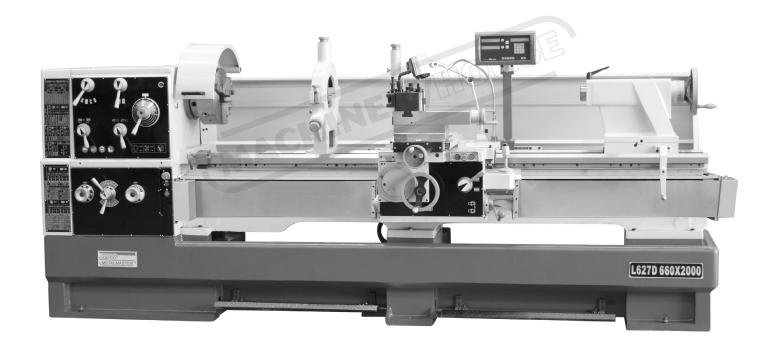
# **INSTRUCTION MANUAL**

# CL-100A Centre Lathe (415V) 660 x 2000mm - 105mm Bore



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## Specifications of the Lathe and its Main Data

#### **Main Data of the Lathe**

| Main Data of the Lathe          | C6266Ax 1500 / C6266Ax 2000 / C6266Ax 3000 |
|---------------------------------|--|
| Max. swing diameter over bed    | Ф 660 mm                                   |
| Max. swing diameter over carr   | age apron $\Phi$ 440 mm                    |
| Max. swing diameter in gap      | ф 900 mm                                   |
| Valid length of gap before head | stock 250 mm                               |
| Height to spindle center        | 330 mm                                     |
| Distance between centers        | 1500 mm / 2000 mm / 3000 mm                |
| Width of bed                    | 400 mm                                     |
| Max. size of tool shank (W x I  | I) 25 <b>x</b> 25 mm                       |
| Max. travel of cross slide      | 368 mm                                     |
| Max. travel of top slide        | 230 mm                                     |
|                                 |  |

## **Main Data of Spindle**

| Spindle bore                | φ 105 mm                   |
|-----------------------------|----------------------------|
| Spindle head joining style  | D1-8                       |
| Spindle reducing bush taper | φ 113 mm(1:20)/ MT5        |
| Spindle speed grade         | 16                         |
| Spindle speed range         | $25 \sim 1600 \text{ rpm}$ |

## **Cutting Thread, Feed Range and Kind**

| Large screw size                                | $\phi$ 40 mm× 2T.P.I. or $\phi$ 40 mm× 12 mm        |
|---|---|
| Inch thread range & kind                        | 7/16~80 T.P.I.(54 kinds)                            |
| Metric thread range & kind                      | $0.45 \sim 120 \text{ mm } (54 \text{ kinds})$      |
| Diameter pitch range & kind                     | $7/8 \sim 160$ DP (42 kinds)                        |
| Module range & kind                             | $0.25 \sim 60 MP (46 \text{ kinds})$                |
| Metric spindle longitudinal feed per revolution | $0.044 \sim 1.48 \text{ mm/rev} (25 \text{ kinds})$ |
| Inch spindle longitudinal feed per revolution   | $0.0016498 \sim 0.05497''$ /rev (25 kinds)          |
| Metric spindle cross feed per revolution        | $0.022 \sim 0.74 \text{ mm/rev} (25 \text{ kinds})$ |
| Inch spindle cross feed per revolution          | $0.0008326 \sim 0.02774''$ /rev (25 kinds)          |

#### **Tailstock Data of Lathe**

| Travel of tailstock sleeve       | 235 mm  |
|----------------------------------|---------|
| Diameter of tailstock sleeve     | ф 90 mm |
| Inside taper of tailstock sleeve | MT5     |

## **Motor Size of Lathe**

Power of main motor 7.5 kW(10HP)Power of cooling pump 0.09 kW(1/8HP)

## Weight and Size of Lathe

| Outline size (Lx Wx H) unit: cm | 321x123x160 / | 371x123x160 / | 471x123x160 |
|---------------------------------|---------------|---------------|-------------|
| Packing size (Lx Wx H) unit: cm | 324x114x184 / | 374x114x184 / | 474x114x184 |
| Net weight of lather            | 2700 kg /     | 2900 kg /     | 3300 kg     |
| Gross weight of lathe           | 2950 kg /     | 3200 kg /     | 3700 kg     |



## 1. Guideline for Safety Operation

The lathe is a high speed and powerful machine and can cause danger if operate it improperly.

Before operating the lathe please read the following guidelines of safety operation. Take care and observe to make the lathe be under normal operation environment so as to avoid danger.

The lathe is in accordance with GB15760-1995 < General Technical Condition of Safety Protection of Metal Cutting Machine> issued by the state.

The manual covers information and hints necessary for proper and safe operation of the lathe.

It is required the operator of the lathe should accept suitable technical training before operating the machine, own skills to operate it and hold the certificate of operation; or he should be trained under the close supervision of somebody who can skillfully operate the machine.

The lathe should be operated under the environmental temperature of  $+5^{\circ}\text{C}$  -  $+40^{\circ}\text{C}$ ; the elevation up to 1000 m; the relative humidity of 50% when ambient temperature is  $+40^{\circ}\text{C}$  or higher relative humidity if ambient temperature is lower.

The manual also covers related information for those who owns necessary skills or appointed persons to make suitable maintenance upon the machine.

#### 1-1 Safety Points for Attention

- 1. Keep the lathe and the working area clean and in good order.
- 2. All guard devices and cover plates should be on the place; the side cover should be closed.
- 3. Do not place any objects in the processing area of the lathe as they may bump with rotating or moving parts.
- 4. Do not contact or leap over moving or rotating parts of the lathe.
- 5. Before starting the lathe, you should understand how to stop it.
- 6. The lathe cannot be operated under overload.
- 7. Stop running of the lathe immediately in case any accident occurs.
- 8. When mounting the chuck or other attachment on the spindle, switch off power supply of the lathe to prevent rotation of the spindle.
- 9. Do not mount the jigger if it is not checked of confirmed to be compatible with the lathe.
- 10. Check the center you used if its load capacity can meet with requirement.
- 11. Switch off power supply before leaving the lathe.
- 12. The maximum weight of the workpiece on the lathe is 500 kg.

- 13. The chuck should be properly and firmly mounted on the spindle of the lathe.
- 14. Take care that the workpiece should be gripped firmly and the speed of the spindle cannot exceed the safe speed of the chuck.
- 15. As it is possible to contact with human body, especially when the material with small diameter is used, it is not allowed in any case that the rod material cannot extend out the end of the spindle of the headstock which has no special guard and relative support.
- 16. There is the label of speed limit for the chuck and that no speed change is allowed in operation at the lower right corner of the headstock, the electric warning board at the electric cabinet (box) and that no touch on the workpiece (or chuck) when it is rotating on the guard of the chuck to remind you to take care.

#### 1-2 Danger of Operation

When operating the lathe you should fully understand the danger of following operations:

#### 1) Cutting Fluid

The cutting fluid is hazardous to human body. To contact the cutting fluid continuously especially the original fluid, it can cause the skin allergic or ill if seriously, even the emulsion can also cause the same. Therefore following precautions should be taken:

- a. Avoid any unnecessary contact.
- b. Put on the protective clothes.
- c. Adopt guard shield or plate.
- d. Do not wear oily or dirt clothes.
- e. Clean all parts of the body where the cutting fluid is contacted after work.
- f. Do not mix different cutting fluids.
- g. Replace the cutting fluid regularly.
- h. Correctly treat the cutting fluid.

#### 2) Safe Operation of the Chuck of the Lathe

All jiggers of work pieces should have clear labels of the maximum safe speed and the speed of the spindle can never exceed it. It should point out that the maximum safe speed on the label is supposed under ideal work condition and lower speed of the spindle should be selected in following cases:

- a. Adopt the chuck to jig the workpiece under noisy work condition.
- b. If the chuck is surely damaged, it is dangerous to operate under high speed, especially when the chuck of grey pig iron is used it shall break if it is something damaged.
  - c. If no griping force is known before jigging.

d. All factors such as strength of the workpiece to be jigged, balance of the jigging faces and the workpiece etc. can largely affect the maximum safe speed.

When the workpiece is rotation, it may not be jigged firmly due to the role of centrifugal force and following factors may be involved:

- a. The speed is too high.
- b. The weight and type of the claws are off standard.
- c. The working radius of the claw is unsuitable.
- d. The claw ahs bad lubrication.
- e. It is unbalanced.
- f. The dynamic factor is not considered in the jigging force.
- g. Too large cutting force.
- h. Is the workpiece jigged internally or externally?

These factors should be seriously considered as they can cause different influence in different purposes. The manufacturer cannot provide concrete data for general use as they are beyond the range controlled by the manufacturer of the machine.

#### 1-3 General Safe Rules for Operator of the Lathe

1. When jigging the workpiece, it cannot have oil or grease;

All parts should be jigged firmly;

Do not intend to jig the workpiece which is unsuitable or hardly to jig well;

Do not jig the workpiece exceeding the weight allowed by the lathe;

Master suitable hoisting method when the workpiece is hoisted.

- 2. Ensure to remove oil or grease on handy tools and operation grippers; Ensure the structures of handy tools and operation grippers are suitable to touch safely by hand.
- 3. When operating the handy tool or the operation gripper, it should be gripped firmly;

Select suitable position to grasp on the handy tool or the operation gripper;

You cannot grasp the handy tool or the operation gripper on unsuitable position;

You cannot operate with excessive force.

- 4. Grasp the handy tool or the operation grippe on recommended positions.
- 5. Do not allow to leave other handy tool or operation gripper on the chuck.
- 6. Do not allow to use broken, damaged or defected tool.
- 7. Ensure the workpiece is jigged firmly on the chuck or other jiggers.
- 8. Take special care of irregular workpiece.
- 9. Take care of large flashes and burrs on the workpiece.
- 10. Always take care to select correct tool in work.
- 11. It is not allowed to leave other unfixed handy tool or operation gripper on the chuck.
- 12. Do not allow to use the tool without the handle.
- 13. Always adopt the chuck, the follow rest and the center to support the workpiece.

- 14. The workpiece should have correct position in the hexagon hole and the groove of the screwdriver.
- 15. Take care that the locking screw should be tightened.
- 16. Do not make preparation work in a hurry.
- 17. Never use the substitute tool if no suitable tool is available or prepared in the workshop.
- 18. Do not allow to move away the guard plate or to open the protection door when the lathe is switched on.
- 19. Do not let your hands or body be within the working area of moving parts.

Take care to move parts of the lathe which could drop down.

Take care of relative position between the hand or the body and the lathe.

Take care of the tool to be grasped and other parts inserted in the chuck or the workpiece.

Do not let your hands or body be on the place where they could be hurt by the chuck or the workpiece.

- 20. Take care not to push the handle, to operate the clutch or to witch on power supply to cause accident.
- 21. Master every function and all kinds of operation methods.
- 22. Never put your hands on the chuck or the workpiece to stop rotation of the spindle.
- 23. For the lathe driven by the clutch, in case the clutch is disengaged, the spindle should be stopped running otherwise the clutch or the brake device should be adjusted.
- 24. When the lathe is not in use, ensure to switch off power supply of the lathe.
- 25. Stop the rotation of the chuck before replacing the new workpiece.
- 26. Always take care to check if driving of the chuck, the belt pulley and driving parts are loose.
- 27. When the handle of the chuck is in the chuck, never start the spindle.
- 28. Do not operate the laths if the attention is not concentrated in order to avoid accident.
- 29. When preparing to make other operation of the lathe such as the tailstock, take care to avoid danger such as bumping or dropping.
- 30. Take care of guard cover of the chuck and other covers which cannot be loosened.
- 31. Put on the safety cap to operate the lathe if the operator has long hair to avoid danger due to hair is wounded by rotating parts of the machine.
- 32. Take special care to make operation if you are closing to rotating part of the machine.
- 33. Always pay attention to filing and deburring:

  Take special care when the file or the deburring tool is closing to the chuck;

  The file or the deburring tool could bump the chuck.
- 34. For the lathe driven by the clutch, take care that the clutch should be at the

- position the lathe is stopped when making measurement.
- 35. Take care of rotating and stopping positions of the spindle when hand is on the handle of the clutch.
- 36. Ensure the spindle of the lathe should be at the stop position when measuring the workpiece jigged on the chuck.
- 37. When the measuring meter is used on the lathe, ensure the motor is at the stop status.
- 38. Wear protective gears met with safe standard before making operation on the lathe;

It is not allowed if taking off protective gears in a short period of time before making operation on the lathe;

Wear protective gears properly.

- 39. Take cars of cuttings flying out from the lathe.
- 40. Select suitable guard plate on the operation position.
- 41. Never leap over or go around the chuck or the workpiece to make adjustment when they are in running status;

Never leap over or go around the chuck or the workpiece to take something;

Take care of the place the workpiece is put when making adjustment of the lathe or the workpiece;

Never leap over or go around the chuck or the workpiece to move the tool/lathe to other position;

Never leap over or go around the chuck or the workpiece to tighten parts on the lathe;

Never leap over or go around the chuck or the workpiece to remove iron chips.

- 42. Master suitable method to load, and never apply force from unsuitable position.
- 43. Never mount the workpiece too large or heavy toward the lathe.
- 44. Never mount the workpiece too large or heavy toward the operator.
- 45. Use necessary tools to treat the workpiece.
- 46. Never apply excessive force on the attachment or the operation lever.
- 47. Take care to jig the workpiece firmly.
- 48. Tighten all claws, nuts, screws and fasteners.
- 49. Always take care to use correct equipment.
- 50. Never make cutting beyond the ability of the lathe.
- 51. Do not apply excessive force to polish or to deburr.
- 52. Always take care to adopt suitable tool to deburr. Do not deburr in a hurry and take care of burrs on the chuck and the workpiece.
- 53. Switch off power supply to stop all movements of the lathe before replacing the exchange gears.
- 54. Take care if the chuck/parts could drop down when the lathe is in operation.

#### 1-4 Protection of the Chuck

The lathe is equipped with the guard of the chuck (option), which is suitable for the standard chuck.

In case the chuck guard is equipped on the lathe, it should be in a closed status before the spindle is running.

1) When the machine is equipped with larger chuck, the chuck guard should be replaced with one which has corresponding diameter with that of the chuck.

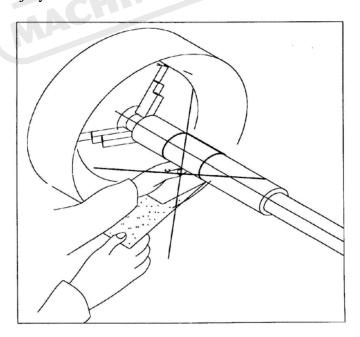
It is suggested that claws cannot extend out the outer diameter of the chuck in order to avoid bump with the chuck guard. For the sake of safe operation, always take care not to extend claws out of the outer diameter of the chuck.

2) When the face chuck is used, the chuck guard should be removed. If it is indeed required by customer, the special chuck guard can be provided but it should be confirmed that only the face chuck is used and any case should be responsible by customer himself.

#### 1-5 The Use of Emery Cloth in Metal Processing Can Cause Danger

In all accidents occurred on the lathe, most are from the use of emery cloth to cause breakage of fingers, or even to amputate occasionally.

When workpieces with different shapes are rotating on the lathe, if using emery cloth to deburr, to polish or to process finished sizes, it can cause the accident when winding emery cloth on the workpiece to be ground by two hands. If winding the emery cloth on the finger or to make rough grinding, the finger could be seized firmly to cause serious injury.



#### **Precautions**

The operator should have certain recognition and knowledge on the necessity to treat part by emery cloth on the lathe.

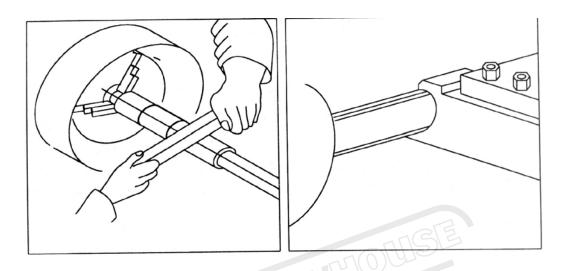
It is not needed to process by emery cloth in following cases:

If the requirement of the surface roughness is not so high;

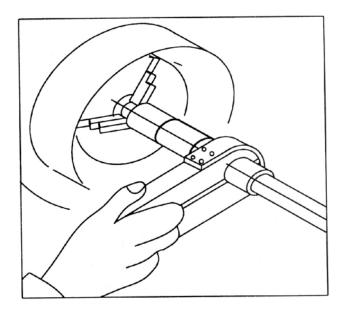
Make processing by turning or on special polisher or grinding machine, the finished sizes and surface roughness can be achieved well.

If technological rule defines that the workpiece should be ground by emery cloth, then the emery cloth should be used in following cases:

a. Nail the emery cloth on a quality wood board to grind;



- b. The emery cloth is fixed on and jigged by the tool holder to grind.
- c. The "Robust Grinder" consists of two pieces of jointed wood board and the emery cloth to make grinding and the workpiece to be polished can go through its hole.
  - d. The polish is made by the wire brush stuck with abrasive material.



Apply force at the both ends of the emery cloth to pull it upward. Never pull it

loosely or wind it on your finger or on the workpiece.

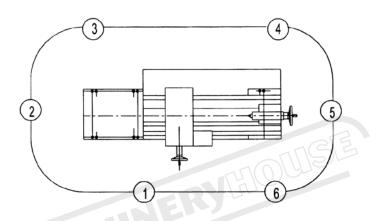
When the end of the workpiece is polished, only a short piece of the emery cloth shall be used as it cannot be wound.

When polish by the emery cloth is made, never operate by wearing gloves.

### 2. Level of Noise

According to GB/T16769-1997 <Measurement Method of Sound-Pressure-Level of Metal Cutting Machine>, measure the noise at six positions being one meter far from the lathe. The maximum noise should be less than 85dB (A).

Note: The measurement should be made at the spindle with standard chuck at the maximum speed.



## 3. Handling and Installation

#### 3-1 The Weight of the Lathe and Hoisting

The weight of the lathe is shown on the manual.

Ensure that the hoister has enough hoisting capacity before hoisting.

Preparations and safety examination:

- 1. Remove all unfixed devices:
- 2. Fix the tail on the tail end of the bed;
- 3. Fix the saddle on the bed and tighten the fixation press plate on the tail of the saddle;
- 4. Ensure screw, pin and fixation bolts on the ring of the hoister are reliably tightened;
  - 5. Only correct hoister can be used;
  - 6. Check ropes if they are robust and reliable in case they are used.

Do not wind the hoisting tool around the bed as it can cause curvature and damage of the leading screw and the smooth bar.

#### 3-2 Handling

When handling the packed lathe, tie ropes as per the hoisting mark and positions on the packing case to hoist, unload and place the machine levelly and stably without over tilting.

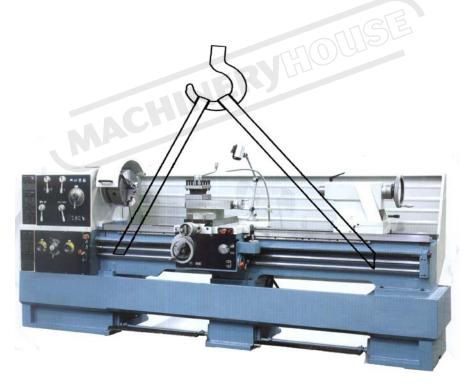
#### 3-3 Unpacking

After unpacking, first of all check appearance of the lathe and check attachments, tools and documents as per the packing list.

#### 3-4 Hoisting

For the lathe with central distance of 1500 mm, 2000 mm or 3000 mm, the hoisting tools should be set at the first reinforced bar nearing the spindle box of the bed and the furthest part of the bed. Put the wooden pad nearing the guide rail for the hoisting tool to avoid bumping the guide rail.

Hoist the machine gently off the ground, and make further adjustment of position of the saddle if necessary so as to make hoisting more balanced.



#### 3-5 Rules of Safe Hoisting

- 1. Do not let the hoister operate under the overload status.
- 2. Do not use damaged hoisting tools.
- 3. Position the hoisting tool correctly and do not place it on the sharp corner or let slide over the edge angle or along the edge of the machine.

- 4. Do not drop down the object.
- 5. Correctly position the hoisting tool for easy removal later.
- 6. Adopt smooth hook with inner radius no less than 50 mm.
- 7. Avoid to place over one hook on the same hoisting tool.
- 8. Avoid acid, alkaline and other dangerous articles.
- 9. The hoisting tool cannot be polluted by oil dirt.
- 10. Take care that friction could occur between the hoisting tool and the machine due to vibration in the course of transportation. Therefore the hoisting tool should have protect sleeve.

The hoisting tool is made of 100% polyester materials or steel wire with enough strength. It is suggested to put the protect sleeve on the hoisting tool to prevent its damage caused by sharp object.

Each set of the hoisting tool should have clear mark of safe working load with the safe coefficient of 6:1.

For the sake of safety, the hoisting tool should be coated with safe colors.

Make an overall check on the hoisting tool regularly.

#### 3-6 Installation

The lathe should be placed on the horizontal ground with robust foundation with enough space around it for easy processing and service. The lathe should be fixed on the foundation by bolts so as to make its performance into full play. It can be put into operation immediately after the level adjustment is made.

#### 3-7 Foundation

The steel pad should be placed under the screws for level adjustment no matter the adjustment iron is used or the lathe is fixed by screws.

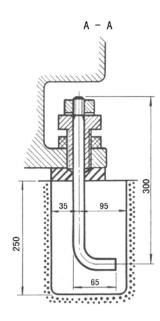
The steel pad has a thickness of 15-21 mm and the diameter of 50-80 mm.

#### 3-8 Position the Lathe by Adjustment Iron Pad

Place 8 iron pads on the base of the lathe to level the lathe or position the lathe n the foundation and adjust 8 leveling screws to make the load distributed evenly. Readjust the lathe one week later by the precision leveler and it can then be put into formal use.

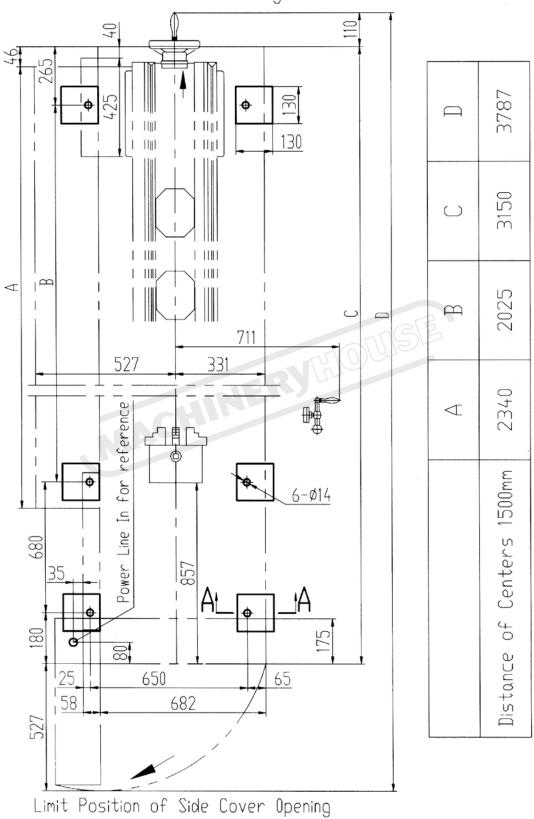
#### 3-9 Fix the Lathe by Anchor Screws

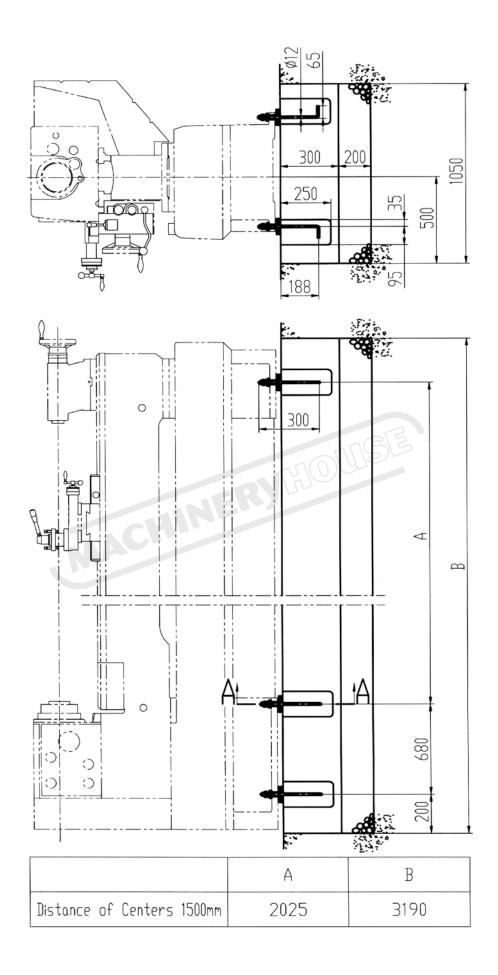
Shown as the foundation drawing, position the lathe on 8 anchor bolts on the foundation as per its sizes.



# C6266A Foundation Drawing

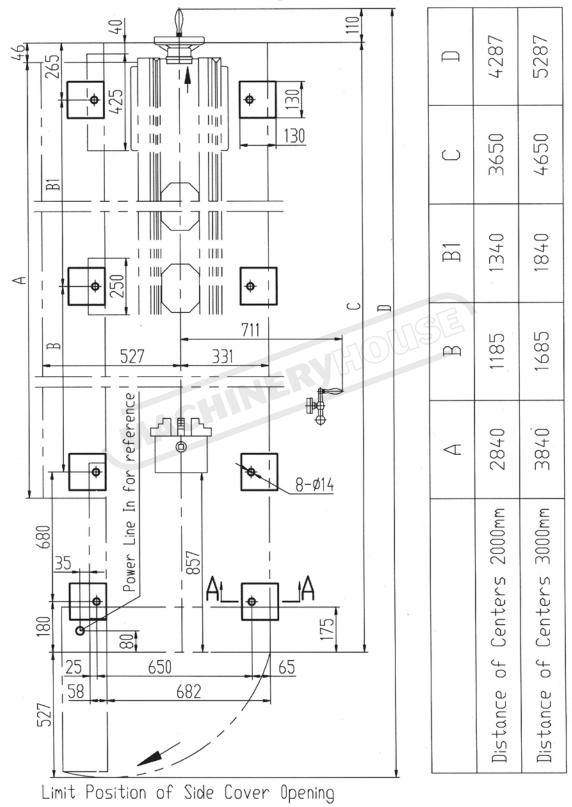


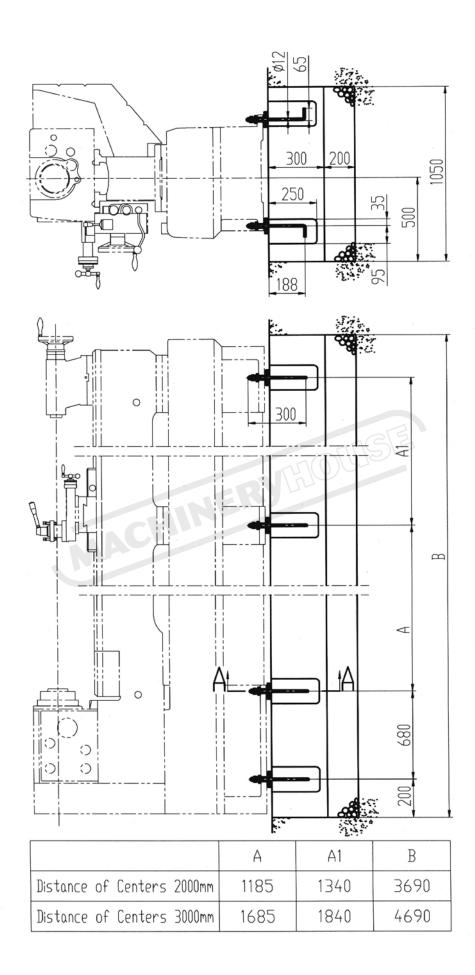




# C6266A Foundation Drawing

Limit Position of Tailstock Moving Backward





Adjust anchor bolts to make them be loaded evenly. Level the lathe by the precision leveler and tighten anchor bolts, then recheck the horizontal accuracy of the bed by the precision leveler.

#### 3-10 Lubrication Examination

In order to ensure good lubrication in the headstock and the feed box of the lathe, fill 20 liters of L-FC15 bearing oil (or MOBIL Velocite10) into the oil tank in the front leg of the lathe and adjust the oil level; fill L-HM68 (or OBIL D.T.E.26) wear resisting hydraulic oil into the carriage apron and make its level no over the oil window.

Before each shift, fill oil in the saddle, the cross slide and the bed tail by the oil

See the lubrication part in the maintenance section of the manual.

#### 3-11 Spindle Bearings of the Headstock

Though all bearings of the headstock have been adjusted and tested before leaving the factory, it is suggested to make further commissioning of the bearings of the headstock before long-term operation at high speed.

Suggested time of speed of commissioning:

Run for 1 hour at 15% of the highest speed; Run for 30 min at 30% of the highest speed; Run for 30 min at 80% of the highest speed.

3-12 Cleaning Before operating the lathe, clean anti-rust oil on rails, leading screw, feed bar, taper hole of the spindle and sleeve of the bed tail by kerosene.

Do not use unauthorized solvent, cellulose solvent or gasoline as they are dangerous and can damage paintings.

After cleaning, all smooth and processed surfaces should be oiled.

#### 3-13 Leveling

Make leveling by the precision leveler (0.05mm/m) mounted on the cross slide. Make leveling of the lathe by adjusting relative anchor bolts from one end to the other and from the rear part to the front part. The longitudinal and lateral leveling should be done as per stipulations on the Item G1 in <Conformity Certificate> of the lathe so as to avoid torsion.

## 4. Power Supply and Connection

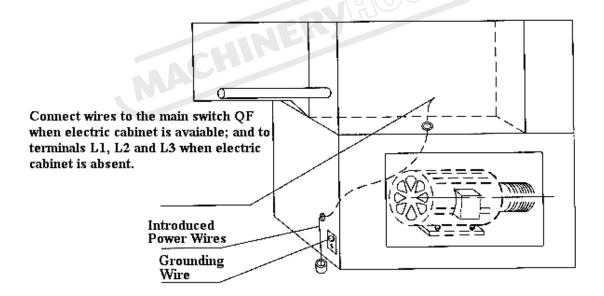
#### **Input Voltage**

The power supply is three-phase  $380 \text{ V} \pm 10\%$ , 50 Hz, and the lathe with power supply of 220 V, 60 Hz is also available.

The recommended fuse is 25 A (380 V).

Power supply introduced to each lathe should run through an external distribution cabinet equipped with independent fuse, from which wires shall be led into the electrical cabinet of the machine and connected with terminals inside the cabinet. The grounding wire should be also connected.

The correct rotation direction of the main motor can be defined as follows: set the left/right screw handle on the headstock at the position of the right screw and lift up the start bar (10) (see the operation system drawing), the spindle should rotate towards normal positive direction. If the rotation direction of the spindle is wrong, it should switch off the main power supply, exchange any wires from two phases in three-phase wires introduced into the electric cabinet. The electric schematic drawing, components arrangement drawing, list of components and wiring diagram are all in the Service Atlas of the Lathe.



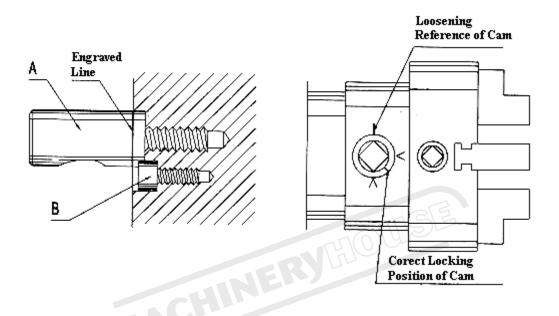
#### 5. Chuck and its Installation

When mounting the chuck and the surface plate, first of all to ensure clean of the spindle and the taper part of the chuck.

For the spindle which is locked by D-type cam, it should ensure that the cam is locked at right position. When the new chuck is mounted, it should readjust the lock bolt (A) of the chuck. Therefore it should remove the lock screw (B) first, adjust each

lock bolt in turn to make the engraved lines on them be flush on the rear end surface of the chuck, and make the round sector be identical with the hole of the lock screw. Then mount the lock screw (B) and mount the chuck on the spindle, lock six cams on the spindle head in turn.

The correct lock position of the cam should make the locking engraved line on each cam lies between two V letters on the spindle head. If the cam is not locked at this position, it should dismount the chuck or the surface plate and make adjustment again as per procedures mentioned above.



#### Warning

When adopting the four-jaw chuck and the surface plate, be sure to take care of the limit of the speed of the spindle. For the four-jaw chuck with  $\,^{\varphi}315$  mm, the speed of the spindle should be no larger then 850 r/min; for the surface plate with  $\,^{\varphi}350$ mm, the speed of the spindle should be no larger then 550 r/min.

For the surface plate with  $\Phi$ 450mm used by the saddle lathe, the speed of the spindle should be no larger than 500 r/min.

(Subject to the data specified on the signboard of the lathe).

When the steel-made three-jaw chuck is used, the speed of the spindle of new three-jaw chuck with  $\Phi$  250 mm should be no larger then 2500 r/min, and that of old three-jaw chuck with  $\Phi$  250 mm should be no larger then 1600 r/min.

The chuck with defects such as crack etc. is not allowed to use on the lathe.

The steel plate three-jaw chuck is recommended.

## 6. Safe Operation of the Lathe

#### **Safe Regulations of the Lathe**

Before starting the lathe, read the operation instruction on the manual carefully.

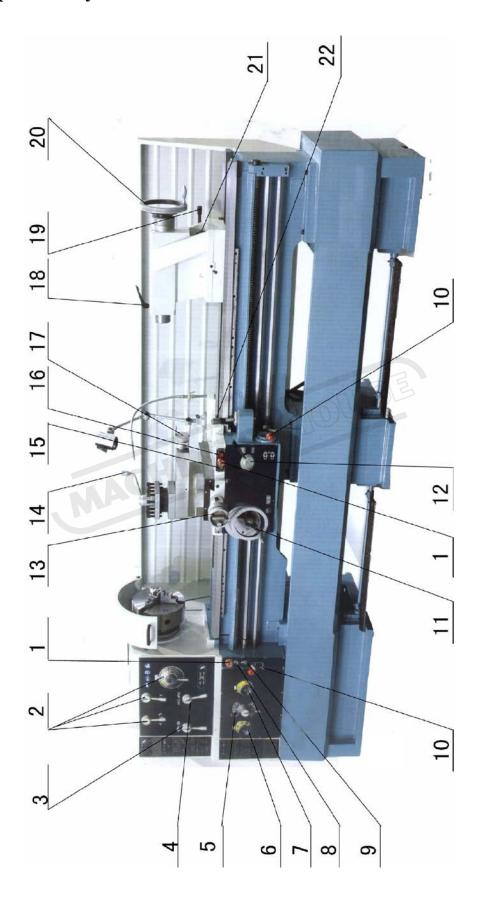
For the sake of safety, please read the guidance of safe operation at the beginning of the manual.

#### **Key points are as follows:**

- 1. Ensure to master the way to stop the machine before starting it.
- 2. Stop operation of the lathe immediately in case any accident occurs.
- 3. Ensure cutting speed, feed and cutting depth to be suitable with the processed parts and the jigger.
- 4. When the spindle is rotating, do not contact the tool, the chuck and the workpiece.
  - 5. Wear and use suitable protective articles and devices.



# 7. Operation System



- 1. Emergency Stop Button
- 2. Selection Handles of Spindle Speed
- 3. Left/Right Screw Handles
- 4. Pitch Extension Handle
- 5. Feed Basic Handle
- 6. Screw Selection Handle
- 7. Double Feed Handle
- 8. Cooling Pump Switch
- 9. Power Supply Lamp
- 10. Spindle Clutch Handle
- 11. Apron Longitudinal Hand-Wheel
  Button
- 12. Open/Close Nut Handle

- 13. Lateral Hand Wheel
- 14. Tool Holder Lock Handle
- 15. Main Motor Start Handle
- 16. Main Motor Stop Handle
- 17. Small Tool Holder Handle
- 18. Tail Sleeve Lock Handle
- 19. Tail Fast Lock Handle
- 20. Tail Hand Wheel
- 21. Tail Extra Lock Nut
- 22. Tool Holder Longitudinal/LateralSelection Cross Handle and Fast

## 7-1 Meaning and Function of Operation Signs

| MMM           | -   | Turn Leftward             | Right Feed        |
|---------------|-----|---------------------------|-------------------|
| WWA           |     | Turn Rightward —          | Left Feed         |
| <b></b>       |     | Basic Pitch/Basic Feed    |                   |
| <b>₩</b> %    |     | Extended Pitch (8 folds)  |                   |
| ستم           |     | Switch of Cooling Pump    |                   |
|               |     | Indication of Power Supp  | oly               |
| mm            |     | Metric Thread             |                   |
| mπ            |     | Module Thread             |                   |
| 1/in          |     | Inch Thread               |                   |
| π/in          | ACH | Pitch Thread              |                   |
| W x mmy       |     | Longitudinal Feed of Spi  | ndle per Rotation |
| ₩x mm/O       |     | Lateral Feed of Spindle p | per Rotation      |
| $\overline{}$ |     | Turning Thread            |                   |
| $\bigvee$     |     | Tool Feeding              |                   |
|               |     | Open/Close Nut Opening    | ,<br>-            |
| ANN           |     | Open/Close Nut Closing    |                   |

#### 7-2 Electric Control

The main switch of power supply of the lathe is located at the rear of the lathe. When it is switched on, the lamp of power supply (9) lights. There is the interlocked switch inside the side cover to switch off power supply when the door is opened.

The control of the main motor is in front of the saddle to control start and stop of the main motor. When the start button (15) is pressed down, the main motor starts to rotate. When the stop button (16) or the emergency stop button (1) is pressed down, the main motor stops running.

The control button of the fast-moving motor of the carriage apron is located at the top of the handle (21) on the carriage apron box to control start and stop of the fast-moving motor of the apron.

The control (8) of the cooling pump motor is in front of the feeding box to control start and stop of the cooling pump motor.

#### 7-3 Turning and Braking of the Spindle

The control of the main motor is located in the front of the saddle to control start and stop of the main motor. When it is pressed down, the main motor starts to rotate. Lift up the handle (10) of the clutch, the positive-turning clutch of the spindle is engaged and the spindle rotates positively while the handle (10) is pressed down, the negative-turning clutch of the spindle is engaged and the spindle rotates negatively. When the handle of the clutch of the spindle is in the middle, the clutch of the spindle is disengaged and the spindle is braked by the brake belt in the headstock and the lever.

#### 7-4 Speed of the Spindle

16 kinds of speed of the spindle can be obtained by selecting position of the handle (2) on the headstock.

Warning: The spindle system is not allowed to change speed in motion.

#### 7-5 Selection of Pitch and Feed

Under normal condition, selection of kinds of thread can be achieved without changing the change gera no matter for metric thread, inch thread, module thread or pitch thread. All obtained pitch and feed are given on the signboard of the feeding box. The pitch obtained from the extension pitch is generally 8-folds of the normal one. Take care that the extension pitch can only be achieved when the speed handle of the spindle is on position and corresponding speeds of the spindle are 70, 50, 35 and 25 r/min

In case the speed handle of the spindle is on position (X, H), no extension pitch can be achieved.

Warning: When the spindle is rotating at high speed, no extension pitch can be

selected, and the change gear shall be equipped as per the schematic drawing on the signboard.

For those threads not listed on the signboard and our manual, please contact with the technical department of our company.

When the double feed handle on the feeding box is at positions V-VIII, the thread function can be achieved.

When the double feed handle on the feeding box is at positions I-IV, the tool feeding function can be achieved.

### 7-6 Positive/Negative Direction of the Leading Screw

The handle (3) of the headstock can change turning direction of the leading screw and the smooth bar thus to achieve transfer of left/right threads.

Processing way of the first thread: by means of small tool holder to move forward one pitch each time at the beginning to process multiple threads. At this time the tool holder has a 90° angle with the axial line of the cross slide; by means of a driving plate with graduations, turn the workpiece one graduation each time before processing to process multiple threads; mount the pad with the thickness identical with the pitch of thread on the chuck to process multiple threads.

#### 7-7 Control of the Slide of the Saddle

By means of longitudinal and lateral hand wheels (11) and (13) to operate the small tool holder, or make feeding by the cross handle (21).

Normally set the left/right thread handle on the headstock at the position of eth right thread. At this time the direction of the cross handle is just the direction of feeding of the tool holder. If pressing down the button on the end of the cross handle the tool holder can move fast.

When the open/close nut handle on the carriage apron is opened, above processing can then be carried out. The open/close nut is interlocked with the tool feeding.

#### 7-8 Operation of Feed Box

There three sets of handle on the feed box: (5), (6) and (7).

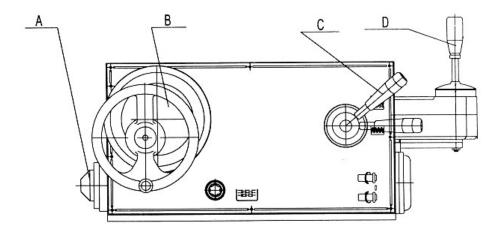
The handle (6) is used to select types of thread. Four kinds of thread are available: metric, incj, module and pitch threads.

The handle (5) is a double-handle A and B in basic group.

The handle (7) is a double feed one. When it is at positions of I, II, III and IV, the smooth bar can rotate while when it is at positions V, VI, VII and VIII, the leading screw can rotate.

Under normal condition, selection of kinds of thread can be achieved without changing the change gear no matter for metric thread, inch thread, module thread or pitch thread.

#### 7-9 Operation of the Carriage Apron

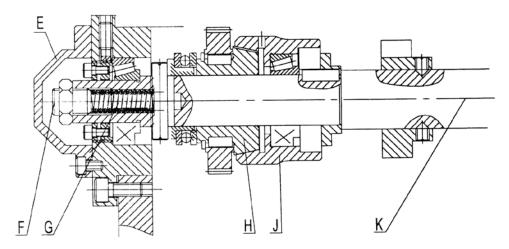


- A. Safe Clutch with Overload Protection
- C. Open/Close Nut Handle

- B. Carriage Apron Hand Wheel
- D. Cross Handle

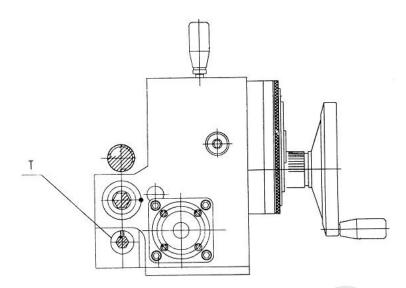
#### 7-10 Adjustment of Feed Safety Device

In the left flange of the carriage apron there is a set of safe clutch for overload protection of feed. When the feeding force of the tool holder is over the set load, the safe clutch shall slip to stop feed of the tool holder. The size of the load to be transmitted depends on the pressure of the spring and is adjusted well when it leaves the factory. The customer can adjust it as required. When adjusting, remove the cover plate E on the left end of the carriage apron and make the spindle of the lathe run at a lower speed, adjust the screw F by the spanner to adjust the pressure of the spring G thus to adjust the load transmitted by the overload protection mechanism. In case the feeding force is over the et load, the clutch H slips in the internal taper sleeve J and the motion transmitted by the smooth bar is stopped at the clutch H and the internal taper sleeve J.



7-11 Carriage Apron Hand Wheel

By means of the cross handle to make the saddle feed longitudinally or to move fast, the carriage apron hand wheel shall disengaged automatically and stop rotation. Only the cross handle is at the central position can the carriage apron hand wheel make the saddle move longitudinally.



#### 7-12 Longitudinal Stop Iron of the Carriage Apron

The longitudinal stop iron T is set at the start bar of the lathe on the left side of the carriage apron. The lock screw on it can make the carriage apron stop longitudinally and automatically at required position so as to carry out single-way fixed-travel turning.

#### 7-13 Locking of the Saddle

The lock screw of the saddle can lock the saddle tightly on the rail of the saddle to prevent its motion along the direction of the bed.

#### 7-14 Cooling

The operation of the cooling pump is controlled by means of the switch of the cooling pump on the feed box.

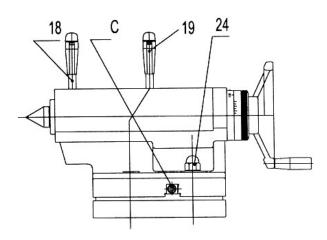
The cooling fluid flows out from the vertical pipe and the hose.

The cooling liquid box is located at the middle leg of the lathe with the volume of 32 liters. Any kind of industrial cooling liquid can be used.

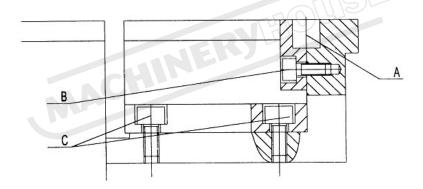
#### 7-15 Tailstock

The lock handle (19) can make the tailstock be locked on the rail of the bed rapidly and is used on finish turning and semi-finish turning to prevent the tailstock to move along the direction of the bed. When making rough turning or other large load cutting, the lock screw of the tailstock (24) should be also locked. The lock handle of the tail

sleeve (18) is used to lock the tail sleeve. When using the tailstock to process taper part, both screws (C) at both sides of the tailstock should be also adjusted to make the tailstock move laterally to the required distance, then lock the handle (19) and screws (C).



#### 7-16 Mounting/Dismounting of the Saddle



#### **Steps to Dismount the Saddle**

- 1. Clean the periphery of the saddle;
- 2. Remove the fixing pin A;
- 3. Remove the screw B;
- 4. Remove the screw C;
- 5. Remove the protective cover of the leading screw;
- 6. Dismount the saddle.

### **Steps to Remount the Saddle:**

- 1. Clean the joint faces of the saddle and ensure their cleanness;
- 2. Ensure the bed of the lathe to be on qualified level status;

- 3. Gently move the saddle to the position to be mounted;
- 4. Put on the screw B and the cylindrical pin A and make adjustment by the rubber hammer.
  - 5. Tighten screws C and B.



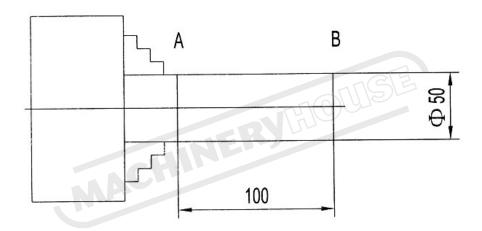
#### 8. Maintenance

#### 8-1 Accuracy of the Lathe

Before the formal operation of the lathe after it is installed, it is necessary to make examination upon the accuracy of the lathe. During the course of operation, check the accuracy of the lathe regularly so as to ensure the accuracy of the lathe for a long term.

#### 8-2 Check the Headstock

After examination of the accuracy of the lathe, it is suggested to check the accuracy of the headstock. Jig a steel bar with the diameter of 50 mm and the length longer than 150 mm on the chuck without finish turning the excircle, the cylindricity should be within 0.01 mm in the length of 100 mm.

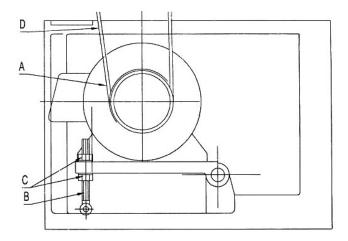


#### 8-3 Check the Tailstock

Place a ground steel axle with the length of 300 mm, check the accuracy of the tailstock by moving the micrometer gage along the central line. Adjust the accuracy of the tailstock as per the way to adjust the screw (C) of the tailstock.

#### 8-4 Adjustment of the Driving Belt

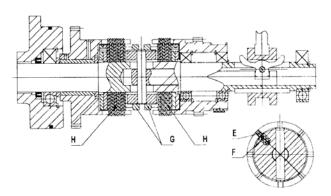
Switch off power supply to check the tension force of V-belt. Press the point D on each V-belt by hand. Loosen two lock nuts C on the bolt B to adjust the tension then tighten both top and bottom lock nuts in turn.



#### 8-5 Adjust the Clutch of the Tailstock

The headstock has two lamella clutches to transfer torques of positive and negative rotation of the spindle respectively. For the lathe equipped with the standard chuck, if the start time from stop to high speed is over 4 seconds, the clutch should be adjusted as follows:

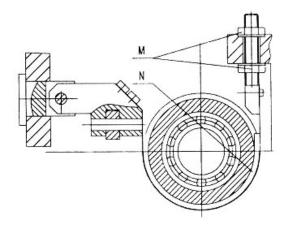
- 1. Switch off powers supply of the lathe;
- 2. Set the spindle at the neutral position - "O";
- 3. Open the cover of the spindle box;
- 4. Press down the lock pin E to press the spring, turn the nut G to adjust pressure of the friction disc H;
  - 5. Reset the lock pin to one notch of the nut G and close the cover of the box.



If the overshoot occurs, the clutch shall be overheated and damaged.

#### 8-6 Adjustment of the Brake of the Headstock

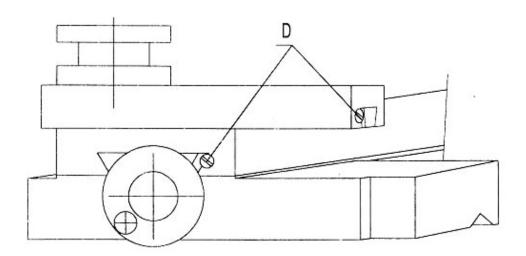
There is a friction brake in the headstock at the transition position of both positive and negative rotations. During the course of operation, if the brake time from high speed to stop is over 8 seconds, the brake is required to make adjustment as follows:



- 1. First of all, switch off the main power supply of the lathe, then set the high/low speed handle of the spindle to the neutral position and set the start bar at the middle position;
  - 2. Open the cover of the spindle box;
- 3. Adjust pressure of the brake belt N by means of the adjusting nut M to the suitable position where other axles shall not rotate when turning the axle of the pulley;
  - 4. Close and reset the cover of the box.

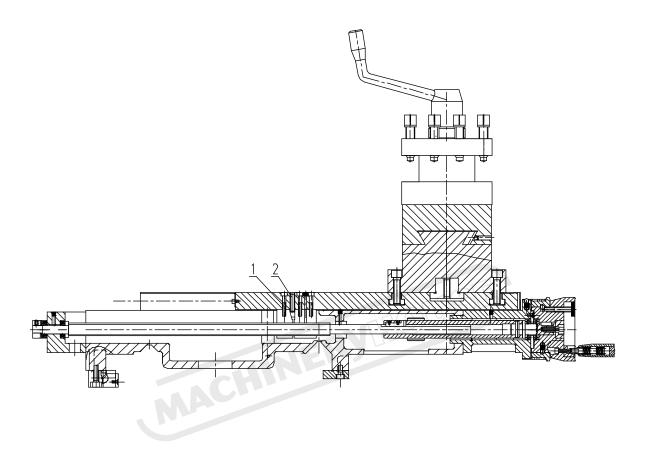
#### 8-7 Gib of the Rail

There are the wedge gibs on the cross slide and the small tool holder to compensate wearing. When adjusting, first of all loosen the rear gib screw D then tighten the front gib screw, at last tighten the rear gib screw. Only a bit adjustment could be done each time. Before the gibs are adjusted, clean and lubricate gibs so as to keep smooth operation.



8-8 Adjustment of Cross Leading Screw Nut

As the friction between the leading screw and the nut can cause worn-out of the nut and make the free stroke of the lateral graduation ring too large. At this time you should adjust the clearance between the leading screw and the nut. Loosen the top screw 1 and suitably tighten the screw 2, then tighten the top screw 1 if the clearance is considered suitable.



#### 8-9 The Change Gear

The change gear of the lathe is need not to be replaced under normal condition to make turning and processing of various kinds of screws. It should be replaced only when special thread is processed.

When processing 11 1/2 and 19 inch thread, the change gear should be replaced.

When processing metric thread with pitch larger than 80 mm or special pitch, the change gear should be changed.

The change gear which takes feeding function is the same with that taking normal pitch.

#### 9. Lubrication

#### 9-1 The Headstock

The continuous lubrication of the spindle bearings, headstock gears and all axles are made and distributed by the oil pump and the oil distributor in the headstock. The oil pump is the cycloid lubrication pump and is driven by the axle I in the headstock. The speed of the oil pump is in no relation with that of the spindle. The oil window is located on the right side of the headstock for check oil supply

Note: Only the oil is seen to flow out can the lathe be started.

#### 9-2 Feeding Box

The return oil of the headstock is used to lubricate gears and bearings in the feeding box, then returns to the oil tank via the return pipe.

#### 9-3 Oil Tank

The oil tank is inside the front leg of the lathe with volume of 13.5 liters. Fill L - FC15 bearing oil (or Mobil Velocite 10/ESSO Spinesso 15) into the oil tank.

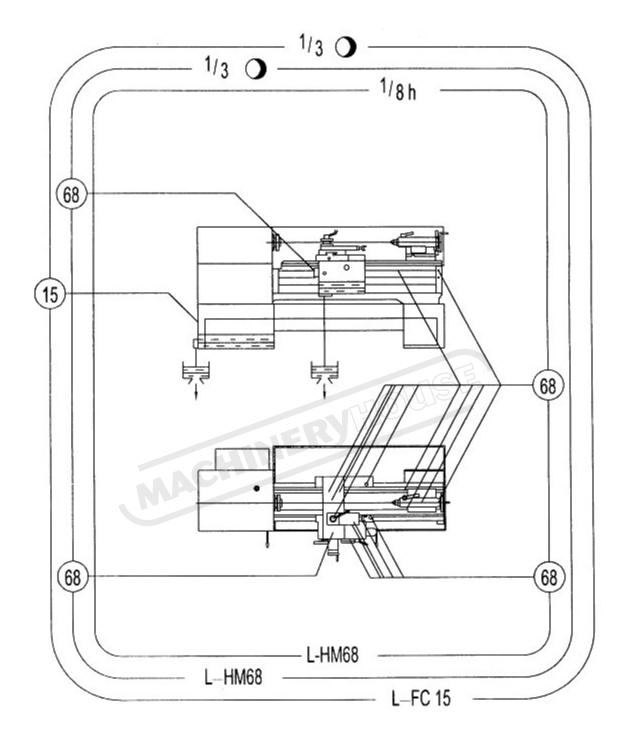
#### 9-4 Carriage Apron

The oil bath lubrication of the gears and bearings of the carriage apron are made by means of spraying style. The oil window is in front of the apron and the oil drain hole is at the bottom of the apron. The lubrication oil is: L-HM68 or L-HM46, MOBIL DTE 26.

### 9-5 Change Gear

The change gear is lubricated by the oil distributor in the headstock.

#### 9-6 Indication of Lubrication of the Lathe



Fill L-FC15 bearing oil of 13.5 liters into the oil tank once every three months.

Fill L-HM68 hydraulic oil about 1.5 liter into the carriage apron and the cross slide once every three months.

Fill L-HM68 hydraulic oil on all rails, leading screw, tail and tool holder once every shift.

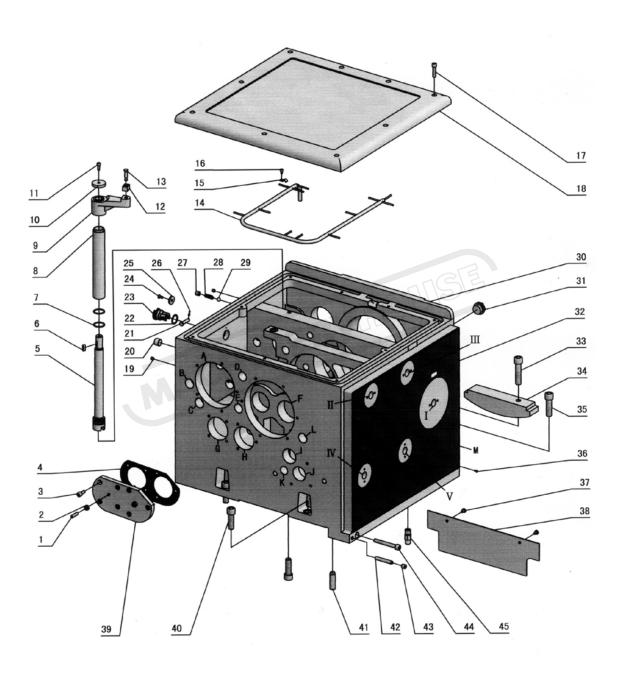
### 10. Normal Troubles and Remedies

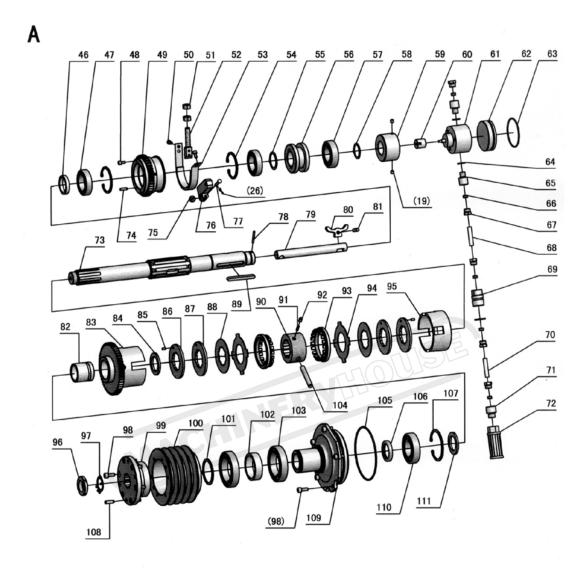
| S/N | Normal Trouble   | Causes   | Remedies   |
|-----|--|--|--|
| 1   | Higher temperature rising of the spindle bearings. The max. temperature over 70°C or temperature rising over 40°C.   | <ol> <li>The brand of lubricating oil is not right.;</li> <li>Lubrication oil is not suitable (much or less);</li> <li>Clearance of the spindle bearing is too small.</li> </ol>   | <ol> <li>Fill suitable lubricating oil in the spindle bearings;</li> <li>Replace with lubricating oil of right brand;</li> <li>Readjust clearance of the spindle bearings.</li> </ol>  |
| 2   | The clutch in the headstock is heating and temperature is higher.  | 1. Bad lubrication or oil couldn't be supplied; 2. Too small clearance of the clutch; 3. Large clearance at the pin roll of the pull rod of the clutch and the actual operation stroke of the friction disc is affected. | 1. Check oil supply of the oil pipe in the headstock; 2. Adjust clearance of the clutch in the headstock; 3. Check all pin rolls of the pull rod of the clutch, and replace them if worn out or deformed largely.  |
| 3   | In operation of the lathe, after the cross handle at the right side of the apron is closed, the toll holder has no feed or only has motion in one direction. | The left/right handle in front of the headstock is in the middle position.   | When the spindle rotates positively the left/right handle points rotation rightward while the spindle rotates negatively the left/right handle points rotation leftward. No such a limit when turning thread, which is in relation to thread direction of the workpiece. |

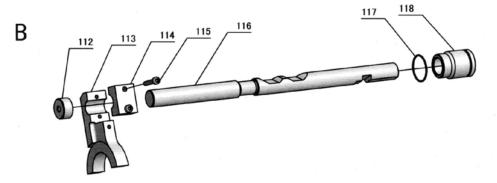
| S/N | Normal Trouble   | Causes   | Remedies  |
|-----|--|--|---|
| 4   | The spindle vibrates in course of turning.                                 | Clearance of the front bearings of the spindle is too large.   | Readjust the front bearings of the spindle and reduce clearance of bearings.  |
| 5   | No oil in the oil window of the tailstock after the main motor is started. | 1. Too lower of oil temperature; 2. No suction of lubrication oil pump due to leak of pipe; 3. Filtering screen is blocked and no oil is sucked; 4. Gas leak from large gap due to worn-out on end face of rotor of the oil pump or between the axle and the sleeve. | 1. Check ambient temperature and oil temperature in winter and the oil pump couldn't work if temperature is too low; 2. Check tightness of the oil pump and pipe connection by dry tallow, make good sealing if gas leak occurs; 3. Remove the oil tank and clean or replace the filtering screen; 4. Repair or replace the oil pump. 5. Fill enough lubrication oil in the oil tank. |
| 6   | The lock position of small tool holder is not fixed.                       | The positioning part of the small tool holder is blocked.  | Fill lubrication oil in the positioning part of the small tool holder.  |

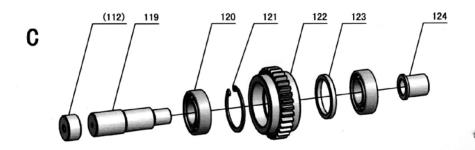
## 11. Parts List Assembly

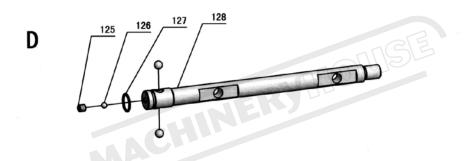
### Headstock

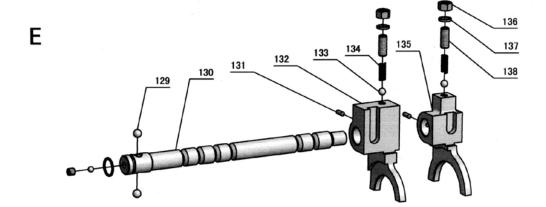


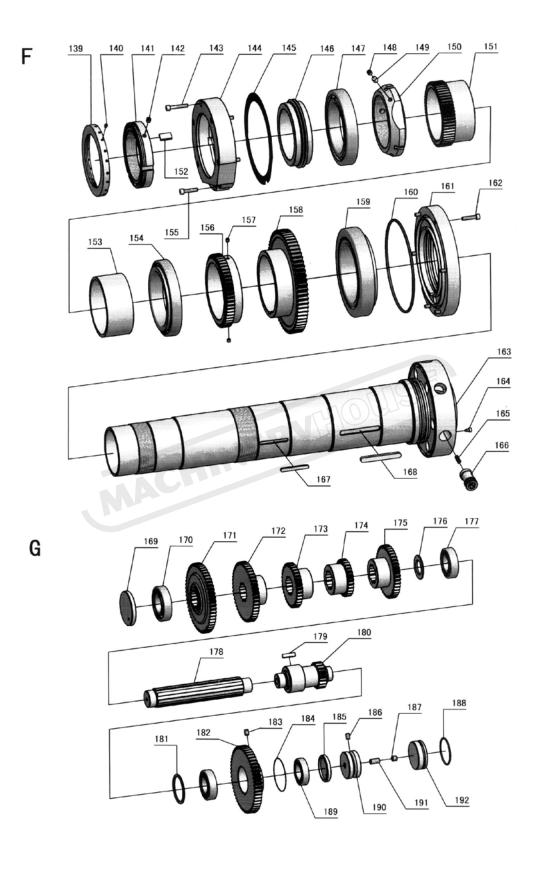


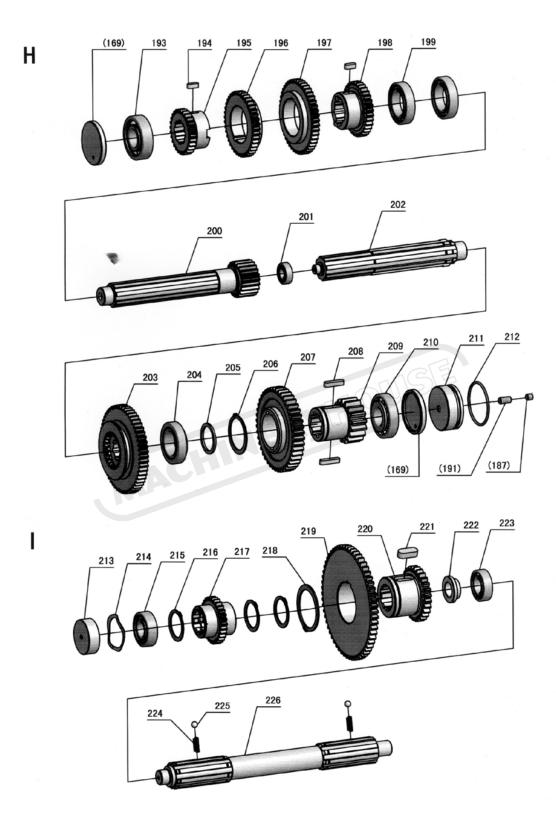


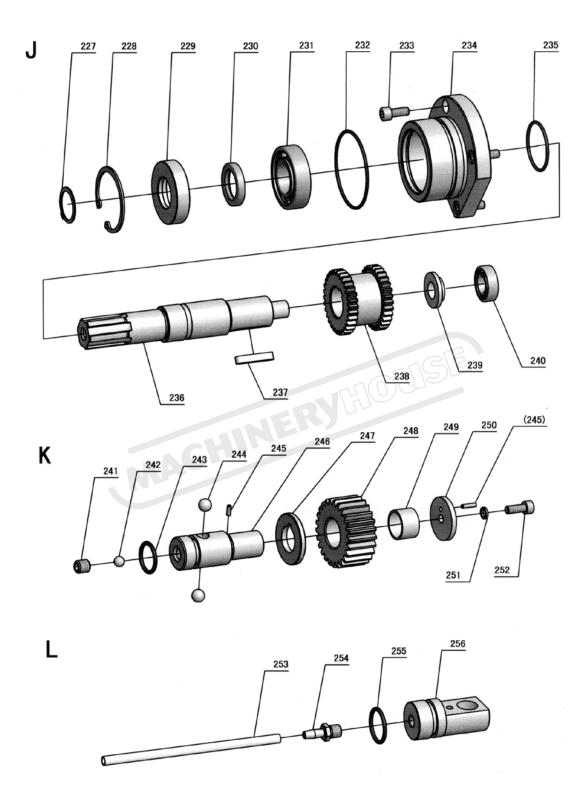


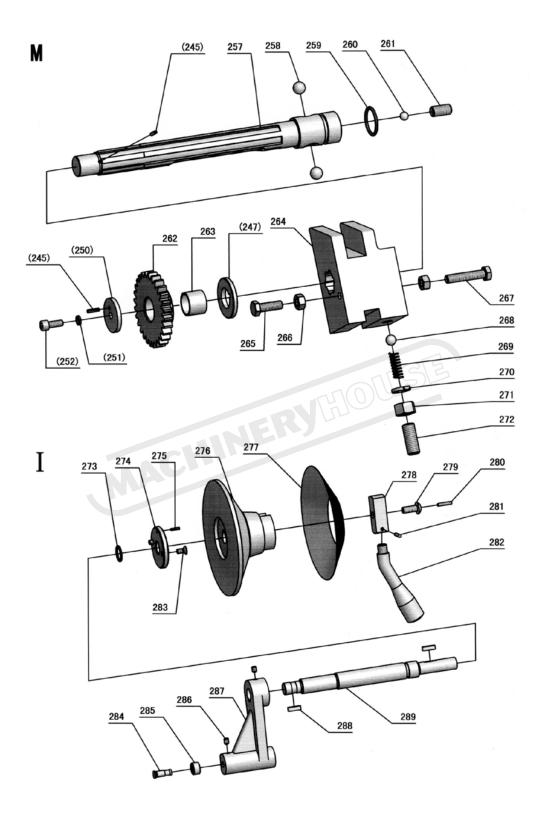


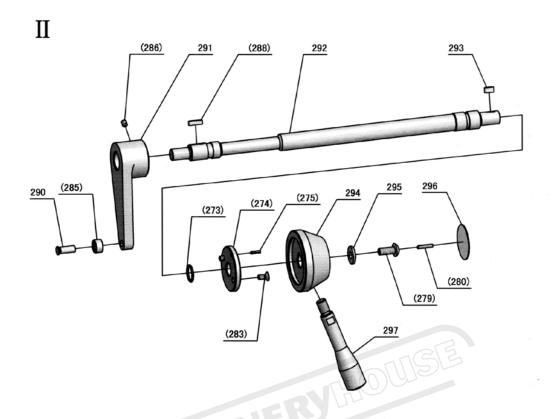


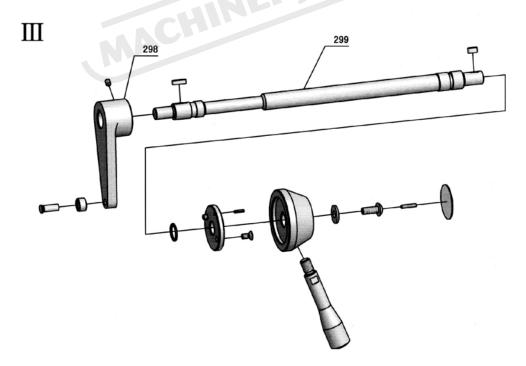


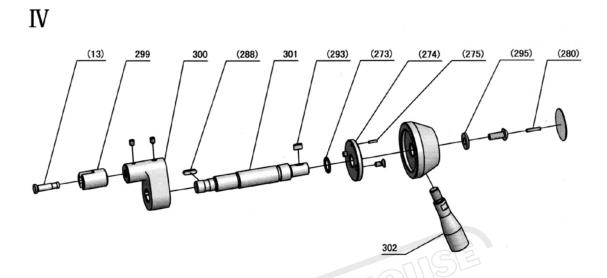


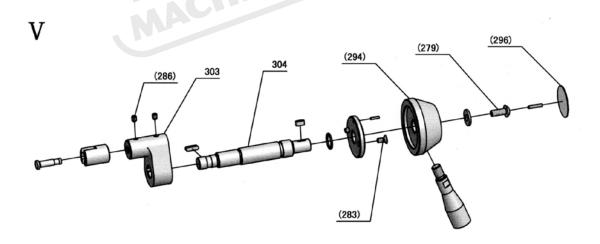












| No. | Part No.       | Name                         | Specifications | Qty. |
|-----|----------------|------------------------------|----------------|------|
| 1   | GB77-85        | Screw                        | M8×30          | 2    |
| 2   | GB6170-86      | Hexagon Nut Type 1           | M8             | 2    |
| 3   | GB70-85        | Hexagon Socket Cap Set Screw | M8×20          | 7    |
| 4   | C6266A-04-81-1 | Gasket For End Cover         |                | 1    |
| 5   | C6266A-04-121  | Vertical Shaft               |                | 1    |
| 6   | GB1096-79      | Round-Head Ordinary Flat Key | A6×20          | 1    |
| 7   | GB3452.1-1992  | Rubber O Ring                | 28×2.65        | 2    |
| 8   | C6266A-04-122  | Shaft Sleeve                 |                | 1    |
| 9   | C6266A-04-119  | Swinging Arm                 |                | 1    |
| 10  | C6266A-04-120  | Washer                       |                | 1    |
| 11  | GB70-85        | Hexagon Socket Cap Set Screw | M6×16          | 1    |
| 12  | C6266A-04-118  | Slide Block                  |                | 1    |
| 13  | C6266A-04-99   | Mandrel                      |                | 3    |
| 14  | C6266A-04-134  | Oil Pipe                     |                | 1    |
| 15  | 25595-1        | Pipe Clip                    | ф 10           | 2    |
| 16  | GB70-85        | Hexagon Socket Cap Screw     | M5×8           | 2    |
| 17  | GB70-85        | Hexagon Socket Cap Screw     | M8×35          | 9    |
| 18  | C6266A-04-02   | Spindle Box Cover            |                | 2    |
| 19  | GB80-85        | Screw                        | M8×8           | 4    |
| 20  | C6266A-04-131  | Technological End Cap        |                | 1    |
| 21  | C6266A-04-125  | Pin Roll                     |                | 1    |
| 22  | GB3452.1-1992  | Rubber O Ring                | 23.6×2.65      | 1    |
| 23  | C6266A-04-123  | Brake Support                |                | 1    |
| 24  | GB819-85       | Screw                        | M6×12          | 1    |
| 25  | C6266A-04-124  | Retaining Ring               |                | 1    |
| 26  | GB91-86        | Cotter Pin                   | 2×12           | 2    |
| 27  | GB77-85        | Hexagon Socket Set Screw     | M12X12         | 1    |
| 28  | C6266A-04-132  | Compression Spring           |                | 1    |
| 29  | GB308-84       | Steel Ball                   | ф 10           | 1    |
| 30  | C6266A-04-01   | Spindle Box Body             |                | 1    |
| 31  |                | Aluminum Alloy Oil Glass     | M27×1.5        | 1    |
| 32  | C6266A-04-116  | Large Rating Plate           | δ1.5           | 1    |
| 33  | GB70-85        | Hexagon Socket Cap Screw     | M16×70         | 1    |
| 34  | C6266A-04-135  | Pressure Plate               |                | 1    |
| 35  | GB70-85        | Hexagon Socket Cap Screw     | M16×55         | 2    |
| 36  | GB818-85       | Screw                        | M3×6           | 12   |
| 37  | GB/T70.2-2000  | Screw                        | M6×10          | 2    |
| 38  | C6266A-04-136  | Baffle Plate                 |                | 1    |
| 39  | C6266A-04-81   | End Cover                    |                | 1    |
| 40  | GB70-85        | Hexagon Socket Cap Set Screw | M16×50         | 3    |

| No. | Part No.        | Name                         | Specifications | Qty. |
|-----|-----------------|------------------------------|----------------|------|
| 41  | GB120-86        | Pin                          | 16×55          | 1    |
| 42  | GB119-86        | Cylindrical Pin              | A10×60         | 1    |
| 43  | GB77-85         | Screw                        | M12×12         | 1    |
| 44  | GB70-85         | Hexagon Socket Cap Screw     | M10×80         | 1    |
| 45  | C6266A-04-139   | Oil Scavenge Connecter       |                | 3    |
| 46  | C6266A-04-46    | Washer                       |                | 1    |
| 47  | GB278-89        | Ball Braring                 | 80108          | 2    |
| 48  | GB70-85         | Hexagon Socket Cap Screw     | M6×12          | 4    |
| 49  | C6266A-04-06    | Bearing Block                | M2.5 , Z42     | 1    |
| 50  | GB70-85         | Hexagon Socket Cap Set Screw | M6×12          | 4    |
| 51  | GB6170-86       | Hexagon Nut Type 1           | M12            | 2    |
| 52  | C6266A-04-130   | Screw Bolt                   |                | 1    |
| 53  | C6266A-04-129   | Brake Ribbon                 |                | 1    |
| 54  | GB893.2-86      | Circlip For Hole             | 68             | 2    |
| 55  | GB894.1-86      | Circlip For Shaft            | 40             | 1    |
| 56  | C6266A-04-48    | Pressing Sleeve              |                | 1    |
| 57  | GB278-89        | Ball Braring                 | 80207          | 1    |
| 58  | GB894.1-86      | Circlip For Shaft            | 35             | 1    |
| 59  | C6266A-04-146   | Oil Pump Coupling Sleeve     |                | 1    |
| 60  | C6266A-04-137   | Oil Pump Coupling            |                | 1    |
| 61  | SNBY2.5/0.5     | Oil Pump                     |                | 1    |
| 62  | C6266A-04-58    | Stopper                      |                | 1    |
| 63  | GB/T3452.1-1992 | Rubber O Ring                | 73×2.65        | 1    |
| 64  | G52-2           | Combined Sealing Washer      | 14             | 2    |
| 65  | C6246B-101087   | Connector Body M14/10        |                | 2    |
| 66  | 25677           | Biconical Cutting Ferrule    |                | 5    |
| 67  | 25568           | Oil Pipe Connecter           |                | 5    |
| 68  | 30242           | Nylon Pipe                   | ф 10×320       | 1    |
| 69  | C6266A-04-140   | Straight Coupling            |                | 1    |
| 70  | 30242           | Nylon Pipe                   | ф 10×940       | 1    |
| 71  | C6246B-101088   | Connector Body M18/10        |                | 1    |
| 72  | WU-16×180-J     | Oil Filter                   |                | 1    |
| 73  | C6266A-04-51    | Input Shaft                  |                | 1    |
| 74  | GB120-86        | Pin                          | 6×20           | 2    |
| 75  | C6266A-04-128   | Roller                       |                | 1    |
| 76  | C6266A-04-126   | Brake Base                   |                | 1    |
| 77  | C6266A-04-127   | Pin Roll                     |                | 1    |
| 78  | GB119-86        | Cylindrical Pin              | A4X35          | 1    |
| 79  | C6266A-04-50    | Pull Rod                     |                | 1    |
| 80  | C6266A-04-49    | Lever                        |                | 1    |

| No. | Part No.        | Name                         | Specifications | Qty. |
|-----|-----------------|------------------------------|----------------|------|
| 81  | GB119-86        | Cylindrical Pin              | A8×28          | 1    |
| 82  | C6266A-04-39    | Copper Sheathing             |                | 1    |
| 83  | C6266A-04-05    | Friction Plate Holder        | M2.5 , Z55     | 1    |
| 84  | C6266A-04-38    | Spacing Collar               |                | 1    |
| 85  | GB119-86        | Cylindrical Pin              | D5×10          | 2    |
| 86  | C6266A-04-40    | Spline Washer I              |                | 2    |
| 87  | C6266A-04-41    | Spline Washer Ii             |                | 2    |
| 88  | C6266A-04-42    | Friction Plate               |                | 16   |
| 89  | GB1096-79       | Round-Head Ordinary Flat Key | A10×80         | 1    |
| 90  | C6266A-04-44    | Spline Housing               |                | 1    |
| 91  | C6266A-04-53    | Compression Spring           |                | 2    |
| 92  | C6266A-04-52    | Check Pin                    |                | 2    |
| 93  | C6266A-04-45    | Adjusting Screw Nut          |                | 2    |
| 94  | C6266A-04-43    | Friction Plate               |                | 14   |
| 95  | C6266A-04-47    | Friction Plate Holder        |                | 1    |
| 96  | GB812-88        | Round Nut                    | M33×1.5        | 1    |
| 97  | GB858-88        | Lock Washer For Round Nut    | 33             | 1    |
| 98  | GB70-85         | Hexagon Socket Cap Set Screw | M8×20          | 11   |
| 99  | C6266A-04-34    | Flange                       |                | 1    |
| 100 | C6266A-04-35    | Belt Pulley                  |                | 1    |
| 101 | GB894.1-86      | Circlip For Shaft            | 60             | 1    |
| 102 | C6266A-04-36    | Distance Bushing             |                | 1    |
| 103 | GB278-89        | Ball Braring                 | 80112          | 2    |
| 104 | GB119-86        | Cylindrical Pin              | A12×70         | 1    |
| 105 | GB/3452.1-1992  | Rubber O Ring                | 136×3.55       | 1    |
| 106 | GB/T13871-1992  | Rotary Shaft Lip Seal        | FB040055       | 1    |
| 107 | GB893.2-86      | Circlip For Hole             | 80             | 1    |
| 108 | GB120-86        | Pin                          | 8×24           | 2    |
| 109 | C6266A-04-37    | Bearing Block                |                | 1    |
| 110 | GB278-89        | Ball Braring                 | 80208          | 1    |
| 111 | C6266A-04-38    | Spacing Collar               |                | 1    |
| 112 | C6266A-04-54    | Stopper                      |                | 2    |
| 113 | C6266A-04-96    | Transmission Fork            |                | 1    |
| 114 | C6266A-04-95    | Locking Block                |                | 1    |
| 115 | GB70-85         | Hexagon Socket Cap Set Screw | M6×30          | 2    |
| 116 | C6266A-04-94    | Shaft                        |                | 1    |
| 117 | GB/T3452.1-1992 | Rubber O Ring                | 36.5×1.8       | 1    |
| 118 | C6266A-04-93    | Shaft Sleeve                 |                | 1    |
| 119 | C6266A-04-55    | Idle Shaft                   |                | 1    |
| 120 | GB278-89        | Ball Braring                 | 80205          | 2    |

| No. | Part No.        | Name                        | Specifications | Qty. |
|-----|-----------------|-----------------------------|----------------|------|
| 121 | GB893.1-86      | Circlip For Hole            | 52             | 1    |
| 122 | C6266A-04-04    | Idle Wheel                  | M2.5,Z32       | 1    |
| 123 | C6266A-04-56    | Spacing Collar              |                | 1    |
| 124 | C6266A-04-57    | Sheath                      |                | 1    |
| 125 | GB77-85         | Screw                       | M10×10         | 2    |
| 126 | GB308-84        | Steel Ball                  | ф8             | 2    |
| 127 | GB/T3452.1-1992 | Rubber O Ring               | 22.4×2.65      | 2    |
| 128 | C6266A-04-105   | Supporting Axle             |                | 1    |
| 129 | GB308-84        | Steel Ball                  | ф 12           | 4    |
| 130 | C6266A-04-102   | Locating Shaft              |                | 1    |
| 131 | GB119-86        | Cylindrical Pin             | A6×16          | 1    |
| 132 | C6266A-04-109   | Transmission Fork           |                | 1    |
| 133 | GB308-84        | Steel Ball                  | ф 10           | 2    |
| 134 | C6266A-04-132   | Compression Spring          |                | 2    |
| 135 | C6266A-04-112   | Transmission Fork           |                | 1    |
| 136 | GB6170-86       | Hexagon Nut Type 1          | M12            | 2    |
| 137 | GB93-87         | Standard Type Spring Washer | 12             | 2    |
| 138 | GB77-85         | Screw                       | M12×30         | 2    |
| 139 | C6266A-04-71    | Balancing Sheet             |                | 2    |
| 140 | GB79-85         | Screw                       | M6×10          | 4    |
| 141 | C6266A-04-32    | Locking Screw Nut           |                | 1    |
| 142 | GB77-85         | Screw                       | M10×10         | 1    |
| 143 | GB70-85         | Hexagon Socket Cap Screw    | M8×45          | 5    |
| 144 | C6266A-04-73    | Rear End Cover              |                | 1    |
| 145 | C6266A-04-73-1  | Gasket For Rear End Cover   |                | 1    |
| 146 | C6266A-04-72    | Oil Scavenge Ring           |                | 1    |
| 147 | GB276-89        | Deep Groove Ball Bearing    | 124            | 1    |
| 148 | GB77-85         | Screw                       | M10×10         | 1    |
| 149 | C6266A-04-31-1  | Pressure Plate              |                | 1    |
| 150 | C6266A-04-31    | Locking Screw Nut           |                | 1    |
| 151 | C6266A-04-24    | Gear Wheel                  | M2.5 , Z60     | 1    |
| 152 | C6266A-04-32-1  | Pressure Plate              |                | 1    |
| 153 | C6266A-04-74    | Distance Bushing            |                | 1    |
| 154 | GB297-84        | Conical Roller Bearing      | D2007926E      | 1    |
| 155 | GB70-85         | Hexagon Socket Cap Screw    | M8×35          | 1    |
| 156 | C6266A-04-22    | Gear Wheel                  | M3, Z54        | 1    |
| 157 | GB80-85         | Screw                       | M8×8           | 2    |
| 158 | C6266A-04-23    | Gear Wheel                  | M3.5, Z68      | 1    |
| 159 | GB297-84        | Conical Roller Bearing      | D2007128E      | 1    |
| 160 | GB/T3452.1-1992 | Rubber O Ring               | 212×5.3        | 1    |

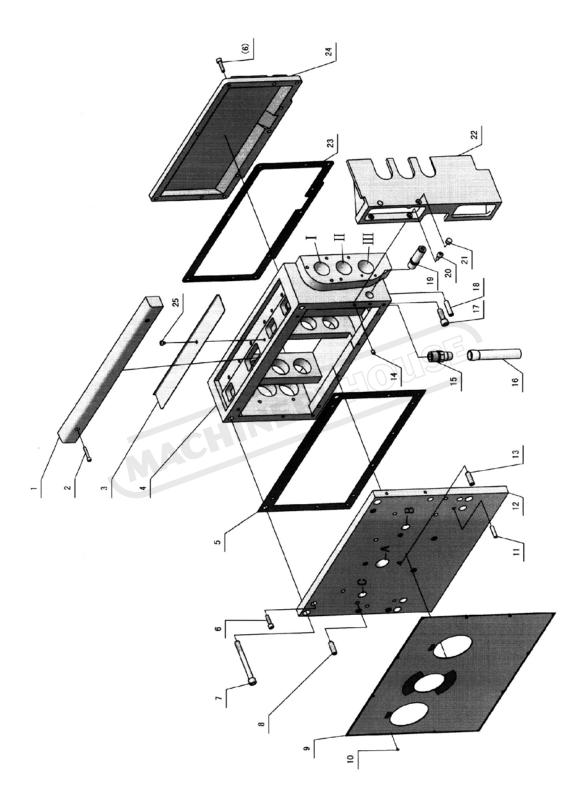
| No. | Part No.         | Name                         | Specifications | Qty. |
|-----|------------------|------------------------------|----------------|------|
| 161 | C6266A-04-75     | Front End Cover              |                | 1    |
| 162 | GB70-85          | Hexagon Socket Cap Set Screw | M8×35          | 6    |
| 163 | C6266A-04-03     | Spindle                      |                | 1    |
| 164 | C6266A-04-77     | Screw For Cam Lock           |                | 6    |
| 165 | RUN6246-101082-1 | Spring                       |                | 6    |
| 166 | C6266A-04-76     | Cam Lock                     |                | 6    |
| 167 | GB1567-79        | Round-Head Thin Flat Key     | A8×70          | 1    |
| 168 | GB1096-79        | Round-Head Ordinary Flat Key | A12×100        | 1    |
| 169 | C6266A-04-59     | Top Cover                    |                | 3    |
| 170 | GB278-89         | Ball Braring                 | 80207          | 1    |
| 171 | C6266A-04-07     | Gear Wheel                   | M2.5 , Z55     | 1    |
| 172 | C6266A-04-08     | Gear Wheel                   | M2.5, Z48      | 1    |
| 173 | C6266A-04-09     | Gear Wheel                   | M2.5, Z35      | 1    |
| 174 | C6266A-04-10     | Gear Wheel                   | M2.5, Z29      | 1    |
| 175 | C6266A-04-11     | Gear Wheel                   | M2.5, Z42      | 1    |
| 176 | C6266A-04-61     | Spacing Collar               |                | 1    |
| 177 | GB278-89         | Ball Braring                 | 80206          | 2    |
| 178 | C6266A-04-60     | Spline Shaft                 |                | 1    |
| 179 | GB1096-79        | Round-Head Ordinary Flat Key | A8×28          | 1    |
| 180 | C6266A-04-13     | Gear Shaft                   | M2.5, Z20      | 1    |
| 181 | C6266A-04-62     | Spacing Collar               |                | 1    |
| 182 | C6266A-04-12     | Gear Wheel                   | M2.5, Z54      | 1    |
| 183 | GB73-85          | Slotted Plain-Head Set Screw | M8×12          | 1    |
| 184 | GB921-86         | Steel Wire Locking Collar    | D=71           | 1    |
| 185 | GB278-89         | Ball Braring                 | 80106          | 1    |
| 186 | C6266A-04-63     | Top Cover                    |                | 1    |
| 187 | GB77-85          | Screw                        | M10×10         | 2    |
| 188 | GB/3452.1-1992   | Rubber O Ring                | 51.5×2.65      | 1    |
| 189 | GB278-89         | Ball Braring                 | 80106          | 1    |
| 190 | C6266A-04-64     | Stopper                      |                | 1    |
| 191 | GB77-85          | Screw                        | M10×20         | 2    |
| 192 | C6266A-04-65     | Stopper                      |                | 1    |
| 193 | GB278-89         | Ball Braring                 | 80306          | 1    |
| 194 | GB1096-79        | Round-Head Ordinary Flat Key | A8×20          | 2    |
| 195 | C6266A-04-14     | Gear Wheel                   | M2.5 , Z28     | 1    |
| 196 | C6266A-04-15     | Gear Wheel                   | M2.5, Z41      | 1    |
| 197 | C6266A-04-16     | Gear Wheel                   | M2.5, Z47      | 1    |
| 198 | C6266A-04-17     | Gear Wheel                   | M2.5, Z34      | 1    |
| 199 | GB278-89         | Ball Braring                 | 80108          | 2    |
| 200 | C6266A-04-18     | Gear Wheel                   | M2.5 , Z22     | 1    |

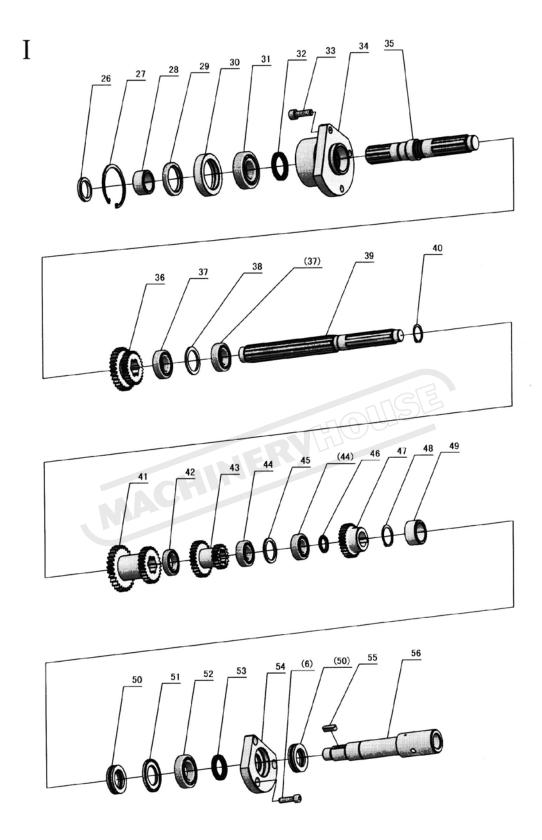
| No. | Part No.        | Name                         | Specifications | Qty. |
|-----|-----------------|------------------------------|----------------|------|
| 201 | GB278-89        | Ball Braring                 | 80202          | 1    |
| 202 | C6266A-04-68    | Spline Shaft                 |                | 1    |
| 203 | C6266A-04-19    | Gear Wheel                   | M2.5 , Z22/Z56 | 1    |
| 204 | GB297-84        | Conical Roller Bearing       | 2007108E       | 1    |
| 205 | C6266A-04-69    | Distance Bushing             |                | 1    |
| 206 | GB894.1-86      | Circlip For Shaft            | 55             | 1    |
| 207 | C6266A-04-20    | Gear Wheel                   | M3, Z46        | 1    |
| 208 | GB1096-79       | Round-Head Ordinary Flat Key | A8×36          | 2    |
| 209 | C6266A-04-21    | Gear Wheel                   | M3.5 , Z17     | 1    |
| 210 | GB297-84        | Conical Roller Bearing       | 7306E          | 1    |
| 211 | C6266A-04-70    | Stopper                      |                | 1    |
| 212 | GB/3452.1-1992  | Rubber O Ring                | 65×3.55        | 1    |
| 213 | C6266A-04-78    | Stopper                      |                | 1    |
| 214 | JB/T7590-94     | Wave Washer                  | 47             | 3    |
| 215 | GB278-89        | Ball Braring                 | 80204          | 1    |
| 216 | GB894.1-86      | Circlip For Shaft            | 36             | 1    |
| 217 | C6266A-04-25    | Gear Wheel                   | M2, Z30        | 1    |
| 218 | GB894.1-86      | Circlip For Shaft            | 55             | 1    |
| 219 | C6266A-04-26    | Gear Wheel                   | M2.5 , Z60     | 1    |
| 220 | C6266A-04-27    | Gear Wheel                   | M2.5, Z28      | 1    |
| 221 | GB1096-79       | Round-Head Ordinary Flat Key | A12×28         | 1    |
| 222 | C6266A-04-80    | Sheath                       |                | 1    |
| 223 | GB278-89        | Ball Braring                 | 80104          | 1    |
| 224 | C6266A-04-133   | Compression Spring           |                | 2    |
| 225 | GB308-84        | Steel Ball                   | ф8             | 2    |
| 226 | C6266A-04-79    | Shaft                        |                | 1    |
| 227 | GB894.1-86      | Circlip For Shaft            | 30             | 1    |
| 228 | GB893.2-86      | Circlip For Hole             | 62             | 1    |
| 229 | C6266A-04-85    | Sealing Shaft Sleeve         |                | 1    |
| 230 | GB/T13871-1992  | Rotary Shaft Lip Seal        | FB030042       | 1    |
| 231 | GB278-89        | Ball Braring                 | 80206          | 1    |
| 232 | GB3452.1-1992   | Rubber O Ring                | 73×2.65        | 1    |
| 233 | GB70-85         | Hexagon Socket Cap Screw     | M8×20          | 3    |
| 234 | C6266A-04-84    | Flange                       |                | 1    |
| 235 | GB?13452.1-1992 | Rubber O Ring                | 45×2.65        | 1    |
| 236 | C6266A-04-86    | Output Shaft                 |                | 1    |
| 237 | GB1096-79       | Round-Head Ordinary Flat Key | A8×40          | 1    |
| 238 | C6266A-04-28    | Gear Wheel                   | M2, Z30        | 1    |
| 239 | C6266A-04-87    | Spacing Collar               |                | 1    |
| 240 | GB278-89        | Ball Braring                 | 80103          | 1    |

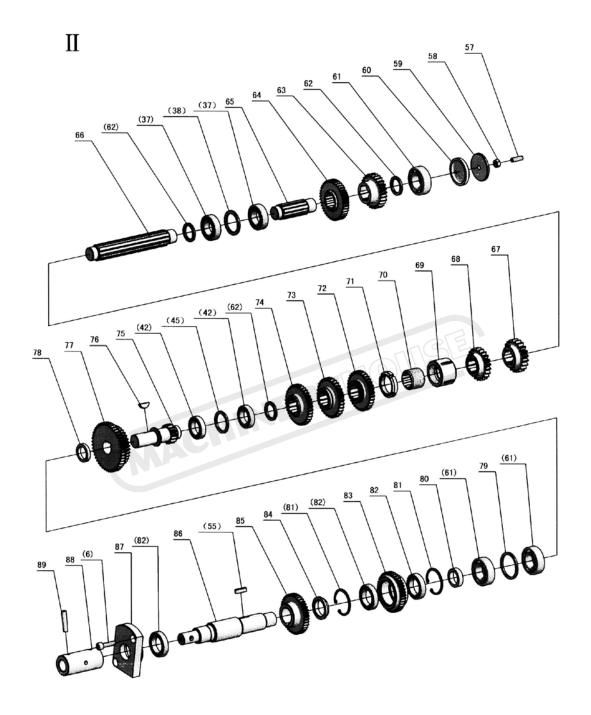
| No. | Part No.        | Name                         | Specifications           | Qty. |
|-----|-----------------|------------------------------|--------------------------|------|
| 241 | GB77-85         | Screw                        | M10×10                   | 1    |
| 242 | GB308-84        | Steel Ball                   | ф8                       | 1    |
| 243 | GB/T3452.1-1992 | Rubber O Ring                | 20×2.65                  | 1    |
| 244 | GB308-84        | Steel Ball                   | ф 10                     | 2    |
| 245 | GB879-86        | Pin                          | 3×12                     | 4    |
| 246 | C6266A-04-88    | Output Idler Shaft           |                          | 1    |
| 247 | C6266A-04-89    | Spacing Collar               |                          | 2    |
| 248 | C6266A-04-30    | Gear Wheel                   | M2, Z25                  | 1    |
| 249 | SF-1            | Oil-Free Lubrication Bearing | 2025                     | 1    |
| 250 | C6266A-04-90    | Retaining Ring               |                          | 2    |
| 251 | GB93-87         | Standard Type Spring Washer  | 6                        | 2    |
| 252 | GB70-85         | Hexagon Socket Cap Set Screw | M6×16                    | 2    |
| 253 |                 | Lucite Pipe                  | $\phi$ 5× $\delta$ 1×150 | 1    |
| 254 | C6266A-04-83    | Oil Outlet Connecter         |                          | 1    |
| 255 | GB/T3452.1-1992 | Rubber O Ring                | 23.6×2.65                | 1    |
| 256 | C6266A-04-82    | Oil Outlet Plug              |                          | 1    |
| 257 | C6266A-04-91    | Shaft                        |                          | 1    |
| 258 | GB308-84        | Steel Ball                   | ф 12                     | 2    |
| 259 | GB/T3452.1-1992 | Rubber O Ring                | 23.6×2.65                | 1    |
| 260 | GB308-84        | Steel Ball                   | ф8                       | 1    |
| 261 | GB77-85         | Screw                        | M10×20                   | 1    |
| 262 | C6266A-04-29    | Gear Wheel                   | M2.5, Z28                | 1    |
| 263 | SF-1            | Oil-Free Lubrication Bearing | 2018                     | 1    |
| 264 | C6266A-04-92    | Transmission Fork Block      |                          | 1    |
| 265 | GB5783-86       | Hexagon Head Bolt            | M8×25                    | 1    |
| 266 | GB6170-86       | Hexagon Nut Type 1           | M8                       | 2    |
| 267 | GB5783-86       | Hexagon Head Bolt            | M8×40                    | 1    |
| 268 | GB308-84        | Steel Ball                   | ф 10                     | 1    |
| 269 | C6266A-04-132   | Compression Spring           |                          | 1    |
| 270 | GB93-87         | Standard Type Spring Washer  | 12                       | 1    |
| 271 | GB6170-86       | Hexagon Nut Type 1           | M12                      | 1    |
| 272 | GB77-85         | Screw                        | M12×30                   | 1    |
| 273 | GB1235-76       | Rubber O Ring                | 22×2.4                   | 5    |
| 274 | RUN6246-101067  | Locater Card                 |                          | 5    |
| 275 | GB879-86        | Resilient Cylindrical Pin    | 3×12                     | 5    |
| 276 | C6266A-04-108   | Speed- Changeable Wheel      |                          | 1    |
| 277 | C6266A-04-117   | Speed Rating Plate           | δ0.5                     | 1    |
| 278 | C6266A-04-145   | Fixed Block                  |                          | 1    |
| 279 | RUN6246-101088  | Screw                        |                          | 5    |
| 280 | GB80-85         | Screw                        | M4×20                    | 5    |

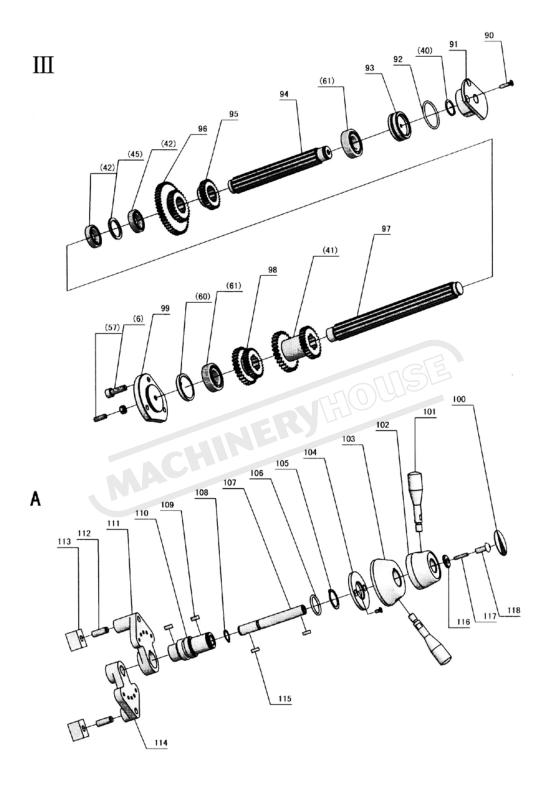
| No. | Part No.         | Name                           | Specifications | Qty. |
|-----|------------------|--------------------------------|----------------|------|
| 281 | GB119-86         | Cylindrical Pin                | A4×20          | 1    |
| 282 | C6266A-04-144    | Handle                         |                | 1    |
| 283 | GB819-85         | Screw                          | M6×12          | 10   |
| 284 | C6266A-04-113    | Mandrel                        |                | 1    |
| 285 | C6266A-04-110    | Sheath                         |                | 3    |
| 286 | GB80-85          | Screw                          | M6×8           | 8    |
| 287 | C6266A-04-114    | Swinging Arm                   |                | 1    |
| 288 | GB1096-79        | Round-Head Ordinary Flat Key   | A5×18          | 6    |
| 289 | C6266A-04-115    | Fork Rod                       |                | 1    |
| 290 | C6266A-04-111    | Mandrel                        |                | 2    |
| 291 | C6266A-04-106    | Swinging Arm                   |                | 1    |
| 292 | C6266A-04-107    | Fork Rod                       |                | 2    |
| 293 | GB1096-79        | Round-Head Ordinary Flat Key   | A5×12          | 4    |
| 294 | C6266A-04-141    | Speed Change Handle            |                | 4    |
| 295 | RUN6246-101070-1 | Washer                         |                | 4    |
| 296 | RUN6246-101099   | Rating Plate                   | δ1             | 4    |
| 297 | C6266A-04-142    | Handle Lever                   |                | 2    |
| 298 | C6266A-04-97     | Swinging Arm                   |                | 1    |
| 299 | C6266A-04-98     | Transmission Fork Swinging Arm |                | 2    |
| 300 | C6266A-04-100    | Swinging Arm                   |                | 1    |
| 301 | C6266A-04-101    | Fork Rod                       |                | 1    |
| 302 | C6266A-04-143    | Handle Lever                   |                | 2    |
| 303 | C6266A-04-103    | Swinging Arm                   |                | 1    |
| 304 | C6266A-04-104    | Fork Rod                       |                | 1    |

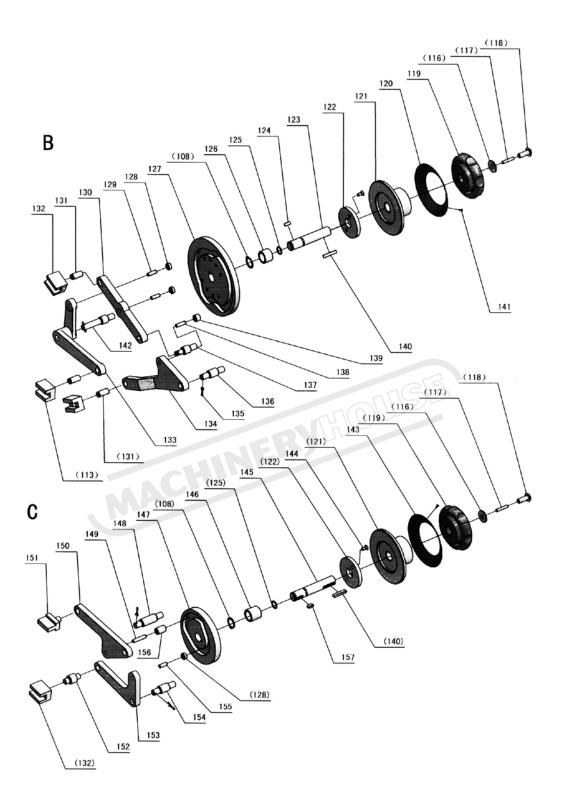
# Gearbox











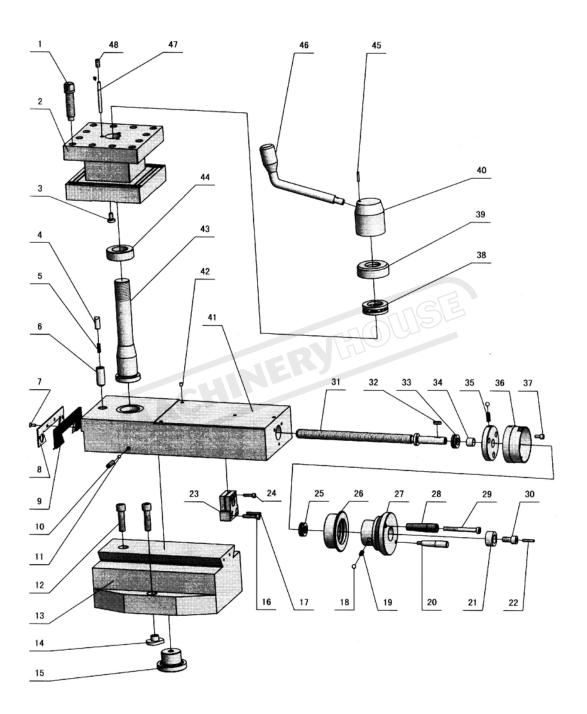
| 1   | C6266A-05-101 | Top Cover Of Feeding Box      |                           | 1   |
|-----|---------------|-------------------------------|---------------------------|-----|
| 2   | GB70-85       | Hexagon Socket Cap Set Screw  | M6×35                     | 2   |
| 3   | C6266A-05-04  | Cover Plate                   |                           | 1   |
| 4   | C6266A-05-01  | Feeding Box Body              |                           | 1   |
| 5   | C6266A-05-77  | Gasket For Front Cover        |                           | 1   |
| 6   | GB70-85       | Hexagon Socket Cap Screw      | M8X30                     | 26  |
| 7   | GB70-85       | Hexagon Socket Cap Screw      | M12×150                   | 2   |
| 8   | Z5035-03-28   | Locating Screw                |                           | 3   |
| 9   | C6266A-05-92  | Panel Of Feeding Box          |                           | 1   |
| 10  | GB818-85      | Screw                         | M3X5                      | 12  |
| 11  | GB117-86      | Tapered Cottar                | 8X35                      | 2   |
| 12  | C6266A-05-03  | Front Cover Of Feeding Box    |                           | 1   |
| 13  | C6266A-05-82  | Locating Screw                |                           | 1   |
| 14  | GB78-85       | Screw                         | M8X10                     | 1   |
| 15  | C6266A-05-99  | Connector                     |                           | 1   |
| 16  |               | Lucite Pipe                   | $\phi$ 20× $\delta$ 2×500 | 1   |
| 17  | GB70-85       | Hexagon Socket Cap Set Screw  | M12×35                    | 2   |
| 18  | GB118-86      | Tapered Cottar                | 10×45                     | 2   |
| 19  | C6266A-05-83  | Fulcrum Shaft For Control     |                           | 1   |
| 20  | GB70-85       | Hexagon Socket Cap Screw      | M8X16                     | 2   |
| 21  | C6266A-05-100 | Stopper                       |                           | 2   |
| 22  | C6266A-05-05  | Pushbutton Support            |                           | 1   |
| 23  | C6266A-05-78  | Sealing Washer For Rear Cover |                           | 1   |
| 24  | C6266A-05-02  | Rear Cover Of Feeding Box     |                           | 1   |
| 25  | GB818-85      | Screw                         | M6X8                      | 1   |
| 26  | C6266A-05-46  | Washer                        |                           | 1   |
| 27  | GB893.1-86    | Hole Baffle                   | 70                        | 1   |
| 28  | C6266A-05-47  | Distance Bushing              |                           | 1   |
| 29  | GB13871-1992  | Rotary Shaft Lip Seal Ring    | B4055                     | 1   |
| 30  | C6266A-05-48  | Oil Sealing Sleeve            |                           | 1   |
| 31  | GB/T276-1994  | Deep Groove Ball Bearing      | 6206                      | 1   |
| 32  | FJ145-63      | Felt Ring                     | 35                        | 1   |
| 33  | GB70-85       | Hexagon Socket Cap Screw      | M10X30                    | 3   |
| 34  | C6266A-05-49  | End Cover I                   |                           | 1   |
| 35  | C6266A-05-38  | Shaft I                       |                           | 1   |
| 36  | C6266A-05-20  | Duplicate Gear                | Z30/Z29                   | 1   |
| 37  | GB/T276-1994  | Deep Groove Ball Bearing      | 6005                      | 4   |
| 38  | C6266A-05-50  | Spacing Collar I              |                           | 2   |
| 39  | C6266A-05-42  | Shaft V                       | 0.7                       | 1   |
| 40  | GB894.1-86    | Axle Bumper                   | 25                        | 2   |
| NO. | Part No.      | Name                          | <b>Specifications</b>     | Qty |

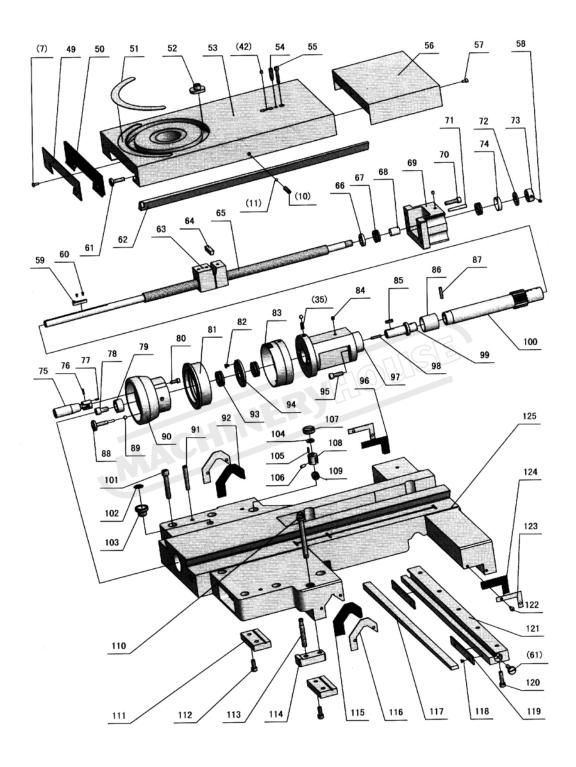
| NO.      | Part No.                     | Name                             | Specifications | Qty    |
|----------|------------------------------|----------------------------------|----------------|--------|
| 80       | C6266A-05-64                 | Distance Bushing Ii              |                | 1      |
| 79       | C6266A-05-63                 | Spacing Collar Vi                |                | 1      |
| 78       | C6266A-05-62                 | Spacing Collar V                 |                | 1      |
| 77       | C6266A-05-31                 | Duplicate Gear                   | Z45/Z35        | 1      |
| 76       | GB1099-79                    | Semicircular Key                 | 6X9X22         | 1      |
| 75       | C6266A-05-32                 | Pinion                           | Z15            | 1      |
| 74       | C6266A-05-29                 | Gear Wheel                       | Z36            | 1      |
| 73       | C6266A-05-28                 | Gear Wheel                       | Z33            | 1      |
| 72       | C6266A-05-27                 | Gear Wheel                       | Z35            | 1      |
| 71       | C6266A-05-61                 | Round Nut                        |                | 1      |
| 70       | C6266A-05-60                 | Adjusting Threaded Sleeve        |                | 1      |
| 69       | C6266A-05-59                 | Adjusting Nut                    |                | 1      |
| 68       | C6266A-05-26                 | Gear Wheel                       | Z22            | 1      |
| 67       | C6266A-05-25                 | Gear Wheel                       | Z21            | 1      |
| 66       | C6266A-05-41                 | Shaft IV                         |                | 1      |
| 65       | C6266A-05-39                 | Shaft II                         |                | 1      |
| 64       | C6266A-05-22                 | Gear Wheel                       | Z41            | 1      |
| 63       | C6266A-05-21                 | Gear Wheel                       | Z27            | 1      |
| 62       | C6266A-05-58                 | Spacing Collar Iv                |                | 3      |
| 61       | GB/T276-1994                 | Deep Groove Ball Bearing         | 6205           | 5      |
| 60       | C6266A-05-57                 | Adjusting Cover                  |                | 2      |
| 59       | C6266A-05-56                 | Adjusting Cap                    |                | 1      |
| 58       | GB74-85                      | Screws                           | M8X25          | 2      |
| 57       | GB6170-86                    | Hexagonal Nut                    | M8             | 2      |
| 56       | C6266A-05-45                 | Shaft VIII                       |                | 1      |
| 55       | GB1096-79                    | Round-Head Ordinary Flat Key     | 8X25           | 2      |
| 54       | C6266A-05-55                 | End Cover Ii                     |                | 1      |
| 53       | FJ145-63                     | Felt Ring                        | 30             | 1      |
| 52       | GB/T276-1994                 | Deep Groove Ball Bearing         | 6006           | 1      |
| 51       | C6266A-05-54                 | Shock Insulator                  | 21100          | 1      |
| 50       | GB/T301-1995                 | Thrust Ball Bearing              | 51106          | 2      |
| 46<br>49 | C6266A-05-53                 | Distance Bushing I               | 30             | 1      |
| 48       | GB894.1-86                   | Axle Bumper                      | 30             | 1      |
| 46<br>47 | C6266A-05-52<br>C6266A-05-37 | Spacing Collar Iii<br>Gear Wheel | Z29            | 1<br>1 |
| 45       | C6266A-05-51                 | Spacing Collar Ii                |                | 3      |
| 44       | GB/T276-1994                 | Deep Groove Ball Bearing         | 6004           | 2      |
| 43       | C6266A-05-30                 | Duplicate Gear                   | Z28/18         | 1      |
| 42       | GB/T276-1994                 | Deep Groove Ball Bearing         | 61905          | 5      |
| 41       | C6266A-05-24                 | Duplicate Gear                   | Z28/28         | 2      |
|          |                              |                                  |                |        |

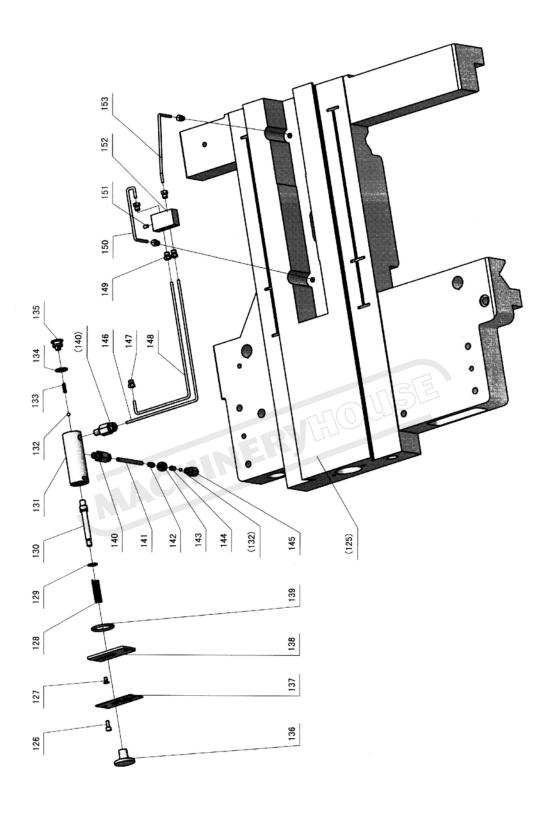
| 81  | GB893.1-86       | Hole Baffle                  | 47             | 2   |
|-----|------------------|------------------------------|----------------|-----|
| 82  | GB/T276-1994     | Deep Groove Ball Bearing     | 61906          | 3   |
| 83  | C6266A-05-35     | Gear Wheel                   | Z41            | 1   |
| 84  | C6266A-05-65     | Distance Bushing Iii         |                | 1   |
| 85  | C6266A-05-36     | Gear Wheel                   | Z41            | 1   |
| 86  | C6266A-05-44     | Shaft VII                    |                | 1   |
| 87  | C6266A-05-66     | End Cover Iii                |                | 1   |
| 88  | C6266A-05-67     | Feeding Rod Coupling Sleeve  |                | 1   |
| 89  | GB117-86         | Tapered Cottar               | 8X40           | 2   |
| 90  | GB819-85         | Screw                        | M6X25          | 2   |
| 91  | C6266A-05-70     | End Cover V                  |                | 1   |
| 92  | GB3452.1-82      | Rubber O Ring                | 46.2×2.65      | 1   |
| 93  | C6266A-05-69     | Distance Bushing Iv          |                | 1   |
| 94  | C6266A-05-43     | Shaft VI                     |                | 1   |
| 95  | C6266A-05-34     | Gear Wheel                   | Z30            | 1   |
| 96  | C6266A-05-33     | Duplicate Gear               | Z48/Z28        | 1   |
| 97  | C6266A-05-40     | Shaft III                    |                | 1   |
| 98  | C6266A-05-23     | Duplicate Gear               | Z28/Z30        | 1   |
| 99  | C6266A-05-68     | End Cover Iv                 |                | 1   |
| 100 | RUN6246-101099   | Rating Plate Handle Lover    |                | 1   |
| 101 | C6266A-05-98     | Handle Lever                 |                | 2   |
| 102 | C6266A-05-93     | Gear B Handle Apparatus      |                | 1   |
| 103 | C6266A-05-94     | Gear A Handle Apparatus      |                | 1   |
| 104 | C6266A-05-81     | Position Limit Washer        |                | 1   |
| 105 | GB894.1-86       | Axle Bumper                  | 28             | 1   |
| 106 | GB3452.1-82      | Rubber O Ring                | 28X3.55        | 1   |
| 107 | C6266A-05-79     | Gear B Shifting Axle         |                | 1   |
| 108 | GB894.1-86       | Axle Bumper                  | 16             | 3   |
| 109 | GB1096-79        | Round-Head Ordinary Flat Key | 6X14           | 2   |
| 110 | C6266A-05-80     | Gear A Shifting Axle         |                | 1   |
| 111 | C6266A-05-07     | Gear A Swing Block           |                | 1   |
| 112 | GB119-86         | Cylindrical Pin              | 10X28          | 2   |
| 113 | C6266A-05-17     | Transmission Fork I          |                | 4   |
| 114 | C6266A-05-06     | Gear B Swing Block           |                | 1   |
| 115 | GB1096-79        | Round-Head Ordinary Flat Key | 5X14           | 2   |
| 116 | RUN6246-101070-1 | Washer                       |                | 3   |
| 117 | GB80-85          | With Cup Point               | M5X25          | 3   |
| 118 | RUN6246-101088   | Screw                        |                | 3   |
| 119 | RUN6246-102053-2 | Handwheel                    |                | 2   |
| 120 | C6266A-05-97     | Rating Plate                 |                | 1   |
| NO. | Part No.         | Name                         | Specifications | Qty |

| 121 | C6266A-05-95 | Speed-Changeable Wheel       |           | 2 |
|-----|--------------|------------------------------|-----------|---|
| 122 | C6266A-05-75 | Position Limit Washer        |           | 2 |
| 123 | C6266A-05-84 | Right Gear Shifting Shaft    |           | 1 |
| 124 | GB1096-79    | Round-Head Ordinary Flat Key | 4X12      | 1 |
| 125 | GB3452.1-82  | Rubber O Ring                | 11.2X2.65 | 3 |
| 126 | C6266A-05-85 | Liner Bushing                |           | 1 |
| 127 | C6266A-05-13 | Large Cam                    |           | 1 |
| 128 | C6266A-05-72 | Roller I                     |           | 3 |
| 129 | GB119-86     | Cylindrical Pin              | 6X18      | 2 |
| 130 | C6266A-05-09 | Swinging Arm Ii              |           | 1 |
| 131 | GB119-86     | Cylindrical Pin              | 10X22     | 3 |
| 132 | C6266A-05-16 | Transmission Fork Ii         |           | 2 |
| 133 | C6266A-05-08 | Swinging Arm I               |           | 1 |
| 134 | C6266A-05-10 | Swinging Arm Iii             |           | 1 |
| 135 | GB91-86      | Cotter Pin                   | 2X12      | 5 |
| 136 | C6266A-05-86 | Fulcrum Shaft Ii             |           | 1 |
| 137 | C6266A-05-88 | Fulcrum Shaft Iii            |           | 1 |
| 138 | GB119-86     | Cylindrical Pin              | 6X20      | 1 |
| 139 | C6266A-05-89 | Roller II                    |           | 1 |
| 140 | GB1096-79    | Round-Head Ordinary Flat Key | B5X28     | 2 |
| 141 | GB827-86     | Rivet For Rating Plate       | 2X5       | 4 |
| 142 | C6266A-05-87 | Fulcrum Shaft I              |           | 1 |
| 143 | C6266A-05-96 | Rating Plate                 |           | 1 |
| 144 | GB819-85     | Screw                        | M5X10     | 6 |
| 145 | C6266A-05-74 | Left Gear Shifting Shaft     |           | 1 |
| 146 | C6266A-05-76 | Liner Bushing                |           | 1 |
| 147 | C6266A-05-14 | Small Cam                    |           | 1 |
| 148 | C6266A-05-18 | Fulcrum Shaft V              |           | 1 |
| 149 | GB119-86     | Cylindrical Pin              | 6X28      | 1 |
| 150 | C6266A-05-12 | Swinging Arm B               |           | 1 |
| 151 | C6266A-05-15 | Toggle Piece                 |           | 1 |
| 152 | C6266A-05-19 | Fulcrum Shaft                |           | 1 |
| 153 | C6266A-05-11 | Swinging Arm A               |           | 1 |
| 154 | C6266A-05-73 | Fulcrum Shaft Iv             |           | 1 |
| 155 | GB119-86     | Cylindrical Pin              | 6X16      | 1 |
| 156 | C6266A-05-71 | Roller III                   |           | 1 |
| 157 | GB1096-79    | Round-Head Ordinary Flat Key | 5X12      | 1 |
|     |              |                              |           |   |

# Saddle







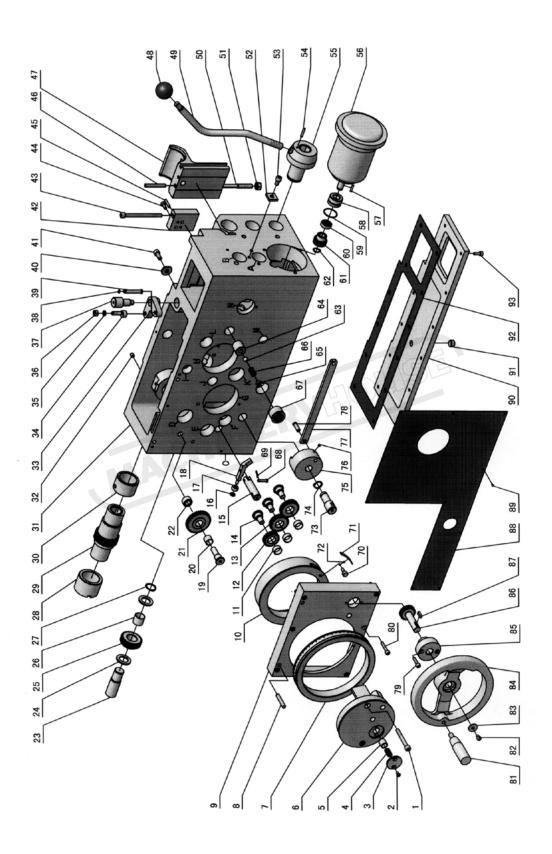
| 37       | GB/T 70             | Screw                 | M6X12          | 3   |
|----------|---------------------|-----------------------|----------------|-----|
| 36       | C6266A-07-50        | Graduated Sleeve      | - <del>-</del> | 1   |
| 35       | GB2089              | Compression Spring    | 1X6X12         | 2   |
| 34       | 00,1001             | Oil Retaining Bearing | d15XD17X13     | 1   |
| 33       | GB/T 301            | Thrust Ball Bearing   | 51102          | 1   |
| 32       | GB/T 1096           | Key                   | 3X18           | 1   |
| 31       | C6266A-07-46        | Small Lead Screw      |                | 1   |
| 30       | C6266A-07-32        | Locking Screw         | Shared part    | 1   |
| 29       | CD6236-07-40        | Screw                 | Shared part    | 1   |
| 28       | CD6236-07-39        | Handle Casing         | Shared part    | 1   |
| 27       | C6266A-07-51        | Handwheel             |                | 1   |
| 26       | C6266A-07-49        | Graduated Ring        | 21102          | 1   |
| 25       | GB/T 301            | Thrust Ball Bearing   | 51102          | 1   |
| 24       | GB/T 70             | Screw                 | M5X20          | 2   |
| 23       | C6266A-07-47        | Screw                 |                | 1   |
| 22       | GB/T 78             | Screw                 | M5×25          | 1   |
| 21       | C6266A-07-33        | Cushion Block         | Part Part      | 1   |
| 20       | CD6236-07-05        | Handle                | Shared part    | 1   |
| 19       | GB2089              | Compression Spring    | 1X6X15         | 3   |
| 18       | GB/T 308            | Steel Ball            | D8             | 10  |
| 17       | GB/T 879            | Pin                   | D4X30          | 2   |
| 16       | GB/T 70             | Screw                 | M6X30          | 2   |
| 15       | C6266A-07-21        | Central Axis          |                | 1   |
| 14       | C6266A-07-19        | T-Slotted Nut         |                | 3   |
| 13       | C6266A-07-20        | Turning Mechanism     | W112^43        | 1   |
| 12       | GB/T 70             | Screw                 | M12×45         | 3   |
| 10<br>11 | GB/T 77<br>GB/T 308 | Screw<br>Steel Ball   | M8×30<br>D6    | 1 2 |
| 9        | C6266A-07-37        | Oil Scraper           | M020           | 1   |
| 8        | C6266A-07-38        |                       |                | 1   |
| 7        | GB/T 819            | Screw Pressure Plate  | M5X12          | 8   |
| 6        | C6266A-07-71        | Locating Sleeve       | MEW12          | 1   |
| 5        | GB/T 2089           | Pressure Spring       | 1×5×18         | 1   |
| 4        | C6266A-07-39        | Bouncing Pin          | 1 5 10         | 1   |
| 3        | RUN6246-103058-2    | Adjusting Screw       | Shared part    | 3   |
| 2        | C6266A-07-23        | Square Tool Post      |                | 1   |
| 1        | GB/T 83             | Screw                 | M16×65         | 12  |
|          |                     |                       |                |     |

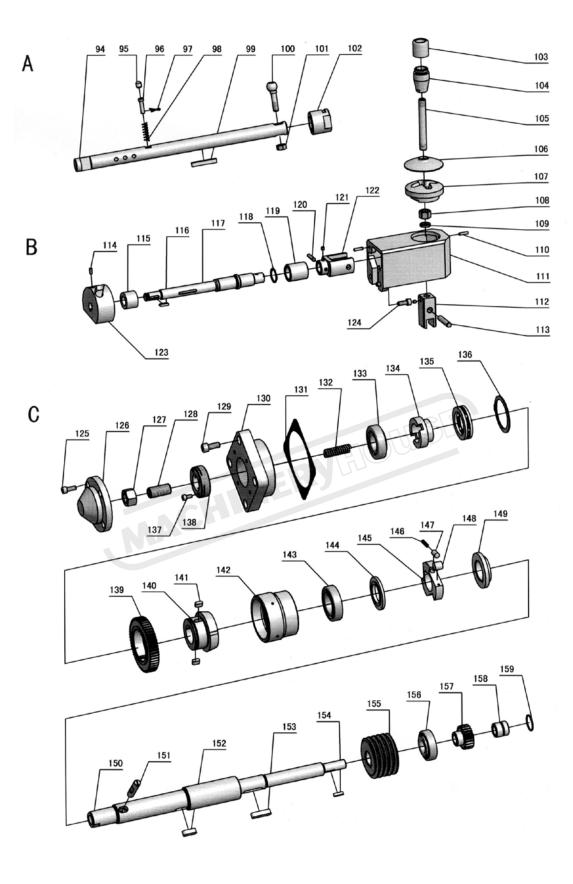
| 41 | C6266A-07-22   | Turret Slide          |               | 1    |
|----|----------------|-----------------------|---------------|------|
| 42 | GB/T 1155      | Oil Cup 6             | D=6           | 7    |
| 43 | C6266A-07-45   | Central Axis          |               | 1    |
| 44 | C6266A-07-23   | Square Tool Post      |               | 1    |
| 45 | GB/T 119       | Cylindrical Pin       | D4×20         | 1    |
| 46 | C6266A-07-24   | Tool Post Handle      |               | 1    |
| 47 | C6266A-07-44   | Pin Roll              |               | 3    |
| 48 | GB77           | Screw                 | M8×16         | 3    |
| 49 | C6266A-07-27   | Pressure Plate        |               | 1    |
| 50 | C6266A-07-26   | Oil Scraper           |               | 1    |
| 51 | C6266A-07-62   | Rating Plate          |               | 1    |
| 52 | C6266A-07-19   | T-Slotted Nut         |               | 3    |
| 53 | C6266A-07-04   | Cross Slide           |               | 1    |
| 54 | GB/T 79        | Screw                 | M8×30         | 1    |
| 55 | GB/T 70        | Screw                 | M6×35         | 3    |
| 56 | C6266A-07-63   | Protective Hood       |               | 1    |
| 57 | GB/T 70        | Screw                 | M5×8          | 3    |
| 58 | GB/T 80        | Screw                 | M6×8          | 3    |
| 59 | C6266A-07-18   | Gib-Headed Key        |               | 1    |
| 60 | GB13806A       | Screw                 | M3X5          | 2    |
| 61 | RUN6246-103036 | Adjusting Screw       | Shared Part   | 5    |
| 62 | C6266A-07-72   | Cross Slide Gibs      |               | 1    |
| 63 | C6266A-07-16   | Screw                 | T=5           | 1    |
| 64 | C6266A-07-15   | Taper Wedge           |               | 1    |
| 65 | C6266A-07-06   | Middle Lead Screw     |               | 1    |
| 66 | C6266A-07-14   | Shim                  |               | 1    |
| 67 | GB/T 4663      | Cylindrical Roller    | 81102         | 2    |
| 68 |                | Oil-Retaining Bearing | d15XD17×22    | 1    |
| 69 | C6266A-07-05   | Rear Support Bracket  |               | 1    |
| 70 | GB/T 70        | Screw                 | M8×30         | 4    |
| 71 | GB/T 118       | Pin                   | D6X45         | 2    |
| 72 | C6266A-07-08   | Shim                  |               | 1    |
| 73 | C6266A-07-07   | Screw Cap             | M15×1.5       | 1    |
| 74 | C6266A-07-13   | Sheath                |               | 1    |
| 75 | C6266A-07-36   | Handle Module         |               | 1    |
| 76 | GB/T 119       | Cylindrical Pin       | D3×12         | 1    |
| 77 | GB/T 879       | Pin                   | D3×10         | 1    |
| 78 | C6266A-07-32   | Locking Screw         |               | 1    |
| 79 | C6266A-07-33   | Cushion Block         |               | 1    |
| 80 | GB/T 70        | Screw                 | M6×16         | 1    |
| No | Part No.       | Name                  | Specification | Qty. |

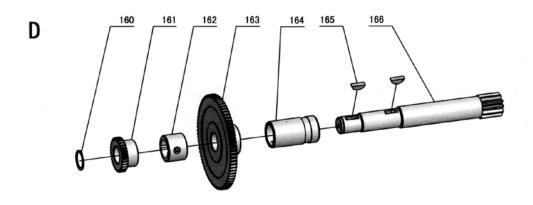
| 81  | C6266A-07-30     | Graduated Ring               |               | 1    |
|-----|------------------|------------------------------|---------------|------|
| 82  | GB/T68           | Screw M5 X 8                 | M5×8          | 3    |
| 83  | C6266A-07-31     | Graduated Sleeve             |               | 1    |
| 84  | GB/T 1155        | Oil Cup 6                    | D=6           | 1    |
| 85  | GB1096-79        | Key                          | 5×18          | 1    |
| 86  |                  | Oil Retaining Bearing        | d32XD36X35    | 2    |
| 87  | GB/T 119         | Cylindrical Pin              | D6×30         | 1    |
| 88  | C6266A-07-35     | Locking Screw                |               | 1    |
| 89  | GB/T 308         | Steel Ball                   | D6            | 2    |
| 90  | C6266A-07-34     | Handwheel                    |               | 1    |
| 91  | GB/T 118         | Pin                          | D8X60         | 2    |
| 92  | C6266A-07-61     | Pare Off The Oil Plank       |               | 1    |
| 93  | GB/T 301         | Thrust Ball Bearing          | 51104         | 2    |
| 94  | C6266A-07-28     | Baffle Sheet                 |               | 1    |
| 95  | GB/T 70          | Screw                        | M8×25         | 2    |
| 96  | C6266A-07-02     | Pare Off The Oil Plank       |               | 1    |
| 97  | C6266A-07-34     | Handwheel                    |               | 1    |
| 98  | GB/T 78          | Screw                        | M5×25         | 1    |
| 99  | C6266A-07-29-2   | Pinion                       |               | 1    |
| 100 | C6266A-07-29-1   | Sheath                       |               | 1    |
| 101 | GB/T 70          | Screw                        | M10×60        | 5    |
| 102 | RUN6246-103031-1 | Rating Plate                 | Shared part   | 1    |
| 103 | RUN6246-103031   | Oil Plug                     | Shared part   | 1    |
| 104 | GB1992A1         | Saucer Spring                | 18X9.2X1X1.4  | 3    |
| 105 | GB/T 119         | Cylindrical Pin              | D3X12         | 1    |
| 106 | GB/T 119         | Cylindrical Pin              | D6X14         | 1    |
| 107 | C6266A-07-55     | Cap                          |               | 2    |
| 108 | C6266A-07-56     | Unloading Bracket            |               | 2    |
| 109 | GB/T 276         | Ball Bearing                 | 526           | 2    |
| 110 | RUN6246-103077   | Braking Tightly Screw        | Shared part   | 1    |
| 111 | C6266A-07-60     | Front Pressure Plate         |               | 2    |
| 112 | GB70-85          | Hexagon Socket Cap Set Screw | M8X25         | 4    |
| 113 | C6266A-07-53     | Pillar Screw Bolt            |               | 1    |
| 114 | C6266A-07-52     | Saddle Locking Block         |               | 1    |
| 115 | C6266A-07-59     | Screw                        |               | 1    |
| 116 | C6266A-07-58     | Pressure Plate               |               | 2    |
| 117 | C6266A-07-12     | Rear Pressure Plate Gibs     |               | 1    |
| 118 | GB/T 68          | Screw                        | M4×6          | 5    |
| 119 | C6266A-07-11     | Gibbed Baffle                |               | 2    |
| 120 | GB/T 70          | Screw                        | M8×30         | 5    |
| No  | Part No.         | Name                         | Specification | Qty. |

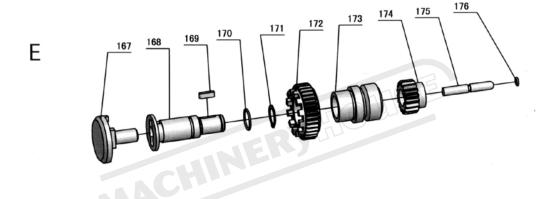
| 121 | C6266A-07-10     | Rear Pressure Plate    |                            | 1  |
|-----|------------------|------------------------|----------------------------|----|
| 122 | GB/T 818         | Screws                 | M5×12                      | 12 |
| 123 | C6266A-07-01     | Pare Off The Oil Plank |                            | 2  |
| 124 | C6266A-07-09     | Pare Off The Oil Plank |                            | 1  |
| 125 | C6266A-07-04     | Cross Slide            |                            | 1  |
| 126 | GB/T 70          | Screw                  | M5×12                      | 2  |
| 127 | GB/T68           | Screw                  | M5×10                      | 2  |
| 128 | RUN6246-103065   | Spring                 |                            | 1  |
| 129 | GB/T 1235        | O-Ring                 | 13× 1.9                    | 1  |
| 130 | RUN6246-103064   | Piston Rod             |                            | 1  |
| 131 | C6266A-07-66     | Body Pump              |                            | 1  |
| 132 | GB308-84         | Steel Ball             | ф 5                        | 2  |
| 133 | GB2089-80        | Spring                 | $0.5 \times 4.5 \times 16$ | 1  |
| 134 | GB1235-76        | O-Ring                 | 16×2.4                     | 1  |
| 135 | RUN6246-103070   | Oil Plug               |                            | 1  |
| 136 | RUN6246-103067   | Plug                   |                            | 1  |
| 137 | C6266A-07-65     | Plate                  |                            | 1  |
| 138 | C6266A-07-64     | Bottom Board           |                            | 1  |
| 139 | GB1235-76        | O-Ring                 | 32×3.1                     | 1  |
| 140 | JC1              | Tube Fitting           | $Z 1/8" \times \phi 6$     | 1  |
| 141 | C6266A-07-63     | Brass Tube             | ф 6×280                    | 1  |
| 142 | RUN6246-103071   | Tube Fitting           |                            | 1  |
| 143 | RUN6246-103072   | Nut                    |                            | 1  |
| 144 | RUN6246-103073-2 | Sleeve                 |                            | 1  |
| 145 | RUN6246-103073-1 | One Way Valve Ass      |                            | 1  |
| 146 | C6266A-07-70     | Brass Tube             | ф 4×460                    | 1  |
| 147 | JC1              | Tube Fitting           | $Z 1/8" \times \phi 4$     | 1  |
| 148 | C6266A-07-67     | Brass Tube             | ф 4×420                    | 1  |
| 149 | JC1              | Tube Fitting           | $Z 1/8" \times \phi 4$     | 6  |
| 150 | C6266A-07-68     | Brass Tube             | φ 4×170                    | 1  |
| 151 | RUN6246-103006   | Oil Plug               |                            | 2  |
| 152 | RUN6246-103005   | Manifold               |                            | 1  |
| 153 | C6266A-07-69     | Brass Tube             | ф 4×190                    | 1  |
|     |                  |                        |                            |    |

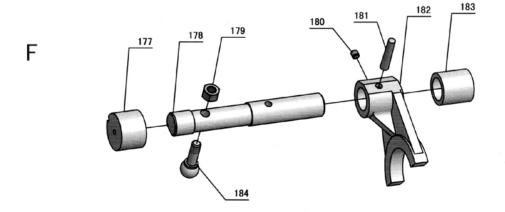
# Apron

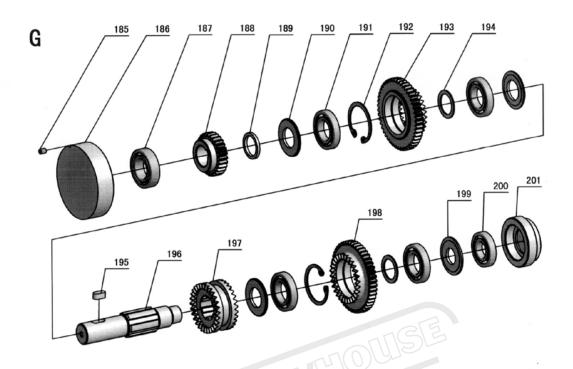


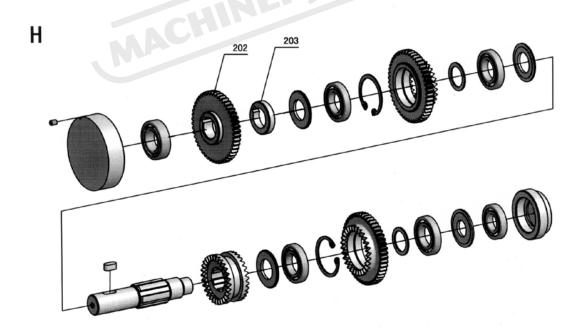


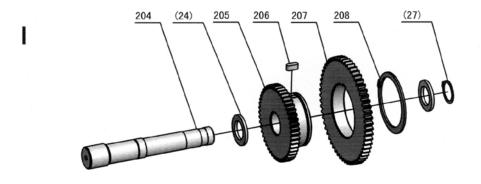


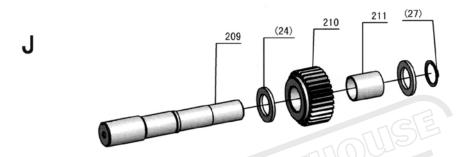


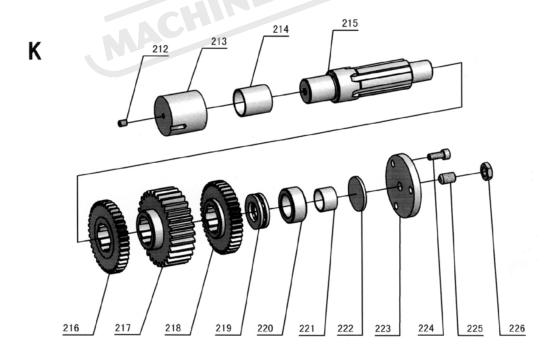


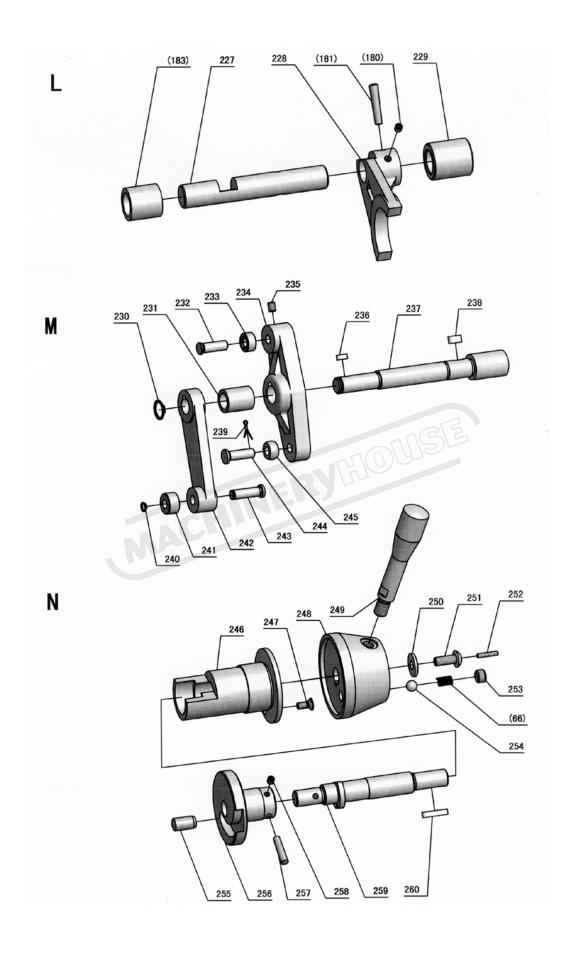












| No. | Part No.      | Name                   | Specifications | Qty. |
|-----|---------------|------------------------|----------------|------|
| 1   | GB70-85       | Screw                  | M8×65          | 2    |
| 2   | GB68-85       | Screw                  | M5×10          | 2    |
| 3   | C6266A-06-040 | End Cover              |                | 1    |
| 4   | C6266A-06-038 | Pressure Spring        |                | 1    |
| 5   | C6266A-06-039 | Top Cover              |                | 1    |
| 6   | C6266A-06-171 | Eccentric Disk         |                | 1    |
| 7   | C6266A-06-030 | Graduated Ring         |                | 1    |
| 8   | GB119-86      | Type A Cylindrical Pin | 8×45           | 2    |
| 9   | C6266A-06-170 | Cover                  |                | 1    |
| 10  | C6266A-06-031 | Inside-Engaged Gear    |                | 1    |
| 11  | SF-1(DU)      | Lubrication Gear       | C/SF1810       | 1    |
| 12  | C6266A-06-166 | Gear                   | M1.5 , Z29     | 2    |
| 13  | C6266A-06-167 | Gear                   | M1.5, Z24      | 1    |
| 14  | C6266A-06-165 | Shaft                  |                | 3    |
| 15  | C6266A-06-026 | Shaft                  |                | 1    |
| 16  | GB95-85       | Washer                 | 6              | 1    |
| 17  | C6266A-06-024 | Bulb                   |                | 1    |
| 18  | C6266A-06-023 | Transmission Fork      |                | 1    |
| 19  | C6266A-06-046 | Shaft                  |                | 1    |
| 20  | SF-1(DU)      | Lubrication Gear       | C/SF1615       | 1    |
| 21  | C6266A-06-047 | Gear Wheel             |                | 1    |
| 22  | C6266A-06-045 | Spacing Collar         |                | 1    |
| 23  | C6266A-06-102 | Shaft                  |                | 1    |
| 24  | C6266A-06-056 | Spacing Collar         |                | 6    |
| 25  | C6266A-06-103 | Gear Wheel             |                | 1    |
| 26  | SF-1(DU)      | Lubrication Gear       | C/SF2220       | 1    |
| 27  | GB894.1-86    | Circlip For Shaft      | 22             | 3    |
| 28  | C6266A-06-104 | Sheath                 |                | 1    |
| 29  | C6266A-06-105 | Gear Wheel             |                | 1    |
| 30  | C6266A-06-106 | Sheath                 |                | 1    |
| 31  | C6266A-06-001 | Apron Body             |                | 1    |
| 32  | GB80-85       | Screw                  | M8×10          | 2    |
| 33  | C6266A-06-081 | Transmission Fork      |                | 1    |
| 34  | C6266A-06-082 | Eccentric Pin          |                | 1    |
| 35  | GB93-76       | Washer                 | 8              | 1    |
| 36  | GB6171-86     | Hexagon Nut Type 1     | M8×1           | 1    |
| 37  | C6266A-06-083 | Staff                  |                | 1    |
| 38  | GB894.1-86    | Circlip For Shaft      | 8              | 1    |
| 39  | C6266A-06-138 | Pin                    |                | 1    |
| 40  | C6266A-06-005 | Pressing Ring          |                | 2    |
|     |               |                        |                |      |

| No. | Part No.        | Name                   | Specifications | Qty. |
|-----|-----------------|------------------------|----------------|------|
| 41  | GB 70-85        | Screw                  | M8×20          | 7    |
| 42  | C6266A-06-125   | Limit Block            |                | 1    |
| 43  | GB70-85         | Screw                  | M8×100         | 1    |
| 44  | GB70-85         | Screw                  | M6×14          | 2    |
| 45  | GB879-86        | Pin                    | 5×24           | 2    |
| 46  | GB119-86        | Cylindrical Pin Type A | 8×55           | 1    |
| 47  | C6266A-06-123   | Nut Base               |                | 1    |
| 48  | HY8311.1 , A    | Handle Bulb            | M12×40         | 1    |
| 49  | C6266A-06-147   | Handle Lever           |                | 1    |
| 50  | C6266A-06-122   | Screw                  |                | 1    |
| 51  | GB41-86         | Hexagon Nut Type 1     | M10            | 1    |
| 52  | C6266A-06-088   | Baffle                 |                | 1    |
| 53  | GB70-85         | Screw                  | M8×14          | 1    |
| 54  | GB879-86        | Pin                    | 5×24           | 1    |
| 55  | C6266A-06-149   | Handle Apparatus       |                | 1    |
| 56  | YS              | Motor                  | YSS2-5634      | 1    |
| 57  | GB1096-79       | Key                    | C4×18          | 1    |
| 58  | C6266A-06-090   | Sheath                 |                | 1    |
| 59  | GB/T3452.1-1992 | O-Ring                 | 28×1.80        | 1    |
| 60  | GB/T13871-1992  | Oil Seal               | FB15×25×7      | 1    |
| 61  | C6266A-06-091   | Gear Wheel             |                | 1    |
| 62  | GB894.1-86      | Circlip For Shaft      | 14             | 1    |
| 63  | GB308-89        | Steel Ball             | ф 10           | 1    |
| 64  | C6266A-06-155   | Sheath                 |                | 1    |
| 65  | GB77-85         | Screw                  | M12×8          | 1    |
| 66  | C6266A-06-120   | Pressure Spring        |                | 2    |
| 67  | R51-5A          | Oil Sight Glass        | 20             | 1    |
| 68  | C6266A-06-022   | Pin                    |                | 1    |
| 69  | GB91-86         | Cotter Pin             | 2×10           | 1    |
| 70  | C6266A-06-048   | Hand-Tightened Screw   |                | 1    |
| 71  | C6266A-06-049   | Leaf Spring            |                | 1    |
| 72  | GB308-89        | Steel Ball             | ф 4            | 2    |
| 73  | C6266A-06-027   | Shaft                  |                | 1    |
| 74  | GB894.1-86      | Circlip For Shaft      | 17             | 1    |
| 75  | C6266A-06-025   | Cam                    |                | 1    |
| 76  | GB77-85         | Screw                  | M5×4           | 1    |
| 77  | C6266A-06-142   | Yoke Plate             |                | 1    |
| 78  | C6266A-06-128   | Pin                    |                | 1    |
| 79  | GB70-85         | Screw                  | M6×25          | 2    |
| 80  | GB70-85         | Screw                  | M6×35          | 6    |

| No. | Part No.      | Name                   | Specifications | Qty. |
|-----|---------------|------------------------|----------------|------|
| 81  | GB4141.5-84   | Turning Handle         | M10            | 1    |
| 82  | GB65-85       | Screw                  | M6×8           | 1    |
| 83  | C6266A-06-035 | Washer                 |                | 1    |
| 84  | C6266A-06-034 | Handwheel              |                | 1    |
| 85  | C6266A-06-169 | Sheath                 |                | 1    |
| 86  | C6266A-06-168 | Pinion                 |                | 1    |
| 87  | GB1096-79     | Key                    | 5×18           | 1    |
| 88  | C6266A-06-162 | Rating Plate Of Apron  |                | 1    |
| 89  | GB827-86      | Rivet For Rating Plate | 2.5×6          | 10   |
| 90  | C6266A-06-151 | Apron Underplate       |                | 1    |
| 91  | GB77-85       | Screw                  | M16×10         | 1    |
| 92  | C6266A-06-150 | Paper Washer           |                | 1    |
| 93  | GB70-85       | Screw                  | M6×16          | 12   |
| 94  | C6266A-06-073 | Shaft                  |                | 1    |
| 95  | C6266A-06-077 | Round Head Pin         |                | 1    |
| 96  | C6266A-06-078 | Pin                    |                | 1    |
| 97  | GB91-86       | Cotter Pin             | 2×10           | 1    |
| 98  | C6266A-06-076 | Pressure Spring        |                | 1    |
| 99  | GB1096-79     | Key                    | 6×40           | 1    |
| 100 | C6266A-06-072 | Spherical Pin          |                | 1    |
| 101 | GB6171-86     | Hexagon Nut Type 1     | $M8 \times 1$  | 1    |
| 102 | C6266A-06-074 | Sheath                 |                | 1    |
| 103 | C6266A-06-065 | Handle Cap             |                | 1    |
| 104 | C6266A-06-066 | Handle Apparatus       |                | 1    |
| 105 | C6266A-06-067 | Handle Lever           |                | 1    |
| 106 | C6266A-06-068 | Dust Cap               |                | 1    |
| 107 | C6266A-06-069 | Cross Cover            |                | 1    |
| 108 | GB6171-86     | Hexagon Nut Type 1     | M14×1.5        | 1    |
| 109 | GB93-87       | Spring Washer          | 14             | 1    |
| 110 | GB119-86      | Type A Cylindrical Pin | 5×20           | 2    |
| 111 | C6266A-06-071 | Hood                   |                | 1    |
| 112 | C6266A-06-070 | Handle Apparatus       |                | 1    |
| 113 | GB119-86      | Type A Cylindrical Pin | 10×50          | 1    |
| 114 | GB78-85       | Screw                  | M5×12          | 1    |
| 115 | C6266A-06-085 | Sheath                 |                | 1    |
| 116 | GB1096-79     | Key                    | 5×20           | 1    |
| 117 | C6266A-06-087 | Shaft                  |                | 1    |
| 118 | GB894.1-86    | Circlip For Shaft      | 25             | 1    |
| 119 | C6266A-06-086 | Sheath                 |                | 1    |
| 120 | GB117-86      | Type A Tapered Cottar  | 6×30           | 1    |

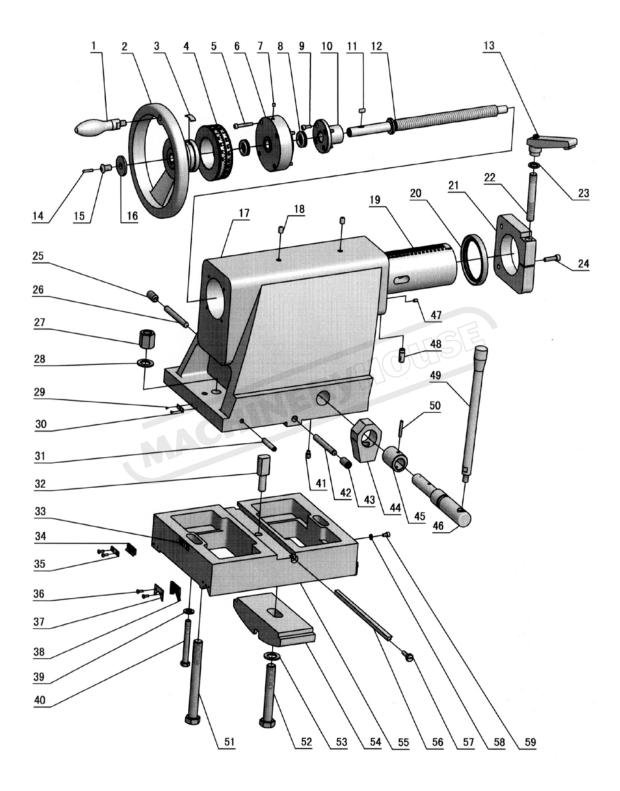
| No. | Part No.         | Name                     | Specifications | Qty. |
|-----|------------------|--------------------------|----------------|------|
| 121 | GB77-85          | Screw                    | M6×6           | 1    |
| 122 | C6266A-06-089    | Joint                    |                | 1    |
| 123 | C6266A-06-084    | Cam                      |                | 1    |
| 124 | GB70-85          | Screw                    | M8×20          | 2    |
| 125 | GB70-85          | Screw                    | M6×16          | 4    |
| 126 | C6266A-06-098    | Cover                    |                | 1    |
| 127 | GB6171-86        | Hexagon Nut Type 1       | M16×1.5        | 1    |
| 128 | GB77-85          | Screw                    | M16×35         | 1    |
| 129 | GB70-85          | Screw                    | M8×20          | 4    |
| 130 | C6266A-06-097    | Bearing Cap              |                | 1    |
| 131 | C6266A-06-101    | Paper Washer             |                | 1    |
| 132 | C6266A-06-108    | Pressure Spring          |                | 1    |
| 133 | GB/T 297-94      | Conical Roller Bearing   | 30205          | 1    |
| 134 | C6266A-06-109    | Sheath                   |                | 1    |
| 135 | GB/T 301-1995    | Thrust Ball Bearing      | 51107          | 1    |
| 136 | GB894.1-86       | Circlip For Shaft        | 50             | 1    |
| 137 | GB70-85          | Screw                    | M5×10          | 2    |
| 138 | C6266A-06-100    | Nut                      |                | 1    |
| 139 | C6266A-06-096    | Gear Wheel               |                | 1    |
| 140 | C6266A-06-110    | Cone Friction Clutch     |                | 1    |
| 141 | GB1096-79        | Key                      | 6×12           | 2    |
| 142 | C6266A-06-095    | Clutch Sleeve            |                | 1    |
| 143 | GB/T 292-94      | Angular Contact Bearing  | 7006AC         | 1    |
| 144 | C6266A-06-094    | Spacing Collar           |                | 1    |
| 145 | C6266A-06-114    | Star Body                |                | 1    |
| 146 | C6266A-06-116    | Pressure Spring          |                | 3    |
| 147 | C6266A-06-115    | Adapter Sleeve           |                | 3    |
| 148 | GB309-78         | Short Cylindrical Roller | 12×12          | 3    |
| 149 | C6266A-06-093    | Spacing Collar           |                | 1    |
| 150 | C6266A-06-112    | Shaft                    |                | 1    |
| 151 | C6266A-06-107    | Stop Dog                 |                | 1    |
| 152 | GB1096-79        | Key                      | 8×22           | 1    |
| 153 | GB1096-79        | Key                      | 8×32           | 1    |
| 154 | GB1096-79        | Key                      | 4×16           | 1    |
| 155 | C6266A-06-092    | Worm                     |                | 1    |
| 156 | GB/T 297-94      | Conical Roller Bearing   | 30204          | 1    |
| 157 | C6266A-06-111    | Shaft                    |                | 1    |
| 158 | C6266A-06-113    | End Cover                |                | 1    |
| 159 | GB/T 3452.1-1992 | O-Ring                   | 18×1.80        | 1    |
| 160 | GB894.1-86       | Circlip For Shaft        | 25             | 1    |
|     |                  |                          |                |      |

| No. | Part No.         | Name                     | Specifications | Qty. |
|-----|------------------|--------------------------|----------------|------|
| 161 | C6266A-06-044    | Gear Wheel               |                | 1    |
| 162 | C6266A-06-018    | Sheath                   |                | 1    |
| 163 | C6266A-06-017    | Gear Wheel               |                | 1    |
| 164 | C6266A-06-016    | Sheath                   |                | 1    |
| 165 | GB 1099-79       | Semicircular Key         | 6×9×22         | 2    |
| 166 | C6266A-06-015    | Pinion                   |                | 1    |
| 167 | C6266A-06-041    | Coupler                  |                | 1    |
| 168 | C6266A-06-020    | Shaft                    |                | 1    |
| 169 | GB1096-79        | Key                      | 5×16           | 1    |
| 170 | GB/T 3452.1-1992 | O-Ring                   | 18×1.80        | 1    |
| 171 | GB894.1-86       | Circlip For Shaft        | 17             | 1    |
| 172 | C6266A-06-042    | Gear Wheel               |                | 1    |
| 173 | C6266A-06-043    | Sheath                   |                | 1    |
| 174 | C6266A-06-021    | Gear Wheel               |                | 1    |
| 175 | C6266A-06-019    | Mandrel                  |                | 1    |
| 176 | GB/T 3452.1-1992 | O-Ring                   | 4.5×1.80       | 1    |
| 177 | C6266A-06-145    | End Cover                |                | 1    |
| 178 | C6266A-06-141    | Shaft                    |                | 1    |
| 179 | GB41-86          | Hexagon Nut Type 1       | M8             | 1    |
| 180 | GB77-85          | Screw                    | M6×6           | 2    |
| 181 | GB117-86         | Type A Tapered Cottar    | 6×35           | 2    |
| 182 | C6266A-06-079    | Transmission Fork        |                | 1    |
| 183 | C6266A-06-137    | Sheath                   |                | 2    |
| 184 | C6266A-06-144    | Ball Pin                 |                | 1    |
| 185 | GB77-85          | Screw                    | M6×8           | 8    |
| 186 | C6266A-06-051    | Bearing Sleeve           |                | 2    |
| 187 | GB/T 276-94      | Deep Groove Ball Bearing | 6005           | 2    |
| 188 | C6266A-06-050    | Gear Wheel               |                | 1    |
| 189 | C6266A-06-063    | Spacing Collar           |                | 1    |
| 190 | C6266A-06-163    | Spacing Collar           |                | 6    |
| 191 | GB/T 278-89      | Ball Bearing             | 80105          | 8    |
| 192 | GB 893.2-86      | Snap Ring                | 47             | 4    |
| 193 | C6266A-06-060    | Gear Wheel               |                | 2    |
| 194 | C6266A-06-164    | Spacing Collar           |                | 4    |
| 195 | GB1096-79        | Key                      | 8×16           | 2    |
| 196 | C6266A-06-058    | Shaft                    |                | 2    |
| 197 | C6266A-06-014    | Coupler                  |                | 2    |
| 198 | C6266A-06-003    | Gear Wheel               |                | 2    |
| 199 | C6266A-06-013    | Spacing Collar           |                | 2    |
| 200 | GB/T 278-89      | Ball Bearing             | 80104          | 2    |

| No. | Part No.      | Name                | Specifications | Qty. |
|-----|---------------|---------------------|----------------|------|
| 201 | C6266A-06-004 | Bearing Sleeve      |                | 2    |
| 202 | C6266A-06-059 | Gear Wheel          |                | 1    |
| 203 | C6266A-06-064 | Spacing Collar      |                | 1    |
| 204 | C6266A-06-002 | Shaft               |                | 1    |
| 205 | C6266A-06-061 | Gear Wheel          |                | 1    |
| 206 | GB1096-79     | Key                 | 6×14           | 1    |
| 207 | C6266A-06-062 | Gear Wheel          |                | 1    |
| 208 | GB894.1-86    | Circlip For Shaft   | 60             | 1    |
| 209 | C6266A-06-006 | Shaft               |                | 1    |
| 210 | C6266A-06-057 | Gear Wheel          |                | 1    |
| 211 | SF-1 (DU)     | Lubrication Bearing | C/SF2230       | 1    |
| 212 | GB77-85       | Screw               | M6×8           | 1    |
| 213 | C6266A-06-052 | End Cover           |                | 1    |
| 214 | SF-1 ( DU )   | Lubrication Bearing | C/SF2530       | 1    |
| 215 | C6266A-06-053 | Shaft               |                | 1    |
| 216 | C6266A-06-054 | Gear Wheel          |                | 1    |
| 217 | C6266A-06-055 | Helical Gear        |                | 1    |
| 218 | C6266A-06-011 | Gear Wheel          |                | 1    |
| 219 | GB/T 301-1995 | Thrust Ball Bearing | 51104          | 1    |
| 220 | C6266A-06-010 | Sheath              |                | 1    |
| 221 | SF-1 ( DU )   | Bearing             | C/SF2015       | 1    |
| 222 | C6266A-06-009 | Shim                |                | 1    |
| 223 | C6266A-06-007 | Flange              |                | 1    |
| 224 | GB70-85       | Screw               | M6×16          | 3    |
| 225 | C6266A-06-008 | Screw               |                | 1    |
| 226 | GB 6173-86    | Hexagonal Thin Nut  | M10×1          | 1    |
| 227 | C6266A-06-140 | Shaft               |                | 1    |
| 228 | C6266A-06-080 | Transmission Fork   |                | 1    |
| 229 | C6266A-06-126 | End Cover           |                | 2    |
| 230 | GB894.1-86    | Circlip For Shaft   | 14             | 1    |
| 231 | C6266A-06-133 | Sheath              |                | 1    |
| 232 | C6266A-06-128 | Pin                 |                | 1    |
| 233 | C6266A-06-127 | Bulb                |                | 1    |
| 234 | C6266A-06-129 | Shifting Rod        |                | 1    |
| 235 | GB77-85       | Screw               | $M6 \times 8$  | 1    |
| 236 | GB1096-79     | Key                 | 4×10           | 1    |
| 237 | C6266A-06-130 | Shaft               |                | 1    |
| 238 | GB1096-79     | Key                 | 5×12           | 1    |
| 239 | GB91-86       | Cotter Pin          | 2×10           | 1    |
| 240 | GB894.1-86    | Circlip For Shaft   | 6              | 1    |

| No. | Part No.         | Name                    | <b>Specifications</b> | Qty. |
|-----|------------------|-------------------------|-----------------------|------|
| 241 | C6266A-06-136    | Roller Head             |                       | 1    |
| 242 | C6266A-06-134    | Swinging Arm            |                       | 1    |
| 243 | C6266A-06-135    | Pin                     |                       | 1    |
| 244 | C6266A-06-132    | Pin                     |                       | 1    |
| 245 | C6266A-06-131    | Roller Head             |                       | 1    |
| 246 | C6266A-06-121    | Sheath                  |                       | 1    |
| 247 | GB68-85          | Screw                   | M6×14                 | 3    |
| 248 | C6266A-06-119    | Handle Apparatus        |                       | 1    |
| 249 | C6266A-04-142    | Lever                   |                       | 1    |
| 250 | RUN6246-101070-1 | Washer                  |                       | 1    |
| 251 | RUN6246-101088   | Round Head Screw        |                       | 1    |
| 252 | GB77-85          | Screw                   | M4×20                 | 1    |
| 253 | GB77-85          | Screw                   | M12×8                 | 1    |
| 254 | GB308-89         | Steel Ball              | ф 10                  | 1    |
| 255 | GB119-86         | Cylindrical Pin Type A  | 12×22                 | 1    |
| 256 | C6266A-06-124    | Split Nut Control Plate |                       | 1    |
| 257 | GB117-86         | Type A Tapered Cottar   | 6×30                  | 1    |
| 258 | GB77-85          | Screw                   | M6×6                  | 1    |
| 259 | C6266A-06-075    | Shaft                   |                       | 1    |
| 260 | GB1096-79        | Key                     | 5×25                  | 1    |
|     |                  |                         |                       |      |

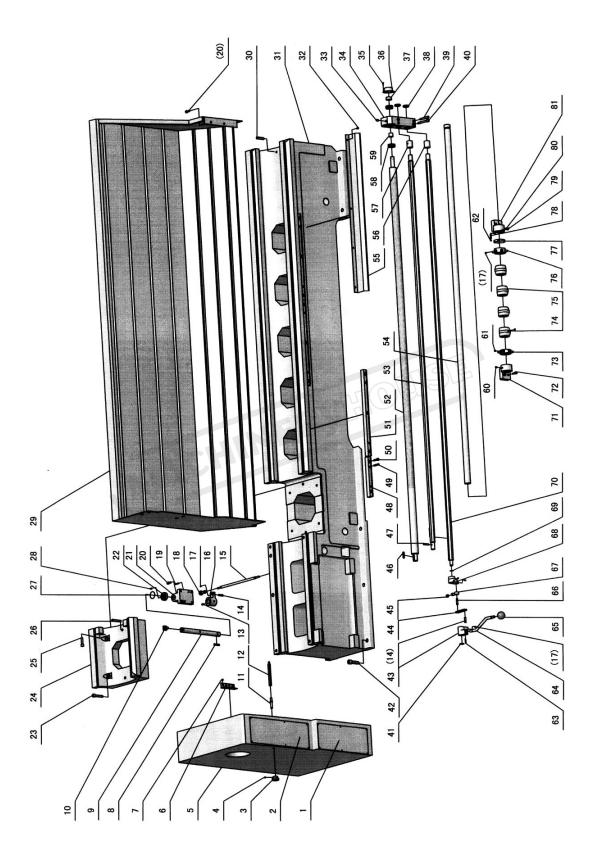
### **Tailstock**

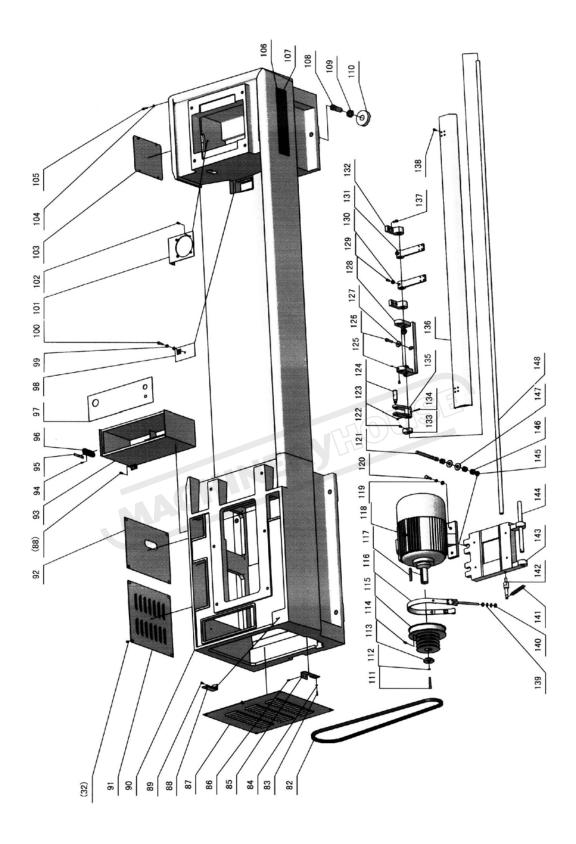


| No. | Part No.      | Name                      | <b>Specifications</b> | Qty. |
|-----|---------------|---------------------------|-----------------------|------|
| 40  | GB/T5782      | Screw Bolt                | M12×100               | 2    |
| 39  | GB/T95        | Washer                    | 12                    | 2    |
| 38  | C6266-08-04   | Dustproof Oil Seal        |                       | 2    |
| 37  | C6266-08-03   | Fixing Piece              |                       | 2    |
| 36  | GB/T818       | Screw                     | M4×12                 | 8    |
| 35  | C6251A-08-08  | Fixing Piece              | Shared part           | 2    |
| 34  | C6251A-08-09  | Dustproof Oil Seal        | Shared part           | 2    |
| 33  | RUN460-105032 | Rating Plate Of Tailstock | Shared part           | 1    |
| 32  | C6266-08-16   | Adjusting Piece           |                       | 1    |
| 31  | RUN460-105007 | Brake Screw Bolt          | Shared part           | 1    |
| 30  | RUN460-105031 | Rating Plate Of Tailstock | Shared part           | 1    |
| 29  | GB/T827       | Rivet                     | 2×5                   | 4    |
| 28  | GB/T95        | Washer                    | 20                    | 1    |
| 27  | GB/T56        | Nut                       | M20                   | 1    |
| 26  | GB/T119.2     | Pin                       | 12×108                | 1    |
| 25  | GB/T80        | Screw                     | M16×30                | 1    |
| 24  | GB/T70        | Screw                     | M8×30                 | 2    |
| 23  | C6266-08-05   | Washer                    |                       | 1    |
| 22  | C6266-08-06   | Screw Bolt                |                       | 1    |
| 21  | C6266-08-13   | Locking Block             |                       | 1    |
| 20  | HG4-692-67    | Oil Seal                  | PD90×110×12           | 1    |
| 19  | C6266-08-11   | Quill                     |                       | 1    |
| 18  | GB/T1155      | Oil Cup                   | 10                    | 2    |
| 17  | C6266-08-12   | Tailstock                 |                       | 1    |
| 16  | C6266-08-19   | Washer                    |                       | 1    |
| 15  | C6266-08-18   | Screw                     |                       | 1    |
| 14  | GB/T80        | Screw                     | M5×25                 | 1    |
| 13  | Z52-2         | Adjustable Fixed Handle   | A-M16×110             | 1    |
| 12  | C6266-08-10   | Feeding Lead Screw        |                       | 1    |
| 11  | GB/T1096      | Key                       | 6×15                  | 1    |
| 10  | C6246B-105005 | Screw Cap                 | Shared part           | 1    |
| 9   | GB/T70        | Screw                     | M6×16                 | 4    |
| 8   | GB/T301       | Thrust Ball Bearing       | 20×35×10              | 2    |
| 7   | GB/T1155      | Oil Cup                   | 6                     | 1    |
| 6   | C6266-08-09   | Flange                    |                       | 1    |
| 5   | GB/T70.1      | Screw                     | M6×40                 | 4    |
| 4   | C6266-08-08   | Graduation Ring           |                       | 1    |
| 3   | Q67-4-33      | Spring                    | 100                   | 1    |
| 2   | C6266-08-07   | Handwheel                 |                       | 1    |
| 1   | JB/T7270.6    | Curved-Surface            | BM12×100              | 1    |

| GB/T79        | Screw   | M10×16   | 1  |  |  |
|---------------|---|--|--|--|--|
| GB/T119.2     | Pin   | 12×95  | 1  |  |  |
| GB/T80        | Screw   | M16×30   | 1  |  |  |
| RUN460-105018 | Supporting Bracket  | Shared part  | 1  |  |  |
| RUN460-105028 | Eccentric Block   | Shared part  | 1  |  |  |
| C6266-08-14   | Brake Screw Bolt  |  | 1  |  |  |
| GB/T80        | Screw   | M6×10  | 1  |  |  |
| C6246B-105030 | Limit Block   | Shared part  | 1  |  |  |
| RUN460-105006 | Screw Bolt  | Shared part  | 1  |  |  |
| GB/T879.1     | Pin   | 6×36   | 1  |  |  |
| GB/T37        | Screw Bolt  | M20×180  | 1  |  |  |
| GB/T5782      | Screw Bolt  | M20×130  | 1  |  |  |
| GB/T95        | Washer  | 20   | 1  |  |  |
| C6266-08-17   | Brake Block   |  | 2  |  |  |
| C6266-08-15   | Base Frame  |  | 1  |  |  |
| C6266-08-02   | Gibs  |  | 1  |  |  |
| RUN460-105020 | Adjusting Screw   |  | 2  |  |  |
| GB/T95        | Washer  | 6  | 1  |  |  |
| GB/T70        | Screw   | M6×10  | 1  |  |  |
|               |   |  |  |  |  |
|               | GB/T119.2 GB/T80 RUN460-105018 RUN460-105028 C6266-08-14 GB/T80 C6246B-105030 RUN460-105006 GB/T879.1 GB/T37 GB/T5782 GB/T95 C6266-08-17 C6266-08-15 C6266-08-02 RUN460-105020 GB/T95 | GB/T119.2         Pin           GB/T80         Screw           RUN460-105018         Supporting Bracket           RUN460-105028         Eccentric Block           C6266-08-14         Brake Screw Bolt           GB/T80         Screw           C6246B-105030         Limit Block           RUN460-105006         Screw Bolt           GB/T879.1         Pin           GB/T37         Screw Bolt           GB/T5782         Screw Bolt           GB/T95         Washer           C6266-08-17         Brake Block           C6266-08-15         Base Frame           C6266-08-02         Gibs           RUN460-105020         Adjusting Screw           GB/T95         Washer | GB/T119.2         Pin         12×95           GB/T80         Screw         M16×30           RUN460-105018         Supporting Bracket         Shared part           RUN460-105028         Eccentric Block         Shared part           C6266-08-14         Brake Screw Bolt         M6×10           GB/T80         Screw         M6×10           C6246B-105030         Limit Block         Shared part           RUN460-105006         Screw Bolt         Shared part           GB/T879.1         Pin         6×36           GB/T37         Screw Bolt         M20×180           GB/T5782         Screw Bolt         M20×130           GB/T95         Washer         20           C6266-08-17         Brake Block           C6266-08-02         Gibs           RUN460-105020         Adjusting Screw           GB/T95         Washer         6 |  |  |

### **Bed Assembly**





No. Part No. Name Specifications Qty.

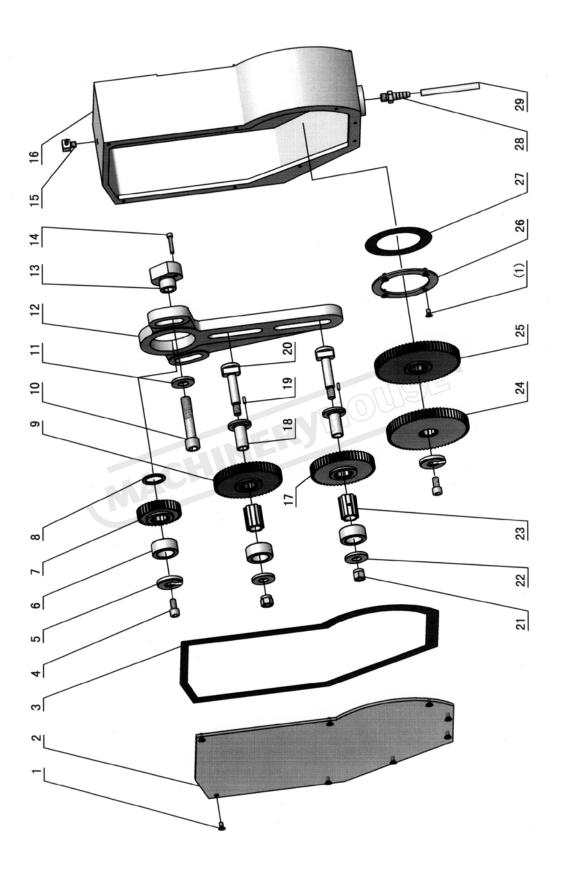
| 1   | C6266A-05-90   | Rating Plate                 |                  | 1    |
|-----|----------------|------------------------------|------------------|------|
| 2   | C6266A-05-91   | Rating Plate                 |                  | 1    |
| 3   | RUN6246-108073 | Nut                          |                  | 1    |
| 4   | GB79-85        | Screw                        |                  | 1    |
| 5   | C6266A-20-23   | Cover-End                    |                  | 1    |
| 6   | GB7277-87      | Hinge                        | 100              | 2    |
| 7   | GB68-85        | Screw                        | M5×10            | 16   |
| 8   | GB1096-79      | Round-Head Ordinary Flat Key | A6X40            | 1    |
| 9   | C6266A-01-49   | Connecting Rod               |                  | 1    |
| 10  | C6266A-01-50   | Crosshead Shoe               |                  | 1    |
| 11  | RUN6246-108074 | Screw                        |                  | 1    |
| 12  | C6266A-05-12   | Screw                        |                  | 1    |
| 13  | GB78-85        | Screw                        | M8X10            | 1    |
| 14  | C6266A-01-53   | Pin                          |                  | 2    |
| 15  | C6266A-01-55   | Connecting Rod               |                  | 1    |
| 16  | C6266A-01-48   | Swinging Arm                 |                  | 1    |
| 17  | GB80-85        | Screw                        | M6X8             | 1    |
| 18  |                | Knuckle Bearing              | M8Levorotationar | 1    |
| 19  | GB119-86       | Ordinary Cylindrical Pin     | 6X30             | 2    |
| 20  | GB70-85        | Screw                        | M8X20            | 4    |
| 21  | C6266A-01-46   | Support Abutment             |                  | 1    |
| 22  | C6266A-01-47   | Shaft Sleeve                 |                  | 1    |
| 23  | GB70-85        | Screw                        | M12×60           | 4    |
| 24  | C6266A-01-02   | Saddle                       |                  | 1    |
| 25  | GB70-85        | Screw                        | M10X40           | 2    |
| 26  | GB118-86       | Tapered Cottar               | 10×65            | 4    |
| 27  | GB921-86       | Steel Wire Locking Collar    | D38Xd1           | 1    |
| 28  | GB71-85        | Screw                        | M8X10            | 1    |
| 29  | C6266A-01-60   | Welding Drawing              |                  | 1    |
| 30  | GB878-86       | Threaded Cylindrical Pin     | M12X50           | 1    |
| 31  | C6266A-01-01   | Lathe Bed                    |                  | 1    |
| 32  | GB/T70.2-2000  | Screw                        | M6X10            | 10   |
| 33  | GB1155-89      | Force-Fit Pressure Oil Cup   | 10               | 1    |
| 34  | C6266A-01-33   | Hitching Leg                 |                  | 1    |
| 35  | GB70-85        | Screw                        | M4X10            | 2    |
| 36  | C6266A-01-34   | End Cap                      |                  | 1    |
| 37  | RUN6246-106007 | Screw Cap                    | Shared part      | 1    |
| 38  | C6266A-01-37   | Hitching Leg Stopper         |                  | 2    |
| 39  | GB118-86       | Tapered Cottar               | 8X75             | 2    |
| 40  | GB70-85        | Screw                        | M10X80           | 2    |
| No. | Part No.       | Name                         | Specifications   | Qty. |

| 41  | GB894.1-86       | Circlip For Shaft            | 20                    | 1    |
|-----|------------------|------------------------------|-----------------------|------|
| 42  | GB70-85          | Screw                        | M16×55                | 12   |
| 43  | C6266A-01-57     | Lever Supporting Abutment    |                       | 1    |
| 44  | C6266A-01-56     | Connecting Rod               |                       | 1    |
| 45  | GB6170-86        | Hexagon Nut Type 1           | M8                    | 1    |
| 46  | GB1096-79        | Key                          | C6×36                 | 1    |
| 47  | C6266A-01-65     | Safety Pin                   |                       | 1    |
| 48  | C6266A-01-44     | Rack                         |                       | 1    |
| 49  | GB879-86         | Resilient Cylindrical Pin    | 8X40                  | 10   |
| 50  | GB70-85          | Hexagon Socket Cap Set Screw | M8X30                 | 14   |
| 51  | C6266A-01-45     | Rack                         |                       | 4    |
| 52  | C6266A-01-30     | Large Lead Screw             |                       | 1    |
| 53  | C6266A-01-31     | Feeding Rod                  |                       | 1    |
| 54  | C6266A-01-64     | Stop Axle                    |                       | 1    |
| 55  | C6266A-01-29     | Chip Guard                   |                       | 1    |
| 56  | C6266A-01-35     | Control Lever Casing         |                       | 1    |
| 57  | C6266A-01-36     | Feeding Lead Screw Casing    |                       | 1    |
| 58  | GB301-84         | Thrust Ball Bearing          | 51204                 | 2    |
| 59  | SF-1             | Oil Retaining Bearing        | 2020                  | 1    |
| 60  | GB79-85          | Screw                        | M8X10                 | 1    |
| 61  | GB80-85          | Screw                        | M8X6                  | 1    |
| 62  | GB308-84         | Steel Ball                   | 6                     | 1    |
| 63  | GB879-86         | Resilient Cylindrical Pin    | 5X24                  | 1    |
| 64  | C6266A-01-58     | Control Lever                |                       | 1    |
| 65  | Z16-1            | Handle Bulb                  | M12×40                | 1    |
| 66  | C6266A-01-59     | Pin                          |                       | 1    |
| 67  |                  | Knuckle Bearing              | M8dextrorotationa     | 1    |
| 68  | C6266A-01-54     | Control Block                |                       | 1    |
| 69  | GB894.1-86       | Circlip For Shaft            | 16                    | 1    |
| 70  | C6266A-01-32     | Control Lever                |                       | 1    |
| 71  | C6266A-01-62     | Left Bracket For Sizing      |                       | 1    |
| 72  | GB70-85          | Screw                        | M8×25                 | 4    |
| 73  | RUN6246-106019-1 | Star Ring                    | Shared part           | 1    |
| 74  | RUN6246-106020-1 | Cushion Block For Cam        | Shared part           | 4    |
| 75  | C6266A-01-63     | Cam                          |                       | 4    |
| 76  | RUN6246-106019-2 | Star Ring                    | Shared part           | 1    |
| 77  | RUN6246-6019-5   | Rating Plate                 | Shared part           | 1    |
| 78  | Q81-1            | Spring                       | 1X5X25                | 1    |
| 79  | GB827-86         | Rivet For Rating Plate       | 2X5                   | 6    |
| 80  | RUN460-105031    | Rating Plate                 | Shared part           | 1    |
| No. | Part No.         | Name                         | <b>Specifications</b> | Qty. |

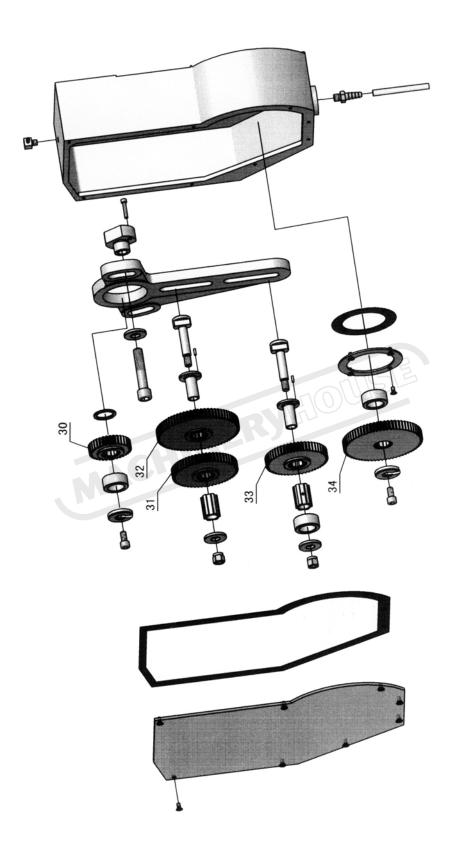
| 81  | C6266A-01-61    | Right Bracket For Sizing  |                       | 1    |
|-----|-----------------|---------------------------|-----------------------|------|
| 82  |                 | V Belt (Type B)           | B97 "                 | 4    |
| 83  | GB70-85         | Screw                     | M5×10                 | 2    |
| 84  | GB6170-86       | Hexagon Nut Type 1        | M4                    | 2    |
| 85  | RUN6246-106091  | Microswitch Bracket       | Shared part           | 1    |
| 86  | GB818-85        | Screw                     | M4×20                 | 2    |
| 87  | C6266A-01-40    | Side Cover                |                       | 1    |
| 88  | RUN6246-106014  | Limited Switch Seat       |                       | 1    |
| 89  | GB70-85         | Screw                     | M6×16                 | 12   |
| 90  | C6266A-01-03-2  | Lathe Leg                 |                       | 1    |
| 91  | C6266A-01-41    | Rear Cover                |                       | 1    |
| 92  | C6266A-01-42    | Rear Cover                |                       | 1    |
| 93  | C6266A-01-69    | Oil Tank Cover            |                       | 1    |
| 94  | GB822-85        | Screw                     | M4X10                 | 4    |
| 95  | GB3452.1-82     | O Ring                    | 50X1.8                | 1    |
| 96  | RUN460-104068   | Oil Cup                   | Shared part           | 1    |
| 97  | C6266A-01-68    | Oil Tank                  |                       | 1    |
| 98  | RUN6246-106051  | Filter Screen             |                       | 2    |
| 99  | GB6170-86       | Hexagon Nut Type 1        | M8                    | 4    |
| 100 | GB70-85         | Screw                     | M8X30                 | 2    |
| 101 | C6251A-01-17-5  | Cooling Pump Base         |                       | 1    |
| 102 | GB70-85         | Screw                     | M6X12                 | 4    |
| 103 | RUN6246-106033  | Pump Hole Cover           |                       | 2    |
| 104 | GB97.1-85       | Flat Washer               | 6                     | 2    |
| 105 | GB70-85         | Screw                     | M6X25                 | 2    |
| 106 | C6266A-01-70    | Rating Plate              |                       | 1    |
| 107 | GB818-85        | Screw                     | M3X6                  | 4    |
| 108 | RUN6246-106069  | Cushion Block             | Shared part           | 8    |
| 109 | GB6173-86       | Hexagonal Thin Nut        | M24X2                 | 8    |
| 110 | RUN6246-106029  | Leveling Screw            | Shared part           | 8    |
| 111 | GB70-85         | Screw                     | M8×55                 | 1    |
| 112 | GB93-87         | Spring Washer             | 8                     | 1    |
| 113 | RUN6141-106049a | Belt Pulley Washer        | Shared part           | 1    |
| 114 | GB80-85         | Screw                     | M8×20                 | 1    |
| 115 | C6266A-01-08    | Motor Belt Pulley         |                       | 1    |
| 116 | RUN6246-106047  | Brake Ribbon              | Shared part           | 1    |
| 117 | GB1096C-79      | Key                       | 10×70                 | 1    |
| 118 |                 | Motor                     |                       | 1    |
| 119 | GB93-87         | Spring Washer             | 10                    | 4    |
| 120 | GB5782-86       | Hexagonal Head Screw Bolt | M10X35                | 4    |
| No. | Part No.        | Name                      | <b>Specifications</b> | Qty. |

| 121 | RUN6246-106046  | Adjusting Screw           | Shared part | 2  |
|-----|-----------------|---------------------------|-------------|----|
| 122 | GB70-85         | Screw                     | M6×12       | 1  |
| 123 | GB70-85         | Screw                     | M5×10       | 1  |
| 124 | RUN6246-106039  | Inserted Pin              | Shared part | 1  |
| 125 | GB80-85         | Screw                     | M6×8        | 1  |
| 126 | GB70-85         | Screw                     | M10×40      | 3  |
| 127 | RUN6246-106097  | Shim                      | Shared part | 3  |
| 128 | RUN6246-106041  | Motor Plate Bracket       | Shared part | 1  |
| 129 | GB79-85         | Screw                     | M10X25      | 4  |
| 130 | GB6170-86       | Hexagon Nut Type 1        | M10         | 4  |
| 131 | RUN6246-106042A | Bracket                   | Shared part | 4  |
| 132 | RUN6246-106036  | Carrier                   |             | 4  |
| 133 | RUN6246-106037  | Cam                       | Shared part | 1  |
| 134 | GB879-86        | Resilient Cylindrical Pin | 5×40        | 1  |
| 135 | RUN6246-106040  | Swinging Arm              | Shared part | 1  |
| 136 | C6266A-01-39-2  | Brake Pedal               |             | 2  |
| 137 | GB70-85         | Screw                     | M8X20       | 8  |
| 138 | GB70-85         | Screw                     | M6X16       | 16 |
| 139 | GB97.1-85       | Flat Washer               | D10         | 4  |
| 140 | GB6170-86       | Hexagon Nut Type 1        | M10         | 2  |
| 141 | Q81-3           | Spring                    | 3×16×115    | 1  |
| 142 | RUN6246-106050  | Fixed Pin                 | Shared part | 1  |
| 143 | RUN6246-106034  | Motor Plate               | Shared part | 1  |
| 144 | RUN6246-106044  | Staff                     | Shared part | 1  |
| 145 | GB93-87         | Spring Washer             | 16          | 2  |
| 146 | GB6170-86       | Hexagon Nut Type 1        | M16         | 6  |
| 147 | RUN6246-106079  | Washer                    | Shared part | 4  |
| 148 | C6266A-01-38-2  | Brake Axle                |             | 1  |

# **Change gear (Metric)**

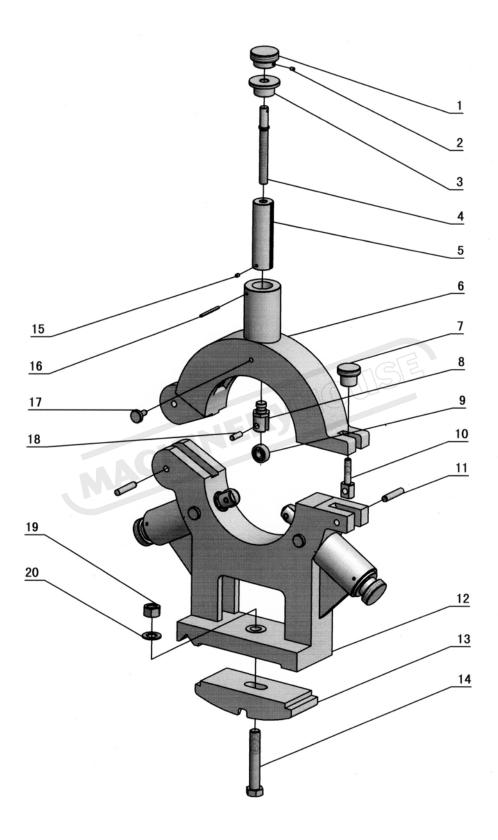


# Change gear (Inch)



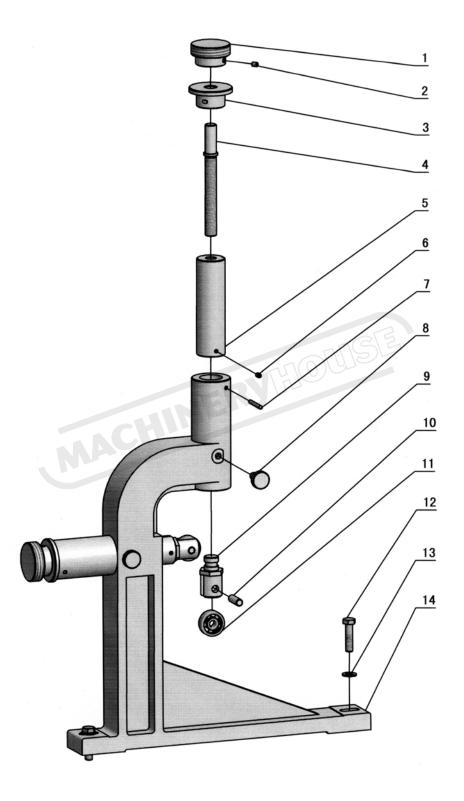
| 1  | GB818-85      | Screw                    | M6×12                                 | 12 |
|----|---------------|--------------------------|---------------------------------------|----|
| 2  | C6266A-20-13  | Case Cover               |                                       | 1  |
| 3  | C6266A-20-14  | Gasket                   |                                       | 1  |
| 4  | GB70-85       | Screw                    | M10×20                                | 2  |
| 5  | C6266A-20-12  | Open Washer              |                                       | 2  |
| 6  | C6266A-20-08  | Washer                   |                                       | 3  |
| 7  | C6266A-20-03  | Change Gear              | Z=36                                  | 1  |
| 8  | C6266A-20-22  | Washer                   |                                       | 1  |
| 9  | C6266A-20-04  | Change Gear              | Z=57                                  | 1  |
| 10 | GB70-85       | Screw                    | M16×80                                | 2  |
| 11 | C6266A-20-21  | Washer                   |                                       | 2  |
| 12 | C6266A-20-02  | Change Gear Bracket      |                                       | 1  |
| 13 | C6266A-20-20  | Fixed Sleeve             |                                       | 2  |
| 14 | GB70-85       | Screw                    | M6×30                                 | 2  |
| 15 | C6266A-20-18  | Oil Intake Connecter     |                                       | 1  |
| 16 | C6266A-20-01  | Change Gear Box Body     |                                       | 1  |
| 17 | C6266A-20-10  | Change Gear              | Z=54                                  | 1  |
| 18 | C6266A-20-09  | Sleeve Carrier           |                                       | 2  |
| 19 | GB119-86      | Ordinary Cylindrical Pin | 4×12                                  | 2  |
| 20 | C6266A-20-06  | Shaft                    |                                       | 2  |
| 21 | GB6182A-86    | Locking Nut With Insert  | M12                                   | 2  |
| 22 | C6266A-20-05  | Washer                   |                                       | 2  |
| 23 | C6266A-20-07  | Spline Housing           |                                       | 2  |
| 24 | C6266A-20-11  | Change Gear              | Z=69                                  | 1  |
| 25 | C6266A-20-15  | Change Gear              | Z=72                                  | 1  |
| 26 | C6266A-20-17  | Pressing Ring            |                                       | 1  |
| 27 | C6266A-20-16  | Gasket                   |                                       | 1  |
| 28 | C6266A-20-19  | Oil Scavenge Connecter   |                                       | 1  |
| 29 |               | Tube                     | $  410.5 \times \delta1 \times 1100 $ | 1  |
| 30 | C6266A-20-25Y | Change Gear              | Z=39                                  | 1  |
| 31 | C6266A-20-27Y | Change Gear              | Z=58                                  | 1  |
| 32 | C6266A-20-26Y | Change Gear              | Z=76                                  | 1  |
| 33 | C6266A-20-04  | Change Gear              | Z=57                                  | 1  |
| 34 | C6266A-20-28Y | Change Gear              | Z=63                                  | 1  |
|    |               |                          |                                       |    |

# **Steady Rest**



| 1  | C6266-10A-04   | Hand Grip                 |             | 3 |
|----|----------------|---------------------------|-------------|---|
| 2  | GB/T78         | Screw                     | M6×8        | 3 |
| 3  | C6266-10A-05   | Sheath                    |             | 3 |
| 4  | C6266-10A-03   | Screw Bolt                |             | 3 |
| 5  | C6266-10A-02   | Quill                     |             | 3 |
| 6  | C6266-10A-01   | Upper Body                |             | 1 |
| 7  | C6251A-10-09   | Hand Grip                 | Shared part | 1 |
| 8  | C6251A-10-02   | Pressure Head             | Shared part | 3 |
| 9  | GB/T276        | Bearing 6300-2RS          | 10×35×11    | 3 |
| 10 | C6251A-10-10   | Screw Bolt                | Shared part | 1 |
| 11 | GB/T119.2      | Cylindrical Pin           | 12×60       | 2 |
| 12 | C6266-10A-06   | Lower Body                |             | 1 |
| 13 | C6266-08-17    | Brake Block               | Shared part | 1 |
| 14 | GB/T37         | Screw Bolt                | M20×120     | 1 |
| 15 | GB/T77         | Screw                     | M6×8        | 3 |
| 16 | GB/T879        | Resilient Cylindrical Pin | 5×60        | 3 |
| 17 | RUN6246-110018 | Screw                     | Shared part | 3 |
| 18 | C6251A-10-03   | Pin                       | Shared part | 3 |
| 19 | GB/T56         | Hexagonal Thick Nut       | M20         | 1 |
| 20 | GB/T97.2       | Washer                    | 20          | 1 |
|    |                | Washer                    |             |   |

### **Follow Rest**



| 1  | C6266-10A-04        | Hand Grip                 | Shared part | 2 |
|----|---------------------|---------------------------|-------------|---|
| 2  | GB/T78-1985         | Screw                     | M6×8        | 2 |
| 3  | C6266-10B-04        | Sheath                    |             | 2 |
| 4  | C6266-10B-03        | Screw Bolt                |             | 2 |
| 5  | C6266-10B-02        | Sheath                    |             | 2 |
| 6  | GB/T77-1985         | Screw                     | M6×8        | 2 |
| 7  | GB/T879-1986        | Resilient Cylindrical Pin | 5×40        | 2 |
| 8  | RUN6246-110018      | Screw                     | Shared part | 2 |
| 9  | C6266-10B-05        | Pressure Head             |             | 2 |
| 10 | GB119-86 ( Type A ) | Cylindrical Pin           | ф 10×20     | 2 |
| 11 | GB/T276-1994        | Ball Bearing 6200-2RS     | 10×30×9     | 2 |
| 12 | GB/T5782-1986       | Hexagonal Head Bolt       | M10×40      | 2 |
| 13 | GB/T97.1-1985       | Flat Washer               | 10          | 2 |
| 14 | C6266-10B-01        | Movable Support Body      |             | 1 |

