooting Charts	195
Battery	199
Theory of Operation	199
Maintenance	199
Inspection and Care	199
Exterior Cleaning	200
Charging	200
Storage	201
History Record	202
Troubleshooting	202
Repair and Rebuild	203
Swing Out Battery Pack	205
Theory of Operation	210
Maintenance	210
Electrical Testing	210
Required Equipment	210
Instructions	210
Troubleshooting	215
Repair and Rebuild	215
Battery Connector	217
Theory of Operation	217
Maintenance	217
Inspection	217
Troubleshooting	218
Repair and Rebuild	220
Switches	221
Theory of Operation	222
Maintenance	223
Troubleshooting	224
Repair and Rebuild	225
Main ON/OFF Switch	225
Arm Angle Switches	225
Key Switch (Optional)	227
Horn Switch	227
Converting Keypad to Key Switch	227
Fuses	229
Theory of Operation	229
Maintenance	229

Table of Contents

Wiring Harness	230
Power Cables	231
Master Control Relay	232
Troubleshooting	233
Repair and Rebuild	233
Contactor Panel	235
Theory of Operation	237
Maintenance	237
Troubleshooting	237
Resistance Testing	237
Repair and Rebuild	238
Transistor Controller	239
Theory of Operation	239
Basics Of Circuit Operation	239
Interface	240
Control Features	241
Motor Circuit	241
Control Circuit	242
Definitions	243
Maintenance	244
Safety	244
Cleaning	244
Troubleshooting	245
Diagnostics and Troubleshooting	245
Fault Codes	245
Repair and Rebuild	247
Electronic Tiller Arm Card (ETAC)	249
Theory of Operation	250
Lift Cutout.	251
Maintenance	251
Troubleshooting	251
Repair and Rebuild	251
Hydraulic System	253
Theory of Operation	253
Lift	254
Lower	255
Relief Pressure	256
Maintenance	257
Changing Hydraulic System Fluid	257
Hydraulic Pump Pressure Relief Valve	259
Troubleshooting	259
Troubleshooting Chart Index	260
Troubleshooting Charts	260
Repair and Rebuild	263
Hydraulic Unit	265
Reservoir	266

Table of Contents

Filter Screen and Inlet Tube	267
Lift Pump	268
Lift Cylinder	269
Theory of Operation	270
Maintenance	270
Inspection	270
Troubleshooting	270
Repair and Rebuild	271
Mast	275
Theory of Operation	275
Maintenance	275
Visual Inspection	275
Lift Chain Inspection	275
Lift Chain Lubrication	280
Lift Chain Adjustment	281
Mast Guides/Dampers Adjustment	281
Troubleshooting	282
Repair and Rebuild	283
Forks	297
Theory of Operation	298
Maintenance	298
Inspection	298
Troubleshooting	298
Repair and Rebuild	299
Appendix	301

Standard Codes

Standard Codes

- B-Code = Business area
- F-Code = Product family
- T-Code = Product type
- C-Code = Component function

Worksheet standard

- W-Code = Working code
- R-Code = Reason code
- SO-Code = Assortment

F-Code List

T-Code List

No. Model
7BWS10/13

C-Code List

No	Function Group	C-Code
0	Chassis / Frame	0000
1	Motors	1000
2	Drive Gear / Transmission	2000
3	Brake / Wheel System	3000
4	Steering System	4000
5	Electrical System	5000
6	Hydraulic / Pneumatic System	6000
7	Operating Function-lifting Mast / Cylinders	7000
8	Peripheral / Installation Equipment	8000
9	Optionals / Attachments	9000
10	Tools	10000

Warning Symbols

Always follow the warnings given in this Service Manual and on the truck to avoid accidents from occurring.

1. Warning Levels

Warning levels

Warning text is given in four levels and provide information on the risks, describe the consequences, and instruct how to avoid accidents.

DANGER

Warns that an accident will occur if the instructions are not followed.

The consequences are serious personal injury or possibly death, and/or extremely large material damage.

WARNING

Warns that an accident can occur if the instructions are not followed.

The consequences are serious personal injury or possibly death, and/or large material damage.

CAUTION

Warns that an accident can occur if the instructions are not followed.

The consequences are personal injury and/or material damage.

NOTE!

Marks the risk of a accident or breakdown if the instructions are not followed.

Prohibitory Symbols

Version no
001

T-code

Prohibitory Symbols



NO SMOKING

If smoking occurs in situations where a restriction against smoking is stated, a serious accident can occur.



OPEN FLAMES PROHIBITED

If open flames are used in situations where open flames are prohibited, a serious accident can occur.



GENERAL PROHIBITION

If the prohibition is ignored, a serious accident can occur.

1. Ordinance Symbols



SAFETY SHOES

When the directive for safety shoes is given, safety shoes shall always be worn to avoid personal injury.



PROTECTIVE GLASSES

When the directive for protective glasses is given, protective glasses shall always be worn to avoid personal injury.

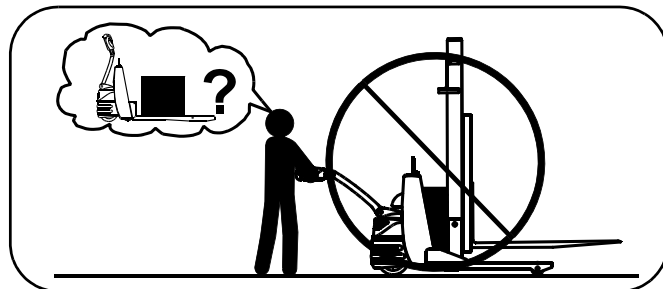
Safety

1. General Safety

Do **NOT** operate or work on this truck unless trained, qualified, and authorized to do so and have read the Operator's Manual.



Know the truck controls and what they do.



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

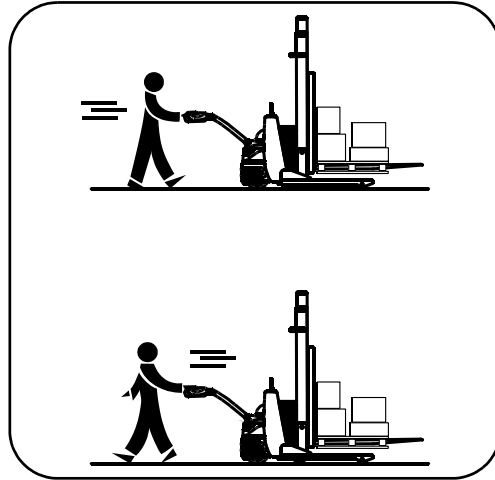


Safety

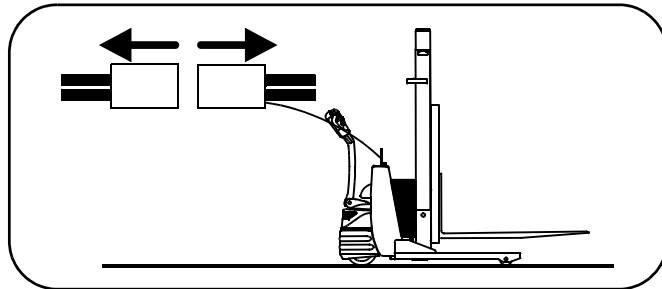
Version no
001

T-code

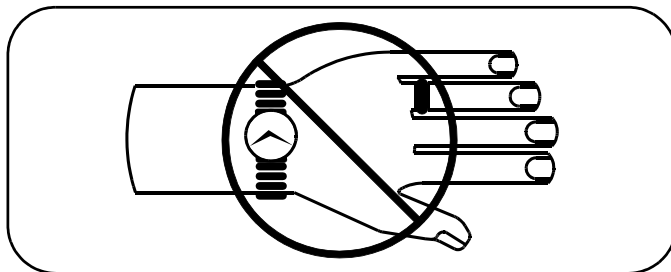
Operate truck only from the position of the operator.



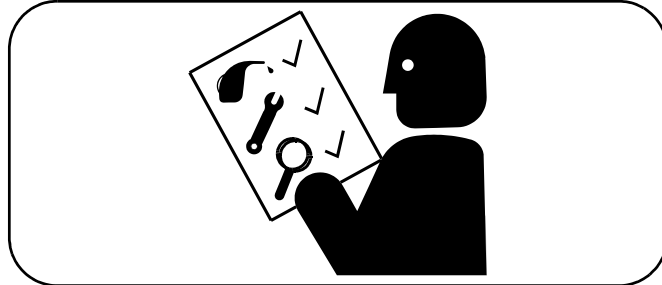
Before working on this truck always press the red **OFF (O)** key on the keypad and disconnect truck battery connector (unless this manual states otherwise).



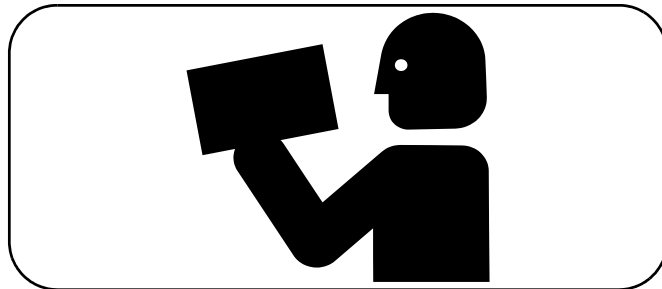
Do **NOT** wear watches, rings, or jewelry when working on this truck.



Follow the scheduled lubrication, maintenance, and inspection steps.



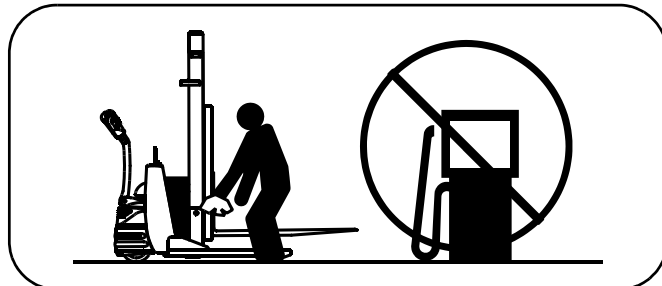
Follow exactly the safety and repair instructions in this manual. Do **NOT** take “shortcuts”.



Do **NOT** Use an open flame near the truck.



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

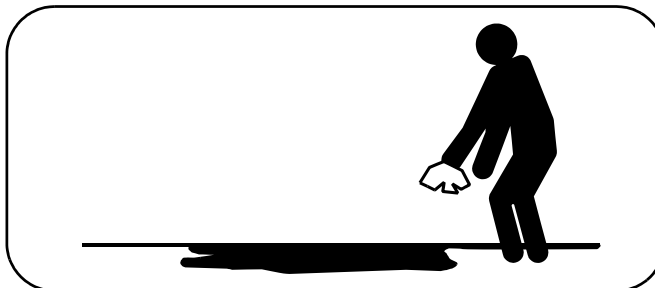


Safety

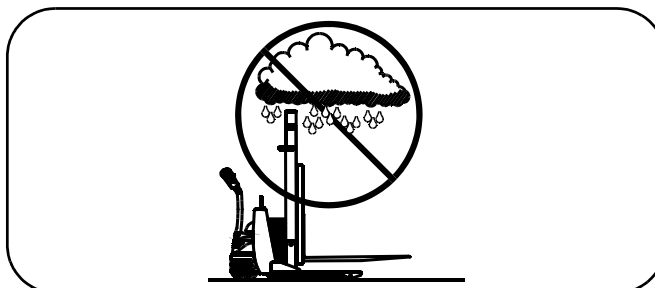
Version no
001

T-code

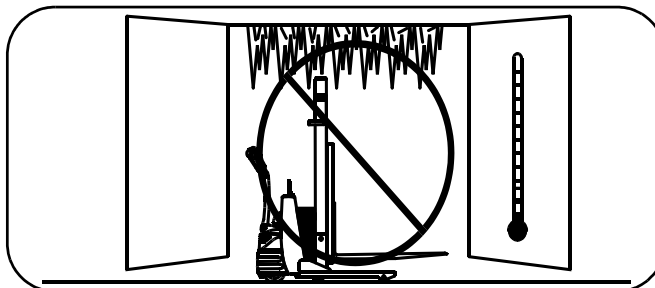
Clean up any hydraulic fluid, oil, or grease that has leaked or spilled on the floor.



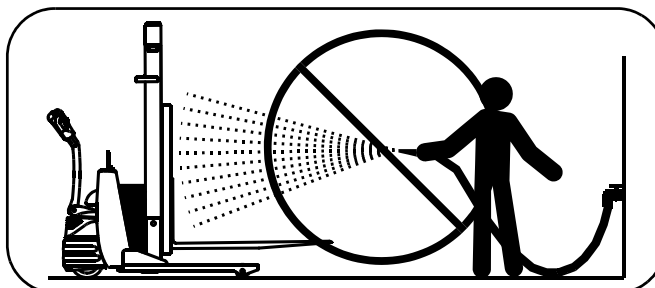
Always operate and park truck indoors.



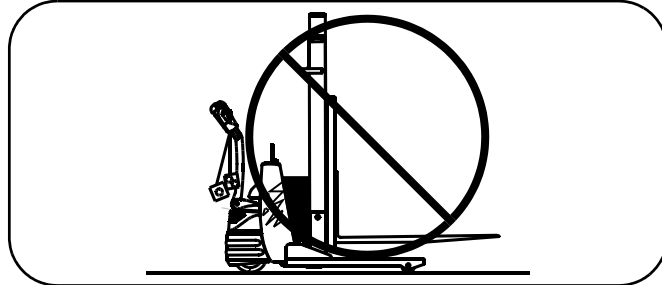
Do not park truck in a cold storage area overnight.



Do **NOT** wash truck with a hose.



Do **NOT** add to or modify truck without written approval from **Toyota**



Battery Safety

Version no
001

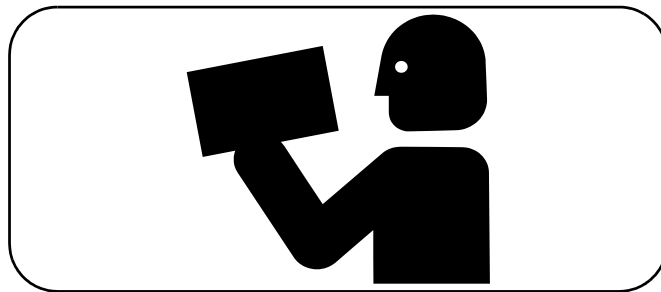
T-code

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.

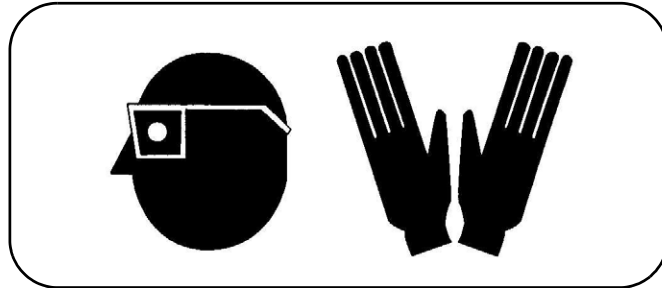
⚠ WARNING Battery electrolyte is a solution of sulfuric acid and water. Battery acid causes burns. Should any electrolyte come in contact with clothing or skin, flush the area immediately with cold water. Should the solution get on your face or in the eyes, flush the area with cold water and receive medical attention immediately.

Read, understand and follow procedures, recommendations and specifications available by the battery and battery charger supplier.

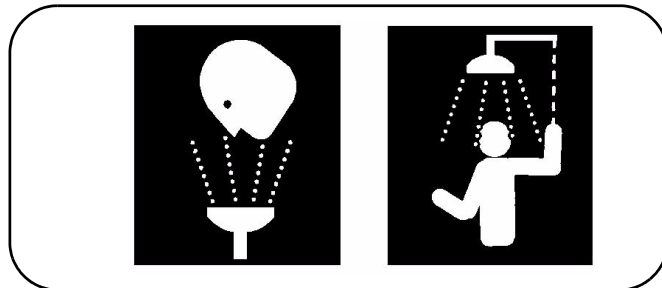


Battery Safety

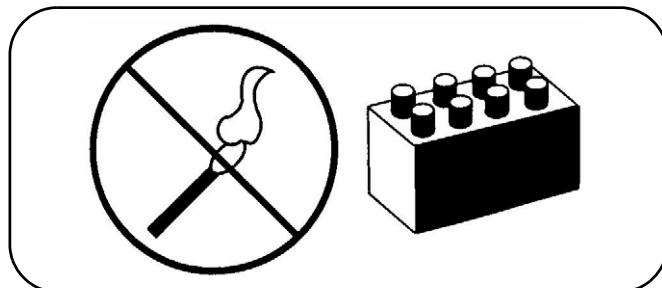
Wear personal protective equipment to protect eyes, face, and skin when checking, handling, or filling batteries. This equipment includes goggles or face shield, rubber gloves (with or without arm shields) and a rubber apron.



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.





Suggest:

For more complete manuals. Please go to the home page.

<https://www.ebooklibonline.com>

If the above button click is invalid. Please download this document first, and then click the above link to download the complete manual.

Thank you so much for reading

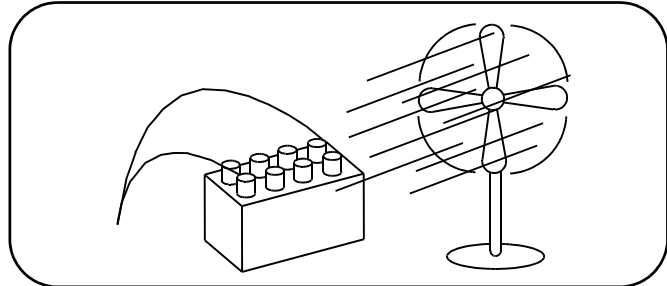
Battery Safety

Version no

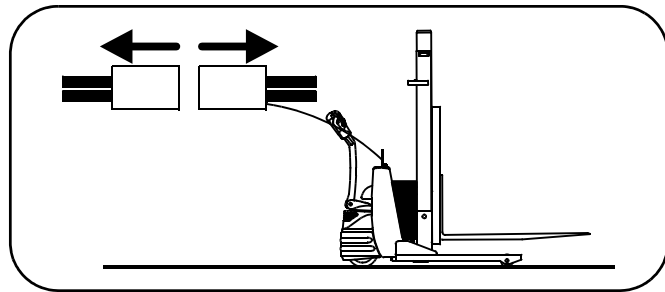
T-code

001

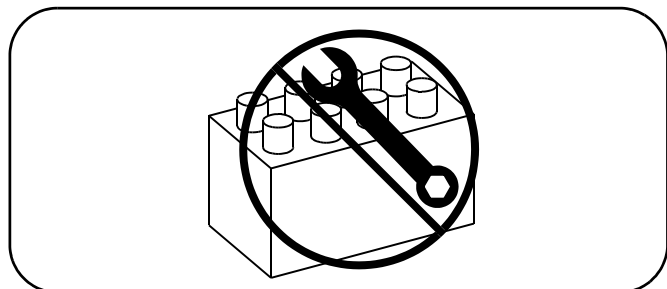
Keep the charger area well-ventilated to avoid hydrogen gas concentration.



Press the red OFF (O) key on the keypad 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.



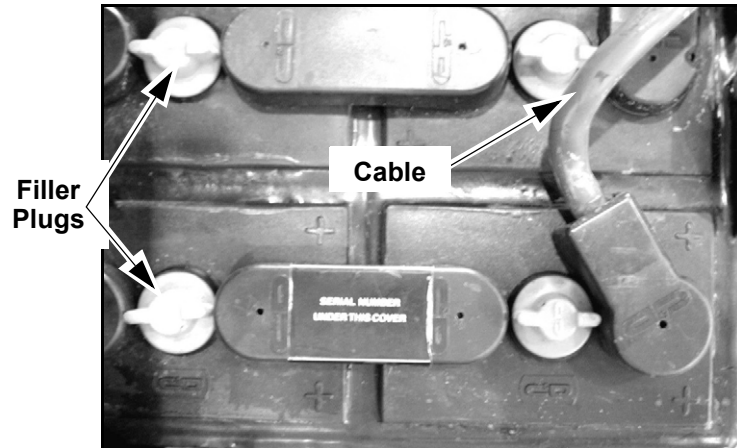
Do **NOT** lay tools or metal objects on top of battery. A short circuit or explosion could result.



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

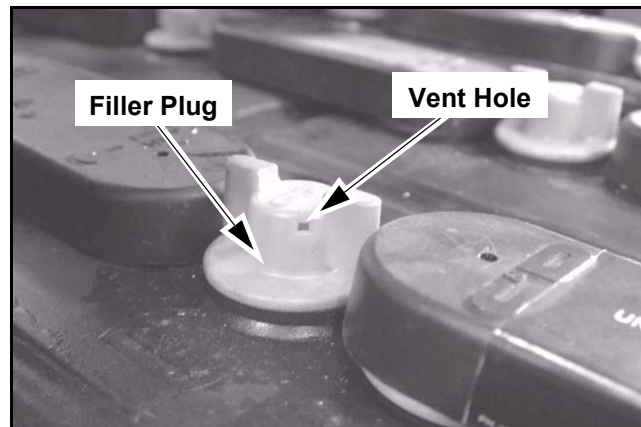
Battery Safety

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

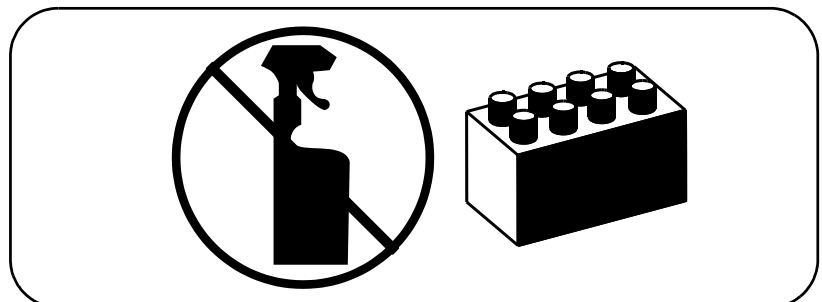


Keep filler plugs firmly in place at all times except when the electrolyte level is checked, when water is added to the cells or when the specific gravity is checked.

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



Do **NOT** allow cleaning solution, dirt, or any foreign matter to enter the cell.



<https://www.ebooklibonline.com>

Hello dear friend!

Thank you very much for reading.

Enter the link into your browser.

The full manual is available for immediate download.

<https://www.ebooklibonline.com>