

ELECTRIC LIFT TRUCKS

SERVICE MANUAL

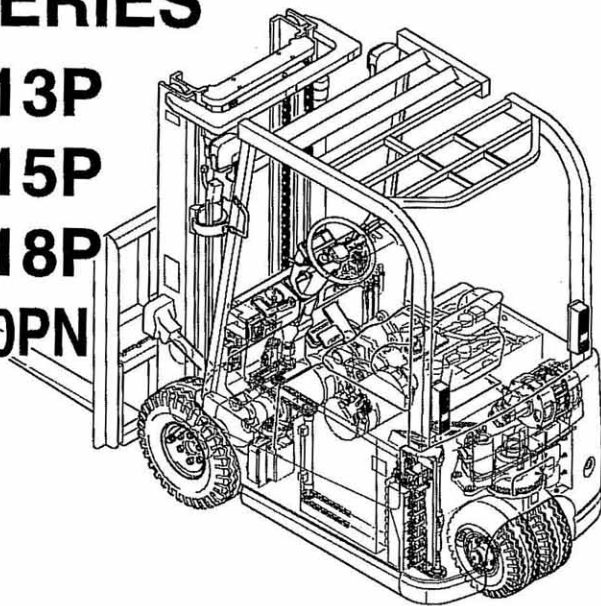
70 SERIES

FBT13P

FBT15P

FBT18P

FBT20PN



NICHIYU
NIPPON YUSOKI CO., LTD.

KYOTO, JAPAN

INTRODUCTION

- ▶ Most accident happens due to the disregard of basic safety rules or precautions. In order to prevent accidents, the factors which may cause accidents must be avoided beforehand.

For this reason, please read this manual and fully understand the precautions for safety and the proper procedures and directions for inspection and maintenance before starting operation.

Performing maintenance and repair without adequate knowledge may cause inadvertent accidents.



- ▶ It is not possible to cover all the possible cases of accidents in this "SERVICE MANUAL". Therefore, attention should be given to precautions other than the ones mentioned in this "SERVICE MANUAL". Especially, when repair and maintenance work which are not covered in this "SERVICE MANUAL" are carried out, always work under the direction of an instructor who understands the matter.

■ USING THE "SERVICE MANUAL"

This Service Manual will give explanation on how to maintain and inspect NICHYU forklift trucks of FBT-70 series.

Since the parts used in this machine are subject to change for the sake of better quality, performance enhancement, and safety, some portions of the contents and illustrations of the "SERVICE MANUAL" may not be identified.

Directions with  and  marks are very important, and must be followed.

	DANGER	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury. You shall observe this instruction.
	WARNING	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury. You shall observe this instruction.
	CAUTION	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. You shall observe this instruction.
	NOTE	Indicates suggestions, tips and hints related to the safety of a operator and maintain of truck.

1. Personnel this "SERVICE MANUAL" is aimed at:

This "SERVICE MANUAL" is directed at personnel who possess sufficient knowledge and technical expertise. If you do not understand any of the contents of this "SERVICE MANUAL", perform operation under the guidance of personnel who does.

2. Conditions of a facility

The work conditions described in the "SERVICE MANUAL" are written on the assumption that the work is performed at a shop where standard facilities and tools for the maintenance of NICHYU ELECTRIC LIFT TRUCKS are available.

For safe and reliable maintenance, the work should be performed at a shop where the facilities are equivalent to these described in the "SERVICE MANUAL" or better, and the instructions described should be strictly followed.

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SAFETY WORK

1. Precautions for safe inspection and maintenance work

Maintenance shops

▲ CAUTION

Facilities with adequate space and level surfaces:

- The floor area of the shop (location) where inspection and maintenance are performed must have adequate floor space, and have level surfaces without holes.
- ➔ If these conditions are not met, unexpected accidents, such as a roll-over of the forklift truck, may result.

▲ CAUTION

WELL-VENTILATED AREA

- Work such as welding painted components or sanding down coated parts should be carried out in well-ventilated areas.
- ➔ If this is not observed, harmful toxic gas or dust may be inhaled.

▲ CAUTION

LOCATION EQUIPPED WITH FIRE EXTINGUISHING EQUIPMENT

- Equipment such as first-aid boxes and fire extinguishers should be nearby when work is performed.

▲ CAUTION

SAFE AND WELL-LIGHTED AREA

- The work area should be safe and well lighted. When working inside the machine or underneath of it, always use a safety lamp with a shielded light bulb.
- ➔ If this is not observed, leaked oil may catch fire when a light bulb pops.

▲ CAUTION

PROPER ARRANGEMENT

- Arrange and clean always at a working place to work safety.
- Especially, arrange disassembled parts well.

Work clothing

CAUTION

- The worker should wear a hat, work clothes, and safety shoes that are suitable for safe work. The work clothes should be close-fitting.
- ➔ If this is not observed, loose clothing may become caught in a machine, resulting in serious injury.

Tools and gauges

CAUTION

- Always use tools that are suitable for the work being performed. Use proper size tools when tightening and loosening the parts of the forklift truck.
- ➔ Failure to observe the above could result in serious injury or damage to machines.

CAUTION

- Prepare tools and gauges before starting to work.

Safety work

WARNING

- When hoisting a forklift truck or a heavy component, use ropes or cable with correct capacity.
- Do not use ropes or cables which are kinked.

WARNING

- After lifting or jacking up a forklift truck, support it with safety blocks or rigid stands.

WARNING

- Prevent tires from moving with wheel chocks etc.

WARNING

- When working under a forklift truck, use a pit or proper safety precautions.

Parts

CAUTION

- When replacing any parts, be sure to use NICHYU genuine parts.

CAUTION

- When replenishing battery electrolyte, be sure to use refined or distilled water.

Repair of electrical components

CAUTION

- Be sure to disconnect the battery plug and discharge the capacitors in the control unit when replacing electrical component.

CAUTION

- Be sure to jack up the drive wheel when trouble shooting electrical operations.

NOTE

Record the places of lead wire connection when disassembling.

CAUTION

CHARGING BATTERY

- Batteries produce flammable gas during charging. Do not allow batteries in the vicinity of fire or flames.
aFailure to observe the above could result in an explosion.

CAUTION

- Diluted sulfuric acid is used as the battery's electrolyte . Keep clothing and skin away from contact with battery fluid.
alf this is not observed, the fluid may corrode clothing or cause burns.