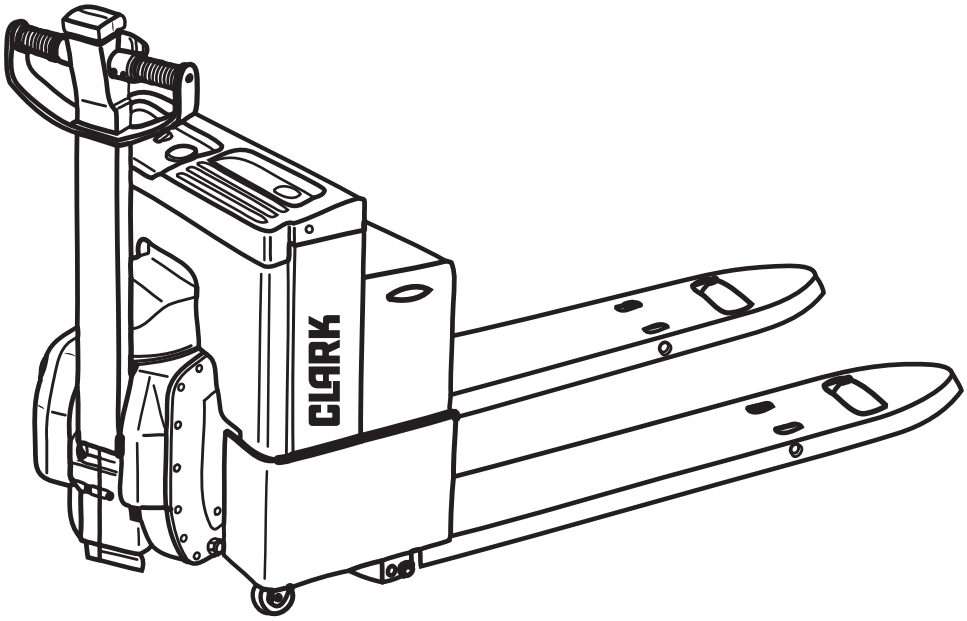
SM-719
EWP45
Service Manual



CLARK®
THE FORKLIFT

Technical
Publications
Lexington, KY 40510
www.Clarkmhc.com

IMPORTANT SAFETY NOTICE

Read and understand all safety precautions and warnings before performing repairs on lift trucks.

Appropriate service methods and proper repair procedures are essential to the safe, reliable operation of industrial trucks as well as the personal safety of the individual doing the work. This Service Manual provides general directions for accomplishing service and repair work with tested, effective techniques. Following them will help assure successful repair and reliable truck operation.

There are numerous variations in procedures, techniques, tools, and parts for servicing industrial trucks, as well as in the skill of the individual doing the work. This manual cannot possibly anticipate all such variations and provide advice or precautions as to each. Accordingly, anyone departing from the instructions provided in this manual through procedures used or choice of tools, materials, and parts may jeopardize his or her personal safety and/or the safety of the vehicle user.

Improper or careless techniques cause accidents. Don't take chances with incorrect or damaged equipment. Read and understand the procedures for safe operation and maintenance outlined in this manual.

STAY ALERT! Follow safety rules, regulations and procedures. Accidents can be avoided by recognizing dangerous procedures or situations before they occur.

DRIVE AND WORK SAFELY and follow the safety signs and their messages displayed on the truck and in this manual.

General Precautions

The following list contains general precautions that should be followed when working on a lift truck:

• **Always wear safety glasses** for eye protection.

• **Remove rings, watches, loose jewelry and open clothing** before working on a vehicle, to avoid serious injury.

• **Do not smoke** while working on a vehicle.

• **Put key switch in the OFF position**, unless otherwise required by the procedure.

• **Set the parking brake**. Place wheel chocks or wood blocks of 4" x 4" size or larger to the front and rear surfaces of the tires to provide further restraint from inadvertent vehicle movement.

• **Use safety stands or blocks** whenever a procedure requires you to be under the vehicle.

• **Service Electric Truck Batteries in a well-ventilated area** to avoid the danger of igniting explosive gases.

• **Follow the Safety Instructions outlined in GROUP 12 "Handling Storage Batteries".**

• **Always Discharge the Capacitors prior to working on or around electrical components.** Refer to the instructions outlined in GROUP 19 "Discharging Capacitors:.

• **Avoid contact with Battery Acid.** The battery contains corrosive acid which can cause injury. Following the

Arrangement and Use of this Manual

Clark arranges parts and service procedures by standardized Groups. In this manual, Groups are similar to “chapters.” Groups are listed in the table of contents on the next page.

Each Group begins with a table of contents that shows the Sections contained within the Group. Lengthy Sections also begin with a table of contents showing the topics contained within the Section.

Each Group and Section has an identifying name and number, or “ID.”

Each page also has a unique ID. The page ID consists of three numbers separated by hyphens. The three numbers represent the Group number, the Section number, and the Page number. For example, “00-1-2” on the lower corner of the page indicates Group 00, Section 1, Page 2.

You can quickly locate a specific point in the manual by using the headers and footers that appear on every Section page. The following illustration points out these areas.

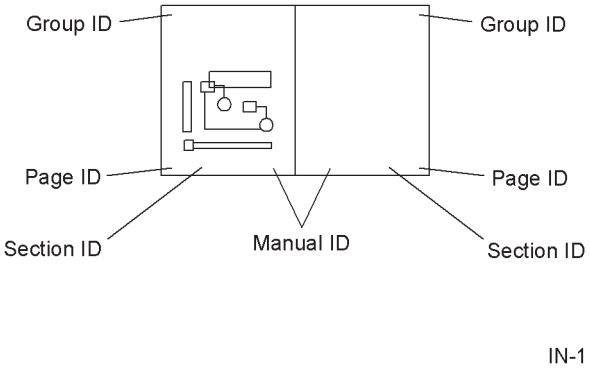


Figure Intro-1

This manual is intended for the use of trained service personnel.

Contents by Group

Contents are listed here by Group number.

Section Locations

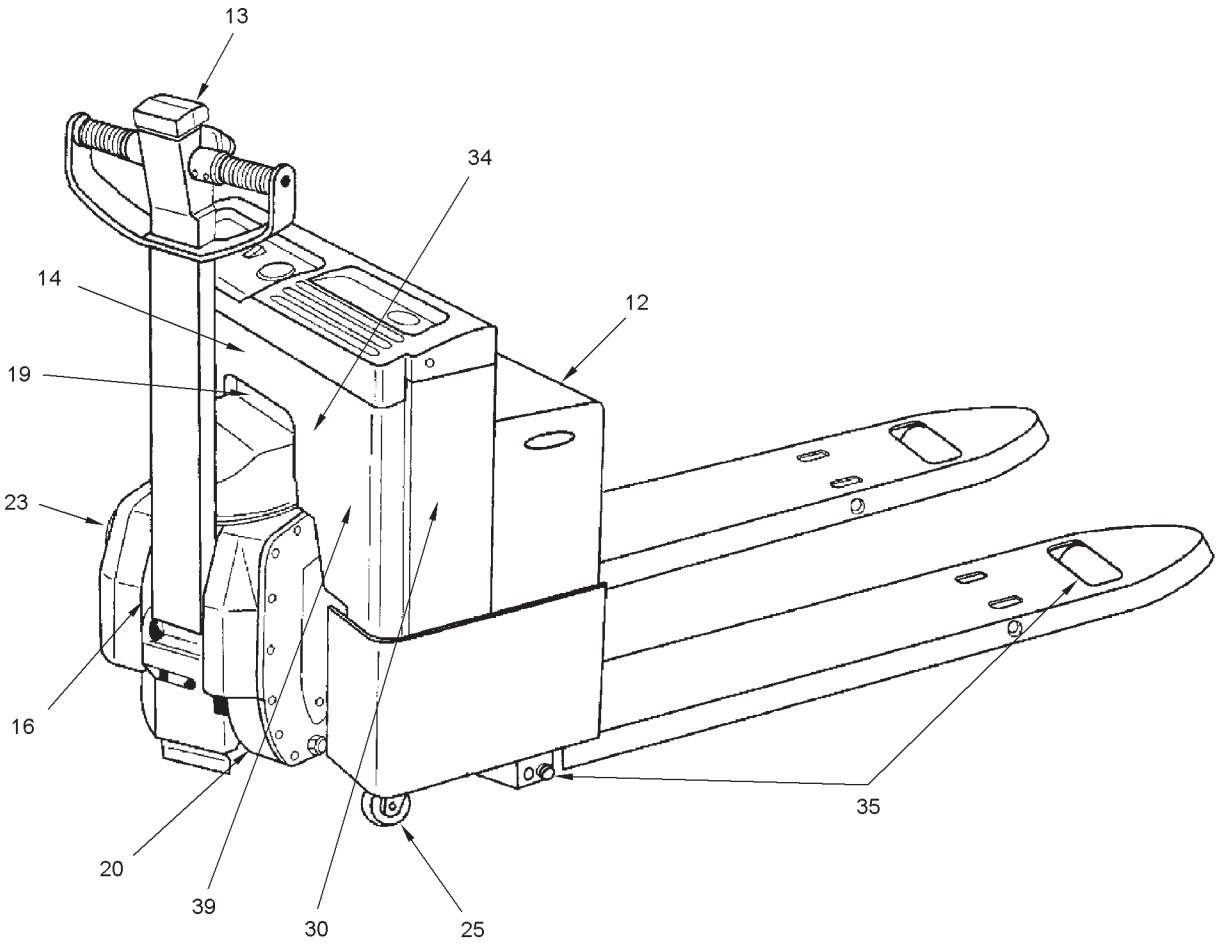


Figure Intro-2

Truck Presentation.

The EWP45 is a battery powered walkie pallet truck intended solely to be operated handling pallets or similar load carriers indoors. The trucks are equipped with a steering arm with all the controls for operating within easy access. The trucks have maximum lifting capacities of up to 4500 pounds (2041 kg). Review data plate on the truck to note the maximum lifting capacity.

The truck is equipped with a 24 volt electrical system. Truck speed is regulated by means of a transistor controller to provide infinite control of acceleration and speed while driving. Chassis/lift frame is raised by means of a hydraulic unit. The control of the lift/lower is done electrically with the push button on the steering arm. The trucks can be fitted with a battery pack.

Truck Side Views

The terms right-hand and left-hand used indicate the right and left side of the truck as viewed from the operator's line of sight for proper operation of truck. Use this view when ordering parts to assure proper selection of parts.

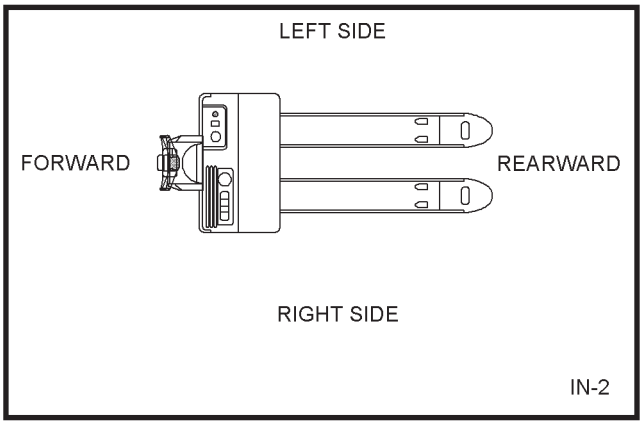


Figure Intro-3

Intended Truck Application

The trucks are solely designed and manufactured to handle goods and should be fitted with the appropriate accessories relevant to the application.

Prohibited Truck Application

The trucks are designed for handling goods indoors. The use of trucks for other purposes is not permitted. Do not use the truck for the following:

- As a towing tractor for trailers.
- To tow other trucks.
- To transport/lift passengers.
- To drive on gravel or grass.

Truck Data

The table below provides information regarding some technical data which is of value with daily use of the trucks.

Truck data	
Lifting capacity rated load, lb/kg	4500/2041
Lift height, inches/mm	8.5/216
Operating speed without load, mph/k	3.7/5.96
Operating speed with load, mph/k	2.9/4.6
Service weight without battery, lb/kg	859/390
Service weight including battery (minimum battery weight 150 lb (68 kg) maximum 330 lb (149.6 kg)	Above + battery weight

The lifting capacity and weight of the truck can be found on the truck data plate.

Truck Dimensions

The following diagram shows external dimensions for the EWP45 truck in its standard design.

All dimensions shown for 48” (1219 mm) long pallet.

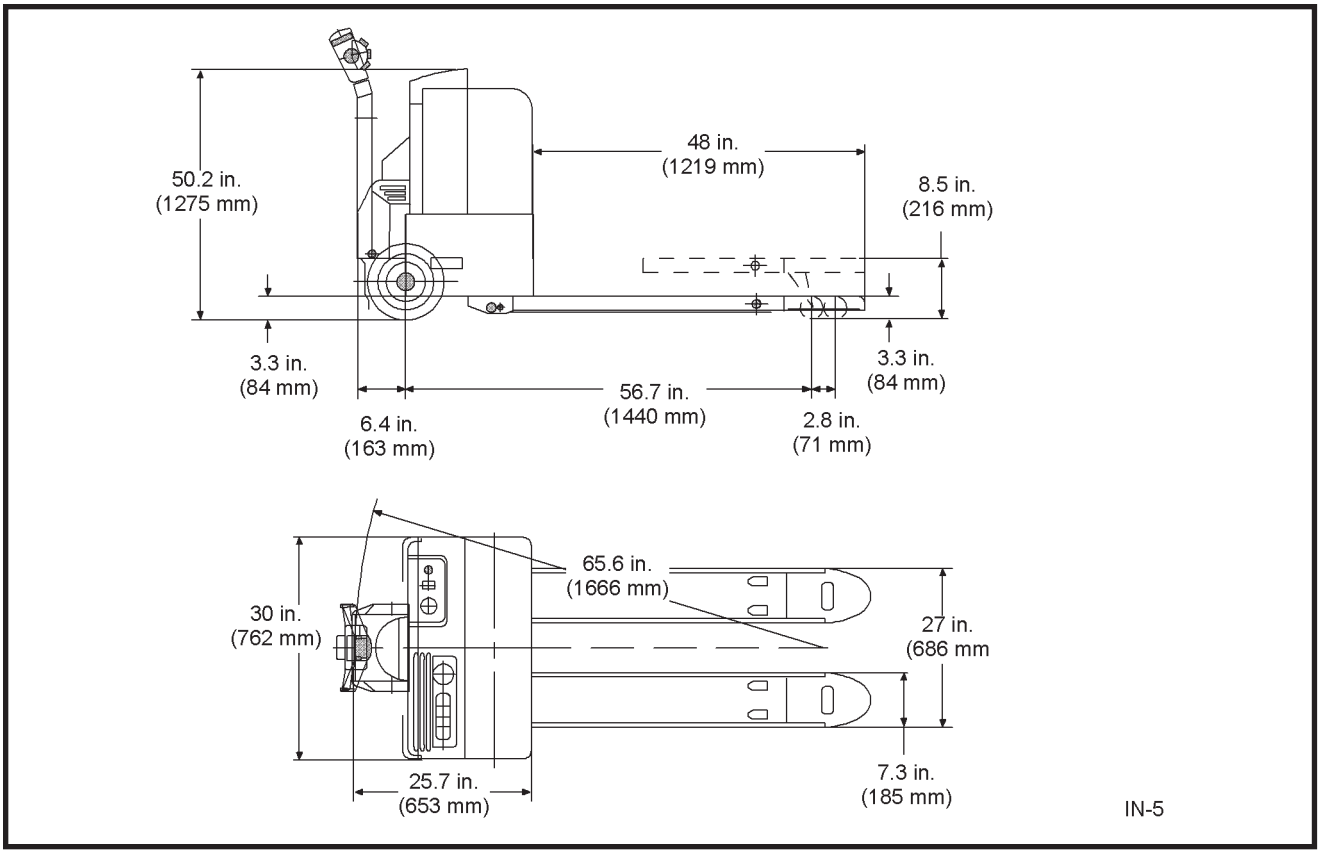


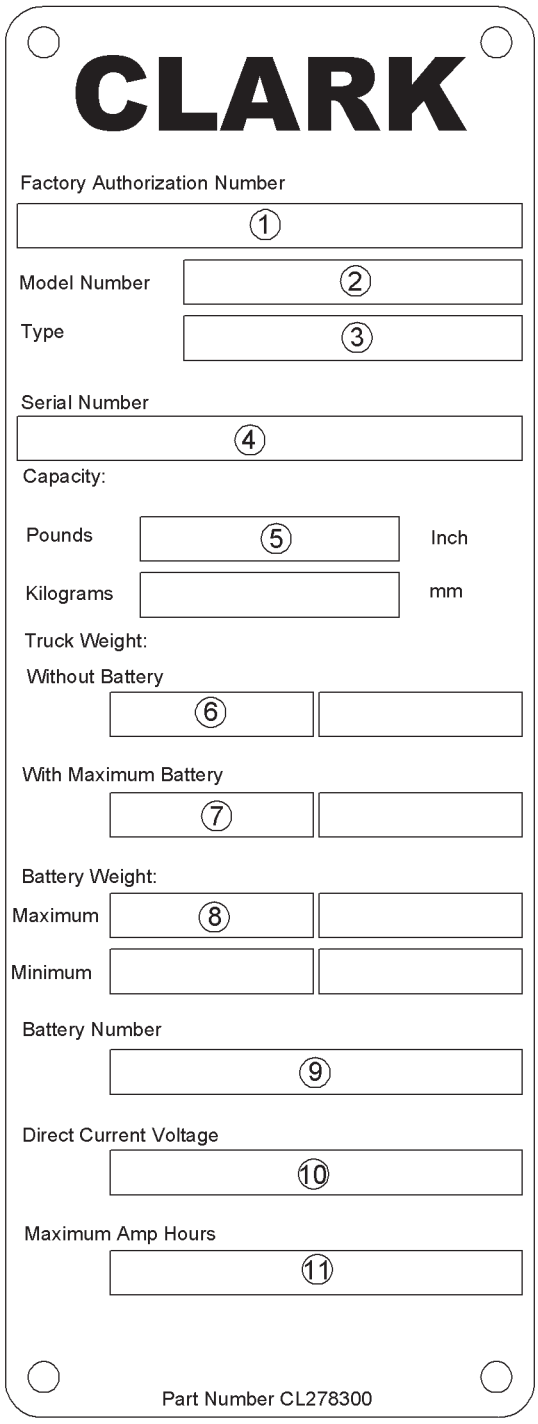
Figure Intro-4

Data Plate

The following diagram shows the data plate used on the truck.

Main Components

1. Factory Authorization Number
2. Truck Model Number
3. Truck Type
4. Truck Serial Number
5. Truck Capacity
6. Truck Weight / Without Battery
7. Truck Weight / With Maximum Battery
8. Battery Weight / Maximum
9. Battery Number
10. Direct Current Voltage
11. Maximum Amp Hours



IN-4

Figure Intro-5

1. Reverser switch

The end of the control handle is equipped with a red automatic reversing switch which causes the truck to travel in the rearward direction when activated.

2. Travel speed/direction selection

Selects the direction truck moves. The further in that direction the faster the truck moves.

3. Horn switch

Horn sounds to warn others of truck position.

4. Fork raise switch

Forks will raise when switch is pressed or until lift reaches upper limit switch.

5. Fork lower switch

Forks will lower when switch is pressed or until lower stops are reached.

6. Battery

24 volt with different capacities and weights.

7. Load wheel

Lubricate load wheels to prevent wheels from locking up.

8. Drive unit with brake

Fixed drive unit with a spring applied brake, drive motor, gear box, and drive wheel combined into a compact unit. The steering bearings are at the top of the drive unit.

9. Electric panel

24 volt electrical system. Truck speed is regulated by means of a transistor controller.

10. Circuit breaker

15A, Control circuit breaker
80A, Power circuit breaker

11. Cover

Removable to provide access for servicing.

12. Steering pivot point

Lubricate pivot point to prevent stiff steering.

13. Hydraulic unit

Pump motor, pump, electric valves and oil tank integrated in a compact unit.

14. Hydraulic electric solenoid valve

For controlling lifting and lowering functions with electric solenoid valve.

15. Steering control handle

Truck is controlled by the operator with 180 degree steering angle. The brake is applied in the upper and lower position of the steering control handle.

16. Key switch (toggle switch)

Shuts off electrical power to control system.

17. Gauge

Combined hourmeter/battery indicator, hourmeter/battery indicator with lift cutout or hourmeter only.

18. Emergency Disconnect Switch

Pushing in on this button disconnects the battery from all circuits on the truck shutting off all power to the truck.

19. Battery Receptacle

Pulling the battery connector shuts off all electrical power to truck.