KWIK-WAY®

SVS II-D VALVE REFACER

Instruction Manual and Parts Lists

Kwik-Way Producst Inc.
500 57th Street, Marion, Iowa, USA
800-553-5953 319-377-9421 319-377-9101 (FAX) **www.kwik-way.com**

PURCHASER'S WARRANTY

Kwik-Way Products Inc.
500 57th Street
Marion, IA 52302 USA

Kwik-Way Products Inc. guarantees all parts of its equipment, to the original purchaser, for three full years (one year electrical) from date of recorded warranty (except as provided below) against defects in material or workmanship when the equipment is installed in strict accordance with pertinent specifications and procedures.

Kwik-Way Products Inc. will repair and/or replace free of charge all such defective parts only when returned to the factory in Marion, with shipping charges prepaid and authorized RMA. To obtain an RMA, contact Kwik-Way Customer Service at 1-800-553-5953.

This warranty does not cover damage caused by accident, abuse or improper installation, nor repair or replacement of parts worn or consumed in normal operation of the machine.

Additionally, this warranty does not cover such items as dresser diamonds, ball bearings, grinding wheels, belts, carbide tool bits and other accessory items, except at the discretion of the company. The warranty on electric motors or electrical component parts is for a period of ninety days from date of delivery.
This warranty is at no time intended to mean the entire machine.

RECEIVING SHIPMENT

Upon taking delivery of your machine, carefully inspect the assembly before removing the rating and packing materials.

If evidence of damage exists, contact the shipper and ***Kwik-Way Products Inc.*** immediately.

Although ***Kwik-Way Products Inc***. is not responsible for damage incurred during transit, you will be provided assistance in preparation and filing of any necessary claims.

CAREFULLY READ THIS MANUAL BEFORE ATTEMPTING TO SETUP OR OPERATE THIS MACHINE.

IMPORTANT NOTE

Always have your serial number ready when communicating with ***Kwik-Way Products Inc.*** regarding parts or service. Keep this manual in a safe place.

Date Received:_____

Serial Number:_____

SAFETY FIRST

This manual has been prepared for the owner and those responsible for the maintenance of this machine. It's purpose aside from proper maintenance and operations, is to promote safety through the use of accepted practice. READ THE SAFETY AND OPERATING INSTRUCTIONS THOROUGHLY BEFORE OPERATING THE MACHINE.

In order to obtain maximum life and efficiency from your machine, follow all the instructions in the operating manuals carefully.

The specifications put forth in this manual were in effect at the time of publication. However, owing to Kwik-Way Products Inc. policy of continuous improvement, changes to these specifications may be made at any time without obligation.

SAFETY INSTRUCTIONS

1. Read, understand and follow the safety and operating instructions found in this manual. Know the limitations and hazards associated with operating the machine.

2. Eye Safety: Wear an approved safety face shield, goggles or safety glasses to protect eyes when operating the machine.

3. Grounding the Machine: Machines equipped with three prong grounding plugs are so equipped for your protection against shock hazards and should be plugged directly into a properly grounded three-prong receptacle in accordance with national electrical codes and local codes and ordinances. A grounding adapter may be used. If one is used, the green lead should be securely connected to a suitable electrical ground such as a ground wire system. Do not cut off the grounding prong or use an adapter with the grounding prong removed.

4. Work Area: Keep the floor around the machine clean and free of tools, tooling, stock scrap and other foreign material and oil, grease or coolant to minimize the danger of tripping or slipping. Kwik-Way recommends the use of anti-skid floor strips on the floor area where the operator normally stands and that each machine's work area be marked off. Make certain the work area is well lighted and ventilated. Provide for adequate workspace around the machine.

5. Guards: Keep all machine guards in place at all times when machine is in use.

6. Do Not Overreach: Maintain a balanced stance and keep your body under control at all times.

7. Hand Safety: NEVER wear gloves while operating this machine.

8. Machine Capacity: Do not attempt to use the machine beyond its stated capacity or operations. This type of use will reduce the productive life of the machine and could cause the breakage of parts, which could result in personal injury.

9. Avoid Accidental Starting: Make certain the main switch is in the OFF position before connecting power to the machine.

10. Careless Acts: Give the work you are doing your undivided attention. Looking around, carrying on a conversation and horseplay are careless acts that can result in serious injury.

11. Job Completion: If the operation is complete, the machine should be emptied and the work area cleaned.

12. Disconnect All Power and Air to Machine before performing any service or maintenance.

13. Replacement Parts: Use only Kwik-Way replacement parts and accessories; otherwise, warranty will be null and void.

14. Misuse: Do not use the machine for other than its intended use. If used for other purposes, Kwik-Way Products Inc. disclaims any real or implied warranty and holds itself harmless for any injury or loss that may result from such use.

SAFETY GUIDE FOR SEAT GRINDER WHEELS

(Read before installing the Wheel)

IMPORTANCE OF PROPER MACHINE MAINTENANCE

The most common cause of wheel breakage is due to improper mounting and abusive and/or careless operation. Only through proper use, regular machine maintenance, service and inspection procedures can wheel breakage be prevented.

It is the responsibility of the user to inspect, at regular intervals, to be certain that mounting flanges are in usable condition, are of proper size and shape and that no damage has occurred to the wheel or the machine.

The following **DO'S** and **DON'TS** should be used as a guide to safer grinding.

WARNING: IMPROPER USE MAY CAUSE BREAKAGE AND SERIOUS INJURY.

DO	DON'T
1. **DO** CHECK all wheels for CRACKS or other DAMAGE before mounting.	1. **DON'T** USE wheels WHICH HAVE BEEN DROPPED or otherwise damaged.
2. **DO** USE MOUNTING BLOTTERS when supplied with wheels.	2. **DON'T** USE EXCESSIVE PRESSURE WHEN MOUNTING wheel between flanges. Tighten nut only enough to hold wheel firmly.
3. **DO** be sure WHEEL HOLE, threaded or unthreaded, FITS machine arbor PROPERLY and that flanges are clean, flat and of the proper type for the wheel you are mounting	3. **DON'T** USE HEAVY GRINDING PRESSURE.
4. **DO** always RUN WHEEL WITH GUARD IN PLACE at least one minute before grinding.	4. **DON'T** USE MACHINE FOR ANY PURPOSE OTHER THAN GRINDING VALVES, VALVE STEMS OR ROCKER ARMS.
5. **DO** USE WHEEL GUARD furnished with machine.	
6. **DO** always WEAR PROTECTIVE SAFETY GLASSES or proper face shield.	

WARNINGS AND CAUTIONS

WARNING: Improper use may cause breakage and serious injury. (Found on page 4).

WARNING: Always disconnect the machine from the power source before attempting to change wheels. (Found on page 12).

WARNING: NEVER dress the wheel without first covering the chuck. (Found on page 14).

WARNING: DO NOT draw wheel off the valve. (Found on page 16).

WARNING: NEVER attempt to release or remove the valve from the chuck while either motor is still running. (Found on page 16).

WARNING: NEVER attempt to remove the valve from the V-block while grinding wheel is still turning. (Found on page 18).

WARNING: DO NOT attempt to remove the rocker arm while grinding wheel is still turning. (Found on page 20).

WARNING: Disconnect the machine from its power source BEFORE beginning any adjustments. (Found on page 22).

WARNING: Disconnect the machine from its power source before cleaning the chuck. (Found on page 24).

CAUTION: Be certain that the machine is properly grounded. (Found on page 7).

CAUTION: DO NOT stop rocker arm movement while shoe is in contact with the grinding wheel. If rocker arm is allowed to dwell in one location, a flat spot will occur. (Found on page 20).

CAUTION: When adjusting belt tension, DO NOT over-tighten. (Found on page 23).

CAUTION: Excessive oiling will damage the motor. (Found on page 26).

SPECIFICATIONS

Specifications	Standard	Metric
Minimum Chuck Capacity (Valve Stem Diameter)	5/32”	4mm
Maximum Chuck Capacity (Valve Stem Diameter)	9/16”	14 mm
Maximum Valve Head Diameter	4”	100 mm
Valve Grinding Wheel Diameter	7”	178 mm
Surface Wheel Diameter	3”	76 mm
Spindle Drive Motor (H.P.)	1/2	0.37 KW
Chuck Drive Motor (H.P.)	1/12	0.06 KW
Coolant Capacity	1 Gallon	3/8 L
Overall Length	37”	940 mm
Overall Width	22”	559 mm
Overall Height	16”	406 mm
Shipping Weight	250 lbs	114 kg

SET-UP AND INSTALLATION INSTRUCTIONS

After uncrating, check for hidden damage. If any is found, contact your carrier.

1. Place your valve facer in its pre-determined location and carefully remove crating.
2. Remove all rust preventative with a clean cloth and approved solvent.
3. Be sure coolant sump is free of all packing. (Packing material will clog the coolant system).
4. Remove the 1/4-20 hex head cap screw from the swivel plate (located next to the chuck swivel plate clamp on the front of the machine).

CAUTION: Be certain that the machine is properly grounded.

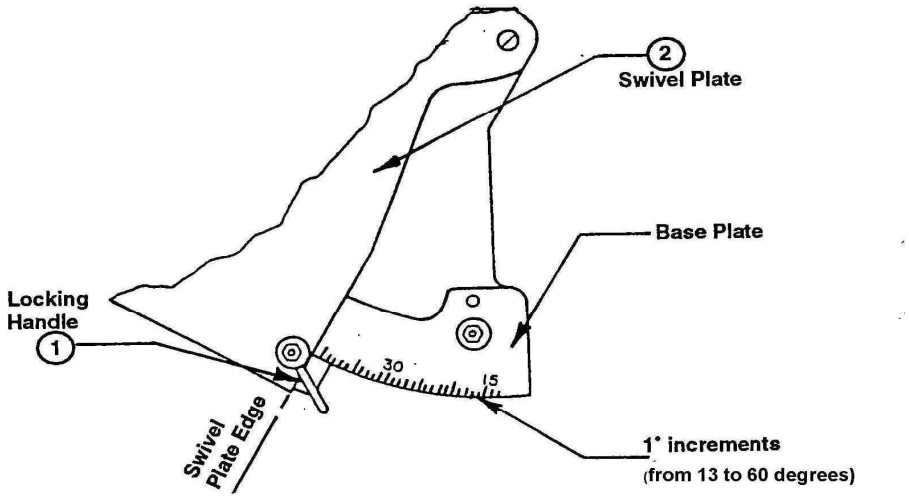
5. Check electrical voltage input tag on the valve facer to be sure it matches your service.
6. Check coolant drain plugs and if tight, fill the sump until the fluid level is approximately 1" above the baffle rib.
7. Connect a filtered and lubricated air supply (65 PSI Min.) to the air inlet at the rear of the machine.

SETTING THE SWIVEL PLATE ANGLE

The swivel plate is marked in 1° increments from 13 ° to 60°. Actual setting for 15°, 30° and 45° are indicated with these numbers.

To set the angle:
1. Loosen the lock handle (Item 1, Figure 1) and set the edge of the swivel plate to the desired angle.
2. Tighten the locking screw (clockwise).

Figure 1



SETTING THE CHUCK VALVE STOP

The valve stop is a device designed to locate all like valves at a given relative distance from the end of the chuck.
To set the valve stop:
1. Install a valve in the chuck at the desired depth and allow the chuck to close.
2. Using the 3/16" diameter valve stop rod provided, push the valve stop in until it is seated against the valve stem end.

NOTE: Be sure subsequent valves are pushed in far enough to contact the stop.

SETTING SPINDLE SLIDE STOPS

This machine is equipped with adjustable stops to limit the travel of the grinding wheel spindle slide. This stop, when set, prevents the wheel from striking the chuck or the valve stem.
1. With the valve installed in the chuck, all motors off and the thumbscrews loose, advance the traverse handle to the left.
2. Feed valve up to valve wheel.
3. Be sure the grinding wheel does not strike either the chuck or the valve stem.
4. Slide the right hand adjustable stop up against the fixed stop and tighten wing nut.

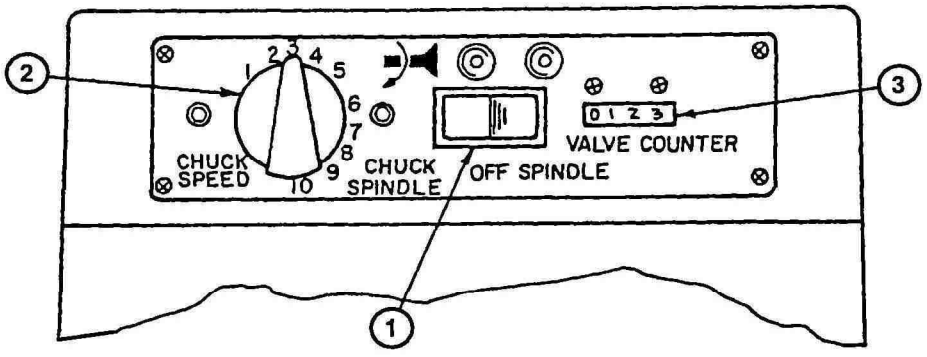
CONTROLS AND SWITCHES

Before attempting to operate this machine, first familiarize yourself with all controls and switches and the functions of each.

MAIN SWITCH (Item 1, Figure 2)

This switch has three positions. In the left position, both the spindle and the chuck motor are on. With the switch in the right position, only the spindle motor will run. When centered, both chuck and spindle motors are off.

Figure 2



CHUCK SPEED CONTOLLERS (Item 2, Figure 2)

Your SVSII Deluxe Valve Facer is equipped with a variable speed chuck motor, which allows you to alter the rotational speed based on the valve head diameter (See chart on chuck cover).

CONTROLS AND SWITCHES (continued)

SPINDLE SLIDE SWITCH

This machine is equipped with an automatic switch, which shuts off the spindle motor, chuck motor and the coolant pump when the traverse handle (Item 3, Figure 4) is in the far right position.

VALVE COUNTER (Item 3, Figure 2)

This machine is equipped with an automatic valve counter enabling you to keep an accurate count of valve facing production.

MOUNTING THE VALVE AND STEM GRINDING WHEELS

WARNING: Always disconnect the machine from the power source before attempting to change wheels.

The valve and stem grinding wheels are attached with special spanner nuts and a special wrench for its removal is included with the accessories.

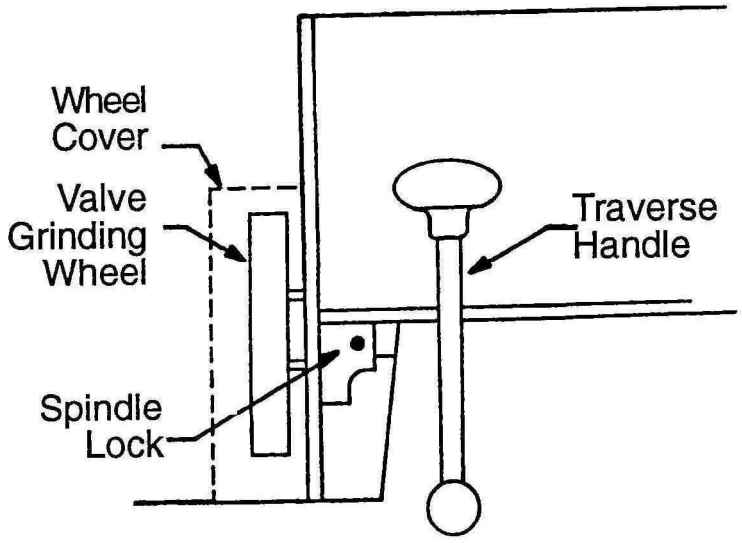


Figure 3

VALVE GRINDING WHEEL REMOVAL

1. Remove the three mounting screws holding the wheel guard in place.
2. Insert the 3/16” diameter valve stop rod provided. (This will keep the spindle from turning while removing the grinding wheel nut.)
3. With the special wrench, remove the grinding wheel nut and then the grinding wheel.
4. Make certain the grinding wheel bushing is tight.
5. Install the new grinding wheel and grinding wheel nut, then tighten.
6. Remove special pin and re-install wheel guard.

STEM GRINDING WHEEL REMOVAL

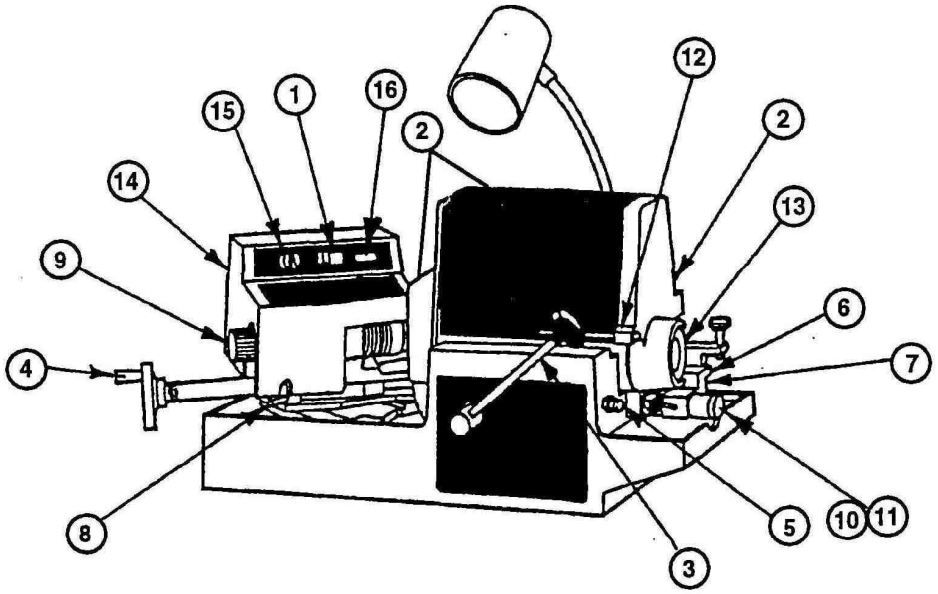
It is not necessary to remove the wheel guard to remove this wheel!

1. Insert the 3/16" diameter spindle lock pin provided. (This will keep the spindle from turning) See Figure 3.
2. With the special wrench, remove the cut-off wheel nut and then the grinding wheel.

   NOTE: Cut-off wheel nut has left hand threads.

3. Install the new grinding wheel and cut-off wheel nut, then tighten.
4. Remove special pin.

Figure 4



1. Main Switch	9. Chuck Handwheel
2. Coolant Control Valves*	10. Surface Grinding Micro Feed Wheel
3. Traverse Handle	11. Micro Feed Dial
4. Valve Feed Handwheel	12. Spindle Slide Adjustable Stops*
5. Chuck Open-Close Button	13. Valve Stop Screw*
6. Rocker Arm Grinding Assembly*	14. Chuck Cover
7. Surface Grinding Assembly	15. Chuck Speed Dial
8. Swivel Plate Lock	16. Valve Counter

*NOTE: These items are not visible in this view of machine

DRESSING THE WHEEL

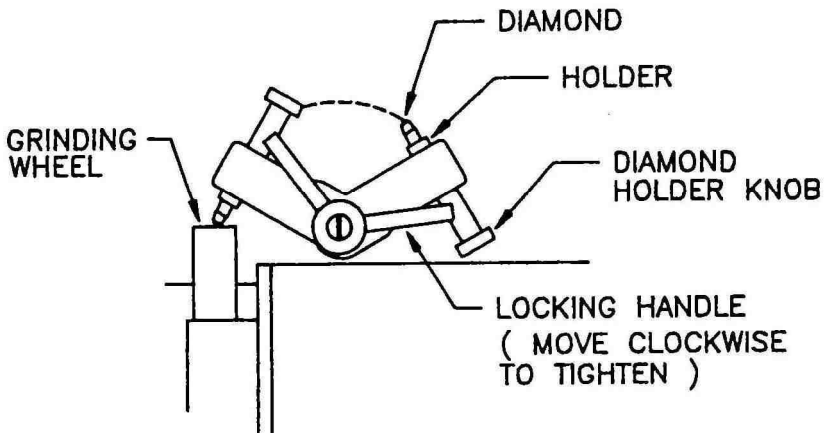
NOTE: See page 45 for tips on properly dressing the wheel.

As the wheel is used, particles break away from the face and the wheel needs to be dressed. The process of dressing the grinding wheel returns it to a smooth condition for the best possible finish on the valve face.

NOTE: A new wheel (or re-installed one which has been off the machine) must be dressed prior to use.

WARNING: Never dress the wheel without first covering the chuck.

Figure 5



1. Turn the main switch to the OFF (center) position.

2. Loosen the lockarm and swing the diamond toward the left.

3. Using the traverse handle, locate the grinding wheel so that the diamond point just contacts the center of the face and lock in place.

4. Position the wheel to the left of the diamond.

5. Depress the right side of the main switch turning on the spindle and coolant pump.

NOTE: Coolant must always be directed onto the diamond when dressing.

6. Using a very slow uniform motion, move the grinding wheel across the diamond.

NOTE: Primary cut must always be into the point of the diamond.

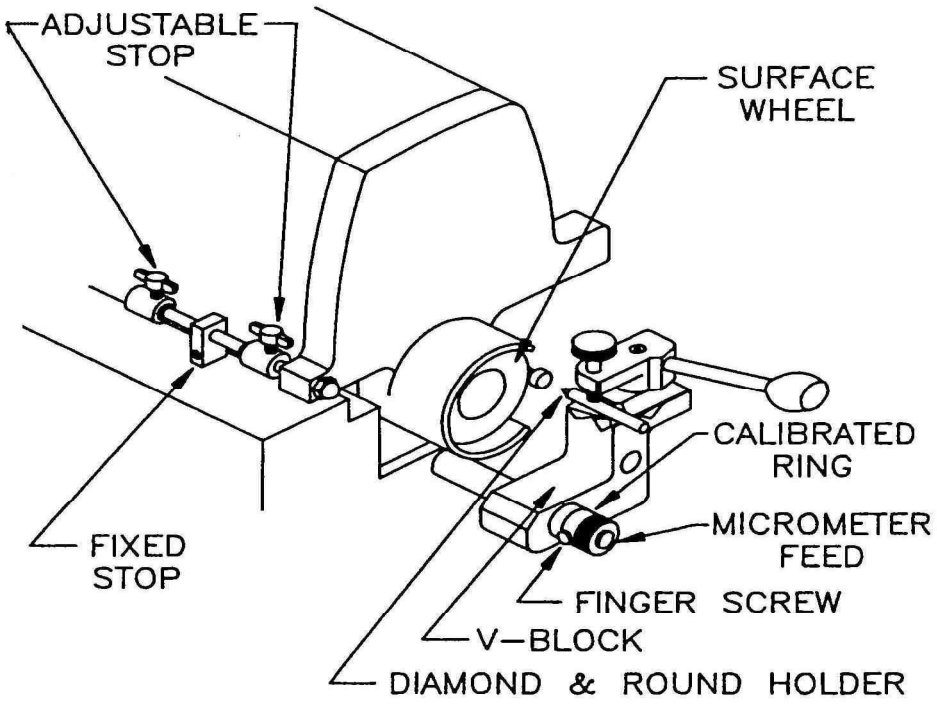
7. Return the wheel to the left and adjust the diamond about 1/8 turn clockwise.

8. Make an additional, very slow pass with the wheel (left to right, right to left) and turn the spindle motor off.

PRECAUTIONS WHEN DRESSING THE WHEEL

1. Take very light cuts, heavy cuts may grind away the mounting and loosen the diamond.
2. Avoid shocks or blows to the diamond tool.
3. The diamond and tool must be locked firmly and the wheel fed gradually across the diamond point.
4. Be careful not to jam the wheel into the diamond.

Figure 6



DRESSING THE STEM WHEEL (See Figure 6)

The stem wheel needs to be dressed periodically to maintain a sharp cutting edge and clean face.

1. Depress the right side of the rocker switch (spindle) and move the traverse handle to the left until the spindle motor comes on.
2. Leave the spindle slide in this location and turn the motor off (center position on the main switch).
3. Loosen the spindle slide stop, move it up tight against the stop and re-tighten.
4. Install the round diamond in the V-block and clamp it in place.
5. Using the micrometer feed, move the diamond point in until it just touches the stem wheel.
6. Move the diamond clear of the wheel and turn the main switch to the spindle “ON” position.

NOTE: Coolant must always be directed onto the diamond when dressing.

7. Sweep the diamond across the face of the wheel feeding in .003 to .005 until the face has been totally cleaned up.

VALVE FACING

De-grease/clean valves, making sure they are free of carbon deposits BEFORE attempting to grind.

PRE-GRIND SET UP

1. Dress the grinding wheel (as needed).

2. Install the valve and set the valve stop.

3. Set the swivel plate to the desired angle.

4. Set the spindle slide stop.

5. Set the chuck speed as dictated by the valve head diameter.

FACING THE VALVE

1. With the traverse handle in the extreme right hand position, depress the left side (chuck/spindle) of the rocker switch, turning on the power to the machine.
2. Move the traverse handle slowly to the left until the motors and coolant pump come on.

NOTE: Adjust the coolant flow onto the face of the valve. Never allow the coolant to be directed into the chuck. Suspended grit in the coolant will cause damage to the chuck balls and collars.

3. Bring the valve face into contact with the grinding wheel by **SLOWLY** turning the feed handwheel clockwise while at the same time slowly passing the wheel back and forth.
4. As the last low spot is removed, stop feeding the handwheel in and pass the wheel across the face 3 or 4 times. (This will put on the finish grind). Allow the valve to spark out before proceeding to step 5.
5. Park the wheel in contact with the valve and turn the handwheel counter-clockwise moving the valve face away from the grinding machine.

WARNING: DO NOT draw the wheel off the valve.

6. Move the traverse handle to the extreme right so the automatic switch shuts off both motors.

WARNING: NEVER attempt to release or remove the valve from the chuck while either motor is still turning.

7. Press the chuck release valve and remove the finished valve.

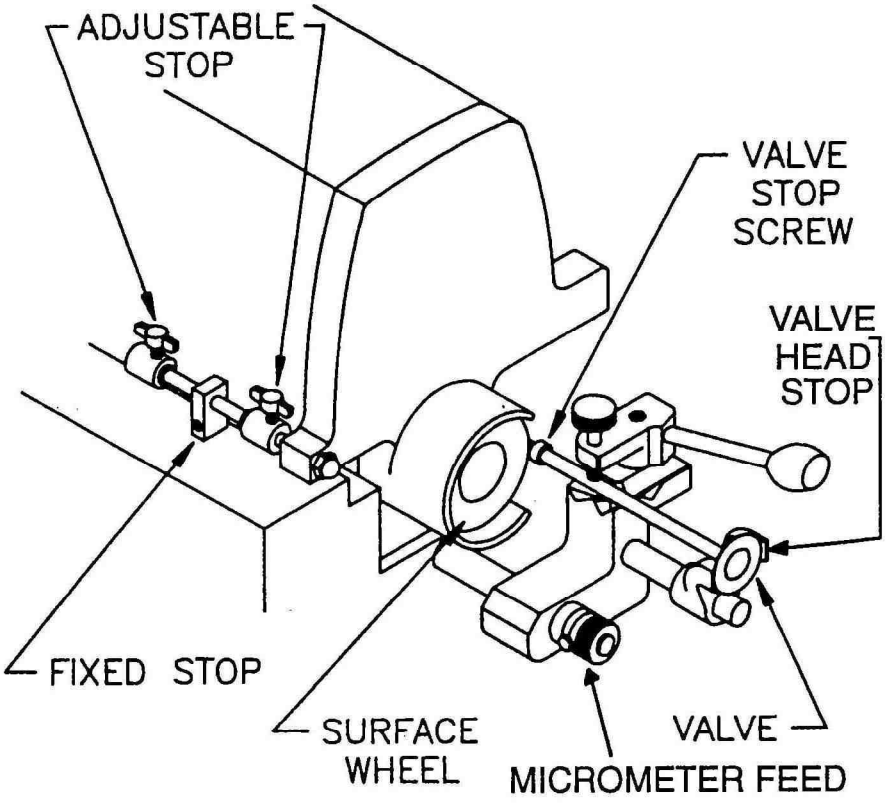
CUT-OFF GRINDING (Figure 7)

1. Depress the toggle switch to the right side position and move the grinder spindle slide to the left until the spindle motor comes on. Leave the slide in this position and shut the motor off at the toggle switch.

2. Lock the grinder spindle slide in this position by moving the two adjustable stops to contact the fixed stop.

3. Place the valve on the V-block, bringing it over the face of the wheel, and lock down in the V-block with the stem tip just contacting the wheel. Turn the motor on and take a light cut across the end of the valve stem.

Figure 7



Before removing the valve, move the V-block back to the rest position and adjust the valve stop screw and jam nut until it contacts the end of the valve stem. This sets the stop screw even with the front edge of the wheel and all other valve stems can be set in the V-blocks against the stop.

4. Set calibration ring to zero, rotate the V-block holder so that the valve stem end is between the stop screw and the wheel edge.
5. Feed the valve stem up by rotating the feed wheel the amount of stock that is to be ground off. (Should not exceed 0.002 inch (0.051mm) per pass).

***NOTE:** This operation should be done using coolant.

WARNING: Never attempt to remove the valve from the V-block while the grinding wheel is still turning.

VARYING WHEEL PERFORMANCE

It is possible to alter the performance of a grinding wheel by varying the traverse speed, infeed (amount of material being removed) or the speed of work. If a wheel acts as though it is too hard (causing burning, chatter, slow cutting or loading) it can be made to act softer by:

1. Increasing the work speed,
2. Increasing the traverse speed,
3. Increasing the infeed,
4. Dressing at a faster traverse speed, or
5. Dressing more often.

If a wheel acts as though it is too soft (not holding size or requiring excessive dressing), it can be made to act harder by:

1. Decreasing the work speed,
2. Decreasing the traverse speed,
3. Decreasing the infeed, or
4. Dressing at a slower traverse speed.

ROCKER ARM GRINDING

It is not necessary to remove the stem grinding attachment to grind rocker arms. Rotate the stem attachment from its at-rest position toward the rear to the front of the machine.

SET-UP

1. Move the traverse handle to the extreme right and depress the spindle switch.
2. Slowly move the traverse handle to the left until the spindle motor starts.
3. Allow the traverse handle to remain in this position and turn the spindle motor off.
4. Loosen the stops, slide them against the fixed stop and lock in place.
5. Mount the rocker arm between the cones (See Figure 9) and position the attachment so that the wheel is in contact with the grinding wheel (See Figure 10).

Figure 8

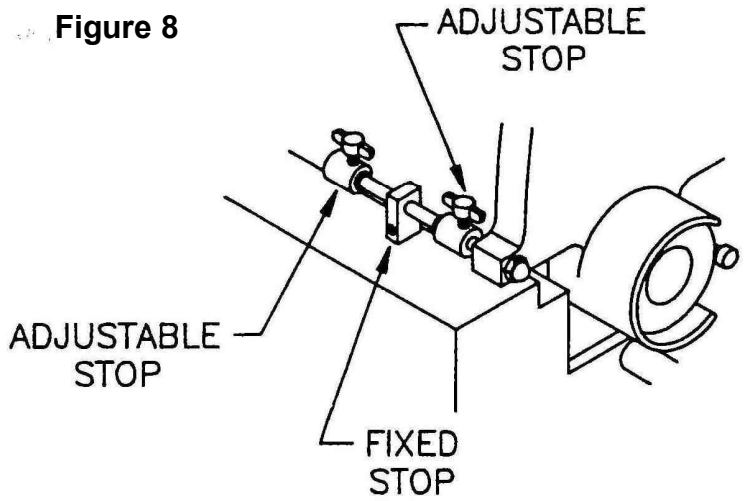


Figure 9

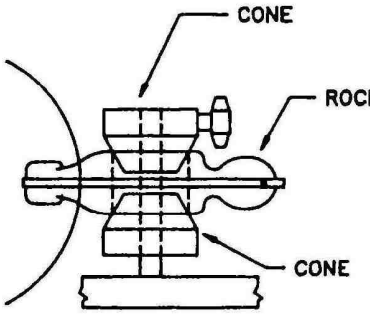
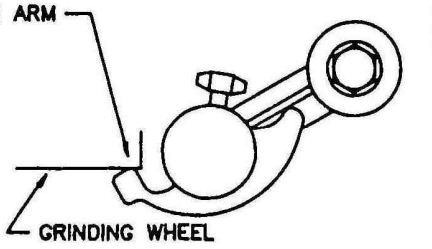


Figure 10



GRINDING PROCEDURE

Start the spindle motor and direct the coolant flow onto the rocker arm shoe.

1. Apply light pressure and slowly rotate the face of the shoe back and forth across the grinding wheel.

IMPORTANT: Be sure that the rocker arm shoe is in continuous contact with wheel during complete travel in both directions.

2. Continue grinding until the entire shoe surface is cleaned up.

CAUTION: DO NOT stop rocker arm movement while shoe is in contact with the grinding wheel. If rocker arm is allowed to dwell in one location, a flat spot will occur.

3. Turn off the spindle motor and remove the finished rocker arm.

WARNING: DO NOT attempt to remove the rocker arm while the grinding wheel is still turning. When rocker arm grinding process has been completed, return both this attachment and V-block to their original locations.

MOTOR/BELT INSTALLATION

When installing a motor or belts, the center line (CL) motor must be parallel to the top of the spindle slide. (See Figure 11)

Failure to accurately install/adjust the motor will cause premature belt breakage.

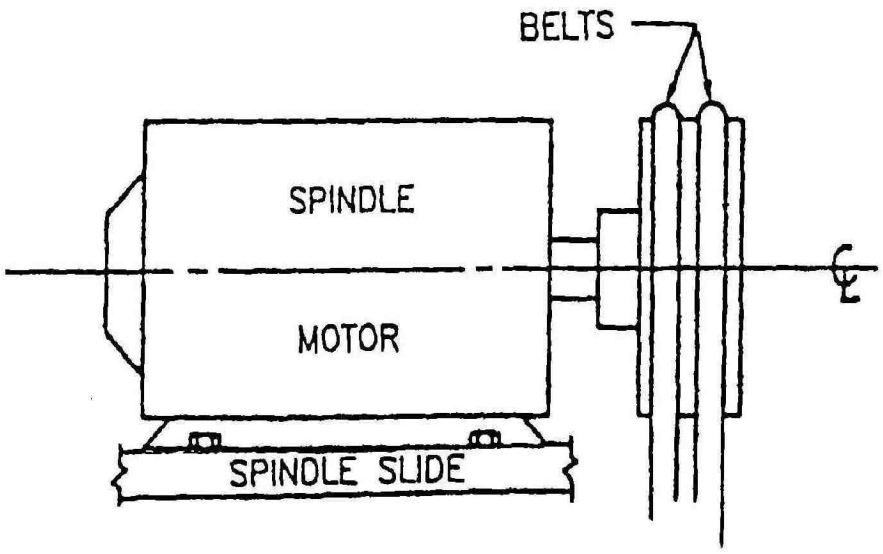


Figure 11

SPINDLE SLIDE ADJUSTMENT

(For Serial No. 4315 and up)

If the spindle slide should need adjustment, start by locating the three socket head set screws at the rear of the machine just below the slide (See Figure 12).

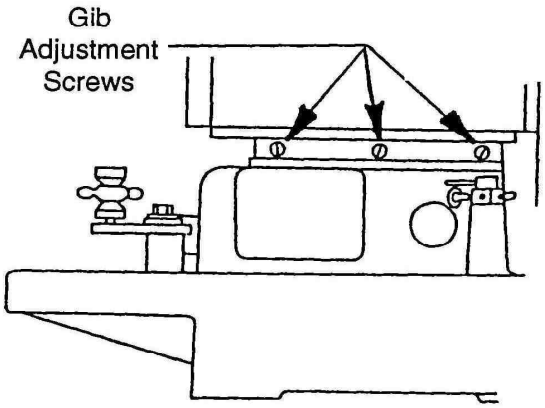
WARNING: Disconnect the machine from its power source BEFORE beginning any adjustments.

1. Position the traverse handle in the vertical position.

NOTE: All screw adjustments are to begin with the handle in this position.

2. The first adjustment will be to the setscrew nearest the large diameter-grinding wheel. Tighten this screw until the spindle slide cannot be moved when using the traverse handle.
3. SLOWLY loosen this screw while attempting to move the traverse handle - stop loosening the screw when the traverse handle can be cycled through its entire range and a noticeable amount of smooth drag is achieved.

Figure 12



4. The next adjustment is to the screw nearest the small diameter-grinding wheel. Tighten this screw until once again the spindle slide cannot be moved with the traverse handle.

5. SLOWLY loosen this setscrew while rocking the traverse handle back and forth - stop when the slide moves smooth and free, yet drag can be detected.

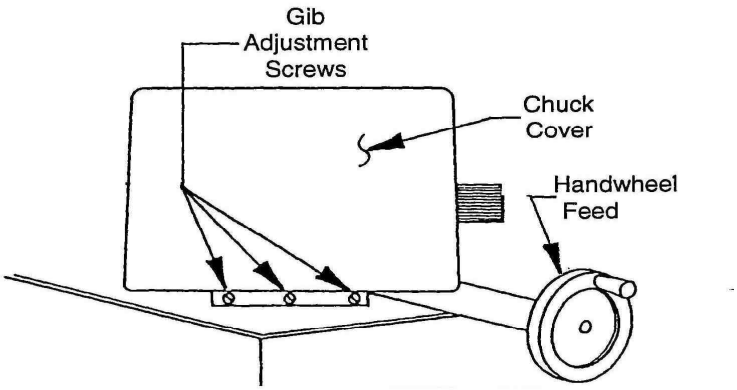
6. While standing on the operator side, grasp both the large diameter and small diameter grinding wheel covers and alternatively push/pull on each, checking for any movement of the spindle slide. If no movement is detected, go to Step 7. If MOVEMENT IS DETECTED, one of the gib screws is too loose and will cause inaccuracy - repeat Steps 2 through 6.

7. Tighten the screw in the center until the spindle slide cannot be moved - SLOWLY loosen this screw while rocking the traverse handle side to side. Continue to loosen the screw, stopping when the amount of drag felt in the center matches that provided by the outer screws.

CHUCK SLIDE

The chuck slide uses spring loaded gib screws, which can be damaged if they are over tightened. Carefully tighten each spring loaded gib screw until it bottoms out and then back it off 1/2 turn (See Figure 13).

Figure 13



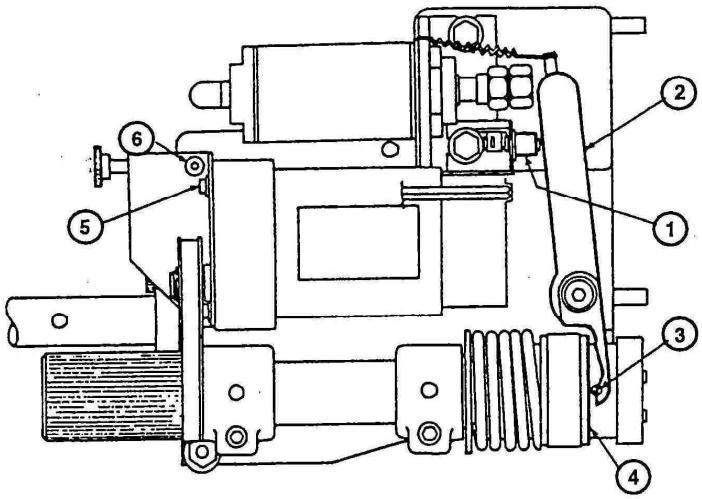
MICRO SWITCH ADJUSTMENT

(See Figure 14)

The micro switch (Item 1) when properly adjusted, will shut off the chuck motor before the chuck yoke pin (Item 3) engages the chuck flange (Item 4). This switch is a safety device to prevent stripping the gears in the chuck motor.

1. Disconnect the machine from the power source and air supply and remove the chuck cover.
2. Move the chuck yoke (Item 2) by hand (you should hear a click in the micro switch before feeling the chuck yoke pin - Item 3) and engage the chuck flange (Item 4).
3. If the chuck yoke pin engages the chuck flange first, adjust the switch bracket by bending away from the chuck yoke slightly, re-check per Step 2.
4. Reattach chuck cover.

Figure 14



CHUCK DRIVE BELT ADJUSTMENT

(See Figure 14)

Proper adjustment of the chuck drive belt will insure long life.

It is not necessary to run excessive tension in this belt. (Positive drive belts require less tension than "V" type belts). Belt tension is adjusted by the motor mount bolts (Item 5). If the belt runs to one side then the motor shaft is not parallel to the chuck. This is adjusted by bracket bolts (Item 6). Loosen and adjust the motor until the belt runs true. Re-tighten bolts. It may be necessary to re-adjust belt tension. Once complete, the belt should provide long life and trouble free operation.

NOTE: Chuck shaft must rotate freely, by hand, after tightening bearing cap screw or there will be damage to the gear motor.

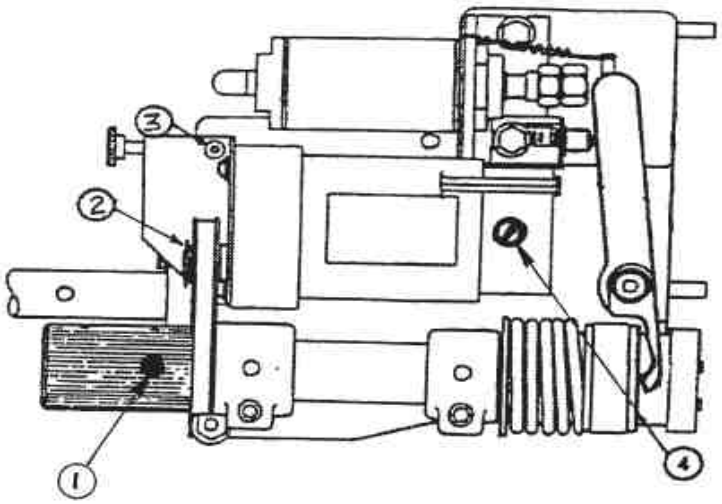
CAUTION: When adjusting belt tension, DO NOT over tighten.

CHUCK MOTOR BRUSH REPLACEMENT

1. Loosen the hand wheel set screw, (item 1) and remove the hand wheel from the chuck.
2. Remove the chuck drive belt.
3. Remove the snap ring (item 2) from the chuck motor shaft, then remove the pulley.

NOTE: The pulley must go back on in the direction removed. The pulley is a one-way clutch and only works if installed correctly.

4. Remove the two button head screws (item 3) and stand the motor up. This will allow access to the two brushes (item 4).
5. Remove the brushes and clean out any brush carbon that may be in the holders.
6. Install the new brushes.
7. Position the motor bracket and install the two button head screws. Tighten.
8. Install the motor pulley onto the motor shaft then attach the snap ring.
9. Position the drive belt onto the pulley, then slip the chuck hand wheel back onto the chuck shaft. Make sure the hand wheel is snug up against the chuck-bearing tower and then tighten the hand wheel set screw.



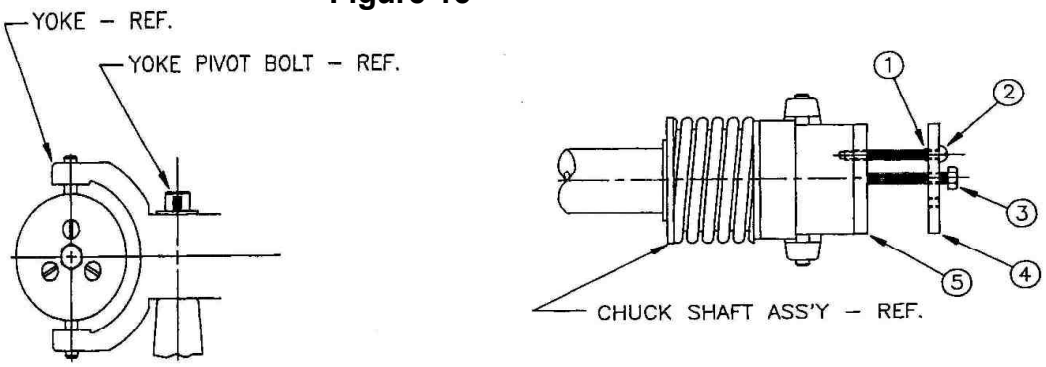
CLEANING

CLEANING THE CHUCK (Chuck Disassembly)

WARNING: Disconnect the machine from its power source before cleaning the chuck.

1. Loosen the thumbscrews located at the left and forward of the chuck handwheel, lift the cover (approx. 3/4") and slide it off the locating pins.
2. With the chuck on the machine, remove the end cap from the chuck.
3. Screw assembly tool onto the chuck shaft as shown in Figure 15. Be sure the round head machine screws (Item 2) are engaged at least 1/4" into the crankshaft.
4. Turn the hex head cap screw in against the pusher plate (Item 5) until the chuck collars are pushed toward the rear.
5. Remove the chuck yoke pivot bolt and the yoke.
6. Unscrew the hex head screw (Item 3) until the collars come forward, releasing all spring pressure.

Figure 15



7. Remove the assembly tool from the chuck. The chuck can now be cleaned while it remains in the machine or it can be removed from the machine for better access.
8. Thoroughly clean all the parts in the solvent including the collars, ball and ball holes.
9. Lubricate the chuck shaft collars and balls with automatic transmission fluid only.
10. Replace balls and collars being sure the keyways in the collars are positioned correctly.
11. Install the assembly tool on the shaft again using the round head machine screws.
12. Compress collars rearward by turning the hex head screw.

NOTE: If the collars bend, check for proper alignment of the shaft keys with the collar keyways.

13. Replace the yoke and yoke pivot bolt as before.
14. Remove the assembly tool and replace the end cap on the chuck shaft.

CHUCK ASSEMBLY REMOVAL

If it is necessary to remove the complete chuck assembly for replacement, proceed as follows:

1. Remove the chuck cover.
2. Remove the chuck yoke pivot cap screw. Disconnect return spring and move the chuck yoke out of the way.
3. Loosen the four socket head cap screws mounting the motor to the motor bracket to relieve the belt tension.
4. Loosen the set screw in the chuck shaft pulley/handwheel and remove the chuck shaft assembly.

To re-install a chuck shaft, reverse steps 1 through 4.

1. Make certain that the shoulder on the valve head end of the chuck is back snug against the solid bearing.
2. When installing the pulley/handwheel, make certain it is drawn up snug yet the chuck shaft can turn freely. Then tighten the setscrew.

HELPFUL HINTS

1. **GET ACQUAINTED WITH YOUR *KWIK-WAY* VALVE FACER.** We recommend that you use scrap valves and practice before beginning an actual job. This will avoid any undue pressure or failure while learning a new procedure.

2. **ALWAYS** cover the chuck before dressing the valve grinding wheel.

3. **ALWAYS** dress a grinding wheel after installation (whether new or reinstalling).

4. If the grinding wheel becomes impregnated with grease or lubricating oil, remove the spindle, soak in solvent overnight, reinstall and turn the motor on. This will throw out the oil by centrifugal force.

5. **ALWAYS** use coolant when dressing the grinding wheel.

6. A good grinding practice is to take very light cuts and to slowly pass the wheel back and forth across the valve face many times.

7. **ALWAYS** clean and degrease valves before grinding to prevent the grinding wheel from “loading up” with residue.

8. For best valve face finish, dress the grinding wheel to a “glassy smooth” surface.

MAINTENANCE

Your **KWIK-WAY** Valve Facing Machine is designed as a minimal maintenance product. However, some basic maintenance will assure that it will continue to operate in a satisfactory manner.

LUBRICATION

1. Grinder spindle slide ways are equipped with snap-lid oilers (1 front, 1 rear) and must be oiled once a week (more frequently if machine is in continuous service).

2. Chuck slide feed screw is equipped with a snap-lid oiler located near the handwheel.

3. Gib and dovetail ways have two (2) snap-lid oilers, one behind the chuck motor and the other under the chuck shaft and between the chuck bearings.

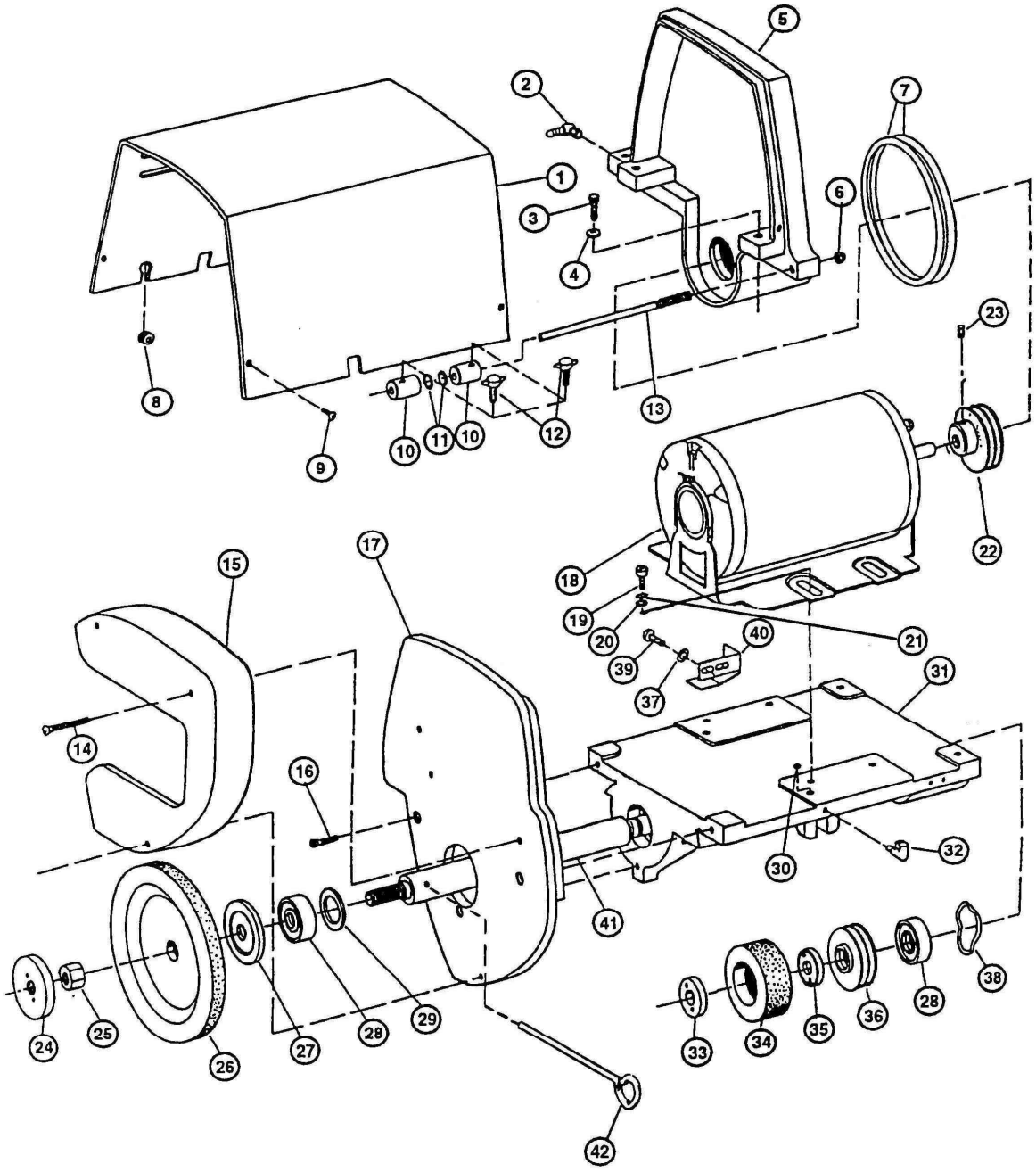
4. Spindle drive motor has two oiling points, one at each end. USE ONLY A FEW DROPS OF OIL in each (every 3 to 4 months).

CAUTION: Excessive oiling will damage the motor.

5. The crankshaft assembly, chuck motor and gear case are all lubricated for life and require no additional lubrication.

6. Surface grinding attachment requires only a few drops of oil placed on either side of the V-block on a weekly basis.

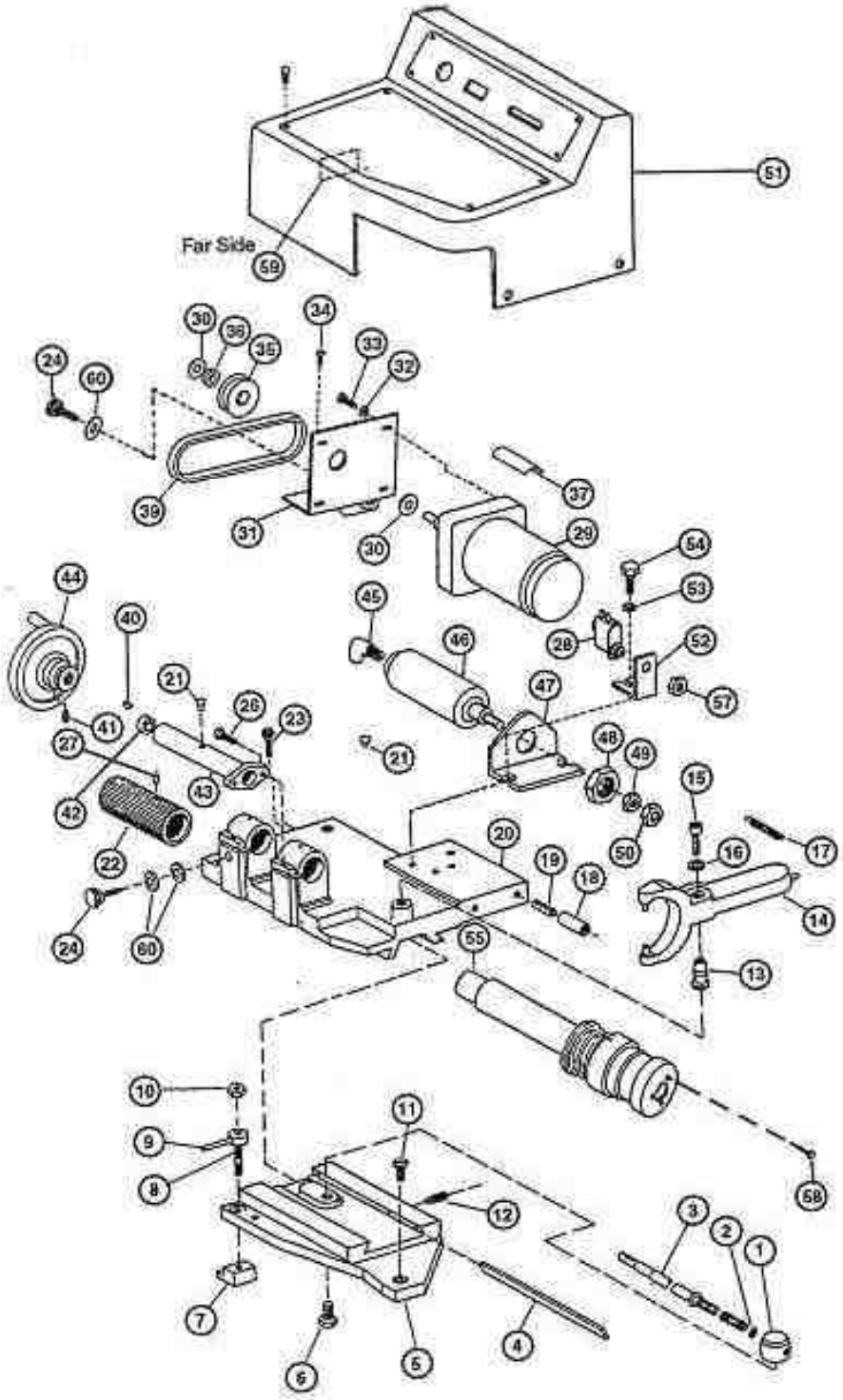
SPINDLE ASSEMBLY DRAWING
115V/230V-60Hz and 220V/50Hz



SPINDLE ASSEMBLY DRAWING
115V/230V-60Hz and 220V/50Hz

Item	Part Number	Description	Quantity
1.	012-0020-10	Spindle Motor Cover	1
2.	000-1567-10	90o Elbow 1/4 x 1/8 MPT	1
3.	000-0168-02	5/16-18 x 1 Soc. Hd. C.S.	2
4.	000-1145-02	1/4 Wr. Iron Washer	2
5.	012-3007-10	Motor Sheave Guard	1
6.	000-0150-08	5/16-18 Hex Cap Nut	1
7.	000-2303-62	O-Ring Belt - 60 Hz	2
OR 7.	000-2303-70	O-Ring Belt - 50Hz	2
8.	000-2700-24	3/8 ID Grommet	1
9.	000-0595-01	10-24 x 3/8 Button Hd. C.S.	4
10.	012-1092-20	Stop Collar	2
11.	000-2300-30	5/16 ID O-Ring	2
12.	060-1125-00	T-Bar Thumbscrew Assembly	2
13.	012-1092-30	Stop Rod	1
14.	000-0361-94	10-24 x 2 Pan Hd. M.S.	3
15.	012-0012-07	Wheel Guard Cover	1
16.	000-0123-47	1/4-20 x 3/4 Flat Hd. Soc. C.S.	3
17.	012-0036-00	Wheel Guard Plate	1
18.	001-1949-95	Motor 115/230-60/50-1	1
19.	000-0165-19	1/4-20 x 1/2 Soc. Hd. C.S	4
20.	000-1155-25	1/4 SAE Washer	4
21.	000-1170-48	1/4 Int. Lockwasher	4
22.*	012-1000-20	Motor Sheave 60Hz	4
22.*	012-1000-30	Motor Sheave 50Hz	1
23.	000-0485-24	1/4-20 x 3/8 Nyl. Soc. Cup S.S	1
24.	012-1004-00	Grinding Wheel Nut	1
25.	012-1003-00	Grinding Wheel Bushing	1
26.	010-0709-00	Grinding Wheel, General Purpose	1
27.	012-1005-07	Grinding Wheel Flange	1
28.	000-1605-12	Bearing	1
29.	000-2003-44	Gasket	2
30.	023-0201-90	Plug	1
31.	012-3004-00	Spindle Bearing Slide	2
32.	000-1900-20	1/4 Angle Oiler	1
33.	024-0646-03	Cut-off Grinding Wheel Nut	2
34.	010-0300-72	Cut-off Wheel	1
35.	013-0218-05	Spindle Pulley Nut	1
36.	012-1001-20	Spindle Sheave	1
37.	000-1170-30	#10 Int. Lockwasher	1
38.	000-1820-52	Wave Spring Washer	1
39.	000-0347-54	10-24 x 3/8 Rd. Hd. M.S.	2
40.	012-1072-20	Switchtrip Bracket	1
41.	012-1002-05	Spindle	1
42.	012-1205-00	Valve Stop Rod	1

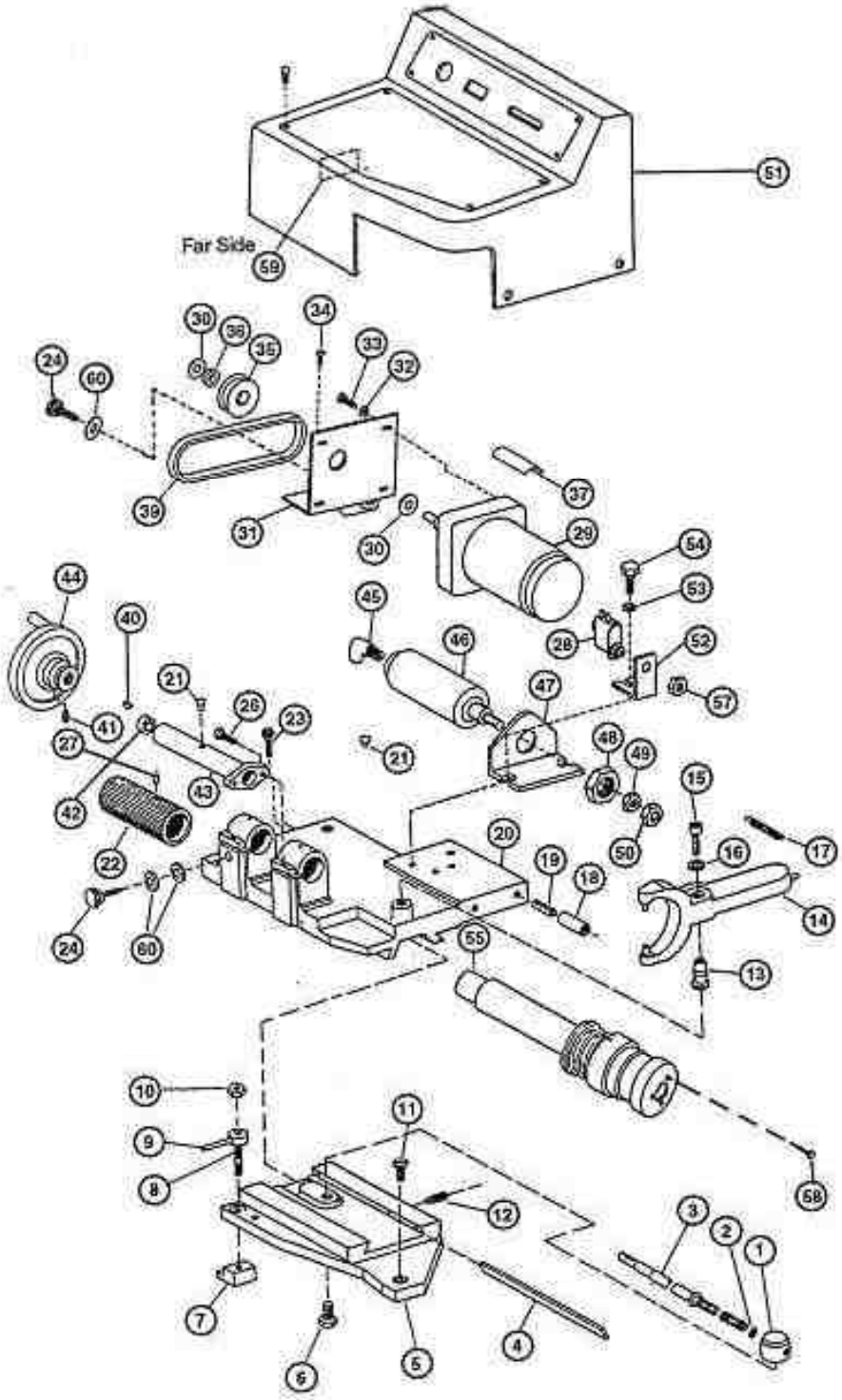
CHUCK BEARING SLIDE ASSEMBLY



CHUCK BEARING SLIDE ASSEMBLY
(Serial #12651 and Up)

Item	Part Number	Description	Quantity
1.	023-0306-08	Feedscrew Nut	1
2.	000-2300-57	O Ring	1
3.	012-1046-00	Chuck Bearing Feedscrew	1
4.	012-1051-10	Gib-New Style	1
5.	012-0011-10	Swivel Plate	1
6.	000-0116-57	5/16-18 x 1/2 Hex Hd. C.S.	1
7.	023-0328-05	Swivel Plate Clamp	1
8.	023-0329-02	Stud Clamp Screw	1
9.	023-0330-46	Clamp Screw Collar Assembly.	1
10.	000-1063-21	5/16-24 Hex Jam Nut	1
11.	013-0303-08	Swivel Plate Pivot	1
12.	000-0585-10	Spring Plunger	3
13.	012-1036-80	Chuck Yoke Pivot	1
14.	012-1035-50	Chuck Yoke Assembly	1
15.	000-0170-51	3/8-16 x 2 Soc. Hd. C.S.	1
16.	000-1150-37	5/16 Wr. Iron Washer	1
17.	000-1807-26	Chuck Yoke Return Spring	1
18.	003-0050-00	Cap	2
19.	000-7205-65	1/4 x 1-1/2 Roll Pin	2
20.	012-3012-00	Chuck Bearing Slide	1
21.	000-1900-12	1/4 Snap Lid Oiler	5
22.	012-1032-10	Chuck Handwheel	1
23.	000-0168-02	5/16-18 x 1 Soc. Hd. C.S.	2
24.	060-1102-50	thumbscrew Assembly	2
25.		No part designated	
26.	000-0171-24	1/4-20 x 7/8 Soc. Hd. C.S.	2
27.	000-0515-35	5/16-24 x 1/4 Br. Ft. SS	1
28.	000-1201-00	Switch	1
29.	001-1945-09	Gear Motor	1
30.	000-1452-03	Collar	1
31.	012-1044-00	Gear Motor Bracket	1
32.	000-1154-60	#10 SAE Washer	4
33.	000-0162-92	10-32 x 3/8 Soc. Hd. C.S.	4
34.	000-0592-24	1/4-20 x 1/2 Button Hd. C.S.	2
35.	000-1606-10	Gear Belt Pulley	1
36.	003-0031-67	Clutch	1
37.	000-6610-50	Chuck Adjustment Decal	1
39.	001-1899-90	Gear Belt	1
40.	000-7300-25	#304 Woodruff Key	1
41.	000-0515-27	1/4-20 x 3/8 Soc. Br. Ft. Pt. S.S.	1
42.	000-9200-96	Oillite Bushing	1
43.	012-1041-20	Feedscrew Brg. Housing	1
44.	012-1042-10	Feed Handwheel Assembly	1
45.	000-1599-48	Tube Elbow	1
46.	000-1566-40	Air Cylinder	1
47.	000-1566-36	Air Cylinder Bracket	1

CHUCK BEARING SLIDE ASSEMBLY

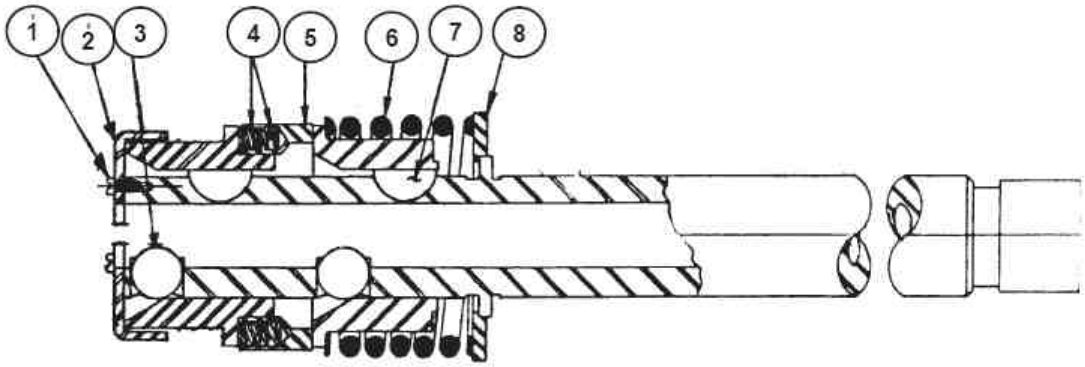


CHUCK BEARING SLIDE ASSEMBLY
(Serial #12651 and Up)

Item	Part Number	Description	Quantity
48.	000-1079-60	1-1/4-12 Hex Nut	1
49.	000-1070-18	1/2-20 Hex Jam Nut	1
50.	000-1035-51	1/2-20 Hex Full Nut	1
51.*	012-1045-60	Cover/Decals 60Hz	1
51.*	012-1045-50	Cover/Decals 50Hz	1
51.*	012-1044-60	Red Cover/Decals 60Hz	1
51.*	012-1044-50	Red Cover/Decals 50Hz	1
52.	012-1044-20	Limit Switch Bracket	1
53.	000-1145-02	1/4 Wr. Iron Washer	2
54.	000-0167-80	5/16-18 x 3/4 Soc. Hd. C.S.	2
55.	012-1575-00	Kit for 9/16 Chuck	1
56.**	013-0370-19	Valve Stop Assembly	1
57.	000-1100-30	15/32-32 Hex Nut	1
58.	000-0160-08	8-32 x 3/8 Soc. Hd. C.S.	3
59.*	000-6610-72	Cover Removal Decal 60Hz	1
59.*	000-6610-75	Cover Removal Decal 50Hz	1
60.	000-1155-25	1/4 SAE Washer	4
61.**	001-1945-13	Chuck Motor Nylon Gear	1
62.			
63.	000-4400-14	Rev. Handle	1
64.	000-6611-12	Decal	1
65.	000-1740-09	Felt Strip	1
66.	013-0370-19	Valve Stop	1
67.	003-0076-50	Controller Knob	1

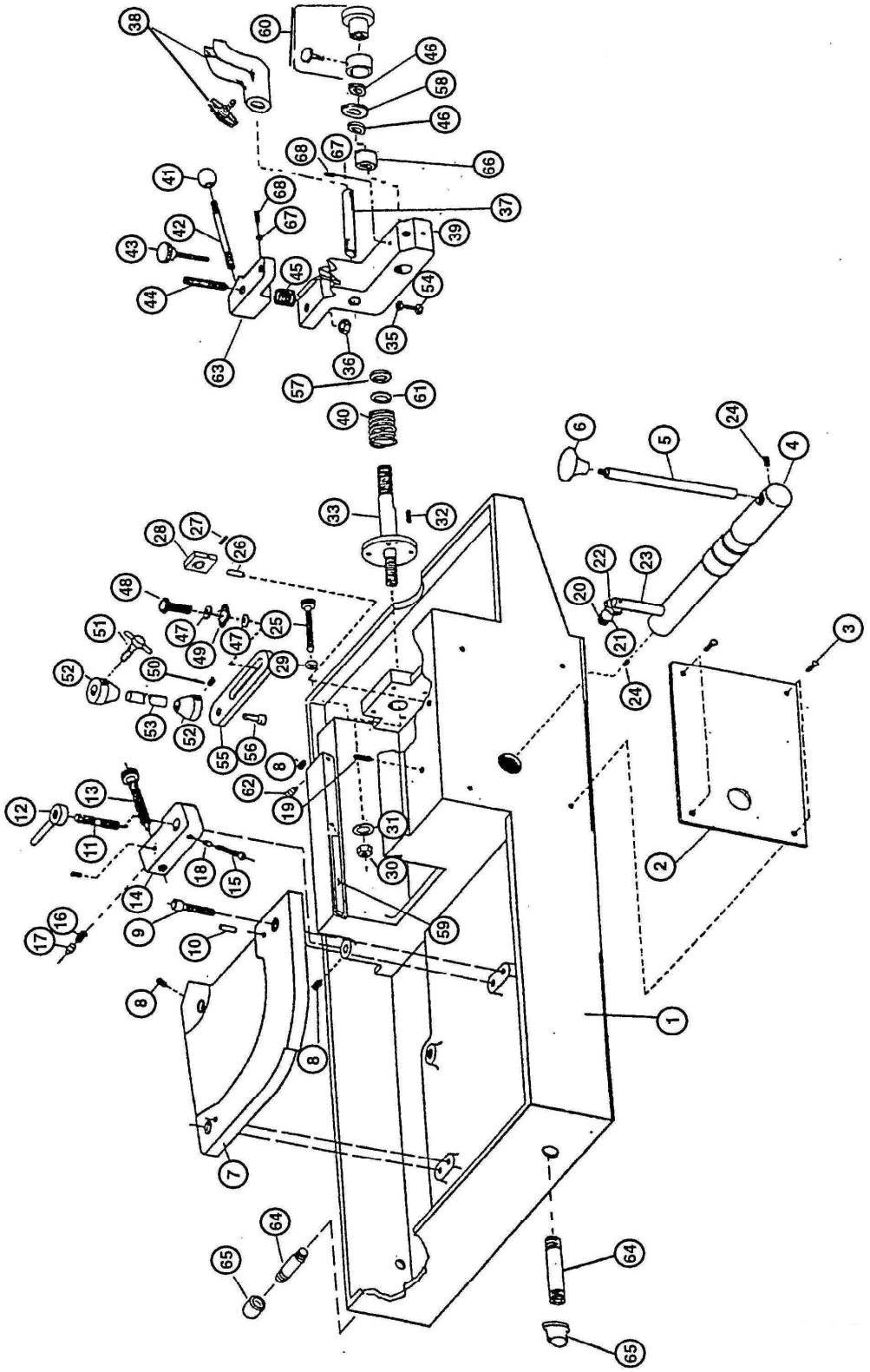
* See part description for part number that applies to your machine

** Not Shown



1.	000-0590-99	Special Machine Screw	3
2.	012-1040-22	Chuck Shaft End Cover	1
3.	010-2101-45	9/16” Steel Ball	6
4.	000-1800-92	Compression Spring	8
5.	012-1031-07	Loading Cup	1
6.	012-1034-17	Chuck Spring	1
7.	000-7300-41	#5 Woodruff Key	2
8.	012-1030-00	Thrust Spacer	1

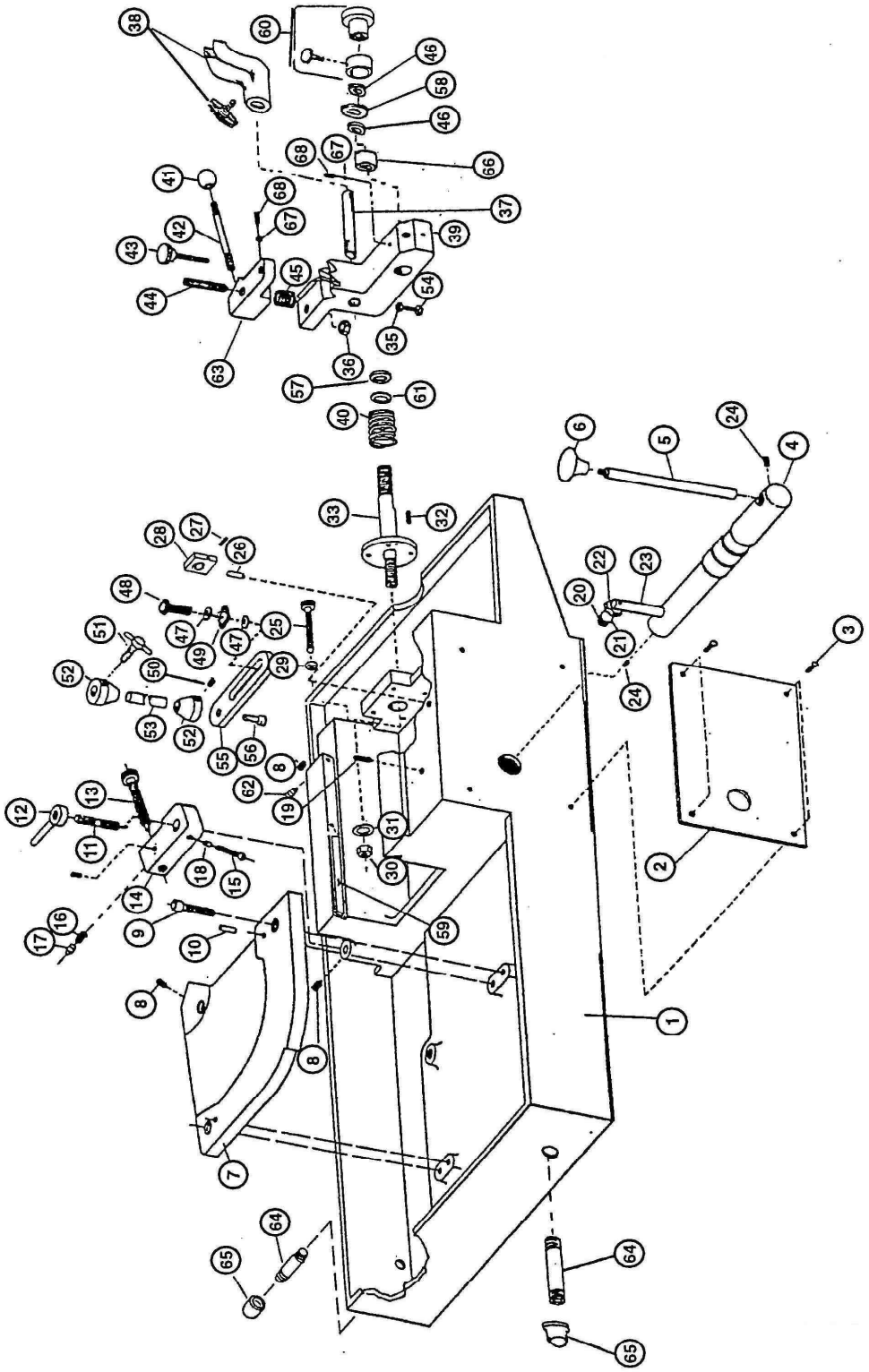
BASE ASSEMBLY



BASE ASSEMBLY

Item	Part Number	Description	Quantity
1.	012-3002-10	Base	1
2.	000-6610-23	Base Panel	1
3.	000-0597-06	6 x 5/16 U Drive Screw	4
4.	012-1021-05	Crankshaft Assembly	1
5.	012-1019-10	Traverse Handle	1
6.	004-0015-46	Oval Knob	1
7.	012-0038-03	Base Plate	1
8.	000-0515-00	1/4-20 x 1/4 Soc. Br. FL PT SS	3
9.	000-0170-19	3/8-16 x 3/4 Soc. Hd. C.S.	3
10.	000-7001-50	1/4 x 7/8 Dowel Pin	2
11.	023-0132-07	Diamond Bracket Lockscrew	1
12.	013-0133-14	Lockscrew Collar	1
13.	023-0129-44	Holder-Diamond Nib Assembly	1
14.	012-1006-20	Diamond Holder Bracket	1
15.	000-0213-85	1/4-20 x 1-1/4 Rd. Hd. MS	1
16.	000-1800-76	Compression Spring	1
17.	031-1118-03	Plug	1
18.	000-0500-16	1/4-20 x 1/4 Soc Ft. Pt. SS	1
19.	000-0566-18	1/4-20 x 1 Soc Cone Pt. SS	1
20.	000-0166-32	1/4-20 x 1-1/4 Soc. Hd. C.S.	1
21.	013-1002-09	5/8 Ball	1
22.	000-1020-08	1/4-20 Hex Full Nut	1
23.	013-1003-06	Crankshaft Arm	1
24.	000-0487-63	5/16-18 x 5/16 Soc. Cup SS	1
25.	025-0251-05	Stop Screw	1
26.	000-7000-37	1/4 x 1-1/4 Dowel Pin	1
27.	000-0485-18	1/4-20 x 1/4 Soc. Cup Pt. SS	1
28.	012-1092-40	Eye Slide	1
29.	000-1034-89	5/16-18 Hex Full Nut	1
30.	000-1035-35	1/2-13 Hex Full Nut	1
31.	000-1181-33	1/2 Med. Split Lockwasher	1
32.	000-0500-24	1/4-28 x 1/4 Soc. Ft. Pt. SS	3
33.	012-1066-22	V-block Pivot Shaft	1
34.	000-1540-75	1/2-14 Sq. Hd. Pipe Plug (Not Shown)	1
35.	000-1040-19	1/4-20 Hex Jam Nut	1
36.	000-1045-15	3/8-16 Hex Jam Nut	1
37.	025-0636-00	Valve Stop Rod (OPTIONAL)	1
38.	025-0635-03	Valve Stop Assembly (OPTIONAL)	1
39.	012-1009-16	V-block Assembly	1
39.*	012-0162-00	For Serial #4182 and Lower	1
40.	000-1808-23	Compression Spring	1
41.	000-4500-22	Knob-Ball	1
42.	012-1055-09	Clamp Lever Handle	1
43.	012-1039-30	Clamp Screw Assembly	1
44.	000-0491-23	3/8-16 x 2 Soc. Hd. Cup Pt SS	1
45.	000-1807-00	Compression Spring	1

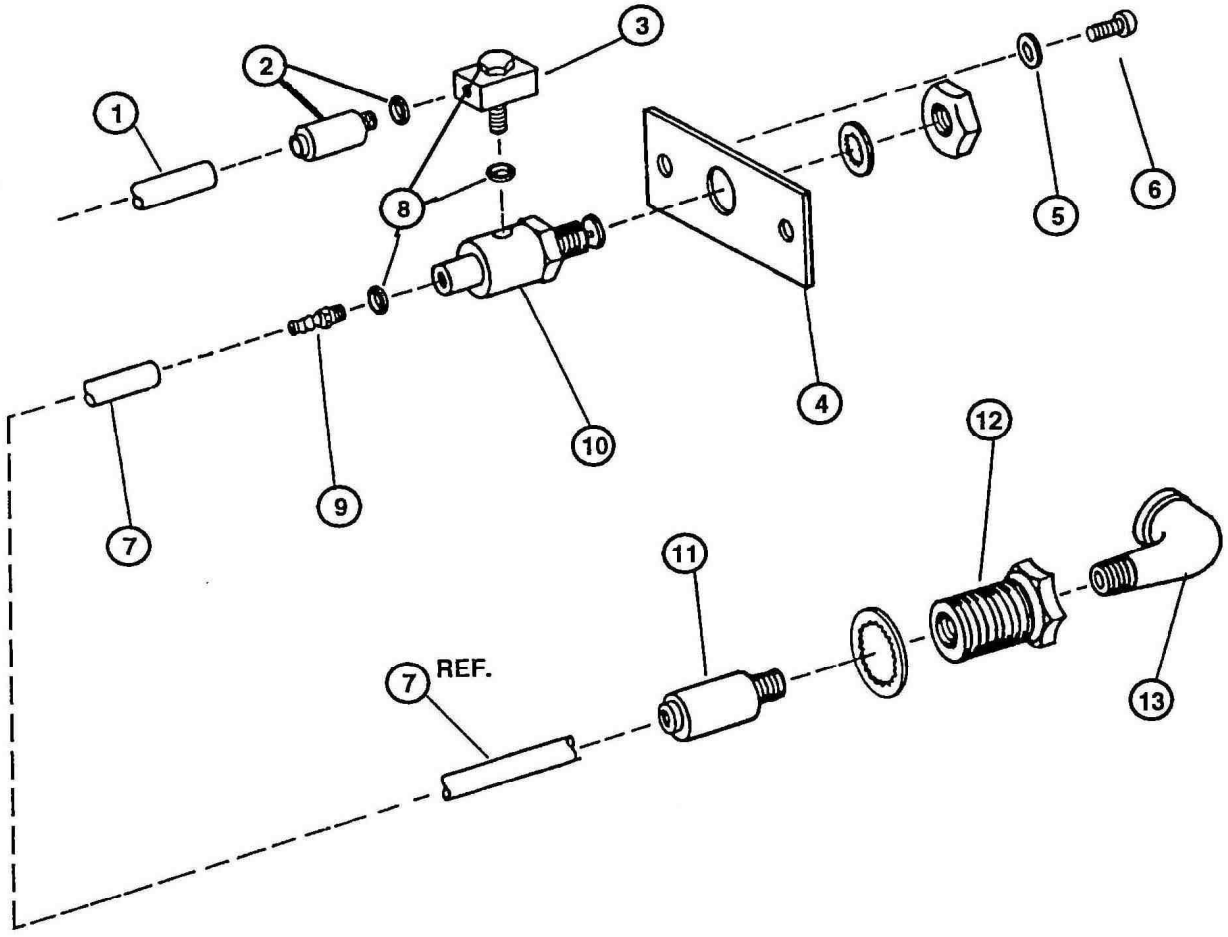
BASE ASSEMBLY



BASE ASSEMBLY (continued)

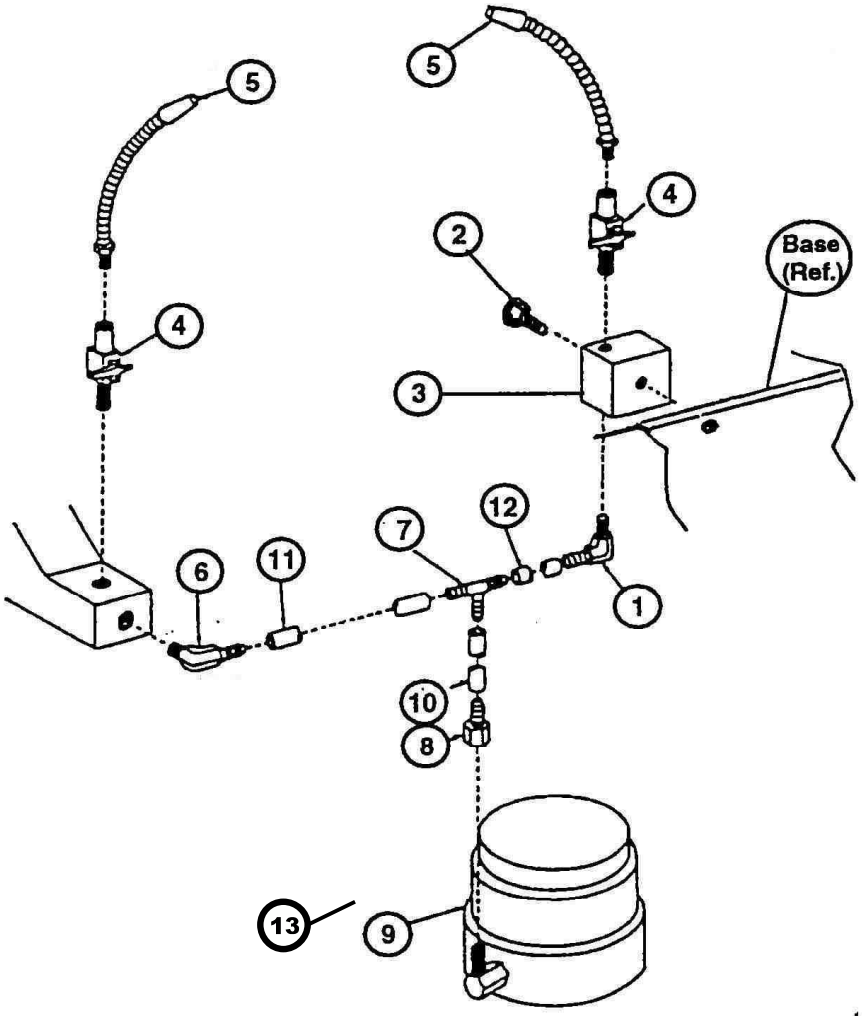
Item	Part Number	Description	Quantity
46.	000-1624-10	Thrust Washer	2
47.	000-1150-37	5/16 Wrought Iron Washer	2
48.	000-0105-53	3/16-18 x 1-1/4 Hex Head. C.S	1
49.	000-1183-22	3/8 Spring Washer	1
51.	060-1130-02	T-Bar thumbscrew Assembly	1
52.	015-0837-43	Rocker Arm Cone	2
53.	023-0836-04	Rocker Arm Attachment Post	1
54.	000-0100-65	1/4-20 x 1-1/4 Hex Hd. C.S.	1
55.	023-0835-07	Rocker Arm Attachment Base	1
56.	000-0167-64	5/16-18 x 1/2 Soc. Hd C.S.	1
57.	000-1158-00	1-1/8 x 3/4 x 3/16 Felt Washer	1
58.	000-1624-00	Thrust Needle Bearing	1
59.	012-1051-50	New Style Gib	1
60.	012-1064-08	Feednut Assembly English	1
61.	000-1142-12	3/4 Machine Bushing	1
62.	000-0488-70	5/16-18 x 1 Nyl Soc SS	3
63.	012-1007-01	Clamp Lever	1
64.	000-1502-74	1/2 x 3-1/2 Pipe Nipple TBE	2
65.	000-1540-83	1/2 Black Pipe Cup	2
66.	012-1066-80	Cup, Marker	1
67.	000-6400-26	Lockscrew Plug	2
68.	000-0486-40	1/4-20 x 1/4 Nyl Soc Cup SS	1
69.	000-0485-18	1/4-20 x 1/4 Soc Cup Pt SS	1
70.	011-1030-30	Coolant Splash Guard	1

AIR PLUMBING ASSEMBLY



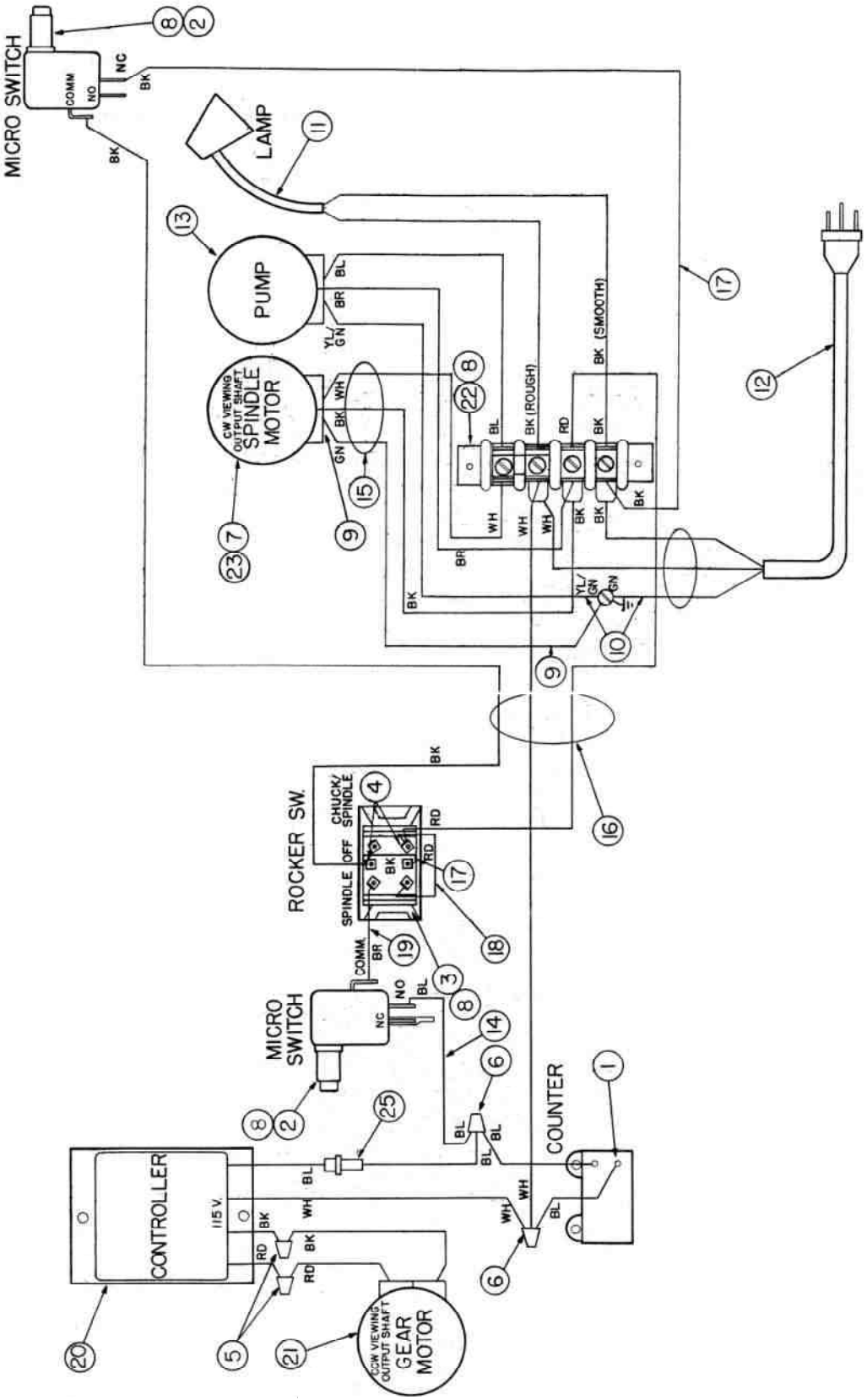
Item	Part Number	Description	Quantity
1.	003-0002-52	5/32 O.D. Tubing	4 Ft
2.	000-1598-90	10-32 Max 5/32 Str. Fitting	1
3.	000-1563-50	10-32 Univ. El Fitting	1
4.	012-1072-40	Air Switch Mounting Plate	1
5.	000-1170-48	1/4 Int. Lockwasher	2
6.	000-0213-77	1/4-20 x 3/8 Rd. Head MS	2
7.	003-0002-49	1/4 O.D. Tubing	1 Ft
8.	000-2005-73	Gasket	3
9.	000-1563-37	10-32 Max 1/4 Str. Fitting	1
10.	000-1563-29	3 Way Air Valve	1
11.	000-1599-25	1/4 x 1/4 Tube-In Str. Fitting	1
12.	000-1559-34	Bulkhead Fitting	1
13.	000-1530-28	1/4 x 90°Street Elbow	1

COOLANT PLUMBING ASSEMBLY



Item	Part Number	Description	Quantity
1.	000-1567-28	90° Elbow 1/4 Barb x 1/4 MPT	1
2.	000-0101-20	1/4-20 x 1-1/2 Hex Head. C.S.	1
3.	012-1045-10	Coolant Nozzle Mount	1
4.	000-1563-68	Plug Valve	2
5.	000-1550-10	Flex Nozzle	2
6.	000-1567-95	90° Elbow, 1/4 Barb x 1/8 MP Brass	1
7.	000-1551-10	Barbed Tee 1/4 ID Hose	1
8.	000-1560-34	1/4 Barb x 1/4 FPT Brass Fitting	1
9.*	000-1919-00	Pump 115-50/60-1	1
9.*	000-1919-04	Pump 220-50/60-1	1
10.	004-0018-57 per ft	1/4 ID x 1/16 Wall PVC Tube (2-1/2” Long)	1
11.	004-0018-57 per ft	1/4 ID x 1/16 Wall PVC Tube (10” Long)	1
12.	004-0018-57 per ft	1/4 ID x 1/16 Wall PVC Tube (15” Long)	1
13.	000-1556-00	Nylon Elbow	1

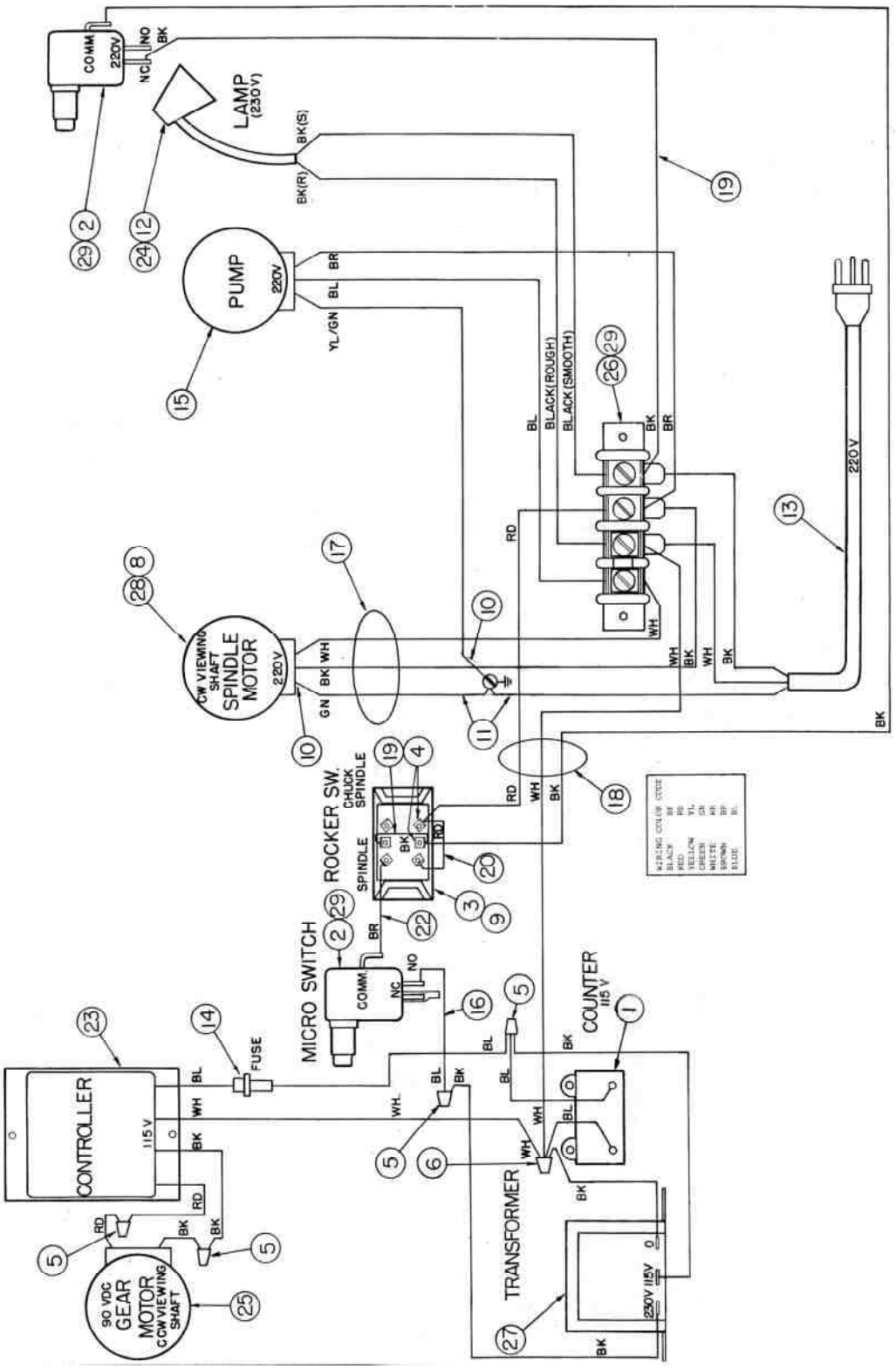
115V/60Hz/1Ph WIRING DIAGRAM



115V/60Hz/1Ph WIRING DIAGRAM
(Serial # 12651 and Up)

Item	Part Number	Description	Quantity
1.	000-1191-50	Counter, Valve	1
2.	000-1201-00	Switch, Bushing Mtg-SPDT	2
3.	000-1205-26	Switch, Rocker-DPDT	1
4.	000-1241-00	Term, QD (12-10) Ful. Ins. 1/4	2
5.	000-1241-41	Nut, Wire-72B (Blue)	2
6.	000-1241-50	Nut, Wire-73B (Orange)	2
7.	000-1242-49	Term, Female Flag 1/4	2
8.	000-1242-70	Term, FQ Disc (16-14GA) Ins-1/4	19
9.	000-1240-28	Term, Hook (16-14GA) #10	2
10.	000-1244-35	Term, Hook (12-10GA) #10	1
11.	000-1252-18	Lamp	1
12.	000-1261-01	Set, Cord 115V-16-3	1
13.	000-1919-00	Pump, 115V-50/60Hz. Ph	1
14.	000-2401-92	Wire, Blue 16GA 20” Lg.	2 Ft
15.	000-2403-38	Cord, 16-3SJO 28” Lg.	3 Ft
16.	000-2403-70	Cord, 16-4SJO 55” Lg.	5 Ft
17.	000-2410-08	Wire, Black-16GA 4” Lg.	2
18.	000-2402-20	Wire, Red 16GA 4” Lg.	1
19.	000-2420-63	Wire, Brown 16GA 20” Lg.	2 Ft
20.	000-6700-60	Controller, Speed-115V	1
21.	001-1945-09	Gearmotor, Pm-1/12Hp	1
22.	001-1945-10	Block, Term 4 Pole 1/4 Tabs	1
23.	004-0034-72	Motor, Spindle 115V-60Hz-1Ph	1
24.	012-1056-40	Fuse-AGC 6 Amp	1

220V/50Hz/1Ph WIRING DIAGRAM



220V/50Hz/1Ph WIRING DIAGRAM
(Serial # 12651 and Up)

Item	Part Number	Description	Quantity
1.	000-1191-50	Counter, Valve	1
2.	000-1201-02	SW, Bushing Mounting-SPDT	2
3.	000-1205-26	SW, Rocker-DPDT	1
4.	000-1241-00	Term, QD (12-10) 1/4 Full Ins.	2
5.	000-1241-41	Nut, Wire-72B (Blue)	4
6.	000-1241-50	Nut, Wire-72B (OR)	1
7.	000-1242-49	Term, Female Flag 1/4	2
8.	000-1242-70	Term, F Q Disc (16-14) Fully Ins 1/4	16
9.	000-1240-28	Term, Hook (16-14) #10	2
10.	000-1244-35	Term, Hook (12-10) #10	1
11.	000-1252-18	Lamp	1
12.	000-1261-28	Set, Cord 220V-16-3SJO	1
13.	000-1281-66	Fuse, AGC 6 Amp	1
14.	000-1919-04	Pump 220V-50/60Hz-1Ph	1
15.	000-2401-92	Wire, Blue 16GA 20” Lg.	2 Ft
16.	000-2403-38	Cord, 16-3SJO 28” Lg.	3 Ft
17.	000-2403-70	Cord, 16-4SJO 55” Lg.	5 Ft
18.	000-2410-08	Wire, Black 16GA 4” Lg.	2
19.	000-2402-20	Wire, Red 16GA 4” Lg.	1 Ft
20.	000-2420-20	Wire, Brown 14GA 20” Lg.	2 Ft
21.	000-6700-60	Controller, Speed 115V	1
22.	001-1601-76	Bulb, Light 60W-220V	1
23.	001-1945-09	Gear Motor, PM 1/12 HP	1
24.	004-0034-72	Block, Term 4P-1.4 Tabs	1
25.	000-1274-90	Transformer	1
26.	012-1056-60	Motor, Spindle 220V-50Hz-1Ph	1
27.	000-1242-70	Term, Q Disc (16-14) Fully Ins. 1/4	3

VALVE REFACING SUPPLIES KWIK-WAY SIX BALL CHUCKS

The Key to the KWIK-WAY "Centerline" Chuck System

Every ***KWIK-WAY*** chuck features two sets of 3 hardened steel balls - one set in the front of the chuck and the other set in the rear of the chuck - that grasp the valve on the portion of the stem that travels within the valve guide. It automatically aligns the valve stem, allowing the valve face to be refaced concentric to the valve stem.

This precision six-ball self-centering chuck requires no stem chamfering or butt grinding prior to refacing.

The ***KWIK-WAY*** Centerline System assures alignment and accuracy, providing precision valve refacing.

VALVE REFACER CHUCKS

MODEL	VALVE STEM DIAMTER CAPACITY	ITEM NUMBER
SVS II-D	0.157" – 0.5625" 4.0 mm – 14.3 mm	012-1575-00
SVS II-D	7/16" – 13/16" 11.11 mm – 20.6 mm	012-1025-21*

* Requires 012-1035-21 fork

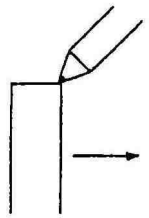
In order for an existing machine in the field, the chuck cover will require modification to fit new chuck and fork.

VALVE REFACER DIAMOND TOOLS

Replacement tools for dressing either valve or butt wheels on valve refacers. Quality oversized diamond tips last longer. Produce different wheel surfaces by varying the amount and speed of stock removal.

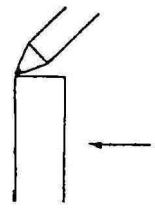
SHOP TIP!

A.



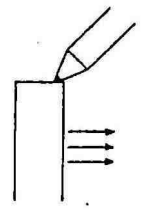
A. Feed diamond up to contact, then traverse from left to right. This will open the abrasive, causing a faster stock removal on valve.

B.



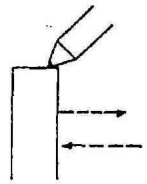
B. Feed diamond up to contact, then traverse from right to left. This will close the abrasive, causing a smoother finish but a slower stock removal and a faster load up of wheel.

C.



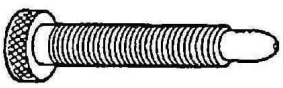
C. A faster traverse into the diamond point will cause the wheel to act softer. Recommended for hard alloy valves.

D.



D. A slower traverse into the diamond point and then a sweep back with **NO** additional feed up will cause the wheel to act hard. This is recommended for polished surface finishes.

MODEL	DESCRIPTION	ITEM
SVS II-D Size: 7/16” Threads: 20 x 1-7/8”	Valve Wheel Diamond	023-0129-44
SVS II-D Size: 5/16” No Thread	Butt Wheel Diamond	024-0131-11



Valve Wheel Diamond

Butt Wheel Diamond

ACCESSORIES FOR SVS II-D VALVE REFACER

DESCRIPTION	ASSEMBLY	ITEM
Valve Refacer Cabinet		012-0039-00
Small Valve Collet	4.0 mm – 6.0 mm	010-1005-00

Heavy-duty unit with spacious cabinet and valve storage rack mounted on side. Holds all your valve grinding supplies (37" wide x 22" deep x 36" high) cabinet for all **KWIK-WAY** bench top valve refacers.

Permits grinding smaller valves without changing chucks. Collet fits into chuck and holds valves with small stem diameters.

Includes the following collets:

PART NUMBER	COLLET SIZE (MM)	DECIMAL
010-1005-21	4.00 mm	0.156
010-1005-23	5.00 mm	0.203
010-1005-24	5.50 mm	0.219
010-1005-25	6.50 mm	0.250
OPTIONAL		
010-1005-22	4.50 mm	0.172
010-1105-25	6.00 mm	0.234

Valve Refacer Cabinet

Small Valve Collet Cabinet

VALVE REFACING WHEELS
FOR USE ON KWIK-WAY VALVE REFACERS

010-0710-08	Finishing
010-0709-00	General Purpose
010-0708-00	Titanium
010-0707-50	Stellite/Hard Alloy

STEM WHEELS
FOR USE ON KWIK WAY VALVE REFACERS SVS II-D 3” (76 mm)

010-0300-72	For General Purpose Stem Grinding
010-0300-13	For Rocker Arm Grinding

VALVE GRINDING OILS

Proper Lubrication is necessary for quality valve finishes, abrasive performance and machine life

ITEM	DESCRIPTION
000-2112-73	1 Gallon (3.6L) Valve Grinding Oil
000-2111-92	5 Gallon (18L) Valve Grinding Oil

TROUBLE SHOOTING GUIDE

CONDITIONS	POSSIBLE CAUSE
1. Spindle Motor and/or chuck motor will not operate	1. Line fuse is open. Check fuse/breaker. 2. Power cord un-plugged 3. Loose or broken wire(s).
2. Spindle lacks power.	1. Loose “O” Ring belts. Replace. 2. Line voltage incorrect for motor, check motor input tag current supply.
3. Spindle motor will not start when the main switch is turned on	1. Spindle slide in far right location. **NOTE:** This machine is equipped with an automatic limit switch when the spindle slide is on the far right location. 2. Limit switch is out of adjustment.
4. Wheel face rough after facing.	1. Feeding the wheel across the diamond too rapidly. 2. Broken diamond. Replace. 3. Diamond tool holder not locked tight. 4. Blunt diamond. Replace.
5. Poor finish on valves	1. Check wheel dress. 2. Chuck out of adjustment. 3. Slide out of adjustment. 4. Spindle bearings worn. **NOTE:** See page 15 on varying wheel performance.

Kwik-Way Products Inc.
500 57th St., Marion, IA 52302 USA
319/377-9421
319/377-9101 (FAX)
800/553-5953
www.kwik-way.com
service@kwik-way.com

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