# Instruction Manual Galvanized Hydraulic Hand Pallet Truck (MN059 & MN648)





## **WARNING!**

- Read and understand the entire operator's manual before using the pallet truck.
- Don't load pallet truck beyond rated capacity of 5,500 lbs.
- Secure load before transporting.
- Keep the load centered on the pallet.
- Don't operate loaded pallet truck on ramps or inclines.
- Always wear appropriate safety shoes.
- Never leave a loaded pallet truck unattended in the raised position; always lower load to the floor.

## **PALLET TRUCK ASSEMBLY**

**Note:** Individual trucks are assembled and ready to use. Pallet trucks purchased in crate quantities (6 units to a crate) require some assembly.

Tools needed for assembly: hammer, flat screwdriver, 14mm wrench

## To attach handle assembly to the frame:



## \*\*\* IMPORTANT - SAFETY \*\*\*

Verify that spring safety pin is in place. The pin should be well rested in the holes situated on each side of the pump housing. If the safety pin is not rested properly in one of the holes, put pressure on the spring using a "C" clamp pushing down on the pump stem. Once pressure is relieved on the pin, reinsert properly and remove clamp slowly,



#### 2

Insert handle pin into corresponding holes and using a hammer, drive in one spring pin on one side only.



3.

Insert handle pin without the handle and verify that the center hole is facing you.



#### 4.

If handle pin's center hole is facing away from you, insert pin from other side.

#### \*\*\* IMPORTANT - FACT \*\*\*

The up/down lever's chain passes through this center hole. If left this way, the chain will have an "S" form and be under too much tension, making the up/down lever difficult to use accurately.



\*\*\* IMPORTANT - CHAIN\*\*\*\*

Before this step, make sure to feed the chain on the outside of the piston stem roller (see yellow arrow). If left in its proper position, it will not be possible to insert the handle pin and chain, breakage may occur.

Align handle holes with pump housing holes and push through handle pin (see red arrow)



Make sure that handle pin is completely through the handle and resting on the other side.

6.



Pull down on the handle to release the tension on the safety pin. CAREFULLY remove the safety pin.



Feed the chain and nut first back inside the handle THROUGH the handle pin's center hole.

\*\*\*IMPORTANT - TIP \*\*\*
Release the up/down lever to its lowest position to make the process easier.



Once the chain is in the proper position, check to see that it moves freely and that it is not obstructed.



Using both hands, push on the valve cam to raise the hook inside the housing and feed the end of the chain in the cam. (see image at right)





Pump the lever a few times to raise the forks. Put the up/down lever to its NEUTRAL position. Using a 14mm wrench and a flat screwdriver, adjust the valve cam so that the forks don't lower or rise (if handle is pumped) at this position.



**12.**\*\*\* IMPORTANT - FINAL CHECK \*\*\*

Test all the features of the pallet truck before this step. The handle should be pumped with full strokes to prime and eliminate air in the system. The up/down lever should be checked at the handle's lowest position for this puts the most tension on the chain. Once the pallet truck is adjusted properly and is performing well, drive in the second spring pin using a hammer.

# **OPERATING PALLET TRUCK**

To raise the forks, place handle lever in UP position (bottom part of the handle slot). See Figure 2.

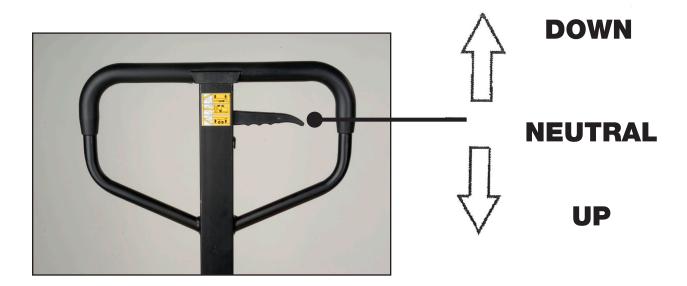


Figure 2

To lower forks, pull lever to DOWN position (upper part of the slot). To freely move the handle, set the lever in NEUTRAL (center notch of the slot).

#### To lift a load:

- 1. Lower forks to lowest position.
- 2. Insert forks under load or into pallet.
- 3. Place lever in UP position (bottom part of the slot).
- 4. Move handles up and down until forks reach desired height.

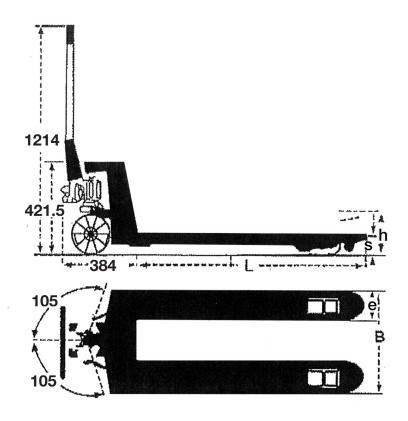
#### To move a load:

- 1. Place lever in NEUTRAL position (center notch of the slot).
- 2. Pull or push to desired location.

#### To lower a load:

- 1. Pull lever to the DOWN position (upper part of the slot).
- 2. Pull forks away from load.

# **TECHNICAL PARAMETER**



| Model No.          | MN648          | MN059          |
|--------------------|----------------|----------------|
| Capacity           | 5500 lbs.      | 5500 lbs.      |
| Сарасну            | 2500 kg        | 2500 kg        |
| H - Maximum        | 7 1/2"         | 7 1/2"         |
| Raised Height      | 190 mm         | 190 mm         |
| S - Lowered Height | 3"             | 3"             |
| 5 - Lowered neight | 75 mm          | 75 mm          |
| I. Fault I amobb   | 42"            | 48"            |
| L - Fork Length    | 1070mm         | 1220mm         |
| E - Fork Width     | 6 1/4"         | 6 1/4"         |
| E - FORK WIGTN     | 160 mm         | 160 mm         |
| B - Fork Outside   | 27"            | 27"            |
| Distance           | 685 mm         | 685 mm         |
| Diameter of the    | 7" x 2"        | 7" x 2"        |
| steer wheel        | 180 mm x 50 mm | 180 mm x 50 mm |
| Diameter of the    | 3" x 3 5/8"    | 3" x 3 5/8"    |
| load wheel         | 74 mm x 93 mm  | 74 mm x 93 mm  |

## **TROUBLESHOOTING**

Possible problems could arise in the operation of your hydraulic pallet truck. Their probable cause(s) and corrective action(s) follow:

| Condition                              | Probable Causes                                       | Corrective Action  |
|--|---|--|
|  | Oil low in tank                                       | Make sure there is no till leakage from valve and add oil. |
| Hydraulic unit does                    | Relief valve not seated properly or air in the system | See "Cleaning Relief Valve" in this manual.                |
| not lift                               | Defective pressure seal in main cylinder              | Consult authorized service centre.                         |
|  | Relief valve not adjusted properly                    | Adjust valve by pressure adjustment screw                  |
| Once lifted truck                      | Relief valve not seated properly                      | See "Cleaning Relief Valve" in this manual.                |
|  | Defective pressure seal in main cylinder              | Consult authorized service centre                          |
| lowers by itself                       | Relief valve not adjusted properly                    | Adjust valve by pressure adjustment screw                  |
|  | Oil leakage   | Consult authorized service centre                          |
|  | Cam chain broken                                      | Replace cam chain.   |
| Fork does not lower                    | UP-DOWN cam nut out of adjustment                     | Refer to "Adjusting UP-DOWN Cam" in this manual.           |
| Fork does not lower                    | Broken fork rods and linkage                          | Consult authorized service centre                          |
|  | Cam chain lock-nut fallen off                         | Replace cam chain lock-nut                                 |
| Lever does not set at NEUTRAL position | Relief valve not adjusted properly                    | Adjust valve by pressure adjustment screw                  |

#### **Cleaning Relief Valve**

Over time, relief valve may become clogged with debris and will not work properly.

To clean relief valve, flush the hydraulic system as follows:

Hold the UP/DOWN lever to the DOWN position and move the handles up and down several times.

#### **Adjusting UP-DOWN Cam**



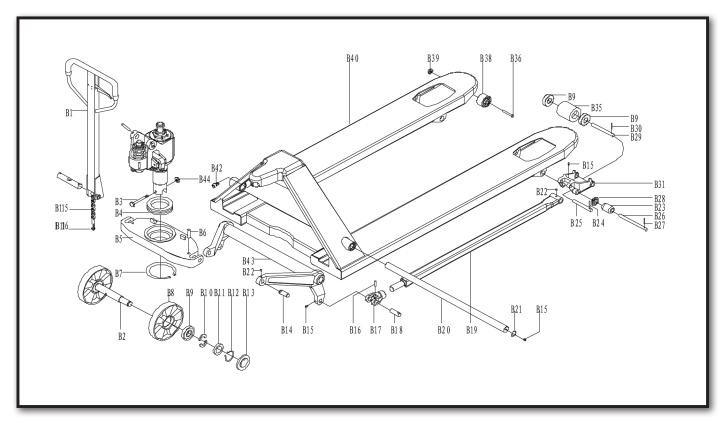
**DO NOT** adjust the up/down lever control using the lock nut at the end of the handle chain. If nylon locking threads are removed from the screw threads, rolling vibration will cause the nut to unscrew and fall off, leaving the up/down lever unusable.



Use proper set screw and lock nut adjustment located on the side of the pump. This feature was designed to ease the pallet truck adjustment.

Tools required are: flat screwdriver and a 14mm wrench.

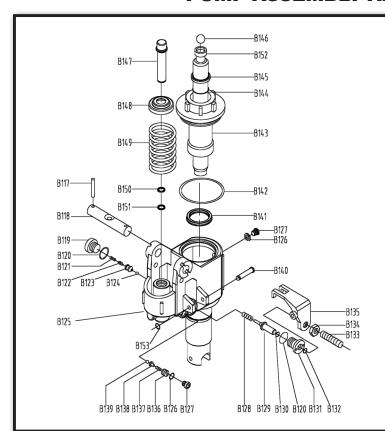
#### **HYDRAULIC HAND PALLET TRUCK ASSEMBLY AND PARTS LIST**

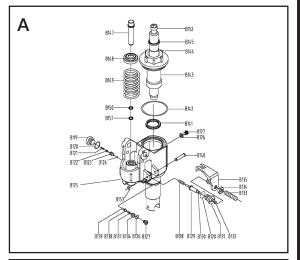


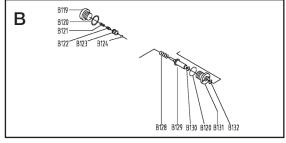
| No. | Order No.  | DESCRIPTION       | Qty. |
|-----|------------|-------------------|------|
| B1  | MN319      | Handle Assembly   | 1    |
| B2  | MN977      | Steer Wheel Shaft | 1    |
| B3  | GB5782-86  | Bolt M8X55        | 1    |
| B4  | MJ584      | Bearing 8111      | 1    |
| B5  | BF-03      | Supporting Base   | 1    |
| B6  | GB879-86   | Spring Pin 5X32   | 2    |
| B7  | GB894-86   | Ring For Axle 55  | 1    |
| B8  | MN304      | Nylon Steer Wheel | 2    |
| B9  | MK984      | Bearing 60204     | 8    |
| B10 | MN978      | Half Ring         | 4    |
| B11 | MN979      | Washer            | 2    |
| B12 | MJ591      | Ring For Axle 20  | 2    |
| B13 | MN310      | Dust Cap          | 2    |
| B14 | MN302      | Handle Pin        | 2    |
| B15 | GB1152-79  | Oiler M6          | 6    |
| B16 | GB879-86   | Spring Pin 5X28   | 2    |
| B17 | AF.7-05    | Joint             | 2    |
| B18 | DF-01      | Pin 16X44         | 2    |
| B19 | AF.7B.1-00 | Straight Tappet   | 1    |
| B20 | AF-02      | Long Shaft        | 1    |
| B21 | GB893-86   | Ring For Hole25   | 2    |
| B22 | GB1155-74  | Oiler 6           | 4    |
| B23 | AF-10      | Roll Sheath       | 2    |

| No. | Order No. | DESCRIPTION      | Qty. |
|-----|-----------|------------------|------|
| B24 | GB879-86  | Spring Pin 5X28  | 2    |
| B25 | SYBC.5-06 | Shaft 16X85      | 2    |
| B26 | DF-04     | Shaft 20X152     | 2    |
| B27 | GB879-86  | Spring Pin 5X35  | 2    |
| B28 | AF-04     | Roll Ring        | 4    |
| B29 | MJ635     | Shaft 20X122     | 2    |
| B30 | MJ585     | Spring Pin5X32   | 2    |
| B31 | AF.7-03   | Frame of Wheel   | 2    |
| B32 | GB879-86  | Spring Pin 5X32  | 8    |
| B33 | SYBC.5-09 | Shaft 20X95      | 4    |
| B34 | AF.7-04   | Nog of Wheel     | 4    |
| B35 | ML368     | Nylon Load Wheel | 2    |
| B36 | GB5782-86 | Bolt M6X50       | 2    |
| B38 | MN306     | Entry Roller     | 2    |
| B39 | MP762     | Lock Nut M6      | 2    |
| B40 | BF.4-00   | Fork Frame       | 1    |
| B42 | GB70-85   | Bolt M6X12       | 1    |
| B43 | BF.3-00   | Rocker Arm       | 1    |
| B44 | GB889-86  | Lock Nut M8      | 1    |
| B45 | AF.7-01   | Wheel 80/74X70   | 4    |

## **PUMP ASSEMBLY AND PARTS LIST**







| No.  | Order No. | Description       | Qty. |
|------|-----------|-------------------|------|
| B101 | DF.1-01a  | Blade Spring      | 1    |
| B102 | GB879-86  | Spring Pin 4X30   | 2    |
| B103 | DF.1-02   | Roller            | 1    |
| B104 | GB879-86  | Spring Pin 4X20   | 1    |
| B105 | GB879-86  | Spring Pin 6X30   | 1    |
| B106 | GB879-86  | Spring Pin 4X20   | 1    |
| B107 | DF.1-03   | Handle            | 1    |
| B108 | BF.1.1-00 | Handle Tube       | 1    |
| B109 | DFI.2-04  | Shaft             | 1    |
| B110 | MN309     | Spring Pin 3X20 1 | 1    |
| B111 | CN.2-13   | Pressure Roller   | 1    |
| B112 | CSB10     | Bush 1220         | 1    |
| B113 | DF.1.2-00 | Pull Pole         | 1    |
| B114 | SF-1      | Bush SF-1F2015    | 2    |
| B115 | MN321     | Chain C-6-9-04A   | 1    |
| B116 | MN324     | Lock Nut M5       | 1    |
| B117 | GB879-86  | Spring Pin 5X35   | 2    |
| B118 | BF-01     | Shaft             | 1    |
| B119 | JF.1-17   | Plug M20X1.5      | 1    |
| B120 | JB982-77  | Copper Washer 20  | 2    |
| B121 | AF.2-9    | Spring            | 1    |
| B122 | SYBC2-07  | Spindle of Valve  | 1    |
| B123 | SYBC.2-08 | Seat of Valve     | 1    |
| B124 | GB308-77  | Ball 6.35         | 1    |
| B125 | BF.2.1-00 | Base              | 1    |
| B126 | JB982-77  | Copper Washer 10  | 2    |
| B127 | CN.2-17   | Plug M10X1        | 2    |

| No.  | Order No.   | Description            | Qty. |
|------|-------------|------------------------|------|
| B128 | BF.2-5      | Spring 1.2X9.8X22      | 1    |
| B129 | AF.2-7      | Strike Pin             | 1    |
| B130 | GB3452.1-82 | O-Ring 7X1.8           | 1    |
| B131 | AF.2-06a    | Seat of Strike Pin     | 1    |
| B132 | GB3452.1-82 | O-Ring 8X2.65          | 1    |
| B133 | GB73-85     | Bolt M6X25             | 1    |
| B134 | GB6170-86   | Nut M6                 | 1    |
| B135 | AF.2-8a     | Lever Plate            | 1    |
| B136 | CN.2-28     | Bolt M10X1             | 1    |
| B137 | CN.2-27     | Spring 2X8X16          | 1    |
| B138 | CN.2-26     | Ball Base              | 1    |
| B139 | GB308-77    | Ball 5                 | 1    |
| B140 | BF.2-3      | Pin 8X58               | 1    |
| B141 | UHS31.5     | Y-Ring 31.5            | 1    |
| B142 | GB3452.1-82 | O-Ring 65X2.65         | 1    |
| B143 | BF.2-2a     | Cylinder Cap 31.5      | 1    |
| B144 | GB3452.1-82 | O-Ring 31.5X3.55       | 1    |
| B145 | DH31.5      | Dust Ring 31.5         | 1    |
| B146 | MN322       | Steel Ball 19.05       | 1    |
| B147 | MN362       | Piston                 | 1    |
| B148 | MN363       | Spring Cap             | 1    |
| B149 | MJ575       | Spring                 | 1    |
| B150 | DH20        | Dust Ring 18           | 1    |
| B151 | UHS18       | Y-Ring 18              | 1    |
| B152 | AF.2-4      | Piston Rod             | 1    |
| B153 | GB894.1-86  | Ring For Axle 8        | 1    |
| А    | MN320       | Pump Assembly          | 1    |
| В    | MN464       | Control Valve Assembly | 1    |