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Toyota 6BPU15 Order Picker (SN.70001-79999) Workshop Service Manual (CL221) Manual Type: Workshop Service Manual Toyota Electric Truck 6BWC10, 6BWC15, 6BWC20, 6BWS11, 6BWS15, 6BWS20, 6BWR15 Workshop Service Manual Manual Type: Workshop Service Manual Toyota 6BWS10, 6BWS13 (SN.585890-up) Electric Walkie Stacker Workshop Service Manual (CL3WS-01) Manual Type: Workshop Service Manual Toyota 6HBW20 Electric Pallet Truck (SN.10011-17000) Workshop Service Manual Manual Type: Workshop Service Manual Toyota 6HBW20 Electric Pallet Truck (SN.17001 and up) Workshop Service Manual (PDMM-0105) Manual Type: Workshop Service Manual Toyota 6HBW23 Electric Pallet Truck (SN. 22000 and up) Workshop Service Manual (CL340-2) Manual Type: Workshop Service Manual Toyota 6HBC30,6HBC40,6HBE30,6HBE40,6HBW30,6TB50 Electric Pallet Truck (SN.10011-20010)Service Manual Manual Type: Workshop Service Manual Toyota 6HBC30,6HBC40,6HBE30,6HBE40,6HBW30,6TB50 Electric Pallet Truck (SN.20011-23999)Service Manual Manual Type: Workshop Service Manual Toyota 6HBC30,6HBC40,6HBE30,6HBE40,6HBW30, 6TB50 Electric Pallet Truck SN:24000-26999 Service Manual Manual Type: Workshop Service Manual Toyota 6HBC30, 6HBC40, 6HBE30, 6HBE40, 6HBW30, 6TB50 Electric Pallet (SN:27000-up) Service Manual Manual Type: Workshop Service Manual Toyota 7PM18, 7PM20 Pallet Truck (SN. from 963650) Operators Manual (243224-040) Manual Type: Operators Manual Toyota 7SM10, 7SM12 Pallet Truck (SN. from 936513) Operators manual (230507-040) Manual Type: Operators Manual Toyota 7BWS10, 7BWS13 Electric Walkie Pallet Truck (SN:40500-) Workshop Service Manual (CL3WS-06) Manual Type: Workshop Service Manual Toyota 7HBW23 Powered Pallet Walkie (SN.24501-) Workshop Service Manual & Wiring Diagrams (CL340-05) Manual Type: Workshop Service Manual Toyota 7HBC30,7HBC40,7HBE30,7HBE40,7HBW30, 7TB50 Pallet Walkie (SN.30001-) Service Manual (CL390-05) Manual Type: Workshop Service Manual Toyota 8HBC30, 8HBC40, 8HBE30, 8HBE40, 8HBW30, 8TB50 Pallet Truck Workshop Service Manual (CL398-07) Manual Type: Workshop Service Manual SERVICE MANUAL Pallet Trucks 8HBW23 00001 and up00700-CL341 Issued: 01 Oct 2015© 2015 by Toyota Industrial EquipmentAll rights reserved. No portion of this manual may be reproduced mechanically, electronically or by anyother means, including photocopying, electronic retrieval or transfer, or recording without the written permis-sion of the publisher.Toyota Industrial Equipment believes the information in this manual is accurate and current as of thepublication date; such information is subject to change without notice. Toyota Industrial Equipment is notresponsible for any errors that may appear in the manual.00700-CL341 1146950AModel 8HBW23 Service Manual Table of ContentsTable of Contents Page Revision Record . . . ese lightning arrester.pdf 46027390323.pdf zedge_ringtones_pro.apk.pdf

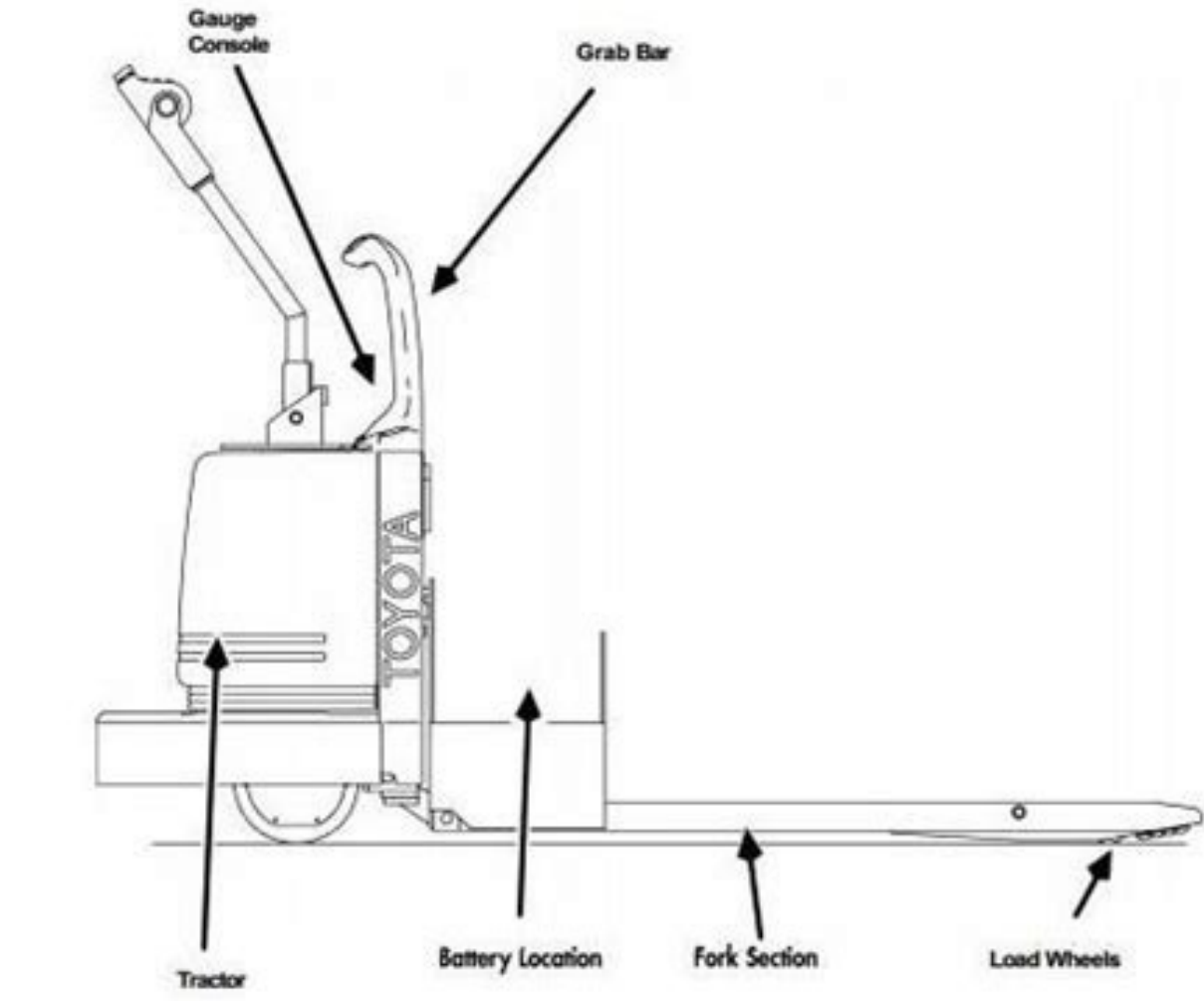


Figure 3-1: Model 6HBE30

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Non-technical changes are not identified with a change bar, however, affected pages are identified with "Revised: Month Year" in the footer.Document Revision History • 00700-CL341, Original Issue Date, Issued: 01 Oct 2015Publication: 00700-CL341, Issued: 01 Oct 2015 xModel 8HBW23 Service ManualService Information Documents IncludedService Information Documents IncludedThe following Service Information documents were incorporated into this manual.Use the blank rows below to log Service Information documents when they are added to thismanual.Document Number Subject Datexii Publication: 00700-CL341, Issued: 01 Oct 2015Model 8HBW23 Service Manual Section 1. How To Use This ManualSection 1. How To Use This ManualPublication: 00700-CL341, Issued: 01 Oct 2015 1-1Section 1. How To Use This Manual Model 8HBW23 Service ManualManual Design • 8. Theory of Operation explains signal flow within the electrical and hydraulicManual Design systems for various conditions of lift truck operation. This section also contains aThis manual is designed to give personnel, with detailed connection point table (Pinoutan expected level of expertise, the technical Matrix) designed to assist in testing andinformation necessary to maintain, troubleshooting the truck.troubleshoot, and repair a Toyota product. • Appendix contains reference informationThe two-line running page header at the top of such as torque values, lubricants, andeach page contains the name of the manual, the standard/metric conversions.title of the current section, and the topic of thecurrent page. • Index alphabetically lists subject matter with applicable page references.This manual includes the following sections: • 1. How to Use This Manual explains the manual format and design as well as abbreviations and symbols used. • 2. Safety explains warning and caution notes, general safety rules, and (as applicable) specific safety rules for batteries, jacking, static electricity, towing, transport, and welding. • 3. Systems Overview includes general lift truck specifications, modes of operation, and setup/configuration information. • 4. Scheduled Maintenance identifies the recommended maintenance tasks and intervals necessary to keep the lift truck working most efficiently. • 5. Troubleshooting provides information used to isolate a problem or failing component based on the lift truck's symptoms. • 6. Messages and Codes gives (as applicable) operator messages, fault codes, and procedures for running diagnostic tests. • 7. Component Procedures contains component locator photos and step-by-step procedures for the testing, removal, and adjustment of individual truck components. Components are grouped by system. A detailed List of Component Procedures can be found at the beginning of the section1-2 Publication: 00700-CL341, Issued: 01 Oct 2015Model 8HBW23 Service Manual Section 1. How To Use This Manual Abbreviations and SymbolsAbbreviations and Term/Symbol DefinitionSymbols E E UL Electric Truck TypeThese abbreviations, acronyms, and symbols Certification Rating withare used in this manual. EE safeguards against inherent fire and electrical shock hazardsTerm/Symbol Definition ESDA ESDS UL Electric Truck TypeA Ampere ETAC Certification Rating whereAC Alternating Current electrical equipment isamp Ampere or amplifier completely enclosedANSI American National Standards Institute Electrostatic DischargeAPI American Petroleum Instituteapprox approximately Electrostatic Discharge SensitiveauxiliaryAWG American Wire Gauge Electronic Tiller Arm Card (See Vehicle Manager) F Fahrenheit F foot or feet ft. foot pound(s) ft. lb. Fuse FUB Battery State-of-Charge GBSOC GA gal.C Celsius or Centigrade gm gaugeC Controller Area Network Gnd gallon or gallonsCAN counterclockwise GPM gramsCCW centimeter groundcm Computer Operating Program Gallons Per MinuteCOP Cold StorageCSC check valve HCV clockwise HD hours on deadmanCW 1 inch or inchesD in. inch pound(s)DC in. lb.DGNDdiam. Direct Current JDM digital ground JP jack and pin connectorDOT diameter Digital Multi-Meter K thousandDVM US Department of K kilogramm kg kilometers per square centimeter Digital Volt-Meter km/cm2Publication: 00700-CL341, Issued: 01 Oct 2015 1-3Section 1. How To Use This Manual Model 8HBW23 Service ManualAbbreviations and SymbolsTerm/Symbol DefinitionW with respect towrtSymbol at® trademark™ registered trademark® copyright© plus or positive+ minus or negative- plus or minus+ degrees° degrees Fahrenheit°F degrees Celsius°C less than< greater than> percent% equals=Publication: 00700-CL341, Issued: 01 Oct 2015 1-5Section 1. 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SafetyGeneral Safety General SafetyDo not operate or work on this truck unless Operate this truck only from the operator'syou are trained, qualified, authorized, and have position.read the Owner and Operator Manual. 6299-002.tif 8B15004D.tifKnow the truck's controls and what they do. Before working on this truck, if equipped with the keypad press the red OFF (O) key, place 6299-008.tif the Main ON/OFF Switch in the OFF position, and disconnect the truck's battery connector (unless this manual tells you otherwise). 6299-003.tifReport any malfunction or unsafe condition toyour supervisor immediately. Do not operatethis truck if it needs repair or if it is in any waysunsafe. 6299-001.tif Do not wear watches, rings, or jewelry when working on this truck. 1864_067.tifPublication: 00700-CL341, Issued: 01 Oct 2015 2-3Section 2. Safety Model 8HBW23 Service ManualGeneral Safety Clean up any hydraulic fluid, oil, or grease that has leaked or spilled on the floor.Obey the scheduled lubrication, maintenance,and inspection steps. spills.tif schedmnt.tifObey exactly the safety and repair instructions Always park this truck indoors in this manual. Do not take "shortcuts." 6299-004.tif 6299-014.tifDo not use an open flame near the truck. Do not park this truck in a cold storage area overnight. 23L6S012.tif 6299-015.tifDo not use gasoline or other flammable liquids Do not add to or modify this truck until youofor cleaning parts. contact your local authorized Toyota Industrial Equipment dealer to receive written 6299-009.tif manufacturer approval. 6299-011.tif2-4 Publication: 00700-CL341, Issued: 01 Oct 2015Model 8HBW23 Service Manual Section 2. SafetyBattery Safety Battery Safety goggles or face shield, rubber gloves (with or without arm shields), and a rubber apron. 25L6S016.tifAs a battery is being charged, an Make sure a shower and eyewash station areexplosive gas mixture forms within and nearby in case there is an accident.around each cell. If the area is notcorrectly ventilated, this explosive gas 04G6S059.tifcan remain in or around the battery forseveral hours after charging. Make surethere are no open flames or sparks inthe charging area. An open flame orspark can ignite this gas, resulting inserious damage or injury. Battery electrolyte is a solution of A battery gives off explosive gases. Never sulfuric acid and water. Battery smoke, use an open flame, or use anything that electrolyte causes burns. If any gives off sparks near a battery, electrolyte comes in contact with your clothing or skin, flush the area 23L6S012.tif 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.Read, understand, and follow procedures, recommendations, and specifications in thebattery and battery charger manufacturer'smanuals. Keep the charging area well-ventilated to avoid hydrogen gas concentration. 04G6S058.tifWear personal protective equipment to protecteyes, face, and skin when checking, handling, or filling batteries. This equipment includesPublication: 00700-CL341, Issued: 01 Oct 2015 2-5Section 2. Safety Model 8HBW23 Service ManualBattery Safety Keep plugs, terminals, cables, and receptacles in good condition to avoid shorts and sparks.If equipped with the keypad, press the red OFF(O) key and place the Main ON/OFF Switch in 27Y7S013.tifthe OFF position before disconnecting thebattery from the truck at the battery connector.Do not break live circuits at the batteryterminals. A spark often occurs at the pointwhere a live circuit is broken. 6299-003.tifDo not lay tools or metal objects on top of the Keep filler plugs firmly in position at all timesbattery. A short circuit or explosion could when not checking the electrolyte level, addingresult. to the cells, or checking the specific gravity. 04G6S057.tif 09G6S047.tif Vent HoleKeep batteries clean. Corrosion causes shorts to the frame and possibly sparks. 6299-013.tif Make sure the vent holes in the filler plugs are open to permit the gas to escape from the cells.2-6 Publication: 00700-CL341, Issued: 01 Oct 2015Model 8HBW23 Service Manual Section 2. SafetyDo not permit cleaning solution, dirt, or any Battery Safetyforeign matter to enter the cells. Obey the charging procedures in the Battery 6299-007.tif Instruction Manual and in the Battery Charger Instruction Manual. 25L6S014.tifMake sure you install the correct size andvoltage battery. A smaller or lighter weightbattery could seriously affect truck stability.An incorrect voltage battery could damage thetruck's electrical system. See the truck'sspecification plate for more information. 6299-012.tifNever plug a battery charger into the truck'sbattery connector. Plug the battery charger onlyinto the battery connector from the battery. 6299-005.tifPublication: 00700-CL341, Issued: 01 Oct 2015 2-7Section 2. Safety Model 8HBW23 Service ManualJacking Safety Tractor SectionJacking Safety 1. Park the lift truck on a level surface.When it is necessary to jack the truck off the 2. Lower the forks completely. Remove anyfloor to perform maintenance procedures, load.observe the following safety precautions: 3. Position all controls in neutral. 4. Block the wheels to prevent movement of the vehicle.Use extreme care whenever the truck is 5. If equipped with the keypad, press the redjacked up. Keep hands and feet clear OFF(O) key. Place the Main ON/OFFfrom the vehicle while jacking the truck. Switch in the OFF position. Disconnect theAfter the truck is jacked, put solid blocks battery connector from the truck.beneath it to support it. DO NOT rely onthe jack alone to hold the truck. 6. Position the jack in the designated jacking position.Fork Section Figure 2-2. Tractor Jacking Points 6270-003.tif1. Park the lift truck on a level surface.2. Using the lift button, raise the forks to maximum height.3. Block the fork section by placing a block behind the load wheels as shown in Figure 2-1. The tractor section remains on the floor.Figure 2-1. Blocking the Fork Section 27Y7S068.tif4. Lower the forks on the blocks. 7. Jack one side of the truck so that the drive tire is no more than 1 in. (25.4 mm) off the5. If equipped with the keypad, press the red floor. OFF(O) key. Place the Main ON/OFF Switch in the OFF position. Disconnect the 8. Block that side of the truck in position. battery connector from the truck. 9. Jack the other side of the truck level with the first side. 10. Block that side of the truck in position. NOTE: After working on a vehicle, test all controls and functions to make sure operation is correct.2-8 Publication: 00700-CL341, Issued: 01 Oct 2015Model 8HBW23 Service Manual Section 2. Safety TowingTowingTo safely tow this truck: 1. Lower the forks and remove any load. 2. If equipped with the keypad, press the red OFF(O) key. Place the Main ON/OFF Switch in the OFF position. Disconnect the battery connector from the truck. 3. Using a suitable towing vehicle, lift the tractor end of the truck until the drive tire is no more than 1 in. (25.4 mm) off the floor. 4. Tow the truck slowly in the tractor-first direction.NOTE: If a suitable towing vehicle is not available, the electromagnetic brake must be disabled to move this truck. See "Electric Brake Release" on page 7-37.Publication: 00700-CL341, Issued: 01 Oct 2015 2-9Section 2. Safety Model 8HBW23 Service ManualTransportTransportTo transport your Toyota walkie truck in anover-the-road vehicle or rail car, perform theseteps: 1. Lower the forks and put the truck in the center of the transport vehicle. 2. Place the control handle in the full upright position to set the

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not, troubleshoot wires and coil for opens. If resistance is OK, replace TA. Publication: 00700-CL341, Issued: 01 Oct 2015 5-23

Section 5. Troubleshooting Model 8HBW23 Service Manual Symptom Tables: Travel (Forward/Reverse) System

No Travel, No Lift/Lower. TA Flash Code 1,3.

Operator Display Indicates Error Code E202 Possible Cause Action

Bad wiring between TA and traction motor With the truck OFF and the battery disconnected, disconnect cables W, V, and U from TA and traction motor. Check for continuity and Bad TA shorts between cables and truck frame.

With the truck OFF and the battery disconnected, disconnect the cables at the TA. Reconnect the battery and turn the truck ON. If code 1,3 is still displayed, replace the TA. If code 1,3 is not displayed, replace the traction motor.

No Travel, No Lift/Lower. TA Flash Code 1,2. Operator Display Indicates Error Code E201 Possible Cause Action

Bad wiring between TA and traction motor With the truck OFF and the battery disconnected, disconnect cables W, V, and U from TA and traction motor. Measure for continuity and Bad TA shorts between cables and to truck frame. With the truck OFF and the battery disconnected, disconnect motor cables at TA. Reconnect the battery and turn the truck ON.

If code is still displayed, replace the TA. If code goes away, replace the traction motor.

No Truck Functions Active. TA Flash Code 1,7, (Low Battery Voltage).

Operator Display May Indicate E221 Possible Cause Action

Battery Problem

Bad traction amplifier Verify the correct, (24V) fully-charged, battery is installed in truck. Verify battery voltage at key switch input.

Measure voltage at JP1-1 wire with JP1 disconnected.

If 24V, replace TA. No Truck Functions Active. TA Flash Code 1,8, (Excessive Battery Voltage). Operator Display May Indicate E222 Possible Cause Action

Battery Problem

Bad traction amplifier Verify the correct, (24V) fully-charged, battery is installed in truck. Verify battery voltage at key switch input. Measure voltage at JP1-1 wire with JP1 disconnected.

If 24V, replace TA. 5-24 Publication: 00700-CL341, Issued: 01 Oct 2015

Model 8HBW23 Service Manual Section 6. Messages and Codes

Section 6. Messages and Codes

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6-5 Code 'TEST'

6-5 Code 'SLO'

6-5 Code 'Sro' (C14)

6-5 Code br_o (C16)

6-6 Code C19

6-6 Code HPd (C20)

6-6 Code C26

6-7 Code C27

6-7 Code C30

6-7 Code C31

6-8 Code C32

6-8 Code C33

6-8 Code C35

6-9 Code Lo (C41)

6-9 Code HI (C42)

6-10 Code Cold (C43)

6-10 Code Hot1 (C44)

6-11 Code Hot2 (C45)

6-11 Code C48

6-11 Code C57

6-12 Code C60

6-12 Code C61

6-12 Code C62

6-12a Code C64

6-12a Code C66

6-12a Code C67

6-12a Code C68

6-12b Code C70

6-12b Code C71

6-13 Code C72

6-13 Code 075

6-13 Code AC (C256)

6-14 Code C257

6-14 Code C258

6-14 Code C259

6-15 Code C380

6-15 Code C382

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..... 6-31 Charger Fault Codes
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..... 6-31 Charger Error Codes
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..... 6-31Publication:00700-CL341, Revised: 31 Aug 2016 6-3Section 6. Messages and Codes Model 8HBW23 Service ManualList of Messages and Codes6-4 Publication: 00700-CL341, Issued: 01 Oct 2015Model 8HBW23 Service Manual Section 6. Messages and Codes Messages and Caution CodesMessages and Caution CodesSection6. MessagesandCodesCode 'TEST'Code Title 'TEST'Operator Display 'TEST'System Response Truck functions are not allowed.Alarm Sounds NoReason New VM was installed that was not loaded with software.Tests to Run NoneHow to Clear Code is cleared after the software is loaded in the VM.Code 'SLO' Creep Speed Code Title 'SLO' Operator Display NOTE: This can be mistaken for a code 075 if the display is read upside-down. System Response There is no code 075. Reason Tests to Run Travel Limited to Creep Speed How to Clear Click-to-Creep feature activated. None With the handle in brake position, quickly click the speed control twice to deactivate creep speed.Code 'Sro' (C14)Code Title SRO (Static Return to Off)Operator Display 'Sro'System Response Error () and Parameter () Indicators Blinking.Alarm SoundsReason Truck is disabled (Emergency Reverse is Active).Tests to Run NoHow to Clear Brake is not applied when the truck is turned ON. Handle is in the brake released range prior to the system being powered ON. Confirm arm angle proximity switch function. Apply the brake.Publication:00700-CL341, Issued: 01 Oct 2015 6-5Section 6. Messages and Codes Model 8HBW23 Service ManualMessages and Caution CodesCode br o (C16)Code Title Brake OverrideOperator Display br oSystem Response TA Flash Code "5,6"Alarm SoundsReason Travel, lift, and lower are disabled.Tests to RunHow to Clear No Brake Override jumper (JP12) connector is connected to manually move the truck. None Move the tiller arm to the upper brake position and disconnect the brake override jumper connector (JP12).Code C19 Default Parameter Warning C19 Code Title No effect on performance. Operator Display No System Response New default parameters have been loaded into the RAM. Alarm Sounds None Reason Self clears after the timer expires. Tests to Run How to ClearCode HPd (C20)Code Title HPD - Directional/Speed Control Warning (High Pedal Disable)Operator Display 'HPd'System Response Error () and Parameter () Indicators Blinking.Alarm SoundsReason Travel is disabled, all other systems active. Emergency reverse is active.Tests to Run NoHow to Clear Directional/Speed Controls were not in neutral the position at power ON or when the brake is released, or failure of the Hall Effect sensor in the speed control circuit. Confirm the directional/speed controls are in neutral, and the handle sensors and wiring are correct. Return the directional/speed controls to the neutral position.6-6 Publication: 00700-CL341, Issued: 01 Oct 2015Model 8HBW23 Service Manual Section 6. Messages and Codes Messages and Caution CodesCode C26Code Title Lift Switch StuckOperator DisplaySystem Response C26Reason Ignores stuck input. Turns off Lift Contactor.
Stuck switch is disabled. If truck is equipped with an alternate switch, the alternate switch is still active. Lift contactorTests to Run responds to input from alternate switch if equipped.How to Clear Lift request ON longer than time out value (10 seconds) and the lift cut-out time out did not activate. The lift system is prevented from lifting (jammed or too heavy a load) to a point of activating the lift cut-out time out. Examine for stuck switch or shorted wiring harness. See "Pinout Matrix" on page 8-9. Release the Lift switch.Code C27 Lower Switch Stuck Code Title C27 Operator Display System Response System ignores stuck input. Turns off Lower Solenoid. Stuck switch is disabled. If truck is equipped with an alternate switch, the alternate switch is still active. Lower Reason solenoid responds to input from alternate switch if equipped. Tests to Run How to Clear Lower request ON longer than time out value (10 seconds). Lower switch is jammed or the operator is holding the switch for longer than is required to lower the forks. Examine for stuck switch or shorted wiring harness. See "Pinout Matrix" on page 8-9. Release the Lower switch.Code C30 Emergency Reverse has been Activated C30 Code Title Normal travel controls are disabled. The truck responds only to activations of the Operator Display Emergency Reverse switch. System Response The Emergency Reverse switch has been pressed and released. Cycle the brake (deadman) switch by engaging the brake. Reason Clears after the brake is applied. Tests to Run How to ClearPublication:00700-CL341, Issued: 01 Oct 2015 6-7Section 6. Messages and Codes Model 8HBW23 Service ManualMessages and Caution CodesCode C31Code Title Lost Brake Pot VR1 Input (Brake Pot Out-of-Range)Operator Display C31 TA Flash Code "3,4"System Response No TravelReason Brake pot input at JP1-17 is open. See "Pinout Matrix" on page 8-9.Tests to Run Troubleshoot wiring to and from the Brake pot.How to Clear Adjust or replace pot or repair wiring. Cycle the truck OFF/ON.Code C32 Emergency Reverse Before Brake Release C32 Code Title Travel is disabled Operator Display The emergency reverse switch is activated (depressed) prior to the brake being System Response released.
Reason Examine for stuck emergency reverse switch. Clears after the Emergency Reverse switch is released. Tests to Run How to ClearCode C33 Horn Switch Stuck Code Title C33 Operator Display System Response Ignores stuck input. Turns off Horn. Horn responds to input from alternate source if equipped (this does not include the second horn switch on the control handle).
Reason Horn request ON longer than time out value (10 seconds). Stuck switch is disabled; Tests to Run if equipped with an alternate switch, the alternate switch is still active. How to Clear Examine horn switch and related wiring. See "Pinout Matrix" on page 8-9. Release or repair Horn switch.6-8 Publication: 00700-CL341, Issued: 01 Oct 2015Model 8HBW23 Service Manual Section 6. Messages and Codes Messages and Caution CodesCode C35Code Title Brake Switch (Arm Angle Proximity Switch) ErrorOperator DisplaySystem Response C35Alarm Sounds Normal travel controls are disabled. The truck responds only to activations of theReason Emergency Reverse switch if the traction motor is rotating in the tractor-first direction.Tests to RunHow to Clear Yes (3 beeps, once, when error code is generated) The brake switch (arm angle proximity switch) is out of adjustment or damaged giving a false indication that the brake is engaged. At the same time, the traction motor is detected rotating. Test the brake switch (arm angle proximity switch) and wires. Apply the brake and have the switch adjusted or replaced.Code Lo (C41)Code Title Battery Undervoltage WarningOperator Display 'Lo'System Response Battery () Indicator Blinking.Alarm Sounds TA Flash Code "2,3"Reason Travel performance may be limited due to low voltage.Tests to Run NoHow to Clear Battery voltage is below approximately 17V. The battery is discharged or there is excessive load on the battery. Measure the battery voltage at JT1-1. Use the service key to read the voltage. See "Service Display" on page 3-16. The battery must be charged.
Examine the battery and battery connections. The fault is cleared when the battery voltage increases above 17V.Publication:00700-CL341, Issued: 01 Oct 2015 6-9Section 6. Messages and Codes Model 8HBW23 Service ManualMessages and Caution CodesCode Hi (C42)Code Title Battery Overvoltage WarningOperator Display 'Hi'System Response Battery () Indicator BlinkingAlarm Sounds TA Flash Code "2,4"Reason Travel performance may be limited.Tests to RunHow to Clear No Battery voltage is over approximately 32V.
This can be caused by the wrong type of battery installed in the truck, bad battery connections/cables, or an overcharged battery. Measure the battery voltage at JP1-1. See "Service Display" on page 3-16. See also "Code Lo (C41)". Check battery and battery connections.
Make sure that the correct size battery is installed in the truck. The fault is cleared when the battery voltage drops below 32V.Code Cold (C43)Code Title Traction Amplifier Cold Thermal CutbackOperator Display ColdSystem Response TA Flash Code "2,1"Alarm SoundsReason Travel performance may be limited.Tests to Run NoHow to Clear Low temperature (below -13°F (25°C)) at the TA heatsink. 1. Operating in an extreme cold environment. 2. Incorrect traction amplifier mounting. 3. Bad traction amplifier. Check TA for error code. Code is cleared when the traction amplifier heatsink temperature returns to within normal operating range.6-10 Publication: 00700-CL341, Issued: 01 Oct 2015Model 8HBW23 Service Manual Section 6. Messages and Codes Messages and Caution CodesCode Hot1 (C44)Code Title Motor Temperature Hot CutbackOperator Display 'Hot1'System Response TA Flash Code "2,8"Alarm SoundsReason Travel performance may be limited.Tests to Run NoHow to Clear Traction motor temperature is above 248°F (120°C). Resistance of the temperature sensor should be 591 Ohms at room temperature. Use an accurate temperature measuring device to verify the temperature reading on the service display. See "Service Display" on page 3-16. Permit the motor to cool down. Replace the temperature sensor.Code Hot2 (C45)Code Title Traction Power Amp Warm Thermal CutbackOperator DisplaySystem Response 'Hot2'Reason TA Flash Code "2,2"Tests to Run Travel performance may be limitedHow to Clear TA internal heatsink temperature is above 185°F (85°C). Operation in extreme hot environment, excessive load on vehicle, or incorrect TA mounting. Verify the Traction Amp is hot.
If it is, determine the cause by checking for mechanical drag such as brakes dragging, gear box issue, or load wheel binding. Check the current through U, V and W and verify that they are even. See "Service Display" on page 3-16. Also see "No Travel or Slow Travel. TA Flash Code 2,2, (Thermal Cutback) Heatsink Temperature Exceeded 185°F (85°C). Operator Display May Indicate Hot2 (C45)" on page 5-23. Take action to bring heatsink temperature into normal operating range.Code C48Code Title Click-to-Creep Button is Stuck ClosedOperator DisplaySystem Response C48Reason No restriction on normal travel.
Click-to-Creep travel disabled, Input from Click-to-Creep button ignored.Tests to Run Click-to-Creep button is stuck closed for more than 10 seconds or is closed whenHow to Clear truck is being powered ON. Click-to-Creep is disabled. Check for heartbeat on the RDP-T module. Run FlashWare RDP Communication Test at the service port. Test wiring to RDP-T module. Release the Click-to-Creep button.Publication:00700-CL341, Issued: 01 Oct 2015 6-11Section 6. Messages and Codes Model 8HBW23 Service ManualMessages and Caution CodesNote: Caution Error Codes 50 and above arelogged. See the following tables for howto clear the code and the allowed activityduring the error. Some codes can becleared by cycling the truck OFF/ON.Code C57 Brake Interlock Proximity Switch Input Mismatch C57 Code Title Hard Plug to 1.0 MPH Operator Display The Curtis analog and digital inputs that read the brake interlock proximity System Response switch's output do not agree Reason Measure voltage inputs at JP1-9 and JP1-24. Should be battery voltage with handle down Tests to Run Repair inputs and re-key How to ClearCode C60Code Title Lift Coil Driver (Driver 3) Open or ShortedOperator Display C60System Response Lift Function not Available. Horn sounds 3 beeps sequence.Reason Lift Contactor Coil Open or ShortedTests to Run Examine for a short or open for lift pump contactor coil and related wiring.
Resistance of coil should be approximately 22-23 ohms. See "Pin Out Matrix" onHow to Clear page 8-9. Repair shorts or opens as needed and re-key.Code C61Code Title Lower Solenoid Coil (Sol 1) Driver Shorted or OpenOperator Display C61 TA Flash Code "3,5"System Response Lower function not available. Lift functions normally.Reason Lower coil driver open or shorted.Tests to Run Examine for a short or open for lower coil, or related wiring. Resistance of coil should be approximately 39 Ohms. See "Pinout Matrix" on page 8-9.How to Clear Investigate cause of open or short and repair or replace as needed.6-12 Publication: 00700-CL341, Revised 31 Aug 2016