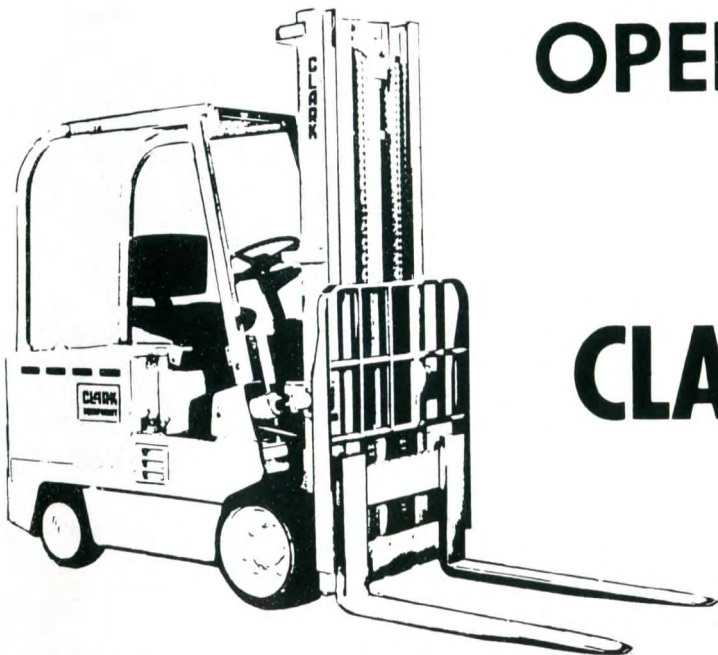


CLARK



OPERATOR INSTRUCTIONS

CLARKLIFT ELECTRIC

EC-60, 70, 80 "B"

36/48 VOLT

6000 LB. THRU 8000 LB. RATED CAPACITY

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FOREWORD

This manual will help the "Qualified Operator" become familiar with the battery powered Rider type lift truck, its major components, its operating controls, special features and the function(s) of each.

This publication is not a training manual but rather, a guide to help the "Qualified Operator" to safe and efficient operation of the Rider type, battery powered, Clark Lift Truck.

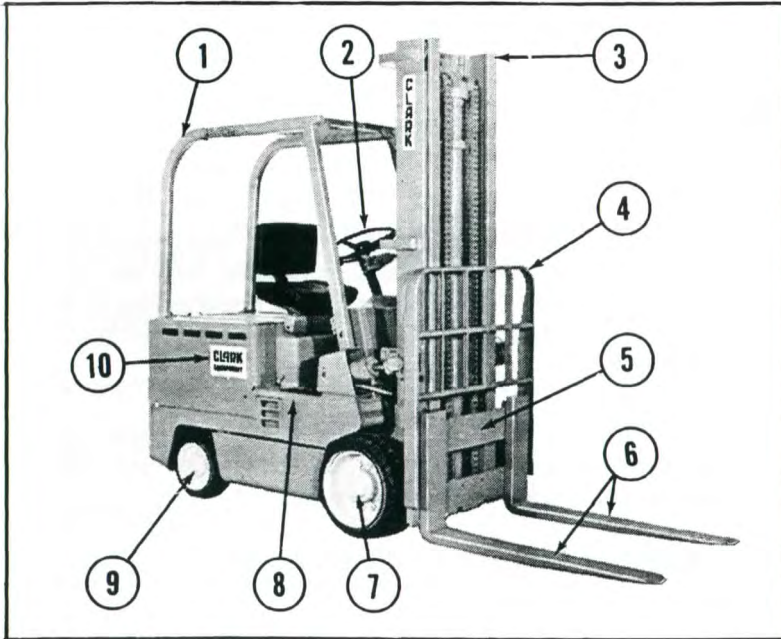
Operator training manuals are available thru your Clark Dealer.

Clark lift trucks are built to take hard work not abuse. They are built to be dependable, but - as with any other truck - they are only as good as the man behind the wheel and the men responsible for maintaining them.

Illustrations in this manual guide the operator through correct procedures of checking, starting, operating, stopping and parking the lift truck.

READ IT – STUDY IT – KEEP IT HANDY

Know Your Truck



1. Overhead Guard
2. Operator's Compartment
3. Upright Assembly
4. Load Backrest Extension
5. Fork Carriage
6. Load Forks
7. Drive Axle and Wheels
8. Machine Serial Location
9. Steer Axle and Wheels
10. Battery Compartment

13314

**36/48 VOLT ELECTRIC
EC 60, 70, 80B
Models
6000 thru 8000 lbs. Rated Capacity**

Safety

1. Only physically qualified and thoroughly trained personnel should be authorized to operate the Clarklift Electric EC 60, 70 or 80 "B" model machines.

2. Prominently placed on every Clark truck is a list of basic rules for operation. These rules are for the protection of you and others in your operating area. Be familiar with them.

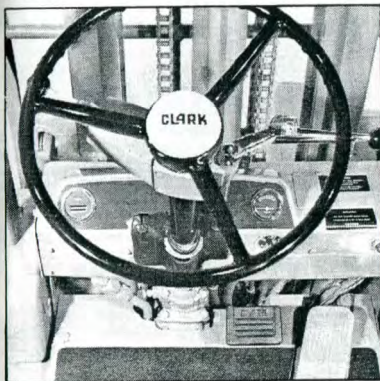
3. Learn how your truck is operated. Know its safety devices, how they function and how the special attachments, if any, work.

4. The wearing of safety glasses and safety shoes is recommended. Dress suitably and avoid loose fitting clothing.



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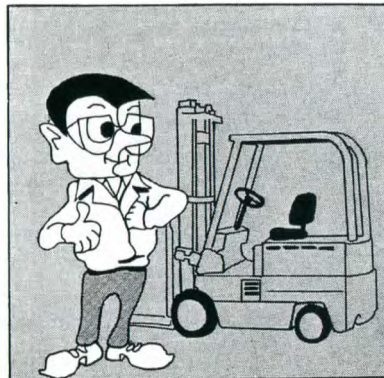
CAUTION

FOR SAFETY OBSERVE THE FOLLOWING WARNINGS. FAILURE TO DO SO MAY CREATE A SERIOUS RISK OF INJURY TO YOURSELF AND OTHERS.

1. OPERATOR MUST BE TRAINED AND QUALIFIED. UNDERSTAND OPERATOR'S MANUAL BEFORE STARTING.
2. OPERATE ONLY FROM DESIGNATED OPERATIONS STATION. KEEP INSIDE THE BODY OF FORK TRUCKS AND REAR OF THE LIFTING MECHANISM ON LIFT TRUCKS. KEEP FEET ON DESIGNATED FOOT AND FEET RESTS OF TRUCKS AND HAND TRUCKS.
3. USE EXTREME CARE WHEN OPERATING WHERE THERE IS A RISK OF FALLING OBJECTS. HIGH LIFT HOIST WALKING TRUCKS SHOULD BE EQUIPPED WITH OVERHEAD GUARDS AND LINES EXCEEDED EXTENDING HIGH LIFT SHOULD EXCEED CAPACITY OR INADEQUATELY WEIGHTED. AS FAR AS LOADS WILL PERMIT COMPLETELY ENGAGE LOAD.
4. BEFORE EXERCISE CAPACITY OR INADEQUATELY WEIGHTED. AS FAR AS LOADS WILL PERMIT COMPLETELY ENGAGE LOAD.
5. BEFORE EXERCISE OR LOWER RAKE TRUCKS. EXTERIOR RESTRICING CHAIN. PLACE GUARD RAILS IN POSITION AND SECURE RAILY OR CAST TO FORKS.
6. HANDLE ONLY STABLE LOADS. USE EXTREME CARE WHEN HANDLING LONG, HIGH OR WIDE LOADS.
7. KNOW AND OBSERVE FLOOR, DOCKBAYS AND BRIDGEPLATE WEIGHT LIMITS. MAKE SURE THEY ARE SECURE.
8. DO NOT TRAVEL WITH THE LOAD AGAINST THE VERTICAL FACE OF THE FORKS AND WITH LOAD ON LIFTING MECHANISM AT MINIMUM OPERATING CLEARANCE AND TO BACK. TRUCKS INTERFERED WITH VISIBILITY TRAVEL WITH FORKS DOWN EXCEPT WHEN CLIMBING GRADES (HILLS).
9. TRAVEL SLOWLY AND WITH CAUTION ON GRADES. DO NOT TURN WHILE OPERATING. LIFT TRUCKS ON GRADES EXCEEDING 15% OR OPERATE WITH LOAD UP GRADE. WHEN UNLOADED, TRAVEL WITH THE LIFTING MECHANISM DOWN GRADE.
10. CHECK SLOPE TRUCKS ARE NOT RECOMMENDED FOR GRADE OPERATION WHEN THE OPERATOR'S PLATFORM IS ELEVATED ABOVE 24 INCHES.
 - DO NOT OPERATE ON 2% SLOPES ON GRADES STEEPER THAN A 5% SLOPE.
 - DO NOT RIDE MOTORIZED HAND TRUCKS ON RAMP EXCEPT FOR DOCKBAYS.
11. START, STOP, CHANGE DIRECTION, TRAVEL AND BRAKE SMOOTHLY. FLOW DOWN WHEN TURNING. SHOW CAUTION ON SLIPPERY SURFACES AND LOOSE MATERIALS.
12. ON HIGH LIFT TRUCKS, LIFT AND LOWER WITH SAFE MECHANICAL OR TALKED LIGHTLY BACK. WHEN LOAD OR LIFTING MECHANISM IS ELEVATED TO PICK UP OR DEPOSIT A LOAD USE MINIMUM FORWARD OR REARWARD TILT.
13. PAY ATTENTION FOR OBSTRUCTIONS, ESPECIALLY OVERHEAD. CHECK YOUR CLEARANCES ON LIFT TRUCKS.
14. DO NOT TRUCKS CARRY OR PASSENGERS UNLESS EXPLICITLY ALLOWED WITHOUT A SECURED SAFETY PLATFORM.
15. ALLOW NO ONE UNDER OR NEAR LOAD OR LIFTING MECHANISM.
16. USE BRAKING BRAKES WHEN LEAVING TRUCK. CHECK WHEELS OF TRUCKS ON AN INCLINE OR IS TO BE WORKED ON.
17. REPORT DAMAGE OR FAULTY OPERATION IMMEDIATELY. DO NOT OPERATE TRUCK UNTIL CORRECTED.

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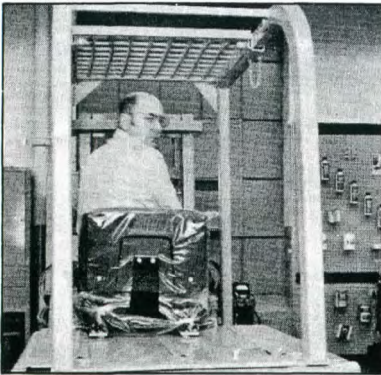
Page 3

Safety



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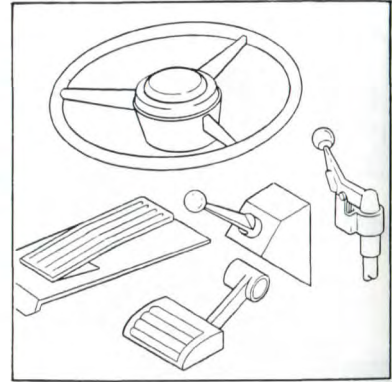
14638



5. Never operate a lift truck with wet or greasy hands or shoes.

7. Always look all around the truck before moving it in any direction. Then remember to start and stop slowly and smoothly.

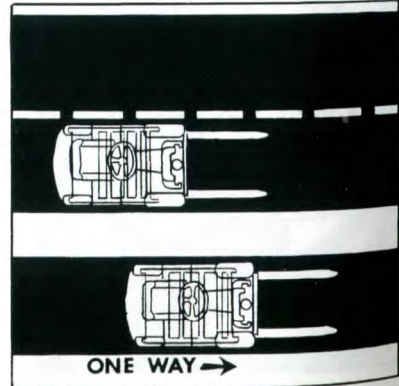
6. Before operating any lift truck, test the horn, brakes, seat operated parking brake, steering, lift-tilt controls, directional controls and special devices for proper operation. Report any improper operation to the proper authority.



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8. Operate the truck only in designated truck routes and keep operating aisles clear. One-way traffic is recommended. If this is not practical in your operation heed highway regulations and drive to right of aisle centerline.



Safety



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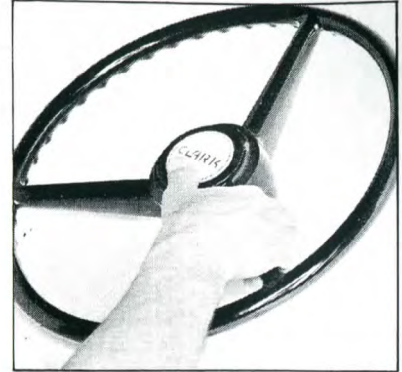
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9. Be alert for pedestrians, other trucks or obstacles in your path of travel.

10. Sound horn at all corners, exits, entrances and when approaching pedestrians or bystanders.



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11. Obey all posted traffic rules and warning signs.

12. Maintain a safe distance from the truck ahead of you at all times.

Assure ample distance to stop smoothly and safely should the need arise.



Page 5

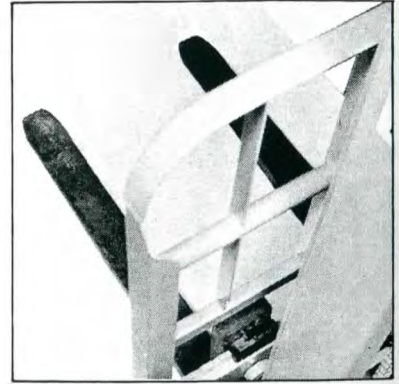
Safety



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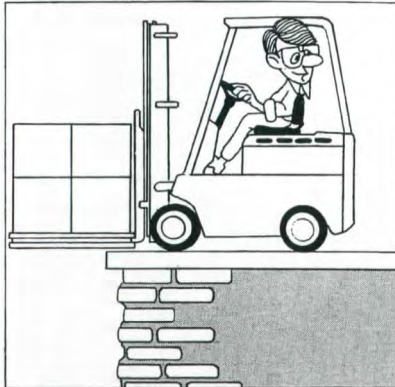
13. Be aware of rear end swing and be alert to prevent rear end swing damage to material in your operating area.

14. Be aware of the position of your fork tips when the truck is in motion. Be alert to prevent striking anything with fork tips.



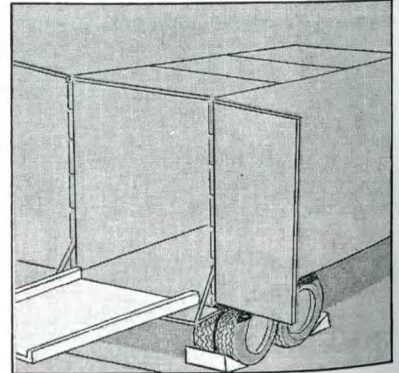
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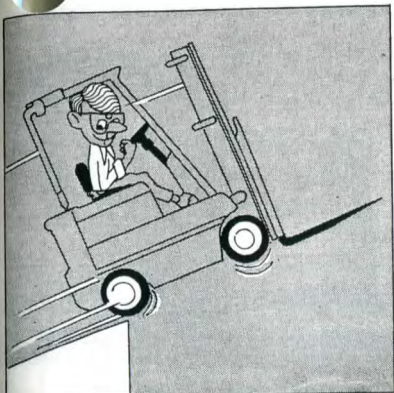
15. Be extremely cautious when operating truck near edge of loading dock.

16. Make sure vehicle being entered has been blocked to prevent accidental roll. Bridge plates must have adequate strength, width, guard rails each side (minimum 3" high recommended), and be properly secured.



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Safety



17. Never allow stunt riding or indulge in horseplay while operating a fork lift truck.

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19. Never carry unauthorized passengers. The quick response of a lift truck may cause riders to fall off. Besides, they distract you and this could be dangerous.

18. Never use your truck to push or tow another. Never allow your truck to be pushed or towed by another.

Should a truck become disabled and require moving, notify the proper authority immediately.



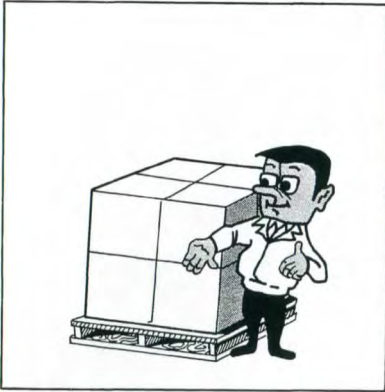
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20. Know the capacity of your truck and its attachment (if any) and never exceed it. Study your truck data capacity plate and learn the facts stamped in areas 1 thru 8.

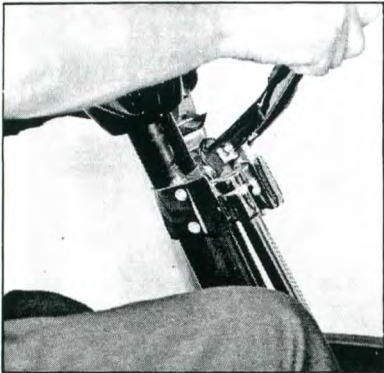
| CLARK EQUIPMENT | |
|---|---|
| INDUSTRIAL TRUCK DIVISION | BATTLE CREEK, MICHIGAN |
| MODEL NO. | TYPE 3 |
| SERIAL NO. | 2 |
| ATTACHMENTS | 4 |
| LOAD C, G, C | CAPACITY WITH ATTACH. LISTED ABOVE OR WITH FORKS - UPRIGHTS VERTICAL |
| A, B | |
| FLOOR | 5 |
| APPROX. WT. ALL TRUCKS | LESS BATT. - ELECTRICS |
| APPROX. WT. ELECTRICS ONLY | WITH MAX. BATT. WT. |
| BATTERY WT. | MAX 7 MIN |
| BATTERY | AH NO |
| CAPACITY | LBS VOLTS 8 |
| <small>FOR OTHER CAPACITIES CONSULT MANUFACTURER AS RELEASED FROM FACTORY THIS TRUCK MEETS THE DESIGN SPECIFICATIONS ESTABLISHED IN AMERICAN NATIONAL STANDARD FOR POWERED INDUSTRIAL TRUCKS PART-III ANSI B 56.1-1969 PT NO. 2315709</small> | |

Safety



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21. Thoroughly inspect all loads to be moved for overload and/or poor balance. If the stability of a load is questionable, don't move it.

23. Before lifting check to insure adequate unobstructed overhead clearance.

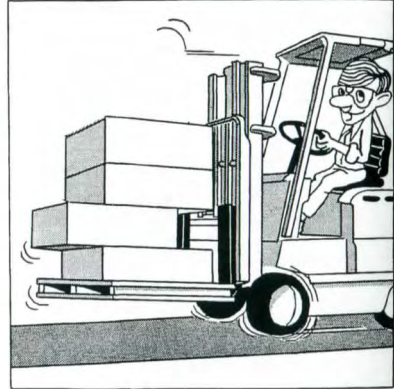
Gradually and smoothly pull up on control lever to start lift.

Smoothly return control lever to neutral position to stop lift at desired point.

22. Unstable loads are a hazard to you and to your fellow workers. Always make certain that your load is well stacked and evenly positioned across both forks. Never attempt to lift a load with only one fork.

24. Push down on control lever to lower load.

Descent of load may be stopped at desired level by smoothly returning control lever to neutral position.



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Safety

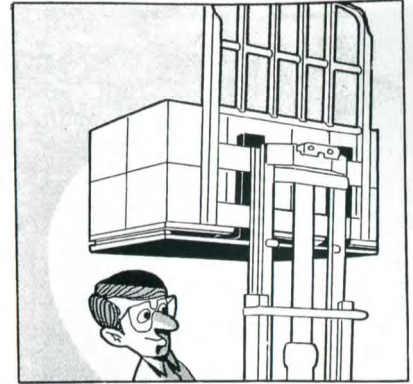


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25. Always travel with load near floor and up-right tilted back to cradle load.

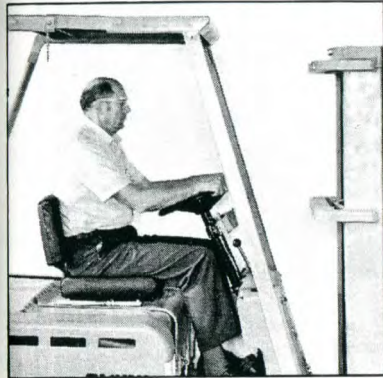
Never lift or lower load while truck is in motion.

26. Never permit anyone to stand or walk under elevated forks or other load engaging attachments if machine is so equipped.



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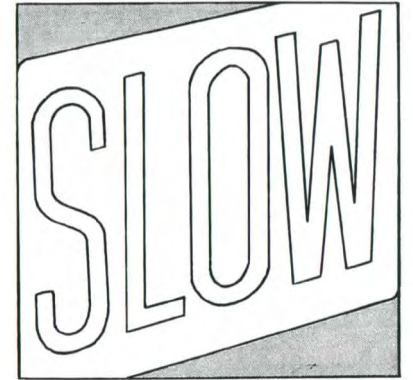


27. Remain seated at all times and keep head, hands, arms, feet and legs within the confines of the operators compartment.

Never reach into the up-right for any reason.

28. Slow down for turns, ramps, bumps, cross aisles, wet or slippery floors and at all times when visibility is restricted.

13103



Safety

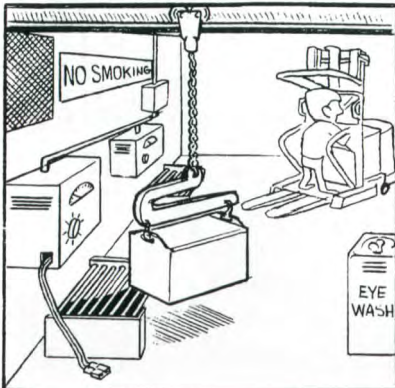
29. Know and observe floor load limits and overhead clearances in all operating areas. Make certain that floors of boxcars, trucks, trailers and elevators are adequate before entering.

30. Use caution when placing loads or traveling near water pipes, overhead sprinklers, electrical wiring, steam pipes, heaters or other fragile or dangerous equipment or material.

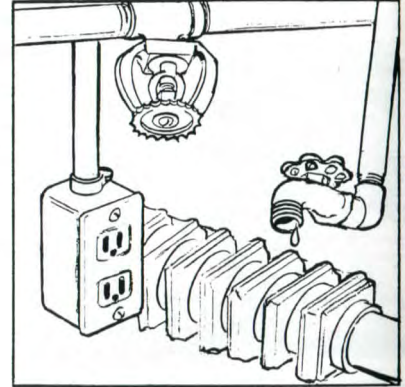


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Page 10

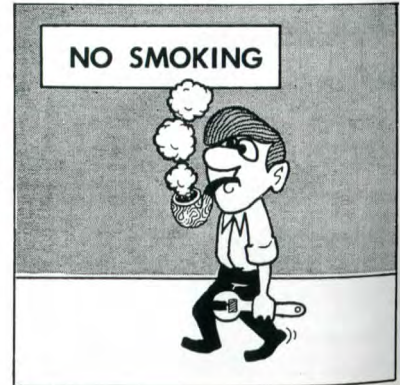


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31. Batteries should be serviced or recharged only in designated charging areas and only by personnel thoroughly trained in safe battery servicing practices.

32. Never smoke or allow anyone to smoke in areas where batteries are being charged or in areas where fuels or other flammable fluids or materials are used or stored.



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Safety



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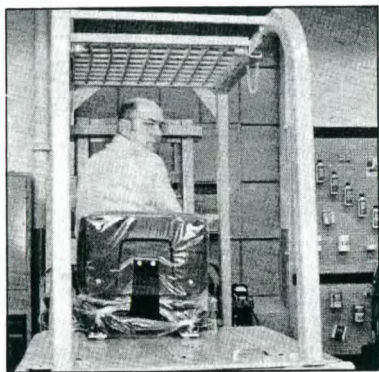
33. Park lift trucks in designated areas only. Lower forks to floor, tilt upright forward, place directional control in neutral, remove switch key and block drive wheels to prevent roll.

34. If truck is to be left unattended make certain that traffic aisles are unobstructed and leave truck as described in item 33.



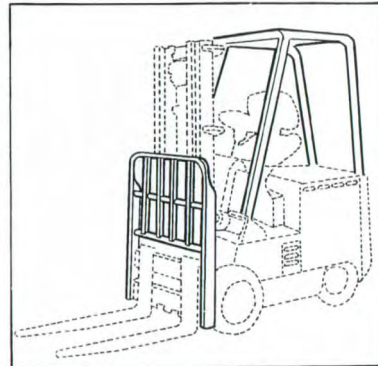
13672

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35. When handling bulky loads which, because of their size and shape, restrict your vision - operate your truck in reverse to improve visibility.

36. Overhead guards and load backrest extensions are for your protection. Make certain that they are securely mounted and undamaged before operating your truck.



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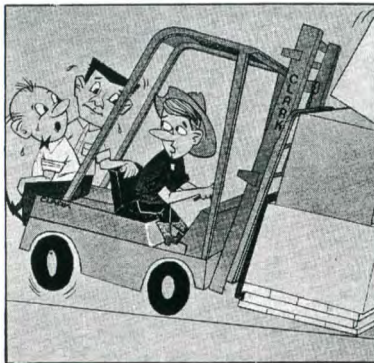
Safety

37. Do not use your lift truck to raise personnel.



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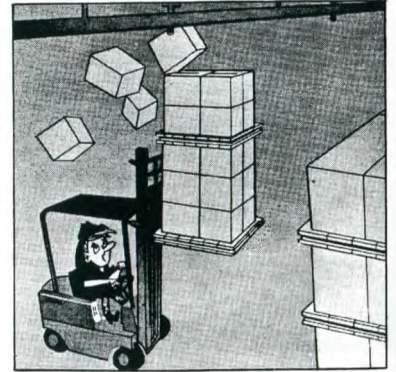
13843



39. Overloading is extremely dangerous. You don't have complete control of your truck and you are causing unnecessary wear.

Never add to your counterweight, always break down the load.

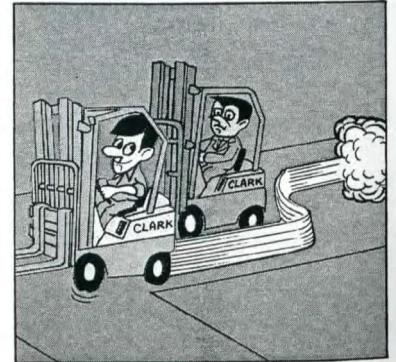
38. Don't handle double tiered loads. They're unstable and difficult to control. Even an overhead guard can't fully protect you from heavy objects dropped from these heights.



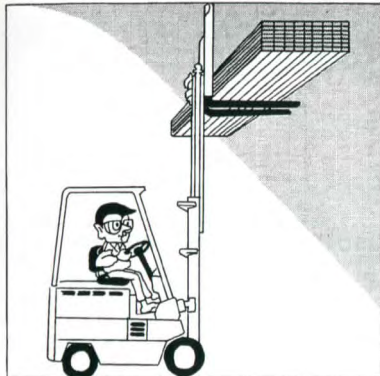
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40. Don't pass other trucks traveling in the same direction at intersections, blind spots or other dangerous locations.



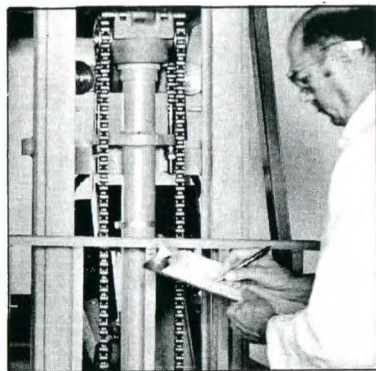
Safety



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41. Be extremely careful of load end swing when operating with loads of long lumber, pipe, etc.

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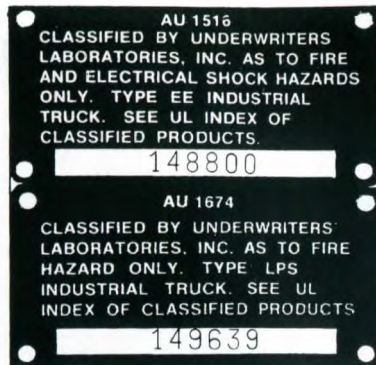


43. Follow a scheduled planned maintenance and lubrication program.

All adjustments and repairs must be performed by thoroughly trained and authorized personnel only.

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42. Know the construction type of your truck and make certain that trucks of this type may be operated in restricted areas before entering. Never take an unauthorized truck into restricted or hazardous areas. (Refer to item 20 on page 7).



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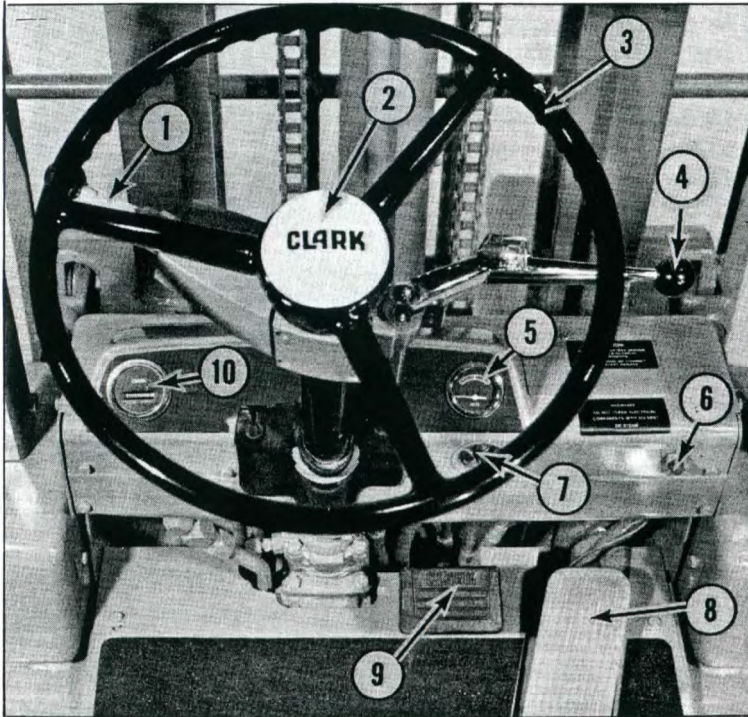
14639

44. Remember - your safety and the safety of others depends on you. Keep your mind on operating your lift truck.



Page 13

Operator's Compartment & Controls



1. Directional Control Lever
2. Horn Button.
3. Steering Handwheel.
4. Hydraulic function control lever (lift, lower & tilt).
5. Battery charge indicator.
6. Fault detector "Reset" button (optional only - consult your supervisor on proper operation).
7. Key Switch.
8. Accelerator Pedal.
9. Service Brake Pedal.
10. Hour Meter

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Before Operation

CLARK
ELECTRIC TRUCK
DRIVER'S DAILY CHECKLIST
Check Before Start Of Each Shift

Truck No _____ Date _____
Operator _____ Supervisor's OK _____

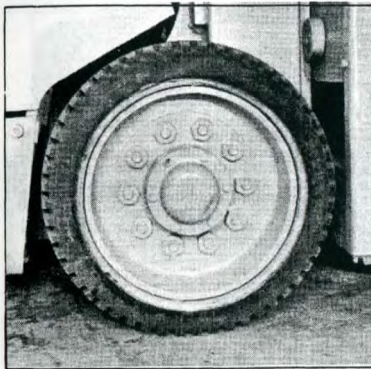
Hour Meter Reading
Start of Day _____ End of Day _____ Hrs. for Day _____

Boxes Accordingly OK Needs Attention or Repair

| Visual Checks: | Operational Checks: |
|---|---|
| <input type="checkbox"/> Obvious damage and leaks | <input type="checkbox"/> Horn |
| <input type="checkbox"/> Tire condition | <input type="checkbox"/> Steering |
| <input type="checkbox"/> Battery plug connection Note: Be sure the battery plug connection is tight. | <input type="checkbox"/> Service brakes |
| <input type="checkbox"/> Head and tail lights | <input type="checkbox"/> Battery Load Test |
| <input type="checkbox"/> Warning lights | Note: Watch battery indicator while holding till meter on full back tilt. If needle falls to red area, battery doesn't have sufficient charge to operate truck properly. |
| <input type="checkbox"/> Hour meter | <input type="checkbox"/> Parking brake |
| <input type="checkbox"/> Other gauges and instruments | <input type="checkbox"/> Seat brake |
| <input type="checkbox"/> Battery Discharge indicator Note: Key on, needle should indicate in green area. | <input type="checkbox"/> Hydraulic controls |

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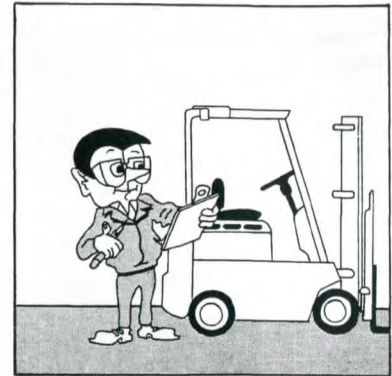
14641



3. Check condition of drive wheels and tires. Note any apparent drive wheel or tire damage on the check list.

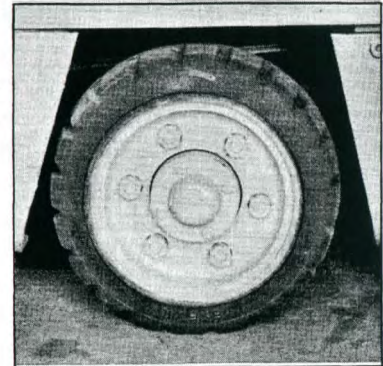
Code: OI-340 Feb 74

2. Walk around truck and visually check for damage and leaks. Note all damage and leaks on check list.



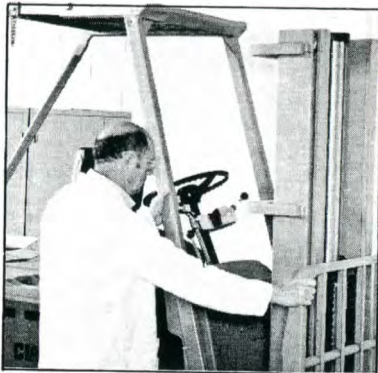
13695

14642



4. Check condition of steer wheels and tires. Note any apparent steer wheel or tire damage on the check list.

Before Operation



13674

5. Check condition of overhead guard and load backrest extension.

Make certain that they are properly positioned and secured.

6. Remove blocks from drive wheels, enter operators compartment and seat yourself.

Remember - these trucks are equipped with seat operated parking brakes which will release automatically when seat is depressed. This may allow truck to roll if parked on an incline.



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7. Operator seat adjustment is accomplished by releasing short lever at right hand side of seat.

Position seat to provide easy access to all hand and foot controls then release lever and make certain that seat locks in desired position.

8. Apply pressure to brake pedal with either foot. Pedal should be "firm". If pedal is "spongy" or "fades" under pressure do not operate the truck. Report brake deficiency immediately.



13673

Before Operation



14636

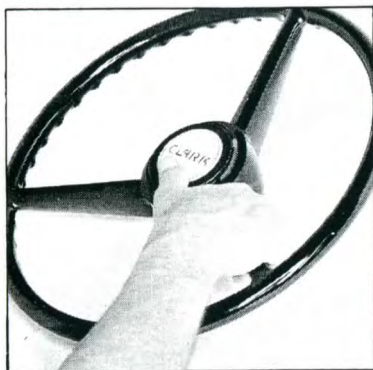
9. Visually check battery connector to make certain that it has been properly connected and is not damaged.

10. Insert key into switch and turn clockwise to "on" position.



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11. Press horn button to determine if horn is operational.

If horn does not function properly, report it immediately to the designated authority.

12. Check hour meter to insure that it is undamaged and functioning properly.

Report any malfunction or damage to the proper authority.

13225



Before Operation



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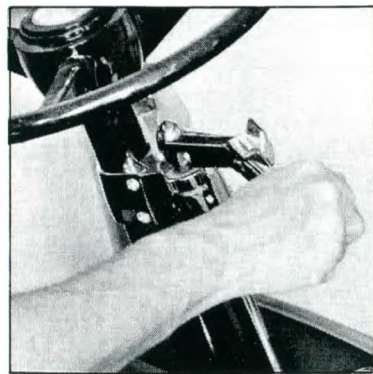
13. Check battery discharge indicator for damage. Needle should remain in green area, check this meter frequently during operation.

Report any malfunction or damage immediately.

14. Gently pull back on tilt control lever and hold.

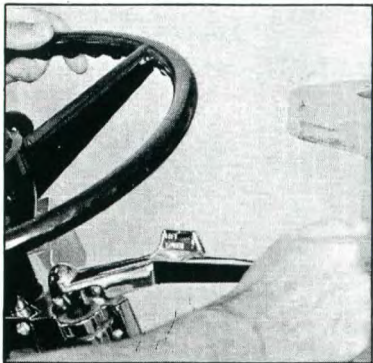
When upright reaches full back tilt check position of battery indicator needle and release control lever.

If needle does not remain in green area battery does not have sufficient charge.



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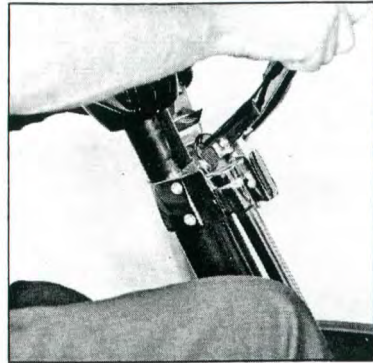
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15. Push forward on tilt control lever and hold until upright reaches near vertical position.

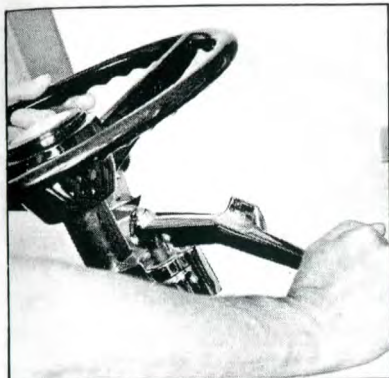
Release control lever to stop upright tilting action at desired point.

16. Check for adequate unobstructed overhead clearance. Gently pull up on lift control lever. Observe upright lift and report any erratic or unusual operation. Release lever to stop lift.



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Before Operation

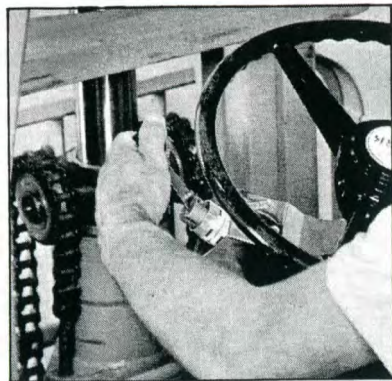


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17. Push lift control lever down and hold while observing descent of upright. When forks reach desired position, slightly above floor, release the lever to stop upright lowering. Report any erratic or unusual operation immediately.

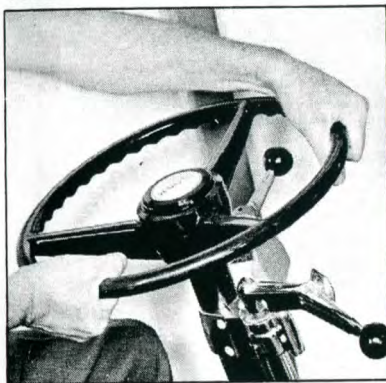
18. Check to insure unobstructed forward path of travel and apply service brakes with either foot.

Push directional control switch lever into position for forward travel.



13680

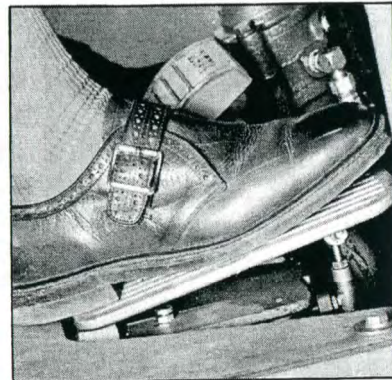
13683



19. Check steering operation by turning hand wheel to right and then to left. Return hand wheel to proper position for desired path of travel. Note any unusual noise or operation.

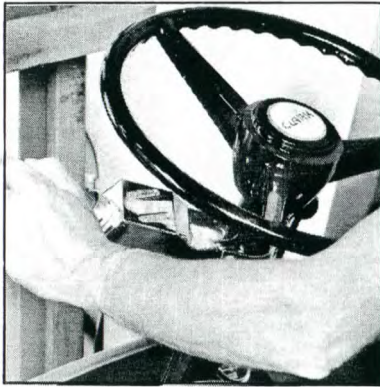
20. Place right foot on accelerator (release service brake if operating with left foot) and press gently until truck begins to move forward.

Release accelerator and apply service brakes to stop truck.



13684

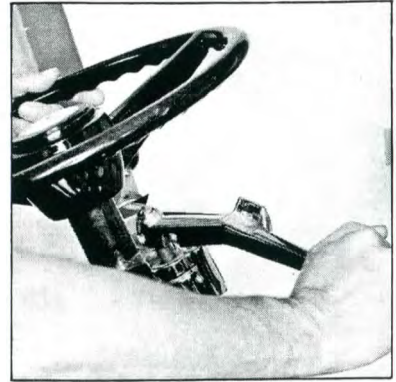
Before Operation



13679

21. Pull directional control switch into proper position for reverse travel. Gently press accelerator pedal with right foot until truck moves backward. Release accelerator pedal and move directional control switch lever to neutral.

22. Lower upright so that lift forks rest on floor and tilt forward to insure that tips of forks are on floor.



13670

13672



23. Turn switch key counterclockwise to "off" position, remove key and carefully dismount from truck. Don't forget to block drive wheels if truck must be left on an incline.

24. Review operators daily check list to make certain that it has been properly marked and turn it into the designated authority.

1324

| CLARK EQUIPMENT | |
|--|--|
| ELECTRIC TRUCK DRIVER'S DAILY CHECKLIST | |
| Check Before Start Of Each Shift | |
| Truck No. _____ | Date _____ |
| Operator _____ | Supervisor's OK _____ |
| Hour Meter Reading: _____ | Hrs. for Day _____ |
| Start of Day _____ | End of Day _____ |
| <input checked="" type="checkbox"/> Boxes Accordingly <input type="checkbox"/> OK <input type="checkbox"/> Needs Attention or Repair | |
| Visual Checks: | Operational Checks: |
| <ul style="list-style-type: none"> ___ Obvious damage and leaks ___ Tire condition ___ Battery plug connection <i>Note: Be sure the battery plug connection is tight.</i> ___ Head and tail lights ___ Warning lights ___ Hour meter ___ Other gauges and instruments ___ Battery Discharge indicator <i>Note: Key on, needle should indicate in green area.</i> | <ul style="list-style-type: none"> ___ Horn ___ Steering ___ Service brakes ___ Battery Load Test <i>Note: Watch battery indicator while holding lift lever on full back lift. If needle falls to red area, battery doesn't have sufficient charge to operate truck properly.</i> ___ Parking brake ___ Seat brake ___ Hydraulic controls |

Operation



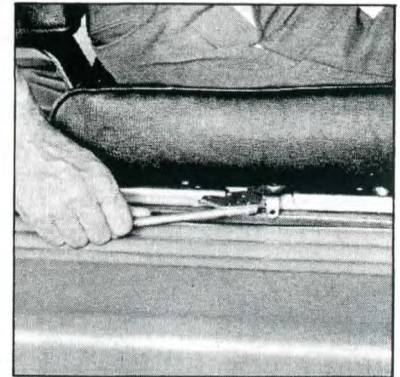
14637

1. Remove blocks at drive wheels, enter operators compartment and seat yourself.

Remember - these trucks are equipped with seat operated parking brakes which will automatically release when seat is depressed - this may allow truck to roll if parked on an incline.

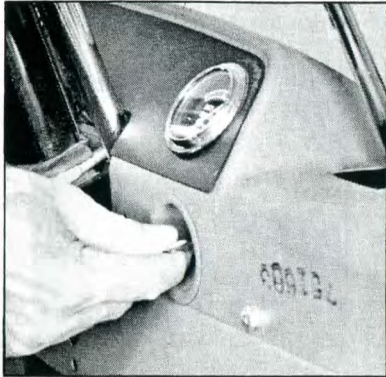
2. Adjust operators seat to a position which is comfortable for you and provides easy access to all hand and foot controls.

Make certain that seat locks into selected position after adjustment.



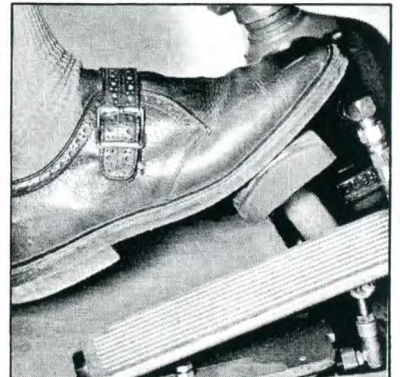
13688

13672



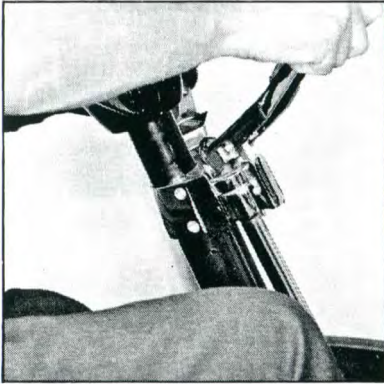
3. Insert key into switch and turn clockwise to "on" position.

4. Place foot on brake pedal and push down to apply the service brakes.



13673

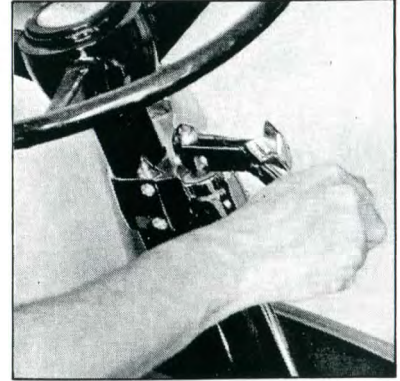
Operation



13669

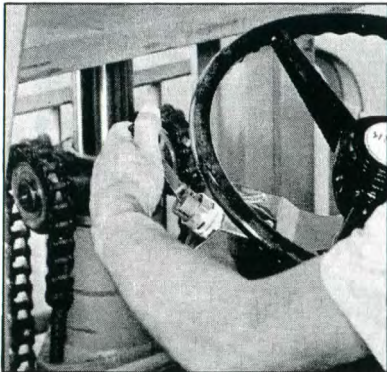
5. Carefully pull up on lift control lever to raise forks from floor slightly.

6. Pull back on tilt control lever to tilt upright back slightly and raise fork tips from floor.



13681

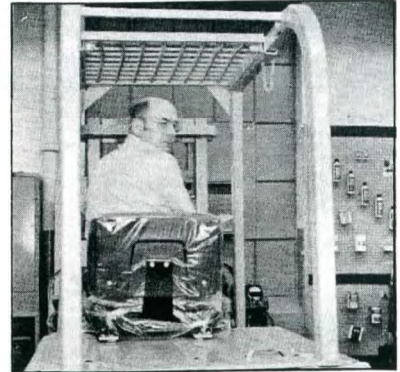
13680



7. Place directional control switch lever in proper position for desired direction of travel. Push to front for forward or pull back for reverse.

8. Check all around truck to insure that the desired path of travel is unobstructed.

14638



Operation



13684

9. Place right foot on accelerator and press until truck begins to move in selected direction. Depress accelerator smoothly until speed is increased to desired level.

10. Always be alert for pedestrians, other trucks or obstacles in your path of travel.



14639

13849



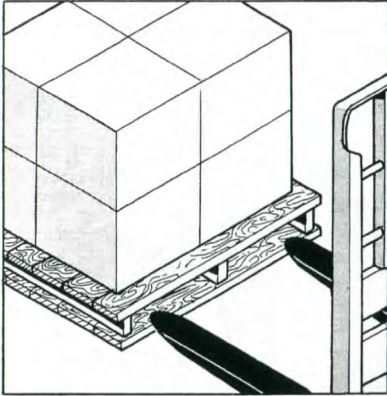
11. Always come to a complete stop before changing direction of travel from forward to reverse or from reverse to forward.

12. To stop truck release accelerator pedal and place foot on service brake pedal. Gently press down on brake pedal to bring truck to smooth stop.



13673

Operation



13203

13. Remember to enter load slowly and squarely.

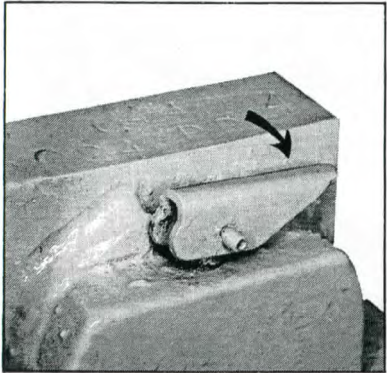
Load should be centered and forks should be near outside edges, if they are not —

14. Adjust them by lifting fork lock lever and sliding forks to the desired position. Then ...



10758

10759



15. ... Remember to lower lever to lock forks securely into notch atop fork bar.

16. It's risky to drive a ramp load first. Your truck can tip forward if the ramp is steep enough. Always back down slowly and never turn sideways on an incline.

13833



Operation



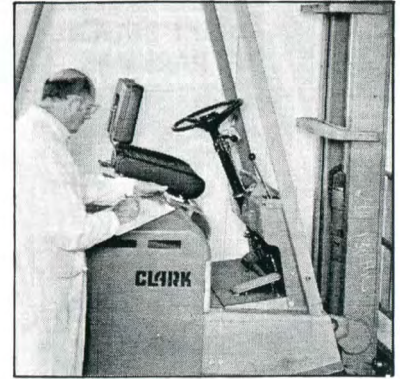
13258

17. Use minimum forward or reverse tilt when stacking and unstacking loads.

Never tilt load forward unless it is over stack or at low lift height.

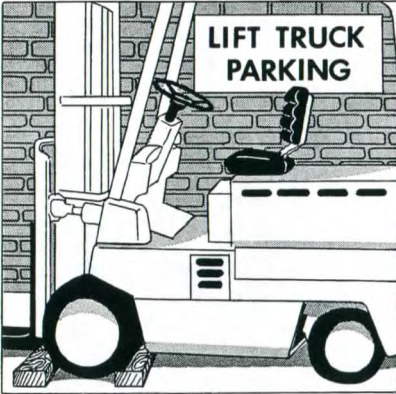
18. Be constantly alert for unusual or erratic operation.

Report any malfunction immediately so that adjustments or repairs may be made by thoroughly trained and qualified personnel.



13685

Parking



13313

1. Park lift trucks in designated parking areas only.

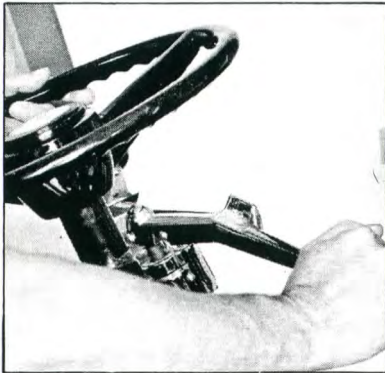
Do not obstruct traffic lanes or aisles.

2. Place directional control switch lever in neutral position.



7216

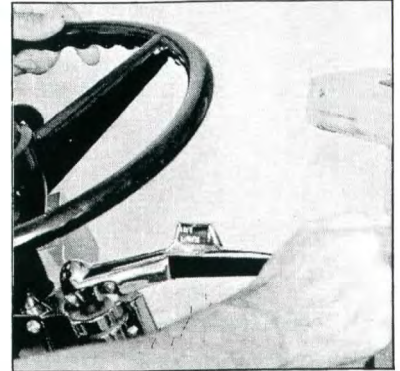
13670



3. Lower forks to floor.

4. Tilt upright forward until fork tips rest on floor.

13682



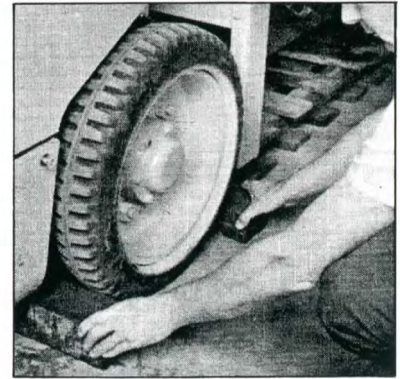
Parking

5. Turn switch key counterclockwise to "off" position and remove key.



13672

6. Carefully dismount from truck and block drive wheels to prevent accidental roll if truck is to be left on an incline.



14640

Notes

A set of horizontal lines for writing notes, organized into two columns. Each column contains 15 lines.

For Handy Reference

RECORD THE FOLLOWING INFORMATION PERTAINING TO YOUR TRUCK.

Model No.

Serial No.

Attachments

Truck Weight W/Battery

Truck Rated Capacity

Gross Truck Weight (w/Battery & Rated Load)

Customer Truck Identification No.

IMPORTANT

Do not expose this manual to hot water or steam.

Additional copies of this manual may be purchased from:

**YOUR AUTHORIZED CLARK
DEALER**