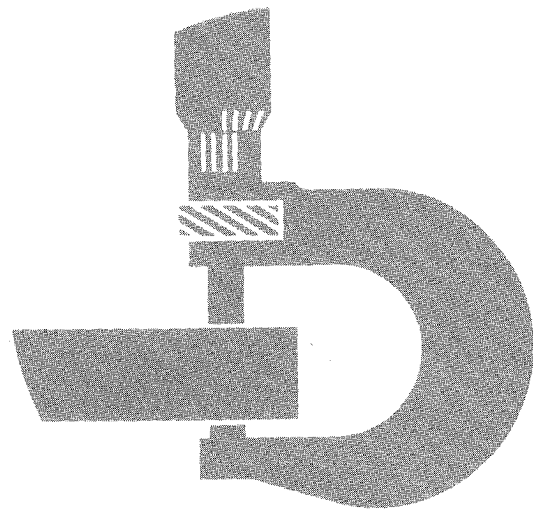


480C Forklift



TECHNICAL MANUAL

480C FORKLIFT TECHNICAL MANUAL TM-1249 (JUN-81)

SECTION AND GROUP CONTENTS

SECTION I - GENERAL INFORMATION

- Group I - Contents and Index
- Group II - Introduction and Safety Information
- Group III - General Specifications
- Group IV - Lubrication

SECTION 01 - WHEELS

- Group 0110 - Powered Wheels and Fastenings
- Group 0120 - Non-Powered Wheels
and Fastenings

SECTION 02 - AXLES AND SUSPENSION SYSTEMS

- Group 0230 - Non-Powered Wheel Axles
- Group 0250 - Axle Shafts, Bearings and
Reduction Gears

SECTION 03 - TRANSMISSION

- Group 0300 - Removal and Installation
- Group 0315 - Controls
- Group 0350 - Gears, Shafts, Bearings and
Power Shift Clutch
- Group 0360 - Hydraulic System

SECTION 04 - ENGINE

- Group 0400 - Removal and Installation
- Group 0401 - Crankshaft and Main Bearings
- Group 0402 - Camshaft and Valve Actuating
Means
- Group 0403 - Connecting Rods and Pistons
- Group 0404 - Cylinder Block

SECTION 04 - ENGINE - Continued

- Group 0407 - Oiling System
- Group 0409 - Cylinder Head and Valves
- Group 0413 - Fuel Injection System
- Group 0414 - Intake Manifold
- Group 0415 - Engine Balancer
- Group 0417 - Water Pump
- Group 0418 - Thermostats, Housing and Piping
- Group 0420 - Fuel Filter
- Group 0421 - Fuel Transfer Pump
- Group 0422 - Starting Motor and Fastenings
- Group 0433 - Flywheel, Housing and Fastenings

SECTION 05 - ENGINE AUXILIARY SYSTEMS

- Group 0505 - Cold Weather Starting Aids
- Group 0510 - Cooling Systems
- Group 0515 - Speed Controls
- Group 0520 - Intake System
- Group 0530 - External Exhaust Systems
- Group 0560 - External Fuel Supply Systems

SECTION 07 - TRACTION CLUTCH

- Group 0715 - Controls
- Group 0752 - Elements

SECTION 09 - STEERING SYSTEM

- Group 0960 - Hydraulic System

All information, illustrations and specifications contained in this technical manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice. Wherever applicable, specifications and design information are in accordance with SAE and ICED standards.

COPYRIGHT® 1981
DEERE & COMPANY
Moline, Illinois
All rights reserved
A JOHN DEERE ILLUSTRATION

750:11 01 10081

SECTION AND GROUP CONTENTS - CONTINUED

SECTION 10 - SERVICE BRAKES

- Group 1011 - Active Elements
- Group 1060 - Hydraulic System

SECTION 11 - PARKING-EMERGENCY BRAKES

- Group 1111 - Active Elements
- Group 1115 - Controls Linkage

SECTION 16 - ELECTRICAL SYSTEMS

- Group 1671 - Batteries, Support and Cables
- Group 1672 - Alternator, Regulator and Charging-System Wiring
- Group 1673 - Lighting System
- Group 1674 - Wiring Harness and Switches
- Group 1676 - Instruments and Indicators

SECTION 17 - FRAME, CHASSIS, OR SUPPORTING STRUCTURE

- Group 1740 - Frame Installation
- Group 1749 - Chassis Weights

SECTION 18 - OPERATOR'S STATION

- Group 1810 - Operator Enclosure

SECTION 19 - SHEET METAL AND STYLING

- Group 1910 - Hood or Engine Enclosure

SECTION 21 - MAIN HYDRAULIC SYSTEM

- Group 2160 - Hydraulic System

SECTION 45 - FORKLIFTS

- Group 4503 - Forks
- Group 4512 - Masts
- Group 4560 - Hydraulic System

SECTION 90 - SYSTEM TESTING

- Group 9005 - General Information - Seven Basic Steps of Diagnosis and Testing
- Group 9010 - Engine
- Group 9015 - Electrical System
- Group 9020 - Power Train
- Group 9025 - Hydraulic System

SECTION 99 - SPECIAL TOOLS

<https://www.ebooklibonline.com>

Hello dear friend!

Thank you very much for reading.

Enter the link into your browser.

The full manual is available for immediate download.

<https://www.ebooklibonline.com>

ALPHABETICAL INDEX

A

Adjust Clutch Disconnect Lever	0715-04
Adjust Parking Brake	1111-10
Air Cleaner	0520-01
Air Filter Element	0520-01
Air Filter Restriction Indicator	1676-01
Air Filter Restriction Indicator Test	9010-20
Axle Assembly, Non-Powered	0230-15
Axle Housing	0250-03
Axle Shaft	0250-10

B

Battery	1671-02
Bleed Air From Lift Cylinder	4560-65
Bleed Brake Hydraulic System	1060-15
Bleed Fuel System	0400-23
Brake Disk	1011-01
Brake Pedal and Equilizing Valve Adjustment	9025-50
Brake Valve	1060-02
Brake Valve, Test	9025-47

C

Camshaft and Valve Actuating Means	0402-01
Charging Circuit Testing	9015-04
Chassis Weights	1749-01
Circuit Breaker	1674-02
Clutch Assembly	0752-02
Clutch Control Valve, Test	9025-53
Clutch Disconnect Lever, Adjustment	0715-04
Clutch Disconnect Lever Adjustment	9020-27
Clutch Disconnect Linkage	0715-01
Clutch Fork	0715-01
Clutch Fork Shaft	0715-02
Clutch Housing (Reverser)	0300-20
Cold Weather Starting Aids	0505-01
Compression Pressure, Test	9010-13
Connecting Rods and Pistons	0403-01
Control Valve	4560-12
Control Valve Linkage	4560-26
Cooling System Test	9010-13
Cooling Systems	0510-01
Counterweights	1749-02
Countershaft Bearing Support, Transmission	0350-14

Crankshaft and Main Bearings	0401-01
Crankshaft Gear	0401-08
Crankshaft Rotation Direction	9010-04
Cylinder Block	0404-01
Cylinder Head and Valves	0409-01
Cylinder, Lift	4560-53
Cylinder, Mast	4512-09
Cylinders, Sideshift	4560-43
Cylinder, Steering	0960-21
Cylinder, Tilt	4560-34

D

Differential Drive Shaft Cone Point Adjustment	0350-29
Differential Drive Shaft Preload Adjustment	0350-33
Differential Housing Backlash Adjustment	0350-37
Differential Housing Preload Adjustment	0350-37
Differential Lock Assembly	0350-20
Differential Lock Linkage Adjustment	9020-26
Drop Retarder, Lift Cylinder	4560-66

E

Element, Hydraulic Oil Filter	4560-32
Electrical System, Diagnose Malfunctions	9015-04
Electrical System Short Test	9015-09
Electrical System Testing	9015-01
Electrical System, Tests	9015-04
Charging Circuit	9015-14
Instruments and Indicators	9015-17
Lighting Circuit	9015-15
Miscellaneous Accessories	9015-19
Starting Circuit	9015-10
System Short	9015-09
Engine Auxiliary Systems	0505-01
Engine Balancer	0415-01
Engine Coolant Heater	0505-01
Engine Coolant Temperature Sender	1676-02
Engine, Diagnose Malfunctions	9010-06
Engine Oil Pressure Indicator Switch	1676-02
Engine Oil Pressure Test	9010-13
Engine Removal and Installation	0400-05
Engine System Testing	9010-01

Continued on next page

ALPHABETICAL INDEX - Continued

Engine Test
 Compression Pressure 9010-13
 Engine oil Pressure 9010-13
 Cooling System 9010-13
 Fuel Transfer Pump Pressure 9010-14
 Air Filter Restriction Indicator 9010-20
 External Fuel Supply Systems 0560-01

F

Fast Idle Adjustment 9010-16
 Filter, Hydraulic Oil 4560-31
 Flasher 1673-02
 Flywheel Housing and Fastenings 0433-01
 Forks 4503-01
 Forklift Functions, Test 9035-35
 Forklift Hydraulics 4560-01
 Forklift Hydraulics, Diagnose
 Malfunctions 9025-21
 Forklifts 4503-01
 Fuel Filter 0420-01
 Fuel Injection System 0413-01
 Fuel Sender 1676-02
 Fuel Tank 0560-01
 Fuel Transfer Pump 0421-01
 Fuel Transfer Pump Pressure Test 9010-14

G

Gauges 1676-01
 Gears, Shafts, Bearings and Power
 Shift Clutch, Transmission 0350-01
 General Information 9005-01
 General Specification I-III-01

H

Headlights 1673-01
 Hoop 1910-01
 Hood Supports 1910-02
 Horn Switch 1674-01
 Hour Meter 1676-01
 Hub 0230-03
 Hydraulic Brakes, Diagnose Malfunctions .. 9025-25
 Hydraulic Pump Using Flow Meter, Test ... 9025-28
 Hydraulic Pump Using Orifice, Test 9025-30
 Hydraulic System Testing 9025-02
 Hydraulics, Forklift 4560-01
 Hydraulic Oil Filter 4560-31
 Hydraulic Oil Filter Element 4560-32
 Hydraulic Pump 2160-03
 Hydraulic Pump Drive 2160-11
 Hydraulic System, Main 2160-01

I

Indicator Lights 1676-01
 Injection Pump Timing Advance
 Adjustment 9010-18
 Instruments and Indicators
 Testing 9015-17
 Intake Manifold 0414-01
 Intake System 0520-01

J, K

Key Switch 1674-01

L

Lift Cylinder 4560-53
 Lift Cylinder Drop Retarder 4560-66
 Lift Cylinders For Leakage, Test 9035-39
 Light Switch 1673-02
 Light, Tail/Flood 1673-01
 Lighting Circuit Testing 9015-15
 Lights, Warning 1673-01
 Linkage, Control Valve 4560-26
 Lubricants I-IV-02
 Lubrication Information I-IV-01

M

Main Hydraulic System 2160-01
 Masts 4512-01
 Measure and Adjust Valves 0402-08
 Miscellaneous Accessories Testing 9015-19
 Miscellaneous Components, Engine 0400-06

N

Neutral Start Switch 1674-02
 Non-Powered Axle Assembly 0230-15
 Non-Powered Wheels and Fastenings 0120-01

O

Oiling System 0407-01
 Operation of Priority Valve, Test 9025-44
 Operator Enclosure 1810-01
 Operator's Station 1810-01
 Overhead Guard 1810-01

P

Parking Brake Adjustment 9020-26
 Parking Brake Band Assembly 1111-03
 Parking Brake Drum 1111-05
 Parking Brake Indicator Switch 1676-02
 Parking Brake Linkage 1115-01

Continued on next page

730-11 01 18088:

ALPHABETICAL INDEX - Continued

Parking Brake Pedal 1115-01
 Parking Brake Pedal Assembly 1115-03
 Parking Brake Shaft 1111-01
 Parking-Emergency Brakes Active
 Elements 1111-01
 Parking-Emergency Brakes Controls
 Linkage 1115-01
 Pilot Bearing 0752-05
 Planet Pinion Carrier Assembly 0250-07
 Platform 1810-05
 Power Train, Diagnose Malfunctions 9020-20
 Power Train System Testing 9020-02
 Powered Wheels and Fastenings 0110-01
 Priority Valve 4560-10

Q, R

Radiator 0510-01
 Rear Oil Seal and Wear Ring 0401-11
 Removal and Installation, Engine 0400-05
 Remove Engine 0400-06
 Reverser Accumulator (Shift Trace), Test 9025-55
 Reverser Control Valve 0360-10
 Reverser Hydraulics, Diagnose
 Malfunctions 9025-26
 Reverser Lever Linkage Adjustment 9020-26
 Reverser System Pressure, Test 9025-51
 Roller Carriage, Mast 4512-06
 Rollers, Mast 4512-10

S

Safety Information I-II-02
 Seat Support 1810-06
 Service Brakes Active Elements 1011-01
 Service Brakes Hydraulic System 1060-01
 Sheave, Mast 4512-07
 Shifter Shafts, Transmission 0350-06
 Shifters, Transmission 0350-13
 Side Shields 1910-01
 Sideshift Cylinder For Leakage, Test 9025-40
 Sideshift Cylinders 4560-43
 Slow Idle Adjustment 9010-14
 Special Tools
 Alternator 1672-01
 Axle Shaft, Bearings and Reduction
 Gears 0250-01
 Camshaft and Valve Actuating Means 0402-01
 Charging System Wiring 1672-01
 Connecting Rods and Pistons 0403-01
 Crankshaft and Main Bearings 0401-01
 Cylinder Block 0404-01
 Cylinder Head and Valves 0409-01
 Electrical System Testing 9015-01

Engine balancer 0415-01
 Engine Removal and Installation 0400-05
 Engine System Testing 9010-01
 Frame Installation 1740-01
 Gears, Shafts, Bearings and Power
 Shift Clutch, Transmission 0350-01
 Hydraulic System 4560-01
 Hydraulic System, Main 2160-01
 Hydraulic System Testing 9025-02
 Masts 4512-01
 Non-Powered Wheels and Fastenings 0120-01
 Non-Powered Wheel Axles 0230-01
 Oiling System 0407-01
 Parking-Emergency Brakes Active
 Elements 1111-01
 Powered Wheels and Fastenings 0110-01
 Regulator 1672-01
 Service Brakes Hydraulic System 1060-01
 Starting Motor and Fastenings 0422-01
 Steering Hydraulics 0960-01
 Traction Clutch Elements 0752-01
 Transmission 0300-03
 Transmission Hydraulic System 0360-01
 Water Pump 0417-01

Specifications

Alternator 1672-01
 Axle Housing 0250-01
 Axle Shaft 0250-02
 Balancer Shaft 0415-01
 Battery 1671-01
 Brake Line 0300-04
 Brake Valve 1060-01
 Camshaft 0402-04
 Clutch Control Valve Test 9025-04
 Clutch Fork 0715-01
 Clutch Housing (Reverser) Installation 0300-05
 Clutch Plate 0752-01
 Connecting Rod and Piston 0403-01
 Control Valve 4560-01
 Control Valve, Transmission 0350-06
 Cooling Systems 0510-01
 Counterweight 1749-01
 Countershaft Bearing Support 0350-04
 Crankshaft and Main Bearings 0401-01
 Cylinder Block 0404-02
 Cylinder Head and Valve 0409-01
 Cylinder Liner 0404-01
 Differential Bearing Quill 0350-03

Continued on next page

T30:11 05 180881

ALPHABETICAL INDEX - Continued

Differential Drive Shaft	0350-02	Timing Gear Train	0402-05
Differential Housing Backlash	0350-03	Toe-In	0230-02
Differential Housing Preload	0350-02	Transmission and Axle	0300-03
Differential Lock Linkage	0300-04	Transmission Cover	0350-05
Drive Housing	0350-04	Transmission Drive Shaft	0350-03
Engine Installation	0400-05	Transmission Oil Filter	0360-04
Engine Test	9010-02	Transmission Oil Filter Relief Valve	0360-04
Flywheel	0752-02	Transmission Oil Pump	0360-01
Flywheel and Flywheel Housing	0433-01	Transmission Pump Test (Flow Meter)	9025-05
Fork	4503-01	Under Frame	1740-01
Forklift Functions Leakage Test (Orifice)	9025-03	Valve Lift and Valve Clearance	0402-01
Fuel Injection System	0413-01	Water Pump	0417-01
Hydraulic Pump	2160-01	Wheel Hub	0230-01
Hydraulic Pump Drive	2160-01	Speed Control Linkage Adjustment	9010-17
Hydraulic Pump Test (Flow Meter)	9025-02	Speed Controls	0515-01
Hydraulic Pump Test (Orifice)	9025-02	Speed Controls Links	0515-01
Masts	4512-01	Speed Control Lever	0515-02
Non-Powered Axle	0230-02	Speed Control Pedal	0515-01
Non-Powered Wheels and Fastenings	0120-01	Speed-of-Shift Adjustment	9025-55
Oiling System	0407-01	Spindle and Knuckle	0230-05
Overhead Guard	1810-01	Starting Aid Adapter	0505-04
Parking-Emergency Brakes Controls Linkage	1115-01	Starting Aid Nozzle	0505-02
Powered Wheels and Fastenings	0110-01	Starting Circuit Testing	9015-10
Reverser Accumulator Test	9025-04	Starting Motor and Fastenings	0422-01
Reverser Brake Housing Assembly	0350-06	Steering Column	0960-05
Reverser Clutch Assembly	0350-06	Steering Cylinder	0960-21
Reverser Clutch Pack Assembly	0350-06	Steering Cylinder Bushings	0960-29
Reverser Control Valve	0360-01	Steering Cylinder For Leakage, Test	9025-43
Reverser Planetary	0350-05	Steering System, Diagnose Malfunctions ..	9025-24
Reverser System Pressure Test	9025-04	Steering System Relief Valve	4560-06
Right Differential Housing Cover	0350-02	Steering System Relief Valve, Test	9025-45
Rocker Arm Assembly	0402-02	Steering Valve	0960-09
Shifter Shaft, Transmission	0350-01	Steering Valve For Leakage, Test	9025-40
Sideshift Cylinder	4560-02	Switch, Engine Oil Pressure Indicator	1676-02
Spindle and Knuckle	0230-01	Switch, Horn	1674-01
Starting Motor	0422-01	Switch, Key	1674-01
Steering Column	0960-01	Switch, Light	1673-02
Steering Cylinder	0960-02	Switch, Neutral Start	1674-02
Steering Cylinder Bushings	0960-03	Switch, Parking Brake Indicator	1676-02
Steering System Relief Valve Test	9025-03	System Relief Valve, Test	9025-23
Steering Valve	0960-02		
Steering Valve Leakage Test	9025-03		
Switches	1674-01		
System Relief Valve Test	9025-03		
Thermostat	0418-01		
Tie Rod	0230-02		
Timing Gear Cover	0402-03		

T

Tail/Flood Light	1673-01
Thermostats	0418-01
Throw-Out Bearing Carrier	0715-01

Continued on next page

ALPHABETICAL INDEX - Continued

Tie Rod 0230-10
 Tilt Cylinder 4560-34
 Tilt Cylinder Bushings 4560-42
 Tilt Cylinders for Leakage,
 Test 9025-39
 Timing Gear Cover 0402-15
 Timing Gear Train 0402-25
 Traction Clutch 0715-01
 Traction Clutch Control 0715-01
 Traction Clutch Elements 0752-01
 Transmission 0300-03
 Transmission and Axle Assembly 0300-07
 Transmission Controls 0315-01
 Transmission Drive Shaft 0350-18
 Transmission Drive Shaft End
 Play Adjustment 0350-42
 Transmission Gears, Shafts and
 Power Shift Clutch 0350-01
 Transmission Hydraulic System 0360-01
 Transmission Oil Filter 0360-25
 Transmission Oil Filter
 Relief Valve 0360-28
 Transmission Oil Pump 0360-04
 Transmission Oil Pump Inlet
 Screen 0360-31
 Transmission Pump Using Flow
 Meter, Test 9025-56
 Trunnion Bar, Mast 4512-11

U, V

Valve, Brake 1060-02
 Valve, Control 4560-12
 Valve, Priority 4560-10
 Valve, Relief Steering System 4560-06
 Valve, Steering 0960-09
 Voltage Regulator 1672-16

W

Warning Lights 1673-01
 Water Pump 0417-01

X, Y, Z

INTRODUCTION AND SAFETY INFORMATION

INTRODUCTION

This technical manual is part of a twin concept of service.

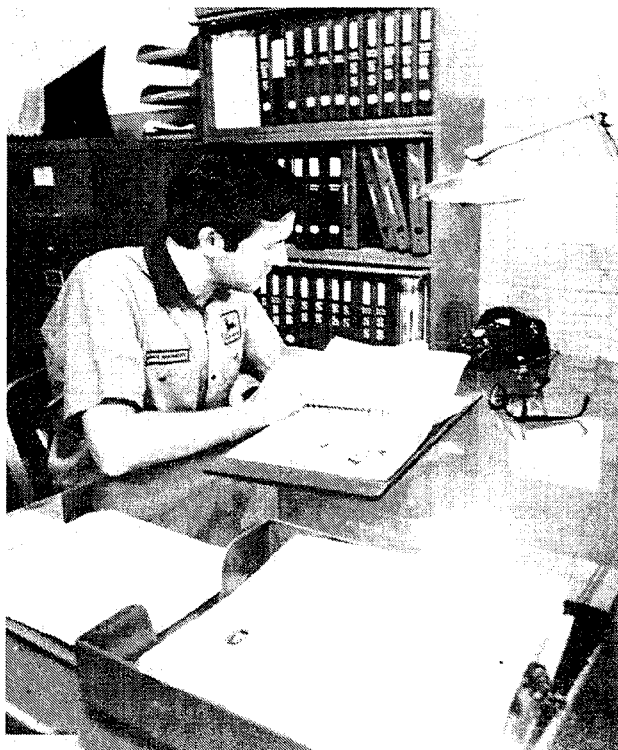
FOS Manuals - for reference

Technical Manuals - for actual service

The two kinds of manuals work as a team to give you both the general background and technical details of shop service.

Fundamentals of Service (FOS) Manuals cover basic theory of operation, fundamentals of troubleshooting, general maintenance, and basic types of failures and their causes. FOS Manuals are for training new personnel and for reference by experienced technicians.

Technical Manuals are concise service guides for a specific machine. Technical manuals are on-the-job guides containing only the vital information needed by an experienced service technician.



Some features of this technical manual:

- John Deere ILLUSTRATION format emphasizing more detailed pictures and a minimum use of words.
- Detailed repair procedures outlined in individual sections.
- System diagnostic testing detailed in separate section.
- Table of contents of all sections at the front of the manual and a listing of all groups and headings at the front of each section.
- Special tools and specifications listed at the front of each group they are used in.
- Special tools illustrated in numerical order at end of manual.
- Alphabetical listing of all major components, specifications, and special tools.
- General specifications, lubricating requirements, and a summation of safety rules.

This technical manual was planned and written for you - an experienced service technician. Keep it in a permanent binder in the shop where it is handy. Refer to it when you need to know correct service procedures or specifications.

Using the technical manual as a guide will reduce error and costly delay. It will also assure you the best in finished service work.



SAFETY AND YOU

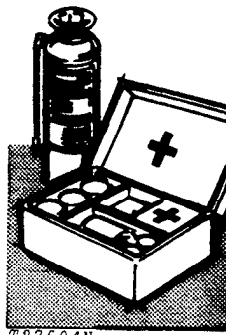


CAUTION: This safety symbol is used for important safety messages. When you see this symbol, follow the safety message to avoid personal injury.



45A:T81289 T30:1 I102 280581

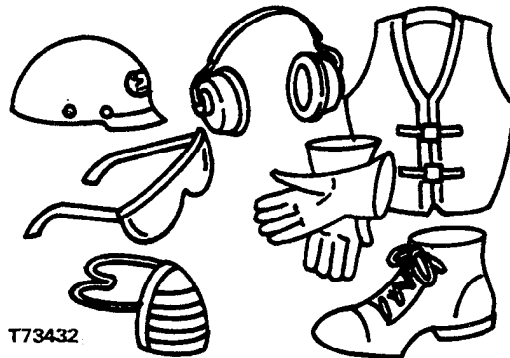
Be prepared for an accident or fire.
Know where the first aid kit and fire extinguisher are.
Know how to use them.
Know where to get help.



T27504N

45A:T27504 N T30:1 I103 280581

Wear safety equipment.



T73432

45A:T73432 T30:1 I104 280581

Wear fairly tight clothing.



T49672

45A:T49672 T30:1 I105 280581



Suggest:

If the above button click is invalid.

Please download this document

first, and then click the above link

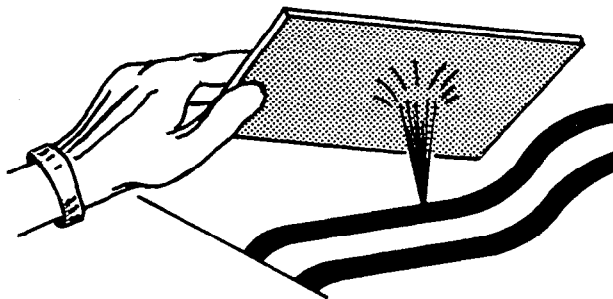
to download the complete manual.

Thank you so much for reading



CAUTION: Escaping fluid under pressure can have sufficient force to penetrate the skin, causing serious injury. Before disconnecting lines, be sure connections are tight and lines, pipes and hoses are not damaged. Use a piece of cardboard or wood, rather than hands, to search for leaks.

If injured by escaping fluid, see a doctor at once. Serious infection or reaction can develop if proper medical treatment is not administered immediately.



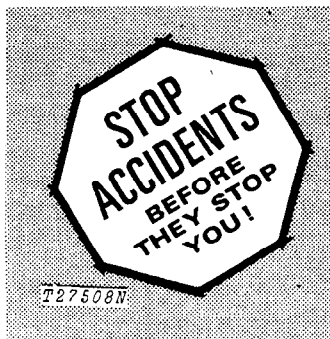
45A:T60993 T301 1106 280581

KEEP SHOP AND STORAGE AREA CLEAN

Maintenance area should be well-ventilated.

Keep maintenance area clean and dry.

Store flammable materials in a cool and well-ventilated area out of reach of unauthorized personnel.



45A:T27508 N T091 1107 280961

<https://www.ebooklibonline.com>

Hello dear friend!

Thank you very much for reading.

Enter the link into your browser.

The full manual is available for immediate download.

<https://www.ebooklibonline.com>