



BEAR®

**Model 1469
Disc Brake Lathe**

(WITH VARIABLE SPEED FEED)

Operating Instructions

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WARNING

For Your Own Safety, Read Instruction
Manual Before Operating Tool
Wear Eye Protection

SAFETY

GROUNDING INSTRUCTIONS:

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

DO NOT modify the plug provided - if it will not fit the outlet, have the proper outlet installed by a qualified electrician.

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

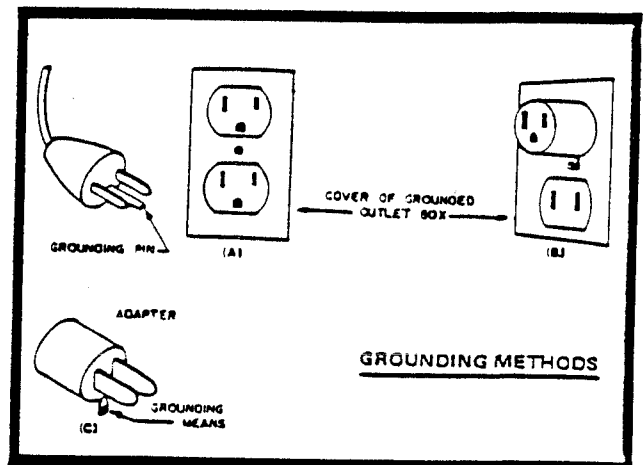
Check with a qualified electrician or serviceman if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded.

Use only 3-wire extension cords that have 3-prong grounding plugs and 3-pole receptacles that accept the tool's plug.

Repair or replace damaged or worn cord immediately.

Grounded, cord-connected tools intended for use on a supply circuit having a nominal rating less than 150 volts:

This tool is intended for use on a circuit that has an outlet that looks like the one illustrated in Sketch A. The tool has a grounding plug that looks like the plug illustrated in Sketch A. A temporary adapter, which looks like the adapter illustrated in Sketch B and C, may be used to connect this plug to a 2-pole receptacle, as shown in Sketch B, if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet can be installed by a qualified electrician. The green-colored rigid ear, lug, etc. extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box.



MACHINE MOUNTING:

The tool should be disconnected from the power supply while the motor is being mounted, connected, or reconnected. Bolt machine securely to bench or stand to prevent possibility of tipping or sliding.

SPEED ADJUSTMENT:

Brake service machines can be safely operated at any speed allowed by the original equipment pulleys. The speed of the workpiece or tool should be chosen according to the quality of work desired.

OPERATING SAFETY:

1. **Keep guards in place** and in working order.
2. **Remove adjusting keys and wrenches.** Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
3. **Keep work area clean.** Cluttered areas and benches invite accidents.
4. **Don't use in dangerous environment.** Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well lighted.
5. **Keep children away.** All visitors should be kept safe distance from work area.
6. **Make workshop kid proof** with padlocks, master switches, or by removing starter keys.
7. **Don't force tool.** It will do the job better and safer at the rate for which it was designed.
8. **Wear proper apparel.** No loose clothing, gloves, neckties, rings, bracelets, or other jewelry to get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.
9. **Always use safety glasses.** Also use face or dust mask if cutting operation is dusty. Everyday eyeglasses only have impact resistant lenses, they are NOT safety glasses.
10. **Secure work.** Use clamps or a vise to hold work when practical. It's safer than using your hand and it frees both hands to operate tool.
11. **Don't overreach.** Keep proper footing and balance at all times.
12. **Maintain tools with care.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
13. **Disconnect tools** before servicing, when changing accessories such as blades, bits, cutters, etc.
14. **Reduce the risk of unintentional starting.** Make sure switch is in "OFF" position before plugging in.
15. **Use recommended accessories.** Consult the owner's manual for recommended accessories. The use of improper accessories may cause risk of injury to persons.
16. **Check damaged parts.** A guard or other part that is damaged should be properly repaired or replaced.
17. **Never leave tool running unattended.** Turn power OFF. Don't leave tool until it comes to a complete stop.
18. **Never stand on tool.** Serious injury could occur if the tool is tipped or if the cutting tool is unintentionally contacted.

DESCRIPTION

The Disc Brake Lathe refinishes disc rotors for passenger cars, light trucks, and recreation vehicles. The lathe will refinish rotors on both working surfaces of the rotor at the same time. The disc lathe is capable of refinishing rotors from 5-1/2 inches (139.7 mm) in diameter to 15 inches (381 mm) in diameter, and from 5/8 inch (15.9 mm) to 1-3/4 inches (44.5 mm) in thickness. The lathe will refinish rotors to meet or exceed vehicle manufacturer's specifications for accuracy and surface finish.

The disc brake lathe is equipped with adapters and accessory items suitable for refinishing disc rotors within the rotor size limits of the machine. The adapters for disc rotors with hubs locate the rotor on the wheel bearing cups in the same manner which the rotors are mounted on the axle of the vehicle. Hubless rotors are mounted between faceplates which locate the rotor in a similar manner to its mounting on the vehicle axle flange. These methods insure that the disc rotors will be refinished with the same accuracy that the vehicle manufacturer used to produce the original rotor.

The disc brake lathe is equipped with a chip shield to protect the operator from flying chips, and has a built-in work light for convenience. The lathe has two cutting tools which have carbide inserts with six cutting edges on each insert. The carbide inserts are of throw-away type. Refer to Figure 5, 6 and 7 for parts identification.

An arbor clamp is supplied for holding the work arbor at a convenient position to mount rotors before refinishing. A rotor location guide is provided to position the rotor on the work arbor so that it is properly positioned for the refinishing operation.

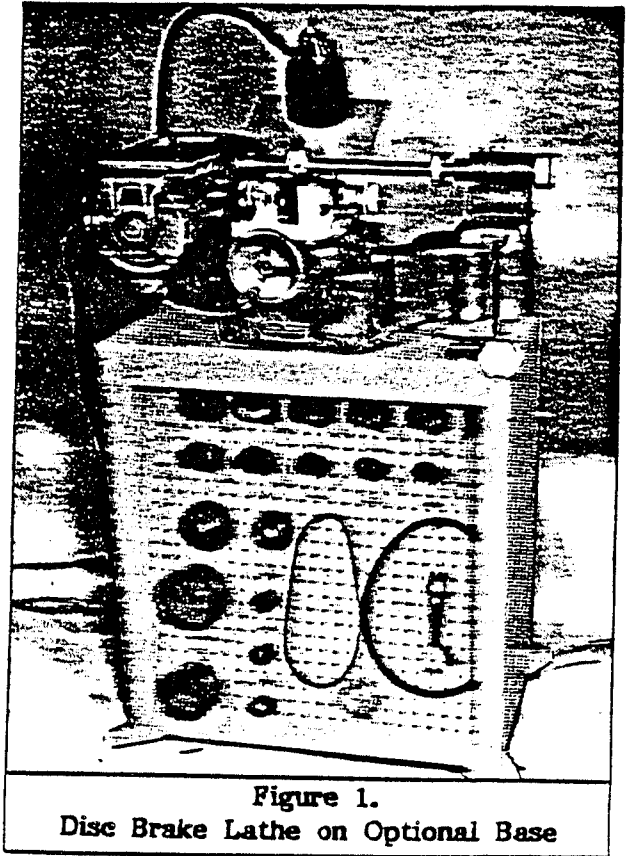


Figure 1.
Disc Brake Lathe on Optional Base

A master on-off power switch is built-in to the lathe. A separate switch is provided for the cross feed motor operation. The cross feed motor switch will automatically turn off when the work carriage travels to its extreme outer position.

UNCRATING and INSTALLATION

ACCEPTANCE FROM CARRIER:

Upon arrival, inspect the crate and if any damage is evident, notify the carrier immediately and request an inspection. The carrier is responsible for any damage during shipment.

We exercise due care in the preparation and packing of the merchandise, but cannot assume any responsibility for its handling in transit or its condition on arrival.

UNCRATING:

If the machine has arrived in good condition, proceed to remove the crate. Be careful when removing the crate that you do not pry against any part of the machine with a pry bar. Move the disc lathe to the section of the shop where it will be operated and remove it from the shipping crate.

CHECK PACKING LIST:

Standard equipment together with any special attachments which may have been ordered have been packed in a box which is fastened to the skid. Open the box and check each item against the packing list. Notify us immediately of any shortages. Any items marked "back ordered" will be shipped without excessive delay.

INSTALLATION:

The Disc Lathe should be mounted on a solid level surface. Secure the lathe to the bench with three mounting bolts, Figure 2. The bench should then be secured to the floor with mounting bolts at the four corner mounting pads. For the best disc brake resurfacing results the lathe must be rigid and solid in its mounting.

The arbor clamp and rotor locating guide should be mounted on the work bench in the holes provided on the bench units or bolted to a convenient work bench area.

On bench-type units install the peg-board hooks provided to store all adapters and accessory items.

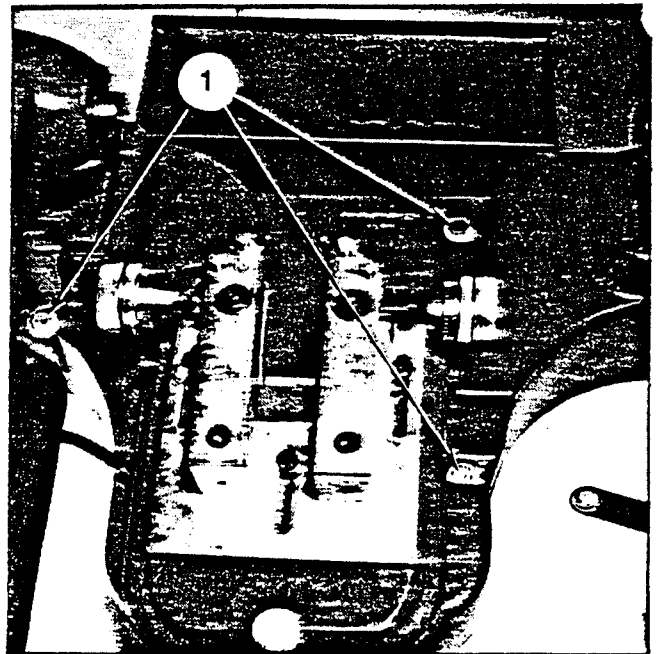


Figure 2. Lathe Installation

1. MOUNTING BOLTS

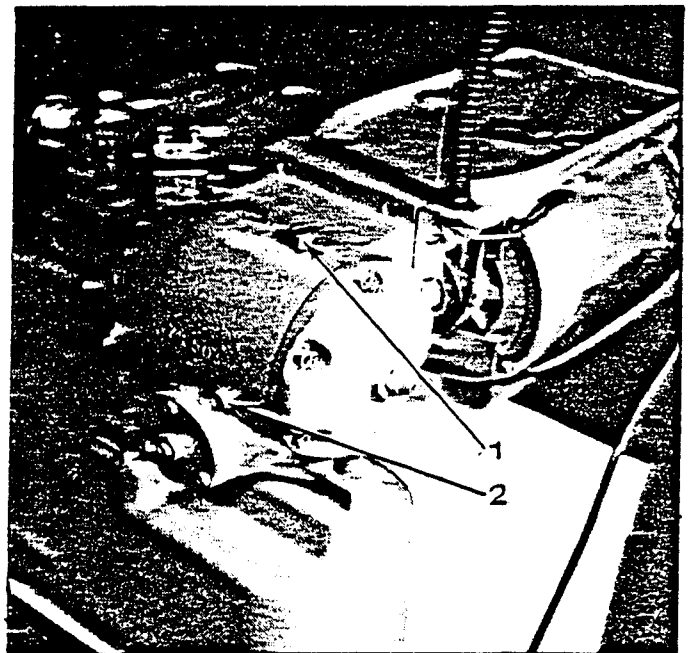


Figure 3. Gear Case Oil Fill Location

1. FILL PLUG
2. LEVEL PLUG

A plastic fill plug has been installed in the top of the head stock for shipping purposes. Remove the plastic plug and replace it with the vented plug attached to the carriage hand wheel. Install lamp into lamp bracket and tighten nut, Figure 3.

LUBRICATION:

Lubricate the Tailstock (1 oiler), the Cross Slide Way Bars (2 oilers), and the Cross Slide Feed Screw with light machine oil or SAE No. 10 weight oil, Figure 4 and 5.

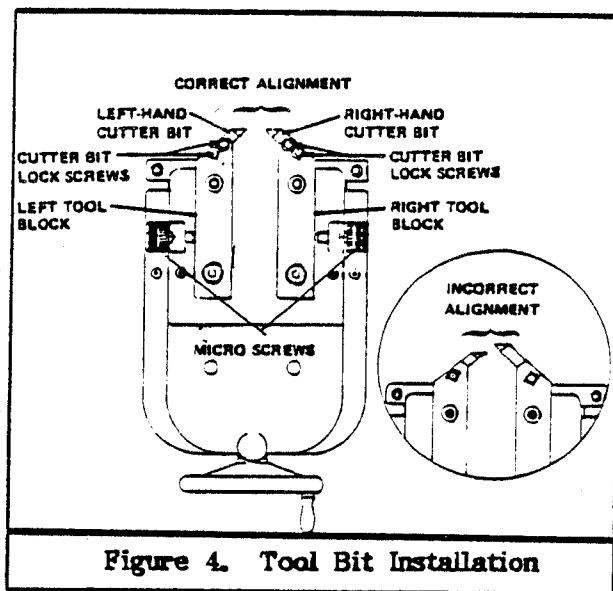


Figure 4. Tool Bit Installation

Check Headstock (gear case) oil level. Remove oil level screw from side of case. Oil level is correct if oil flows from opening. In order to fill headstock to proper level, remove Filler Plug and lubricate with SAE No. 90 weight gear lube until lubricant flows from side plug screws on headstock, Figure 3.

CUTTER BITS:

Install left-hand Cutter Bit on left tool block and right-hand Cutter Bit on right tool block.

NOTE: Left and right-hand Cutter Bits are not interchangeable.

Position Cutter Bits fully against the recessed area of the tool block. Misalignment will cause the bit to assume an incorrect cutting angle against the rotor.

Place the Cutter Bits so that they are evenly spaced in the tool block approximately $\frac{3}{4}$ inch from bit tip to tool block before tightening Cutter Bit lock screws.

NOTE: It may be necessary to move the tool bits out from the tool block when cutting thin rotors. However, should Cutter Bits extend too far outward toward the rotor, the resulting loss in rigidity will seriously affect the quality of the finish of the rotor.

Lathes with serial numbers 10247901 and up have a tool holder plate with a second inner set of holes (Figure 25). If tool chatter occurs while finishing thin rotors on these lathes, move the tool holders and adjusting blocks to the inner set of holes on the tool holder plate.

Older lathes can be updated by ordering tool plate #72345.

When large diameter rotors are to be machined it will be necessary to loosen the three tool block plate socket head screws and slide the whole plate away from the arbor, and retighten the screws.

CAUTION:

1. Always measure rotor total thickness with a micrometer and check against car manufacturer's machining limits. **DO NOT exceed manufacturer's specifications.**

2. Cutter bits must always be sharp and free from nicks. In case of doubt, always replace cutter bits.

3. Always use a chatterband.

4. Special attention to cleanliness of rotors, taper cones, spacers and arbor attachments is vital to maintain surface finish requirements.

SPECIFICATIONS

SIZE:

Width.....32 inches (81.3 cm)
 Depth.....24 inches (61 cm)
 Height.....12 inches (31 cm)

WORK AREA REQUIRED:

Width.....40 inches (102 cm)
 Depth.....27-1/2 inches (70 cm)

ELECTRICAL REQUIREMENTS:

115 volt, 60 Hertz, single phase, 20 amp service.

CUTTING CAPACITY:

Maximum Disc Diameter..15 inches (38 cm)
 Minimum Disc Diameter..5-1/2 inches (14 cm)
 Spindle Speed.....72 RPM
 Cross Slide,
 feed/per revolution....Infinitely variable
 from .001" (.002 mm)
 to .010" (.025 mm)

SHIPPING WEIGHT:

285 lbs. (129.5 kg)

IDENTIFICATION

Refer to Figure 5 and 6 for identification of lathe components, and refer to Figure 7, 8 and 9 for identification of attachments and optional accessories.

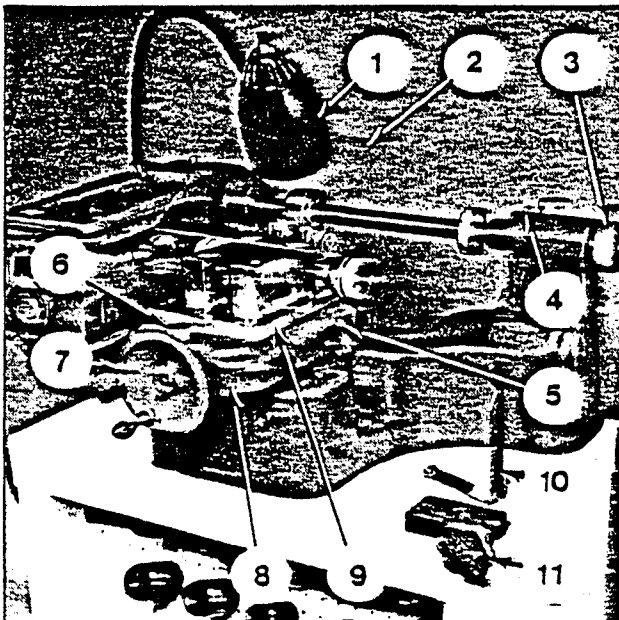


Figure 5. Lathe Identification

- | | |
|-----------------|----------------|
| 1. WORK LAMP | 10. POSITIONER |
| 2. CHIP SHIELD | GUIDE |
| 3. KNURLED KNOB | 11. ARBOR |
| 4. OILER | CLAMP |
| 5. OILER | |
| 6. CROSS FEED | |
| LOCK KNOB | |
| 7. CROSS FEED | |
| HAND WHEEL | |
| 8. CROSS FEED | |
| CARRIAGE | |
| 9. TOOL HOLDER | |
| PLATE | |

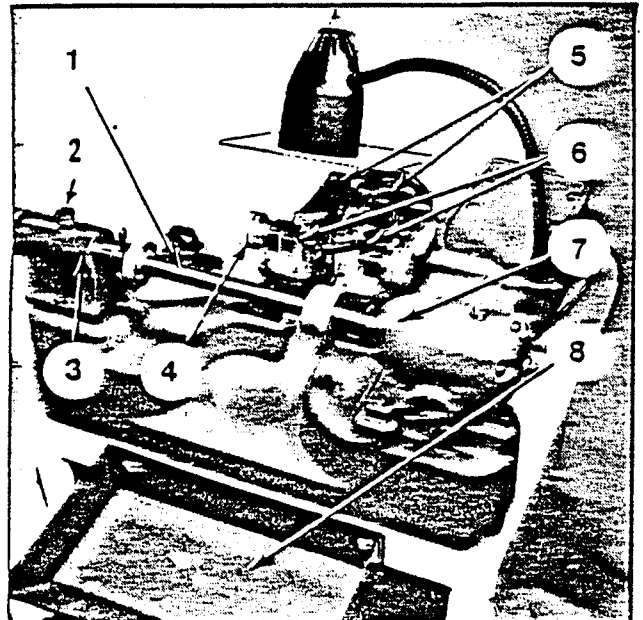


Figure 6. Lathe Identification

1. ARBOR
2. LOCK KNOB
3. TAILSTOCK
4. MICRO KNOBS
5. TOOL BIT HOLDERS
6. TOOL BITS
7. HEAD STOCK
8. CHIP TRAY

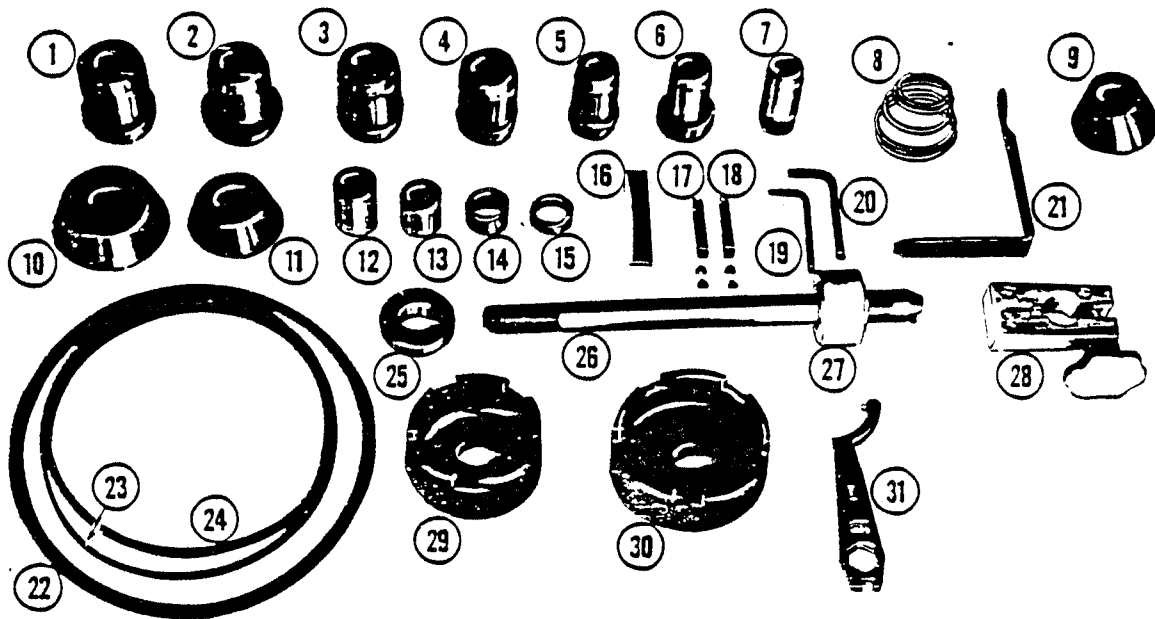


Figure 7. Standard Attachment Group 71594

Adapter Part No.	Bearing Cup Number		Bearing Cup Location		Vehicle Application
	Small End	Large End	Inner	Outer	
1 71390	LM 48510		•		'69 & Older Passenger Car '70 & Newer Light Truck
		LM 501310	•		'70 & Newer Light/Medium Truck
2 71387	L 68110 L 68111		•		'70 & Newer Passenger Car
		LM 603011	•		4 Wheel Drive
3 71386	JL 69310		•		'74 & Newer Midsize Passenger Car
		LM 29710	•		'70 & Newer Light Truck
4 71389	LM 67010		•		'69 & Older Passenger Car
		15245		•	'70 & Newer Light/Medium Truck
5 71388	LM 12710 LM 12711			•	'70 & Newer Passenger Car
		M 12610		•	'69 & Older Passenger Car '70 & Newer Light Truck
6 71393	LM 11910			•	'69 & Older Passenger Cars, Mazda
		K 1922 PZ	•		Capri
7 71391	LM 11710			•	Vega, '65 & Newer V-W, Austin Marina
		40215 H 1000		•	Datsun 8 210

8	20728	SPRING
9	20720	CONE, CENTERING, 2 1/4" OD
10	20722	CONE, CENTERING 4" OD
11	20721	CONE, CENTERING, 3-7/32" OD
12	20737	SPACER, 2"
13	20736	SPACER, 1 1/4"
14	20703	SPACER, 1"
15	64123	SPACER, 3/4"
16	20719	STONE, HONING
17	72276	KIT, TOOL BIT, LH
18	72277	KIT, TOOL BIT, RH
19	25592	WRENCH, ALLEN, 3/4"

20	25593	WRENCH, ALLEN, 5/16"
21	72375	GUAGE, CENTERING
22	24851	BAND, CHATTER, 10-3/4"
23	72326	BAND, CHATTER, 8-3/4"
24	71595	BAND, CHATTER, 6-1/8"
25	71576	NUT, LOCK
26	71574	ARBOR
27	71575	NUT, POSITIONING
28	70533	HOLDER, ARBOR
29	70137	PLATE, FACE, SMALL
30	70136	PLATE, FACE, LARGE
31	20717	WRENCH, SPANNER

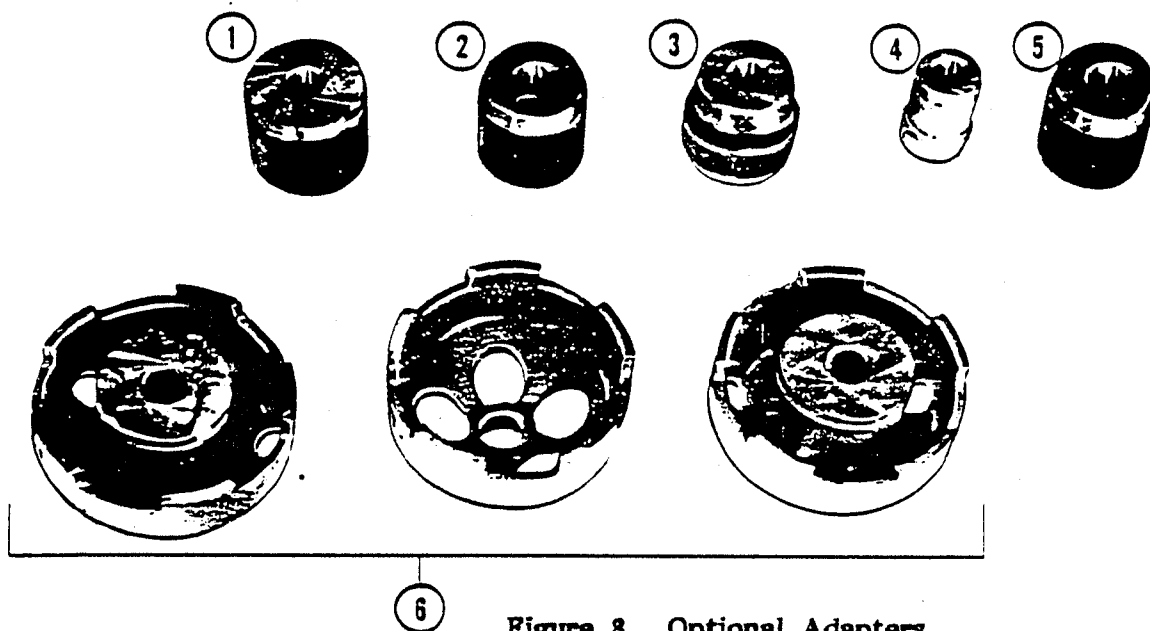


Figure 8. Optional Adapters

	PART NO.	DESCRIPTION	VEHICLE APPLICATION
1	70496	CONE, RADII	DODGE AND FORD LIGHT TRUCKS
2	70497	CONE, RADII	FORD LIGHT TRUCKS
3	71392	CONE, RADII	DATSUN, OPEL AND VOLKSWAGEN
4	72446	CONE, RADII	SCOUT AND JEEP
4	72447	CONE, RADII	FORD LIGHT TRUCKS
6	73213	REAR ROTOR SET	FORD

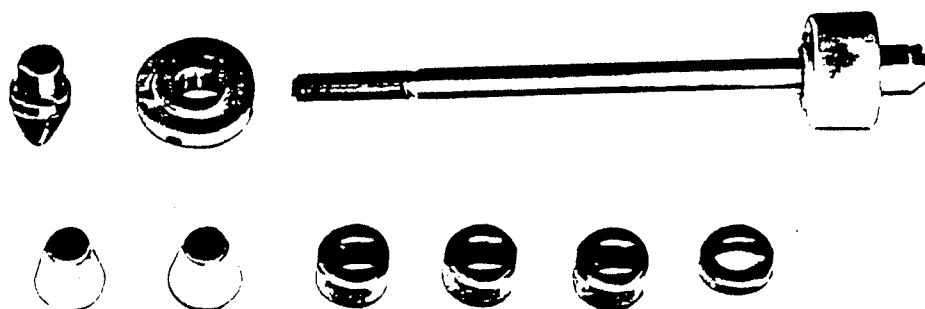


Figure 9. Optional 64966 Import Adapter Group

OPERATION



DANGER:

Failure to comply with all of the special safety instructions listed below could result in serious injury or death.

- Never operate when floor is wet due to shock hazard.
- Never operate while wearing loose clothing, necktie or jewelry.
- Always wear safety glasses.

- Protect hands from sharp edges.

- Never remove metal shavings with hands.

- Use plastic chip shield to avoid contact with hot, flying metal chips.

- Check electrical supply service prior to operation. The lathe should be connected to a properly grounded 115 volt electrical supply.

ASSEMBLING ROTOR TO ARBOR:

ROTORS WITH HUBS (FIGURE 10)

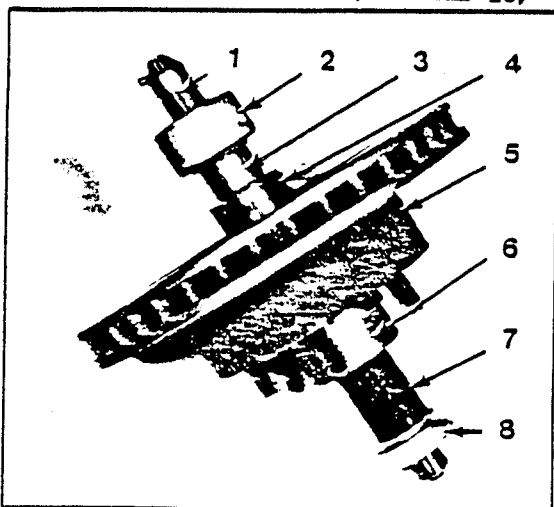


Figure 10. Rotor Installed on Arbor

- | | |
|------------------|------------------|
| 1. ARBOR | 6. OUTER BEARING |
| 2. LARGE NUT | CUP CONE |
| 3. SPACER | 7. SPACER |
| 4. INNER BEARING | |
| CUP CONE | 8. LOCKNUT |
| 5. ROTOR | |

1. Mount the arbor into the arbor clamp, pin end down so pin is held in slot of arbor clamp.

2. Install large nut (left hand thread) onto arbor.

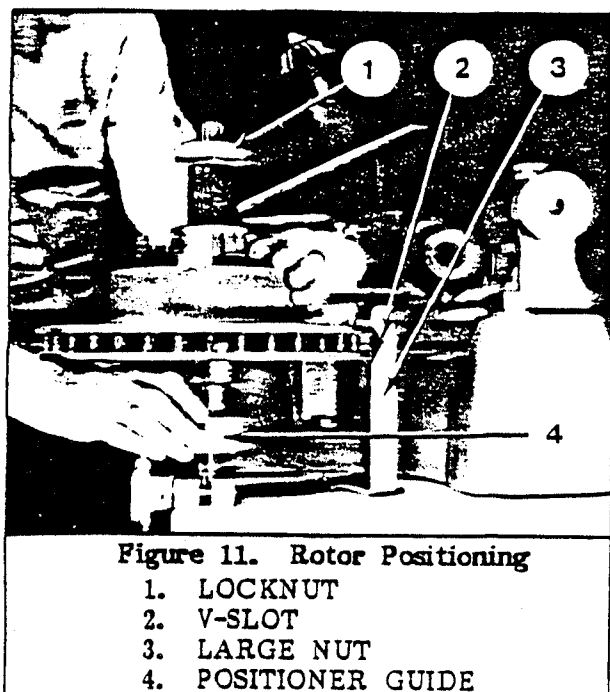


Figure 11. Rotor Positioning

1. LOCKNUT
2. V-SLOT
3. LARGE NUT
4. POSITIONER GUIDE

3. Select the proper taper cones inner and outer to fit the rotor bearing cup.

NOTE: Make sure arbor cones and spacers are clean and free of chips before assembly.

4. On the arbor, install cone which fits inner bearing cup, with tapered side up.

5. Install rotor onto arbor, studs up.

6. Install cone which fits outer bearing cup onto arbor, with tapered side down.

7. Swing the rotor positioning guide until it contacts the outer edge of the disc rotor. Turn the large nut until the rotor edges are centered within the V-slot of the positioning guide.

NOTE: It may be necessary to add a spacer under inner bearing cup cone to raise rotor to the V-slot.

8. Add a suitable spacer on top of outer bearing cup cone if necessary and thread lock nut onto arbor. Hand tighten.

9. Install chatter band around rotor.

ROTORS WITHOUT HUBS (FIGURE 12)

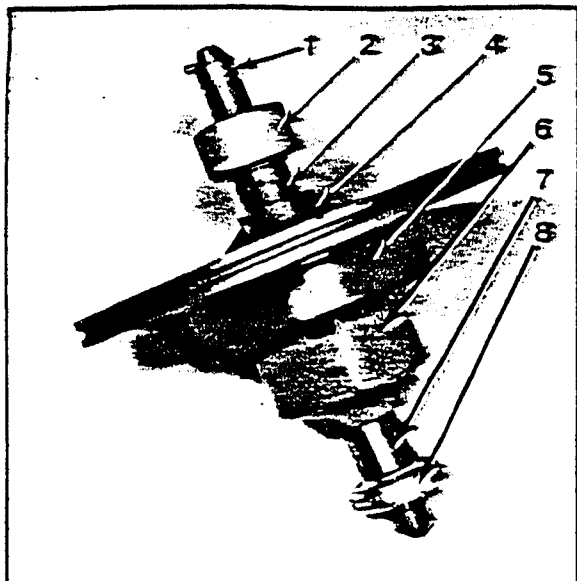


Figure 12. Hubless Rotor Installed

- | | |
|------------------|------------|
| 1. ARBOR | 7. SPACER |
| 2. LARGE NUT | 8. LOCKNUT |
| 3. SPACER | |
| 4. LARGE ADAPTER | |
| 5. ROTOR | |
| 6. SMALL ADAPTER | |

1. Mount the arbor into the arbor clamp, pin end down so pin is held in slot of arbor clamp.

2. Install large nut (left hand thread) onto arbor.

3. Install large floating adapter onto arbor, large end up.

4. Install spring onto arbor with large end down.

5. Install proper size tapered cone, tapered side up onto arbor, Figure 13.

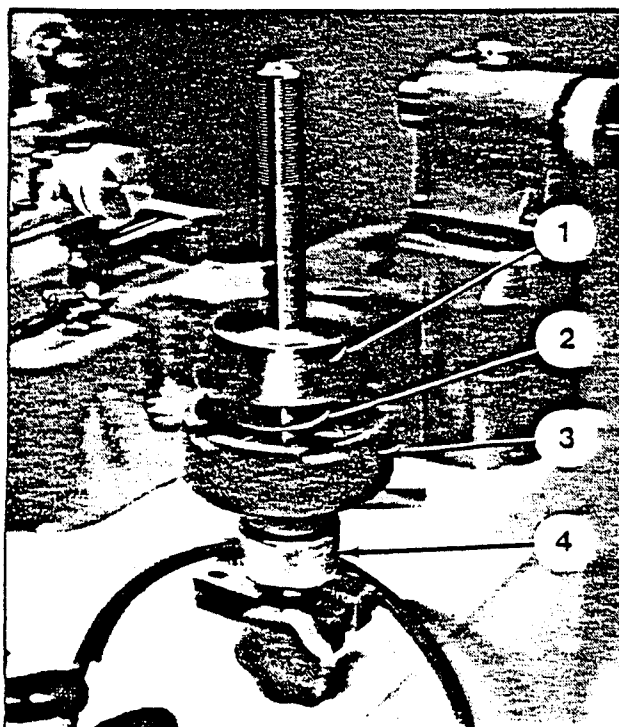


Figure 13. Cone and Spring Installed

- | |
|------------------|
| 1. TAPERED CONE |
| 2. SPRING |
| 3. LARGE ADAPTER |
| 4. LARGE NUT |

NOTE: Tapered cone must fit, but not pass through the center hole of the rotor.

NOTE: Use Adapter Set No. 73213 for Ford rear rotors.

6. Install disc brake rotor, as shown in Figure 14.

7. Install small floating adapter, large end down, onto arbor.

8. Swing the rotor positioning guide until it contacts the outer edge of the disc rotor. Turn the large nut until the rotor edges are centered within the V-slot of the positioning guide. Figure 14.

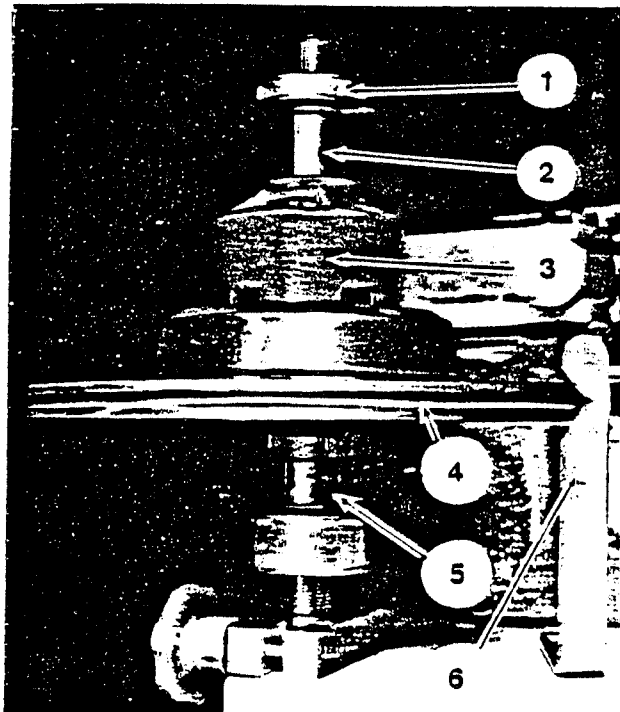


Figure 14. Positioning Rotor

- | | |
|------------------|---------------------|
| 1. LOCKNUT | 4. ROTOR |
| 2. SPACER | 5. SPACER |
| 3. SMALL ADAPTER | 6. POSITIONER GUIDE |

NOTE: It may be necessary to add a spacer under the large adapter to raise the rotor to the V-slot.

9. Add a suitable spacer on top of the small adapter if necessary and thread lock nut onto arbor. Hand tighten.

10. Install chatter band around rotor.

INSTALLING ARBOR ASSEMBLY IN LATHE:

1. Bring the cross feed carriage to the extreme outer position by turning the hand wheel counterclockwise so it will not interfere with the rotor.

2. Unclamp the arbor and disc assembly from the arbor clamp.

3. Install arbor and disc assembly into lathe by engaging the drive pin end of the arbor into the slot in the headstock spindle as far as it will go. Turn the tailstock knurled knob clockwise until tapered end of arbor enters tailstock bearing. Turn tailstock knurled knob until tailstock bearing is just touching the tapered end of the arbor.

CAUTION: DO NOT over tighten tailstock knurled knob. Tailstock bearing should have only a slight preload.

4. Tighten the tailstock lock knob.

5. If rotor is not in line with center of slot in tool plate, make minor adjustments to the knurled nuts on the arbor until rotor centers in tool plate slot, Figure 15.

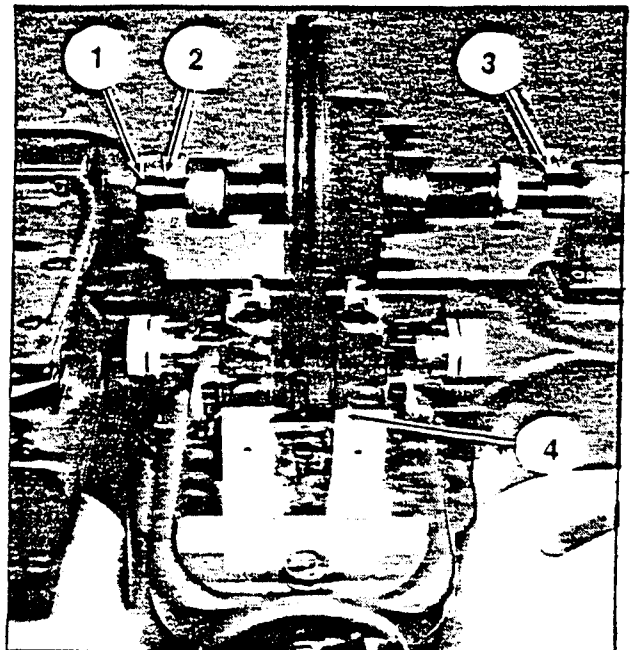


Figure 15. Rotor Aligned with Slot

- | | |
|--------------------|------------|
| 1. SLOTTED SPINDLE | 3. BEARING |
| 2. DRIVE PIN END | 4. SLOT |

6. Tighten small knurled nut with spanner wrench. (Right hand nut.)
Figure 16.

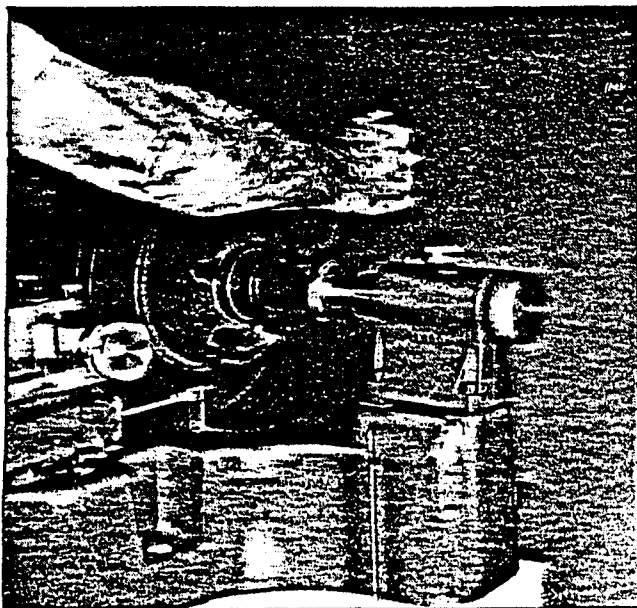


Figure 16. Tighten Arbor Assembly

ADJUSTING TOOL BITS

NOTE: Heavier than 0.010 inch tool cuts may require spring adjustment on tool bars, Figure 17.

1. Loosen Micro feed screws to spread tool blocks so Cutter Bits will clear the rotor.

2. Manually run cross-feed carriage TOWARD THE ARBOR with hand wheel until left hand tool bit is near the inside edge of rotor face.

3. Turn both micro knobs until tool bits just barely touch the rotor surfaces, Figure 18.

4. NOTE: Hold Micro Knob stationary while turning Direct Reading Dial to Zero.

5. Turn cross-feed hand wheel to move tool bits clear of the rotor face toward the arbor.

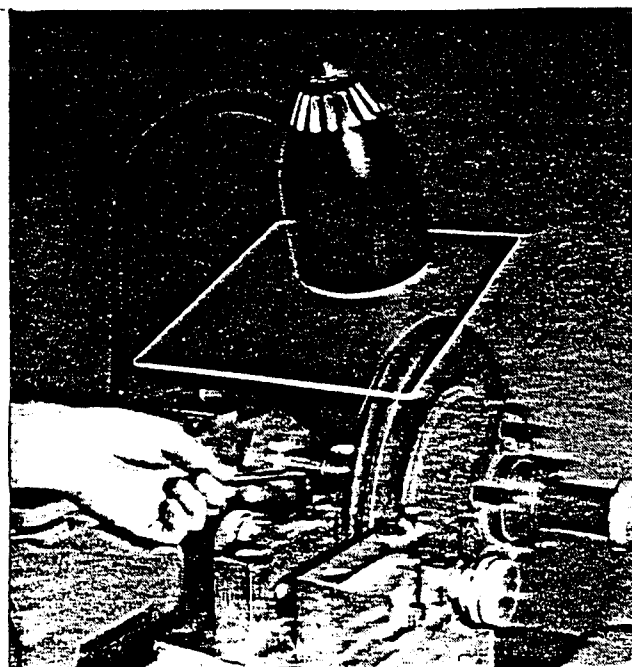


Figure 17. Tool Block Adjustment

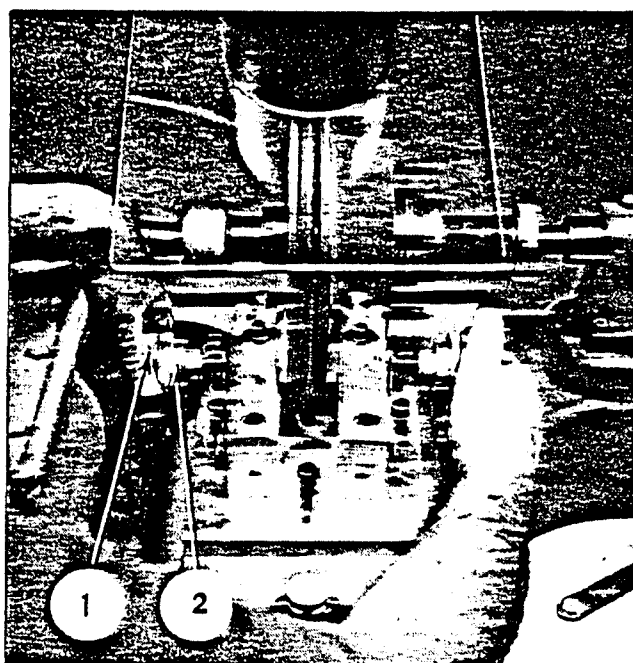


Figure 18. Micro Knob Adjustment

1. MICRO KNOB
2. DIRECT READING DIAL

RUNNING LATHE:

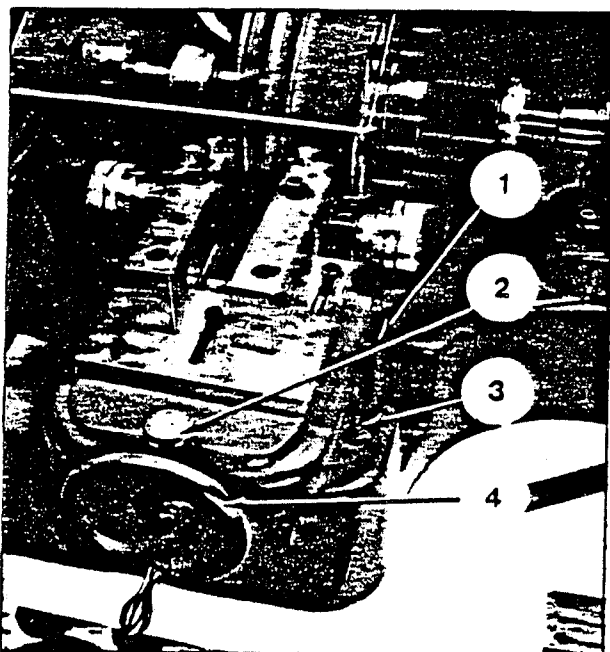


Figure 19. Cross Feed Controls

1. CROSS FEED POWER SWITCH
2. CROSS FEED LOCK KNOB
3. CROSS FEED CARRIAGE SWITCH
4. CROSS FEED HAND WHEEL

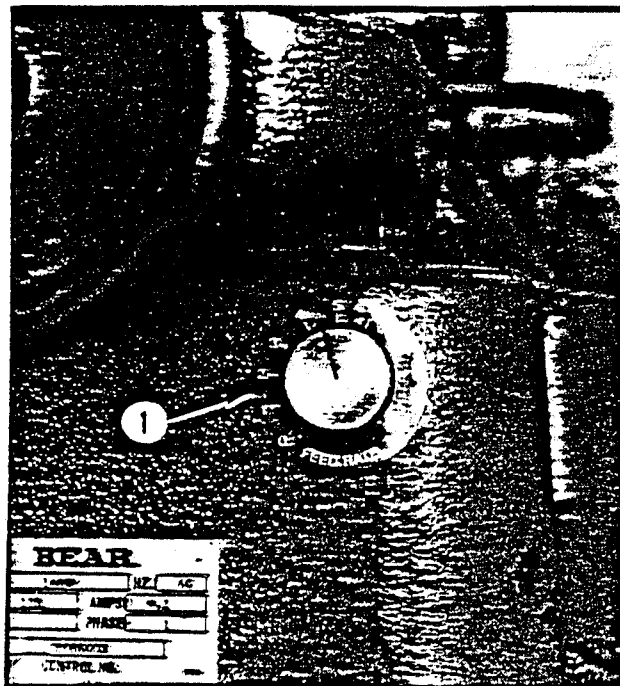


Figure 20. V.S.F. Control

1. VARIABLE SPEED FEED

RUNNING LATHE:

NOTE: Use Brake Specifications to determine if rotor will be within car manufacturer's minimum thickness. On fixed caliper rotors, the same amount must be removed from each side. This is not necessary on floating caliper rotors.

1. Turn each Micro Knob until Direct Reading Dial to get desired depth of cut. Each graduation on Direct Reading Dial is 0.001.
2. Set variable speed control to get desired finish of cut. Use higher speeds for rough cuts - lower speeds for finer cuts. See Figure 20.

REMEMBER

Set depth according to the amount of material to be removed.

Set Variable Speed Feed according to the smoothness of finish wanted.

NOTE: Depth and speed must be determined by the operator. Lighter (0.001" to 0.004") and slower (under 5) will produce a finer finish. HIGHER CROSS-FEED SPEEDS PRODUCE ROUGHER FINISHES.

3. Make sure cross-feed Lock Knob is loose (disengaged).



WARNING:

Place the work light and chip shield in position over the rotor to protect operator from flying chips.

4. Turn headstock motor ON by placing headstock toggle switch "UP". See Figure 21.

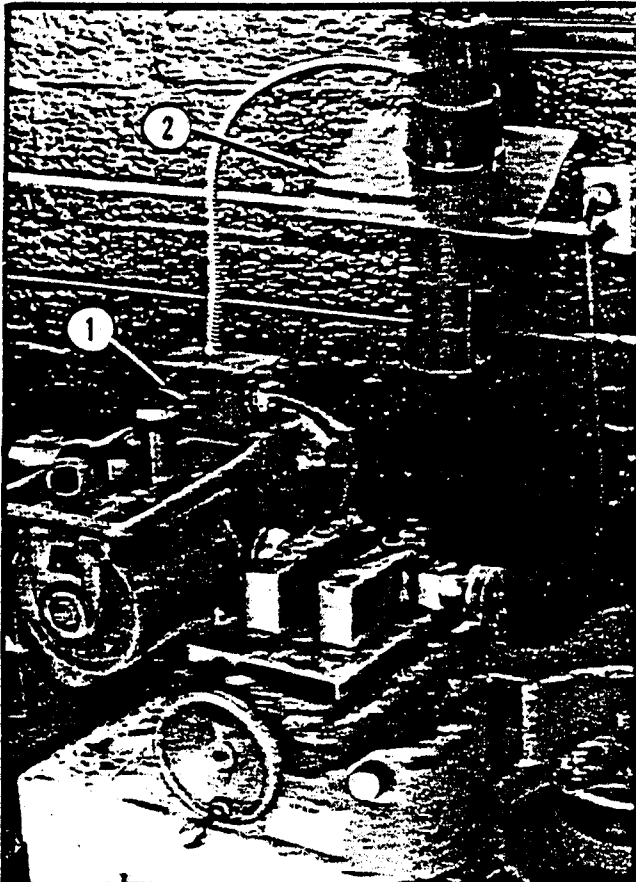


Figure 21. Head Stock Motor Switch

- 1. HEAD STOCK MOTOR SWITCH
- 2. CHIP SHIELD

5. Place cross-feed carriage switch to the forward, "ON" position.

6. Tighten the cross-feed lock knob. When the cut is complete, loosen the cross-feed lock knob to stop carriage motion. The lathe cross-feed will shut off at the end of its travel.

Occasionally two cuts are necessary, the second cut being a very light one. The rotor surfaces will meet requirements and acceptable commercial standards. If an even finer finish is desired, place a finishing stone against each rotor surface while it is turning. Only a few seconds of contact is necessary.



WARNING:

DO NOT adjust the screw which automatically shuts off the cross-feed motor power switch at the end of travel. Over travel of the cross-feed will destroy cross-feed drive motor instantly.

7. After the refinishing cut has been completed, turn the headstock motor switch off and check rotor thickness with a suitable micrometer. Discard the rotor if the thickness is less than the vehicle manufacturer recommended minimum disc rotor thickness.

REMOVING THE ROTOR-ARBOR ASSEMBLY:

1. To remove rotor and arbor assembly from lathe, disengage cross slide feed by loosening lock screw, Figure 22.

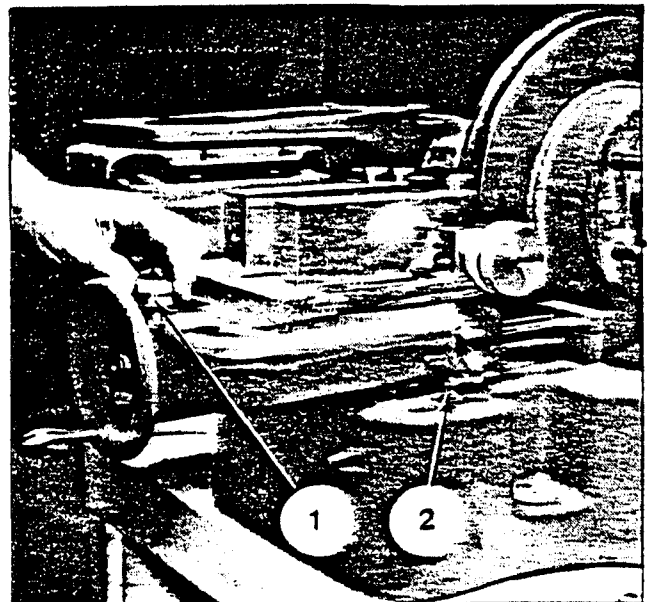


Figure 22. Cross Feed Shut Off

- 1. CROSS FEED LOCK KNOB
- 2. CROSS FEED POWER SWITCH

2. Manually retract cross slide with handwheel, backing the slide with its Tool Blocks and Cutter Bits away from the disc mounting area.

NOTE: This will also facilitate loading of the work and prevent damage to the cutter bits. Normally, the cross slide is fully retracted at completion of a cut.

3. Loosen small knurled nut on arbor using a spanner wrench, Figure 23.

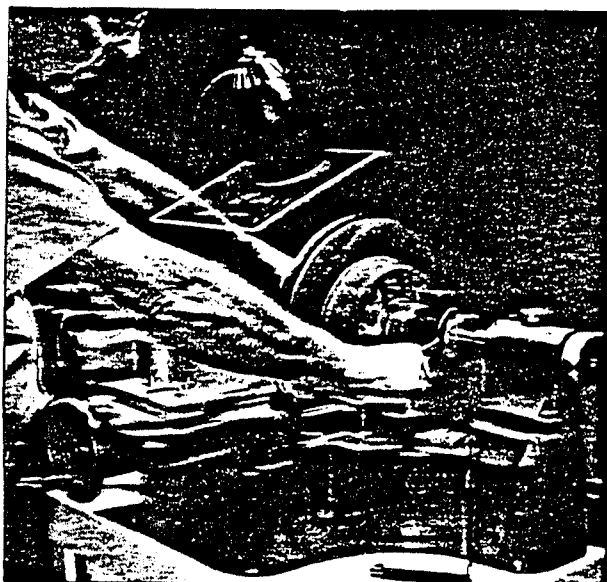


Figure 23. Loosen Arbor Assembly Nut

4. Loosen lock screw on tailstock assembly 1/4 turn and back off spindle with knurled knob. Support arbor assembly to avoid dropping as tailstock spindle loosens the arbor.

5. Place arbor in arbor clamp and remove knurled nut, adapters and rotor.

SMALL DIAMETER ROTORS:

To accommodate the small diameter rotors of some vehicles, it will be necessary to relocate the tool holder plate inward, toward the arbor. This will allow the Cutter Bits to contact the entire frictional surface of the rotor for the cutting operation.

Lathes with serial numbers 10247901 and up have a tool holder plate with a second inner set of holes, Figure 25.

If tool chatter occurs while finishing thin rotors on these lathes, move the tool holders and adjusting blocks to the inner set of holes on the tool holder plate.

Older lathes can be updated by ordering tool plate #72345.

1. Loosen the three allen head screws on tool holder plate.

2. Push tool holder plate forward, toward the arbor and retighten the three allen head screws, Figure 24.

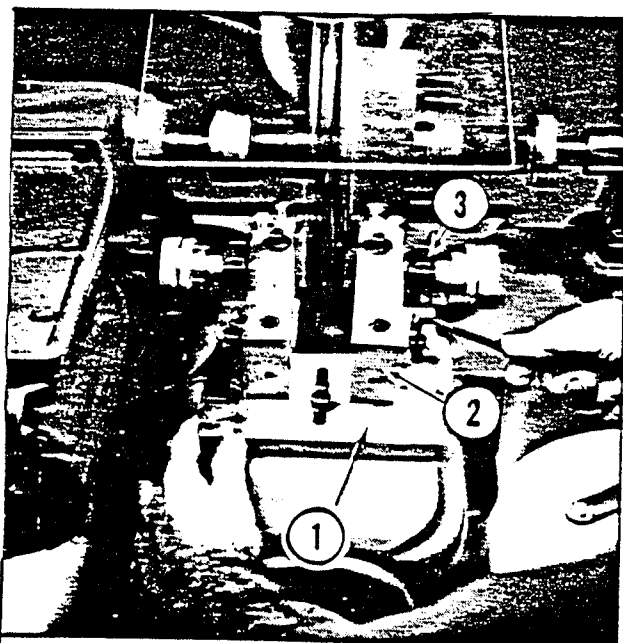


Figure 24. Tool Holder Plate Adjustment

1. TOOL HOLDER PLATE
2. TOOL HOLDERS
3. ADJUSTING BLOCKS

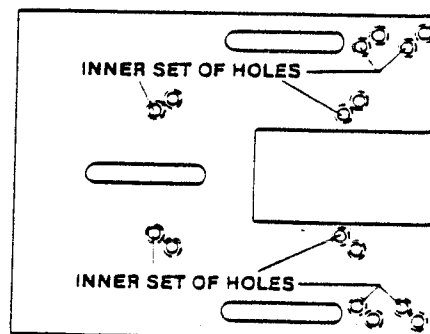


Figure 25. Tool Holder Plate No. 72345

MAINTENANCE

To keep your equipment in good working order, periodic maintenance is suggested as follows:

CLEANLINESS:

1. Following every disc brake job, brush away the metal chips from the lathe main assembly (tool blocks, cross slide ways) with a brush.



WARNING: DO NOT use air hose. Flying metal chips may cause eye injury.

2. Following every disc brake job, clean arbor assembly (tapered cones and spacers included) and wipe with oil dampened cloth to keep assembly parts from rusting.

CUTTER BITS:

To extend the life of cutter bits, it is helpful to dress the cutting edge with the hone stone after every 3 or 4 rotors machined. This removes the sharp, feather-edges that develop on the cutting edge. To dress, work stone back and forth a few times on the same angle as the cutter bit edge.

DAILY:

Clean-

a. All machine parts. Remove all cutting chips. CAUTION: DO NOT use compressed air to blow off chips. Chips may enter vital electrical parts or enter operator's eyes.

b. Wipe arbors and all adapters clean. Wipe a light film of SAE No. 10 oil on arbors and adapters to prevent rust.

Inspect-

a. Cutting tool tips. Good disc refinishing depends on sharp tool bits. Replace or index carbide inserts or replace tool bits as needed.

WEEKLY:

Lubricate-

a. Cross slide oil cups with SAE No. 20 oil.

b. Tailstock oil cup with SAE No. 20 oil.

c. Disc carriage feed screws with dry film, graphite lube.

MONTHLY:

Check Oil-

a. In main drive gear box. Add SAE No. 90 Gear Lube as needed.

Lubricate-

a. Main drive motor bearings. Add 2 or 3 drops of SAE No. 20 oil to motor bearing oilers.

Inspect-

a. Tool carriage guides for wear and looseness. Adjust wear plugs to take up wear or looseness.

b. All arbors and adapters for nicks, chips or scratches. Damaged parts can contribute to disc runout after refinishing. Replace damaged items; DO NOT attempt to sand or grind damaged parts.

YEARLY:

Inspect Electrical Parts-

a. Electrical cords may be frayed or cracked. Replace for your protection.

b. Sticking switches may cause short circuits. Replace for your protection.

c. Hot running motors may catch fire. Replace for your protection.

TROUBLESHOOTING GUIDE

Problem	Probable Cause	Remedy
No power with switch ON	<ol style="list-style-type: none"> 1. Power cord not plugged in 2. Circuit breaker 	<ol style="list-style-type: none"> 1. Plug in cord 2. Reset breaker
Tool carriage will not feed with power switch ON	<ol style="list-style-type: none"> 1. Cross feed lock knob loose 2. Feed motor burned out 3. Carriage motor switch defective 	<ol style="list-style-type: none"> 1. Tighten knobs 2. Call service technician 3. Call service technician
Tool chatter on disc after refinishing using chatter bank	<ol style="list-style-type: none"> 1. Tool bits dull 2. Finish cut too heavy 3. Arbor not properly in lathe 	<ol style="list-style-type: none"> 1. Index tool bit inserts or replace 2. Refinish with .005" cut (max) 3. Reinstall arbor

1469 VARIABLE SPEED RETRO KIT

<u>QUANTITY</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>
1	622-89215	Wiring Dia.
1	617-87256	Box
1	619-72404	Decal
1	619-72406	Decal
2	627-36068	Switch -
2	665-40866	Strain Relief
1	665-81501	Strain Relief
1	610-87255	Cover
1	610-88587	Bottom Plate
1	617-89214	Controller -
1	619-89229	Decal
1	628-89216	DC Motor ✓
1	634-89092	Cable Assembly
1	634-89094	Cable Assembly
1	634-89095	Cable Assembly
2	645-41564	Tie Strip
1	653-63943	Knob
4	699-41333	Screw
1	699-41834	Washer
1	699-44117	Nut 5/32
4	699-77077	Splice
2	699-58690	Drive Screw ✓
2	699-84142	Terminal
1	655-89230	Lead List
1	655-84142	Lead List
1	611-89209	Nut PCB

MS/pam
05/11/83

