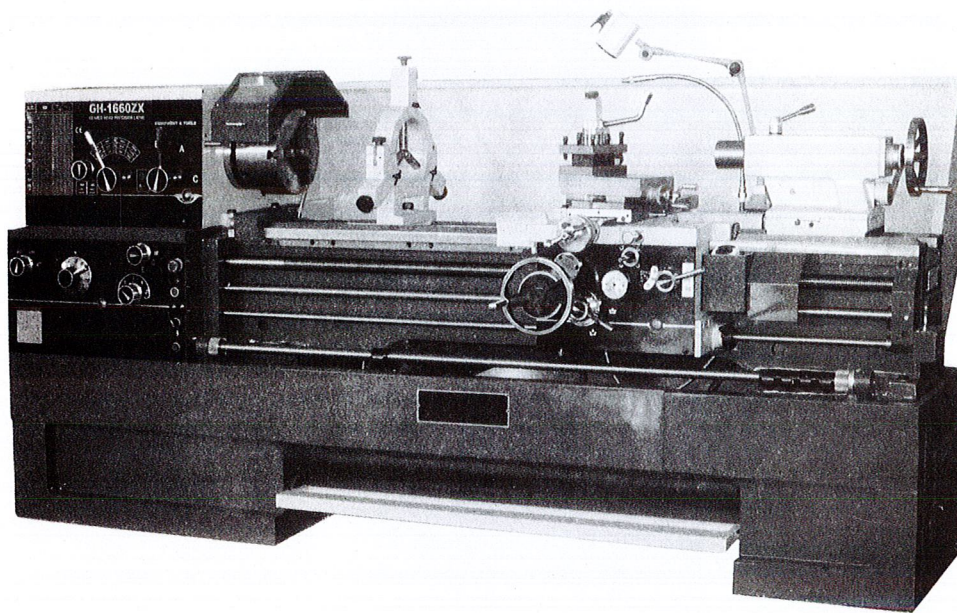


OPERATOR'S MANUAL

ZX Lathes



(Safety guard cover is optional)

, **WARNING**

1. **Read and understand the entire instruction manual before attempting assembly or operation.**
2. **These lathes are designed and intended for use by properly trained and experienced personnel only. If you are not familiar with the proper and safe operation of a lathe, do not use until proper training and knowledge have been obtained.**
3. Always wear approved safety glasses/face shields while using this machine.
4. Make certain the machine is properly grounded.
5. Before operating the machine, remove tie, rings, watches, other jewelry, and roll up sleeves above the elbows. Remove all loose clothing and confine long hair. Do **not** wear gloves.
6. Keep the floor around the machine clean and free of scrap material, oil and grease.
7. Keep machine guards in place at all times when the machine is in use. If removed for maintenance purposes, use extreme caution and replace the guards immediately.
8. Do **not** over reach. Maintain a balanced stance at all times so that you do not fall or lean against blades or other moving parts.
9. Make all machine adjustments or maintenance with the machine unplugged from the power source.
10. Use the right tool. Don't force a tool or attachment to do a job which it was not designed for.
11. Replace warning labels if they become obscured or removed.
12. Give your work undivided attention. Looking around, carrying on a conversation, and "horse-play" are careless acts that can result in serious injury.
13. Keep visitors a safe distance from the work area.
14. Use recommended accessories; improper accessories may be hazardous.
15. Make a habit of checking to see that keys and adjusting wrenches are removed before turning on the machine.
16. Never attempt any operation or adjustment if the procedure is not understood.
17. Keep fingers away from revolving parts and cutting tools while in operation.
18. Keep belt guard in place and in working order.
19. Never force the cutting action.
20. Do **not** attempt to adjust or remove tools during operation.
21. Always keep cutters sharp.
22. Always use identical replacement parts when servicing.
23. Failure to comply with all of these warnings may cause serious injury.
24. Never operate the machine under the influence of medication, drugs or alcohol.
25. Some dust created by power sanding, sawing, grinding, drilling and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:
 - Lead from lead based paint
 - crystalline silica from bricks and cement and other masonry products, and
 - arsenic and chromium from chemically-treated lumber.
26. Your risk from those exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specifically designed to filter out microscopic particles

Specifications:**GH-1440ZX/1460ZX****Capacities:**

Swing over Bed	360mm
Swing over Cross Slide	200mm
Swing through Gap	600mm
Distance between Centers	1000/1500mm

Headstock:

Hole through Spindle	80mm
Spindle Mount	D1-8
Spindle Taper with Sleeve:	MT-5 (MT-7)
Number of Spindle Speeds	12
Range of Spindle Speeds	42 - 1800 rpm
Lubrication Method	Splash

Gearbox:

Number of Longitudinal and Cross Feeds	122
Range of Longitudinal Feeds mm/rev).....	0.04-2.46mm
Range of Cross Feeds (mm/rev).....	0.03-1.23mm
Number of Inch Threads	61
Range of Inch Threads	1-5/8 - 72 T.P.I.
Number of Metric Threads	24
Range of Metric Threads	0.5 - 20 mm

Compound and Carriage:

Maximum Tool Size	25x25mm
Maximum Compound Slide Travel.....	100mm
Maximum Cross Slide Travel	280mm
Maximum Carriage Travel.....	890/1340mm

Tailstock:

Tailstock Sleeve Travel	130mm
Taper in Tailstock Sleeve.....	MT-4

Miscellaneous:

Main Motor	5.5kw, 3Ph, 4P 230V/460V
Net Weight (approx.).....	2250/2550kg.

Specifications:**GH-1640ZX/1660ZX****Capacities:**

Swing over Bed	410mm
Swing over Cross Slide	250mm
Swing through Gap	660mm
Distance between Centers	1000/1500mm

Headstock:

Hole through Spindle	80mm
Spindle Mount	D1-8
Spindle Taper with Sleeve:	MT-5 (MT-7)
Number of Spindle Speeds	12
Range of Spindle Speeds	25 – 1800 or 42-1800 rpm
Lubrication Method	Splash

Gearbox:

Number of Longitudinal and Cross Feeds	122
Range of Longitudinal Feeds mm/rev)	0.04-2.46mm
Range of Cross Feeds (mm/rev)	0.03-1.23mm
Number of Inch Threads	61
Range of Inch Threads	1-5/8 - 72 T.P.I.
Number of Metric Threads	24
Range of Metric Threads	0.5 - 20 mm

Compound and Carriage:

Maximum Tool Size	25x25mm
Maximum Compound Slide Travel	100mm
Maximum Cross Slide Travel	280mm
Maximum Carriage Travel	890/1340mm

Tailstock:

Tailstock Sleeve Travel	130mm
Taper in Tailstock Sleeve	MT-4

Miscellaneous:

Main Motor	5.5kw, 3Ph, 6P 230V/460V
Net Weight (approx.)	2300/2600kg.

Specifications:**GH-1840ZX/1860ZX/1880ZX****Capacities:**

Swing over Bed	460mm
Swing over Cross Slide	290mm
Swing through Gap	700mm
Distance between Centers	1000/1500/2000mm

Headstock:

Hole through Spindle	80mm
Spindle Mount	D1-8
Spindle Taper with Sleeve:	MT-5 (MT-7)
Number of Spindle Speeds	12
Range of Spindle Speeds	25 - 1800 or 42-1800 rpm
Lubrication Method	Splash

Gearbox:

Number of Longitudinal and Cross Feeds	122
Range of Longitudinal Feeds mm/rev)	0.04-2.46mm
Range of Cross Feeds (mm/rev)	0.03-1.23mm
Number of Inch Threads	61
Range of Inch Threads	1-5/8 - 72 T.P.I.
Number of Metric Threads	24
Range of Metric Threads	0.5 - 20 mm

Compound and Carriage:

Maximum Tool Size	25x25mm
Maximum Compound Slide Travel	100mm
Maximum Cross Slide Travel	280mm
Maximum Carriage Travel	890/1340/1900mm

Tailstock:

Tailstock Sleeve Travel	130mm
Taper in Tailstock Sleeve	MT-5

Miscellaneous:

Main Motor	5.5kw, 3Ph, 6P 230V/460V
Net Weight (approx.)	2350/2650/2900kg.

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⚠ Warning

Read and understand the entire contents of this manual before attempting set-up or operation!

Failure to comply may cause serious injury!

Contents of the Shipping Container

- 1 Lathe
- 1 Steady Rest (mounted on lathe)
- 1 Follow Rest (mounted on lathe)
- 1 250mm Three Jaw Chuck (mounted on lathe)
- 1 320mm Four Jaw Chuck
- 1 Face Plate (12" face plate for 14" ZX lathes, 16" face plate for 16"/18" ZX lathes)
- 1 Tool Box

Tool Box Contents

- 7 Hex Wrench Set
- 4 Open End Wrench Set
- 1 Spindle Sleeve
- 1 Center
- 6 Leveling Bolts
- 6 Leveling Pads
- 1 Flat Blade Screwdriver
- 1 Cross Point Screwdriver
- 1 Chuck Wrench
- 1 Tool Post Wrench
- 1 Light bulb
- 1 Adjustable Wrench
- 1 Oil Gun
- 1 Cross Feed Handle
- 2 Shear Pins
- 1 Live Center (MT4 for 14"/16" ZX lathes
MT5 for 18" ZX lathes)
- 1 Key For Cam Locks
- 1 Round Nut Spanner
- 1 Gap-Bridge Pin Driver
- 5 Fuse
- 1 Taper Piece
- 1 Paint Can
- 1 Parts List
- 1 Operator's manual

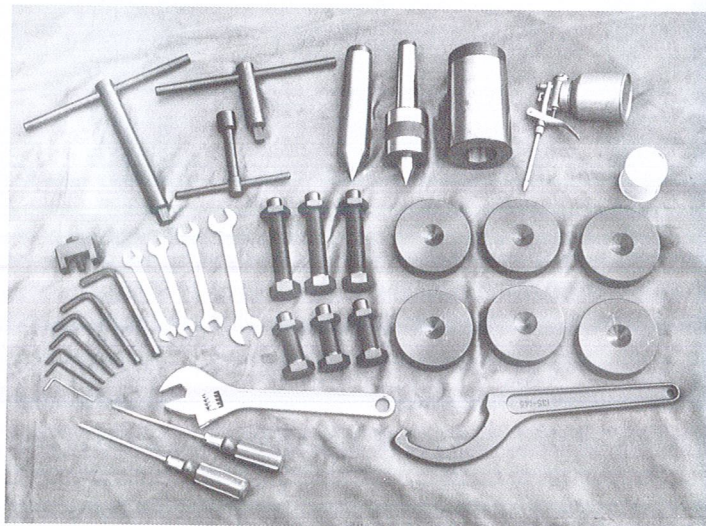


Fig.1

Uncrating and Clean-Up

1. Finish removing the wooden crate from around the lathe.
2. Unbolt the lathe from the shipping crate bottom.
3. Choose a location for the lathe that is dry, has good lighting, and has enough room to be able to service the lathe on all four sides.
4. Sling lathe after placing steel rods or pipes (of sufficient strength) into holes of lathe stand as diagrammed in Fig. 2. **Do not lift by spindle.** With adequate lifting equipment, slowly raise the lathe off the shipping crate bottom. Make sure lathe is balanced before moving.
5. To avoid twisting the bed, the lathe's location must be absolutely flat and level. Check for a level condition using a machinist's precision level on the bedways both front to back and side to side. The leveling pads included in the toolbox and the leveling screws in the lathe base will help you to reach a level condition. **The lathe must be level to be accurate.**
6. Clean all rust protected surfaces using a mild commercial solvent, kerosene or diesel fuel. Do not use paint thinner, gasoline, or lacquer thinner. These will damage painted surfaces. Cover all cleaned surfaces with a light film of 20W machine oil.
7. Remove the end gear cover. Clean all components of the end gear assembly and coat all gears with a heavy, non-slinging grease. Replace cover.

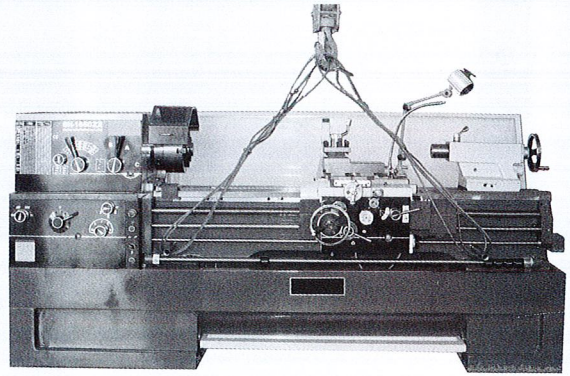
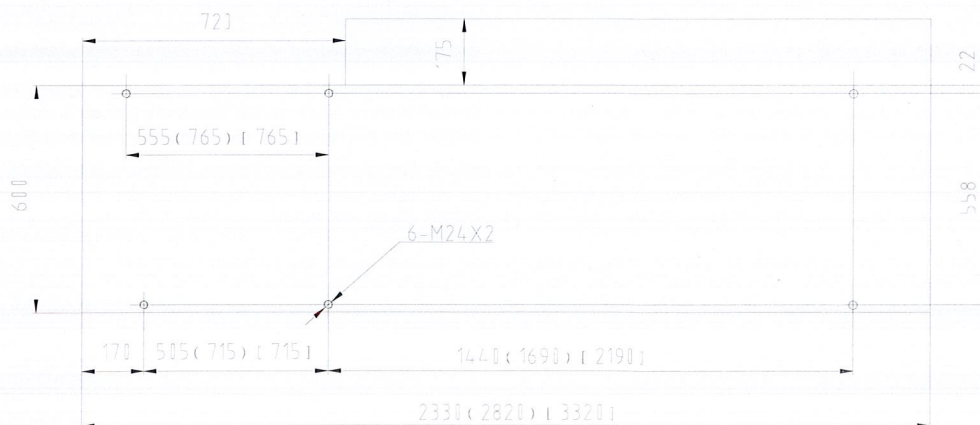


Fig.2



sizes before are for 1440/1640/1840ZX Machines
sizes in [] are for 1880ZX Machine

sizes in () are for 1460/1660/1860ZX Machines

Chuck Preparation (Three Jaw)

WARNING

Read and understand all directions for chuck preparation!

Failure to comply may cause serious injury and/or damage to the lathe!

Note: Before removing the chuck from the spindle, place a way board across the bedways under the chuck.

1. Support the chuck while turning six camlocks 1/4 turn counter-clockwise with the cam lock key enclosed in the toolbox.
2. Carefully remove the chuck from the spindle and place on an adequate work surface.
3. Inspect the camlock studs. Make sure they have not become cracked or broken during transit. Clean all parts thoroughly with solvent. Also clean the spindle and camlocks.
4. Cover all chuck jaws and scroll inside the chuck with #2 lithium tube grease. Cover the spindle, cam locks, and chuck body with a light film of Mobil DTE® Oil Heavy Medium oil.
5. Lift the chuck up to the spindle nose and press onto the spindle. Tighten in place by turning the cam locks 1/4 turn clockwise. The index mark (A, Fig. 3) on the camlock should be between the two indicator arrows when tight (B, Fig. 3). If the index mark is not between the two arrows, remove the chuck and adjust the camlock studs by either turning out one full turn (if cams will not engage) or turning in one full turn (if cams turn beyond indicator marks).
6. Install chuck and tighten in place.

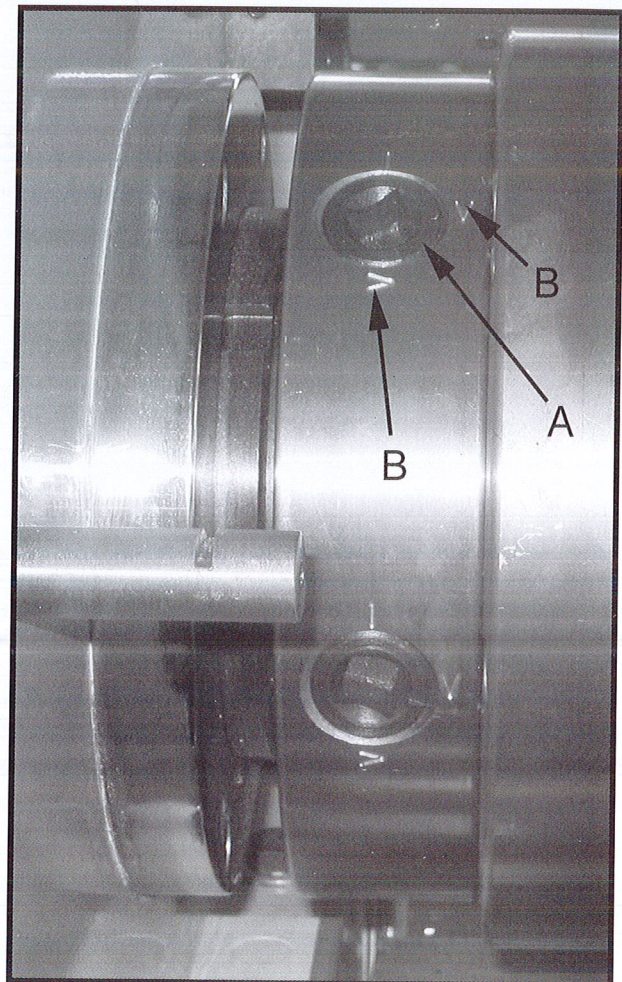


Fig.3

Lubrication

⚠ Caution

Lathe must be serviced at all lubrication points and all reservoirs filled to operating level before the lathe is put into service!

Failure to comply may cause serious damage to the lathe!

1. **Headstock** - Oil must be up to indicator mark in oil sight glass (A, Fig. 4). Top off with Mobil DTE® Oil Heavy Medium. Fill by removing the plug on the top of the headstock. To drain, remove drain plug on the left side of the headstock at the lower rear corner. Drain oil completely and clean out all metal shavings. Refill after the first month of operation. Then change oil in the headstock every two months.
2. **Gearbox** - Oil must be up to indicator mark in oil sight glass (B, Fig. 4). Top off with Mobil DTE® Oil Heavy Medium. To add oil to the gearbox, remove two screws on the top cover. To drain, remove drain plug (C, Fig.4) on the left side of the gearbox. Drain oil completely and refill after the first three months of operation. Then change oil in the gearbox every six months.
3. **Apron** - Oil must be between indicator marks in the oil sight glass (A, Fig. 5). Top off with Mobil DTE® Oil Heavy Medium. Remove oil plug (B, Fig. 5) on upper right of apron to fill. To drain, remove drain plug on bottom of apron. Drain oil completely and refill after the first three months of operation. Then, change oil in the apron annually. Pull knob (C, Fig. 5) on the one-shot lube system and hold for several seconds to allow oil to fill the pump. When the knob is released, oil will flow through various oil lines to lubricate the ways and cross slide surface. Perform this twice daily or as needed. When the oil level is below the indicator mark, oil must be added.

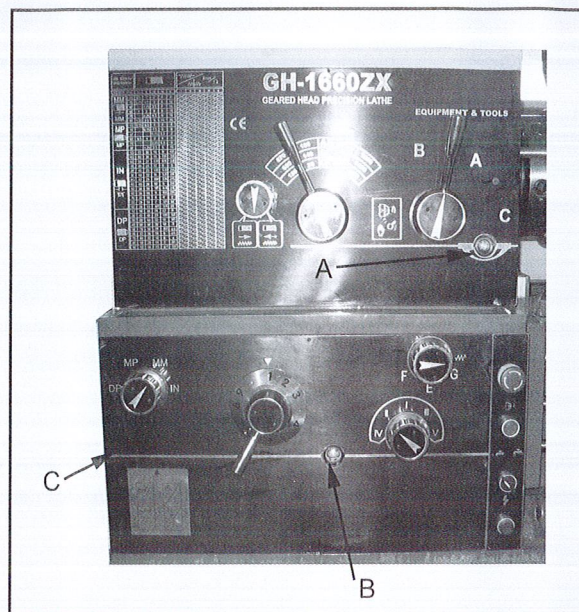


Fig.4

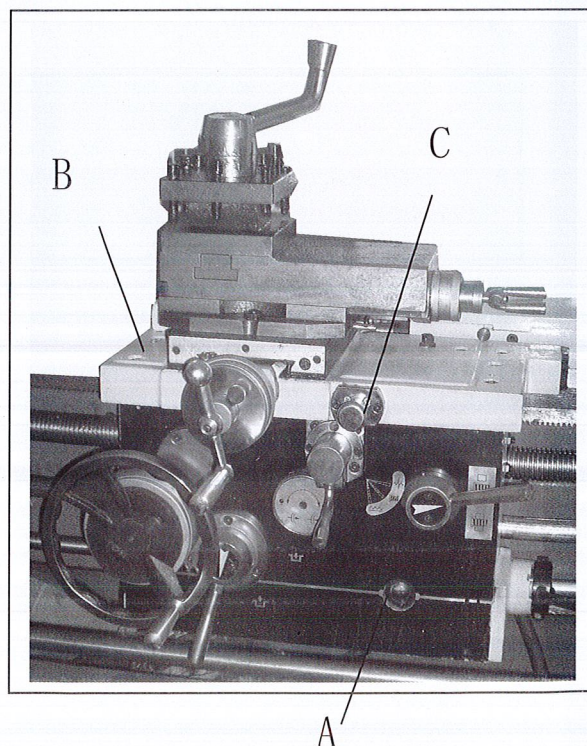


Fig.5

4. **Leadscrew & Feed Rod:** Lubricate two ball oilers on the right side bracket (A, Fig. 6) with Mobil DTE® Oil Heavy Medium oil daily.
5. **Saddle:** Lubricate ball oiler (A, Fig. 7) on handwheel shaft with Mobil DTE® Oil Heavy Medium oil daily.
6. **Compound Rest:** Lubricate four ball oilers (B, Fig. 7) on top of compound slide with Mobil DTE® Oil Heavy Medium oil daily.
7. **Cross Slide:** Lubricate one ball oiler (C, Fig. 7) with Mobil DTE® Oil Heavy Medium oil daily.
8. **Tailstock:** Lubricate one ball oiler (A, Fig. 8) on top of tailstock with Mobil DTE® Oil Heavy Medium oil daily.

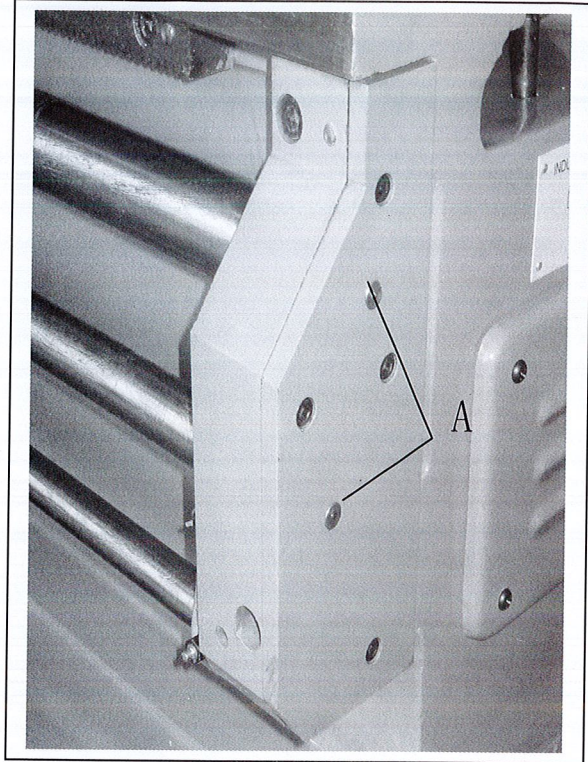


Fig.6

Coolant Preparation

⚠ CAUTION

Follow coolant manufacturer's recommendations for use, care, and disposal.

1. Remove access cover on tailstock end at the rear base of the lathe. Make sure coolant pump has not shifted during transport.
2. Pour four gallons (approx.) of coolant mix into the chip pan.
3. After machine has been connected to power, turn on coolant pump and check to see that the coolant is cycling properly.
4. Replace access cover.

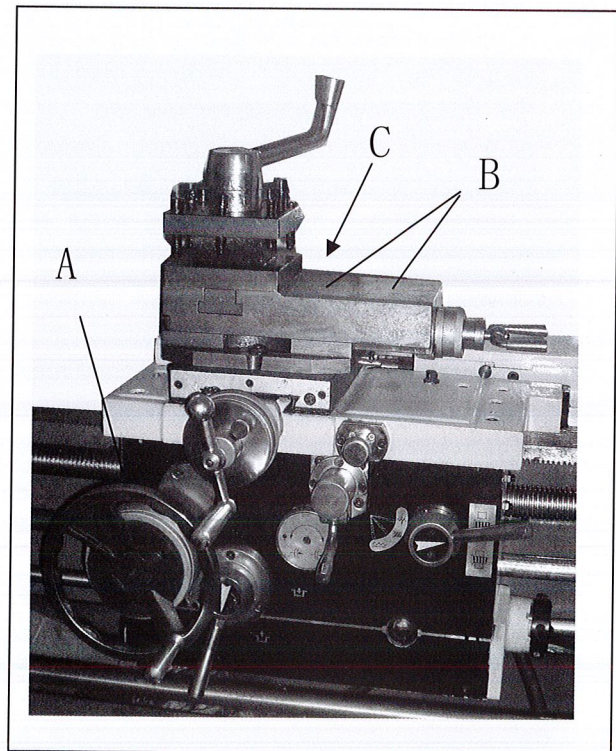


Fig.7

Electrical Connections

⚠ WARNING

All electrical connections must be completed by a qualified electrician! Failure to comply may cause serious injury and/or damage to the machinery and property!

The main motor is rated at 7-1/2 HP (5.5KW), 230/460V and comes from the factory prewired at 230V. Confirm power available at the lathe's location is the same rating as the lathe.

Power is connected properly when pulling up on the forward-reverse lever causes the spindle to rotate counter-clockwise as viewed from the tailstock. If the chuck rotates in the clockwise direction, disconnect the lathe from the power source, switch any two of power leads (except ground wire *green*), and connect the lathe to the power source.

(230/460V is optional)

To switch from 230V to 460V operation

⚠ WARNING

Disconnect the machine from power source! Failure to do so may cause serious injury!

Main Motor: Change the wires according to the diagram on the outside of the motor junction box.

Transformer: Open electrical panel on rear of machine on the headstock side. Switch wire from 230V terminal to 460V terminal as outlined on the transformer.

Coolant Pump: Open access panel on the base at the tailstock end. Change wires in coolant pump junction box according to diagram on the outside of the junction box over.

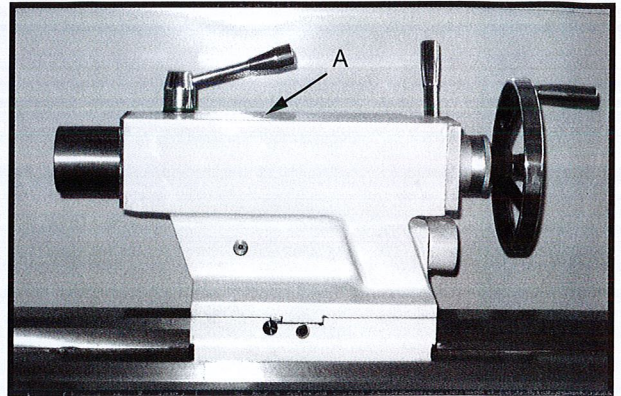


Fig.8

Main Power Switch: (A, Fig.9) Turns power to machine on and off.

Power Source Cable Receiver: (B, Fig.9) Make sure the lathe is properly grounded.

General Description

Lathe Bed

The lathe bed (A, Fig. 10) is made of cast iron with low vibration and high rigidity. Two precision ground v-slideways, reinforced by induction hardening and grinding, are an accurate guide for the carriage and headstock. The main drive motor is mounted in the stand below headstock.

Headstock

The headstock (B, Fig. 10) is cast from high grade, low vibration cast iron. It is bolted to the bed by four hex socket cap bolts. In the head, the spindle is mounted on precision taper roller bearings.

Carriage

The carriage (C, Fig. 10) is made from high quality cast iron. The cross-slide is mounted on the carriage and moves on a dovetailed slide which can be adjusted for play by means of the gibbs.

The compound slide (D, Fig. 10), which is T-slotted, and mounted on the cross slide (E, Fig. 10), can be rotated 360°. The compound slide and the cross slide travel in a dovetailed slide and have adjustable gibbs. A four way tool post is fitted on the compound slide.

Four Way Tool Post

The four way tool post (F, Fig. 10) is mounted on the compound slide and allows a maximum of four tools to be mounted at the same time. Remember to use a minimum of two clamping screws when installing a cutting tool.

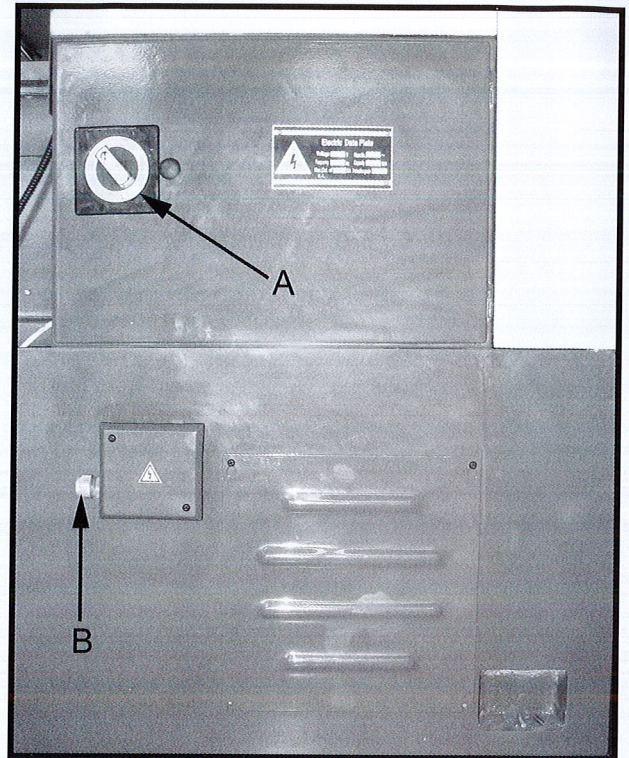


Fig.9

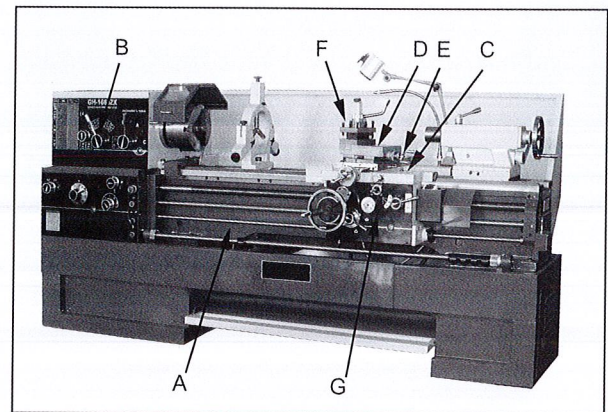


Fig.10

Apron

The apron (G, Fig. 10) is mounted to the carriage. Quick travel of the apron is accomplished by means of a bed mounted rack and pinion, operated by a hand wheel on the front of the apron.

Tailstock

The tailstock (A, Fig. 11) slides on a v-way and can be locked at any location by a clamping lever. The tailstock has a heavy duty quill with a Morse Taper #4, or Morse Taper #5 (18" models).

Leadscrew and Feed Rod

The leadscrew (B, Fig. 11) and feed rod (C, Fig. 11) are mounted on the front of the machine bed. They are connected to the gearbox at the left and are supported by bearings on both ends. Both are equipped with shear pins.

Feed Gear Box

The gear box (D, Fig. 11) is made from high quality cast iron and is mounted to the left side of the machine bed.

Steady Rest

The steady rest (F, Fig. 11) serves as a support for shafts on the free tailstock end. The steady rest is mounted on the bedway and secured from below with a bolt, nut and locking plate. The sliding fingers require continuous lubrication at the contact points with the workpiece to prevent them from premature wear.

To set the steady rest:

1. Loosen three hex socket cap screws.
2. Loosen knurled screw and open sliding fingers until the steady rest can be moved with its fingers around the workpiece. Secure the steady rest in position.

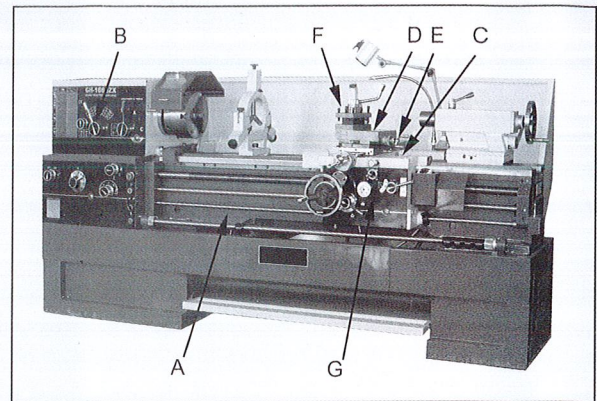


Fig.10

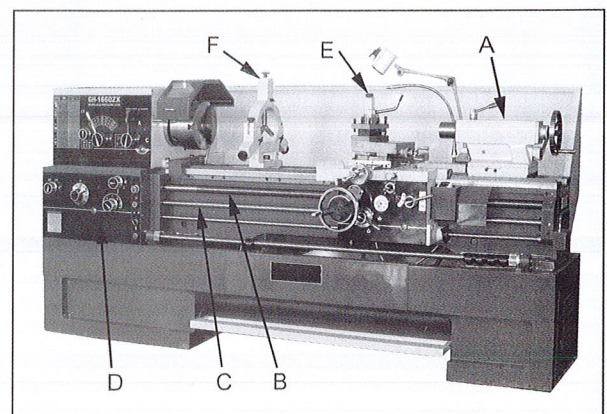


Fig.11

3. Set the fingers snugly to the workpiece and secure by tightening three hex socket cap screws. Fingers should be snug but not overly tight. Lubricate sliding points with lead based grease.

Follow Rest

The traveling follow rest (E, Fig. 11) is mounted on the saddle and follows the movement of the turning tool. Only two fingers are required as the place of the third is taken by the turning tool. The follow rest is used for turning operations on long, slender workpieces. It prevents the workpiece from flexing under the pressure of the cutting tool.

The sliding fingers are set similar to the steady rest, free of play, but not binding. Always lubricate adequately with lead based grease during operation.

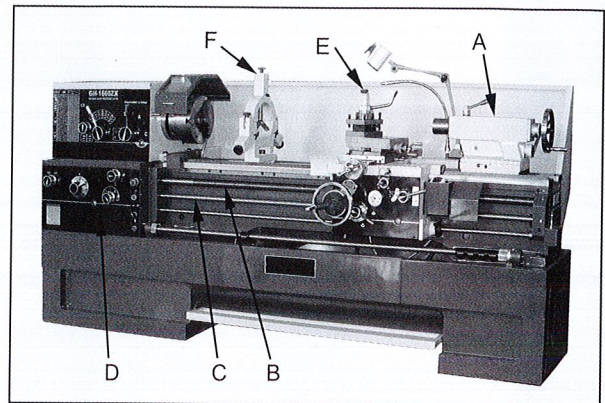


Fig.11

Controls

1. **Control Panel:** Located on front of headstock.

Coolant On-Off Switch: (A, Fig.12) turns coolant pump on and off.

Power Indicator Light: (D, Fig.12) Lit whenever lathe has power.

Emergency Stop Switch: (C, Fig.12) Depress to stop all machine functions. (**Caution:** Lathe will still have power). Twist clockwise to reset.

Jog Switch: (B, Fig.12) Quickly depress and release to rotate the spindle.

2. **Headstock Gear Change Levers:** (F, Fig.12) Located on front top portion of headstock. Move levers left, or right to desired spindle speed.

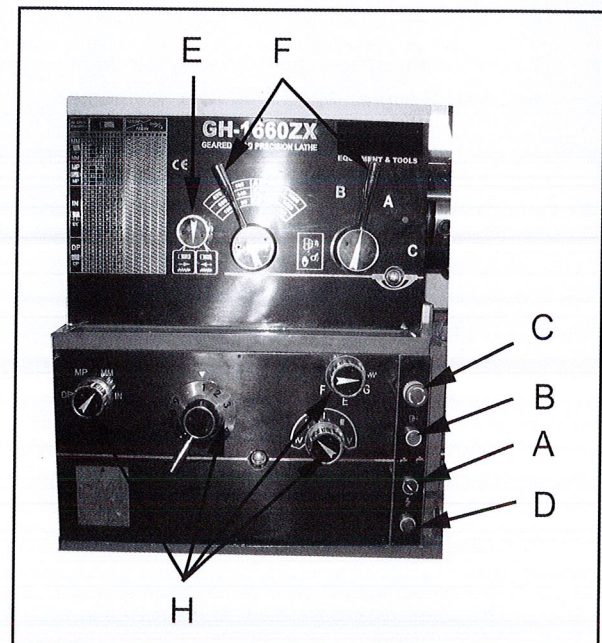


Fig.12

3. **Leadscrew/Feed Rod Directional Lever:** (E, Fig.12) Located on front of headstock at left and lower section. Changing knob changes direction of feed. (**Caution:** Do not move knob while machine is running.)
4. **Feed/Lead Selector Lever:** (H, Fig.12) Located on front of headstock. Used whenever setting up for threading or feeding.
5. **Compound Lock:** (not shown) Lever located on back of compound slide. Turn clockwise to lock and counter-clockwise to unlock.
6. **Cross Slide Lock:** (A, Fig.13) Lever located on left side of cross slide. Turn clockwise to lock and counter-clockwise to unlock.

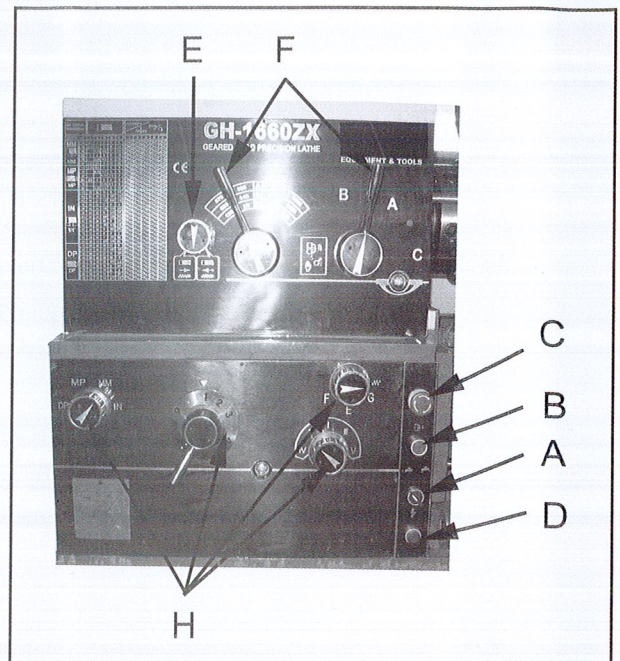


Fig.12

7. **Carriage Lock:** (B, Fig.13) Lock handle located on top right of carriage. Turn clockwise to lock. Turn counter-clockwise to unlock.
(**Caution:** Carriage lock must be loose before moving carriage or damage to lathe may occur.)
8. **Longitudinal Traverse Hand Wheel:** (C, Fig.13) Located on the apron assembly. Rotate hand wheel clockwise to move the apron assembly toward the tailstock (right). Rotate the wheel counter-clockwise to move the apron assembly toward the headstock (left).
9. **Longitudinal/Cross Feed Selector Lever:** (E, Fig.13) Can be pushed to upper, middle and lower three positions. Push the lever up, cross feed is effected. Push the lever down, longitudinal feed is effected. When the lever is in the middle position, screws can be cut by engaging the half nut.
10. **Half Nut Lever:** (D, Fig. 13) Located in the front of the apron assembly. Used for threading.
11. **Feed Engage Lever:** (G, Fig.13) Located in the front of the apron assembly. Pull lever up to engage. Push lever down to disengage.

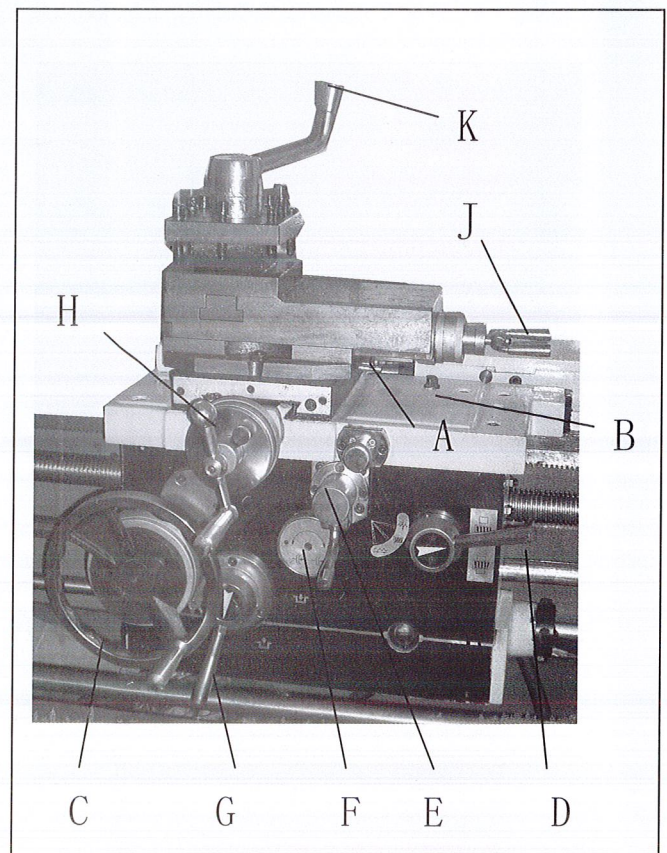


Fig.13

12. **Adjustable Feed Clutch:** (F, Fig.13) When the machine is overloaded, it can slip. Then cutting rate must be reduced. **Note:** This setting has been calibrated at the factory and should not need adjustment. If adjustment is necessary, follow the diagram on the front of the apron.
13. **Cross Traverse Hand Wheel:** (H, Fig.13) Located above the apron assembly. Clockwise rotation moves the cross slide toward the rear of machine.
14. **Compound Rest Traverse Handle:** (J, Fig.13) Located on the end of the compound slide. Rotate clockwise or counter-clockwise to move, or position.
15. **Tool Post Clamping Lever:** (K, Fig.13) Located on top of the tool post. Rotate counter-clockwise to loosen and clockwise to tighten.
16. **Tailstock Quill Clamping Lever:** (A, Fig.14) Located on the tailstock. Rotate clockwise to lock the sleeve. Rotate counter-clockwise to unlock.
17. **Tailstock Clamping Lever:** (B, Fig.14) Located on the tailstock. Lift up to lock. Push down to unlock. If the tailstock has a heavy load, tighten the hexagon head at right side of the tailstock for auxiliary locking.
18. **Tailstock Quill Traverse Hand Wheel:** (C, Fig.14) Rotate clockwise to advance the quill and counter-clockwise to retract it.
19. **Tailstock Off-Set Adjustment:** (D, Fig.14) Two hex socket cap screws located on the tailstock base are used to off-set the tailstock for cutting tapers. Loosening one screw while tightening the other will off-set the tailstock. Do not clamp the tailstock lock handle when adjusting.

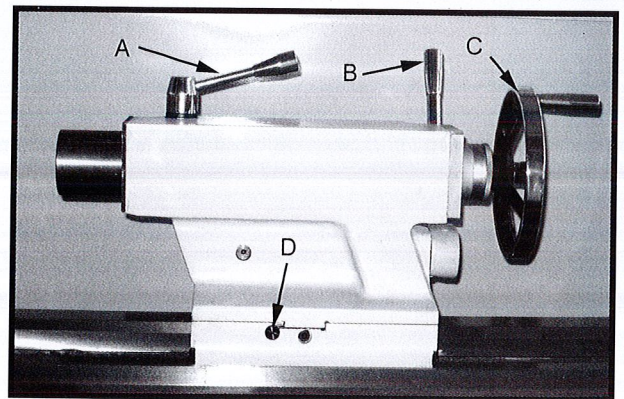


Fig.14

20. **Foot Brake:** (A, Fig.15) The connecting rod mechanism is in the bed stand. The braking device is in the pulley of the headstock. Depress the pedal to stop all lathe functions. (**Caution:** lathe still has power.)

21. **Micro Carriage Stop:** (B, Fig. 15) can be used during manual feed operation. The dial can be turned for fine tuning the position of the stop. The micro carriage stop can be moved along the bed by loosening the two socket head cap screws found on the bottom side of the stop.

22. **Bed Cover:** (C, Fig. 15) can easily be removed to clean out the stand.

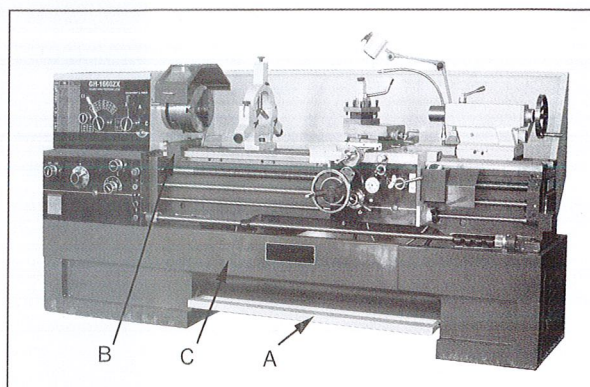


Fig.15

Operation

Feed and Thread Selection

1. Reference the feed and thread chart. Found on front of the headstock (A, Fig.16).
2. Move levers and knobs (B, C, D, E, Fig.16) to the appropriate position according to the feed and thread chart.

Thread Cutting

1. Set forward/reverse lever (A, Fig.17) to desired direction.
2. Set selector levers (B, C, Fig.17) to desired R.P.M.
3. Select desired thread using levers (E, F, H, G, Fig.17).
4. Set Selector lever (D, Fig.18) to correct position (neutral).
5. Engage the half nut lever (A, Fig.18).
6. Make a test cut with scrap material and check results before cutting regular material.

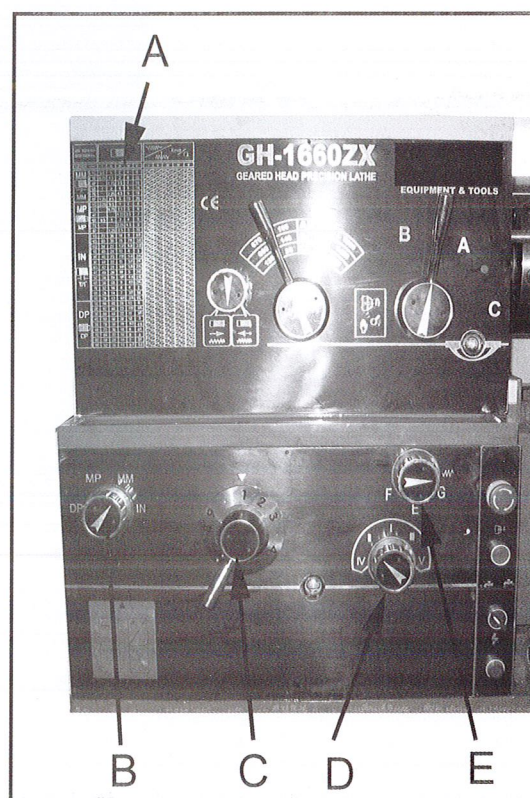


Fig.16

Compound Slide

The compound slide (C, Fig.18) is located on top of the cross slide and can be rotated 360°. There are calibrations in degrees (B, Fig.18) below the rest to assist in placement of the compound to the desired angle.

Gib Adjustments

After a period of time some of the moving components may need to be adjusted due to wear.

Saddle

Turn gib screws on either side of the saddle at the rear to adjust the drag on the saddle.

Cross Slide

Turn gib screws in the front and rear of the gib to adjust the drag of the cross slide.

Compound Slide

Turn gib screws to adjust the drag of the compound slide.



Fig.17

Tailstock Off-Set

Follow the procedure below to off-set the tailstock to cut shallow tapers:

1. Loosen tailstock in position by lowering locking handle (A, Fig.19) and loosening hexagon head eccentric shaft.
2. Alternately loosen and tighten front and rear set screws (B, Fig.19). **Note:** Front side set screw shown.

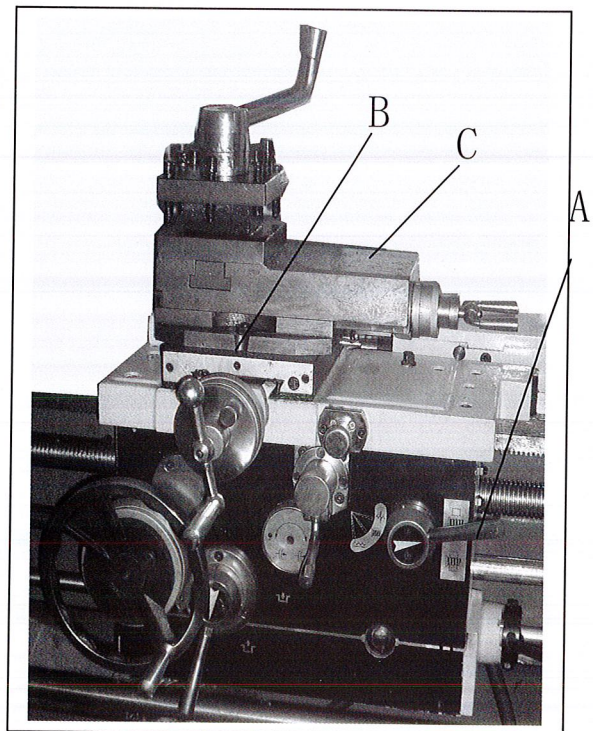


Fig.18

Removing Gap Section

1. To remove the gap section, remove four hex socket cap screws, and two hex cap bolts.
2. Tighten the hex nuts on the tapered alignment pins to loosen the pins. Once loosened, they can be removed.
3. Gap section can now be removed.

Installing Removable Gap Section

1. Clean the bottom and the ends of the gap section thoroughly.
2. Set gap section in place and align the ends.
3. Loosen the nuts on the locating pins and push down through the gap in to the lathe bed.
4. Replace four hex socket cap screws and tighten alternately until all are snug.

Belt Replacement and Adjustment

1. **Disconnect machine from the power source.**
2. Open end gear cover, remove lower rear cover and lower side cover. This will expose the motor and V-belts.
3. Loosen hex nut (A, Fig.20). Place scrap piece of wood under motor to act as lever. Lift motor up and block temporarily.
4. Remove belts. Install new belts onto pulleys.
5. Lift up on motor and remove temporary blocking.
6. Tension belts by loosening nut (B, Fig.20) and tighten nut (A, Fig.20) until light finger pressure causes approximately 3/4" deflection on each belt.
7. Install covers and connect lathe to the power source.

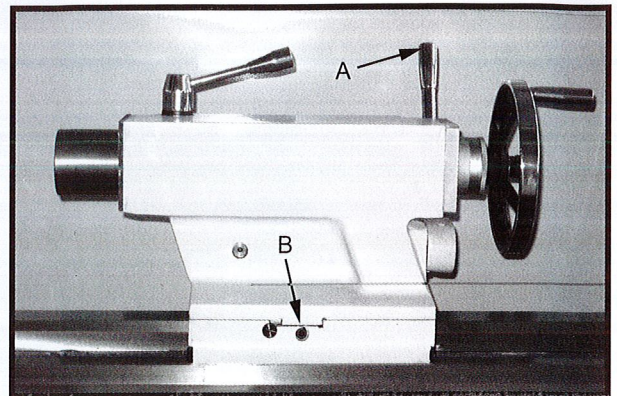


Fig.19

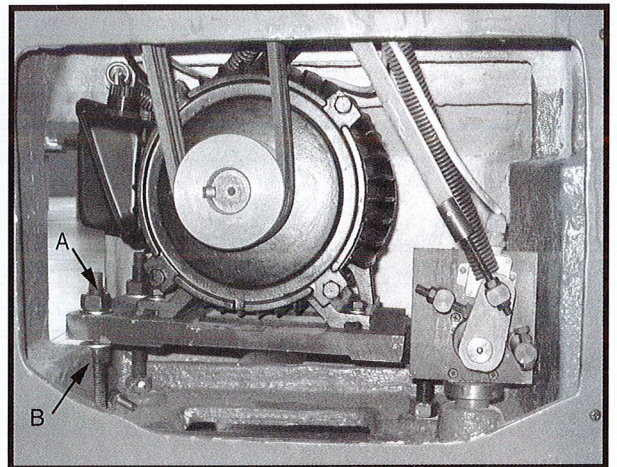


Fig.20

Aligning Tailstock to Headstock

1. Fit a 12" ground steel bar between centers of the headstock and tailstock (See Fig.21).
2. Fit a dial indicator to the top slide and traverse the center line of the bar.
3. If adjustment is needed, align the tailstock using the off-set screws (A, Fig. 22) until the tailstock is aligned.

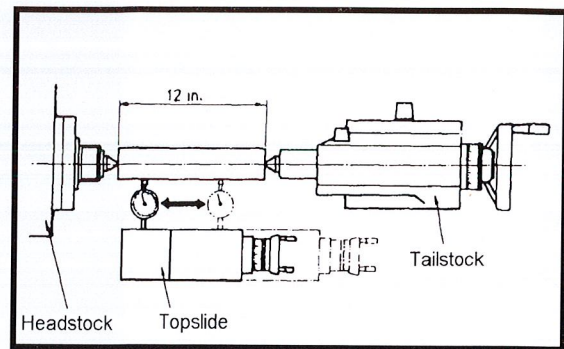


Fig. 21

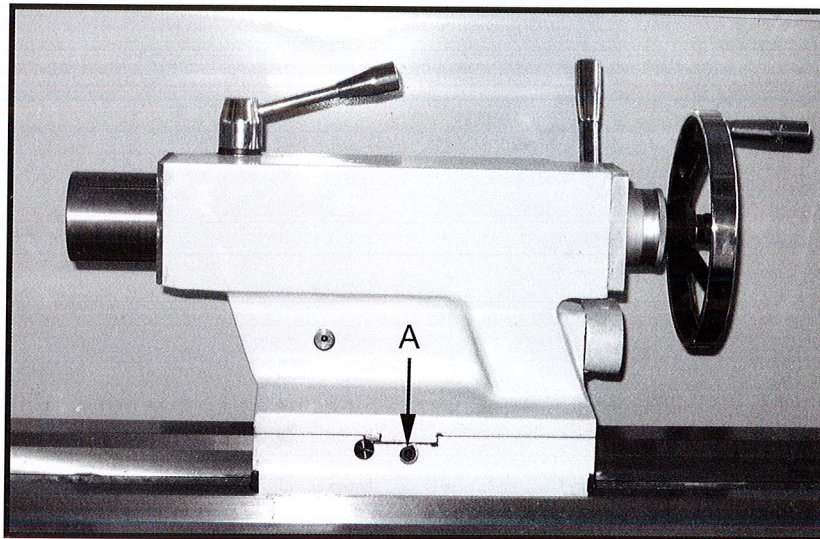


Fig.22

