
Instruction Manual

Read through carefully and understand these instructions before use.

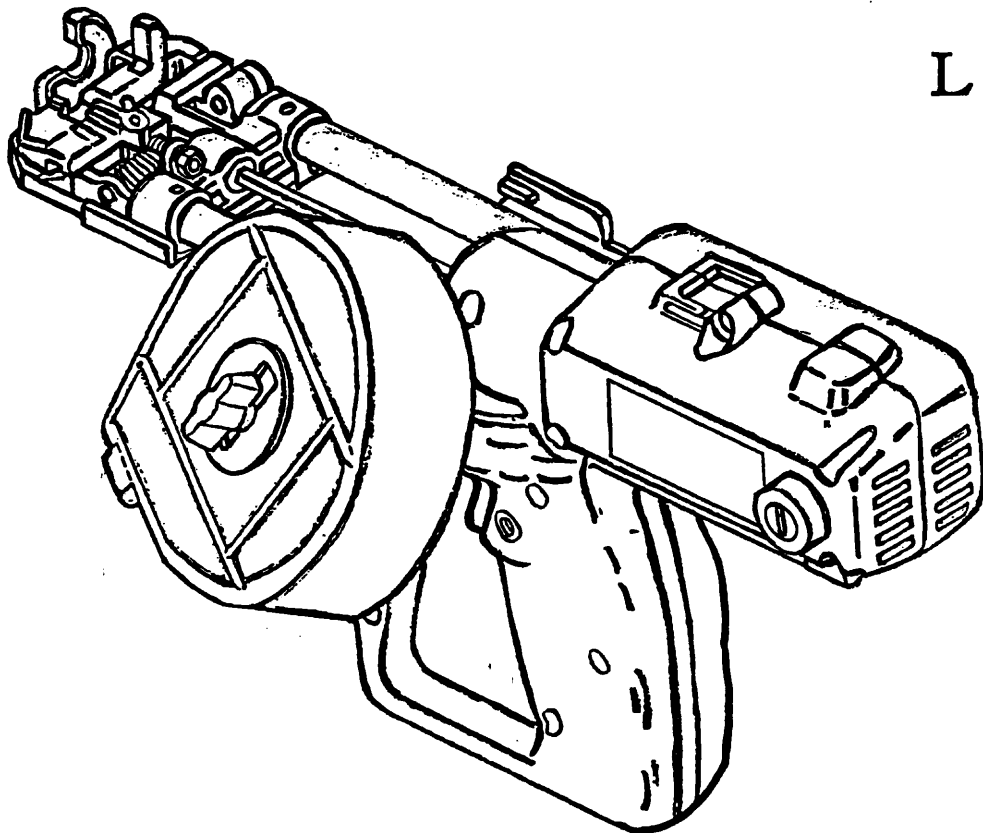
AUTO FEED SCREWDRIVING TOOL

MURO



VL-32

LH



MURO

MURO CORPORATION
TOKYO JAPAN

Congratulations on the purchase of your Muro Auto-feed Screwdriving Tool.

The Muro VL32-LH is an all-in-one, high performance tool, designed with the professional in mind. It's light weight enables operators to complete jobs faster, with minimal effort. The overall shape and weight balance of the tool ensures comfortable operation and the tool's two speed transmission allows for a variety of work applications. The Muro VL32-LH drives collated hexagon head screws (VISROPE), ranging in size from 1" (25mm) to 1-9/16" (40mm) {from the base of the flange to tip of screw}. Be sure to ask for Muro VISROPE screw coils to ensure trouble free operation of your Muro auto-feed screwdriving tool.

Tool Specifications

Standard Accessories

Type	LH (for Hexagon Head Screw)	1 Phillips/Square No. 2 Bit 150mm (6") (U. S. A. /Can.)
Model	VL32	1 Hex socket No. 8 145mm (5-11/16") (U. S. A. /Can.)
Weight	2.1 Kg (4.6lbs.)	1 Pozidrive No. 2 Bit 150mm (6") (Europe)
Speed	'1' = 2700rpm '2' = 4500rpm	1 Hex socket No. 8 145mm (5-11/16") (Europe)
Voltage	115V (U. S. A. /Canada) 230V (Europe)	1 Allen key 2.0mm (0.078")
Current	2.8A (U. S. A. /Canada) 1.4A (Europe)	1 Allen key 2.5mm (0.098")
Cord Length	2.8m (9-1/3Ft.)	1 Allen key 3.0mm (0.118")
Screw Range	25mm - 40mm (1" - 1-9/16")	1 M4 nut wrench
	(From the base of the flange to tip of screw.)	

A holder for the nut wrench and allen keys is fixed to the back of the magazine.

Note: Due to Muro's continuing program of research and development, the specifications herein are subject to change without notice.

***** IMPORTANT SAFETY INSTRUCTIONS *****

WARNING: When using electrical tools, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and personal injury, including the following:

READ ALL INSTRUCTIONS

1. Keep work area clean.
Cluttered areas and benches invite injuries.
2. Consider work area environment.
Don't expose the VL32-LH to rain. Don't use the tool in damp or wet locations. Keep the work area well lit. The VL32-LH produces sparks during operation and also when switching the tool "on" and "off". Never use it in the presence of flammable liquids or gases.
3. Guard against electric shock.
Prevent body contact with grounded surfaces. For example; pipes, radiators, fire stove or refrigerator enclosures.
4. Keep children away.
Do not let visitors come in contact with the VL32-LH or extension cord. All visitors should be kept away from the work area.

5. Store the VL32-LH when it is idle.
When not in use, the tool should be stored in a dry, and high or locked-up place - out of reach of children.
6. Don't force the tool during operation.
It will do the job better and safer at the rate for which it was intended.
7. Use the right tool.
Don't force a small tool or attachment to do the job of a heavy-duty tool. Don't use the VL32-LH for a purpose for which it was not intended - for example - don't use the bit to drive screws longer than 40mm. (1-9/16") {from the base of the flange to tip of screw.}
8. Dress properly.
Do not wear loose clothing or jewelry. They can be caught in moving parts. Rubber gloves and non-skid footwear are recommended when working outdoors. Wear protective head covering to contain long hair.
9. Use safety glasses. Also use a face or dust mask if the driving operation is dusty.
10. Don't abuse the power cord.
Never carry the tool by it's power cord or yank it to disconnect the plug from the power socket (receptacle). Keep the cord away from heat, oil and sharp edges.
11. Secure work.
Use clamps or a vise to hold the work. It's safer than using your hands and it frees both hands to operate the tool.
12. Don't overreach.
Keep proper footing and balance at all times..
13. Maintain tools with care.
Keep the tool clean (particularly it's feeding mechanism) and the tool's bit in good condition for better and safer performance. Follow instructions for lubricating the tool and for changing accessories. Inspect the VL32-LH's power cord periodically and if it is damaged, have the tool repaired by an authorized service facility. Inspect extension cords periodically and replace if damaged. Keep the grip handle dry, clean and away from oil and grease.
14. Disconnect tools.
When not in use, before servicing, when changing accessories, such as bits, and when inserting the VISROPE into the feeder block, disconnect the tool from it's power source.
15. Remove adjusting keys and wrenches.
Form a habit of checking to see that allen keys and wrenches have been removed from the tool before turning it on.
16. Avoid unintentional starting.
Don't carry the tool with your finger on it's trigger switch. Be sure the switch is off when plugging in the VL32-LH.
17. Extension cords.
Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current the VL32-LH will use. An undersized cord will cause a drop in line voltage resulting in a loss of power and overheating. Table 2 shows the correct size to use depending on the cord length and nameplate ampere rating. If in doubt, use the next heavier gage. The smaller the gage number, the heavier the cord.

Volts		Total Length of Cord in Feet			
		0-25	26-50	51-100	101-150
120V					
230V		0-50	51-100	101-200	201-300
Ampere Rating		AWG			
More Than	Not More Than				
0	- 6	18	16	16	14
6	- 10	18	16	14	12
10	- 12	16	16	14	12
12	- 16	14	12	Not Recommended	

Table 2: Minimum gage for cord sets

18. Outdoor use of extension cords.
When the tool is used outdoors, use only extension cords intended for use outdoors and so marked.
19. Stay alert.
Watch what you are doing. Use common sense. Do not operate the tool when you are tired.
20. Check damaged parts.
If a part of the tool becomes damaged, this part should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting and any other conditions that may affect its operation. A part that is damaged should be properly repaired or replaced by an authorized service center unless otherwise indicated elsewhere in this manual. Have defective switches replaced by an authorized service center. Do not use the tool if the trigger switch does not turn it on and off.
21. Replacement parts.
When servicing, use only identical replacement parts.
22. Polarized plugs. (U. S. A. /Canada)
To reduce the risk of electric shock, the VL32-LH has a polarized plug (one blade is wider than the other). This plug will fit into a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper outlet. Do not change the plug in any way.

SAVE THESE INSTRUCTIONS

The VL32-LH noise emission is as follows:

- (a) the continuous A-weighted equivalent sound pressure level at the operator's ear is 80 dB(A).
- (b) the peak C-weighted instantaneous sound pressure level is 79.4 dB(A).
- (c) the sound power level emitted by the tool where the equivalent sound pressure level exceeds 85dB(A) is 92.4 dB(A).

***** OPERATING INSTRUCTIONS *****

Tool preparation before use:

- (a) Use an appropriate power supply :- The power source should conform to the specifications stated on the nameplate. A direct current (DC) power supply can particularly damage the unit and cause injury. Before connecting the VL32-LH to a power source, ensure the trigger switch is in the "off" position. The motor will start automatically if the plug is connected to a socket with the switch in the "on" position. Pull the trigger switch to start the unit and release it to stop. When releasing the switch, always check that it returns to its former position. (see fig. 9)
- (b) Installing the magazine :- Push the magazine onto the magazine holder until it clicks firmly into position. The magazine is inserted onto the tool from the motor end in the direction of the feeding mechanism, so that if two-handed control of the tool is desired, the magazine may be used for extra leverage by pushing in the direction of insertion. To remove the magazine, press the clamp plate on the back of the magazine and remove it from the magazine holder. (see fig. 8)
- (c) Insertion and removal of the bit :- Always use a no. 2 type bit of 150mm (6") in length and HEX socket 145mm (5-11/16) in length. The bit type should be the same as the type of screws being driven. For example, if the screws have a phillips head recess, then a phillips bit should be used.
 - (i) Inserting the bit - Shift the feeder block about 30mm (1.18") in the 'B' direction as shown in figure 11. Pass the bit through the feeder block center hole, through the adjustor ring and align with the hexagonal sleeve hole. Push the sleeve about 4mm (0.16") in the 'C' direction and slide the bit fully into the hole. Release the sleeve to fix the bit in place. Check that the bit is fully secured.
 - (ii) Removing the bit - Push the sleeve about 4mm (0.16") in the 'C' direction and maintain this position while pushing the feeder block to its original position. Now, slide the bit from the feeder block.
- Note: Do not attempt to remove the bit by force using pliers or other tools. Also, to prevent any chance of injury during bit replacement, ensure the tool's switch is off and the plug is disconnected from the power source prior to bit replacement.
- (d) Bit rotational speed :- The speed at which the bit rotates may be set at 2700rpm or 4500rpm. A switch on the right hand side of the tool allows selection of the speed most appropriate for the work at hand. The settings '1' and '2' indicated on the transmission switch, correspond to the speeds 2700rpm and 4500rpm respectively (see fig.10). As a rough guideline, setting '1' (2700rpm) may be used for wood or steel applications, while '2' (4500rpm) may be used for drywall applications. When changing the tool's speed, firstly ensure the motor has fully come to a halt, then move the transmission switch until it clicks into the speed setting required. However, if the transmission switch cannot be pushed completely into position, press the trigger switch lightly and just before the motor comes to a complete stop, the transmission switch should be pushed into the required setting. The internal gears are now fully engaged and operation of the VL32-LH may recommence.
- (e) Loading of screw coils :- Use only Muro designated screw coils called VISROPE. Place the VISROPE into the magazine with the screw heads facing upwards. (see fig.3) Push the first screws on the VISROPE out of the screw outlet and close the magazine cover. Insert the VISROPE tip into the slot between the feeder block and guide cover (see fig.5). Because the VISROPE stops one screw short of the bit center, the feeding mechanism must be activated to bring the first screw in line with the bit. To do this, the feeder block must be pushed about 30mm (1.18") in the 'A' direction, as illustrated in figure 4.
- (f) Visrope guide :- This guide restricts the movement of the VISROPE, ensuring that the screw and bit are always aligned. Collated screws, as shown in figure 2, have plastic gauges of 17mm (0.67") from the base of the flange to the base of the VISROPE.

- (g) To drive screws of different lengths :- No matter what length of screw is being driven, the head of the screw will always be in the same position on the feeder block. However, the distance between the tip of the screw and the size piece will change with respect to the screw length. This distance should be approximately kept at 0-2mm by adjusting the size piece. For screws of 25mm (1") in length, the size piece should be in its fully retracted position. The size piece is adjusted by loosening screw 'B' on the underside of the feeder block and moving the size piece in and out as shown in figure 6.
- (h) Check the tool for damage :- Prolonged use causes wear and tear. The tool should be checked for damaged or missing parts, replacing any defective part with a designated identical part. All moving parts should be checked to ensure they function properly.
- (i) Ensure the work environment is safe :- Always keep the workplace and workbench neat and tidy, and make sure the work area is well lit.

Operation of the VL32-LH:

- (a) Adjusting the driving depth :- The size piece and depth adjusting ring are used to adjust the depth to which screws may be driven. The adjustor ring may be rotated to shorten or lengthen the guide pole stroke (see fig.7). Rotating the adjustor ring to the right results in a shallow drive, while rotating to the left gives a deeper drive. The distance the bit extends past the size piece, minus the screw recess depth (approx. 3mm[0.12"]), is the depth to which screws will be driven. For example, if the head of the screw is required to be flush with the work surface, the bit should extend about 3mm(0.1) beyond the size piece when the feeder block is fully depressed.
- (b) Switch operation :- The trigger switch is equipped with a locking mechanism which allows continuous motor operation. To avail of this feature, press the switch-lock button with the trigger in the "on" position. Press the trigger switch again to release the switch-lock. (see fig.9)
- (c) Driving screws :- Firstly, adopt a stable posture which automatically reduces the likelihood of accidents. A groove just above the grip handle allows the tool to be gripped comfortably with the thumb and forefinger. Pressing the trigger switch starts the motor but does not cause the bit to rotate. Ensure the tool's size piece is placed firmly onto the work surface. Failure to securely press the size piece against the work surface may result in the screw head being exposed when the driving operation is complete, thus reducing the screw's holding strength. Push the bit into the screw recess and the bit will then begin to drive the screw. The screws should be driven with a single action and once the screw is driven, allow the feeder block to return to its original position and the next screw will automatically feed forward. Slippage of the bit in the screw's recess will cause the bit to wear, reducing the tool's driving ability. Also, stopping or slackening off the pressure while driving screws will cause screw feeding problems.
If the feeding mechanism should jam, remove the VISROPE from the feeding block and begin again. To remove the VISROPE, shift the guide cover to the left and tilt it upwards (see fig.13). Push the feeder block in the 'A' direction and pull the VISROPE to the left to remove the screws. The visrope guide may also be removed depending on the nature of the problem.
For optimum efficiency in small spaces or angled work applications, remove the magazine and cut the VISROPE to a suitable length before reinserting into the feeder block.

After using the VL32-LH:

- (a) Do not leave waste VISROPE plastic lying around after you finish. The plastic may become entangled with people's feet causing injury.
- (b) Keep the tool in a safe place after use or when not needed for long periods. It should be stored in a dry, well-ventilated location at a maximum temperature of 50 C.

- (c) The tool should be maintained in good condition. For optimum performance, clean and adjust the unit regularly. Gypsum powder or other materials will affect the tool's performance and consequently its efficiency. Remove such materials from the feeder block before and after use. The grip handle should be kept dry, clean and free from oil and grease at all times. Do not wipe plastic parts with solvents, such as, gasoline, thinner, benzine, carbon tetrachloride, alcohol, ammonia, and oil-containing chloric annex, because they may damage and crack plastic parts. Wipe plastic parts with a soft cloth, lightly dampened with soapy water.
- (d) Dust in the motor should be discharged after every 50 hours of use. A method of discharging the dust is to run the motor in a no-load situation and blow compressed air into the housing through the rear air vents causing the dust and air to exhaust together through the front air vents.

CAUTION

To ensure trouble-free operation of your VL32-LH tool, please note the following:

- (a) Inspect the bit and replace with a new one whenever excessive wear or damage is noticed.
- (b) To ensure that the grip finger, guide cover and guide poles (see fig.1) slide smoothly, regularly apply 2 - 3 drops of a high grade lubricating oil.
- (c) The gap between the guide cover and the feeder block should be sufficient to allow free movement of the VISROPE. If this gap size is incorrect, it may result in feeding problems. If feeding problems occur, First adjust the height setting of the guide cover. Using the 3mm allen key, turn the cap screw to narrow or widen the height. If problems persist, adjust the set screw using the M4 nut wrench and 2mm allen key. As a guide for adjusting this gap, if 4.0mm diameter screws are being used, the gap should be 5.5~6.5mm. If 5.0mm diameter screws are being used, the gap should be 6.5~7.5mm. When the distance is set tighten the lock nut while holding the set screw in position with the allen key. (see fig.12)
- (d) As vibration through use can cause screws to loosen, periodically tighten screws on the feeder block.
- (e) The motor uses carbon brushes. These should be inspected regularly and replaced as necessary. Both carbon brushes should be replaced together. (see fig.14)

Double Insulation:



The VL32-LH is marked with '□' which indicates that it has a double insulation system. This system is made up of basic insulation and supplementary insulation. Basic insulation is applied to live parts to provide protection against electrical shock. Supplementary insulation is an independent insulation provided in addition to the basic insulation to protect against electric shock in case of mechanical rupture or electrical breakdown of the basic insulation. Double insulation provides extra protection for you, the operator, because the basic and supplementary types of insulation are physically separated and arranged, so that they are not subject to the same deteriorating influences (e.g. temperature and contaminants).

The following guidelines should be observed and followed for long term use and benefits of the VL32-LH double insulation structure :-

- (a) Replacing VL32-LH parts with non-authorized replacement parts may result in losing the safety function of the double insulated system.
- (b) The tool's housing is designed to be shock proof, but rough handling and dropping of the tool should be avoided.
- (c) Solvents should not be used to clean the tool.
- (d) Dirt may attach to the motor during use, which deteriorates the insulating performance of the tool. The motor should therefore be cleaned periodically using compressed air, or by an authorised Muro agent.

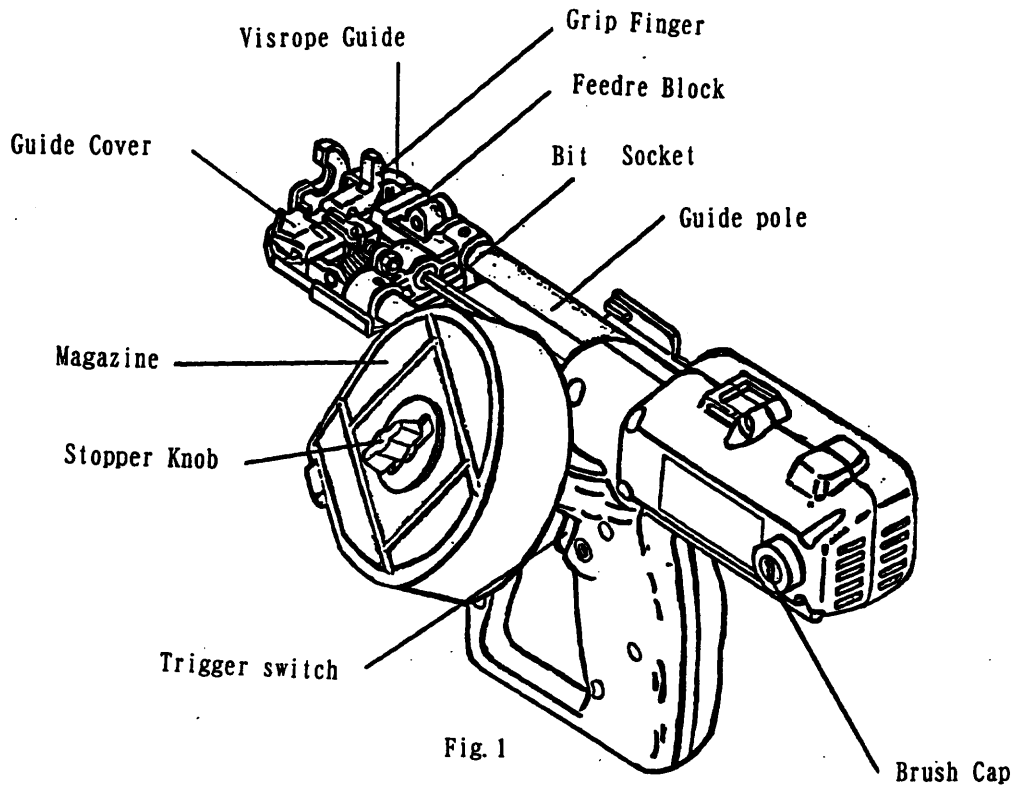


Fig. 1

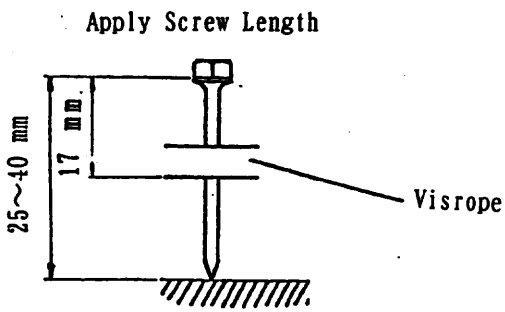


Fig. 2

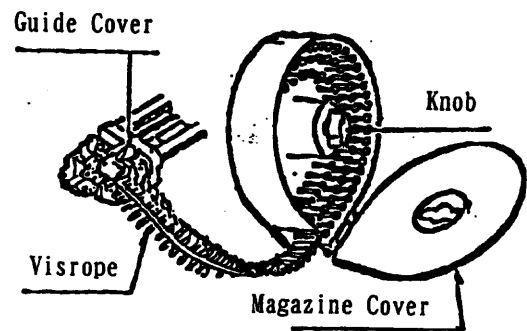


Fig. 3

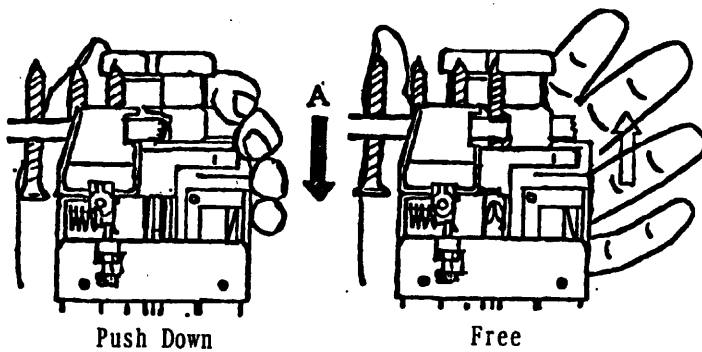


Fig. 4

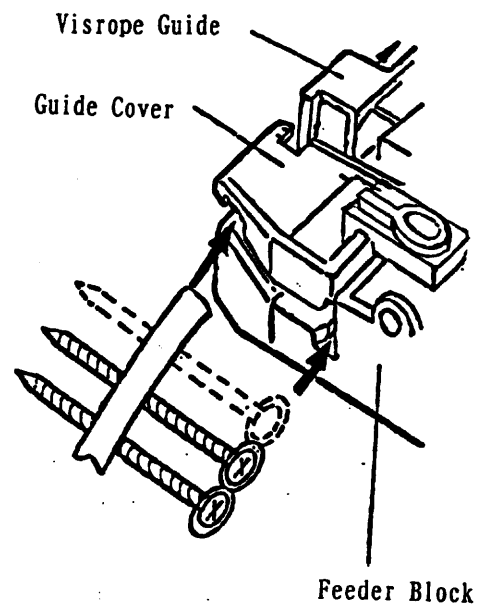


Fig. 5

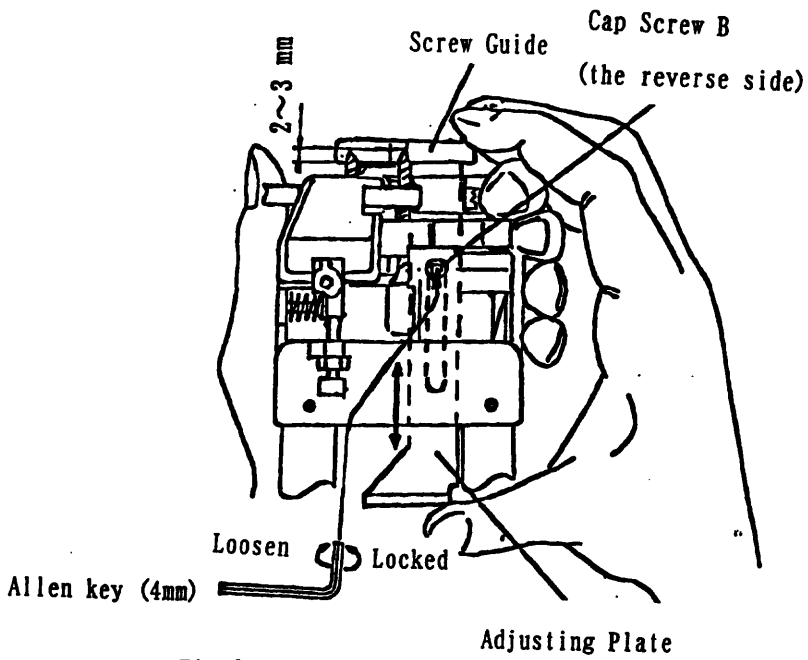


Fig. 6

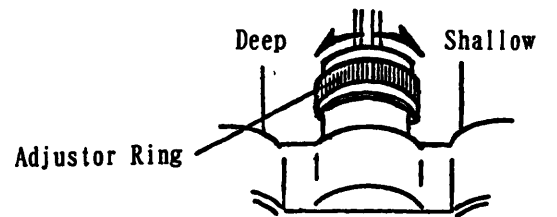


Fig. 7

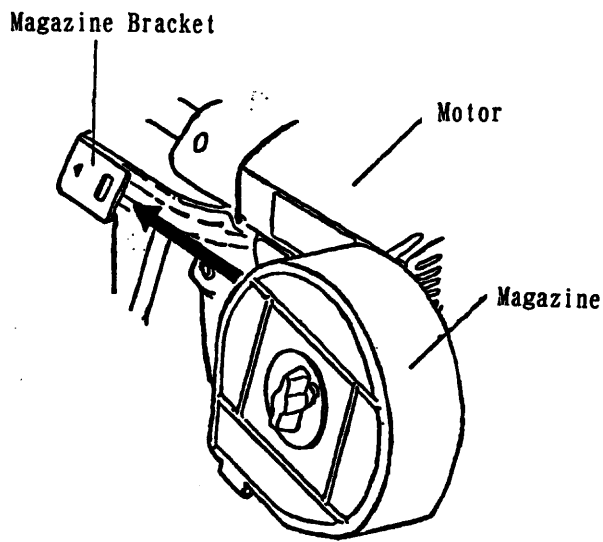


Fig. 8

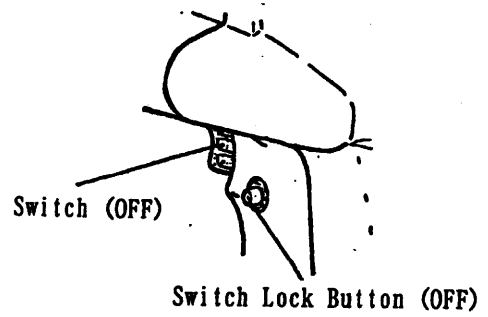
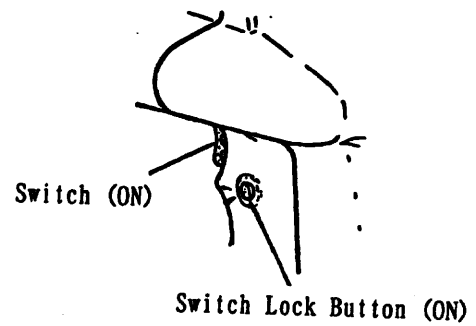


Fig. 9

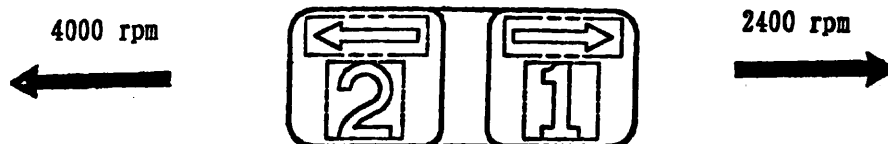


Fig. 10 Bit RPM selection switch

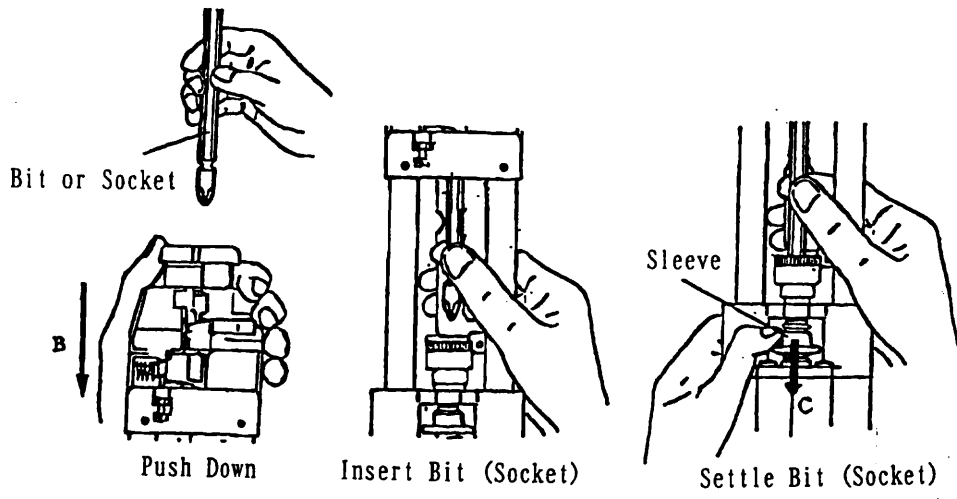


Fig. 11

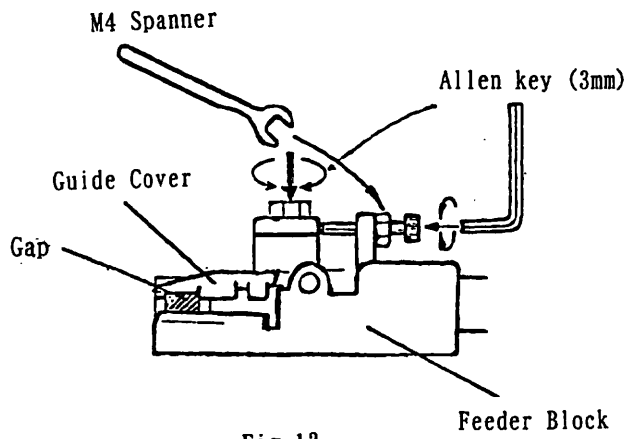


Fig. 12

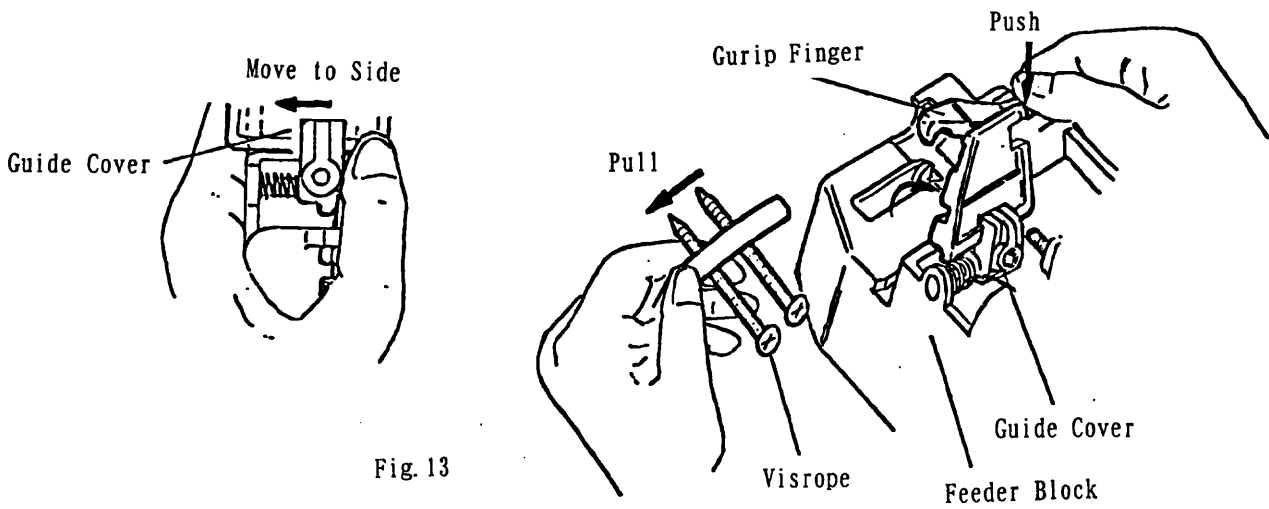


Fig. 13

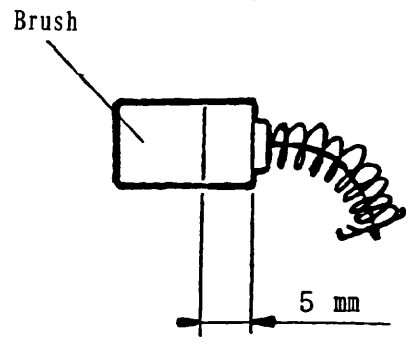
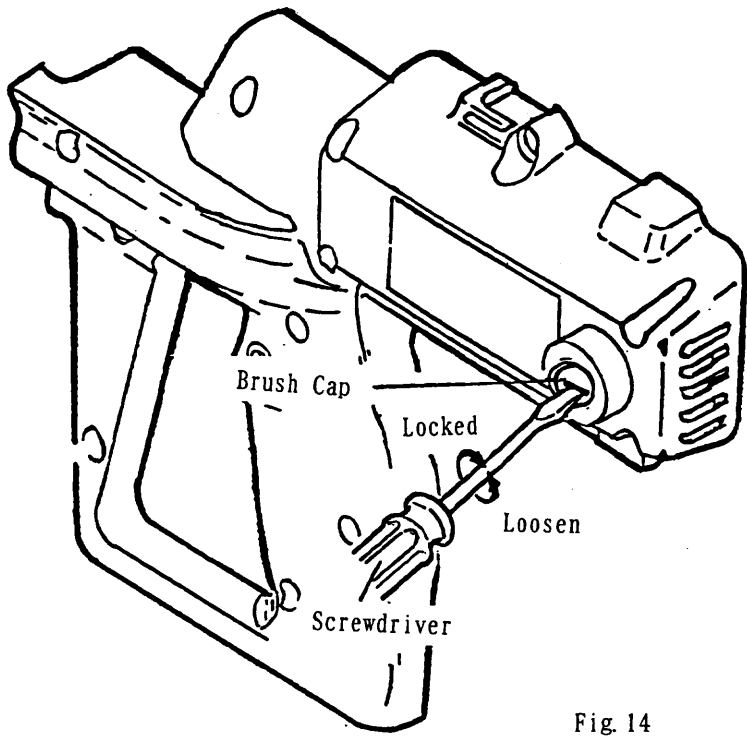


Fig. 14



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