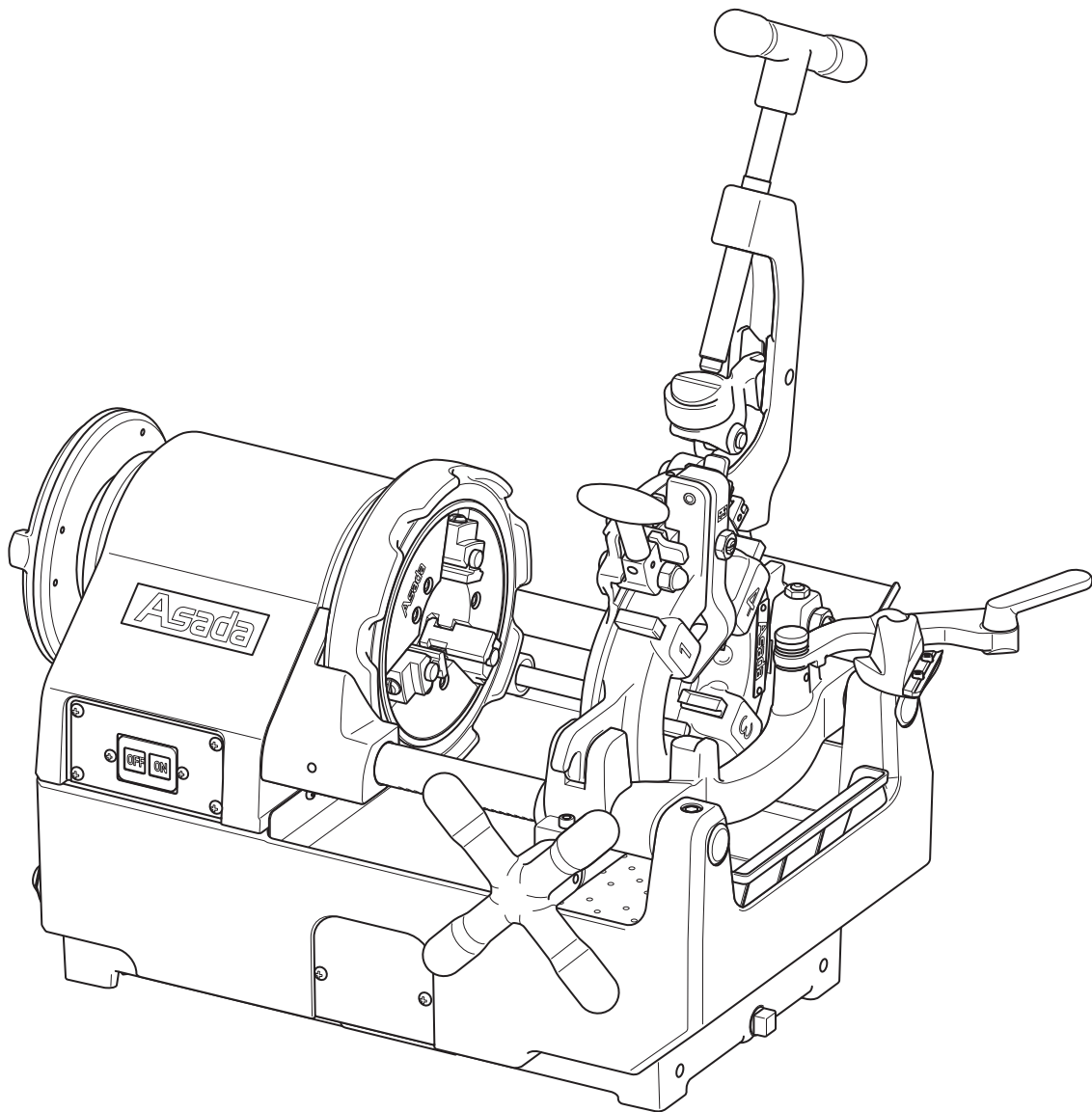


Asada

Threading Machine

BEAVER 50G

INSTRUCTION MANUAL



[Read through this manual carefully before use]

BEAVER 50G

SAFETY PRECAUTIONS

Thank you for choosing our BEAVER 50G.

- This Instruction Manual must be retained by the user of this machine.
- Read this Instruction Manual carefully and completely before use and thoroughly understand the usage, capacity, cautions, and easy repairs for correct operation.
- Handle the machine properly to make full use of its functions for safe work.
- After reading the instructions, save this manual so that you can read it when necessary.
- Use the machine for the intended application only. It will do a better job and be safer at the rate for which it was designed.
- Upon receiving the machine, check the following.
 - Check that the machine is built conforming to the specifications stated in your order.
 - Check the overall machine for any damage or deformation caused in transit due to accidents or other reasons.
 - Check that all items and accessories delivered.

In case any discrepancy is found, immediately report the fact to the shop you purchased or our sale office. (The contents of this manual are subject to change without prior notice.)

CLASSIFICATION OF CAUTIONS

Precautionary signs are classified into the following 3 levels.



DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

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CAUTIONS IN USE

- To prevent accidents such as fire, electric shock, and injury, be sure to observe the following "CAUTIONS IN USE".
- Before using the product, please read all of these "CAUTIONS IN USE" carefully and follow the instructions to use the product correctly.
- After reading, keep it in a safe place so that you can take it out and read it immediately when you need it.

DANGER

- ◆ **Always ground the machine.**
Otherwise, you may get an electric shock and resultant death.
- ◆ **Do not plug in Power Cord with wet hands.**
- ◆ **Do not expose the machine to rain and water and use it in humidity and wet places.** Humidity may deteriorate the motor insulation and it leads to electric shock.
- ◆ **If Power Plug, Power Cord or an extension cord is damaged, replace it immediately.**
- ◆ **Do not pull out Power Cord from the receptacle holding itself or place the machine on Power Cord not to damage Power Cord.**
- ◆ **For an extension cord, use a three-core cable equipped with a ground wire. Use a thick and durable cord for outdoor.**
- ◆ **The workpiece, Hammer Chuck and Scroll rotate during operation.**
Be careful not to be caught yourself in them.
- ◆ **Do not ground the machine with a gas pipe as it may cause an explosion.**

WARNING

- ◆ **Use the machine at the voltage indicated on Machine Plate.**
Otherwise, the machine may become hot, emit smoke or catch fire.
- ◆ **Do not operate the machine forcibly with worn out Dies. It leads to overload and Motor may stop.**
- ◆ **Keep Threading Oil away from fire.**
- ◆ **If the machine generates heat or smokes, do not disassemble it unnecessarily and request inspection or repair.**

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WARNING

- ◆ **Do not use the machine in the presence of flammable liquids or gases such as gasoline and thinner.**
Ignition or explosion may take place.
- ◆ **Wear gloves when replacing Dies, Reamer, Pipe Cutter.**
You may cut your hands.
- ◆ **The cut surfaces are sharp. Do not touch them with bare hands.**
- ◆ **When it is required to touch blade and moving parts for replacement, etc., turn off the machine and unplug it before starting the operation.**
- ◆ **Before plug in Power Cord, make sure that the machine is turned off.**
If the machine remains turned on, it will start suddenly and lead to an unexpected accident or injury.
- ◆ **Keep your hands and face away from the rotating parts during operation.**
You may get caught in rotating parts and get injured.
- ◆ **Do not use gloves when cutting, reaming, threading, etc.**
You may get caught and injured.
- ◆ **Do not wear ties, necklaces, open-sleeved, loose clothes or Knitted gloves.**
You may get caught and injured.
- ◆ **Cover long hair with a hat or hair cover.**
You may get caught in the rotating part and injured.
- ◆ **When not in use and during power outage, inspection or maintenance, turn off the machine and unplug Power Cord.**
- ◆ **Do not leave the machine while it is turned on.**
Others may get caught in the machine and injured.
- ◆ **Use Pipe Support for long and heavy workpieces.**
Otherwise, the pipe is distorted and swings during rotation and the weight of the pipe lifts up the machine.
- ◆ **Wear safety glasses during operation.**
Threading Oil and/or chips may get in your eyes and cause injury.
- ◆ **Do not blow off chips with compressed air.**
They may get in your eyes and cause blindness.
- ◆ **Use a dust mask for operations which generate dust.**
Dust may get into your mouth or nose.

 **WARNING**

- ◆ Dies, chips and threads surfaces are hot immediately after threading. Do not touch them with bare hands.
- ◆ Fix Carriage not to move itself during transportation, and hold the machine at the bottom of it to lift it up. Do not hold Scroll or Reamer.
- ◆ When lifting up the machine, bend your knees to avoid a load on your waist.
- ◆ Do not drop the machine or pipes stained with Threading Oil onto your feet when lifting up them as they are slippery.
- ◆ Do not install the machine on an inclined or unstable place.
The machine may fall down and cause injury.
- ◆ Do not place the machine so that the Die-Head side is higher than the Scroll side.
Threading Oil runs down through the inside of the pipe and it stains the floor.
- ◆ Keep proper footing and balance at all times. Otherwise you may tumble and get injured.
- ◆ Do not operate the machine when you cannot concentrate on your work, e.g. when you are tired or while under the influence of alcohol, medication or drugs.
- ◆ Before turning on the machine, remove the tools used for inspection and adjustment from the machine.
- ◆ Do not use anything other than the specified standard and optional accessories.
- ◆ Die-Head is wet and slippery with Threading Oil. Do not drop it on your foot when replacing it.
- ◆ After threading pipes, always wash off Threading Oil on the threads surfaces and the inside of the pipes before piping.
Drinking tap water mixed with Threading Oil may cause diarrhea and vomiting.
- ◆ Perform a required pressure resistance test on the processed pipe.
Gas or water may leak.
- ◆ If you notice any abnormality (smell, vibration, noise, etc.) in the machine during operation, stop it immediately and refer to "BEFORE REQUESTING REPAIR / SERVICE" in this manual.
- ◆ For repairs, contact the store where you purchased the machine or our sales office.
- ◆ Do not modify this machine as it complies with the applicable safety standards.

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CAUTION

- ◆ **Pay attention to the position of your hands not to pinch fingers when lowering Die-Head.**
- ◆ **Do not leave the machine with a long workpiece set on it.**
You may tumble and get hurt.
- ◆ **Securely install accessories in accordance with this manual.**
Otherwise, accident or injury takes place.
- ◆ **Before using the machine, check for any damage on it and it can work normally.**
- ◆ **When the machine is carried with Threading Oil in it, Oil may splash and stain clothes due to vibration.**
- ◆ **If the machine has been dropped accidentally, carefully check for any damage, crack or deformation.**
If the machine is used under such condition, it may cause poor threading accuracy, accident and injury.
- ◆ **Before leaving the machine for a long time, unplug Power Cord.**
- ◆ **Please use Threading Oil (White) that is indispensable for processing water pipes. If you use, wash it off with water, and if it is (Red) wipe it off with a waste cloth. At this time, be careful not to cut your hands with the threads or cut surfaces.**
- ◆ **Start threading at a distance of 70 mm or more from Hammer Chuck.**
Otherwise Carriage hits the body before the threading is completed, and The feeding of Die-Head stops.
- ◆ **For proper threading, observe the following points.**
 - Use Die-Head and Dies which match the thread size.
 - Install Die-Head on Carriage properly.
 - Do not place Die-Head directly on the ground and handle it roughly.
 - Make sure that Threading Oil pours on Dies properly.
 - Do not use deformed and/or oblique-cut pipes.
- ◆ **Keep your workbench and work area tidy, always clean and bright enough.**
- ◆ **Do not let visitors touch and operate the machine.**
- ◆ **When not in use, the machine should be stored in dry places out of reach of children.**

 CAUTION

◆ **Threading Oil**

- Contacting Threading Oil to skin may cause inflammation. Wear protective gloves when handling Threading Oil. If oil gets on your skin, rinse thoroughly with water and soap.
- Do not drink as it may cause diarrhea and vomiting. If swallowed accidentally, do not force to vomit and get a medical diagnosis immediately.
- Store Threading Oil out of reach of children.
- Do not dilute Threading Oil or mix with the other types of Threading Oil.
- When Threading Oil turns into milky mixed up with water, or when it is extremely deteriorated and causes poor threads, replace it with new Threading Oil immediately.
- Store Threading Oil in a dark place out of direct sunlight, and tightly seal after use to prevent dust and moisture from entering.
- Do not inhale oil mist or vapor of Threading Oil. It causes nausea. If inhaled, move to a place with fresh air, cover the body to keep warm, rest and get a medical diagnosis.
- Dispose of waste oil and waste oil containers as industrial waste.
- Do not heat and cut waste containers and drill holes on it. Ignition or explosion may take place.

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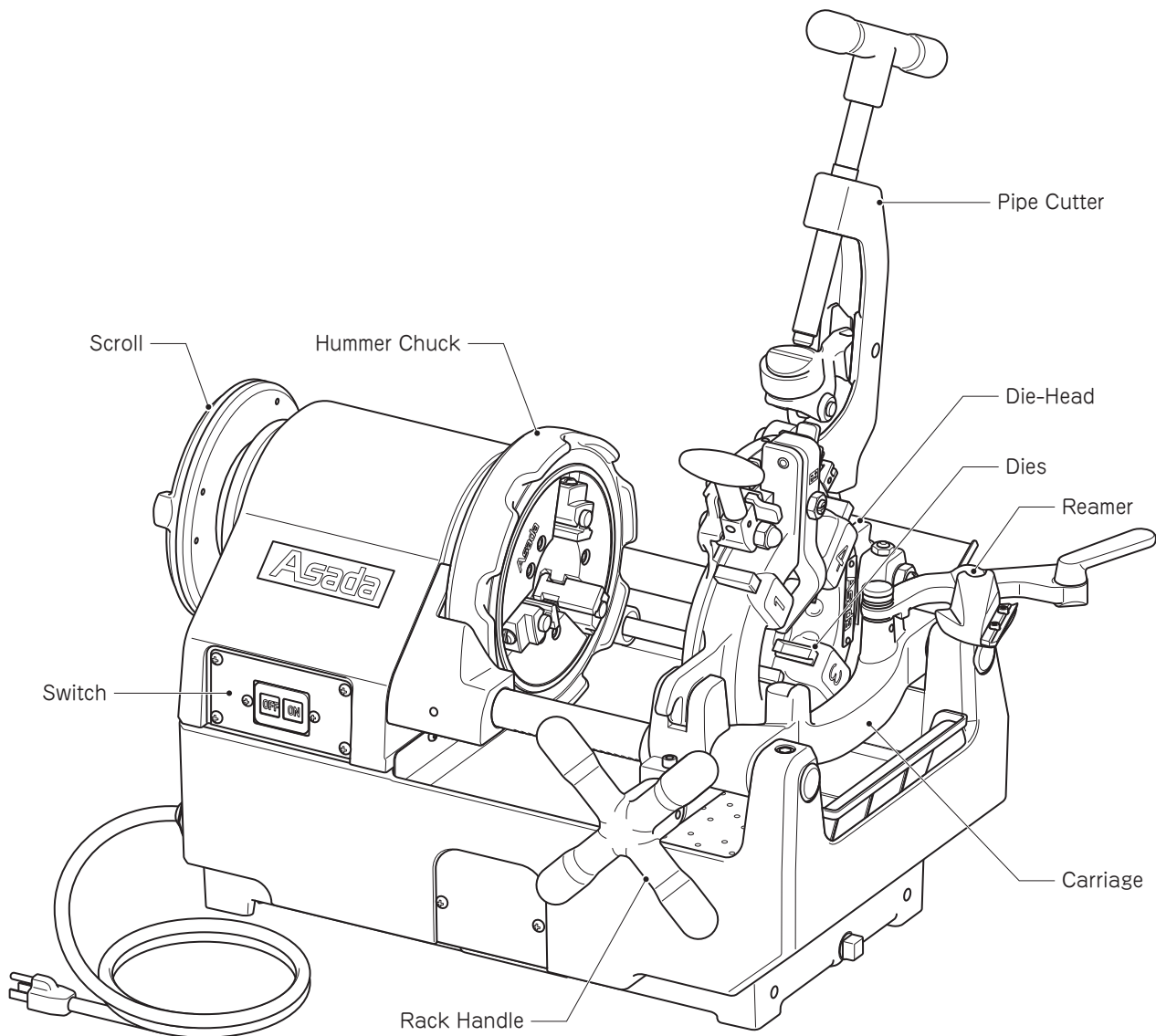
OVERVIEW

- The pipe threading machine, model BEAVER 50G, is intended to rotate a material such as a pipe and rod for cutting or threading. The machine consists of Motor which rotates a pipe and rod, etc. Scroll and Hammer Chuck to hold a workpiece. Pipe Cutter to cut a workpiece, Die-Head to thread a workpiece, and Gear Pump to lubricate Threading Oil.

COMPONENTS OF THE MACHINE

Threading Machine

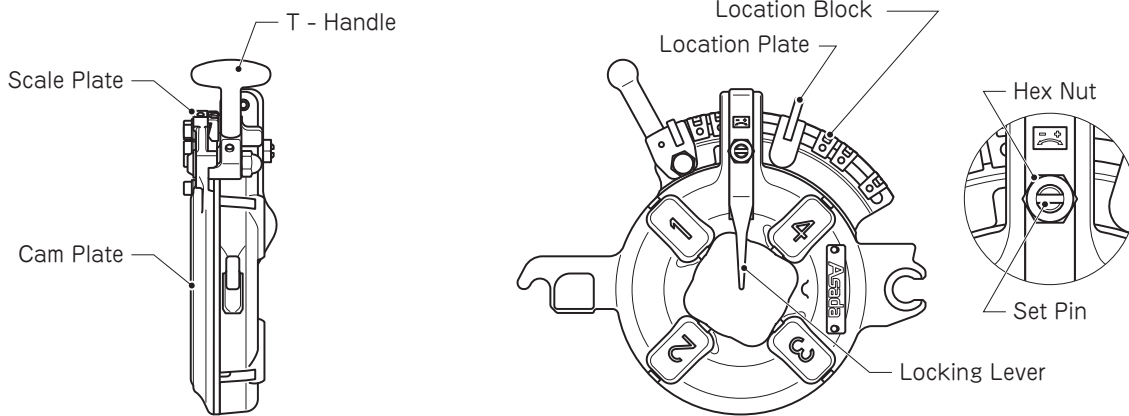
- The diagram illustrates main parts and Die Head of this machine. Pipe is chucked by Hammer Chuck, cut by Pipe Cutter and threaded by Die Head.



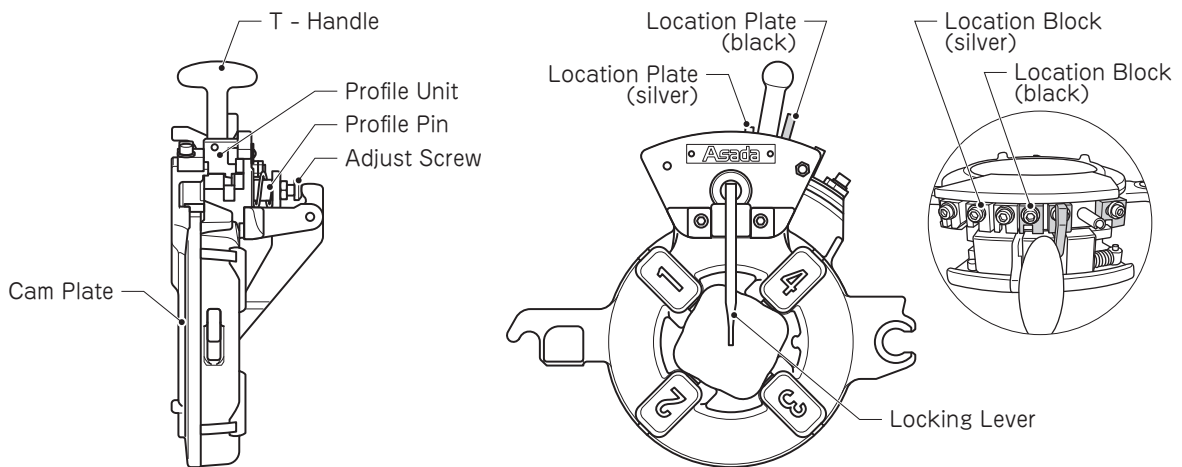
Die Head

- The diagram illustrates main parts of Die-Head.

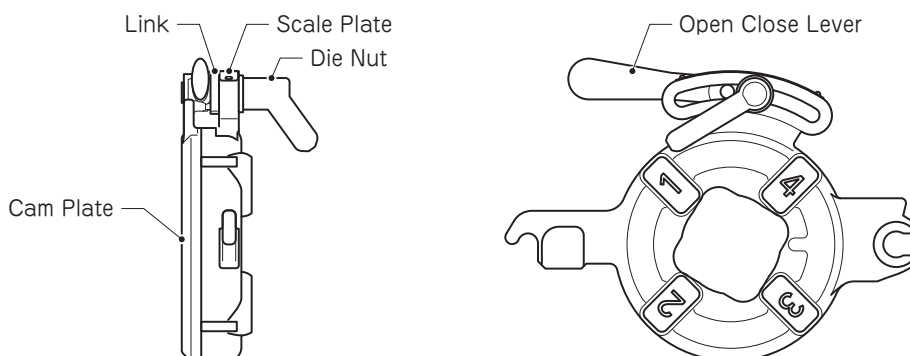
■ DIE-HEAD BE 1/2"-2"



■ DIE-HEAD AT 1/2"-2"



■ DIE-HEAD MANUAL 1/2"-2"



BEAVER 50G

Specifications

Cutting capability	BSPT/NPT 1/4"-2", Bolt 3/8"-2"
Speed	38min ⁻¹ (rpm) No load
Motor	Single phase Universal Motor, 750W
Frequency	50/60 Hz
Dimensions	L : 570mm × W : 435mm × H : 360mm
Weight	46kg

※Specifications are subject to change without prior notice.

※Voltage made to order.

Standard Accessories

Die-Head	Die-Head Manual	Die-Head BE	Die-Head AT
	1/2"-2"	1/2"-2"	1/2"-2"
Dies	1/2"-3/4", 1"-2"		
Other	Threading Oil 4L, Tools		

Optional Accessories

Code No.	Parts Name
20114	Die-Head Manual W3/8"-1"
63096	Die-Head Manual W1.1/8"-2"
20158	Die-Head Manual M10-24
63095	Die-Head Manual M27-36
70076	Cutter Blade for Stainless Steel Pipe
36003	Nipple Max BSPT1/2"-3/4"
56100	Taper Thread Gauge Set BSPT1/2"-1"
56127	Taper Thread Gauge Set BSPT1/2"-2"
01810	Nipple Chuck BSPT1/2"-2"



BEAVER 50G

INSTALLATION

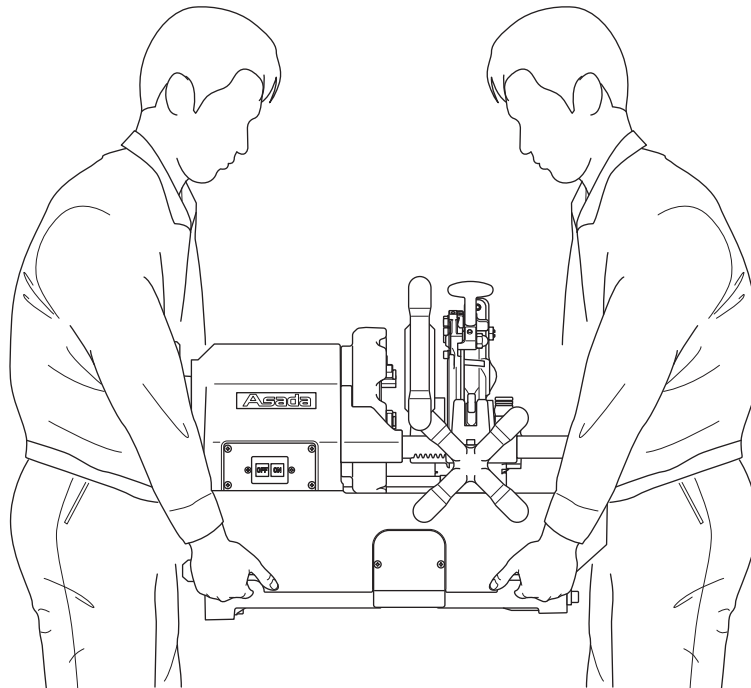
Carrying the Machine

WARNING

- ◆ Fix Carriage not to move itself while carrying the machine, hold the machine at the bottom of it. Do not hold Scroll and Reamer to carry the machine.
- ◆ When lifting it up, bend your knees to avoid a load on your waist.
- ◆ The machine stained with Threading Oil is slippery. Do not drop the machine on your feet when lifting it up.

CAUTION

- ◆ When the machine is carried with Threading Oil in it, oil may splash and stain clothes due to vibration.



Installation

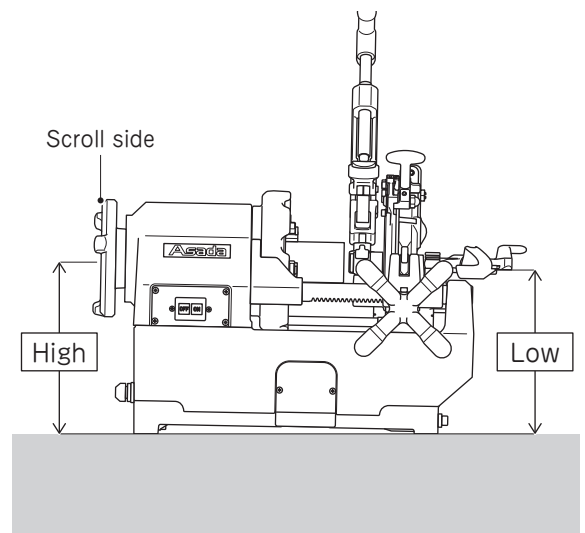
DANGER

- ◆ Always ground the machine to avoid electric shock and resultant death.
- ◆ Use an extension cord with a three-core cable equipped with a ground wire.
Use a thick and durable cable for outdoor.
- ◆ Never ground the machine with a gas pipe.
Explosion may take place.

CAUTION

- ◆ The Scroll side of the machine should be Higher than Die-Head side when the machine is installed.
Threading Oil runs down through the pipe and it stains the floor.
- ◆ Do not expose the machine to rain and water. Die-Head or Dies will get rusted.

- ① Put the machine in a place free from moisture.
- ② Put the machine on a flat surface or work bench.
In this condition, the Scroll side is higher than the Die-Head side.
- ③ Secure a sufficient space around the machine.
A wide space is necessary particularly when threading long and heavy pipes.
- ④ Use Pipe Support for long and heavy pipes. Avoid excessive force applied to the machine which causes to tilt it.
- ⑤ Make sure that the power source is equipped with a ground fault circuit interrupter to avoid electric shock.
- ⑥ Use a grounding clip when a receptacle without ground is used.
- ⑦ When an extension cord is used, use the one conforming to the applicable regulations.



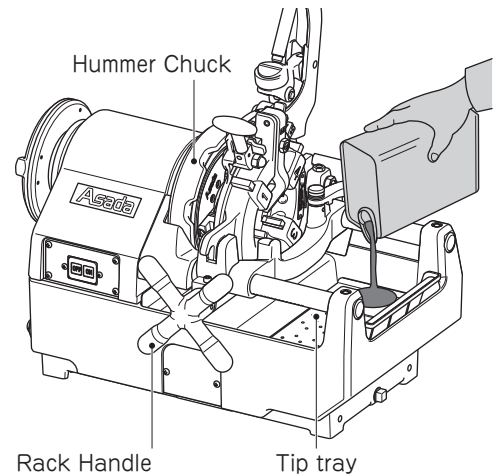
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OPERATION

- The following gives a general description of threading work including pipe cutting.

Check for Threading Oil

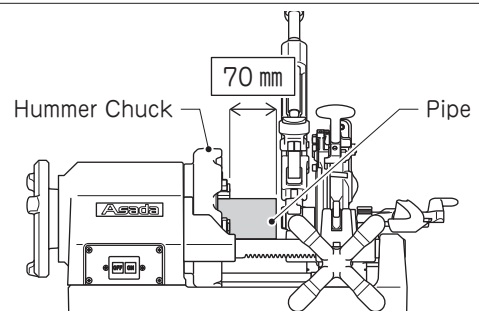
- A new machine is coated with rust preventive oil, so wipe it off with a clean cloth.
- ① Turn Rack Handle clockwise to move Carriage toward Hammer Chuck.
- ② Add Threading Oil from the right side of the machine until Strainer is soaked.
- ③ Make sure that the machine is turned off, and then insert Power Plug into a receptacle. Make sure to ground the machine when a receptacle without ground is used.
- ④ Turn on the machine and check that Threading Oil is coming out from Die-Head. If the discharge amount of Threading Oil is not appropriate, adjust it with Oil Adjust Screw. For the operation, refer to "MAINTENANCE & INSPECTION: Adjustment of Discharging Amount of Threading Oil".



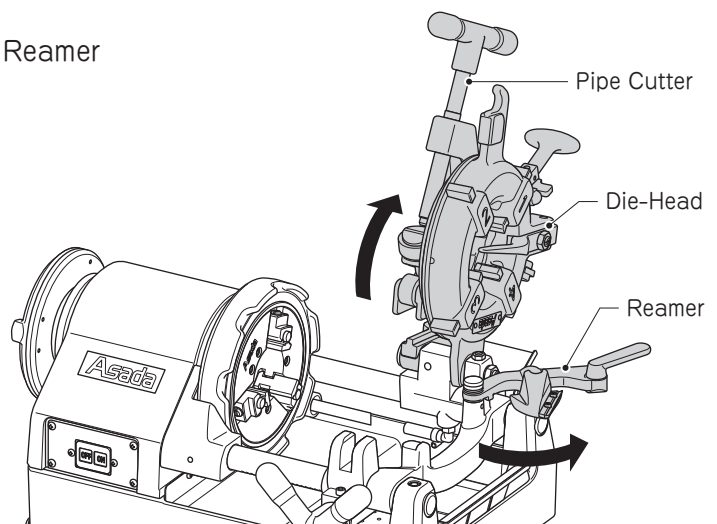
Setting Workpiece

⚠ CAUTION

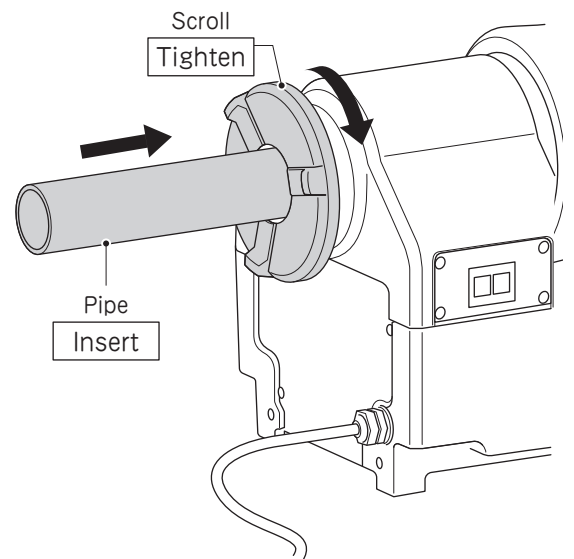
- ◆ **Do not thread a workpiece within 70mm from Hammer Chuck.**
Carriage hits the body before threading is completed and the machine may be damaged.



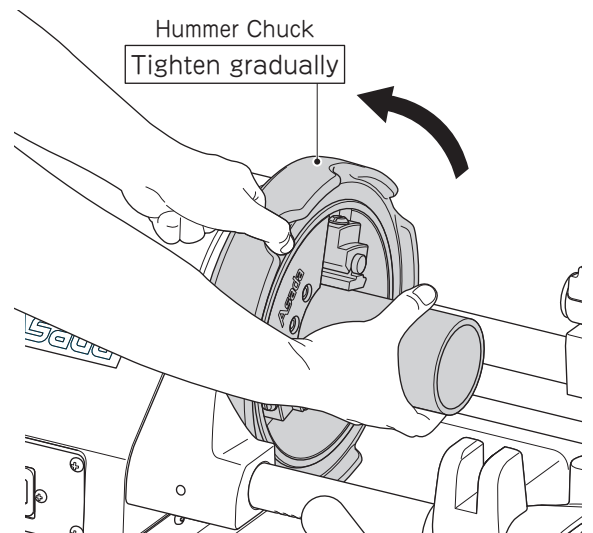
- ① Lift up Pipe Cutter and Die-Head and set Reamer at the back side.



- ② Insert a workpiece from the Scroll side and tighten Scroll.



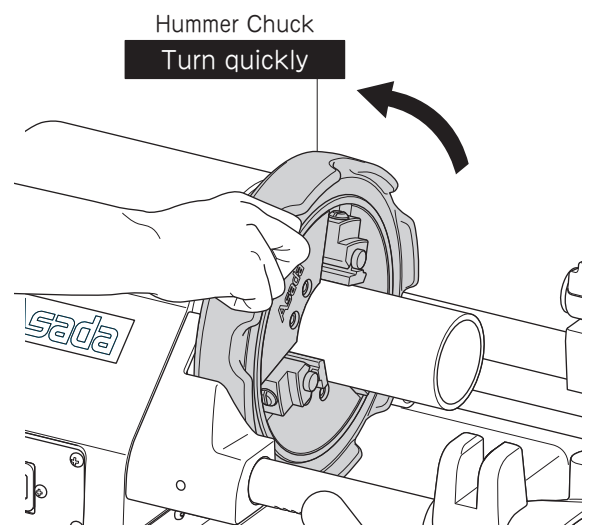
- ③ Hold the workpiece on Hammer Chuck side with a right hand and tighten Hammer Chuck gradually to chuck the workpiece.



- ④ Make sure three Jaws contact the workpiece.

- ⑤ If three Jaws do not properly contact the workpiece, the workpiece will shake and cutting and threading cannot be performed properly.

- ⑥ Turn Hammer Chuck quickly to chuck the workpiece securely at the end.



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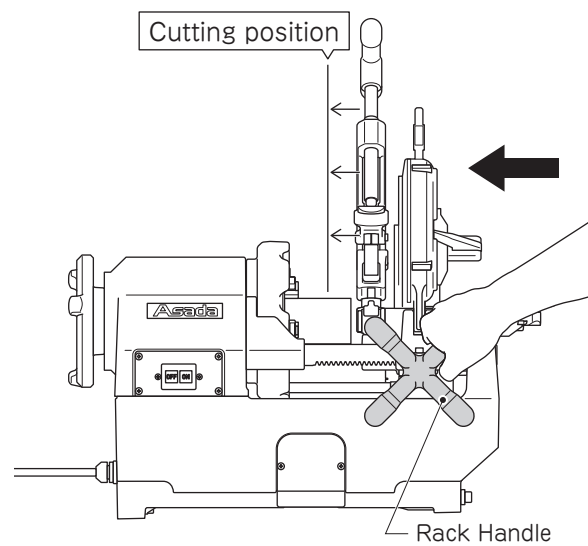
Cutting

- Use Pipe Cutter for cutting workpieces.
Take out the cut workpieces regularly from Tank.

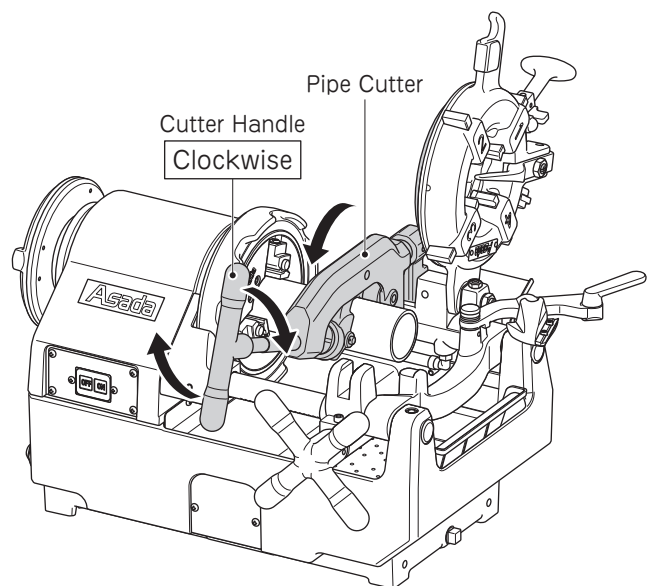
⚠ CAUTION

- ◆ Do not touch the cut surface with bare hands because it is hot and sharp.
- ◆ If turn Cutter Handle forcibly, the cut surface becomes an oval shape and it causes improper threading. Turn Cutter Handle half per one turn of the pipe.

- ① Lift up Pipe Cutter and turn Rack Handle to move Pipe Cutter to the cutting position of the pipe.



- ② Lower Pipe Cutter onto the pipe, then turn on the machine.
- ③ Turn Cutter Handle clockwise and start cutting the pipe.
- ④ Lift up Pipe Cutter after cutting.
- ⑤ Remove the cut piece from the tank.



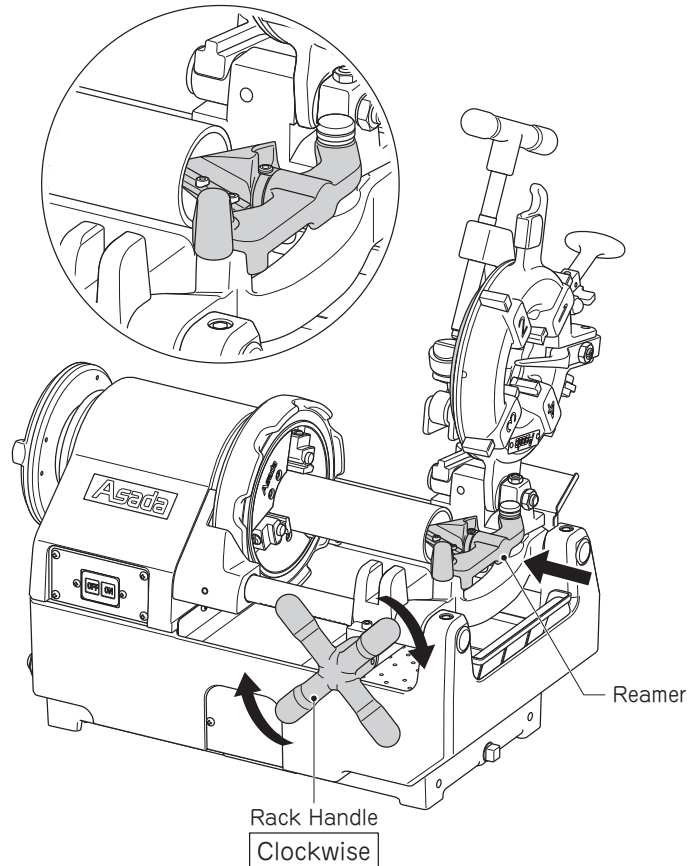
Reaming

⚠ CAUTION

◆ Blade tip of Reamer is very sharp. Do not touch it with bare hands.

The inner surfaces of the pipes cut with Pipe Cutter have to be reamed.

- ① Pull Reamer frontward and set it.
- ② Turn Rack Handle clockwise to move Reamer Blade against the turning pipe.
- ③ Turn Rack Handle further, lightly press Reamer Blade against the inside surface of the pipe for reaming.



Selecting Dies size

- For thread size [1/2"] and [3/4"], use Dies [1/2"-3/4"].
For thread size [1"], [1.1/4"] [1.1/2"] and [2"], use Dies [1"-2"].
- Select proper Dies depending on the thread sizes.
When changing the thread size from [1/2"], [3/4"] to [1"], [1.1/4"], [1.1/2"], [2"] and vice versa, Dies have to be replaced. [All 4 pieces of Dies have to be replaced at the same time.]

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Removing and Installing Dies

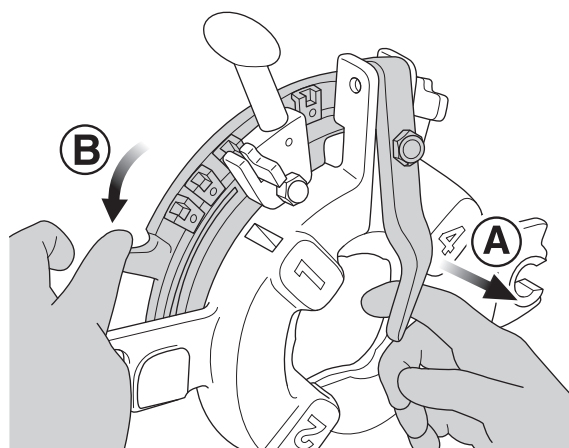
■ Die-Head BE 1/2"-2"

Removing

⚠ CAUTION

◆ Wear gloves to avoid cutting hands by Dies.

- ① Remove Location Plate.
- ② Pull Locking Lever toward "A" to open Dies.
- ③ Slide Cam Plate fully toward "B" and remove Dies.

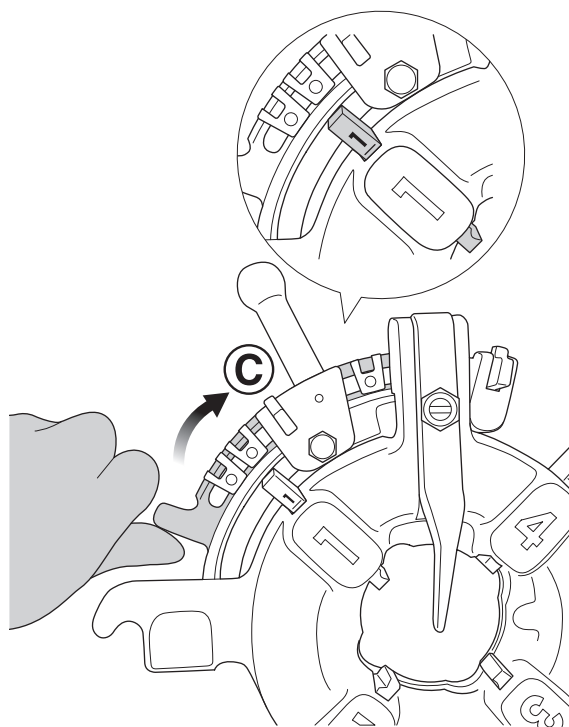


Installing

⚠ CAUTION

◆ Make sure that each number on Dies matches the slot number of Die-Head.

- ① Insert Dies which the number is same as the slot number of Die-Head until click sound is heard.
- ② The numbers of Dies have to be on the slot number side of Die-Head.
- ③ Slide Cam Plate toward "C" until click sound is heard from Locking Lever.



■ Die-Head AT 1/2"-2"

Removing

⚠ CAUTION

◆ Wear gloves to avoid cutting hands by Dies.

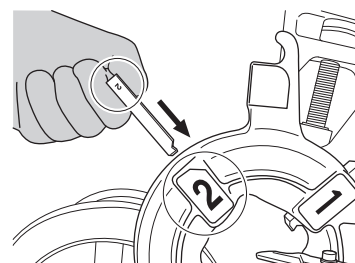
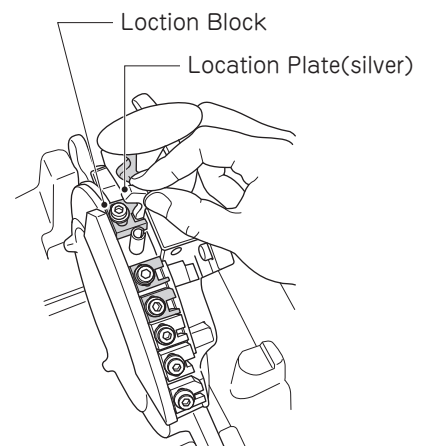
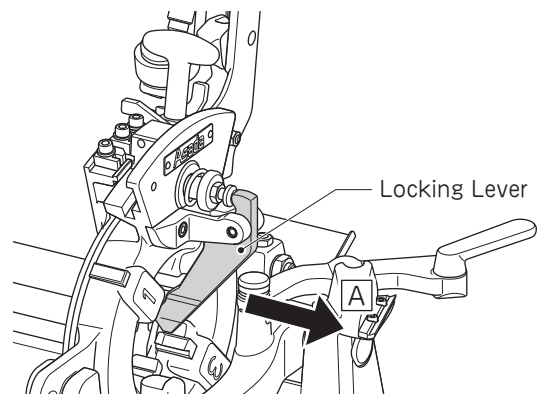
- ① Pull Locking Lever toward "A" to open Dies.
- ② Set silver Location Block into 2" Location Block.
- ③ When Die-Head is lowered, pull out Dies No. 1 and 4 upward.
- ④ Lift up Die-Head and pull out Dies No. 2 and 3 downward.

Installing

⚠ CAUTION

◆ Make sure that each number on Die matches the slot number of Die-Head.

- ① Pull Locking Lever toward "A" to make open position.
- ② Set silver Location Plate into 2" Location Block.
- ③ Insert Dies which the number is same as the slot number of Die-Head.
- ④ The numbers of Dies have to be on the slot number side of Die-Head.



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■ Die-Head Manual

Removing

⚠ CAUTION

◆ Wear gloves to avoid cutting hands by Dies.

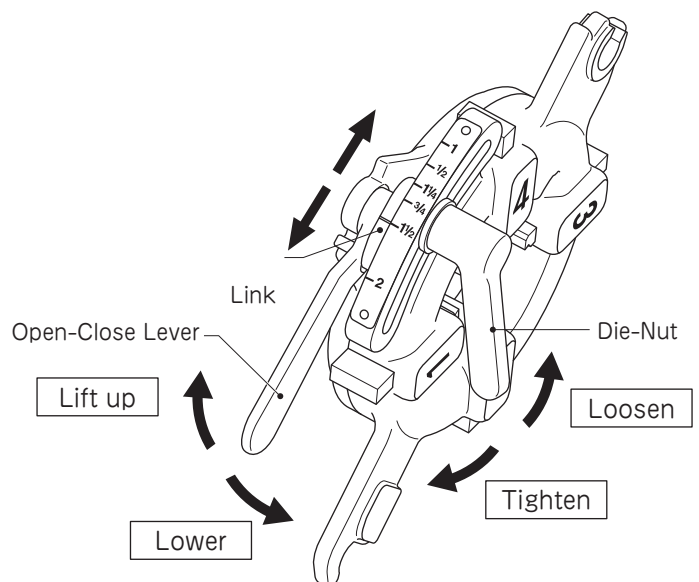
- ① Loosen Die-Nut. Lower Link frontward fully. Tighten Die-Nut and lift up Open-Close Lever to remove Dies.
- ② When Die-Head is lowered, pull out Dies No. 1 and 4 upward.
- ③ Lift up Die-Head and pull out Dies No. 2 and 3 downward.

Installing

⚠ CAUTION

◆ Make sure that each number on Dies matches the slot number of Die-Head.

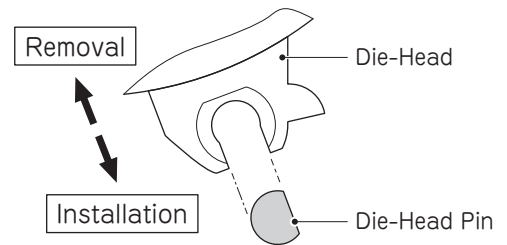
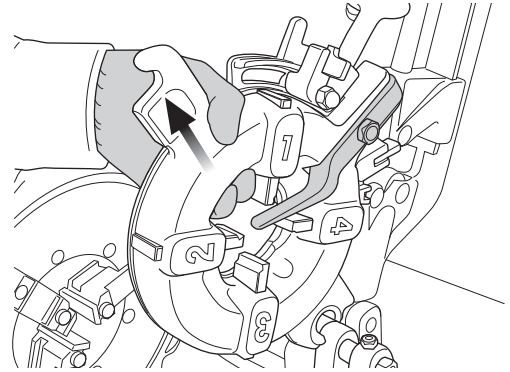
- ① Loosen Die-Nut and lower Link frontward fully. Tighten Die-Nut and lift up Open-Close Lever.
- ② Insert Dies which the number is same as the slot number of Die-Head until click sound is heard.
- ③ The numbers of Dies have to be on the slot number side of Die-head.



Replacing Die-Head

Removing and Installing Die-Head from/to Carriage

- ① Lift up Die-Head halfway.
- ② Pull out Die-Head diagonally and frontward.
- ③ Only when Die-Head is lifted up halfway and it becomes parallel to the flat surface of Die-Head Pin, it can be removed or installed from/to Carriage.

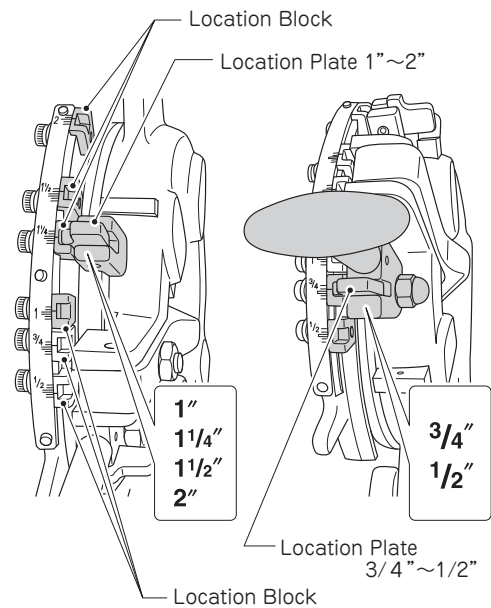


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Changing Thread Size

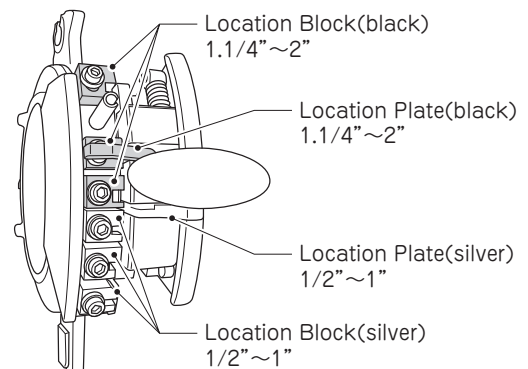
■ Die-Head BE 1/2"-2"

- ① Set Location Plate into Location Block of the required threading size. Use Location Plate at the front for 3/4" to 1/2" and at the rear for 1" to 2"
- ② Threading size of each Location Block is indicated on Scale Plate.



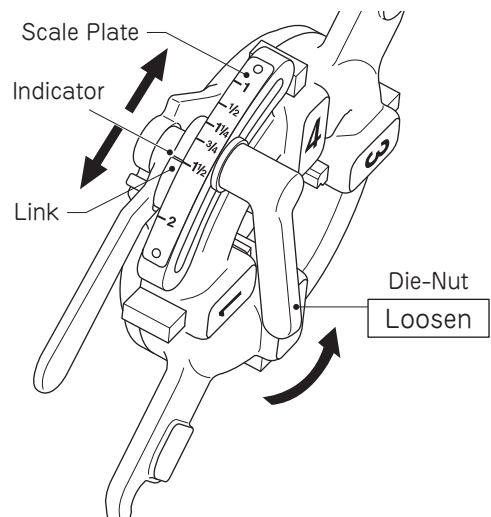
■ Die-Head AT 1/2"-2"

- ① Set Location Plate into Location Block of the required threading size.
- ② Threading size is indicated on each Location Block. Use silver Location Plate and Block for 1/2" to 1" and black ones for 1.1/4" to 2".



■ Die-Head Manual

- ① Loosen Die-Nut.
- ② Set Indicator to the required threading size on Scale-Plate while Open-Close Lever is lowered frontward.
- ③ Tighten Die-Nut.
- ④ Depending on the actual thread depth, Adjust the position of Indicator frontward or backward slightly.



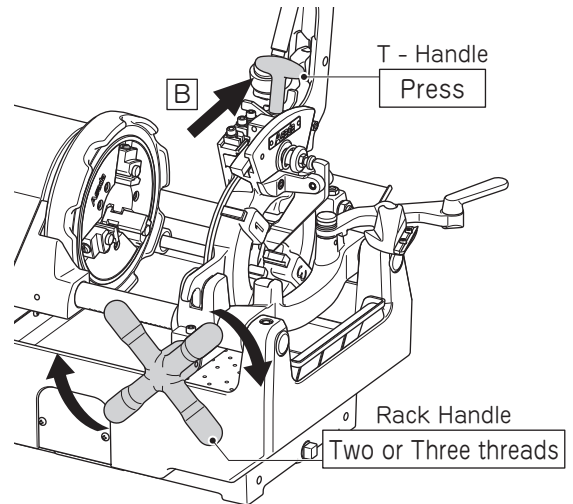
Threading

⚠ CAUTION

◆ Watch the position of your hands while lowering Die-Head to avoid pinching.

■ Die-Head BE, AT 1/2"-2"

- ① Lower Die-Head and press T-Handle toward "B" to set.
- ② Turn on the machine. Turn Rack Handle clockwise and press Dies against the workpiece.
- ③ Take hands off from Rack Handle after two or three threads were cut.
- ④ Dies open automatically when threading is completed. Turn off the machine.



■ Die-Head Manual 1/2"-2"

- ① Lower Die-Head and Open-Close Lever frontward.
 - ② Turn on the machine. Turn Rack Handle clockwise and press Dies against the workpiece.
 - ③ Take hands off from Rack Handle after two or three threads were cut.
 - ④ When the required number of threads have been cut, lift up Open-Close Lever gradually to finish cutting by opening Dies.
- ※ In case open Dies rapidly, steps may be produced in the finishing section of the thread, and it results in a defective thread.

BEAVER 50G

Adjusting Thread Length

With new Die-Head, thread length has been adjusted within the standard length at the factory, but can be adjusted as required.

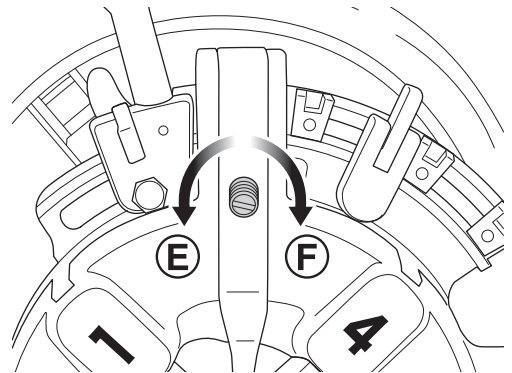
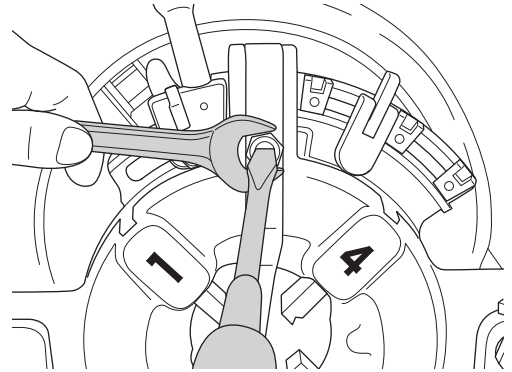
■ Die-Head BE 1/2"-2"

① Hold Set Pin with a flat screwdriver and loosen Hex Nut.

② Turning Set Pin toward "E" makes threads shorter and turning toward "F" makes threads longer.

The thread length will be adjusted by approx. 2mm per a half rotation.

③ Hold Set Pin with a flat screwdriver not to turn it and tighten Hex Nut.



⚠ CAUTION

◆ Wear gloves to avoid cutting hands by Dies.

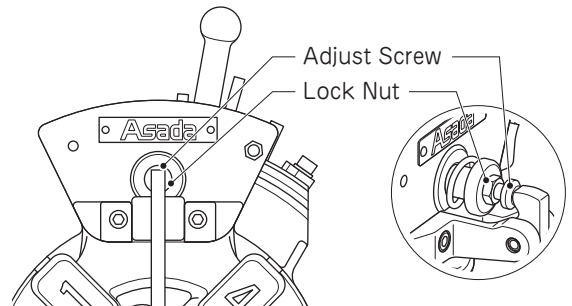
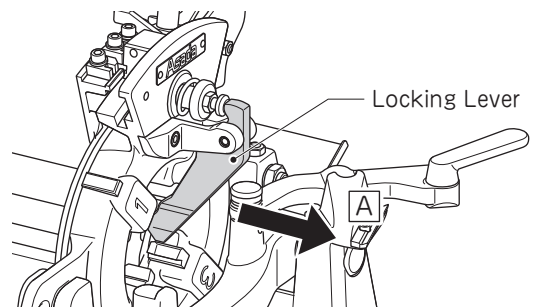
◆ Cannot thread longer than the width of Dies.

■ Die-Head AT 1/2"-2"

① Pull Locking Lever toward "A" to open Dies.

② Loosen Lock Nut and turn Adjust Screw depending on the required thread length. Right turning makes thread length longer and left turning makes it shorter. Thread length will be adjusted by approx. 2.5mm per one rotation of Adjust Screw.

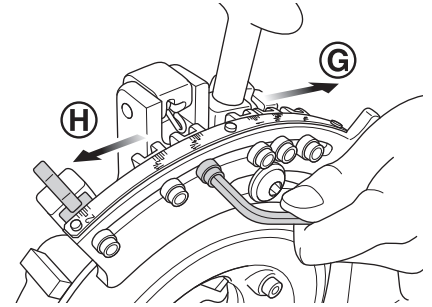
③ After adjustment, tighten Lock Nut.



Adjusting Thread Depth

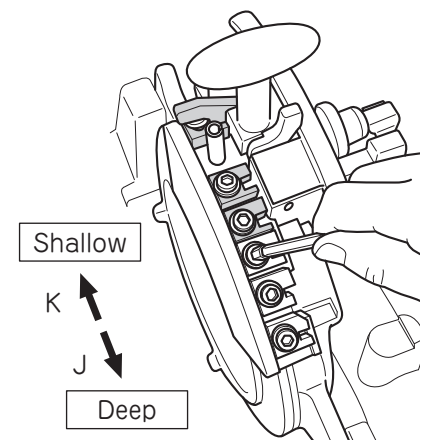
■ Die-Head BE 1/2"-2"

- ① Set Location Plate to one Location Block which is not for the size to be adjusted.
- ② Loosen Bolt and move Location Block to adjust thread depth.
- ③ Sliding toward "G" makes threads deeper and sliding toward "H" makes threads shallower. Thread depth will be adjusted by 1.5 to 2 threads per one scale.
- ④ Check threads with a Taper Thread Gauge, etc. and adjust it again if necessary.



■ Die-Head AT 1/2"-2"

- ① Loosen Bolt to fix Location Block.
- ② Move Location Block to adjust thread depth. Sliding toward "J" makes threads deeper and "K" makes threads shallower. Thread depth will be adjusted by 1.5 to 2 threads per one scale on Cam Plate.
- ③ Tighten Bolt to fix Location Block.
- ④ Check threads with a Taper Thread Gauge, etc. and adjust it again if necessary.



Removing Workpiece

⚠ CAUTION

- ◆ **The workpiece is wet and slippery with Threading Oil after threading. Do not drop on your feet.**

- ① Turn Rack Handle counterclockwise and move Carrige to the right.
- ② Loosen Hammer Chuck.
- ③ Loosen Scroll and pull out the workpiece.

Cleaning after Use

⚠ CAUTION

- ◆ **Do not blow off chips with compressed air.**
They may get into eyes and loss of eyesight may result.
- ◆ **Chips are sharp. Do not touch them with bare hands.**
Always wear gloves.

- Remove chips scattered on the machine or in the area.
- Use a wire brush and clean and remove chips from Chuck, Dies and Reamer.
- Use waste cloth and wipe off Threading Oil splashed over the machine and the area.

BEAVER 50G

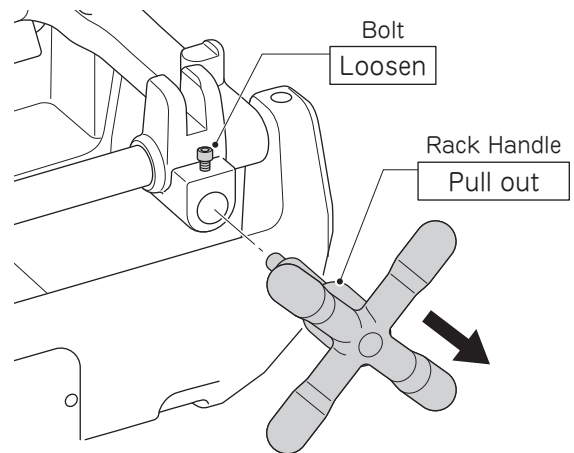
Storage and Carrying

Rack Handle, Reamer, and Splashproof Plate can be removed easily.

By removing Rack Handle, Reamer, and Splashproof Plate, it becomes compact and easy to store and carry.

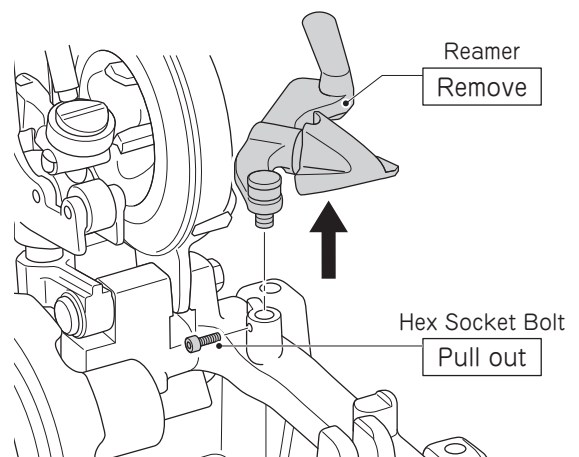
Removing Rack Handle

- ① Loosen Bolt to fix Rack Handle.
- ② Pull out Rack Handle.



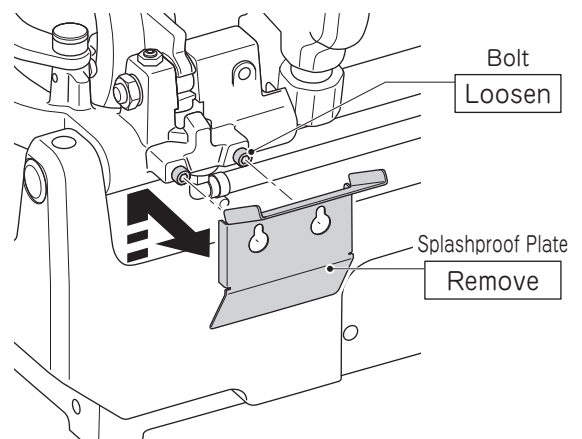
Removing Reamer

- ① Remove Bolt to fix Reamer.
- ② Pull out Reamer upward.



Removing Splashproof Plate

- ① Loosen Bolts to fix Splashproof Plate.
- ② Slide Splashproof Plate upward slightly and remove it.



MAINTENANCE & INSPECTION

⚠ CAUTION

- ◆ Always wear gloves when replacing Cutting Blade and Dies.
- ◆ Disconnect Power Plug during maintenance and inspection.

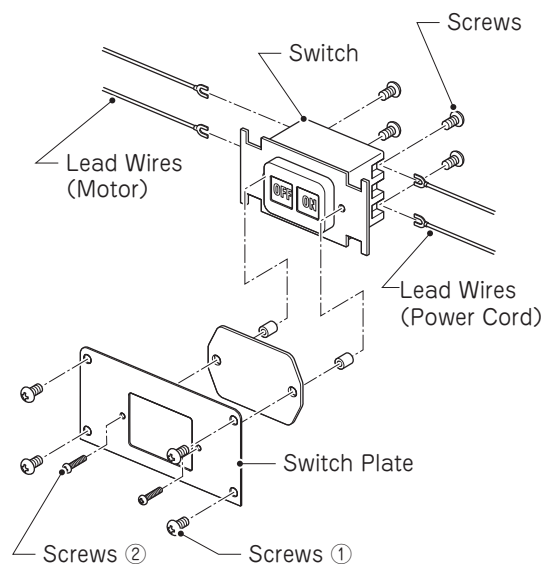
Replacement of Parts

Replacement of Switch

⚠ WARNING

- ◆ Disconnect Power Plug to avoid electric shock.

- ① Remove four Screws ①, and pull out Switch Plate to the front.
- ② Remove two Screws ②, and remove Switch from Switch Plate.
- ③ Loosen four Screws, and remove Lead Wires from Switch.
- ④ Connect Lead Wires to a new Switch.
- ⑤ Install Switch Plate to Switch with two Screws ②.
- ⑥ Install Switch Plate in the machine with four Screws ①.

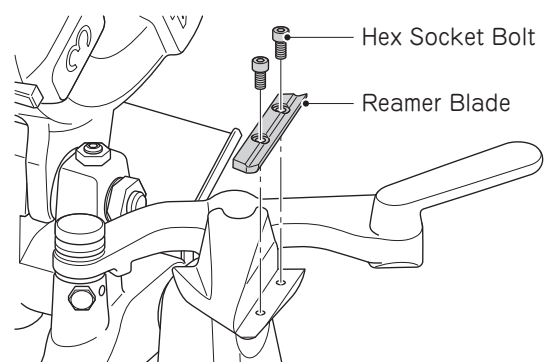


Replacement of Reamer Blade

⚠ CAUTION

- ◆ Wear gloves to avoid cutting hands by Reamer Blade.

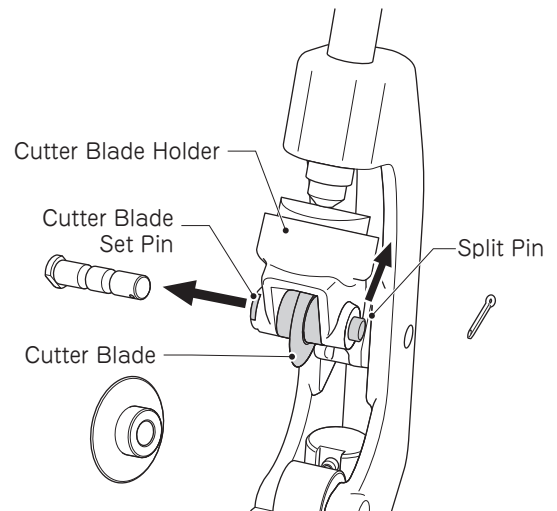
- ① Lift up Pipe Cutter and Die-Head and pull Reamer frontward to set it.
- ② Remove Bolts to fix Reamer Blade, and remove Reamer Blade.
- ③ Install a new Reamer Blade.
- ④ Fix Reamer Blade with Bolts.



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Replacement of Cutter Blade

- ① Lift up Pipe Cutter and lower Die-Head.
- ② Straighten the bent Split Pin and pull it out upward.
- ③ While holding Cutter Blade , slightly push out Cutter Blade Set Pin from the Split Pin side and pull out from the opposite side.
- ④ Wipe off chips, dirt, oil, etc. on Pin and apply grease to the groove.
- ⑤ Put a new Cutter Blade into Cutter Blade Holder and insert Pin.
- ⑥ Insert a new Split Pin into Cutter Blade Set Pin, and bend the both tips.

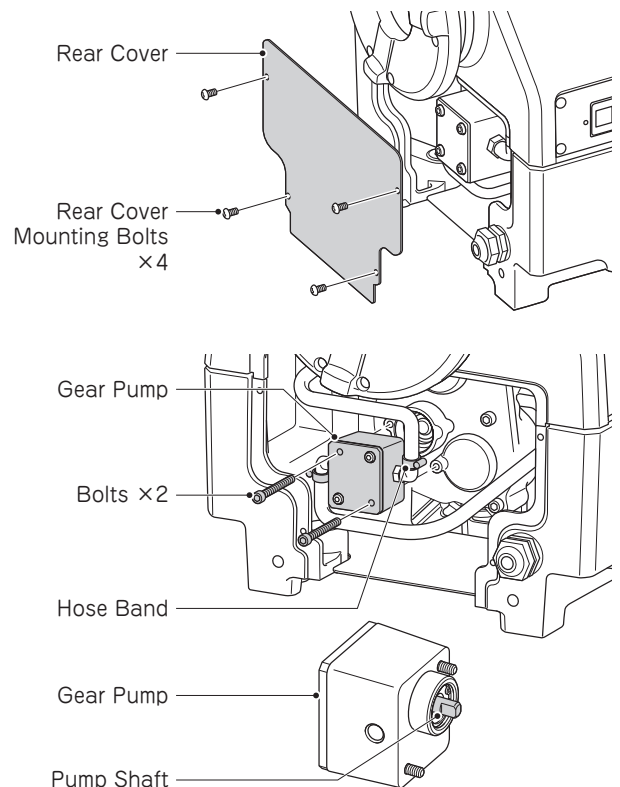


Replacement of Gear Pump

⚠ CAUTION

- ◆ Oil in Gear Pump and Hoses overflows when remove them and it may stain the floor. Spread waste cloth around Gear Pump.
- ◆ Be careful not to put Power Cord between Pump Cover and the machine body when installing Pump Cover. Power Cord may get damaged and it will cause current leakage.

- ① Set an oil pan , remove Plug to drain Threading Oil.
- ② Loosen four Bolts to fix Pump Cover and remove Pump Cover.
- ③ Loosen two Bolts to fix Gear Pump and remove Gear Pump.
- ④ Loosen Hose Bands and remove Hoses from Gear Pump. Be careful as oil overflows.
- ⑤ Install two Hoses to a new Gear Pump and tighten Hose Bands firmly.
- ⑥ Turn Pump Shaft to align it with the groove on the machine side, and install Gear Pump with removed Bolts.
- ⑦ Add Threading Oil (2.4L) and lower Die-Head.
- ⑧ Turn on the machine and check Threading Oil comes out from Die-Head.

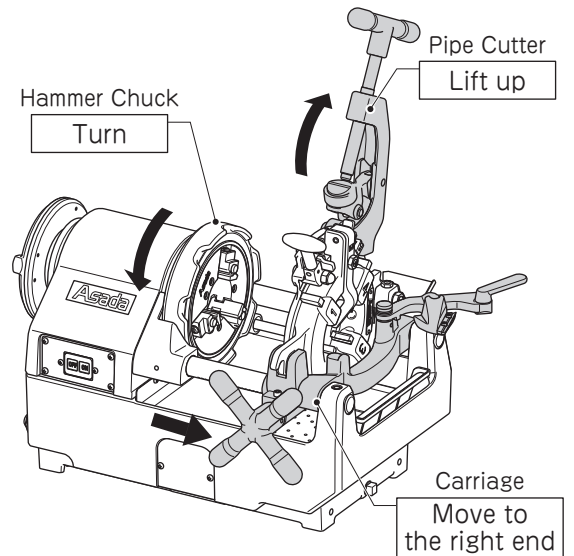


Replacement of Jaw Inserts

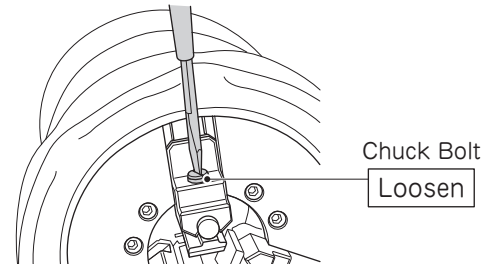
⚠ CAUTION

◆ Unplug Power Cord.

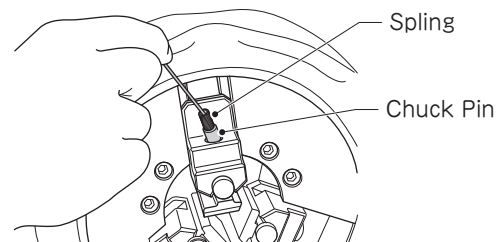
- ① Turn Rack Handle counterclockwise to move Carriage to the right end.
- ② Lift up Pipe Cutter.
- ③ Turn Hammer Chuck forward and make a space until a screwdriver enters.



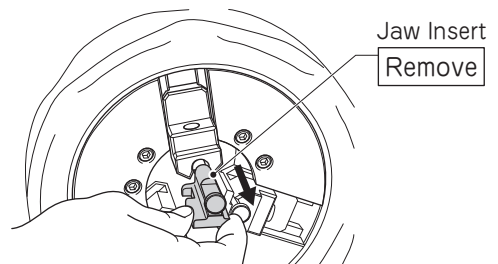
- ④ Loosen Chuck Bolt.



- ⑤ Pull out two Springs and Chuck Pin with a thin stick.

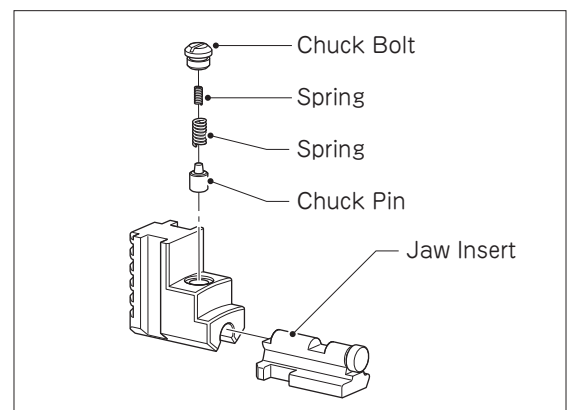


- ⑥ Pull out Jaw Insert forward. Remove the other two Jaw Inserts as all of three Jaw Inserts have to be replaced at the same time.



- ⑦ Wipe off chips, dirt, oil, etc. on Jaw Insert mounting surfaces.

- ⑧ Insert a new Jaw Insert all the way and Chuck Pin and two Springs. Tighten Chuck Bolt firmly.



- ⑨ Install other two Jaw Inserts in the same manner.

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Replacement of Carbon Brush

⚠ WARNING

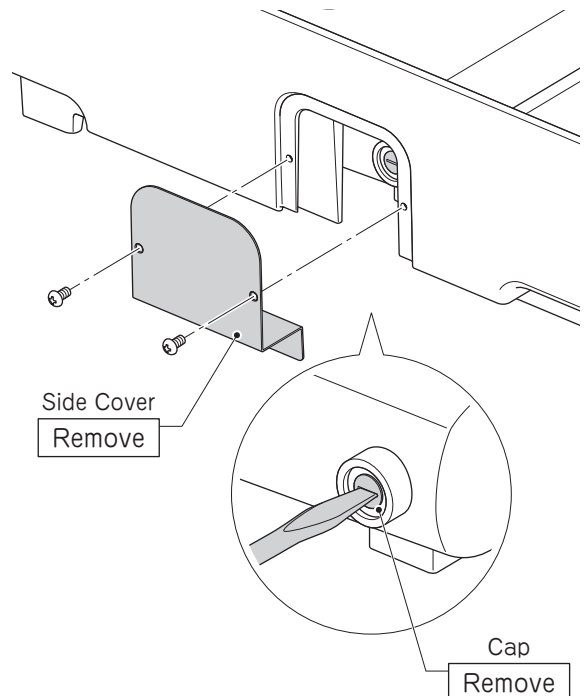
◆ Unplug Power Cord to avoid electric shock.

⚠ CAUTION

◆ Keep new Carbon Brush free from oil, dirt, chips, etc.
Avoid the stain on gloves from attaching to Carbon Brush.

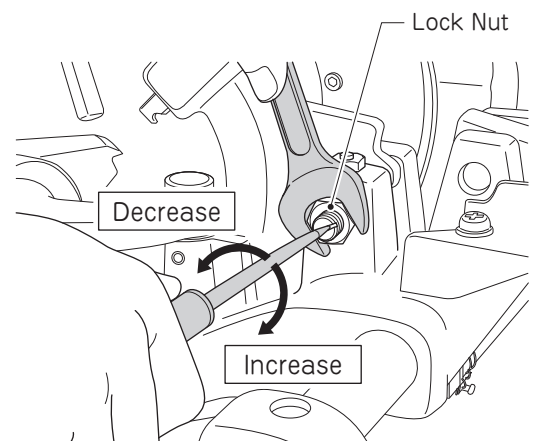
- ① Remove Side Cover.
- ② Remove Cap with a flat screwdriver and pull out Carbon Brush.

- ③ Insert a new Carbon Brush.
- ④ Tighten Cap and install Side Cover.



Adjustment of Discharging Amount of Threading Oil

- ① Ensure Tank is filled with Threading Oil until Strainer is soaked.
- ② If the discharging amount of Threading Oil from Die-Head is not appropriate, adjust the discharging amount with Oil Adjust Screw.
- ③ Loosen Lock Nut of Oil Adjust Screw.
- ④ Turning Oil Adjust Screw clockwise increases the discharging amount of oil and counterclockwise decreases it.
- ⑤ Tighten Lock Nut after adjustment.



BEFORE REQUESTING REPAIR / SERVICE

- Before requesting repair or service, inspect according to the following failure diagnosis. If the problem persists, please contact our sales office.
- The warranty does not cover the product if it is not used correctly or if it is used for purposes other than this unit and malfunctions.

Phenomenon	Cause	Countermeasures
Does not start even turned on the machine.	Power Cord is unplugged.	Plug in Power Cord.
	Carbon Brush is worn out.	Replace Carbon Brush. Refer to P.29
	Low voltage.	Set to the specified voltage.
	Switch failure.	Replace Switch. Refer to P.26
	Motor failure.	Request repair.
	Power Cord has been damaged or broken.	
Slow rotation.	Low voltage.	If the problem is not solved even with the specified voltage, request repair.
	Motor failure.	Request repair.
No threading oil, little.	Threading Oil in Tank is low.	Replenish Threading Oil. Refer to P.13
	Filter is clogged with chips.	Clean Filter in Tank.
	Gear Pump failure.	Replace Gear Pump. Refer to P.27
	Discharge amount of Threading Oil has not been adjusted.	Adjust discharge amount of Threading Oil. Refer to P.29
	Die-Head is not installed correctly.	Install correctly
Cannot thread properly	Thread depth and length are not adjusted.	Adjust Die-Head. Refer to P.23,24
	Dies are worn out and/or chipped.	Replace Dies. Refer to P.17
	Deterioration of Threading Oil.	Replace Threading Oil. Refer to P.13
	Threading Oil is not genuine.	Use genuine Threading Oil.
	Dies are not installed properly	Install correctly. Refer to P.17
The movement of each part is bad	Chips and iron powder are attached.	Remove chips and iron powder.

● Customer Memo

Please fill in for your record in the future.
The information is helpful for inquiry and ordering parts.

Products Number :

Date Purchased :

Store Purchased the Unit :