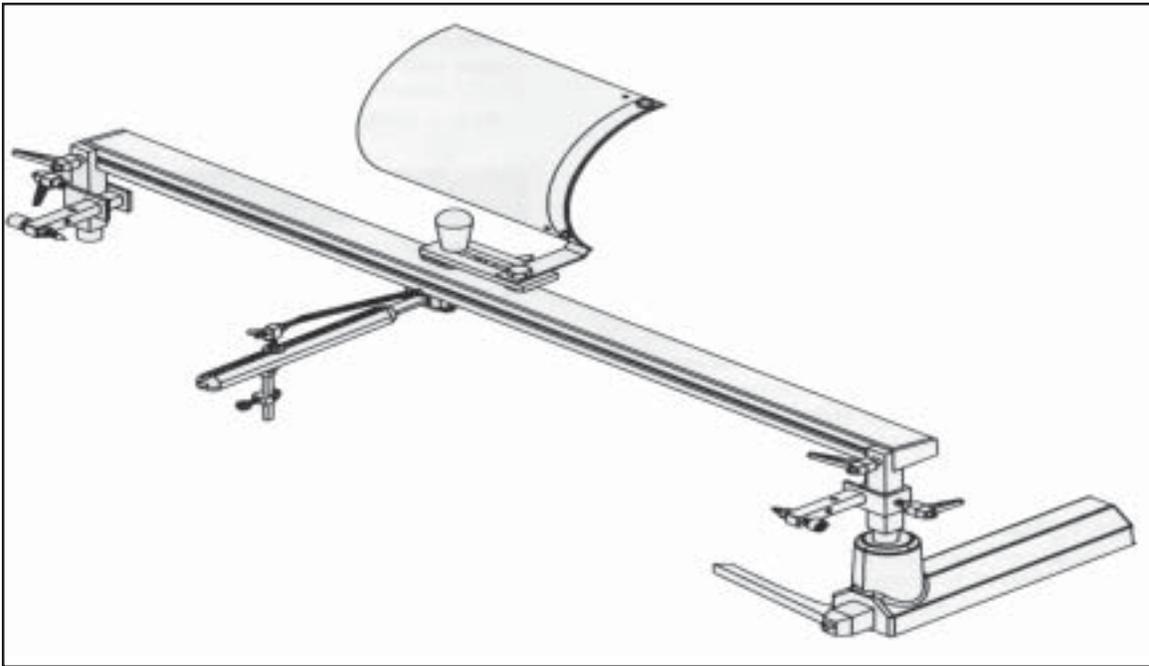


CENTRAL MACHINERY®

LATHE DUPLICATOR ATTACHMENT (FOR USE WITH LATHE MODEL 90265)

MODEL 90692

ASSEMBLY AND OPERATING INSTRUCTIONS



3491 Mission Oaks Blvd., Camarillo, CA 93011
Visit our Web site at <http://www.harborfreight.com>

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For technical questions, please call 1-800-444-3353.

PRODUCT SPECIFICATIONS

Item	Description
Product Compatibility	For use with Lathe Model 90265
Maximum Turning Length	38"
Maximum Bowl Diameter	8"
Overall Length	40"
Overall Height	7-1/2"
Overall Width	4-5/16"
Scale	Inches/Metric – 1/16" & 1MM Segments
Cutting Tool Dimensions	0.195" x 0.512" x 7.875"
Accessories	3MM Hex Wrench 4MM Hex Wrench 6MM Hex Wrench 10MM/12MM Combo Open End Wrench
Weight	22.20 Pounds

SAVE THIS MANUAL

You will need this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures, parts list and assembly diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep this manual and invoice in a safe and dry place for future reference.

UNPACKING

When unpacking, check to make sure all the parts shown in the **Parts List** on **page 13** are included. If any parts are missing or broken, please call Harbor Freight Tools at the number shown on the cover of this manual as soon as possible.

GENERAL SAFETY WARNINGS AND PRECAUTIONS

1. **Keep work area clean and dry.** Cluttered, damp, or wet work areas invite injuries.
2. **Keep children away from work area.** Do not allow children to handle this product.

3. **Store idle equipment.** When not in use, tools and equipment should be stored in a dry location to inhibit rust. Always lock up tools and equipment, and keep out of reach of children.
4. **Do not use this product if under the influence of alcohol or drugs.** Read warning labels on prescriptions to determine if your judgement or reflexes are impaired while taking drugs. If there is any doubt, do not attempt to use this product.
5. **Maintain labels and nameplates on this product.** These carry important information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
6. **Dress safely.** Do not wear loose clothing or jewelry, as they can become caught in moving parts. Wear a protective hair covering to prevent long hair from becoming caught in moving parts.
7. **Do not overreach.** Keep proper footing and balance at all times to prevent tripping, falling, back injury, etcetera.
8. **Industrial applications must follow OSHA requirements.**
9. **Stay alert.** Watch what you are doing at all times. Use common sense. Do not use this product when you are tired or distracted from the job at hand.
10. **Check for damaged parts.** Before using this product, carefully check that it will operate properly and perform its intended function. Check for damaged parts and any other conditions that may affect the operation of this product. Replace or repair damaged or worn parts immediately.
11. **Replacement parts and accessories:** When servicing, use only identical replacement parts. Only use accessories intended for use with this product. Approved accessories are available from Harbor Freight Tools.
12. **Maintain this product with care.** Keep this product clean and dry during storage for better and safer performance. For your safety, service and maintenance should be performed regularly by a qualified technician.
13. **Use the right equipment for the job.** Do not attempt to force small equipment to do the work of a larger industrial tool. There are certain applications for which this equipment was designed. It will do the job better and more safely at the rate for which it was intended. Do not modify this equipment, and do not use this equipment for a purpose for which it was not intended.
14. **WARNING!** The warnings, precautions, and instructions discussed in this manual

cannot cover all possible conditions and situations that may occur. The operator must understand that common sense and caution are factors, which cannot be built into this product, but must be supplied by the operator.

SPECIFIC PRODUCT WARNINGS AND PRECAUTIONS

1. **This Lathe Duplicator Attachment is designed for use ONLY with the Lathe Model 90265** (available from Harbor Freight Tools). Make sure to read and understand all instructions and safety precautions as outlined in the manufacturer's manual for the Model 90265 Lathe with which the Lathe Duplicator Attachment will be used.
2. **Maintain a safe working environment.** Keep the work area well lit. Make sure there is adequate surrounding workspace. Always keep the work area free of obstructions, oil, grease, trash, and other debris.
3. **Keep all safety guards in place, in proper adjustment, and in proper alignment.**
4. **Prior to starting the Lathe and Lathe Duplicator Attachment, make sure all adjusting keys and wrenches are removed from the equipment.**
5. **Never adjust the Lathe Duplicator Attachment while it is running.** Turn off and unplug the Lathe from its electrical outlet. Wait until the Lathe comes to a complete stop before performing any adjustments.
6. **Protect hands and fingers from possible injury.** Keep hands and fingers away from the chuck, centers, and other moving parts.
7. **Wear eye, face, and hearing protection.** Always wear an ANSI approved full face safety shield and ANSI approved hearing protectors when using the Lathe Duplicator Attachment. Wear ANSI approved dust masks or a respirator if the work performed creates excessive dust.
8. **Never leave the Lathe Duplicator Attachment unattended while it is running.** Turn off the electrical power to the Lathe, and do not leave the Lathe Duplicator Attachment until the Lathe comes to a complete stop.
9. **Never stand on the Lathe Duplicator Attachment.** Serious injury could occur if the equipment is tipped or if the sharp centers are accidentally contacted.
10. **Keep the Cutting Tool sharp and dry for better and safer performance.**

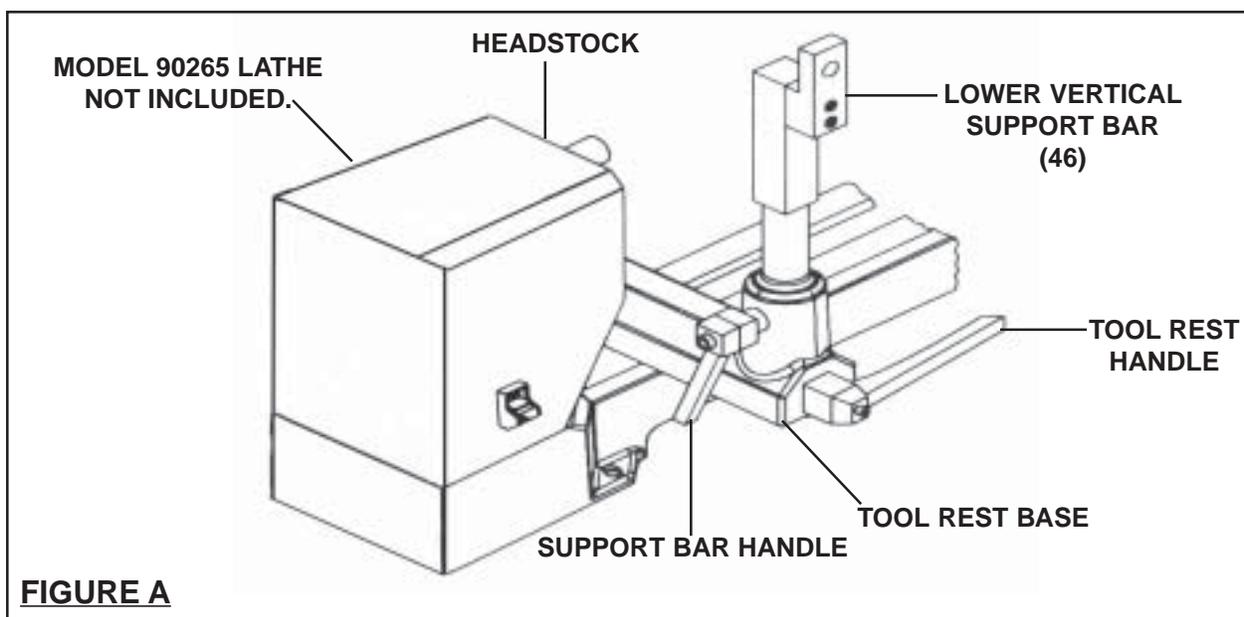
11. **Keep the Lathe Duplicator Attachment dry and its moving parts properly oiled for better and safer performance.**
12. **WARNING!** Some dust created by power sanding, sawing, grinding, drilling, lathe operations, and other construction activities, contain chemicals known (to the State of California) to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are: lead from lead-based paints, crystalline silica from bricks and cement or other masonry products, arsenic and chromium from chemically treated lumber. Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles. (*California Health & Safety Code 25249.5, et seq.*)

ASSEMBLY INSTRUCTIONS

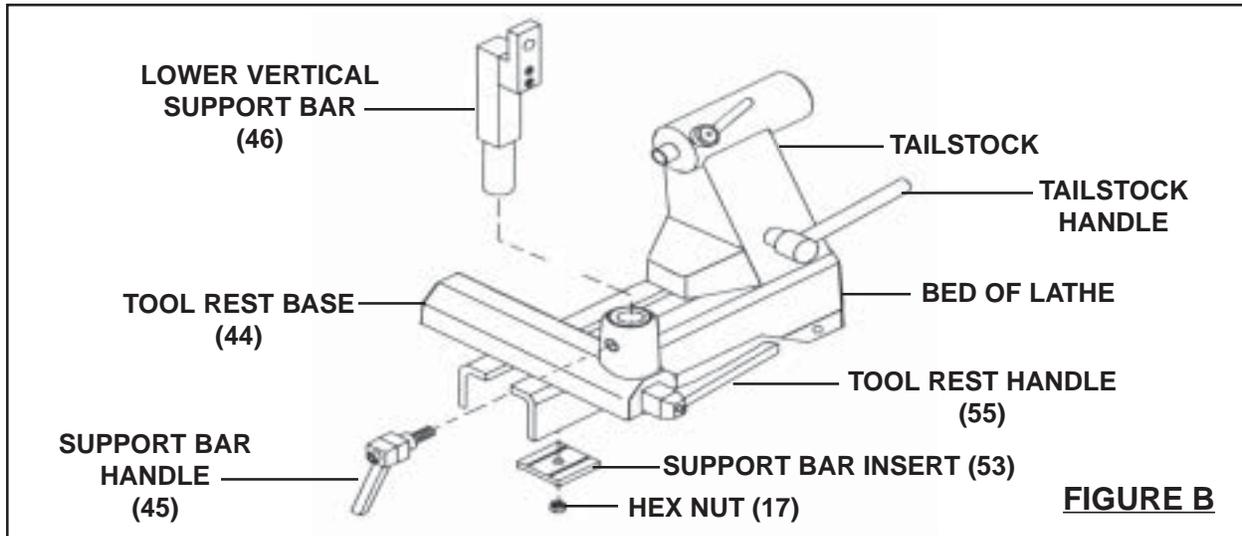
NOTE: For additional references to the parts listed in the following pages, refer to the **Assembly Diagram** on **page 14**.

To Attach The Tool Rest Base:

1. Loosen the Tool Rest Handle of the *lathe*, and slide the Tool Rest Base of the *lathe* to as near the Headstock of the *lathe* as possible. **(See Figure A.)**
2. Loosen the Support Bar Handle of the Model 90265 *lathe*, and remove the Tool Rest Base of the *lathe*. **(See Figure A.)**



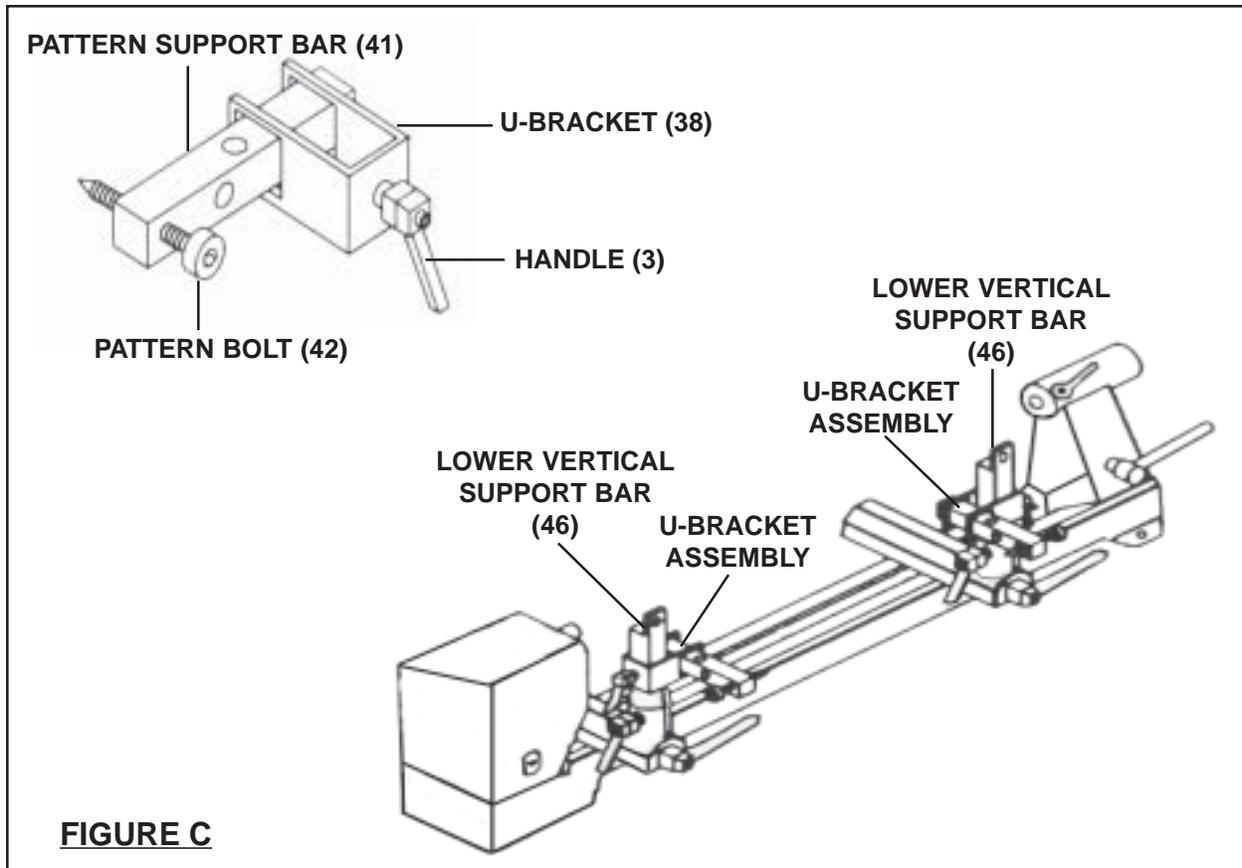
3. Install one Lower Vertical Support Bar (46) onto the Tool Rest Base of the *lathe*, and secure it by tightening the Support Bar Handle of the *lathe*. **(See Figure A.)**
4. Loosen the Tailstock Handle of the *lathe*, and remove the Tailstock from the Bed of the *lathe*. **(See Figure B.)**



5. Loosen the Hex Nut (17) from the bottom of the Tool Rest Base (44) and Support Bar Insert (53), and slide the Tool Rest Base assembly onto the Bed of the *lathe*. Then, re-tighten the Hex Nut. **(See Figure B.)**
6. Replace the Tailstock of the *lathe* onto the Bed of the *lathe*, and secure it by tightening the Tailstock Handle of the *lathe*. **(See Figure B.)**

To Install The U-Bracket Assembly:

1. Screw one Pattern Bolt (42) into the side of one Pattern Support Bar (41) and secure the Pattern Bolt with a Hex Nut (39). Then, slide the Pattern Support Bar into one U-Bracket (38). **(See Figure C, next page.)**
2. Screw one Handle (3) into the U-Bracket (38). **(See Figure C.)**
3. Insert the U-Bracket (38) onto the Lower Vertical Support Bar (46), and secure the U-Bracket by tightening the Handle (3). **(See Figure C.)**
4. Repeat Steps #1, #2, #3 for the remaining U-Bracket Assembly. **(See Figure C.)**



To Attach The Support Bar:

1. Remove the End Cap (12) from each end of the Support Bar (54).
(See Assy. Diagram.)
2. Remove the two Square Nuts (47) from the Handles (48), and insert the Square Nuts into the T-Slot of the Support Bar (54).
(See Figure D, next page.)
3. Insert the threaded, bolt portion of the Handles (48) through the Lockwashers (34), Flat Washers (40), and holes in the Lower Vertical Support Bars (46). Then, screw the threaded, bolt portion of the Handles into the two Square Nuts (47) on the Support Bar (54).
(See Figure D.)
4. Replace the End Cap (12) on each end of the Support Bar (54).
(See Assy. Diagram.)

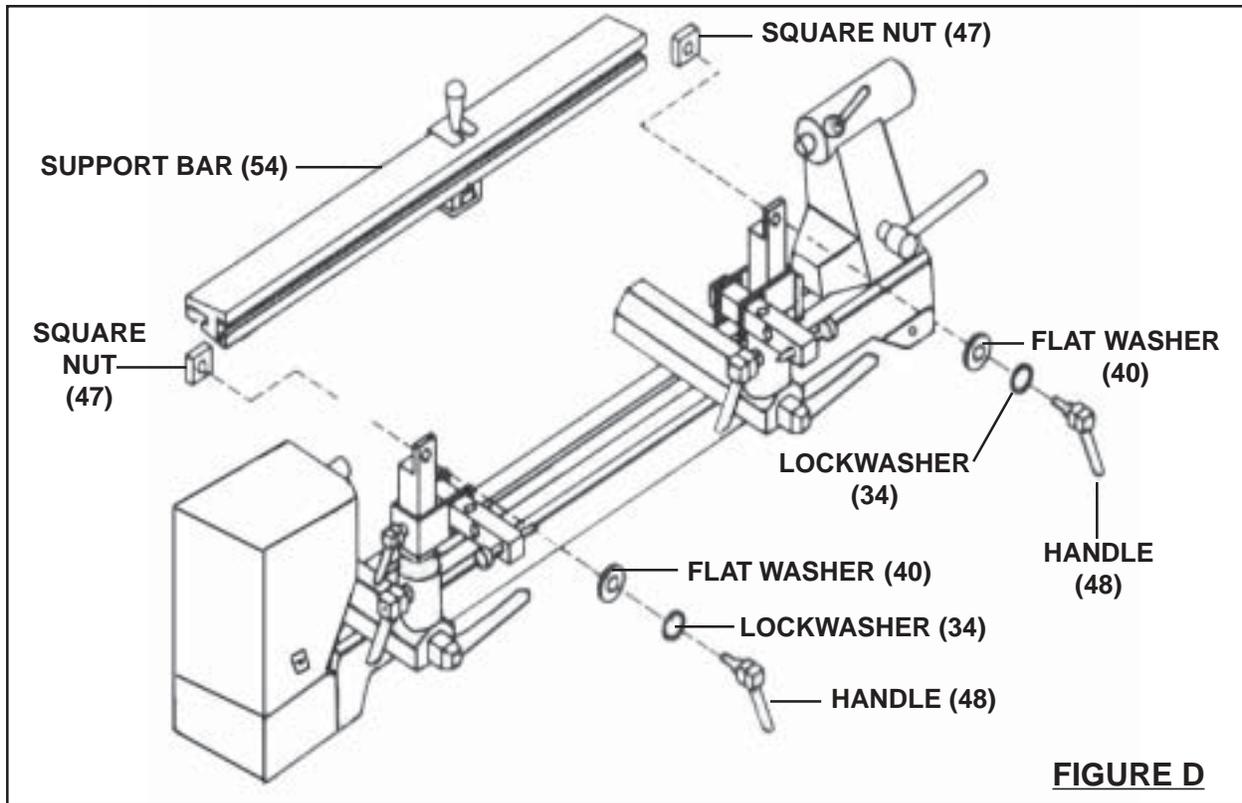


FIGURE D

To Assemble The Tool Holder:

1. Loosen the two Set Screws (20) on the Tool Holder (24), and extend the Cutting Tool (31) out about 4 inches. Then re-tighten the two Set Screws to secure the Cutting Tool in place. **(See Figure E.)**
2. Slide the Pattern Follower Assembly into the T-Slot located at the bottom of the Tool Holder (24). **(See Figure E.)**

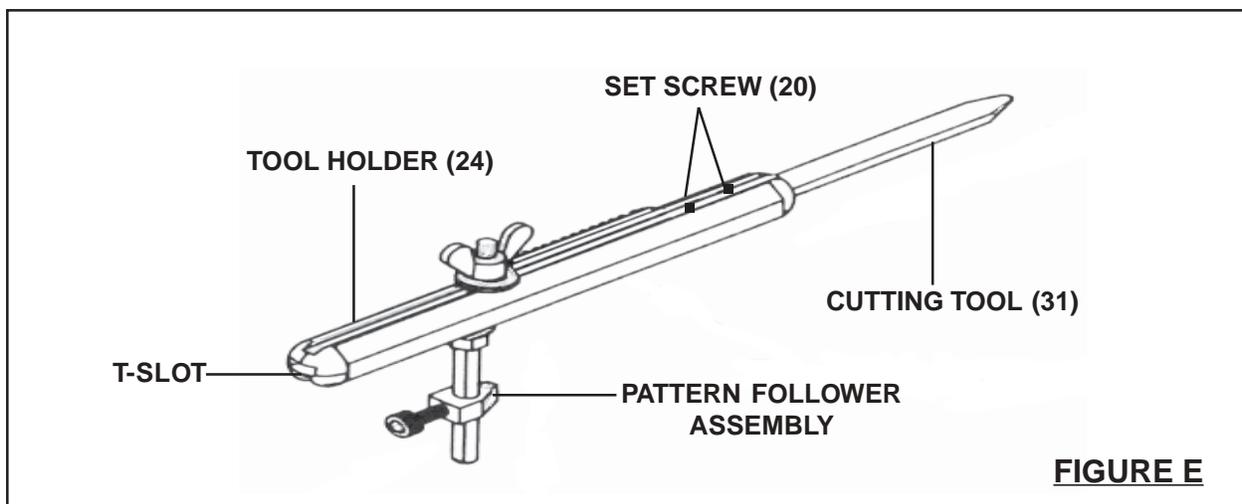
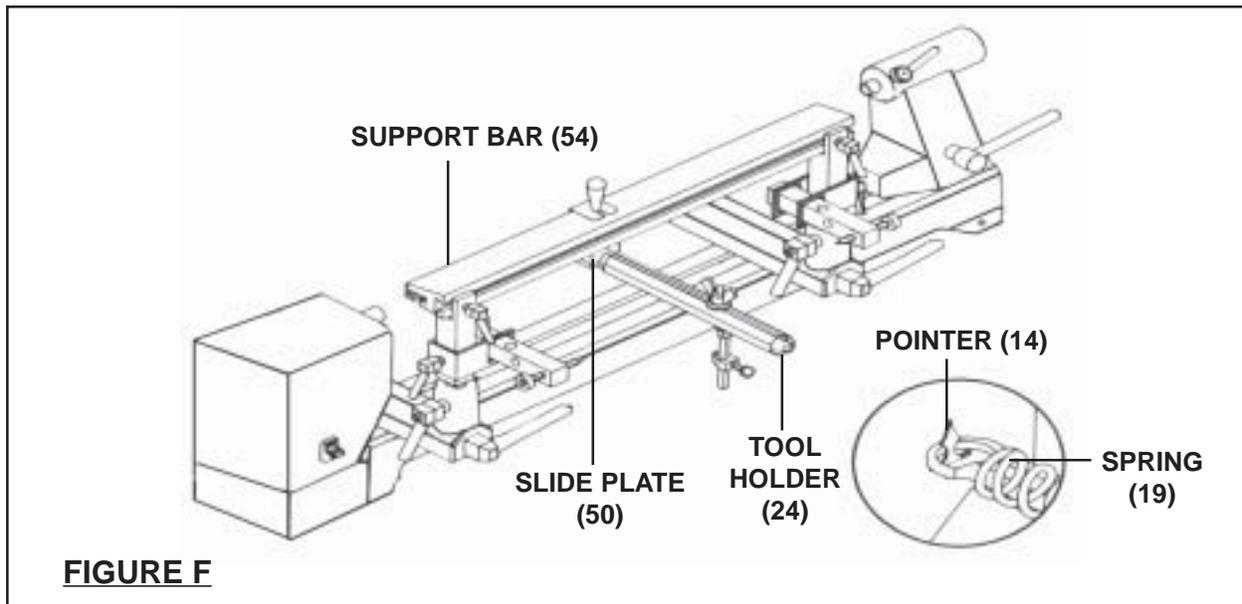


FIGURE E

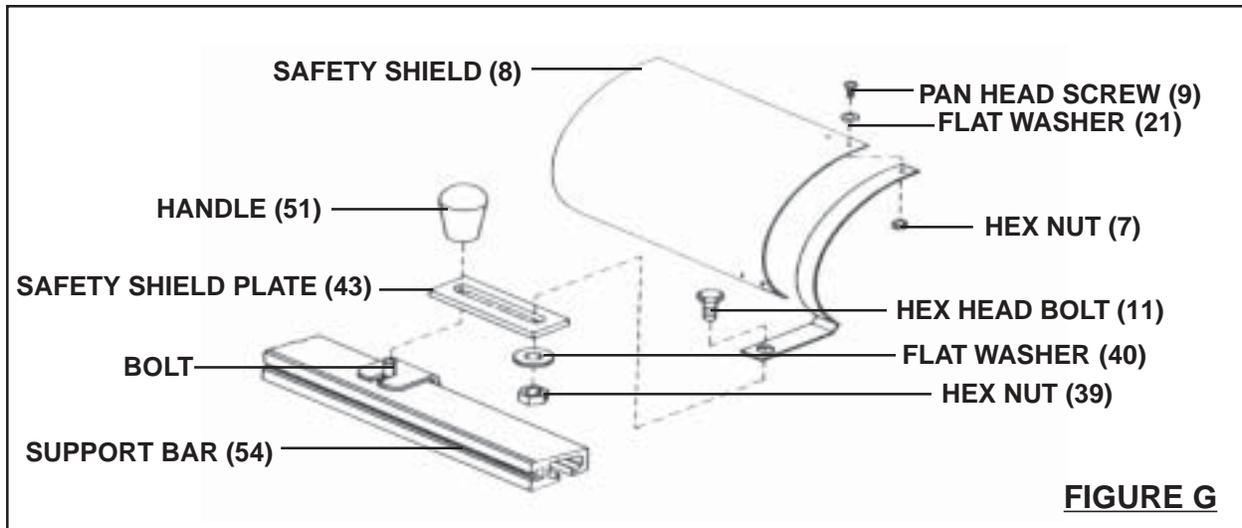
To Attach The Tool Holder Assembly:

1. Slide the Cutting Tool (31) of the Tool Holder (24) into the Slot located on the Side Plate (50). **(See Figures E and F.)**
2. Attach the Spring (19) over the Pointer (14) on the Side Plate (50). **(See Figure F.)**
3. Adjust the Spring (19) so that there is enough tension to keep the Tool Holder (24) firmly against the Support Bar (54). **(See Figure F.)**



To Attach The Safety Shield:

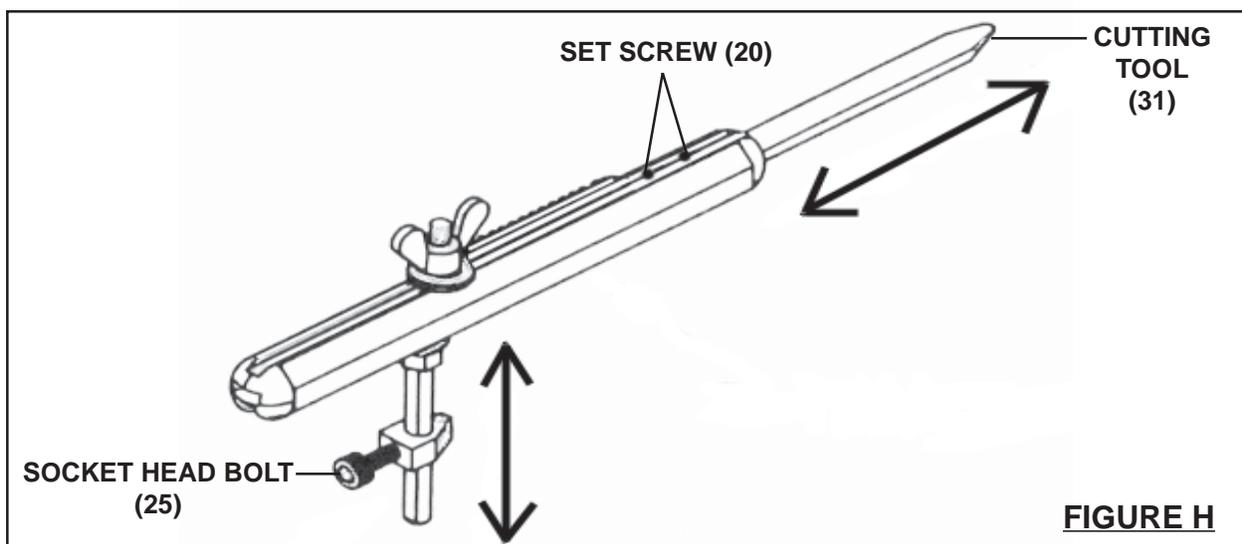
1. Attach the Safety Shield Bracket (10) to the Safety Shield (8), using the Pan Head Screw (9), Flat Washer (21), and Hex Nut (7). **(See Figure G, next page.)**
2. Unscrew and remove the Handle (51) from the Bolt located on the Support Bar (54). Place the Safety Shield Plate (43) on the Bolt. Then, re-tighten the Handle onto the Bolt. **(See Figure G.)**
3. Attach the Safety Shield Bracket (10) to the Safety Shield Plate (43), using a Hex Head Bolt (11), Flat Washer (40), and Hex Nut (39). **(See Figure G.)**



OPERATING INSTRUCTIONS

To Adjust The Cutting Tool:

1. Prior to use, the Cutting Tool (31) must be set approximately 1/8" above the Spindle of the *lathe*. Make sure to check at the Headstock and Tailstock of the lathe. **(See Figure H.)**
2. The Cutting Tool (31) can be adjusted *vertically* by loosening the Support Bar Handles (45) which secure the Lower Vertical Support Bars (46) in place. **(See Figure B.)**



3. The Cutting Tool (31) also can be adjusted *vertically* by loosening the Socket Head Bolt (25) which secures the Tool Holder (24) in place. Once adjusted, make sure to re-tighten the Socket Head Bolt. **(See Figure H.)**
4. The Cutting Tool (31) can be adjusted *horizontally* by moving the Tool Rest Base across the Bed of the lathe, towards or away from the Spindle of the lathe. **(See Figure A.)**
5. The Cutting Tool (31) also can be adjusted horizontally by loosening the two Set Screws (20), moving the Cutting Tool in or out, and then re-tightening the Set Screws. **(See Figure H.)**

To Perform Duplicate Turning:

1. Mount the *original woodstock that is to be duplicated* in the Pattern Bolts (42). The Tool Rest Bases (44) will need to be adjusted along the Bed of the lathe to the required length. **(See Figures A, and C.)**
2. Mount the new piece of woodstock in the lathe. When starting with a square piece of woodstock that will be cut to a cylinder, detach the Spring (19) on the Tool Holder (24) from the Support Bar (54). Manually feed the Cutting Tool into the woodstock with a light depth of cut until the cylinder has been formed. **Do not start cutting on the end of the woodstock, as the Cutting Tool may become caught and damage the woodstock. (See Figure F.)**
3. Turn the woodstock to a cylinder slightly larger than final size. Then, reattach the Spring from the Tool Holder (24) to the Support Bar (54) and adjust the Pattern Follower assembly against the original woodstock. **(See Figures E, and F.)**
4. Continue gliding the Tool Holder (24) along the Support Bar (54) until the new piece of woodstock fully duplicates the original piece of woodstock. **(See Figure F.)**
5. Always make sure to turn off the lathe and unplug it from its electrical outlet when finished with duplicate turning. Wait until the lathe and Lathe Duplicator Attachment stop completely before attempting to remove the pieces of woodstock.

INSPECTION, MAINTENANCE, AND CLEANING

1. Before each use, inspect the general condition of the Lathe Duplicator Attachment. Check for broken, cracked, or bent parts, loose or missing parts, and any condition that may affect the proper operation of the product. If a problem

occurs, have the problem corrected before further use.

Do not use damaged equipment.

2. For better and safer performance, always keep the Cutting Tool (31) clean and sharp.
3. Daily, with a clean cloth, brush, or vacuum remove all debris from the Lathe Duplicate Attachment. Then, use a lightweight machine oil to lubricate all moving parts.

TROUBLESHOOTING GUIDE

Symptom	Possible Cause(s)	Corrective Action
Machine slows down while operating.	1. Applying too much pressure to workpiece.	1. Ease up on pressure.
Tool "chatters" during turning operation.	1. Workpiece is too far out of round. 2. Workpiece has too much wobble. 3. Operator using improper technique. 4. Cutting motion is against the grain of the workpiece. 5. Workpiece is too long and thin, and is deflected by tool pressure.	1. True up the roundness of the workpiece before turning operation. 2. Establish new center marks on ends to reduce wobble. 3. Read instructions, and take lighter cuts to minimize chatter. 4. Use cutting motion that is with the grain. 5. Install a steady rest in the middle, behind the workpiece.
Workpiece splits or breaks up during turning operation.	1. Workpiece contained defects before mounting.	1. Select or assemble a workpiece that is free of defects.
Workpiece finish poor.	1. Prototype or template loose. 2. Loose tool holder. 3. Pattern follower not contacting original.	1. Secure prototype or template. 2. Tighten tension of spring. 3. Adjust pattern follower firmly against original.

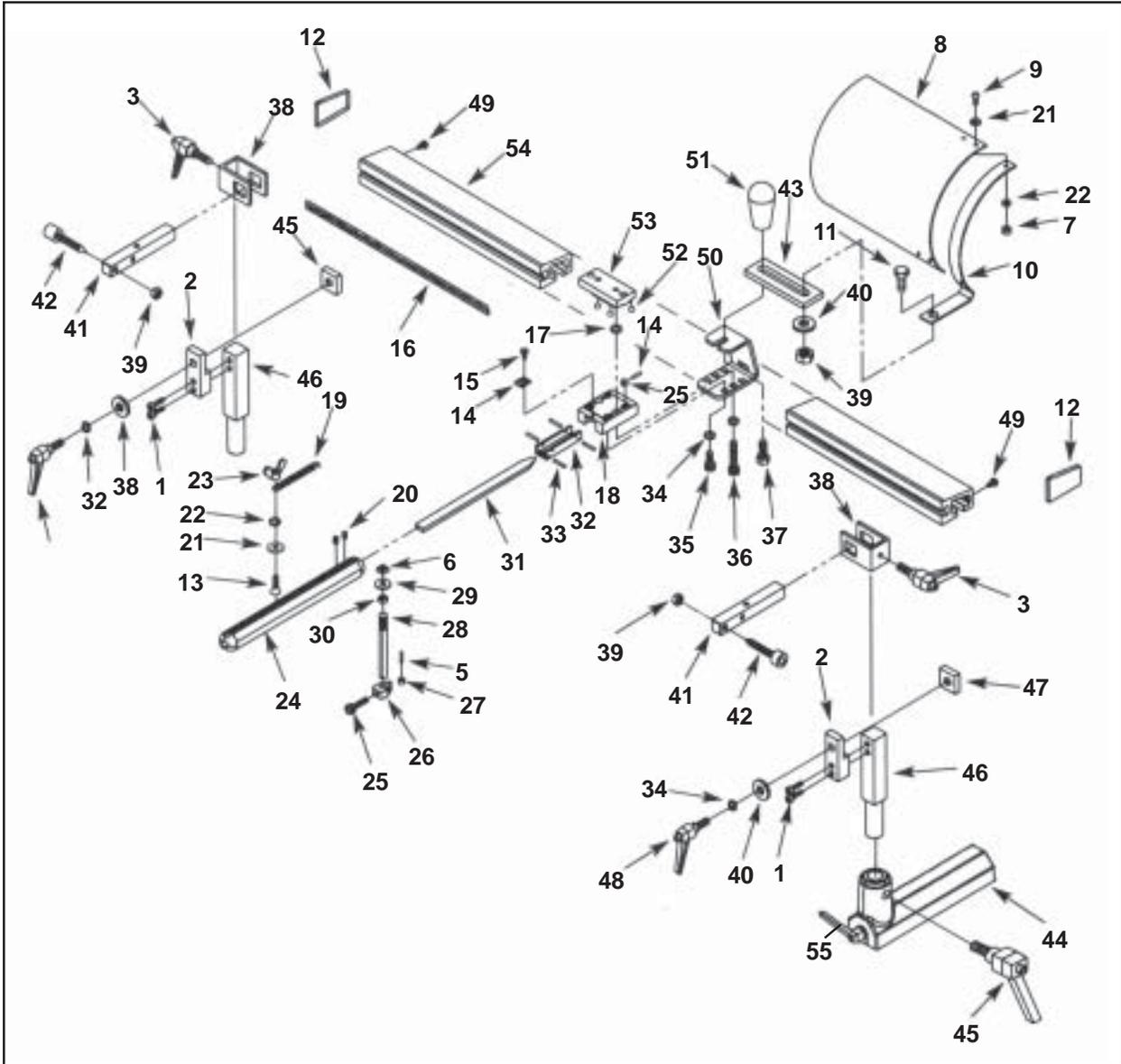
PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

PARTS LIST

Part #	Description	Qty.	Part #	Description	Qty.
1	Socket Head Bolt (5/16"-18*1")	4	28	Rod	1
2	Upper Vertical Support Bar	2	29	Flat Washer (1/4")	1
3	Handle	2	30	Hex Nut (1/4"-20)	1
4	Dowel Pin (3*12MM)	4	31	Cutting Tool	1
5	Spring Pin (3*10MM)	1	32	Dowel Pin Base	1
6	Square Nut (1/4"-20)	1	33	Dowel Pin (3*18.7MM)	4
7	Hex Nut (#10-24)	2	34	Lock Washer (5/16")	8
8	Safety Shield	1	35	Socket Head Bolt	4
9	Pan Head Screw (#10-24*1/2")	2	36	Socket Head Bolt	2
10	Bracket	1	37	Hex Head Bolt	1
11	Hex Head Bolt (5/16"x18*3/4")	1	38	U-Bracket	2
12	Cap (Set of 2)	1	39	Hex Nut (5/16"-18)	3
13	Flat Head Screw (#10-24*3/8")	1	40	Flat Washer (5/16")	3
14	Pointer	1	41	Pattern Support Bar	2
15	Flat Head Screw (#10-24*1/4")	1	42	Pattern Bolt	2
16	Scale	1	43	Plate	1
17	Hex Nut	2	44	Tool Rest Base	1
18	Slide Plate Base	1	45	Handle	1
19	Spring	1	46	Lower Vert. Support Bar	2
20	Set Screw (1/4-20*1/4")	2	47	Square Nut (5/16"-18)	2
21	Flat Washer (#10)	3	48	Handle	2
22	Lock Washer (#10)	3	49	Pan Washer Head Screw	2
23	Wing Nut (#10-24)	1	50	Slide Plate	1
24	Tool Holder	1	51	Handle	1
25	Socket Head Bolt (#10-24*3/8")	1	52	Ball (5/16")	8
26	Bracket	1	53	Support Bar Insert	1
27	Ball Bearing (R83022)	5	54	Support Bar	1
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ASSEMBLY DIAGRAM



NOTE: Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.