

PMA-510 ECA / EPA



CLARK Technical
Publications
Lexington, KY
40508

Copyrighted Material
Intended for CLARK dealers only
Do not sell or distribute

CONTENTS

- 1 TRUCK MODEL ILLUSTRATIONS
- 2 SUBJECT/PICTORIAL INDEX
- 4 SAFETY INFORMATION
- 5 FOREWORD
- 6 PM - PLANNED MAINTENANCE PROGRAM

GROUP SECT. PMA - PLANNED MAINTENANCE ADJUSTMENT PROCEDURES
PM REPORT FORM

- 01 1 LUBRICATION CHARTS
- 02 1 SEAT CONTROL ROD ADJUSTMENT
- 06 1 DIRECTIONAL CONTROL LEVER ADJUSTMENT
- 06 2 HORN AND STEERING HANDWHEEL ADJUSTMENT
- 12 1 ELECTRIC TRUCK BATTERY MAINTENANCE
- 12 2 ELECTRIC TRUCK BATTERY STANDARD U.L. 583
- 16 1 ELECTRIC MOTOR MAINTENANCE
- 16 2 DRIVE MOTOR BRUSH REPLACEMENT - GE
- 16 3 DRIVE MOTOR BRUSH REPLACEMENT - PRESTOLITE
- 19 3 EV-1 #1 CARD INITIAL ADJUSTMENT SETTINGS
- 19 4 PUMP AND TRACTION CONTROL LED CHECK
- 20 1 DRIVE UNIT MAINTENANCE
- 22 1 PNEUMATIC TIRE AND WHEEL MAINTENANCE
- 23 1 PARKING BRAKE RELEASE
- 23 3 BRAKE BLEEDING PROCEDURE
- 26 2 STEER WHEEL BEARING MAINTENANCE
- 26 3 POWER STEERING RELIEF PRESSURE CHECK
- 29 1 HYDRAULIC SUMP FLUID AND FILTER CHANGE
- 30 1 HYDRAULIC SYSTEM RELIEF PRESSURE CHECK AND ADJUSTMENT
- 31 1 HYDRAULIC SYSTEM SCHEMATIC DIAGRAM
- 32 1 TILT CYLINDER ADJUSTMENT
- 32 2 TILT CYLINDER DRIFT TEST
- 34 1 UPRIGHT LIFT CHAIN CHECK AND ADJUSTMENT
- 34 3 UPRIGHT DOWNDRIFT TEST
- 34 4 FORK WEAR INSPECTION
- 34 7 LIFT CHAIN MAINTENANCE

— REFERENCE INFORMATION —

- 40 1 TRUCK DATA PLATES AND DECALS
- 40 2 SUGGESTED EQUIPMENT FOR ELECTRIC TRUCK P.M.
- 40 3 FIRE EXTINGUISHER RECOMMENDATIONS
- 40 4 LUBRICANT SPECIFICATIONS AND RECOMMENDATIONS
- 40 5 TRUCK SPECIFICATIONS
- 40 17 MEASURING VOLTAGES WITH THE V-0-M
- 40 18 MEASURING RESISTANCE WITH THE V-0-M
- WIRING DIAGRAM - TRUCK ELECTRICAL SYSTEM

Inspect BATTERY COVER. Any damage should be noted on the P.M. check sheet. Make sure that the battery cover operates freely and latches securely when closed.



Fig. 22151

Inspect OVERHEAD GUARD for damage. Make sure there are no missing bolts and make certain the mounting bolts are secure. See Page 39 for tightening instructions.



Fig. 22152

Examine the LOAD BACKREST EXTENSION. Be sure all bolts are in place and tight. Make a report of any damage on the P.M. check sheet.

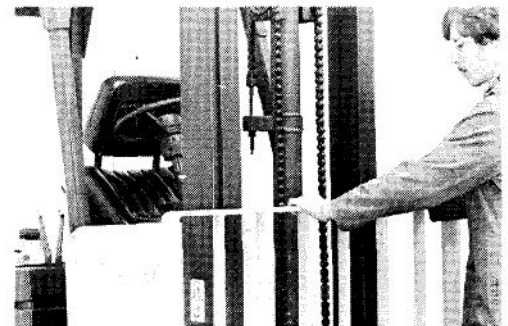


Fig. 22164

Check UPRIGHT LIFT CHAINS for equal tension. Inspect CARRIAGE AND RAIL LIFT CHAIN CONDITION. Refer to GROUP 34, Section 7 for Lift Chain maintenance.

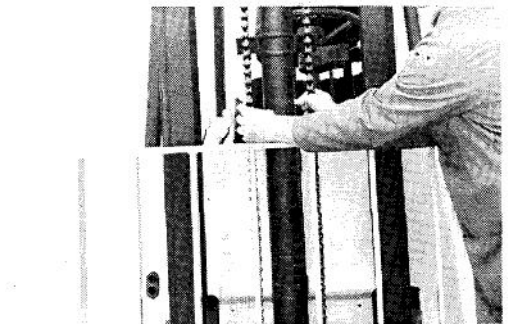


Fig. 22153

Check CARRIAGE CHAIN ADJUSTMENT. Check roller tracing patterns on the rails. Approximately 1/2 - 3/4 inch of unused rail indicates correct chain adjustment. If patterns are not correct, adjust the carriage chains. Refer to GROUP 34, Section 1, Upright Lift Chain Check and Adjustment Procedure.

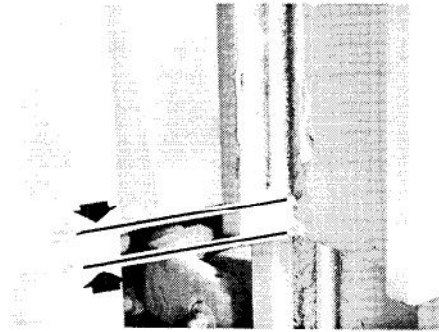


Fig. 17643

Inspect LIFT CHAIN ANCHORS at both ends of chain. Be sure both nuts, for each chain anchor are in place. Be sure there is a cotter key located in the end of each anchor.

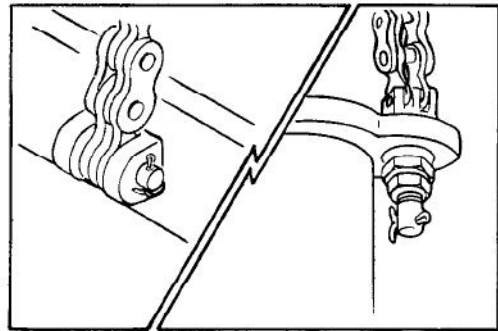
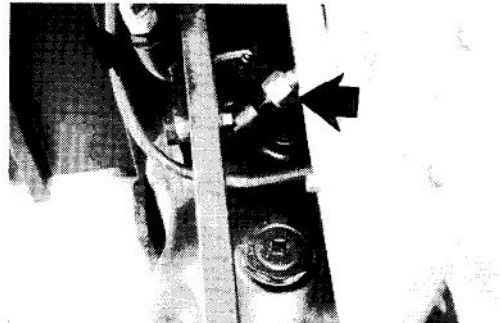
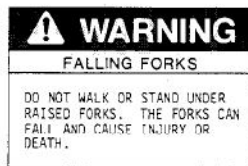


Fig. 22225

Check all LIFT LINE HYDRAULIC CONNECTIONS for leaks. If necessary, raise the carriage for access to the fittings. BE SURE TO PLACE BLOCKING UNDER THE CARRIAGE AND UPRIGHT RAILS. See Fig. 22154, Page 9.



84M253

Check LIFT CYLINDER RETAINING BOLTS to be sure they are in place and tight. Refer to GROUP 40, Section 5 for torque specification.

Note: When carriage is raised and blocked, the oil level in drive axle may also be checked. Refer to Page 30 and 31.

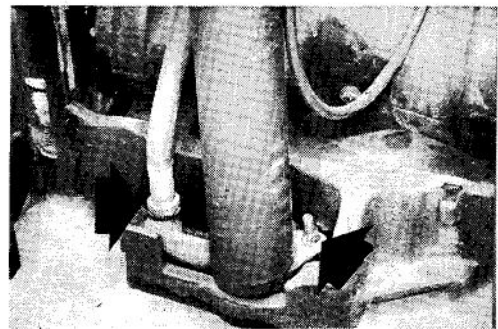


Fig. 22155

Inspect the entire upright assembly. Be sure all safety guards are in place and not damaged. Also that all chain retainers are in place. Check to see that carriage stops are in place, and the top cylinder bolt is in place. Check all welded connections.

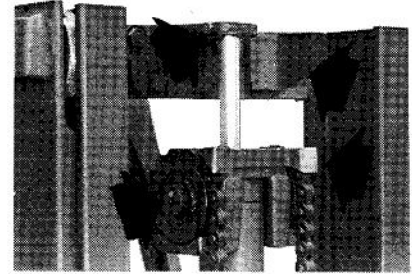


Fig. 22156

If carriage was blocked up for previous inspections, raise carriage slightly and remove the blocking. Lower the carriage.

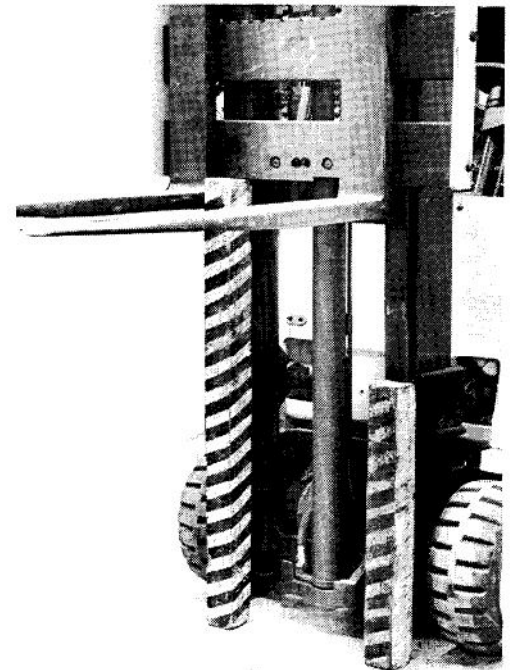
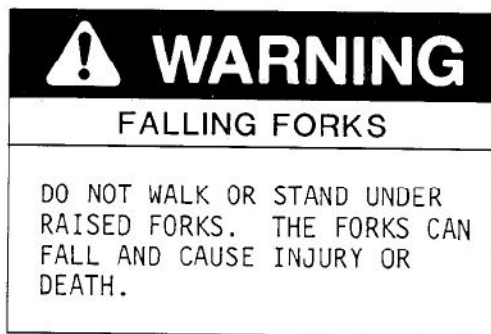


Fig. 22154

INSPECT THE LIFT FORKS:

Shown here are new forks. Push forks together, as shown and check for the following.

Forks should rest 1/4-inch off the floor.

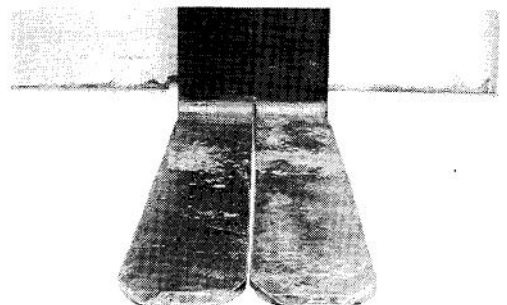


Fig. 18046

Inspect LIFT FORKS for cracks, breaks, bending and excessive wear. Neither fork tip should be more than 1/4 of an inch higher than the other. Check the amount of wear at the heel of the forks.

Refer to Group 34, Section 4, Fork Wear Inspection.

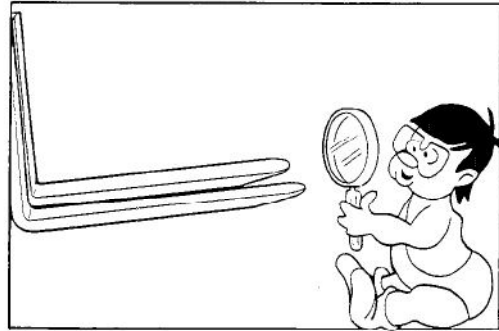


Fig. 17796

Inspect FORK LATCHES. The latches are spring loaded. Be certain they are not broken or damaged.

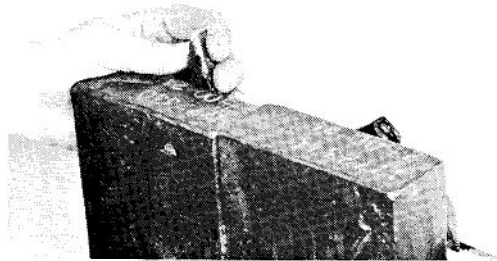


Fig. 18132

Check FORK LATCHES to be sure they operate freely and lock properly.

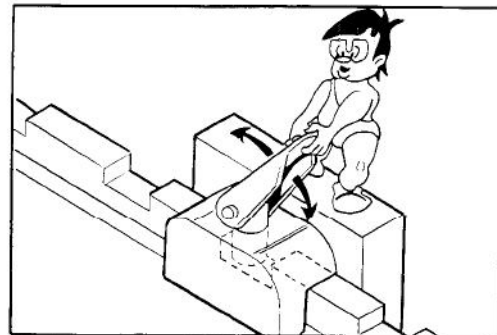


Fig. 17795

Check fork stop pins for security of mounting.

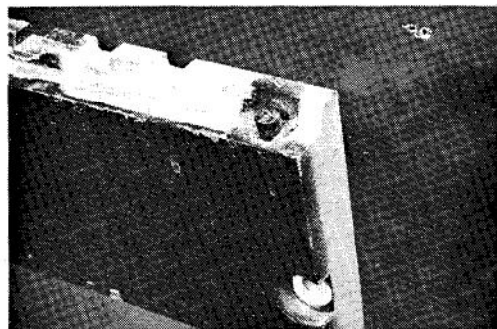


Fig. 19507

Check condition of DRIVE AND STEER TIRES. Remove objects from the tire tread. Check tires for excessive wear and chunking. Also, check the air pressure in pneumatic tires. See GROUP 40, Section 5 for specifications.

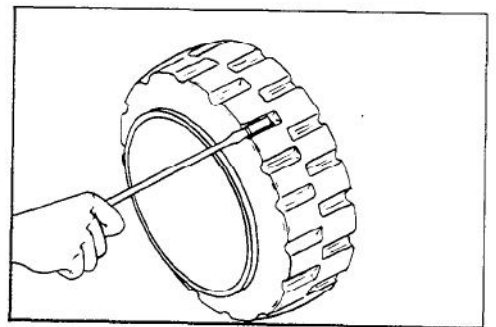


Fig. 12917

Make sure the DIRECTIONAL CONTROL LEVER is mounted securely, and operates freely. Check that the lever positively stays or "holds" in each position (park, forward, and reverse).

Report any malfunction. Do not attempt to operate the truck until repair has been made. Refer to Group 06, Section 1 for adjustment of directional control lever.

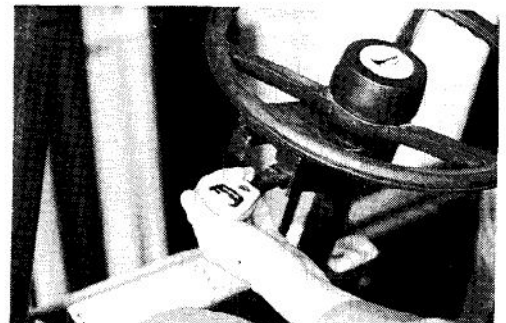


Fig. 22158

Check the HYDRAULIC CONTROL LEVERS for freedom of operation and security of mounting. Make sure that valve lever knobs are attached securely to the lever and screws are tight. Refer to Group 40, Section 5 for torque specifications.

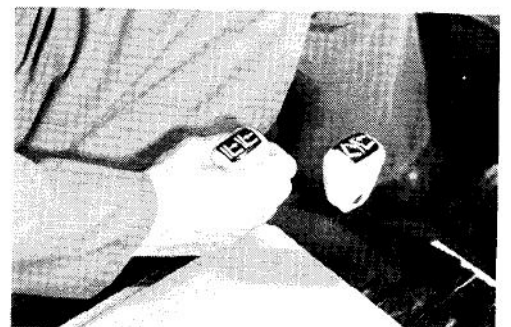


Fig. 22159

Inspect condition of the BATTERY CONNECTOR.

Check the spring-loaded terminal and retaining tab for poor connection due to burning, bad crimp, or loose or broken retainer.

Check the molded body for damage from overheating, burning and chips or cracks.

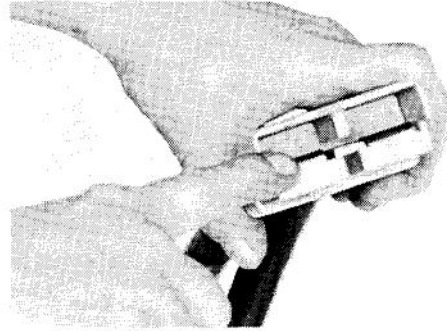


Fig. 14006

Inspect the SPRING LOADED CONNECTORS in the Truck Battery Receptacle. Look for looseness, burned parts and other damaged areas due to excessive heat.

Refer to checks noted above. If any of the above conditions are evident, replace the connectors.

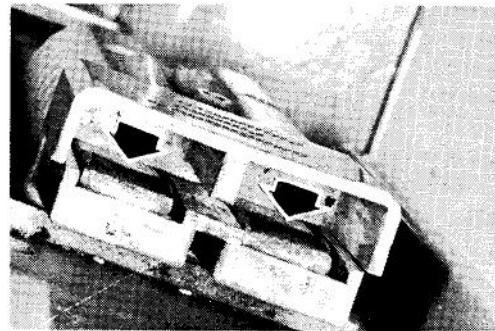


Fig. 17650

Connect the battery to the truck.

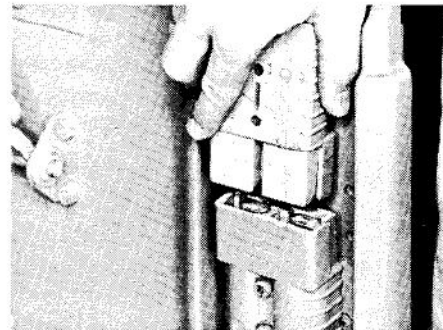


Fig. 17651

Operational Checks

Check PARKING BRAKE operation:

1. Put the truck on a level surface and block the wheels.
2. Put directional control lever in the "NEUTRAL" position and get off the truck.
3. Turn key switch to the "ON" position, and push the seat down. You should hear the hydraulic pump motor start operating.
4. At the left front side of the truck under the cowl, watch the operation of the parking brake piston rod. It should release the parking brake by moving the piston rod out of the cylinder (towards the front of truck).

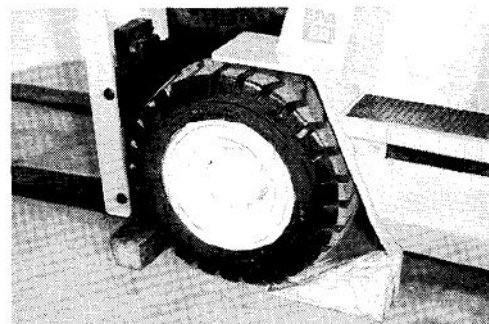


Fig. 22160

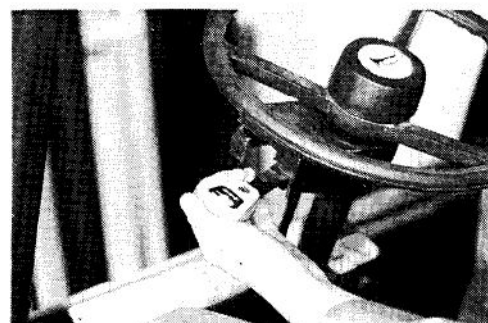


Fig. 22158



Fig. 22161

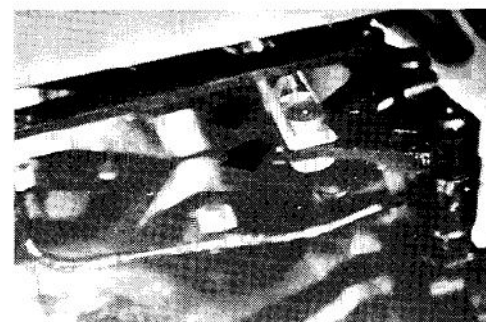


Fig. 22162

5. Now place the directional control lever into the "PARK" position, or let up on the seat.

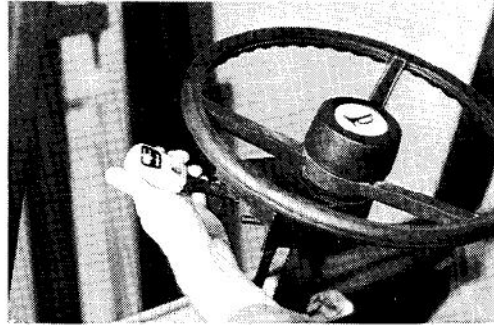


Fig. 22163

6. The hydraulic pump motor should stop operating and the parking brake should apply as the piston rod of the parking brake cylinder moves towards the rear of truck.

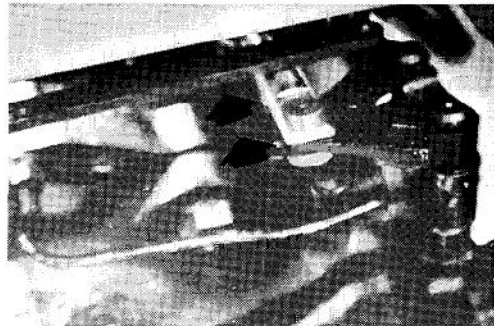


Fig. 22162

Check operation of RETURN-TO-NEUTRAL:

1. Get into the driver's seat and turn key switch to "ON" position.



Fig. 22161