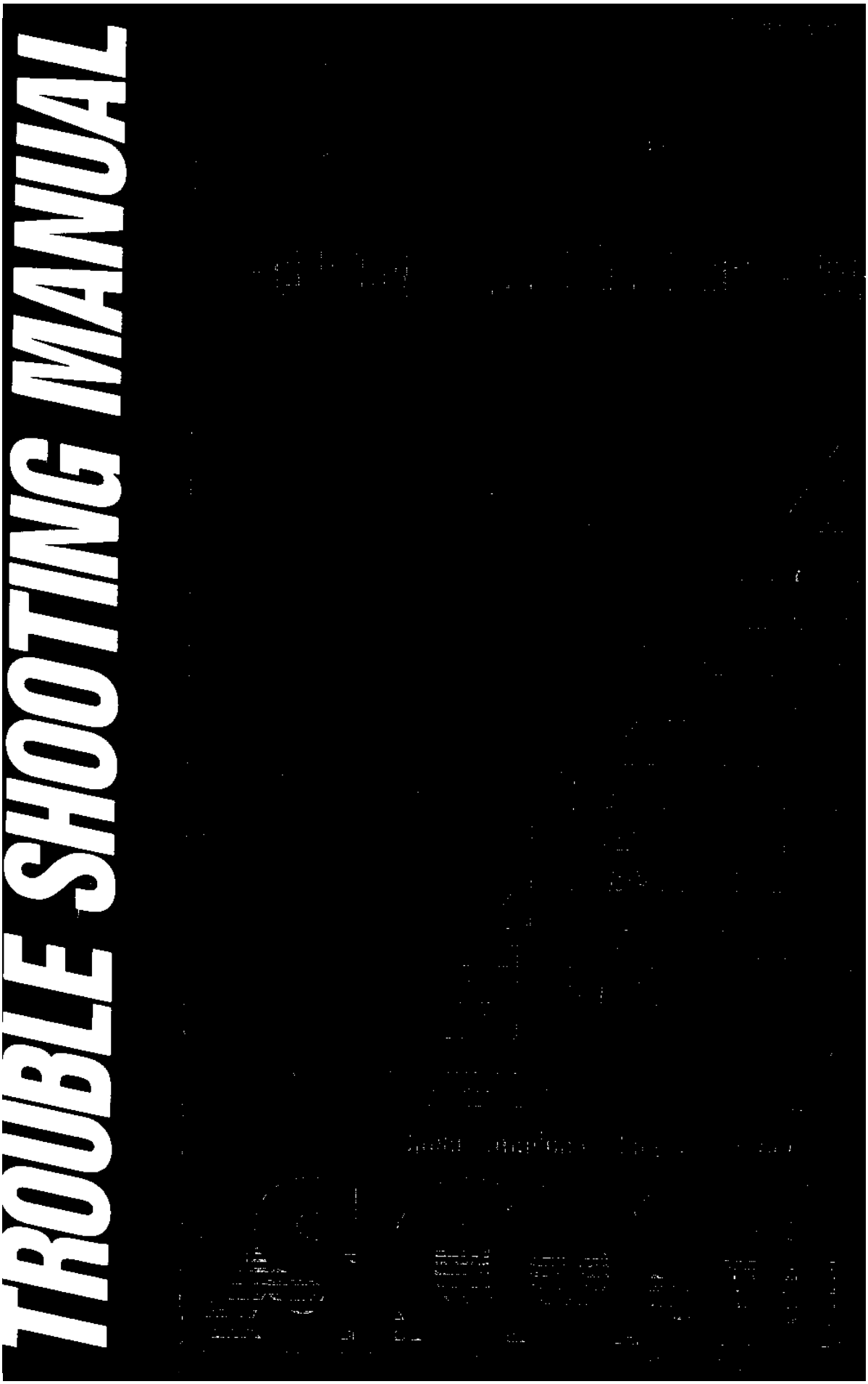
# TROUBLE SHOOTING MANUAL



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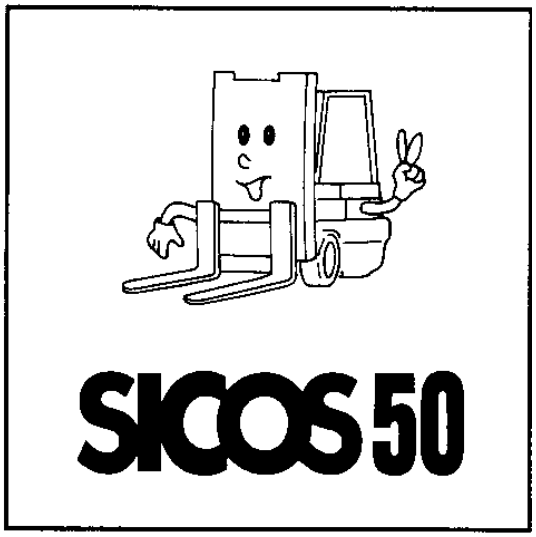
# 1. FBT-50 SERIES

## 1-1 Out line

The new FBT-50 series are equipped with micro-computer control system (SICOS 50) and it enables overall control of travel, hydraulics and safety monitors. Also it performs centralized supervision and control for the whole truck, thus improving safety and work efficiency, as well as saving energy.




## 1-2 Feature

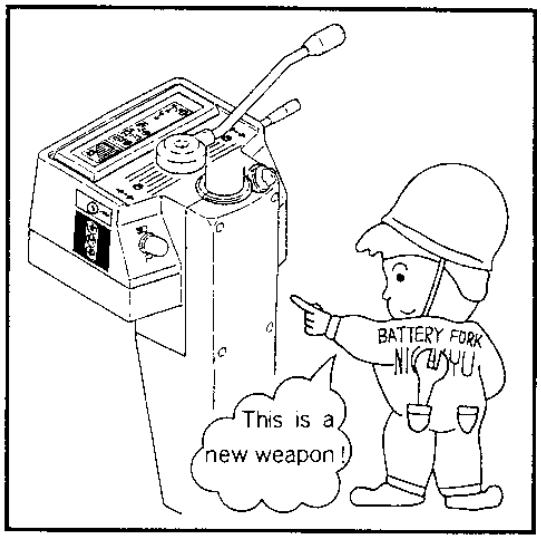
Following function is newly introduced with FBT-50 series.

- Hydraulic chopper
- Regenerative braking
- Lift interrupt at overdischarging

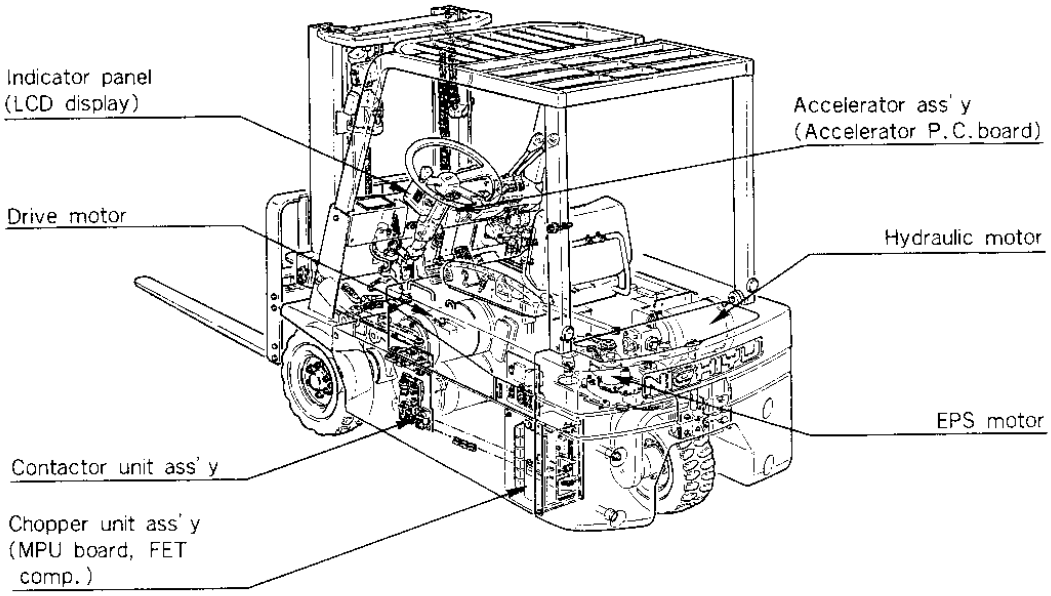
In addition to these, as standard function,

- Safety monitor and self-diagnosis function by the LCD display
  (A symbol flashes and possible defective part is displayed.)
- Self-diagnosis history memory
- I/O checks

are displayed on the LCD display on the indicator panel.
They provide accurate and quick fault-finding.



## 1-3 Layout of components



# 2. HOW TO ADJUST SICOS 50

When replacing MPU board or current sensor, or when necessary, adjust SICOS 50 by four potentiometers and eight rotary switches on the MPU board.

Before adjustment,

- All the parts are in normal condition.
- Micro-computer system is normal, and truck speed can be controlled.
- The display shows under condition.

| s-F | p-F |
|---|---|
| speed | acceleration |
| 100% | 100% |

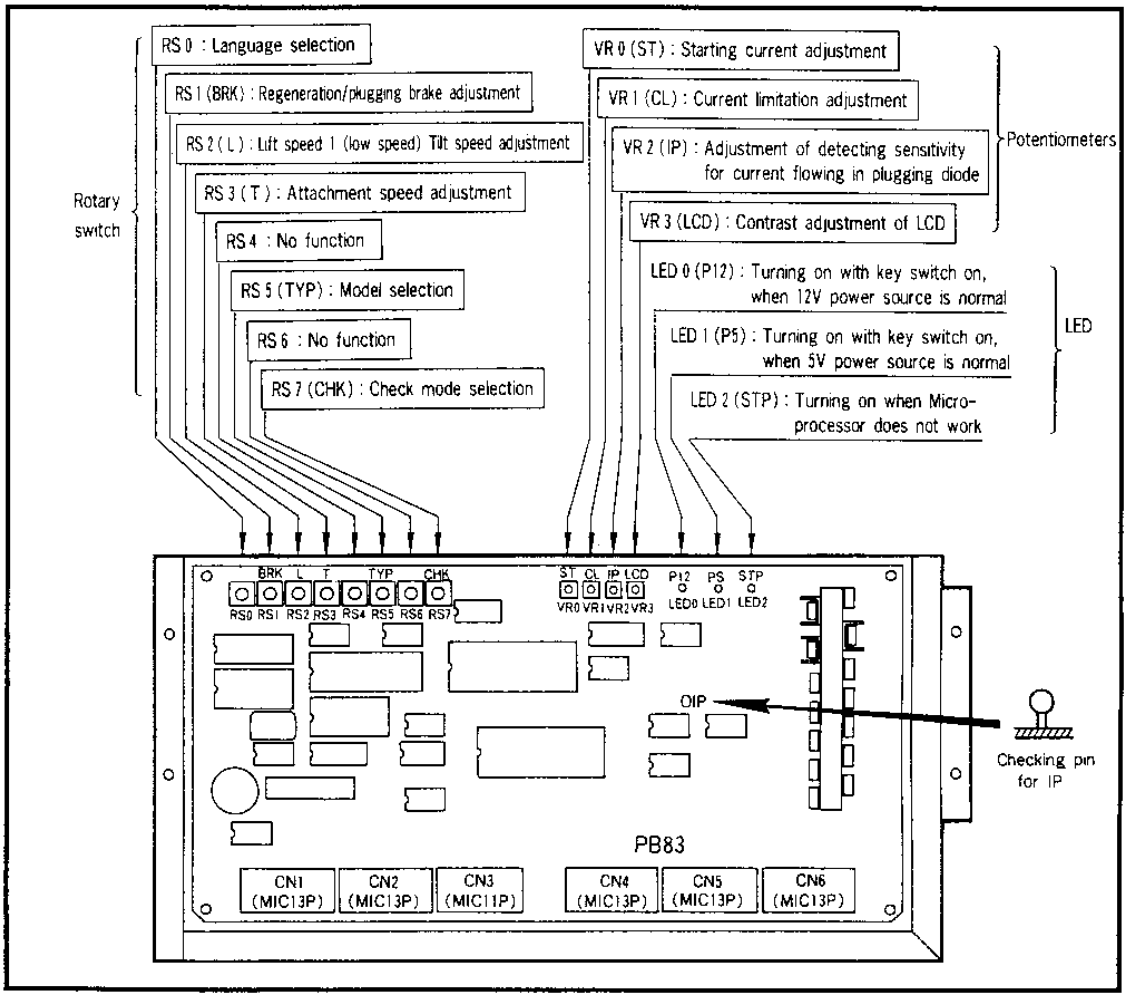
- Specific gravity of battery electrolyte is more than 1.26 (20°C)

Confirm above condition before adjustment.

**⚠NOTE**

- **Be sure to disconnect the battery plug for safety when selecting rotary switch and potentiometer on the MPU board.**
- **Set the rotary switch as follows to avoid lifting or tilting when touch hydraulic control levers by mistake at adjustment or maintenance or repairment.**

**ROTARY SWITCH RS2(L) TO 「0」**
**RS3(T) TO 「0」**




Rotary switches and Potentiometers on MPU board

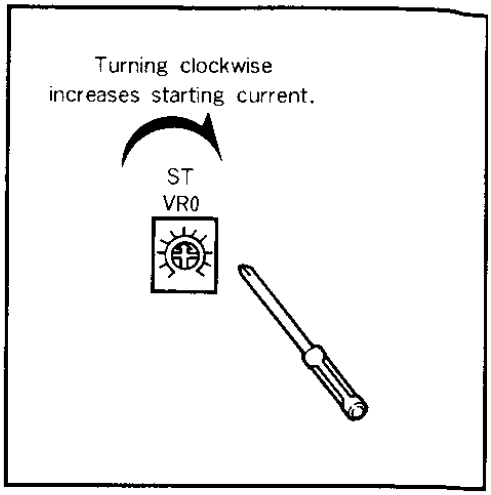
### 2-1 Adjustment by potentiometers

1. VR0 (ST) : Starting current adjustment

The "VR0" potentiometer adjusts starting current.
(Refer to page 5 for adjusting method.)
Turning it clockwise increases starting current.
※ Be sure to confirm current limitation after adjusting starting current.
If it is not within specified range, adjust it and confirm starting current again.

2. VR1 (CL) : Current limitation adjustment

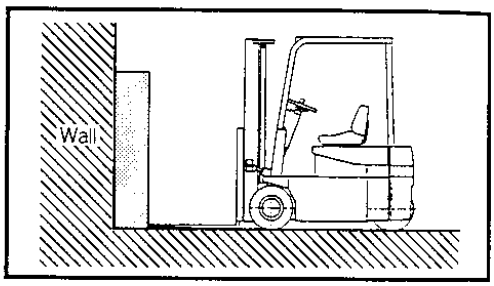
The "VR1" potentiometer adjust current limitation.
Turning it clockwise increases current limitation.
(Refer to page 5 for adjusting method.)



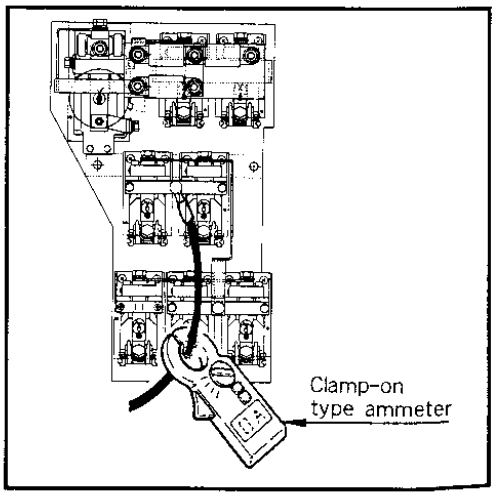
Starting current adjustment (VR0)

<Measurement and adjustment of current limit>
1) Place the forks against a wall and apply parking brake so that the forklift will not move.

<Adjustment>
2)• Set the power control of mode select switch to "100%".
• Set the reducing speed switch to "OFF" (Max. travel mode).
(That is what the display would show "s-F p-F".)
3) Remove the left side cover and prepare 500A DC ammeter and set the ammeter to lead wire at the closing side M1R and M2R of contactor unit.
4) Turn on the key switch (K.S.-ON) and set the directional switch to forward position (DS1-ON) and then set the rear wheel straight by steering. (Steering micro-swith-OFF)
5) Depress the accelerator pedal all the way down on depressing the brake pedal, and read off the maximum current within 2 seconds. Repeat this procedure 2 or 3 times, and adjust the current to within specified range.
※ Be sure to check starting current after adjusting current limitation. If starting current is not within specified range, adjust it and check current limitation again.



Placing forklift against wall



Setting ammeter