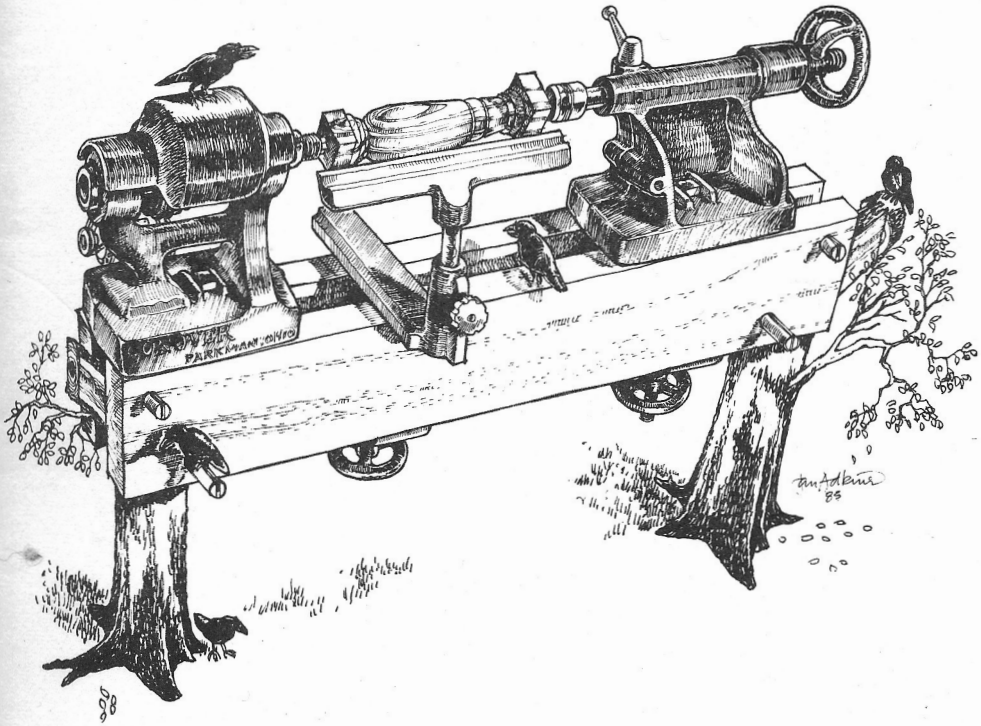
Instruction Manual
Conover 16"
Lathe Set



CONOVER

WOODCRAFT SPECIALTIES INC

18125 Madison Rd., Parkman, OH 44080 Phone 216/548-3481

Instruction Manual
Conover 16″
Lathe Set

Congratulations on your purchase of a Conover 16" Lathe Set. Your Lathe Set has been manufactured to exacting standards using the finest of materials. With reasonable care it should give generations of service. We ask that you take a few minutes to peruse this manual so that your Lathe Set can have a good start in life and you will be able to nurture a tradition of fine care.

Rick Pirko (seated) led the design team that developed the Conover 16" Lathe assisted by Ernie Conover Jr. (vacationing), Ernie Conover III (middle) and professional wood turner David Hout (left).

Receipt Inspection

Your Lathe Set has been shipped in a strong wooden crate designed to take the rigors of our modern transportation system. Inspect the crate carefully upon arrival and do not sign the bill of lading unless it is intact. If there is external damage evident, open the crate in front of the driver and note any damage on the bill of lading. You have seven to ten days to file a formal damage claim and you should save all packing materials. It is best to get a damage inspector to view the machine immediately if damage is extensive. Freight companies can be cantankerous to work with so a reasonable, but very firm, attitude is necessary.

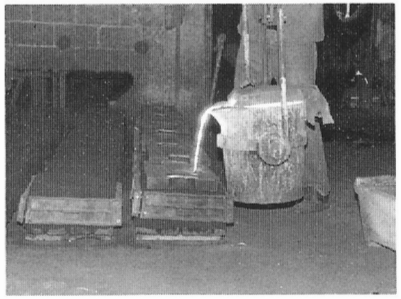
Unpacking

Remove the top of the crate by unscrewing the drywall screws with a phillips head screw driver. First remove all of the accessories. The headstock and tail stock are bolted to the bottom of the crate. By undoing the nuts inside the crate they can be lifted out. The bolts are strictly for packing purposes and can be relegated to a miscellaneous nut and bolt bin.

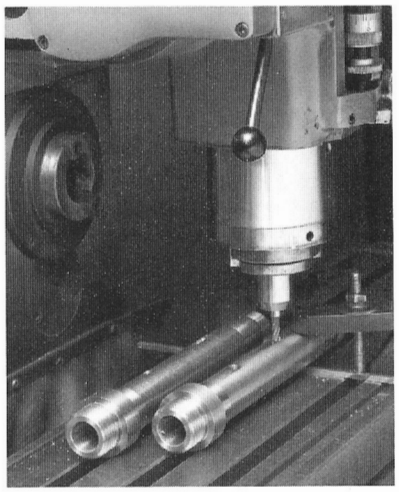
The unpainted metal parts have been given a light coat of cosmoline to prevent rust. The first order of business is to remove this protective coating using a small amount of kerosene or safety solvent and a paint brush. Wash all of the bright metal parts down with solvent and wipe everything dry with a clean rag. It is important to use common sense with cleaning solvent. It goes without saying that it should be used in an adequately ventilated area away from open flames. Be careful not to use excessive solvent around the headstock spindle at either side of the drive pulley. Set the Lathe Set aside on the workbench or in your living room if you prefer, to admire while you go about the next order of business—building a bed.

Quality Craftsmanship

Drag of a flask coming off the squeeze machine and about to go to the foundry floor.



Pour in progress hot iron at approximately 2800 degrees F; flows from the ladle into a rammed up flask.



Milling of keyway in our robust headstock spindle.

All parts are precision machined to exacting standards.

Conover Lathes are hand assembled in small lots. Frequent quality checks during the manufacturing process combined with a dynamic "run in" insure that your lathe is tuned to perfection.

Building A Bed

The bed building project allows you to put a special signature on your lathe, in that you can say a lot about your ability and taste as a woodworker. The project can be as simple or as difficult as you want to make it, however, a little time spent now on detail will pay great dividends later. It is also important to consider the type of turning you will be doing. You may even want to build two beds for different types of turning. If you're a bowl turner you might want to build a very short gap bed lathe, while a spindle turner will build an entirely different bed, and finally someone who does a lot of faceplate work over the bed may want to laminate additional width to the front bed rail in this area to add further tool post support.

The only important factor in building a bed is that the two bed rails be made from sound straight timbers that are free of cup and wind. They should measure between 1¾" to 2" thick and 5¾" to 6¼" wide. The reader will be quick to notice that this allows the machine to mount on standard lumber yard 2x6's which measure out at approximately 1¾" by 5¾". This material will produce a very serviceable lathe bed and is especially useful if you have to put a bed together somewhere on sight quickly and want to discard it once the project is finished. A more satisfactory bed for long term use is produced by finding suitable hardwood timbers which are milled to a slightly greater thickness of 1⅞" to 2". A material which we have found particularly useful in the building of beds is high quality void free plywood. We are partial to so called "Baltic Birch" which is made in the Soviet Union. It is sold in five foot square sheets and is readily available in ¾" thickness of 13 plys of pure birch. By ripping this into 6" wide strips and laminating three pieces together a very satisfactory 2" wide bed plank is obtained. Hand planing the tops and bottoms to trueness makes for a very accurate surface. A long bed joiner, if available, is also a good way to accomplish this task. By staggering the sheets in the lamination stack a bed of any length can be obtained in multiples of five feet. The important thing to remember is not to have any two joints in a lamination stack opposite each other.

The distance between the bed rails is quite arbitrary. Most turners will find placing the bed rails the exact distance of the key ways, which is 1½", will obtain the best results. Placing the rails further apart at 2" or 2¼" is no liability and actually has some advantage. Although the user must remember to pull the tail stock to the front edge of the bed during normal use, it does mean that he can offset the tail stock slightly for turning tapers.

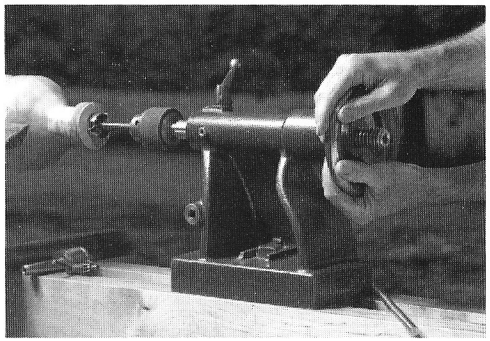
See Bed Diagram page 15

Use of plywood in the fabrication of the base of the bed is also highly recommended. Incorporate plenty of triangular cross bracing in your design as a lathe bed cannot be too rigid. Also incorporating box ends into the base that can be filled with sand offers many advantages. The sand lends weight to the bed section and absorbs vibration well. It is not recommended that you anchor the bed to the floor but rather set it on rubber pads. The idea is to absorb vibration and not transmit it. The height at which you build your bed is also completely arbitrary and based on physique and taste. This is one of the advantages of a wood bed in that it can be custom tailored to the user.

All this leads to the fact that although we have included a set of plans for bed construction in this manual, almost nothing in these plans should be taken as hard and fast, and experimentation and change is encouraged. Although wood beds wore for centuries and can easily be re-trued with simple hand planing, those used to the twentieth centuries' space age materials may wish to add wear strips to the tops and bottoms of the bed. Wear resistant ways can be created by capping the top and the bottom of the bed rails with plastic laminates, brass or steel strips. It is suggested that these materials be kept fairly thin, however, or the shock absorbing characteristics of the wood timbers will be lost. In no case should the bed be built from angle or channel iron as this material has a poor modulus of vibration and transmits energy like crazy. Brass or steel plates no thicker than 1/16 of an inch can provide wear resistance without completely losing the dampening effect of the wood. Remember, wood has worked well on its own for centuries and will give you years of hard service.

Now that I have the bed built and my lathe is set up I guess it's time to think about a building.

Setting Up The Conover 16" Lathe Set



Powerful action of heavy cast iron hand wheel and Acme threads, combined with 4½" ram travel allows deep drilling and secure holding with plenty of tool rest clearance. Clever design allows "gun" drilling of super long holes with shell augers inserted through the spindle.

Placement of the Lathe Set on the bed is simplicity in itself. The motor feet should be mounted with the four screws provided. Mount the motor feet at the headstock end of the bed flush with the top of the back bed rail and with the flanges turned to the outside. Mount your motor to the motor rail and install it in the motor feet with the two pins provided. Now mount the headstock on the bed and line the headstock pulley set up with the motor pulley. Secure the headstock with the ⅝-11x9" bolt, cast washer and square nut provided. The square nut is held captive in the cast flanges in the base of the headstock casting. Be sure and pull the headstock to the front edge of the bed during final tightening so that it will line up with the tail stock. Next, mount the tail stock by dropping the ⅝-11 bolt through the cored hold in the base of the tail stock casting and place it upon the bed. Secure it with the cast washer and hand wheel provided. Secure the tool post with the similar ⅝-11x10" bolt, cast washer and hand wheel provided. Once adjusted to the proper length the tool post can be quickly removed and replaced on the bed by simply pulling it directly forward and dropping the bolt and cast washer out through the bottom of the bed rails. Reversing the process replaces it quickly. This allows the user to safely remove the tool post and tool rest during sanding and auxiliary operations.

Rubbing candle wax on the bed ways from the front edge of the headstock to the end of the bed will greatly facilitate smooth operation. This should be done to the top and bottom rails. Also, movement

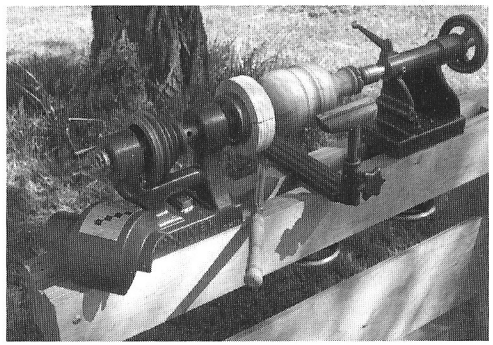
of the tail stock and tool rest will be smoother if two hand operation is used. Place one hand on the tail stock or tool post and the other hand on the hand wheel and move them in parallel motions. This will prevent the cast washer from camming backwards and binding movement.

Use Of The Conover Lathe

The writer would like to preface this section with a note about speed. The Conover Lathe Set is capable of fifteen speeds with four easily adjustable principle speeds of 600, 1100, 1725 and 2600 rpms. The handy chart on the belt cover, which also includes the serial number, is a self-explanatory quick reference to speed. While plenty of power is desirable in a lathe, many users try to use excessive speed to replace skill and sharp tools. Excessive speed is not necessary in wood turning and sharp tools properly presented get the job done right. The higher speeds above 1800 should never be used for actually turning and are only designed for sanding.

Particular care should be taken in the initial roughing out stages of a billet or blank. Since the work is, almost without exception, out of round and out of balance at this point speed should be used very cautiously. The low 600 rpm speed is just the ticket for bringing work into round. It will accomplish this task safely and with a minimum of effort. If you have problems with stalling your lathe constantly during the roughing stage put a more powerful motor on it, but do not use higher speed. Once the work is brought into round it can safely be stepped up to the 1100 or 1725 speed for finish turning and the speed used depends a lot on the diameter of the work.

I WANT TO EMPHASIZE THAT A FREQUENT LATHE ACCIDENT IS BILLETS AND BLANKS FLYING OUT OF THE LATHE DURING THE INITIAL ROUGHING PROCESS DUE TO BEING STARTED AT HIGH SPEEDS. THE FIRST THING YOU SHOULD TRAIN YOURSELF TO DO WHEN MOUNTING SOMETHING IN THE LATHE IS TO SET THE LATHE AT THE LOWEST POSSIBLE SPEED.



Use of the tail stock during some face plate turning can provide extra security and reduce chatter.

Proper Mounting Of Morse Tapers

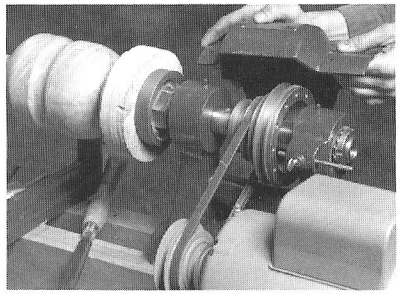
The Morse taper is an American innovation which dates from the time of the industrial revolution. It is still used commonly in machinery produced worldwide and is a sure, trouble free method of mounting accessories in machine spindles. One of the most frequent causes of injuring, or "bugging" a Morse taper socket is dirt. The user should form the habit of cleaning the Morse taper socket before mounting of a taper device. This is easily and best accomplished by simply wiping the socket out with your finger, but ensure that the machine is turned off. Likewise, the Morse taper itself should be cleaned before inserting in the socket. Again, simply wiping with the hand is the simpliest and quickest method. This alone can do more to ensure long life of taper sockets than any other factor.

A Morse taper should never be pounded into the socket. Spur centers should always be driven into the work with a soft faced mallet and then mounted in the taper socket. It is never necessary to pound a Morse taper to have it hold. If it does not hold, there is either dirt in the socket or the taper or the socket is bugged. All that is necessary is to align the taper in the socket and drive it home with a snap of the wrist. With a little practice this becomes second nature. The socket should be relatively dry and free from oil. While light oil will not bother it particularly, grease and heavy oils can cause slipping and collect dirt.

To remove a Morse taper simply insert the ⅜" diameter knockout bar through the back of the spindle and drive it out with a snap of the wrist—the reverse of the installation process. Have your other hand ready to catch the taper so it does not fall on the floor.

If the Morse taper itself becomes scored or bugged it should be dressed with an oil stone and fine emery cloth. Likewise, a lightly bugged Morse taper socket can be dressed with a fine emery cloth on a piece of dowel. Cut a slot across the piece of dowel, wrap the emery paper around it and work the bug out. In the headstock this can be done by actually powering up the spindle. In the tail stock the dowel will either have to be turned by an electric drill or by hand. Just remember not to work on any one spot in the taper too long so that the integrity of the taper is maintained. Finally, if a socket becomes badly bugged we can usually correct the problem by re-reaming it. Simply return the offending spindle to us with a note detailing the problem. Usually about twenty dollars will re-ream the socket. We will appraise the situation and contact you before we start work.

Warm Up



Sturdy indexing mechanism allows dividing to 12 positions. 24 positions can be supplied at a nominal extra charge. Four principal speeds of 600, 1100, 1725, and 2600 rpm are quickly obtained. By consulting the handy speed chart on the belt cover and sliding the headstock fifteen speeds are available.

Although not absolutely necessary, it is always best to run your lathe at idle speed of 600 rpm for three to five minutes before starting work. This allows the bearings to warm up, the grease to form a proper lubrication film and the preload to become correct. This is especially important in cold weather when the machine is quite cold.

Mounting The Work

Mounting of work for spindle turning is simple and straight forward. Most spindle turning is done with a combination of a spur center in the headstock and a cup center in the tail stock. The cup center can take two forms: either a dead center or a live center. The live center offers many advantages in that less power is necessary to turn the work and the center never overheats or burns. When using a dead center remember to lubricate the end of the wood with a little cup grease before mounting.

When mounting the spur center it is best to remove it first from the lathe, and drive it into the work with a soft faced hammer. Never drive work into the center while it is mounted in the lathe as this can injure the Morse taper socket. Once the work is marked to the center, remount the spur center in the lathe and align the wood with the marks. Position and secure the tail stock appropriately and force the cup center into the center of the billet with the tail stock ram. Lock the tail stock ram with the locking lever. The tail stock ram will probably have to be tightened several times during the turning process because of the spur center digging deeper into the work during the shock of roughing. Be sure to loosen the locking lever before applying additional pressure to the work.

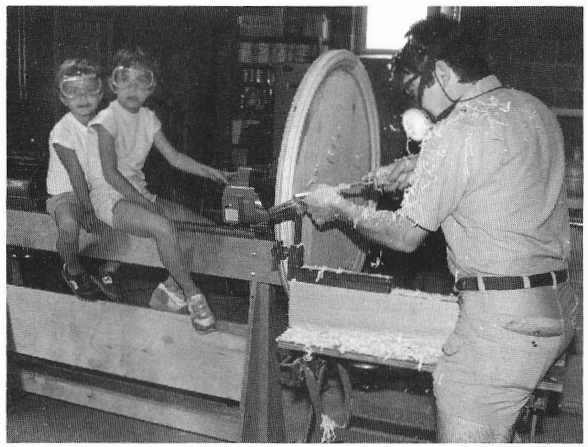
Position the tool post and tool rest to suit your taste and turn the lathe over once or twice by hand to insure that a corner of the billet will not hit the tool rest. Having previously switched the lathe to the lowest possible speed of 600 rpms, switch on the lathe and commence work.

Face Plate Turning

Another frequent method of mounting work in the lathe, especially for the turning of bowls and vessels, is a face plate. Great caution should be exercised in the mounting of work on face plates as the sheer weight of large bowl blanks make their leaving the lathe a dangerous proposition. Use of high quality wood screws with sufficient length to properly secure the work is imperative. Use of drywall screws is not recommended because they lack toughness due to being heat treated. Although they are jim-dandy for drywall installation they are poor for face plate work because they are prone to snapping under shock loads. Brass screws are excellent as long as they are big enough for the load on the face plate. They tend to damage tools less when hit. Bandsawing billets to as perfect a circle as possible speeds up the roughing out process considerably and promotes safety in that the load is much better balanced to start with.

Do not use the indexing mechanism as a spindle lock for face plate installation and removal. Lock the spindle by removing the belt cover and inserting the ⅜" diameter knockout bar through the cross hole in the spindle just in front of the pulley.

If you equip your lathe with a reversing switch be most careful of heavily laden face plates unscrewing during reverse operations. Finally, if you turn large diameter objects outboard you may have to slow your lathe down to less than 600 rpms. This can be accomplished by installing a jack shaft between the motor and the headstock or by installing an 1100 rpm motor.



Of course our lathe can turn outboard! Kids replace sand used in their sand box as we turn a 36" dia. medallion for our dining room ceiling.

Other Methods of Mounting

Screw Chuck

Another handy method of mounting small work such as chess pieces and miniature work is with a screw center. This is simply a wood screw mounted on a taper backed plate. A hole is drilled in the work and it is simply turned onto the wood screw. For small work this is ample to hold the work and ensure centering with repeated mounting and un-mounting.

Three Jaw And Collet Chucks

Another useful holding device is a three jaw scroll chuck. The three jaws move in conjunction with one another and perfectly center work repeatedly within .002-.003". By using two different sets of jaws supplied, both inside and outside holds can be facilitated.

Finally, there is a useful array of collet chucks available today. The user should consult the collet manufacturers instruction for proper use of these devices. When ordering be sure to specify 1½"—8 tpi backing.

Full Length Tool Rest

The Full Length Tool Rest kit allows mounting of a user fabricated tool rest of almost unlimited length. Mount the right angle pin on the tail stock by screwing it into the tapped hole in the boss at the front of the tail stock and locking it with the nut. Mount the stepped pin in the tool post. Fabricate a tool rest of the desired shape and length and drill ½" holes in the bottom edge to facilitate mounting on the stepped pin and right angle pin. Adjust the height by raising and lowering the stepped pin in the tool post and by raising and lowering of the collar on the right angle pin.

It is suggested that the user use a hardwood such as hard maple to fabricate the tool rest and that holes be drilled at frequent intervals such as every six inches. This way a long tool rest can be fabricated and the excess can hang out past the tail stock. It is also useful to face the top edge of the wood tool rest with a piece of steel or brass to add rigidity and reduce wear.

Simple scrape duplication can be accomplished by cutting a pattern of the shape in light plywood and pinning or screwing it at right angles to the top of the rest. By clamping a pin to a scraping tool the pattern can be followed.

Maintenance

Corrosion Prevention And Lubrication

Corrosion is one of the most frequent and chronic problems in lathes. Fine wood dust is a fantastic degreasing agent and constantly removes oil from all surfaces. Likewise, green wood is often turned and sap rusts things in short order.

Your Conover Lathe Set, wherever possible, has been painted with a heavy duty machinery enamel. All painted surfaces need only be wiped down with a rag occasionally for cosmetics. One of the best treatments for bright metal surfaces is paste wax. Use paste furniture wax and not automotive cleaning type waxes. Simply apply a thin film of wax with a soft rag. This should always be done after turning green wood. Applying candle wax to the threads of the ⅝—11 hold down bolts promotes free travel of the hand wheels.

The acme threads in the tail stock spindle should be lubricated with light machine oil through the oil hole just ahead of the hand wheel. Also applying a few drops of oil to the outside of the tail stock spindle just behind the Morse taper socket and the acme threads ensures that it slides well. Thirty weight non-detergent motor oil is fine for the purposes. The acme threads should be cleaned off with a rag periodically to prevent wood dust build-up. Any turning session should end with a wiping down of the spindle threads and re-oiling of the spindle.

The Timken tapered roller bearings are lubricated and sealed at the factory and should give long service without re-packing. A good rule of thumb is to re-pack the bearings when the belt wears out. Since re-packing is more a factor of the amount of use the lathe receives and not time, belt wear is a good indication of service. This makes double sense in that the headstock spindle has to be removed to replace the belt anyway.

Tool Rest Care

The tool rest fits into the triangular cored hole in the tool post. By tightening the star knob the rest is forced against the two sides of the triangle and held secure. The star knob is fitted with a brass screw thread so as to hold fast without injuring the tool rest.

Occasionally the tool rest may need redressing due to wear. This is best accomplished with a single cut mill file. By pulling the file sideways along the tool rest (draw filing) it can be easily redressed.

Care of Centers

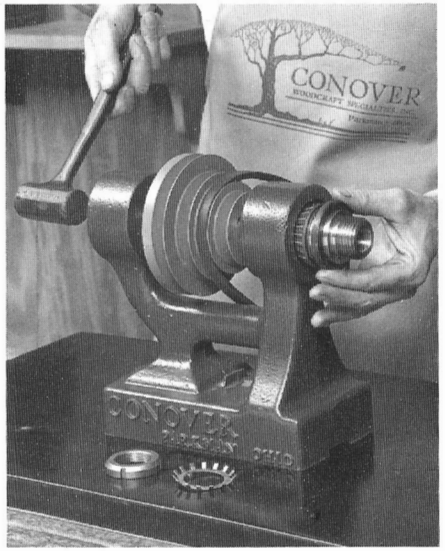
Conover spur, cup, and live centers are designed for severe service with a minimum of care. Corrosion is a constant problem, especially when turning green woods. Wiping with light oil after use is a must. The center point of our spur center is removable. This allows easy sharpening and adjustment to suit the users needs. The best way to sharpen the point is to mount it in a drill chuck in the headstock and hold a single cut file against it.

All Conover centers are through drilled a minimum of 3/16" to allow easy point removal with the ⅛" knock out bar supplied. The spades of the spur point are heat treated so sharpening must be done with a grinder.

The live center is supplied with two points. Use the cup point for large heavy work and the 60 degree point for miniature work and after the cup point during facing. The face of the center, without any points, can be used for metal spinning and supporting work.

Headstock Spindle Removal

To remove the headstock spindle, start by unlocking the tab (or tonged) washer from the preload nut. Unscrew the preload nut and push the spindle out through the front of the lathe. Since the front seal must come out with the spindle, it may be necessary to place a block of wood against the back of the spindle and tap it lightly with a hammer to start it moving. Once started it should push out by hand. You will be left with the bearing and spacing washer in the bearing cup which can then be easily removed once the back seal is removed. While the front seal will have come out with the spindle you will have to carefully remove the back seal with a screw driver. If the seals are worn or harmed during the removal process, obtain a new set before re-installing the bearings. It is not necessary to remove the front bearing from the headstock spindle during repacking.



Removal of the headstock spindle. Slight blow from a soft faced mallet coaxes front seal out which technican is now holding.

Wash the bearings and the cups out with kerosene oil or safety solvent. Do this operation in a well-ventilated area away from open

flames. Dry all parts thoroughly with a soft clean cloth. Do not blow bearings off with compressed air as this can injure them. Re-pack each bearing with ½ teaspoon of fibrous wheel bearing grease which is obtainable at any automotive supply store. It is imperative to use only ½ teaspoon, as a frequent cause of bearing failure is overpacking. Place the grease in the palm of your hand and roll the bearing race into the grease and thoroughly pack in into the rollers. Replace the spindle in the headstock and install the back bearing and spacer. Finally install the seals and the preload nut.

Run the preload nut up slowly while turning the headstock spindle over by hand. Keep feeling for play and when resistance is felt and play ceases lock the tab washer. Now power up the headstock spindle for about five minutes and unplug the lathe and recheck the spindle for play. If play is found unlock the tab washer and tighten the preload nut until the play is removed. If the spindle is excessively hot, back the preload off one tab. By using the four slots in the preload nut in conjunction with the tabs, the nut can be turned a very small amount to the next locking position. *Note: Never stick your fingers into the spindle while it is running. The LH thread at the back of the spindle will pull fingers in with painful consequences. Always unplug the lathe before checking for heat.

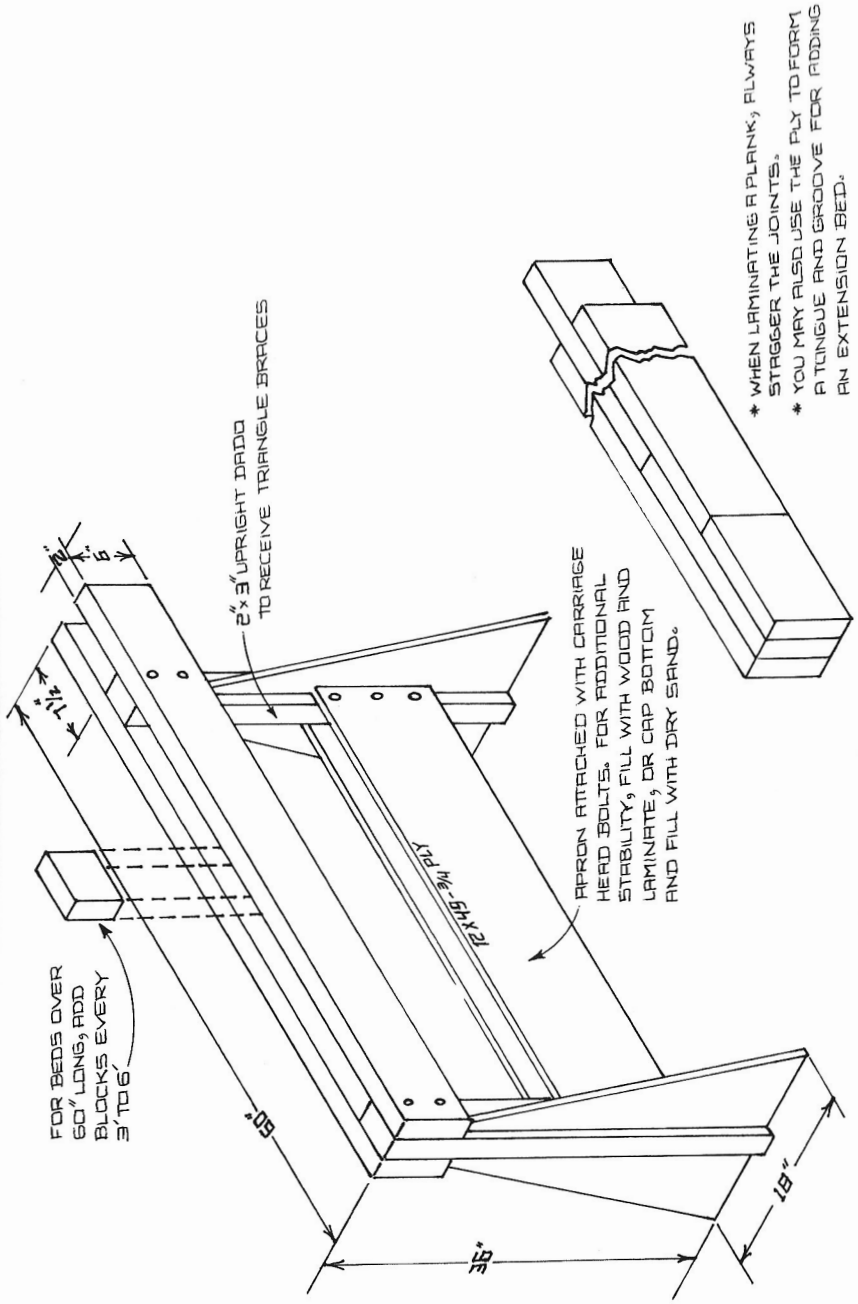
After running at idle for twenty or thirty minues the spindle should be warm but not hot to the touch. As the grease works its way out of the races, some change in the preload setting is natural and a little more heat is frequently presented during the running in period. If in double shut the lathe down for about an hour and run it for five minutes later on to see if excessive heat is generated. It is common for the bearings to be quite warm after heavy service such as turning large bowls and heavy spindle work. This is a natural state of affairs and shouldn't be a source of concern. The bearings, however, should never get hot enough that they would burn you badly, smell, or cause oil or water to evaporate.

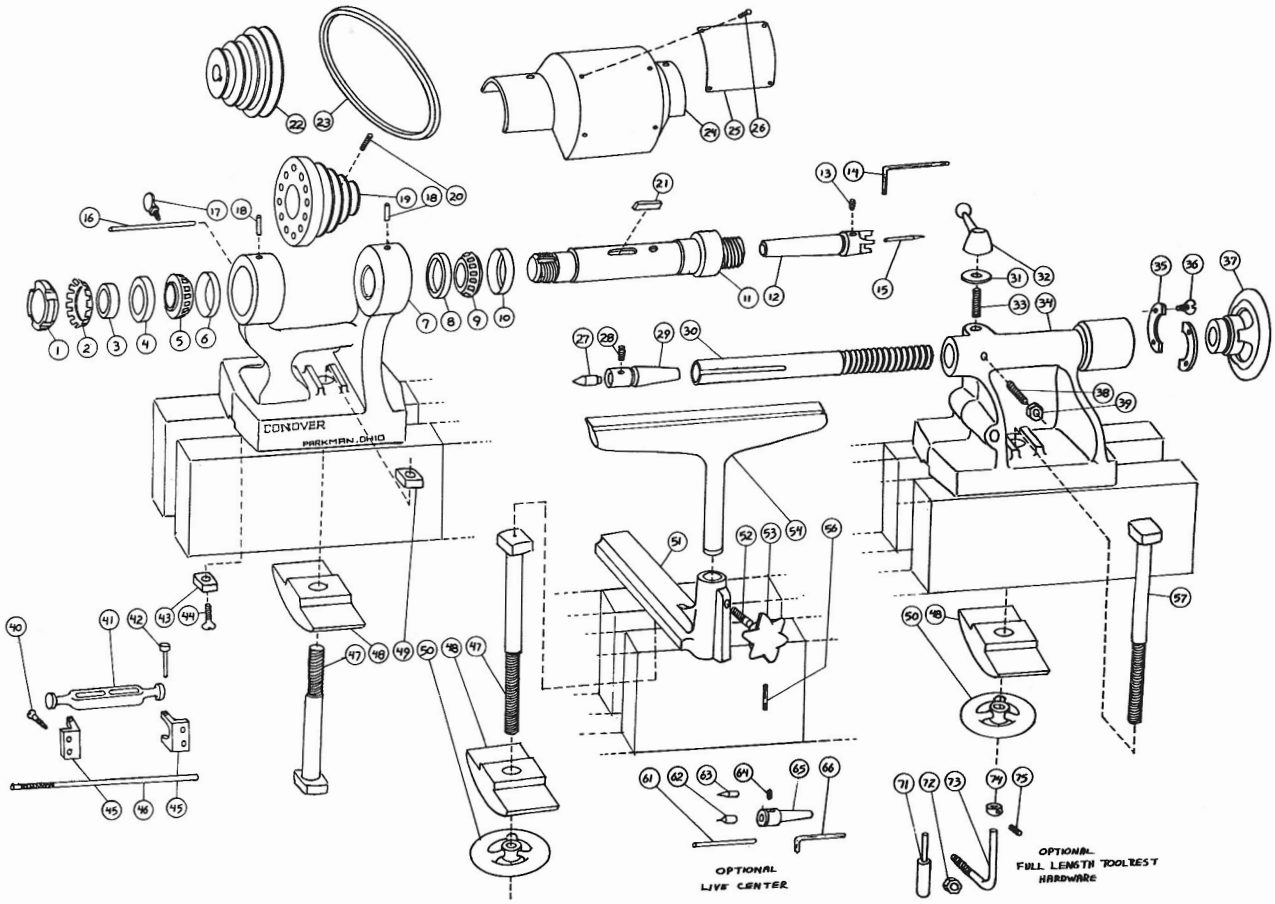
Should you wish to return your headstock to the factory for belt change and re-packing of the bearings, feel free to do so. Simply box the headstock up and return it to us freight prepaid with a description of the problem. We will inspect the headstock, re-pack the bearings, replace the belt and return it to you freight collect. The charge for this service is nominal and we will appraise you of the cost before starting work. Also feel free to call us at any time if you have any question about any of these procedures and we will be glad to lend advice.

Replacement Parts

Should you need replacement parts at any time, please consult the exploded diagram at the back of the manual. Simply phone or write and we will give you the current price of the item and can ship within twenty-four hours on a MasterCard or Visa card. When ordering parts it is always wise to appraise us of the serial number of your lathe. Again, if you have any questions call us at any time. Finally, we hope that you enjoy your new lathe as much as we have enjoyed making it for you.

Bed Diagram





Conover CL16 Lathe Set
Parts List

ITEM NO.	QTY.	DESCRIPTION
1	1	Tongued Nut
2	1	Tongued Washer
3	1	Collar
4	1	Back Seal
5	1	Back Cone
6	1	Back Cup
7	1	Headstock Casting
8	1	Front Cup
9	1	Front Cone
10	1	Front Seal
11	1	Spindle, Headstock
12	1	Body, Spur Center
13	1	Set Screw, 10-32 x 3/8"
14	1	3/32" Hex Wrench
15	1	Point, Spur Center
16	1	Index Pin
17	1	Thumb Screw, ¼-20 x ¾"
18	2	Cover Pin
19	1	Headstock Pulley
20	1	Set Screw, 1/4-20 x ⅜"
21	1	Keystock ¼ x 1"
22	1	Motor Pulley
23	1	Belt, 4L270
24	1	Belt Cover
25	1	Nameplate
26	4	Drive Screw
27	1	Point, Cup Center
28	1	Set Screw 10-32 x ⅜"
29	1	Body, Cup Center
30	1	Spindle, Tail Stock
31	1	Washer (if required)
32	1	Clamp Handle
33	1	Stud 3/8-16 x 2¼"
34	1	Tail Stock Casting
35	2	Retainer
36	4	Screw, 10-24 x ½" FHMS
37	1	Tail Wheel
38	1	1/4-20 x ¾" Dog Pt. S.S.
39	1	Nut, 1/4-20
40	4	Woodscrew #12 x 1½"
41	1	Motor Rail
42	2	Drop Pin
43	4	Keyway Block
44	4	Screw 10-24 x 1½" FHMS
45	2	Motor Foot
46	1	Knockout Bar 3/8"
47	2	Bolt 5/8-11 x 9"
48	3	Flat Washer
49	1	Square Nut 5/8-11
50	2	Flat Wheel
51	1	Tool Base
52	1	Brass Stud 3/8-16 x 1½"
53	1	Star Knob, Incl. 52+53
54	1	Tool Rest 6" (Not Shown, Opt.)
55	1	Tool Rest 6" (Not Shown, Opt.)
56	1	Roll Pin 3/16 x 1½"
57	1	Bolt 5/8-11 x 10"

FOR OPTIONAL LIVE CENTER

ITEM NO.	QTY.	DESCRIPTION
61	1	Knockout Bar 1/8"
62	1	Cup Point, 5/8" diameter
63	1	Plain Point, 5/8" dia.
64	1	Set Screw
65	1	Body, Live Center
66	1	Hex Wrench, 3/32"

FOR OPTIONAL WOOD TOOL REST

ITEM NO.	QTY.	DESCRIPTION
71	1	Step Post
72	1	Nut, 1/2-13
73	1	Right Angle Bolt
74	1	Set Screw Collar
75	1	Set Screw