



SAFETY AND OPERATING MANUAL

CONDUIT PIPE THREADING MACHINE MODEL NO. CM82

Please record your machine Serial No. which are located on nameplate

Serial No.

WARNING: For your own safety and effective operation, read this Safety and Operating Manual carefully and completely before assembling and operating this unit. Failure to understand and follow the contents of this manual may result in electrical shock, fire and/or serious personal injury.



Keep this manual for future reference.

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SAFETY INFORMATION

1. Safety Symbols

The purpose of safety symbols is to attract your attention to possible dangers. The safety symbols, and the explanations with them, deserve your careful attention and understanding. The safety warnings do not by themselves eliminate any danger. The instructions or warnings they give are not substitutes for proper accident prevention measures.

SYMBOL MEANING

	WARNING: Failure to obey a safety warning can result in serious injury to yourself or to others. Always follow the safety precaution to reduce the risk of fire, electric shock, and personal injury.
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	CAUTION: Failure to obey a safety warning may result in property damage or personal injury. Always follow the safety precaution to reduce the risk of fire, electric shock, and personal injury.
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NOTE:	Advises you of information instructions vital to the operation or maintenance of the equipment.
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2. General Safety

- 1) Read all these instructions in this manual completely and carefully for your protection against serious injuries.
- 2) Save this manual. Refer to them frequently and use them to instruct other users.

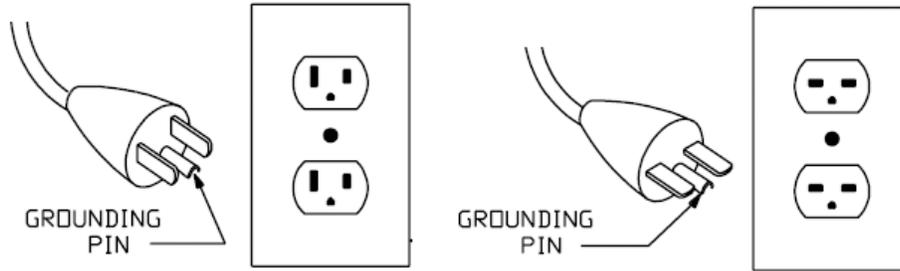
3. Personal Safety

- 1) Stay alert, watch what you are doing and use common sense when operating a power tool. Never operate machine when tired or under the influence of drugs or alcohol. A moment of inattention while operating machine may result in serious personal injury.
- 2) Do not wear gloves, loose clothing or jewelry that can get caught in machine's moving parts and cause serious injury. Cover up or tie up long hair. Keep sleeves and jackets buttoned for reduction of risk any accident.
- 3) Always wear safety glasses.
- 4) Protect your hearing by earmuffs or earplugs. If you use machine daily or in a noisy area.
- 5) Protect your lungs by using dust mask when work area is dusty.
- 6) Keep your hands and face away from dies, cutter blade, auto-chuck or other moving parts.
- 7) Avoid accidental starting. Make sure switch is OFF position before plugging in. Plugging in tools in that have the switch ON invites accidents.
- 8) Keep hands away from rotating die head or any parts. Stop the machine before wiping pipe or screw. Allow the machine to come to a complete stop before touching the pipe, machine chucks, or any rotating parts. This practice will prevent serious injury.
- 9) Do not over-reach. Keep proper footing and balance at all times. Proper footing and balance enables better control of the tool in unexpected situations.
- 10) Unplug power cord when not in use, before making any adjustments, changing accessories, or storing the tools. Such prevention safety measures reduce risk of starting tool accidentally.

4. Electrical Safety

- 1) In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and

ordinances. Never modify the plug provided – if it will not fit the outlet, have the proper outlet installed by a qualified electrician.



- 2) Avoid body contact with grounded surfaces. If your body is grounded, There is an increased risk of electrical shock
- 3) Never expose electrical tools to rain or wet condition. Water entering a tool will increase the risk of electrical accident.
- 4) Do not abuse cord. Never carry machine by the cord or yank the cord to disconnect it from outlet. Keep cord from heat, oil, sharp edges or moving parts. Replace damaged cords immediately. Damaged cords will cause the risk of electrical shock.
- 5) When used outdoors, use only extension cord intended for use outdoors and so marked.
- 6) Use only three-wire extension cords which have three-prong grounding plugs and three-pole receptacles which accept the tool's plug.
- 7) Use extension cord in good condition. Make sure to use one heavy enough to carry the current the machine will draw. An undersized cord will cause a drop on line voltage resulting in loss of power and overheating. The extension cord chart shows the correct sizes to use depending on cord length and ampere rating.

Minimum gage for cord

Ampere Rating	Total length of cord in meter			
	0 - 8	9 – 17	18 – 33	34 – 50
0 – 6	18 AWG	16 AWG	16 AWG	14 AWG
6 – 10	18 AWG	16 AWG	14 AWG	12 AWG
10 - 12	16 AWG	16 AWG	14 AWG	12 AWG
12 – 16	14 AWG	12 AWG	Not Recommended	
MCC Machine	18 AWG	16 AWG	14 AWG	12 AWG

- 8) Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded.
- 9) Keep all electric connections dry and off the ground. Do not touch plugs or tool with wet hands. Reduce the risk of electrical shock.

5. Work Area Safety

- 1) Keep the work area clean. Cluttered work area invite accident.
- 2) Do not use machine in dangerous environment. Do not use machine near gasoline or other flammables or gases, or in damp locations. Do not expose machine to rain or direct sunlight. Keep work area well lighted.
- 3) Keep floors dry and free of slippery materials such as oil. Slippery floors invite accidents.
- 4) Keep children away from work area. All visitors should be kept at a safe distance from the work area. Guard or barricade for the work area when work piece extends beyond machine will reduce the risk of accident.
- 5) When not in use, machine should be stored in a dry and locked-up place out of the reach of children.
- 6) Never leave the machine running unattended. Turn off the power and stay there until machine comes to a complete stop.

6. Machine Safety

- 1) Threading machine is made to thread and cut pipe or bolt. Follow instruction on proper use of this machine. Do not use for other purpose such as drilling holes or turning winches. Other uses or modification this power drive for other applications may increase the risk of serious accident.
- 2) Secure machine to bench or stand. Support long heavy pipe with supports. This practice will

prevent tipping.

- 3) Remove hex keys and adjusting wrenches from machine before operation.
- 4) Do not force machine. It will do the job better and safer at the rate for which it is designed.
- 5) Maintain the machine with care. Periodically check lubrication and consumables. Replace cutting oil or dies when necessary. Inspect extension cord periodically and replace if damaged.
- 6) Use only manufacturer's recommended accessories. Consult this manual for recommended accessories. Using improper accessories may increase the risk of injury.
- 7) Do not use machine if switches are broken or switch does not turn it ON or OFF. Any tool that can not be controlled with the switch is dangerous and must be repaired.
- 8) Check for broken or damaged parts and alignment of moving parts before using machine. Repair or replace damaged parts by an authorized dealer to insure proper operation of the machine. Use only genuine MCC replacement parts. Poorly maintained machine cause risk of accident.
- 9) Keep handles dry and clean and free from oil and grease for better control of the machine.

7. Electrical Connection

Your MCC Machine is powered by a precision built electric motor.

It should be connected only to a power source that satisfies the power input listed on the machine's name plates.

If the name plate is marked AC or 60 or 50Hz, the machine must be operated only with alternating current (normal household current).

Never operate the machine with a direct current (DC), such as a generator. A substantial voltage drop will cause a loss of power and overheating.

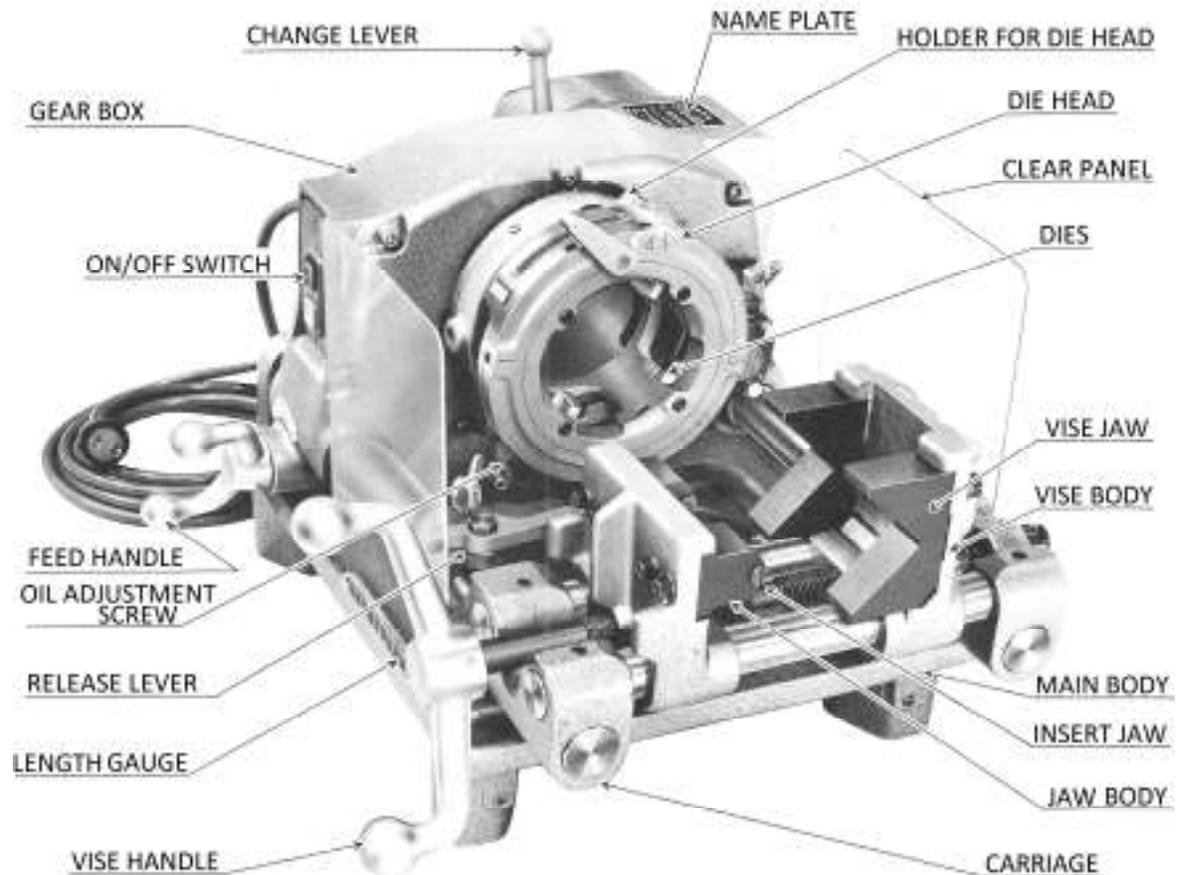
If the machine does not operate when plugged into an outlet, make sure the power supply rating.

WARNING: Keep the cord away from the work area and position the cord so that will not be caught on the work pieces, tools, or other objects during threading.



Parts Name for MCC Conduit Pipe Threading Machine

Model No. CM82



- * Die head rotating in forward direction only.
- * One touch changeable die head and easy setting dies.
- * High speed, high efficiency.
- * Automatic oiling directly to the dies and pipe through the die head during the threading operation.
- * Die head opens automatically when desired length of thread is cut.
- * This machine is designed specially to thread conduit pipes.

Description, Specifications and Standard Equipment

Description

The MCC Model CM82 Conduit Pipe Threading Machine is an electric motor-driven machine that centers and chucks the steel pipe and rotates Die Head while threading operations are performed. Threading dies are mounted in Die Head. An integral oiling system is provided to flood the work with cutting oil during the threading operations.

Specification

Model No.	CM82
Die Head	Automatic Opening Type (Self-open)
Threading Capacity	PF1/2 - PF3 C15 - C75
Motor	Single Phase 750W, 50/60Hz (Series, adaptable to local voltage)
Rotation Speed	120 RPM (No-Load)
Controls	ON/OFF Switch
Dimension	460mm(L) x 350mm(W) x 280mm(H)
Weight	40 Kg

Standard Accessories

Die Head for PF $\frac{1}{2}$ - PF1 $\frac{1}{2}$, C15 - C51	1 set
Die Head for PF2 - PF3, C63 - C75	1 set
Dies (PF $\frac{1}{2}$ - PF $\frac{3}{4}$, PF1 - PF1 $\frac{1}{2}$, PF2 - PF3, C19 - C31, C39 - C51, C63 - C75)	1 set
Cutting Oil 4 liter can	1 pc
Chip Scraper	1 pc
Spanner for Die Head	1 pc
Release Bar for Die Head	1 pc
Hex Keys 3, 4, 5, 6 mm	1 pc each
Carbon Brush	1 set
Machine Cover	1 pc
Tool Box	1 pc
Legs	1 set

Optional Equipments/Accessories

Dies C15
 HSS(SKH) Die for all sizes
 Pipe Thread Dies 1/4 - 3/8", 1/2 - 3/4", 1 11/4"
 Bolt Thread Dies M8, M10, M12, M14, M16, M18, M20, M22, M24
 Bolt Thread Dies W5/16", W3/8", W1/2", W5/8", W3/4", W7/8", W1"
 Reamer
 Pipe Stand

Preparing for Operation

1. Machine Inspection

To prevent serious injury, inspect your threading machine on a daily basis in accordance with following procedure.

- 1) Make sure your threading machine is unplugged and the ON/OFF switch is set to OFF position.
- 2) Inspect Vise Jaw for excessive wear. If it is worn down, it needs replacement.
- 3) Inspect Handle for any degradation. The sever damage causes risk of injury.
- 4) Inspect the power code and plug for damage. If the plug has been modified, is missing the grounding pin, or if the cord is damaged, do not use the threading machine until the cord has been replaced.
- 5) Inspect the threading machine for any broken, missing, misaligned parts as well as any other conditions which may affect the safe and normal operation of the machine.

WARNING: Do not use the threading machine until any problem has been repaired. The machine with any broken, missing, misaligned parts can cause serious injury.



- 6) Lubricate the threading machine if necessary according to the Maintenance Instructions.
- 7) Use tools and accessories that are designed for your threading machine. The correct tools and accessories allow you to do the job successfully and safely.

WARNING: Do not use any accessories designed for use with other equipment. It can cause serious injury. The machine allows using only the attachment or accessory designed for this machine.



- 8) Clean any oil, grease or dirt from all handles and controls. This reduces the risk of injury due to a tool or control slipping from your grip.
- 9) Inspect the cutting edges of your tools and dies. If necessary, replace them prior to using the threading machine.
- 10) Clean metal shavings and other debris from Chip Tray of the threading machine. Check the level and quality of the cutting oil. Replace or add oil if necessary. The suitable quantity is 80% of the tank inside. Cutting oil lubricates and cools the threads during the threading operation. A dirty or poor grade cutting oil can result in poor thread quality and reduce die life.
- 11) To drain dirty oil and replace the oil, refer to the Maintenance Instructions.

2. Machine and Work Area Set-Up

To prevent serious injury, proper set-up of the machine and work area is required. The following procedures should be completed.

- 1) Locate a work area properly by considering adequate lighting, eliminating flammable liquids, vapors or dust
- 2) Make sure the grounded electrical outlet.
- 3) Clear path to the electrical outlet that does not contain any sources of heat or oil, sharp edges or moving parts that may damage electrical cord.
- 4) Dry place for machine and operator. Do not use the machine while standing in water.
- 5) Make sure that the ground is even and has clean surface for stable mounting of machine.
- 6) Clean up the work area prior to setting up any equipment. Always wipe up any oil that may have splashed or dripped from the machine to prevent slips and falls.
- 7) If the workpiece extends more than 1m beyond the threading machine, use one or more pipe stands to prevent tipping and the oscillation of the pipe.
- 8) If the workpiece extends beyond the threading machine, set-up guards or barricades to avoid any accident.
- 9) Make sure ON/OFF switch is in the OFF position.
- 10) Stand facing the machine.
- 11) Have convenient access to the ON/OFF switch, tools and chucks without reaching across the machine. Machine is designed for one person operation.

- 12) Plug the threading machine into the electrical outlet making sure to position the power cord along the clear path selected earlier. If the power cord does not reach the outlet, use an extension cord in good condition.
- 13) To avoid electrical shock and electrical fires, never use an extension cord and understand the "Electrical safety" in "Safety Information" well

WARNING: Keep all electrical connections dry and off the ground. Do not touch plug with wet hands. Otherwise, you can not avoid the risk of electrical shock.



- 14) Check the threading machine to insure it is operating properly.
- 15) Turn the switch on and check that the threading machine rotates in a designated direction.
- 16) Inspect the moving parts for misalignment, binding, odd noises or any other unusual conditions that may affect the safe and normal operation of the machine. If such conditions are present, have the machine serviced.
- 17) Turn the switch off.

3. Cutting Oil Lubrication

WARNING: FIRST AID TREATMENT



If oil gets in eyes, wash them with pure water and see a doctor.
If oil sticks to skin, wash well with water and soap.
If swallowed, do not induce vomiting and see a doctor.
If inhaled mist, move to the clean place, cover with blanket, keep warm and quiet and see a doctor.

Use genuine MCC Cutting Oil.

MCC cutting oil Improves the finished screw surfaces and extends Die's service life.

MCC Cutting Oil is suitable for water works pipe for easy washing.

- 1) Remove Chip Tray from oil tank.

[NOTE]

Remove foreign substance from oil tank.

Change the whole oil if rain turns the oil cloudy or dirty.

- 2) Fill the tank 80% full with the cutting oil.
- 3) Reinstall Chip Tray.

STORAGE

Store machine in a place inaccessible to children and out of the way of people. This is chemical product. Never leave machine in an area exposed to direct sunlight. Always store it in a cool, dark location. Make sure that Punching Plate is tightly in place and the machine is covered when not in use to avoid contamination (e.g. dust and moisture).

Machine Operation

WARNING:



- * Always read and follow "Safety Information" and "Preparing for Operation"
- * SHARP! Do not touch cutting edges.
- * Moving Parts! Keep hands and face away from moving blades and parts. Moving parts could pull in objects such as clothing, hair, jewelry and fingers.
- * If there is a problem or malfunction, IMMEDIATELY stop the machine and disconnect the power cord.
- * Always remove the chip and keep machine clean before and after operation.
- * After operation, switch off and disconnect Power Cord.

Failure to follow these instructions could result in serious personal injury.

NOTE:

- * For longer lifetime of motor, please avoid continued threading operation more than 30 minutes.
- * Use low or high speed as listed in Name Plate based on pipe and size. Higher speed than listed may cause a damage on motor.

1. Electrical Requirement

- 1) Make sure to adequately ground the machine prior to operation.
- 2) If an extension power cord is required, make sure to use the appropriate cable listed in the chart in the page No. 4 in this manual to prevent drop of voltage which damage motor.

2. To Replace Dies

NOTE: First, be sure to unplug the power cable.

- 1) Loosen Hex Nut which is located behind Die Head.



- 2) Insert Release Bar (small end) into the hole on Die Head. Turn Die Head to the direction indicated in the photo all the way. Then, slightly tighten Hex Nut to hold the position.



- 3) Turn Cam Handle towards back until the slots for Dies are lined up straight.



4) Remove all Dies. Now, ready for installing new Dies.

5) When installing new Dies, make sure that the number on Dies (1 – 4) matches the same number on Die Head. Then, insert Dies all the way.



6) Turn Cam Handle towards front all the way.



7) Loosen Hex Nut which is located behind Die Head.



8) Insert the Release Bar (Small end) into the hole on Die Head. Then, turn it until the size indication and line meets at the size that you cut the thread.



8) Tighten Hex Nut again.



3. To Replace Die Head

NOTE First, be sure to unplug the power cable.

1) Insert Release Bar (Large end) into the hole on Die Head and turn Die Head to front.



2) Die Head can be removed.



3) Before attaching Die Head, clean up the surface of Die Head where contacts the machine.

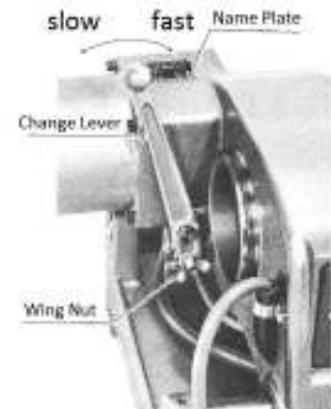


4) Insert Release Bar(Large end) into the hall on Die Head and turn Die Head to back.



4. High Speed and Low Speed

1) MCC CM82 is equipped with two-speed transmission. The low speed operation could be chosen by turning Change Lever to left from view of operator's side, and the high-speed operation by turning Change Lever to right. Turning Change Lever should be done just before the motor is stopped or right after the switch is on. Do not operate Change Lever when the motor runs at full speed, or when the motor runs with threading load. Tighten Wing Nut of Change Lever to secure the position of Change Lever in place and avoid any mis-operation of Change Lever by accident.



2) Always operate this machine at the suggested cutting speed for pipe size as listed in Name Plate on gear box.

3) When thread needs to be cut more than 100mm in length on PF1-PF3 heavy conduit pipe or C63- C75 light conduit pipe, operate this machine always at low-speed. Moreover, when the heavy conduit pipe to be cut more than 100mm threads repeatedly is PF1.1/2-PF3, turn the machine off occasionally for the purpose of preventing the motor from damage or burnt.

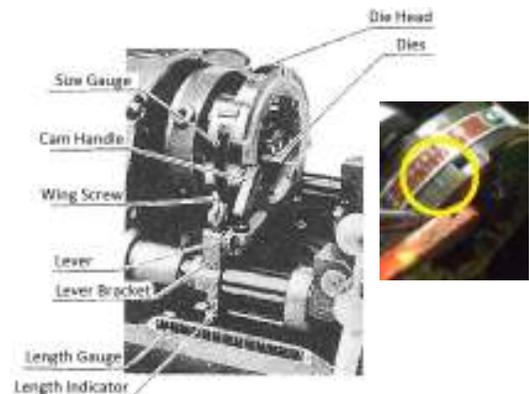
5. To Cut Thread

1) Make sure that Cam Handle is in close position. (; when Cam Handle is located at top, it should be swung towards you to close Cam Handle.)

2) Make sure that the size of die head is properly set for the size of pipe to be cut a thread. Size Gauge must be lined up with the engraved line on Cam Plate.

3) Set Length Indicator on Lever Bracket on Support Bar to the desired length on Length Gauge of Main Body. Tighten up Wing Screw of Lever Bracket to secure.

4) Bring Die Head by turning Feed Handle to the left end of



Support Bars, and at that position, chuck a pipe in Vise by touching the front side of Dies with the pipe end.

5) Turn switch on. Cutting oil is supplied from die head when it's on.

6) Send Die Head by turning Feed Handle to push against a pipe to be cut. When a few threads are cut on the pipe, relax your hands on Feed Handle.

7) When the desired length of thread is cut, Dies release the pipe automatically.

8) Turn switch off.

9) Return Die Head by turning Feed Handle to the left end, and release the pipe from Vise.

10) When thread needs more than 110mm in length, bring the Length Indicator to the right end, and follow the above instructions 4 to 6 in this section. When thread is cut about 100mm length and before the pipe is released from Dies, turn a switch off. Release the pipe from vise, and bring Die Head with the pipe to the left end by turning Feed Handle. Chuck the pipe in Vise again, then, turn a switch on to cut the further length of thread.

NOTE:

* Thread pitch becomes slightly larger when thread is more than 40mm in length. This is nature of thread-cutting with this type of machine.

6. Cutting Oil

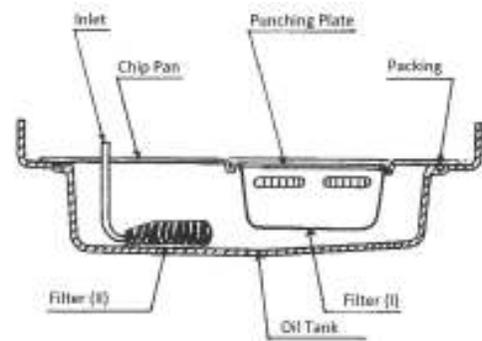
1) MCC cutting oil is formulated to extend service life of Dies and provide a finer finish of thread. Always make sure that cutting oil supply is adequate. Insufficient oil supply to thread-cutting will shorten Dies life, cause rough finishing of thread, and may cause a damage on Oil Pump.

2) Chips and other dirt dropped down from the Chip Receiver gather at Filter (I). Clean this filter occasionally to assure efficient oil circulation.

3) Occasionally take out Chip Receiver and drain cutting oil from oil tank. Then, remove all chips and other sludges from the bottom of Oil Tank and clean Filter (II) at the lubrication pump inlet.

4) Do not use or leave the machine outdoor. If the machine is left outdoor by accident and exposed to rain, water may enter and exist in Oil tank. Be sure to drain all water prior to operation.

5) To increase the flow of cutting oil, tighten Oil Adjustment Screw(; Cap Screw) located underneath Die Head.



7. Maintenance and Inspection

1) Daily care of this machine is vital to the efficient threading work and to the machine service life. Remove all cutting chips from the machine, and clean Feed Screw and Insert Jaws on Vise often.

2) Since Spindle Oilless Metal is made of special oil contained metal, daily lubrication is no required. To insure long service life, lubricate it every three to six months depending on use.

3) The support bar must be well lubricated to insure smooth operation. Supply machine oil on support bars and slide them several times.

4) Replace Carbon Brushes with new ones after 250-300 hours use, when about 2/3 of the carbon is worn out, it raise a risk to damage Commutator of Motor.

5) Do not leave the machine outdoors. Rain might get into the motor and cause a damage.



8. Chamfering

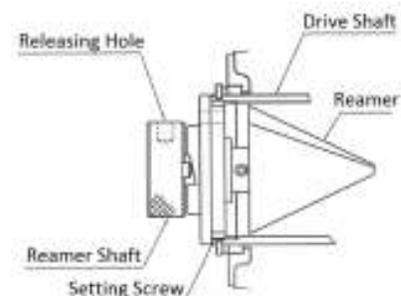
1) Install Reamer(; optional accessory) in Drive Shaft from the motor side by screwing it to left (see Fig).

2) After threading is done, slide Die Head back to a few centimeter left.

3) Loosen Vise and send the pipe into Drive Shaft until the pipe contact Reamer. Then chuck the pipe in Vise again.

4) Turn the switch on and push Reamer against the pipe for chamfering.

5) To take Reamer off from Drive Shaft, insert Release Bar into a hole on Reamer Shaft, then, rotate it to right.



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