

SETUP & OPERATION MANUAL

FEATURES

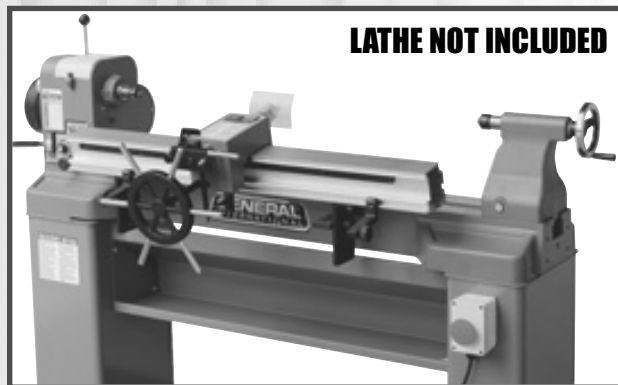
- ➊ Designed for rough bulk material removal from wood blanks, to make multiple matching spindles that follow the profile of an original spindle or a shop made template.
- ➋ Extruded aluminum base and carriage.
- ➌ Smooth hand wheel controlled rack & pinion system.
- ➍ High speed steel cutter.
- ➎ Fits most 12" - 22" floor model lathes with cast bedways.

* Some manual shaping of fine details and finish sanding will still be required.

WOOD LATHE DUPLICATOR



LATHE NOT INCLUDED



SPECIFICATIONS

MAXIMUM DUPLICATING LENGTH
36" (914 mm)

MAXIMUM DUPLICATING DIAMETER
2"~20" (51 ~ 508 mm)
Depending on lathe swing over bed

MAXIMUM DUPLICATING DEPTH
3" (76 mm)

MAXIMUM ORIGINAL SPINDLE DIAMETER
5" (127 mm)

MAXIMUM WIDTH OF TEMPLATE
3" (76 mm)

DUPLICATES FROM
ORIGINAL SPINDLE OR TEMPLATE

MAXIMUM DEPTH OF CUT PER PASS
1/4" (6.35 mm) - 1/8" recommended

MODEL #25-036





GENERAL® INTERNATIONAL

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THANK YOU for choosing this General® International model 25-036 Wood Lathe Duplicator. This duplicator has been carefully tested and inspected before shipment and if properly used and maintained, will provide you with years of reliable service. For your safety, as well as to ensure optimum performance and trouble-free operation, and to get the most from your investment, please take the time to read this manual before assembling, installing and operating the unit.

The manual's purpose is to familiarize you with the safe operation, basic function, and features of this duplicator as well as the set-up, maintenance and identification of its parts and components. This manual is not intended as a substitute for formal woodworking instruction, nor to offer the user instruction in the craft of woodworking. If you are not sure about the safety of performing a certain operation or procedure, do not proceed until you can confirm, from knowledgeable and qualified sources, that it is safe to do so.

Once you've read through these instructions, keep this manual handy for future reference.

Disclaimer: The information and specifications in this manual pertain to the unit as it was supplied from the factory at the time of printing. Because we are committed to making constant improvements, General® International reserves the right to make changes to components, parts or features of this unit as deemed necessary, without prior notice and without obligation to install any such changes on previously delivered units. Reasonable care is taken at the factory to ensure that the specifications and information in this manual corresponds with that of the unit with which it was supplied.

However, special orders and "after factory" modifications may render some or all information in this manual inapplicable to your machine. Further, as several generations of this model of duplicator and several versions of this manual may be in circulation, if you own an earlier or later version of this unit, this manual may not depict your machine exactly. If you have any doubts or questions contact your retailer or our support line with the model and serial number of your unit for clarification.

GENERAL® & GENERAL® INTERNATIONAL WARRANTY

All component parts of General®, General® International and Excalibur by General International® products are carefully inspected during all stages of production and each unit is thoroughly inspected upon completion of assembly.

Limited Lifetime Warranty

Because of our commitment to quality and customer satisfaction, General® and General® International agree to repair or replace any part or component which upon examination, proves to be defective in either workmanship or material to the original purchaser for the life of the tool. *However, the Limited Lifetime Warranty does not cover any product used for professional or commercial production purposes nor for industrial or educational applications. Such cases are covered by our Standard 2-year Limited Warranty only. The Limited Lifetime Warranty is also subject to the "Conditions and Exceptions" as listed below.*

Standard 2-Year Limited Warranty

All products not covered by our lifetime warranty including products used in commercial, industrial and educational applications are warranted for a period of 2 years (24 months) from the date of purchase. General® and General® International agree to repair or replace any part or component which upon examination, proves to be defective in either workmanship or material to the original purchaser during this 2-year warranty period, subject to the "conditions and exceptions" as listed below.

To file a Claim

To file a claim under our Standard 2-year Limited Warranty or under our Limited Lifetime Warranty, all defective parts, components or machinery must be returned freight or postage prepaid to General® International, or to a nearby distributor, repair center or other location designated by General® International. For further details call our service department at 1-888-949-1161 or your local distributor for assistance when filing your claim.

Along with the return of the product being claimed for warranty, a copy of the original proof of purchase and a "letter of claim" must be included (a warranty claim form can also be used and can be obtained, upon request, from General® International or an authorized distributor) clearly stating the model and serial number of the unit (if applicable) and including an explanation of the complaint or presumed defect in material or workmanship.

CONDITIONS AND EXCEPTIONS:

This coverage is extended to the original purchaser only. Prior warranty registration is not required but documented proof of purchase i.e. a copy of original sales invoice or receipt showing the date and location of the purchase as well as the purchase price paid, must be provided at the time of claim.

Warranty does not include failures, breakage or defects deemed after inspection by General® or General® International to have been directly or indirectly caused by or resulting from; improper use, or lack of or improper maintenance, misuse or abuse, negligence, accidents, damage in handling or transport, or normal wear and tear of any generally considered consumable parts or components.

Repairs made without the written consent of General® International will void all warranty.

RULES FOR SAFE OPERATION

To help ensure safe operation, please take a moment to learn the machine's applications and limitations, as well as potential hazards. General® International disclaims any real or implied warranty and holds itself harmless for any injury that may result from improper use of its equipment.

1. Do not operate the wood lathe when tired, distracted, or under the effects of drugs, alcohol or any medication that impairs reflexes or alertness.
2. The working area should be well lit, clean and free of debris.
3. Keep children and visitors at a safe distance when the wood lathe is in operation; do not permit them to operate the wood lathe.
4. Childproof and tamper proof your shop and all machinery with locks, master electrical switches and switch keys, to prevent unauthorized or unsupervised use.
5. **Stay alert!** Give your work your undivided attention. Even a momentary distraction can lead to serious injury.
6. Fine particulate dust is a carcinogen that can be hazardous to health. Work in a well-ventilated area and whenever possible use a dust collector and wear eye, ear and respiratory protection devices.
7. Do not wear loose clothing, gloves, bracelets, necklaces or other jewelry while the wood lathe is in operation. Wear protective hair covering to contain long hair and wear non-slip footwear.
8. Be sure that adjusting wrenches, tools, drinks and other clutter are removed from the machine before operating.
9. Keep hands well away from the spindle, the spinning workpiece, and all moving parts. Use a brush, not hands, to clear away chips and dust.
10. Do not use stock containing defects such as checks, splits, cracks, knots or foreign objects. Before starting, inspect stock and remove all foreign objects such as dirt, nails, staples or any object that could damage a tool or become dislodged and fly free and cause injury.
11. Select appropriate turning speed for the size and type of workpiece being turned and use lowest speed when starting a new workpiece.
12. Before turning on the wood lathe, make sure the workpiece and duplicator are securely installed between centers and that all locking levers and moveable or removable parts are tightened down and secured.
13. Adjust the cutting tool parallel and as close as possible to the workpiece and, before starting the lathe, turn the workpiece by hand, at least one full rotation to make sure that it does not come in contact with the cutting tool.
14. Maintain turning tools with care. Keep turning tools sharp and clean for best and safest performance.
15. Avoid working from awkward or off balance positions. Do not overreach and keep both feet on floor.
16. Keep guards in place and in working order. If a guard must be removed for maintenance or cleaning be sure it is properly re-attached before using the tool again.
17. Use of parts and accessories NOT recommended by GENERAL® INTERNATIONAL may result in equipment malfunction or risk of injury.
18. Never stand on machinery. Serious injury could result if the tool is tipped over.
19. Always disconnect the tool from the power source before servicing, changing accessories, performing any maintenance or cleaning, or if the machine will be left unattended.
20. Make sure that switch is in the "OFF" position before plugging in the power cord.
21. Make sure the tool is properly grounded. If equipped with a 3-prong plug it should be used with a three-pole receptacle. Never remove the third prong.
22. Do not use this wood lathe duplicator for other than its intended use. If used for other purposes, GENERAL®INTERNATIONAL disclaims any real implied warranty and holds itself harmless for any injury, which may result from that use.

BASIC FUNCTIONS

This General International model 25-036 wood lathe duplicator is designed for use on wood lathes only. Installation and/or use on Metalworking lathes or any other machinery can lead to serious personal injury, damage to the machine, the duplicator and the workpiece.

This duplicator is designed to roughly remove bulk material from a wood blank to enable the user to make multiple matching spindles that follow or replicate the profile of either an original spindle or a shop made template. This unit is not designed to be a precision copying device, and as such some manual shaping of fine details will still be required. As with normal manual turnings, finish sanding of the workpiece will also still be required. Having a maximum duplicating length of 36" the unit is designed to fit on most models of 12"-22" swing capacity wood lathes that have cast bed ways and is an ideal time saver on projects that require multiple identical wood spindles such as turned railings and turned chair or table legs.

Important Notice: If your wood lathe has a swing over bed of less than 12" or more than 22" and/or if your wood lathe has tubular or any type other than cast bed ways, then this unit is not designed for use on your machine. Any attempts to modify or adapt the unit to fit machines other than as described above is not recommended or endorsed by General International, and is done at the users own risk of personal injury, damage to the machine, the duplicator or the workpiece.

UNPACKING

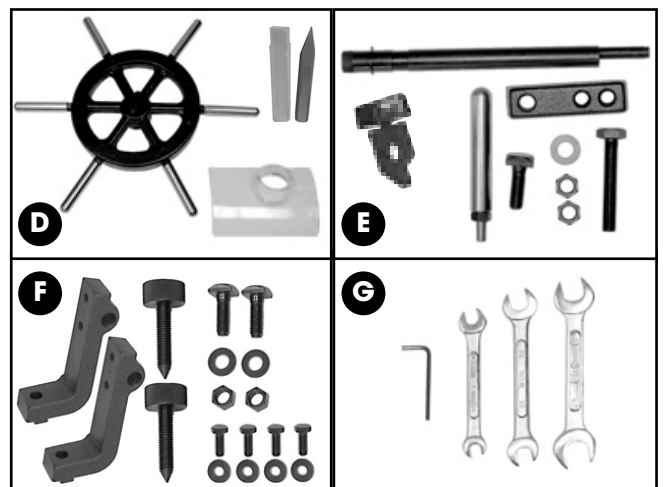
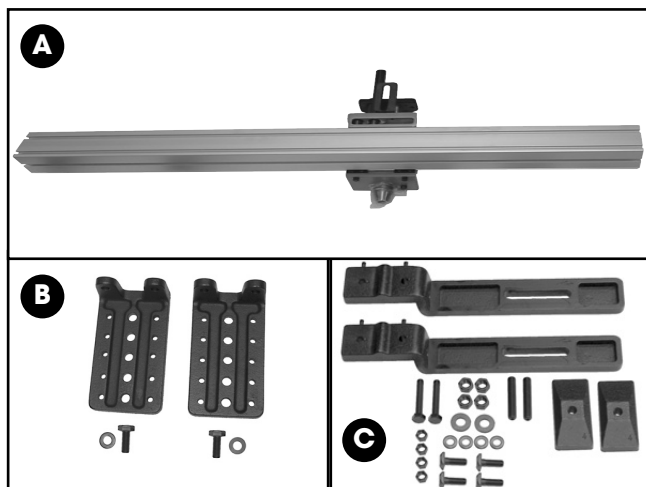
Carefully unpack and remove the unit and its components from its shipping containers and check for missing or damaged items as per the list of contents below.

Tip: It is recommended to group all of the parts in each plastic bag together and keep them separate from the other components. This will make assembly much easier.

Note: Please report any damaged or missing items to your General International distributor immediately.

LIST OF CONTENTS

	Qty
A- DUPLICATOR ASSEMBLY WITH RAILS	1
B- SUPPORT BRACKET	2
— Washer 10 x 20 - 2	2
— Hex head bolt M10 x P1.5 - L30	2
C- SUPPORT BEAMS	2
— Clamping plates	2
— Set screw M12 x 1.75 - L65	2
— Hex nut M12 x 1.75	4
— Washer 12 x P26 - 2.5	2
— Hex head bolt M10 x 1.5 x L60	2
— Square head bolt M10 x P1.5 x L20	4
— Hex nut M10 x 1.5 - L30	4
— Washer 10 x 20 - 2	4
D- HANDWHEEL	1
CHIP GUARD	1
CUTTING TOOL WITH PLASTIC COVER	1
E- FOLLOWER ARM	1
FOLLOWER ARM FINE POINT	1
HANDLE	1
BACKUP SUPPORT	1
— Hex head bolt M10 x 1.5 - L55	1
— Square head bolt M10 x P1.5 - L30	1
— Hex nut M10 x 1.5 - L30	2
— Washer 10 x 20 - 2	1
F- CLAMPING BRACKETS	2
— Clamp screw	2
— Square head bolt M10 x P1.5 - L30	2
— Hex head bolt M6 x P1.0 - L20	4
— Washer P6	4
— Washer P10 x 20-2	2
— Hex nut M10 x P1.5 - L30	2
G- TOOLS	
— 4 mm Allen wrench	1
— 8/10 mm Combination wrench	1
— 12/14 mm Combination wrench	1
— 17/19 mm Combination wrench	1



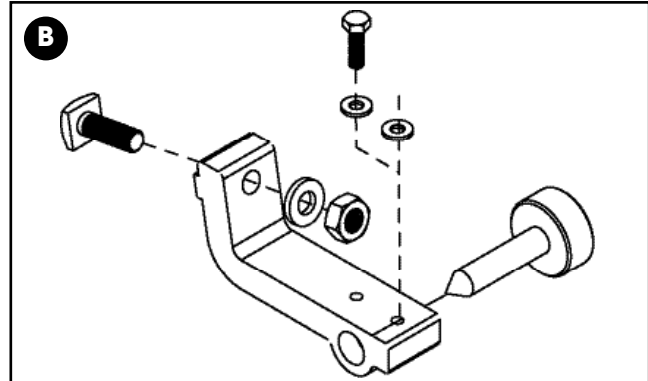
ADDITIONAL REQUIREMENTS FOR ASSEMBLY/INSTALLATION

- Allen wrench 6 mm
- Adjustable wrench
- Socket wrench kit
- Phillips head screwdriver
- An extra person for help with lifting



ASSEMBLING & INSTALLING THE DUPLICATOR ON A WOOD LATHE

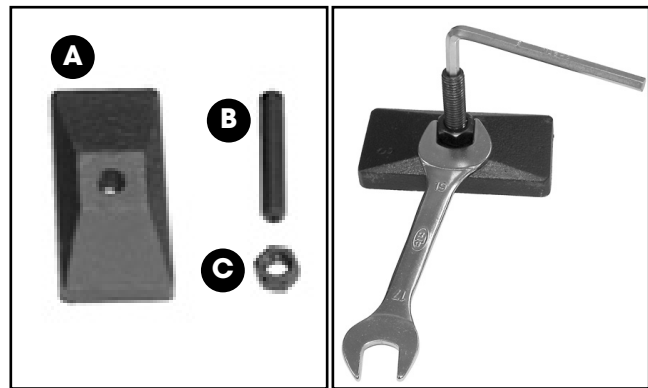
TEMPLATE CLAMPING BRACKET ASSEMBLIES



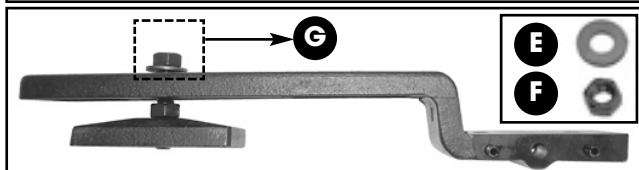
1. Assemble the clamping bracket components **A** as shown in **B**, and set them aside for now.

ASSEMBLING THE CLAMPING PLATE HARDWARE

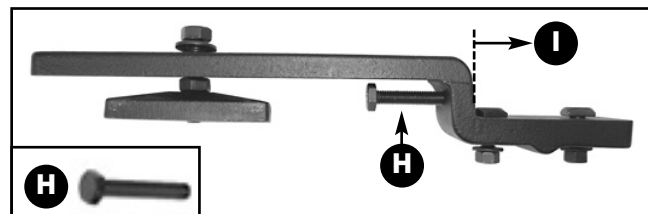
1. Lay one clamping plate **A** on a flat surface with the flat side down.
2. Thread one 12 mm set screw **B** into the threaded hole in the clamping plate until it is flush with the flat surface.
3. Thread a M12 nut **C** onto the set screw until it touches the clamping plate.
4. Using the 6 mm allen wrench, hold the set screw while tightening the nut with the supplied 19 mm wrench as shown.
5. Do this for both of the clamping plates.



ASSEMBLING THE CLAMPING PLATES TO THE SUPPORT BEAMS



1. Fit the set screws on the clamping plates into the slot **D** on the support beams and secure them to the beams with a 12 x P26 washer **E** and M12 hex nut **F**, leaving them loose for now **G**.



On lathes that have a swing of 14" or more:
Bolt **H** is used as an alignment stop to set the duplicator parallel to the bed ways. It makes it much quicker when re-mounting the duplicator by pre-setting the position the duplicator was in before you removed it.

- Note:** If your wood lathe swing diameter is 12", then **DO NOT** install the alignment bolt **G** on the support beams.
2. For lathes with a swing of 14" or more, install a 12 mm x 65 mm long alignment bolt **H** and thread into each support beam until it is flush with the other side of the hole.

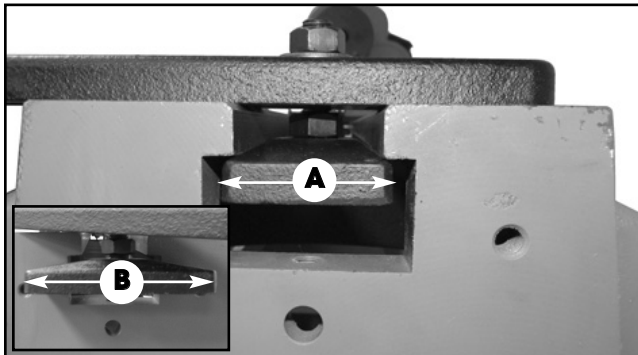
MOUNTING THE SUPPORT BEAMS

Preliminary note

Before installing the duplicator on the lathe, it is a good practice to take a moment to make sure that the headstock and tailstock points on the lathe are aligned. Duplicating with headstock and tailstock points that are misaligned will cause the finished duplication to be tapered from one end to the other in relation to your template or original spindle.

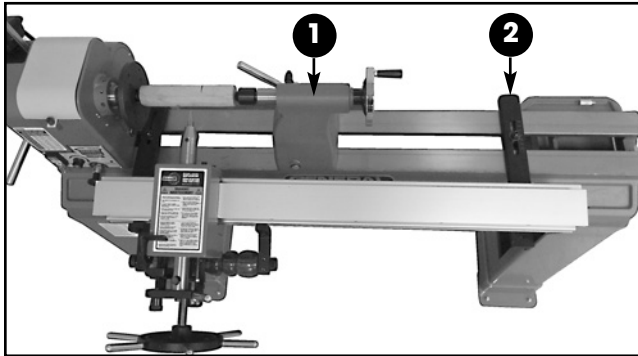


TURN OFF AND UNPLUG THE LATHE FROM THE POWER SOURCE BEFORE ASSEMBLING AND INSTALLING THE DUPLICATOR ON A WOOD LATHE.



1. Remove the tailstock and the tool rest from the lathe.
2. Mount the two support beams on the lathe bed by sliding the clamping plate between the ways.

Note: Because the clamping plates are rectangular, they may be clamped in two directions, A or B, depending on the width of the lathe bed.



3. a) For a typical installation when working with longer spindles, position the left hand support beam approximately 1" from the headstock, C.

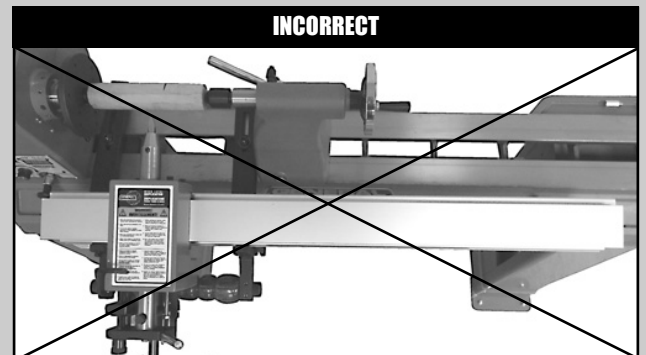
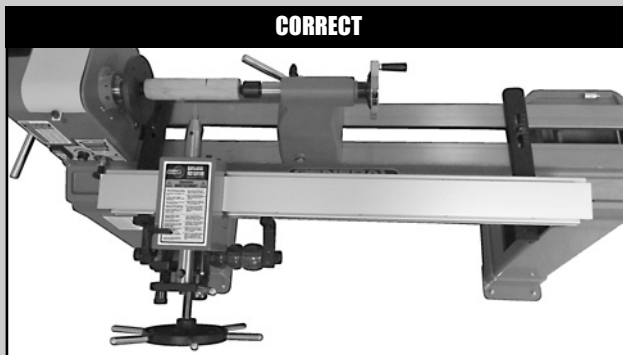
The right hand support beam, D, should be spaced roughly 2/3 to 3/4 of the length of the lathe bed away from the left beam.

3. b) For a stable installation of the duplicator when working with short workpieces, it is preferable to first install the tailstock on the lathe, 1, and then position the right hand support beam, 2, behind it as shown.

4. At this time, lightly tighten the support beams to secure them on the lathe bed.

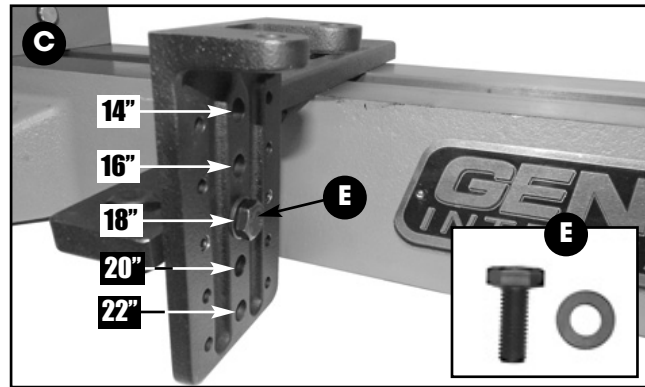
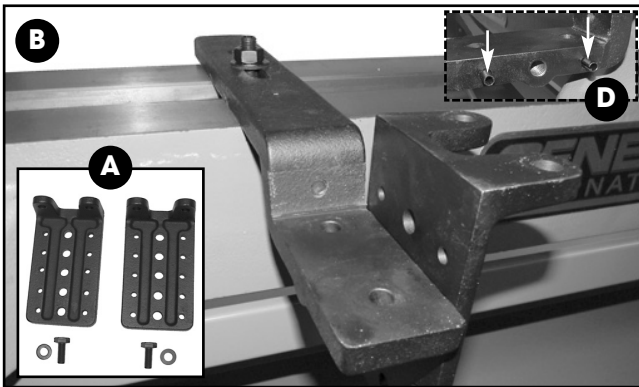
Note: The final tightening of the support beam assemblies will be done later, once the duplicator has been aligned parallel to the lathe bed in section "ALIGNING DUPLICATOR PARALLEL TO THE LATHE BED".

Note: To avoid chatter or excess vibration when duplicating, make sure to install the support beams as far as reasonably possible from each other on the bed. Installing the two beams too close to each other, i.e. within the same half of the lathe bed (as shown on right), may cause the duplicator to twist or shake, and the excess vibration will affect the finish quality of the workpiece, requiring substantially more sanding.



MOUNTING THE SUPPORT BRACKETS

Note: You do not need to install support brackets on a lathe with a 12" diameter swing.



1. The two support brackets **A** are mounted vertically to the two support beams as shown in **B**.
2. Each support bracket has 5 holes on the center line **C**. These 5 holes are used for adjusting the height of the support bracket to meet your lathe swing. (The holes are for swings of 14", 16", 18", 20", 22").

*Note: If your wood lathe swing diameter is 12", then you **DO NOT** need to use the two support brackets. Skip ahead to the next section "Mounting the duplicator rail".*

3. To mount the support brackets to the support beams, align the two holes on the right and left side of the support brackets with the two pins, **D**, on the support beams.
4. Install the 10 x 20 mm washer and 10 x 1.5 mm bolt **E** and tighten to secure the support bracket.

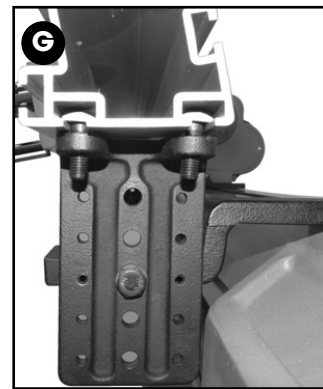
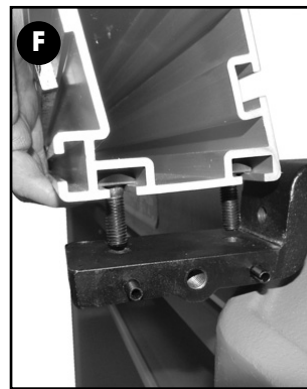
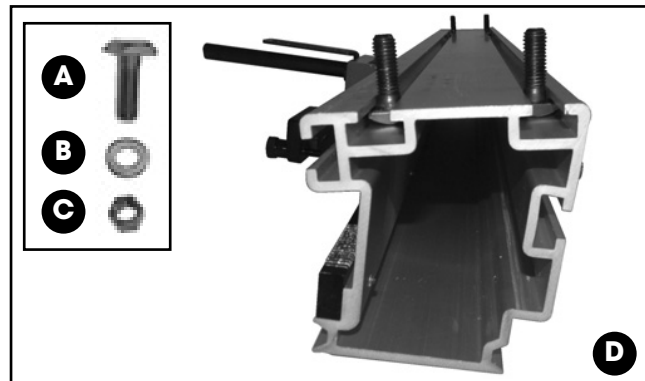
MOUNTING THE DUPLICATOR RAIL



TO LIMIT THE POTENTIAL FOR INJURY, INCLUDING SERIOUS LACERATION, ALWAYS MAKE SURE TO REMOVE THE CUTTING TOOL FROM THE DUPLICATOR BEFORE INSTALLING OR REMOVING THE DUPLICATOR FROM THE LATHE.

*Hint: Before you begin, have the four 10 x 20 -2 flat washers, **B**, and four M10 x 1.5 - L30 hex nuts, **C**, in hand and ready to thread onto the bolts because you will not be able to let go of the duplicator until it is fastened to the support brackets.*

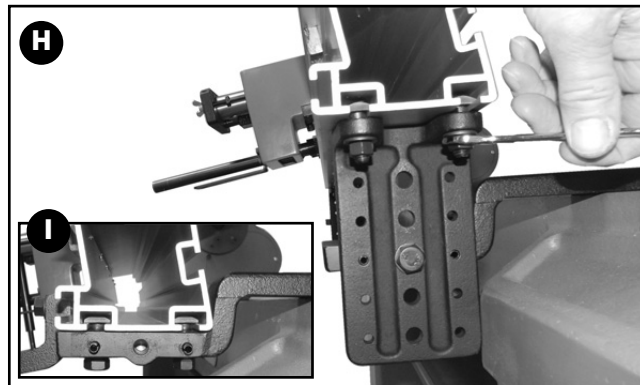
1. Install the (4) 10 mm square head bolts, **A** by sliding them into the bottom t-slots, as shown in **D**. Locate them about 2 inches in from the ends.



BE SURE TO HAVE AT LEAST 2 HELPERS WHEN MOUNTING. BECAUSE OF THE CARRIAGE WEIGHT IN THE FRONT, THE UNIT WILL NOT BALANCE ON THE SUPPORT BEAMS UNTIL THE MOUNTING BOLTS ARE SECURE. IT MAY FLIP FORWARDS CAUSING SERIOUS INJURY.

2. With helpers to assist in the lifting **E**, align the 4 square head bolts on the duplicator rail with the four holes on the support beams (12" Lathe swing), **F**, or support brackets (swing larger than 12"), **G**, and lower the rail until it is resting on the support beams. **Do not let go of the unit at this time.**

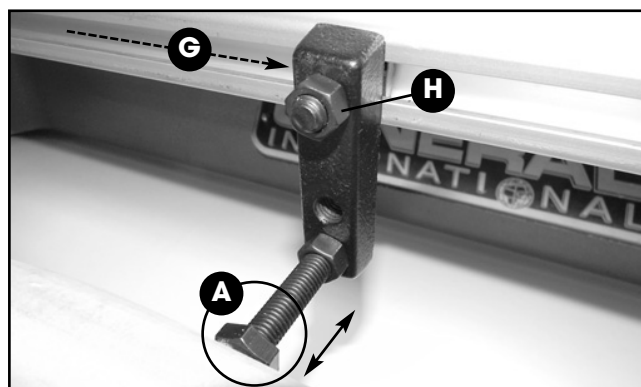
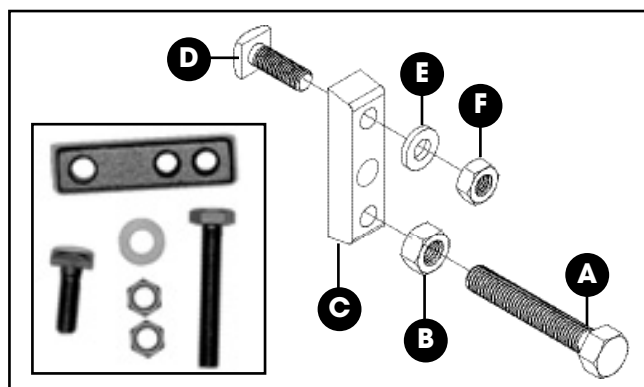
3. Install the four 10 x 20 -2 flat washers and four M10 x 1.5 - L30 hex nuts, **B** and **C**, onto the four square head bolt threads and snug them up by hand.
4. Once the duplicator rail is in position on the support brackets, **H**, or beams, **I**, use the supplied 14 mm wrench to tighten the 10 mm nuts.



ASSEMBLING AND MOUNTING THE TEMPLATE BACKUP SUPPORT

The template backup support is used to support the middle section of longer templates or sample turnings to prevent the template or sample turning from deflecting inwards when the duplicator stylus pushes against it.

It should be mounted to the carriage rail roughly centered on the template or sample turning and the stop bolt **A** should be adjusted in inwards or outwards as needed to just touch against the back of the template or sample turning (as shown below on right).



1. Assemble the backup support as shown above, by threading a hex nut **B** onto the end of the longer M10 hex stop bolt **A** far enough to expose roughly 3/8" of the end of the bolt beyond the nut, and then threading the exposed threads on the end of the bolt into the bottom hole in the support plate **C**.
2. Fit the shorter square head bolt **D** through the back of the support plate and secure it in place with a washer **E** and hex nut **F**.
3. Slide the T-head bolt into the t-slot in the rail as shown, **G**, until the support is roughly centered on the rail and then tighten the nut, **H**, to secure it in place.

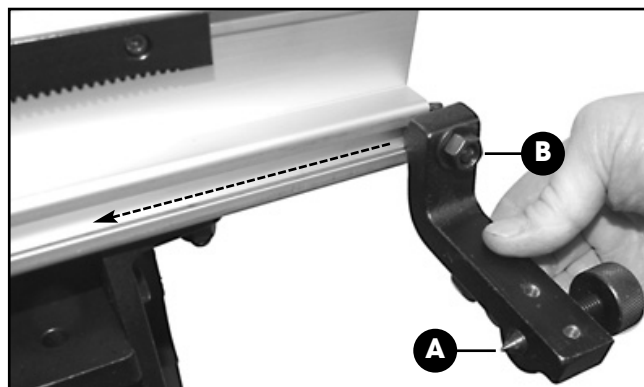
MOUNTING THE TEMPLATE CLAMPING BRACKETS

The duplicator is supplied with two clamping brackets that are used to hold the template or original spindle in place at each end.

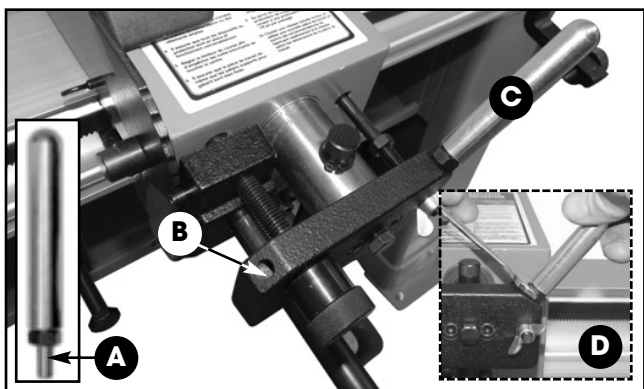
Hint: When installing the brackets, make sure to orient them so that the points **A** are facing inwards.

To mount the clamping brackets:

1. From each end of the duplicator, slide the t-head bolt of each of the brackets into the t-slot in the rail as shown.
2. The final positioning of the brackets will depend on the length of the template or original spindle being used to duplicate. Set the bracket positioning so that the distance between the points **A** is roughly 1/8" more than the length of template or original spindle. Once in position tighten down the nut **B** to secure the brackets in place.

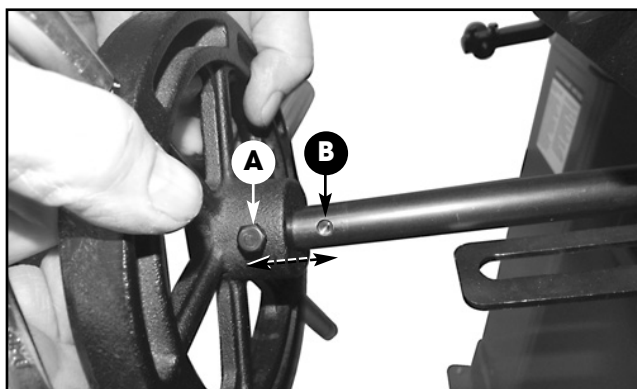


INSTALLING THE SLIDE HANDLE



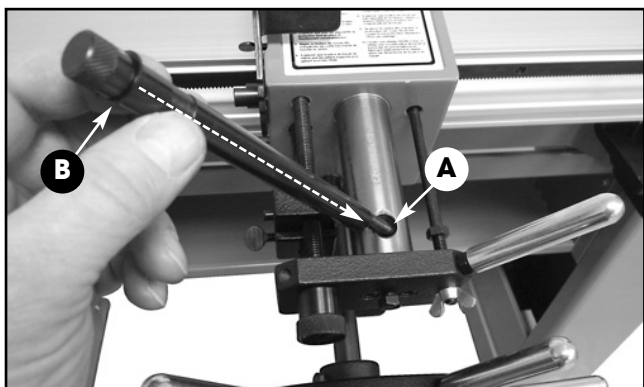
1. Screw the threaded end of the slide handle, **A**, into the hole in either the top left **B** or right **C** of the fixing block until it stops at the nut.
2. Tighten down the nut **D** to secure the handle to the block.

INSTALLING THE HANDWHEEL



1. Fit the handwheel hub onto the end of the shaft taking care to line up the bolt **A** with the hole in the shaft **B** as shown.
2. Secure the handwheel to the shaft by tightening the bolt using the supplied 10 mm wrench.

ATTACHING THE FOLLOWER ARM WITH STYLUS TO THE CARRIAGE ASSEMBLY



1. Insert the stylus end of the follower arm into the hole, **A** until it stops at the snap ring **B**.



2. Tighten the bolt **C** using the supplied 12 mm open end wrench.

ATTACHING THE CHIP GUARD

The chip guard will keep debris from getting onto the duplicator and possibly hindering smooth movement of the carriage assembly.

1. Slip the hole in the guard over the cutting tool arbor until it is past the set screw as shown.

The built in pressure ring on the guard holds it in place. A slight rotating action while sliding the guard forward or backwards on the arbor shaft will aid in repositioning.

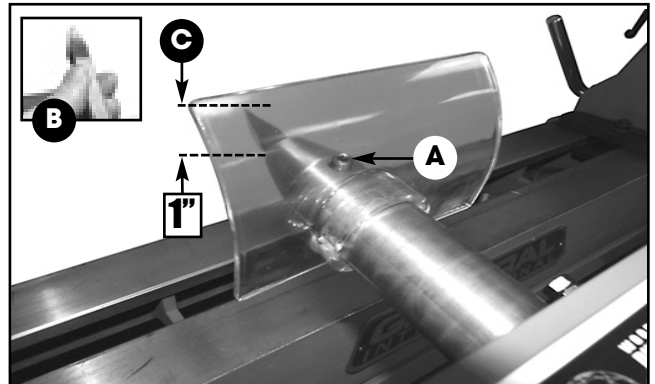


MOUNTING THE CUTTING TOOL



THE CUTTING TOOL MUST BE SECURELY INSTALLED IN THE TOOL HOLDER. A LOOSE OR DISLODGED CUTTING TOOL MAY CAUSE SERIOUS INJURY TO THE USER AND/OR DAMAGE TO THE LATHE, DUPLICATOR OR THE WORKPIECE.

1. Loosen the tool lock screw **A** by using the supplied 4 mm Allen Wrench.
2. Insert the cutting tool into the tool holder. Make sure the flat surface on the cutting tool is facing upward, **B**.
3. The cutting tool should protrude approximately 1" from the end of the tool holder, **C**.
4. Tighten the cutting tool securely by using the 4 mm wrench.



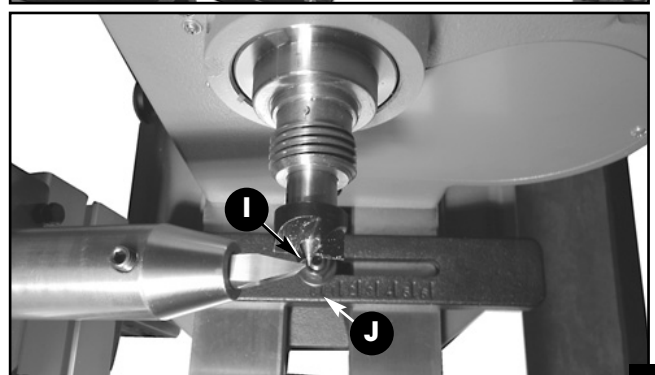
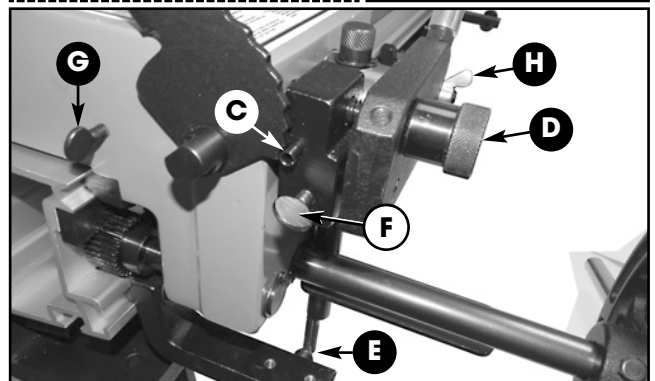
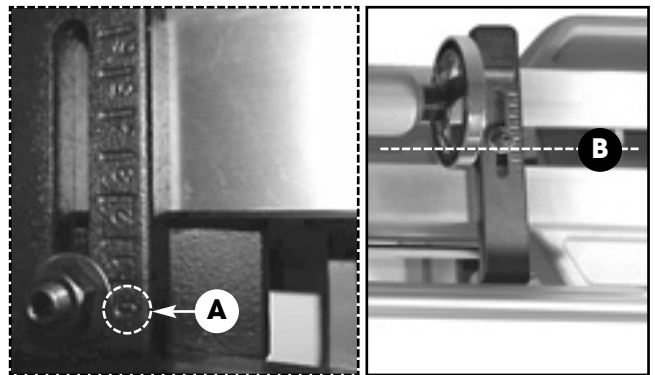
ALIGNING DUPLICATOR PARALLEL TO THE LATHE BED

Now that the duplicator is mounted to the lathe and all of the components are assembled, it is time to fine tune the alignment. These steps will ensure that the duplicator is parallel to the bed of the lathe.

1. Disconnect the Lathe from the power source.
2. Mount the centers in the headstock and tailstock of the lathe.
3. Align the "0" mark, **A**, on the support brackets to the center of the lathe bed ways, **B**, and in line with the headstock and tailstock center points.

This scale is used for rough alignment of the duplicator parallel to the bed ways. At the "0" mark you will be able to duplicate up to 6 inches in diameter (for larger turnings, see page 15).

4. Set the retaining plate pin to the lowest setting on the ratchet plate **C**.
5. Turn the micro adjustment knob **D** to its lowest setting until the follower arm with the stylus hits the stop **E**.
6. Turn thumb screws **F** and **G** to lock the setting.
7. If the follower arm movement is not smooth, loosen the spring tension adjustment nut **H**.
8. Using the handwheel, move the carriage to the left towards the headstock until the point of the cutting tool lines up with the point of the headstock center, **I**. (Note how the 0 marks also lines up vertically with the points), **J**.

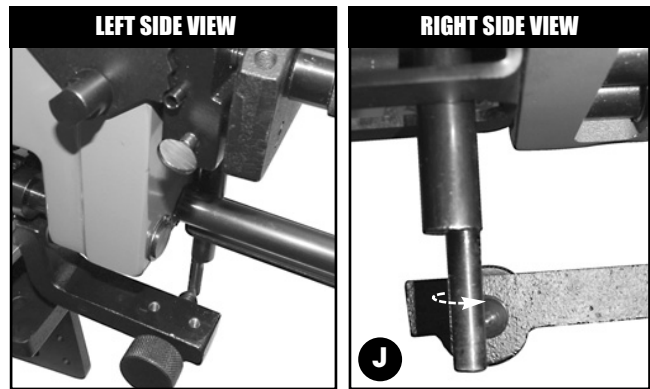


9. Align the inside edge of the stylus with the center point of the clamping bolt. The stylus is off center (eccentric) and it may be necessary to rotate the shaft to line it up, **J**.

10. Move the carriage of the duplicator towards the tailstock and bring the point of the cutting tool against the point on the tailstock center as you did with the headstock.

If the 2 points are not lined up, your turning will be tapered. Simply loosen the mounting bolt on the support bracket where the 0 to 6 scale is located and move the duplicator in or out until the points touch.

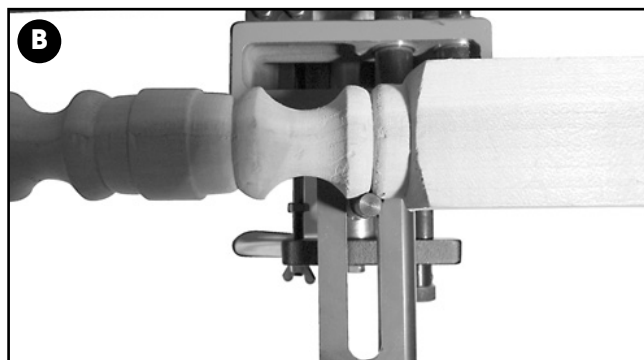
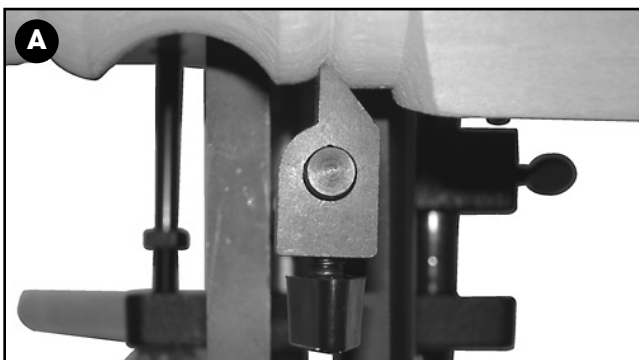
11. With the duplicator parallel to the lathe bed, firmly tighten the support beams using the supplied 19 mm wrench.



DUPLICATING FROM A TURNING SAMPLE (ORIGINAL SPINDLE)

Now that the duplicator is mounted onto the machine and it is aligned parallel to the bed ways, you will need to mount the part that you want to duplicate.

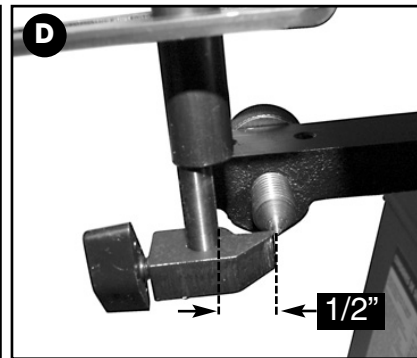
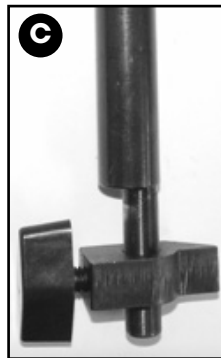
Note: Before you begin you must determine whether the turning has any sharp V cuts or angles. If so you will want to use the fine point stylus attachment, **A**, as the round stylus will not fit into tight grooves, **B**.



1. Attach the fine point stylus by slipping the hole in the attachment over the round stylus, and tighten the lock knob, **C**.

*If you were to mount the fine point attachment at the current settings, your turning would be 1/2" larger than your template. This happens because the attachment point is 1/2" longer than the round stylus that you aligned the center points with during the initial setup, **D**.*

To correct this:

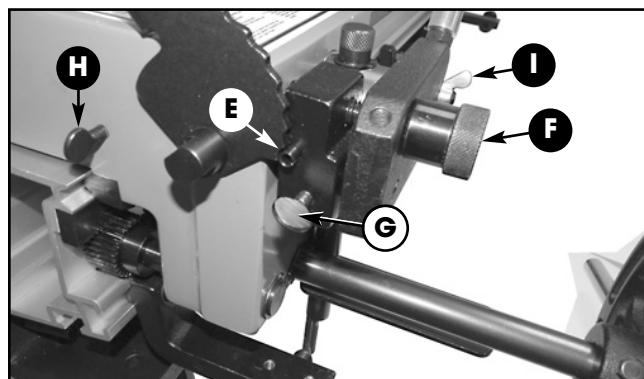


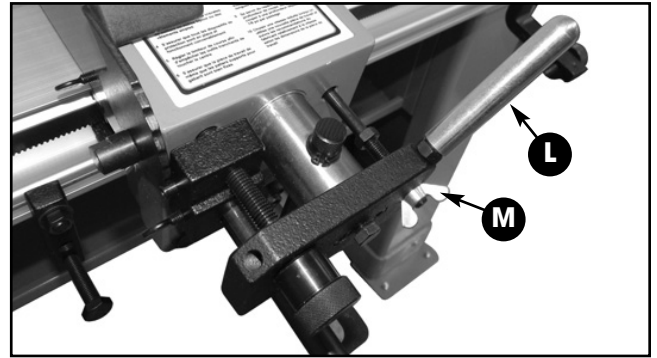
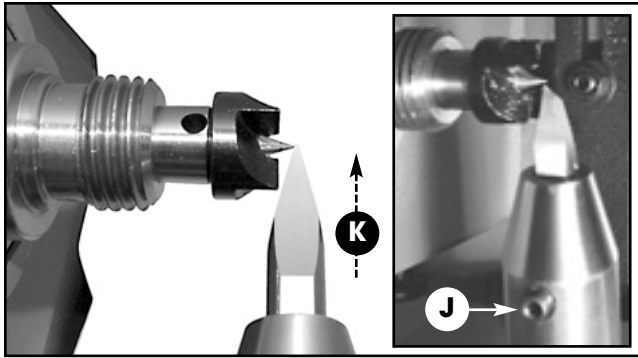
2. Unplug the lathe from the power source.

3. Set the retaining plate pin to the lowest setting on the ratchet plate **E**.

4. Turn the micro adjustment knob **F** until the tip of the fine point attachment installed on the follower arm lines up with the center point of the clamping bolt. (as shown in **D**).

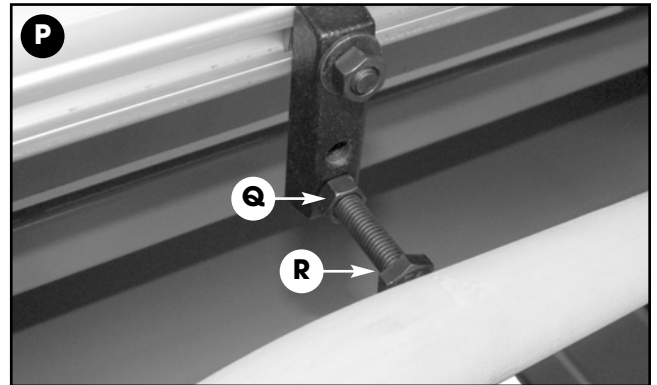
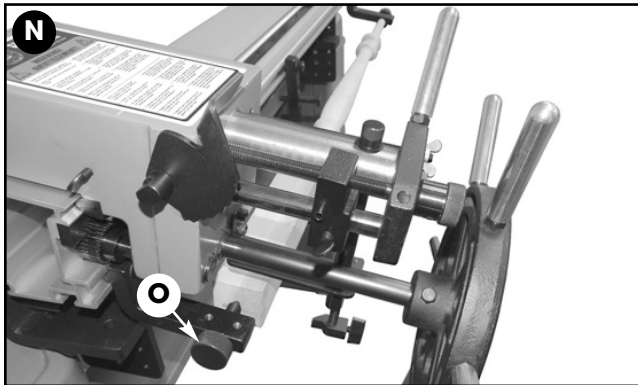
5. Turn thumb screws **G** and **H** to lock the setting. If the follower arm movement is not smooth, loosen the spring tension adjustment nut **I**.





The cutting tool will now be 1/2 in away from the headstock center.

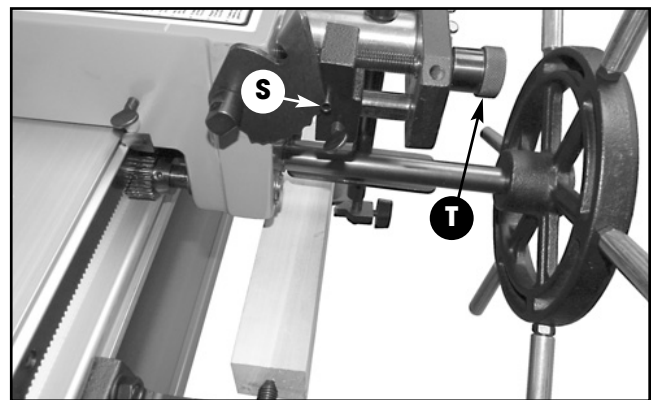
6. Loosen the cutting tool set screw **J** using the supplied 4 mm allen wrench and move it out of the cutting tool arbor until it touches the center point of the headstock center, **K**. Tighten the set screw.
7. Using the handle, **L**, pull the cutting tool arbor as far back towards you as it will go, and lock it in position using the thumbscrew, **M**.



8. Mount the sample turning you want to duplicate between the center points on the clamping brackets, **N**. (do not move the left hand bracket position or the turnings will be uneven) Adjust the right hand clamping bracket to the length of the sample turning. Turn the knob, **O**, on each clamping bracket so that the center points insert into the ends of the sample turning.
9. Position the template backup support at the location that provides the most effective support along the entire length of the sample turning being used, **P**. Loosen the locking nut, **Q**, and turn the adjustment screw, **R**, so that it just makes contact with the sample turning. Tighten the locking nut back up with the supplied 14 mm open end wrench. *This will keep the sample turning from deflecting when the stylus puts pressure against it.*

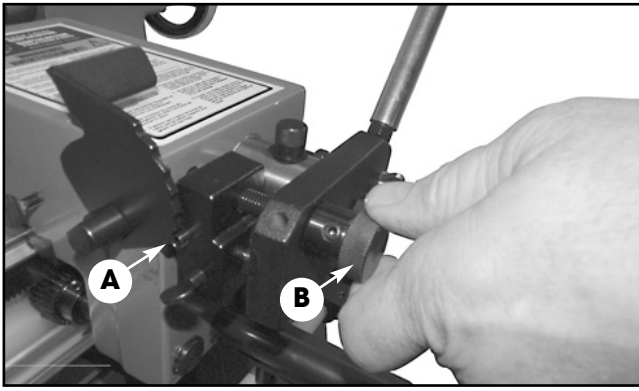
Note: The backup support must always be used regardless of whether a template or a sample turning is being used for duplicating.

10. Mount your workpiece between the headstock and tailstock centers and lock the tailstock into place on the lathe bed ways. Position the stylus so that it is against the largest diameter of the turning.
11. Set the ratchet plate to the upper (Highest) position, **S**. Keeping tension on the handle, loosen the arbor lock thumbscrew and slowly release the arbor until the pin contacts the ratchet plate. Turn the micro adjustment knob, **T**, in or out until the stylus is 1/8" away from the largest part of the sample turning.
12. Turn the workpiece by hand to make sure it clears the cutting tool.

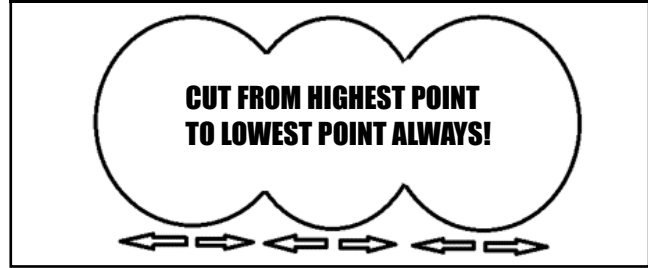


NOTE: IF YOUR WORKPIECE STOCK MATERIAL IS SQUARE, YOU CAN SAVE TIME AND WEAR ON THE CUTTING TOOL BY BY CUTTING OFF THE CORNERS. A BANDSAW OR TABLESAW CAN BE USED TO TURN THE SQUARE STOCK INTO AN OCTAGON BY MAKING A BEVEL CUT ALONG THE LENGTH OF THE STOCK.

ADJUSTING DEPTH OF CUT



TIP: When turning a workpiece of varying diameters, always try to cut downhill instead of uphill, the bit will cut better and have less tearout on the workpiece. See example below.



The depth of cut is controlled by the ratchet plate **A**, combined with the micro adjustment knob **B**. Each notch on the ratchet plate represents a 3 mm (approx 1/8") depth of cut increment.

When the ratchet plate is locked at the lowest notch, the stylus should just touch the template or sample turning at its smallest point. Start the lathe up and move the carriage from the left to the right over the entire length of the workpiece. Keep advancing the ratchet plate one notch at a time until the workpiece is round. Once the workpiece is round you will start to cut the contours as the stylus contacts them on you sample piece.

When the workpiece approaches the sample turning diameter, use the micro-adjustment depth control knob **B** to accurately control the final cutting diameter.

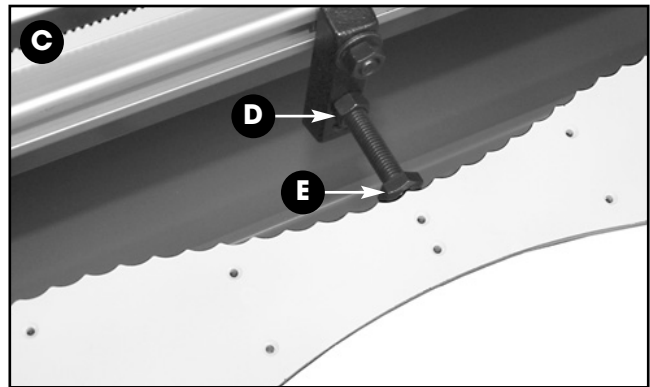
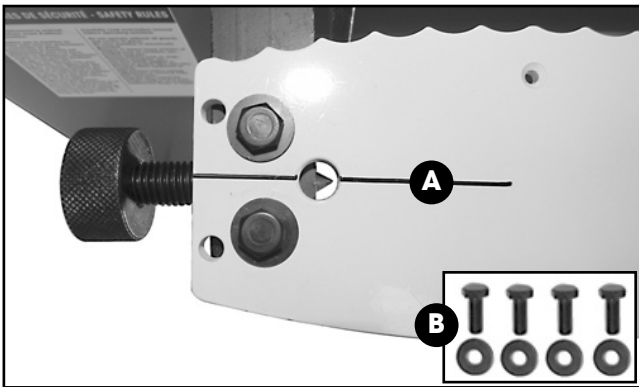


MAKE SURE THE RATCHET PLATE IS SECURELY LOCKED IN PLACE. A LOOSE OR DISLOGGED RATCHET PLATE MAY CAUSE SERIOUS INJURY TO THE USER AND/OR DAMAGE TO THE LATHE, DUPLICATOR OR THE WORKPIECE. MAKE SURE ALL NUTS ARE FASTENED SECURELY BEFORE YOU START TURNING OPERATIONS.

DUPLICATING FROM A TEMPLATE

This process is the same as duplicating from a turning except you will be using a template instead of a sample turning.

Before you begin, mark a centerline on your template, **A**. This centerline represents the center points on the screws of the template mounting brackets, the one that hold a sample turning. This centerline assures that the template is parallel to the lathe bed. If it is not, your workpiece will be tapered.

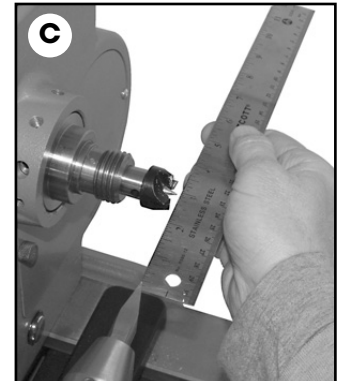
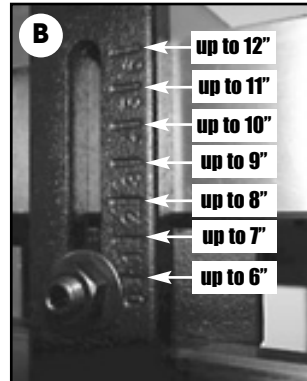
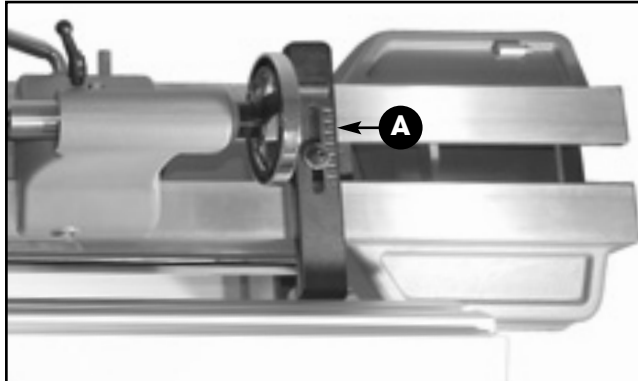


1. Mount the template onto the 2 template mounting brackets using the (4) 6 mm hex head bolts and washers, **B**.
2. Line up the centerline on the template with the center of the template mounting bracket screws. Tighten the bolts with the supplied 10 mm open end wrench
3. Position the template backup support at the location that provides the most effective support along the entire length of the template being used, **C**.
3. Loosen the locking nut, **D**, and turn the adjustment screw, **E**, so that it just makes contact with the template. Tighten the locking nut back up with a 14 mm open end wrench. This will keep the template from deflecting when the stylus puts pressure against the template.

Note: The backup support must always be used regardless of whether a template or a sample turning is being used for duplicating.

DUPPLICATING LARGER THAN A 6 INCH DIAMETER

Depending on the size and swing of your lathe, it may be possible to duplicate a turning larger than 6" in diameter. This is achieved by moving the duplicator out away from the bed ways. Using the "0 - 6" Scale on the support brackets, **A**, set the number for the desired diameter. Each number adds an inch to the maximum diameter that you can turn, **B**.



Use the lines that correspond to the number to rough align the duplicator parallel to the lathe bed ways. The alignment process will be the same as in the beginning of this manual, with the exception that the cutting tool will no longer be able to reach the center points in the headstock and tailstock. This measurement must be set with a ruler or vernier calipers, **C**.

Note: To duplicate a workpiece with a larger or smaller diameter than the original sample turning or template, move the cutting tool in the cutting tool arbor **IN** for larger and **OUT** for smaller.

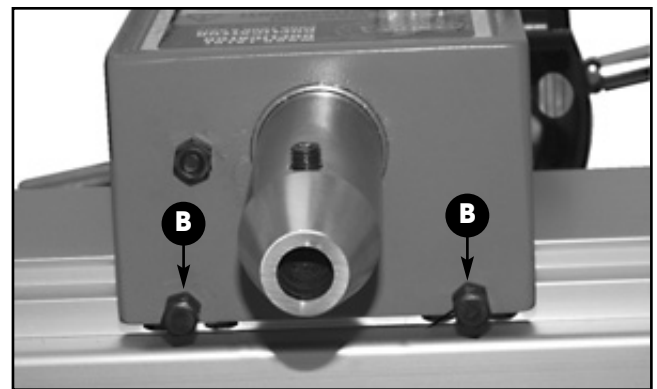
ADJUSTMENTS

CARRIAGE ASSEMBLY

The carriage assembly was aligned at the factory and should not require any further adjustment.

We do recommend that you periodically check the carriage assembly for side play. The carriage should travel along the rail smoothly with a small amount of drag.

To check for play in the assembly grasp the carriage at opposite corners and try to wiggle it side to side, **A**. If no side movement is detected, the carriage is ok.



To remove the side play:

1. Loosen the (2) 10 mm lock nuts **B** and turn the (2) 10 mm bolts clockwise 1/4 of a turn. Check for play again and re-adjust if necessary. Be careful not to tighten the bolts too much or the handwheel will be hard to turn and the carriage may not move smoothly.
2. Re-tighten the (2) 10 mm lock nuts with a 10 mm open end wrench.

ADJUSTING SPRING TENSION



The follower arm and stylus are kept against the template or sample turning by spring pressure. If the movement is not smooth you can adjust it.

Turn the wing nut:

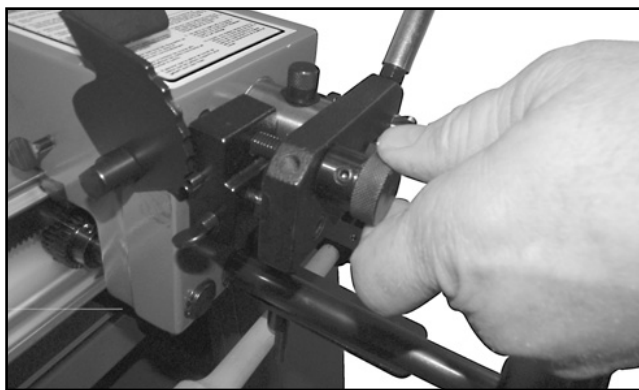
- clockwise to increase spring tension.
- counter-clockwise to decrease spring tension.

FOLLOWER ARM AND STYLUS

The stylus is mounted onto the follower arm off center (eccentric) so that it can be fine tuned.

To micro adjust the stylus loosen the follower arm locking bolt using the supplied 12 mm open end wrench and rotate the follower arm left or right. Re-tighten the locking bolt when set.

MICRO ADJUST DEPTH CONTROL KNOB



As a turning approaches its finished size, a final light pass of the cutting tool will give a smoother finish*. Turn the micro adjust depth knob clockwise until final depth is obtained.

** Note: Depending on the level of detail in your template or original spindle, some manual shaping of fine details and finish sanding will still be required.*



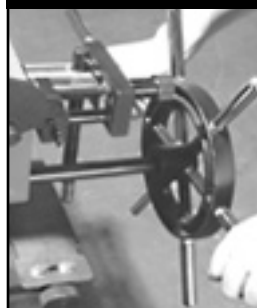
OPERATION

TURNING THE HANDWHEEL FOR DUPLICATING



TO AVOID HAND INJURY WHEN TURNING THE HANDWHEEL, PROPER TECHNIQUE SHOULD BE USED. HOLD THE HANDLES ON THE HANDWHEEL ONLY - DO NOT HOLD AND TURN THE HANDWHEEL BY ITS RIM.

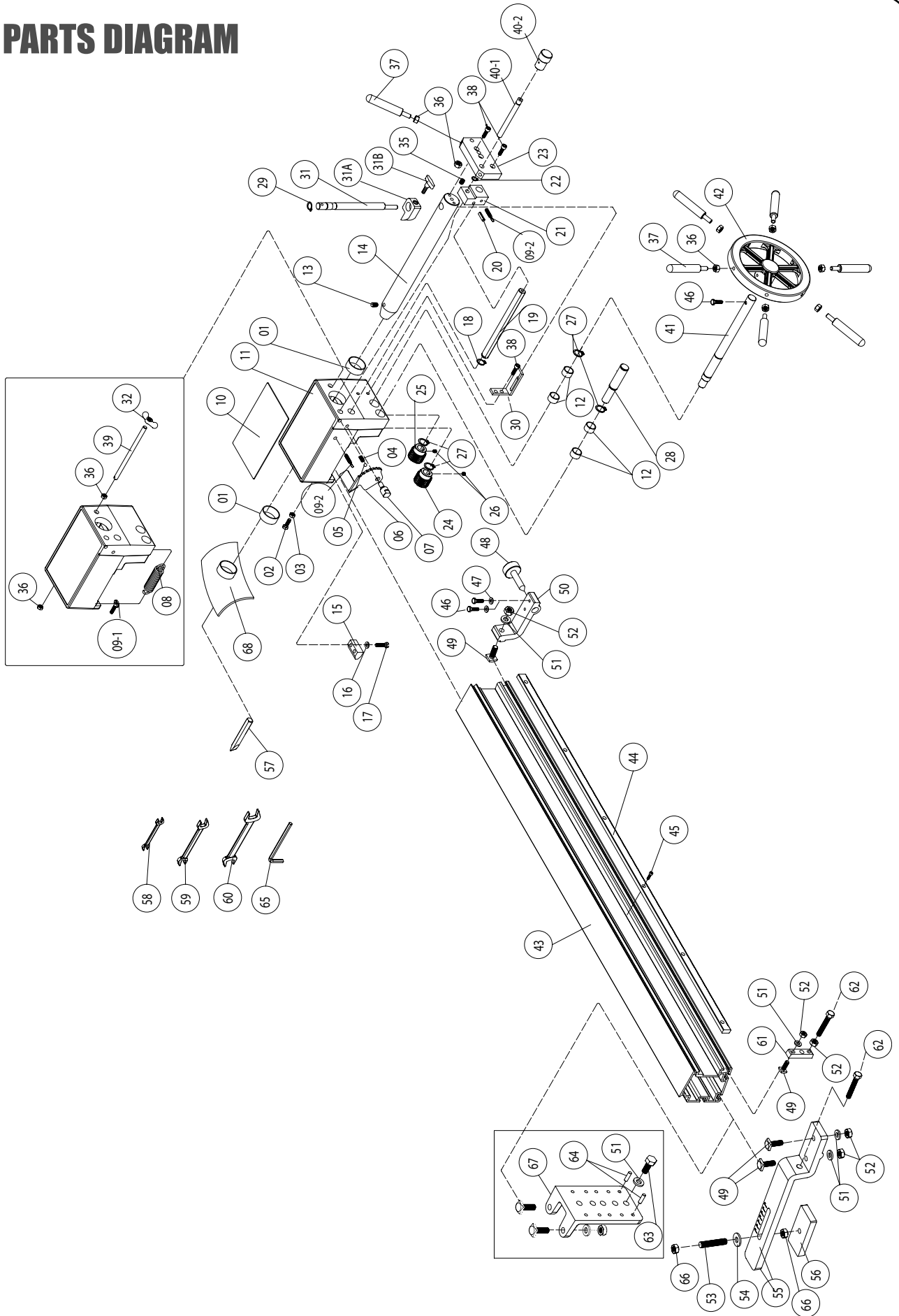
CORRECT



INCORRECT



PARTS DIAGRAM



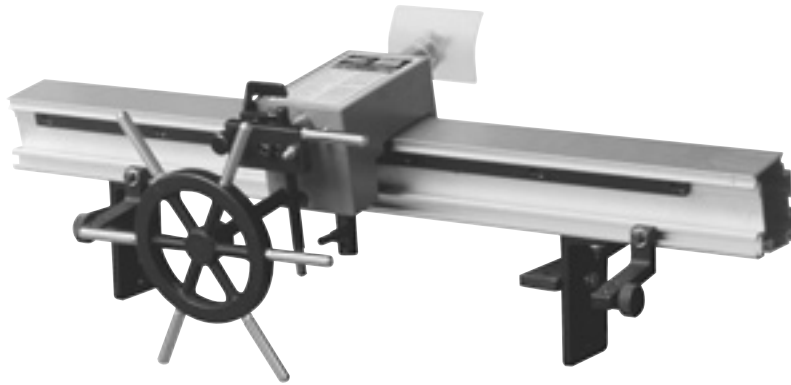
**PARTS LIST
25-036**

PART NO.	DESCRIPTION	SPECIFICATION	QTY	PART NO.	DESCRIPTION	SPECIFICATION	QTY
25036-01	PIVOT BUSHING		2	25036-35	HEX HEAD BOLT	M8XP1.25-L1	1
25036-02	HEX HD. BOLT	M6XP1.0-L20	2	25036-36	HEX NUT	M8XP1.25	9
25036-03	HEX NUT	M6XP1.0	3	25036-37	HANDLE		7
25036-04	TENSION SPRING		1	25036-38	CAP SCREW	M6XP1.0-L20	3
25036-05	INDEX PIN		1	25036-39	SPRING ROD		1
25036-06	RATCHET PLATE		1	25036-40-1	ADJUSTMENT ROD		1
25036-07	PIVOT PIN		1	25036-40-2	ADJUSTMENT KNOB		1
25036-08	SPRING		1	25036-41	GEAR PIVOT		1
25036-09-1	WING SCREW	M6X1.0-L25-HOLE	1	25036-42	HANDWHEEL		1
25036-09-2	WING SCREW	M6X1.0-L25	2	25036-43	DUPLICATION RAIL		1
25036-10	LABEL		1	25036-44	RACK		1
25036-11	CARRIAGE		1	25036-45	CAP SCREW	M4XP0.7-L10	6
25036-12	PIVOT BUSHING		4	25036-46	HEX HEAD BOLT	M6XP1.0-L20	5
25036-13	SET SCREW	8XP1.25-L16	1	25036-47	WASHER	Ø6	4
25036-14	CUTTERHEAD		1	25036-48	BOLT		2
25036-15	ADJUSTING GUIDE		4	25036-49	SQUARE HEAD BOLT	M10XP1.5-L30	7
25036-16	WASHER	Ø6	8	25036-50	CLAMPING BRACKETS		2
25036-17	HEX HEAD BOLT	M6XP1.0-L25	8	25036-51	WASHER	Ø10X20-2	9
25036-18	C-RING	C-15	1	25036-52	HEX NUT	M10XP1.5	8
25036-19	GUIDE ROD		1	25036-53	BOLT	M12X1.75-L65	2
25036-20	SPRING PIN	Ø6XL20	1	25036-54	WASHER	Ø12XØ26-2.5	2
25036-21	ADJUSTING BLOCK		1	25036-55	SUPPORT BEAMS		2
25036-22	C-RING	C-9	1	25036-56	CLAMPING PLATES		2
25036-23	FIXING BLOCK		1	25036-57	CUTING TOOL	HSS	1
25036-24	GEAR	30T	1	25036-58	OPEN WRENCH	10X8	1
25036-25	GEAR	28T	1	25036-59	OPEN WRENCH	12X14	1
25036-26	SET SCREW	M6XP1.0-L8	3	25036-60	OPEN WRENCH	17X19	1
25036-27	C-RING	C-18	4	25036-61	BACKUP SUPPORT		1
25036-28	OVAL WHEEL AXLE		1	25036-62	HEX HD BOLT	M10XP1.5-L55	3
25036-29	C-RING	C-14	1	25036-63	HEX HD BOLT	M10XP1.5-L30	2
25036-30	STYLUS AUXILIARY DEVICE		1	25036-64	SPRING PIN	Ø6XL20	4
25036-31	STYLUS		1	25036-65	ALLEN KEY	4MM	1
25036-31A	STYLUS FINE POINT		1	25036-66	HEX NUT	M12X1.75	2
25036-31B	WING SCREW		1	25036-67	SUPPORT BRACKET		2
25036-32	WING NUT		1	25036-68	GUARD		1

NOTES

Notes

MODEL 25-036



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orderdesk@general.ca
www.general.ca

IMPORTANT

When ordering replacement parts, always give the model number, serial number of the machine and part number. Also a brief description of each item and quantity desired.