Mobile Column Lift Set

Capacity 8200kg (18000Lbs)/ Each Column

Item No. 167219B

Installation Manual

2012. Aug.

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1. GENERAL

1.1   SPECIFICATIONS

Item No.	167219B
Capacity	8200 Kg (18000 lbs) / Each Column
Pressure Relief Valve	15 Mpa (2,030 psi) Sealed Ex-Works
Pump motor	2.2 Kw (DC24V, Max 110Amper) / Each Column
Battery charger power supply	Input: 100-250 VAC, 50/60Hz, single phase Output: 24VDC, Max 10Amper
Operational Voltage	24 VDC
Lifting height	1700mm (67")
Column Width	1,120 mm (44")
Vehicle Tire Size Range	228 - 1,140mm (9"- 45")
Fork length	500 mm (19-5/8")
Lifting / Lowering Time	100 sec/ 68 sec at load of 16,500 lbs / each column
Noise Level	Max. 73 dB(A)
Set-up	Indoors ; Outdoors
Unit Weight	700 Kg (1,540 lbs) per Column
Maximum Distance between Lifting Columns	9 Meter (29 ' - 6")
Maximum Floor Surface Pressure	1875Kg (7,000 lbs) per Front Wheel of the column

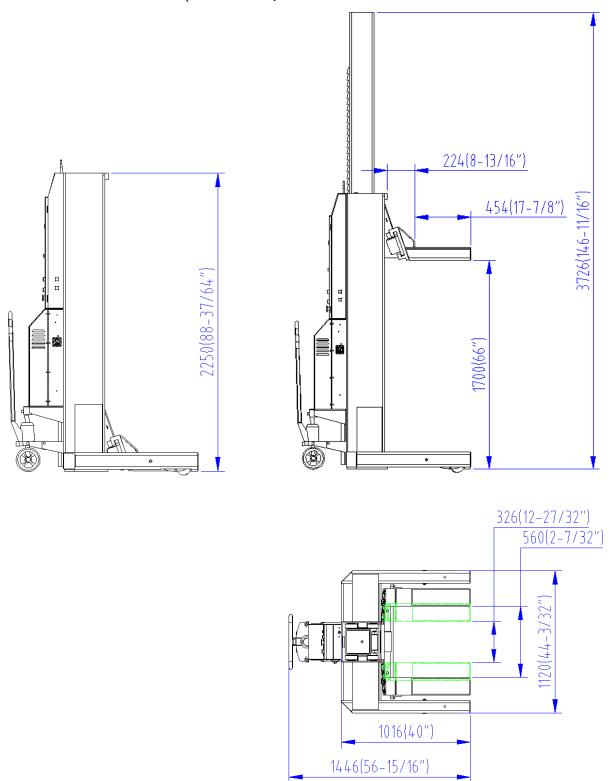## 1.2   DIMENSIONS   (mm / inch)

Fig.1   Mobile Column Lift Dimensions

1.3.   DESCRIPTION OF THE LIFTING SYSTEM

The mobile column lift is a movable electrically driven hydraulic column lift used for lifting heavy vehicles. It is used in set of four columns. But at least two lifting columns are required to work at same time for lifting a vehicle.

The main components of the mobile column lift are shown below: (see figure 2):

-A column and a lifting cylinder

-A hydraulic power unit (motor pump)

-A control box

-A pallet jack lifting mechanism

-A mechanical safety lock

-Two adjustable lifting forks
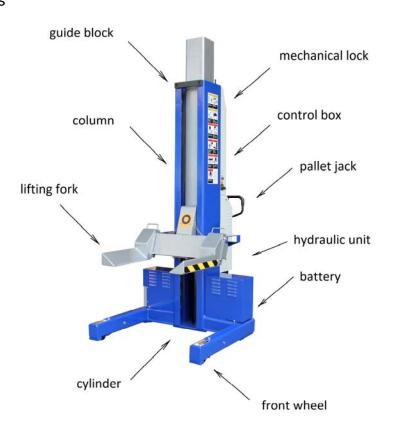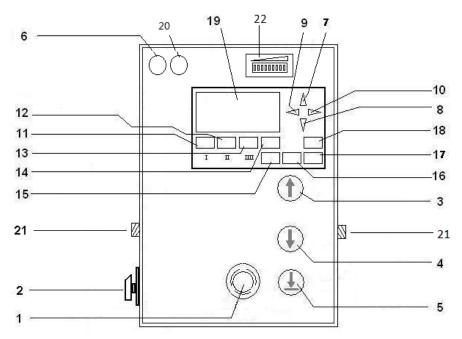
-Two retractable front wheels

Fig.2   column components
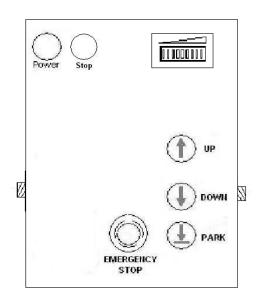
1.4 CONTROL BOX PANEL

The main control box controls Main power. All other functions of the lifting system are controlled from the control panel on the column. The functions of the switches, buttons on the control system are described below (Fig. 3)

Panel of Main Control Box of 1# Column

**Panel of Sub Control Box
of 2#, 3#, 4# Column**

Fig.3 Main Control Box and Sub Control Box

1.   **EMERGENCY BUTTON**;   Pressing this, all movements (lifting or lowering) are immediately stopped.

2.   **POWER SWITCH**;   Controls the power to the lifting columns. The switch has three positions: middle (OFF) , left (ON) and right (CHARGE).

3.   **"⇑ (UP)" button**;   Controls the lifting of the columns.

4.   **"⇓ (DOWN)" button**;   Controls the lowering of the columns.

5 .   **"⇓ (PARK)" button**;   Controls the lock of the columns.

6.   **"POWER" light**.   This light will go on when the power is ON

7.8.9.10.   **Four "DIRECTION" buttons**.   These buttons move cursor on the screen to edit items.

11,12,13.   **Three "MODE" buttons.**   These buttons serve to select between the functions: **"WHEEL", "AXLE"** and **"ALL"**

14.   **"BIAS" button.**   This button controls the zero point of height reading in initialization of the columns.

15.   **"START" button**.   This button and button "SHIFT" control the running of the program.

16.   **"SHIFT" button.**   This is for control the running of the program.

17.   **"ENTER" button**.   This button serves confirming of instruction or entering sub menu.

18.   **"ESC" button.**   This button serves to enter menu or exit from menu or from sub menu to upper lever menu.

19.   **LCD SCREEN.**   Show the height readings of columns & information

20.   **"STOP" light**.   This light will go on when the EMERGENCY button is pressed.

21.   **CABLE port**   This port is used for cable mode.

22.   **BATTERY indicator.**   This indicator shows the output voltage of the battery.

2. INSTALLATION

Remark: Only move the lifting column with a **forklift**.

Only raise the lifting column at the correct points.

Damage to lifting column and /or injury to persons may occur if the lifting column is not moved in the correct manner.

STEP 1. Moving the lift

1. Remove the cover from the crate or, when using a stand, remove the straps.

2. Carefully insert forklift teeth into the forklift pockets. The pockets are bolted to the column before leaving factory. (Fig. 4a & 4b)

Fig. 4a & 4b Forklift pockets on Column

3. Lift up the column then move it to the working position.

STEP 2. Fill the tank

1. Take off the forklift pockets from the mobile column lift (**better.** If not, it's OK).

2. Remove the cover from the hydraulic unit. (Fig. 5) Remove the plug from the fill opening and fill the tank with hydraulic oil: AW32, 46 or other good grade Non-detergent hydraulic oil SAE-10, filleted at 4 micron max, about 12L (3.2 Gal) .

3. Install the breather cap on the fill opening.

4. Install the cover back on the hydraulic unit. Check for oil leakage.

Fig. 5

STEP 3. Install the battery

1. Seat and fasten the batteries on the column base by using the belt provided.

Note: Be careful of the antennas next to the battery. Do not break them.

2. Connect the power cables of the batteries. Red end is '+Plus', Blue end is '-Negative'.(Fig. 6)

3. Install the battery cover back.

Fig. 6 Battery & cover

STEP 4 Cable reel

1. Take out the cable reels from the carton.

2. Insert the holding frame into the base on the upper cover. (Fig. 8a & 8b)

Fig. 8a   Fig. 8b   Fig. 8c

3. Pull up and pull down the upper and down lock button, the reel can turn aside.(Fig.8c)

4. Fix the reel on the base by the screw. (Fig. 8d)

| Fig. 8d | Fig. 8e |

5. Put the cable plug into the socket. (Fig. 8e)

STEP 5. Repeat

Repeat the above steps for the other three columns.

3.   CHARGING THE BATTERY

Remark: If the batteries are already full charged, skip this procedure.

STEP 1   Turn on the battery power switch on the right side of each column.
              (Fig 9a)

Fig. 9a   Fig. 9b

STEP 2   Plug in the power plug on the AC 220V 50/60Hz single phase power
              supply.(Fig. 10a)
STEP 3   Turn the control box power switch to the CHARGE (right) position.
              (Fig. 9b)
STEP 4   After both green display LED are lighting, the battery is full charged.
              (Fig 10)

Fig. 10a   Fig. 10b

NOTE: For first time charging, it
              will need about 10 hour,
              depending on the
              capacity of the battery.

STEP 5   Turn the control box power switch on each column to OFF (middle)
              position. Pull off all the power plugs of the battery charges.

Now the lifts are ready for test.

4. TESTING THE LIFTS

STEP 1   According to Fig.11, position the four lifts respectively.
            Connect the columns by cables.

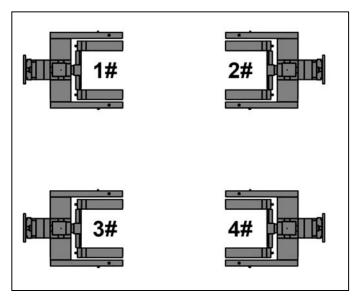Fig. 11

STEP 2   Check that the two
            forks are rest on the
            carriage firmly and
            the locking pins are
            in the position.
            (Fig.12a)

Fig. 12a

STEP 3   Turn control box power switch to ON (left) position in
            sequence 4#, 3#, 2#, 1#.
            The green power lamp [6] will be on. (Fig. 12b)

Fig. 12b

And the software is running.

TD 400C **Version 2.0.0.X** **INITIALIZING…**	**Please wait…**
LCD screen 1st	**LCD screen 2nd**

TB6 Controller VX.XX **Copyright @ Kernel** **Curr. status: RESET** **Self - Checking…**	**TB6 Controller VX.XX** **Copyright @ Kernel** **170cm 4 Lifts Z___** **Push START to confirm**
LCD screen 3rd	**LCD screen 4th**

STEP 4   Press the START button [15] on the screen to start working..

Mode: I   bias: Z___ **0   0   0** **0   0   0** **Reset!   15time   4min**
LCD screen 5th

NOTE: 'Mode: I' means WHEEL/SINGLE status.

STEP 5   Press UP button on 1# column until height reading to be 5 or 6 cm Repeat for other three columns.

Mode: I   bias: Z___ **5   6   0** **6   5   0** ⊙**Stop!**
LCD screen 6th

STEP 6   Press 'ALL' button [13].

STEP 7   Press UP button on 1# column until height reading to be 50cm. Repeat for other three columns until reach height limit.

Mode: II..II   bias: Z___ 170   170   0 170   170   0 Arrive at travel end!
LCD screen 7th

STEP 8   Press DOWN button on 1#
column until height reading
to decrease about 50cm
Repeat for other three
columns until reach
ground.

Mode: I		bias: Z___
0	0	0
0	0	0
Free	up/dn!	Max.5s/time

LCD screen 8th

STEP 9   Turn all the control box power switch to OFF (middle)
position.

Now the lifts are ready for operation