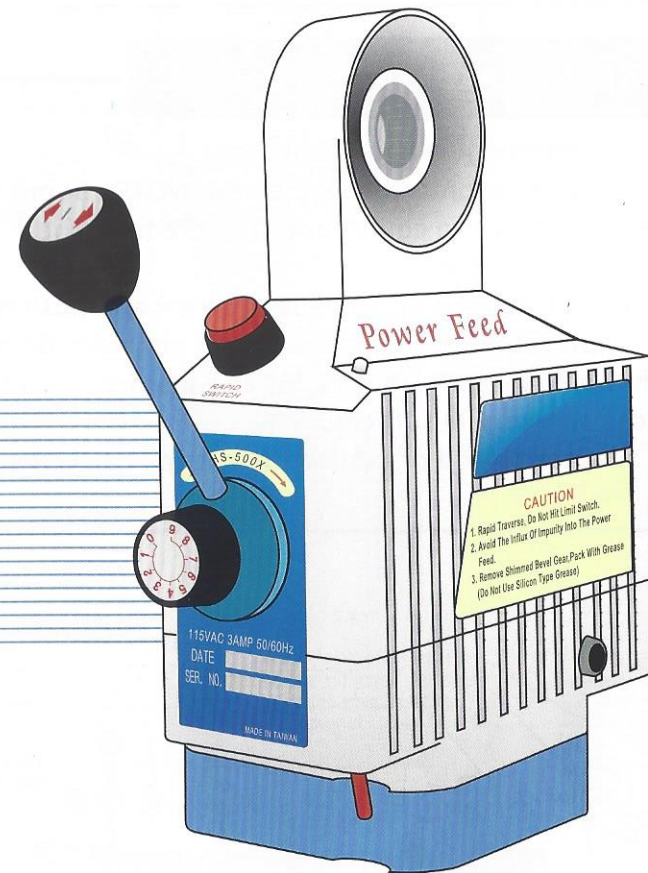


POWER TABLE FEEDS

INSTRUCTION MANUAL



HS-500X

PREPARATION

- Remove the nut, handle and dial assembly from the right-hand end of the milling machine.
- Remove the four cap screws holding the bearing housing in place.
- Using a soft hammer, tap the bearing housing off. Clean the end surface of the table. (Refer to Fig. 1)

DRIVE UNIT INSTALLATION (Refer to Fig. 1)

- Move table to extreme left-hand position.
- Slide the bearing inner onto the lead screw. NOTE : Some lead screws will require to cut off approx 5/32 from the length of the bearing race.
- Slide the power table feed onto the lead screw and push in place. Notes : On some machines the dowel pin holes do not line up with the adaptor. Push pins out and discard in such cases. The cap screws will suffice.
- Secure the adaptor to end of table with existing cap screws.

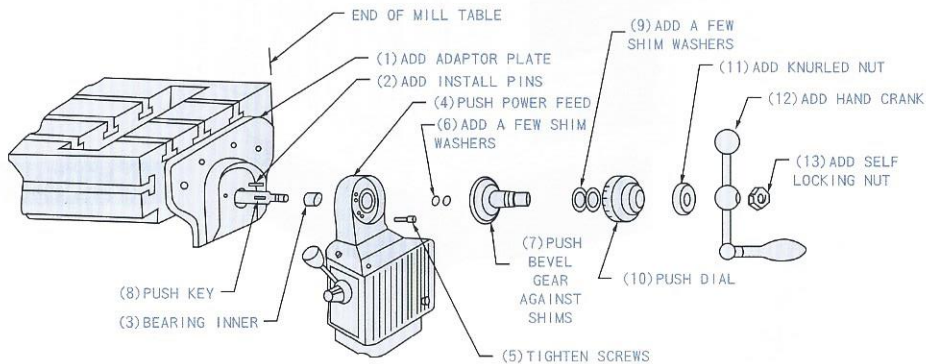


FIG. 1-A INSTALLATION INSTRUCTIONS

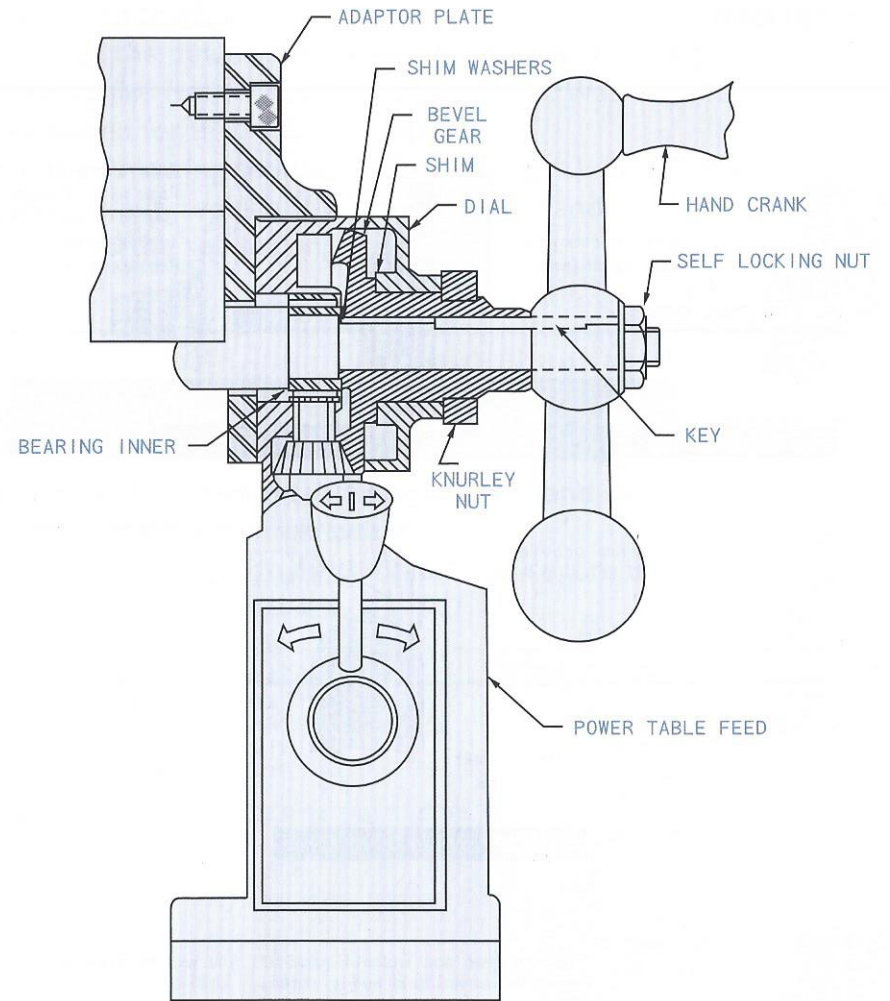


FIG. 1-B INSTALLATION INSTRUCTIONS

BEVEL GEAR INSTALLATION

- Fig. 2 through Fig. 5 is shown the sequence of the bevel gear installation.

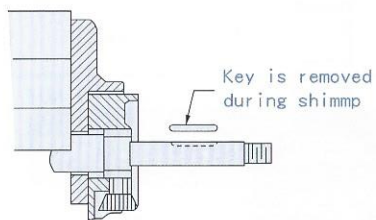


FIG.2 Preparation

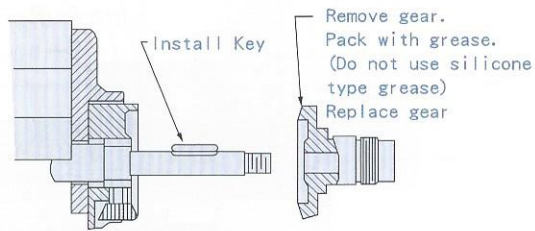


FIG.5 Lubrication

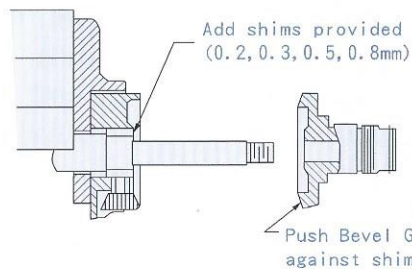


FIG.3 Shimming Bevel Gear

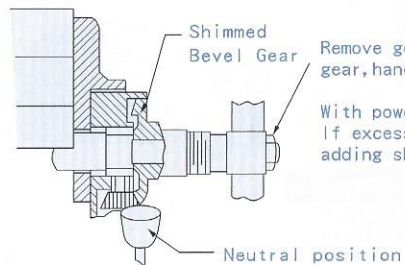
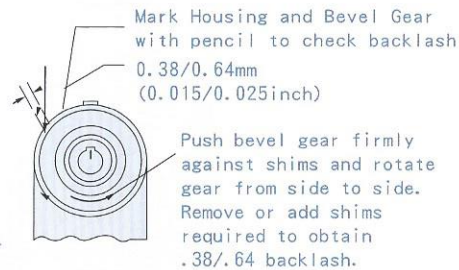


FIG.4 Double check of shimming

CAUTION: If backlash is not properly set before turning unit on bevel gear, may be damage.

DIAL AND HANDCRANK INSTALLATION

- After getting the proper backlash, the dial should be adjusted to obtain 0.127mm (0.005 inch) spacing from the face of the power table feed. This is important in order to keep chips from entering the gear train. Washers are provided for this. Shim as required.
- In the following sequence (Refer to Fig. 1), put on the dial locking nut, replace key in shaft, slide handcrank in place, and add the self locking nut.

LIMIT SWITCH INSTALLATION (Refer to Fig. 6)

- Remove tee shaped table stop bracket and using the same screws install the limit switch.
- Put the cable clamp on the cable and secure using the right-hand chip scraper screw.

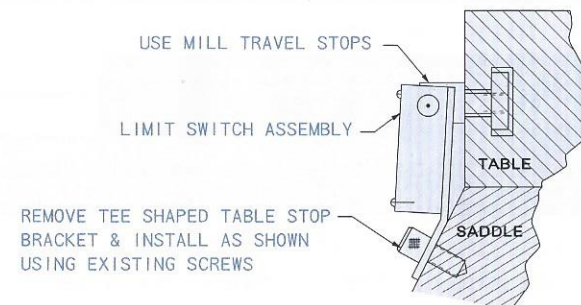


FIG.6 LIMIT SWITCH INSTALLATION

POWER TABLE FEED OPERATION — GENERAL

- Plug the feed into a source of 115 VAC, 50/60 cycle, AC power having a current capacity of 5 amperes.
- **CAUTION** : All electrical apparatus should be properly grounded the feed is provided with a 3 wire cord that includes a ground terminal. Do not remove this terminal. On installations where the cord is wired to a junction box, be sure to ground the green wire. Turn the power switch on. An pilot light indicates the feed control is energized. Turn off when the feed will not be used for an extended period.
- The feed direction is controlled by the main operating handle; handle to right, feeds to right; handle to left, feeds to left; handle in center, feed is stopped, and disengaged. (On model HS-500X when handle to right or left, feeds table to right or left will be delay approx 0.5 second.) Feed rate is controlled by the black knob. Feed rate is electronically regulated, which means that the feed rate will remain constant at any setting regardless of load, within the capacity of the table feed.

POWER TABLE FEED OPERATION — RAPID TRAVERSE

- A red button is provided on the table feed which allows the feed rate to be increased to 39 in/min without disturbing the selected rate.

POWER TABLE FEED OPERATION — LIMIT SWITCHES

- The limit switch is designed as a safety stop only and is not intended to be used as an accurate stop. The stopping point will be affected by the speed of the motor at the time the limit stop is struck. When the feed has shut itself off against a stop, the feed may be reversed and it will automatically feed in the direction away from the stop.
- **CAUTION** : Do not allow this feed to drive into any positive stop, as damage to the feed and the milling machine may result. Always leave the stops set to where they will prevent the feed from feeding against the end of the table travel.
- **CAUTION** : Every attempt has been made to seal this feed. However, excessive amounts of coolants can work their way in and ultimately damage the feed. For long life, keep the unit as dry as possible. Wipe down at the end of each shift.

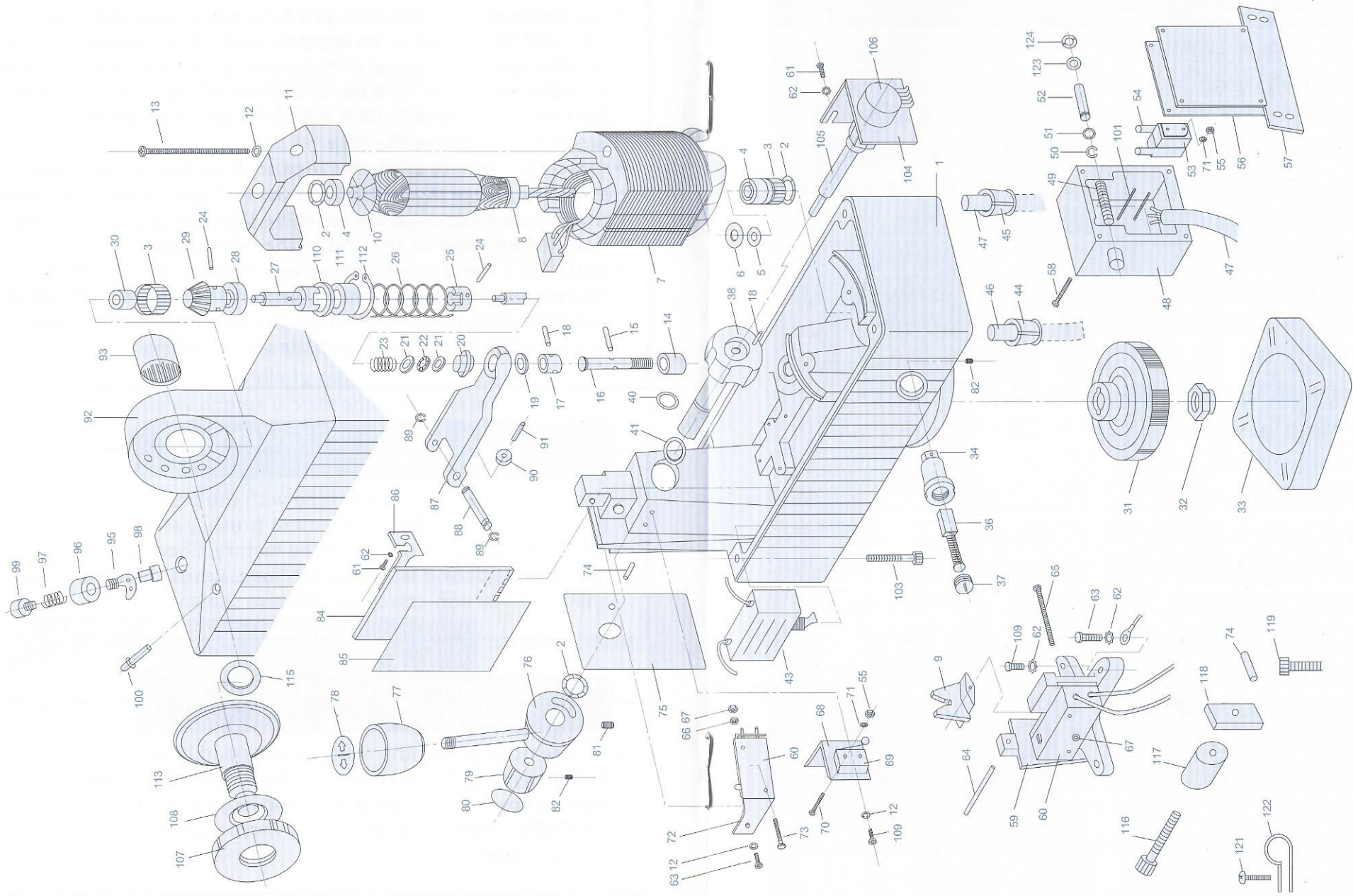
POWER TABLE FEED OPERATION — MOTOR BRUSHES

- The motor is a commutator type with the brushes accessible from the outside. The replacement brush, part NO.36, is available from your dealer or the factory, Check brushes monthly. Replace it less than 1/4" long. Reseal brush caps with Silatic SH 780 non-corrosive adhesive sealant.

POWER TABLE FEED OPERATION — LUBRICATION

- At assembly, grease the roller bearing and bevel gear with bearing grease. Every three months of operation, remove the bottom cover and lightly grease the large spur gear.
- **CAUTION** : Damage to the motor may result from over-greasing the spur gear.

SCHEMATIC DIAGRAM OF PARTS



PARTS LIST

| PART NO. | DESCRIPTION | Q'ty |
|----------|---------------------------|------|
| 1 | HOUSING, BOTTOM | 1 |
| 2 | WASHER, WAVE | 4 |
| 3 | RING | 2 |
| 4 | BEARING, #627ZZ | 2 |
| 5 | WASHER | 1 |
| 6 | WASHER | 1 |
| 7 | STATOR | 1 |
| 8 | ARMATURE | 1 |
| 9 | SWITCH ACTUATOR | 1 |
| 10 | FAN | 1 |
| 11 | BEARING MOUNT TOP | 1 |
| 12 | SPRING WASHER, 5/32" | 5 |
| 13 | SCREW, 5/32-32x2-3/4 | 2 |
| 14 | BEARING, DNK 8/12 | 1 |
| 15 | PIN ϕ 3.17x18 | 1 |
| 16 | DRIVING SHAFT | 1 |
| 17 | SETTLE BLOCK | 1 |
| 18 | SPRING PIN, ϕ 2.5x16 | 2 |
| 19 | WASHER | 1 |
| 20 | BEARING HOUSING | 1 |
| 21 | BEARING BUSHING | 2 |
| 22 | BEARING, NTA 512 | 1 |
| 23 | SPRING | 1 |
| 24 | SPRING PIN, ϕ 3x16 | 2 |
| 25 | CLUTCH, BOTTOM | 1 |
| 26 | SPRING | 1 |

PARTS LIST

| PART NO. | DESCRIPTION | Q'ty |
|----------|--------------------------|------|
| 27 | CLUTCH SHAFT | 1 |
| 28 | BEARING, #608ZZ | 1 |
| 29 | BEVEL GEAR | 1 |
| 30 | BEARING, DNK 6/10 | 1 |
| 31 | ASSY-GEAR CLUTCH | 1 |
| 32 | NUT, 5/16-24VF | 1 |
| 33 | GEAR COVER | 1 |
| 34 | BRUSH HOLDER | 2 |
| 36 | BRUSH, MOTOR | 2 |
| 37 | CAP-BRUSH | 2 |
| 38 | CAM | 1 |
| 40 | O-RING | 1 |
| 41 | MOLD-SPACER, CAM | 1 |
| 43 | SWITCH | 1 |
| 44 | STRAIN RELIEF, RIGHT | 2 |
| 45 | STRAIN RELIEF, LIFT | 2 |
| 46 | POWER CORD | 1 |
| 47 | POWER CORD, LIMIT SWITCH | 1 |
| 48 | BOX, LIMIT SWITCH | 1 |
| 49 | SPRING, L/S | 1 |
| 50 | RING | 2 |
| 51 | WASHER | 2 |
| 52 | ACTUATOR | 2 |
| 53 | MICRO SWITCH | 2 |
| 54 | ACTUATOR | 2 |
| 55 | NUT, 2-56NC | 4 |

PARTS LIST

| PART NO. | DESCRIPTION | Q'ty |
|----------|--------------------------------|------|
| 56 | BUSHING | 1 |
| 57 | HOLD PLATE | 1 |
| 58 | SCREW, 4-40NC×7/8 | 4 |
| 59 | HOLD BODY, SWITCH | 1 |
| 60 | MICRO SWITCH | 3 |
| 61 | SCREW, 5/32-32NC×1/4 | 3 |
| 62 | STAR WASHER | 6 |
| 63 | SCREW, 5/32-32NC×5/8 | 2 |
| 64 | PIN, ACTUATOR | 1 |
| 65 | SCREW, #4-40NC×11/8 | 2 |
| 66 | STAR WASHER, ø3 | 2 |
| 67 | NUT, #4-40NC | 4 |
| 68 | MOUNTING PLATE | 1 |
| 69 | MICRO SWITCH | 1 |
| 70 | SCREW, #2-56NC×1/2 | 2 |
| 71 | WASHER, ø2 | 4 |
| 72 | MOUNT PLATE | 1 |
| 73 | SCREW, #4-40NC×5/8 | 2 |
| 74 | SPRING PIN, ø5×16 | 3 |
| 75 | NAME PLATE | 1 |
| 76 | HANDLE | 1 |
| 77 | HANDLE KNOB | 1 |
| 78 | LABEL, DIRECTION | 1 |
| 79 | KNOB | 1 |
| 80 | LABEL, POTENTIAL LEVEL | 1 |
| 81 | SOCKET SET SCREW, 1/4-20NC×3/8 | 1 |

PARTS LIST

| PART NO. | DESCRIPTION | Q'ty |
|----------|------------------------------------|------|
| 82 | SET SCREW, 5/32-32NC×1/4 | 3 |
| 84 | CIRCUIT BOARD | 1 |
| 85 | INSULATOR | 1 |
| 86 | MOUNTING PLATE, CIRCUIT BOARD | 1 |
| 87 | LIFTFORK | 1 |
| 88 | LIFTFORK SHAFT | 1 |
| 89 | CRESCENT-RING | 2 |
| 90 | WHEEL, LIFTFORK | 1 |
| 91 | PIN, 1/8×1/2 | 1 |
| 92 | HOUSING, TOP | 1 |
| 93 | NEEDLE BEARING, DNKJ 20/16A | 1 |
| 95 | SWITCH HOUSING, TRIANGLE | 1 |
| 96 | MOLD-RAPID SWITCH HOUSING | 1 |
| 97 | SPRING | 1 |
| 98 | PLUNGER | 1 |
| 99 | HEX-SEAL BOOT | 1 |
| 100 | TRANSMITTER-LIGHT | 1 |
| 101 | SCREW, #2-56NC×3/4 | 2 |
| 103 | SCREW, 3/16-24NC×1-3/4 | 4 |
| 104 | MOUNTING PLATE, POTENTIOMETER | 1 |
| 105 | SCREW | 1 |
| 106 | POTENTIOMETER, 10KΩ | 1 |
| 107 | NUT | 1 |
| 108 | WASHER, 0.15, 0.2, 0.3, 0.5, 0.8mm | 5 |
| 109 | SCREW, 5/32 32NC×3/8 | 4 |
| 110 | WASHER | 1 |

PARTS LIST

| PART NO. | DESCRIPTION | Q'ty |
|----------|------------------------------|------|
| 111 | SPACER-UPPER SHAFT | 1 |
| 112 | RING-RETAINING | 1 |
| 113 | BEVEL GEAR | 1 |
| 115 | WASHER, 0.2, 0.3, 0.5, 0.8mm | 4 |
| 116 | SCREW, 5/16×1½ | 2 |
| 117 | TRAVEL STOP | 2 |
| 118 | NUT | 2 |
| 119 | SCREW, ¼×1 | 2 |
| 121 | SCREW | 1 |
| 122 | CLAMP | 1 |
| 123 | WASHER | 2 |
| 124 | WASHER | 2 |

NOTE