



Haas Automation, Inc.

Toolroom Lathe

Next Generation Control
Operator's Manual Supplement
96-0112
Revision AL
February 2020
English
Original Instructions

Haas Automation Inc.
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Oxnard, CA 93030-8933
U.S.A. | HaasCNC.com

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Each CNC Machine and its Components (collectively, “Haas Products”) are warranted by Manufacturer against defects in material and workmanship. This warranty is provided only to an end-user of the CNC Machine (a “Customer”). The period of this limited warranty is one (1) year. The warranty period commences on the date the CNC Machine is installed at the Customer’s facility. Customer may purchase an extension of the warranty period from an authorized Haas distributor (a “Warranty Extension”), any time during the first year of ownership.

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This Certificate supersedes any and all other agreements, promises, representations, or warranties, either oral or in writing, between the parties or by Manufacturer with respect to subject matter of this Certificate, and contains all of the covenants and agreements between the parties or by Manufacturer with respect to such subject matter. Manufacturer hereby expressly rejects any other agreements, promises, representations, or warranties, either oral or in writing, that are in addition to or inconsistent with any term or condition of this Certificate. No term or condition set forth in this Certificate may be modified or amended, unless by a written agreement signed by both Manufacturer and Customer. Notwithstanding the foregoing, Manufacturer will honor a Warranty Extension only to the extent that it extends the applicable warranty period.

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This warranty is transferable from the original Customer to another party if the CNC Machine is sold via private sale before the end of the warranty period, provided that written notice thereof is provided to Manufacturer and this warranty is not void at the time of transfer. The transferee of this warranty will be subject to all terms and conditions of this Certificate.

Miscellaneous

This warranty shall be governed by the laws of the State of California without application of rules on conflicts of laws. Any and all disputes arising from this warranty shall be resolved in a court of competent jurisdiction located in Ventura County, Los Angeles County, or Orange County, California. Any term or provision of this Certificate that is invalid or unenforceable in any situation in any jurisdiction shall not affect the validity or enforceability of the remaining terms and provisions hereof, or the validity or enforceability of the offending term or provision in any other situation or in any other jurisdiction.

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If you have concerns or questions regarding this Operator's Manual, please contact us on our website, www.HaasCNC.com. Use the "Contact Us" link and send your comments to the Customer Advocate.

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Customer Satisfaction Policy

Dear Haas Customer,

Your complete satisfaction and goodwill are of the utmost importance to both Haas Automation, Inc. and the Haas distributor (HFO) where you purchased your equipment. Normally, your HFO will rapidly resolve any concerns you have about your sales transaction or the operation of your equipment.

However, if your concerns are not resolved to your complete satisfaction, and you have discussed your concerns with a member of the HFO's management, the General Manager, or the HFO's owner directly, please do the following:

Contact Haas Automation's Customer Service Advocate at 805-988-6980. So that we may resolve your concerns as quickly as possible, please have the following information available when you call:

- Your company name, address, and phone number
- The machine model and serial number
- The HFO name, and the name of your latest contact at the HFO
- The nature of your concern

If you wish to write Haas Automation, please use this address:

Haas Automation, Inc. U.S.A.
2800 Sturgis Road
Oxnard CA 93030
Att: Customer Satisfaction Manager
email: customerservice@HaasCNC.com

Once you contact the Haas Automation Customer Service Center, we will make every effort to work directly with you and your HFO to quickly resolve your concerns. At Haas Automation, we know that a good Customer-Distributor-Manufacturer relationship will help ensure continued success for all concerned.

International:

Haas Automation, Europe
Mercuriusstraat 28, B-1930
Zaventem, Belgium
email: customerservice@HaasCNC.com

Haas Automation, Asia
No. 96 Yi Wei Road 67,
Waigaoqiao FTZ
Shanghai 200131 P.R.C.
email: customerservice@HaasCNC.com



Declaration of Conformity

Product: CNC Lathes (Turning Centers)*

*Including all options factory- or field-installed by a certified Haas Factory Outlet (HFO)

Manufactured By: Haas Automation, Inc.
2800 Sturgis Road, Oxnard CA 93030
805-278-1800

We declare, in sole responsibility, that the above-listed products, to which this declaration refers, comply with the regulations as outlined in the CE directive for Machining Centers:

- Machinery Directive 2006 / 42 / EC
- Electromagnetic Compatibility Directive 2014 / 30 / EU
- Additional Standards:
 - EN 60204-1:2006 / A1:2009
 - EN 614-1:2006+A1:2009
 - EN 894-1:1997+A1:2008
 - EN ISO 13849-1:2015

RoHS2: COMPLIANT (2011/65/EU) by Exemption per producer documentation.

Exempt by:

- a) Large scale stationary industrial tool.
- b) Lead as an alloying element in steel, aluminum, and copper.
- c) Cadmium and its compounds in electrical contacts.

Person authorized to compile technical file:

Jens Thing

Address:

Haas Automation Europe
Mercuriusstraat 28
B-1930 Zaventem
Belgium

USA: Haas Automation certifies this machine to be in compliance with the OSHA and ANSI design and manufacturing standards listed below. Operation of this machine will be compliant with the below-listed standards only as long as the owner and operator continue to follow the operation, maintenance, and training requirements of these standards.

- *OSHA 1910.212 - General Requirements for All Machines*
- *ANSI B11.5-1984 (R1994) Lathes*
- *ANSI B11.19-2010 Performance Criteria for Safeguarding*
- *ANSI B11.22-2002 Safety Requirements for Turning Centers and Automatic Numerically Controlled Turning Machines*
- *ANSI B11.TR3-2000 Risk Assessment and Risk Reduction - A Guideline to Estimate, Evaluate, and Reduce Risks Associated with Machine Tools*

CANADA: As the original equipment manufacturer, we declare that the listed products comply with regulations as outlined in the Pre-Start Health and Safety Reviews Section 7 of Regulation 851 of the Occupational Health and Safety Act Regulations for Industrial Establishments for machine guarding provisions and standards.

Further, this document satisfies the notice-in-writing provision for exemption from Pre-Start inspection for the listed machinery as outlined in the Ontario Health and Safety Guidelines, PSR Guidelines dated November 2016. The PSR Guidelines allow that notice in writing from the original equipment manufacturer declaring conformity to applicable standards is acceptable for the exemption from Pre-Start Health and Safety Review.



All Haas CNC machine tools carry the ETL Listed mark, certifying that they conform to the NFPA 79 Electrical Standard for Industrial Machinery and the Canadian equivalent, CAN/CSA C22.2 No. 73. The ETL Listed and cETL Listed marks are awarded to products that have successfully undergone testing by Intertek Testing Services (ITS), an alternative to Underwriters' Laboratories.



Haas Automation has been assessed for conformance with the provisions set forth by ISO 9001: 2015. Scope of Registration: Design and Manufacture of CNC Machines Tools and Accessories, Sheet Metal Fabrication. The conditions for maintaining this certificate of registration are set forth in ISA's Registration Policies 5.1. This registration is granted subject to the organization maintaining compliance to the noted standard. The validity of this certificate is dependent upon ongoing surveillance audits.

Original Instructions

User's Operator Manual and other Online Resources

This manual is the operation and programming manual that applies to all Haas Lathes.

An English language version of this manual is supplied to all customers and is marked "**Original Instructions**".

For many other areas of the world, there is a translation of this manual marked "**Translation of Original Instructions**".

This manual contains an unsigned version of the EU required "**Declaration Of Conformity**". European customers are provided a signed English version of the Declaration of Conformity with Model Name and Serial Number.

Besides this manual, there is a tremendous amount of additional information online at: www.haascnc.com under the Service section.

Both this manual and the translations of this manual are available online for machines up to approximately 15 years old.

The CNC control of your machine also contains all of this manual in many languages and can be found by passing the **[HELP]** button.

Many machine models come with manual supplement that is also available online.

All machine options also have additional information online.

Maintenance and service information is available online.

The online "**Installation Guide**" contains information and check list for Air & Electrical requirements, Optional Mist Extractor, Shipping Dimensions, weight, Lifting Instructions, foundation and placement, etc.

Guidance on proper coolant and Coolant Maintenance is located in the Operators Manual and Online.

Air and Pneumatic diagrams are located on the inside of the lubrication panel door and CNC control door.

Lubrication, grease, oil and hydraulic fluid types are listed on a decal on the machine's lubrication panel.





How to Use This Manual

To get the maximum benefit of your new Haas machine, read this manual thoroughly and refer to it often. The content of this manual is also available on your machine control under the HELP function.

IMPORTANT: Before you operate the machine, read and understand the Operator's Manual Safety chapter.

Declaration of Warnings

Throughout this manual, important statements are set off from the main text with an icon and an associated signal word: "Danger," "Warning," "Caution," or "Note." The icon and signal word indicate the severity of the condition or situation. Be sure to read these statements and take special care to follow the instructions.

Description	Example
<p>Danger means that there is a condition or situation that will cause death or severe injury if you do not follow the instructions given.</p>	 <p>DANGER: No step. Risk of electrocution, bodily injury, or machine damage. Do not climb or stand on this area.</p>
<p>Warning means that there is a condition or situation that will cause moderate injury if you do not follow the instructions given.</p>	 <p>WARNING: Never put your hands between the tool changer and the spindle head.</p>
<p>Caution means that minor injury or machine damage could occur if you do not follow the instructions given. You may also have to start a procedure over if you do not follow the instructions in a caution statement.</p>	 <p>CAUTION: Power down the machine before you do maintenance tasks.</p>
<p>Note means that the text gives additional information, clarification, or helpful hints.</p>	 <p>NOTE: Follow these guidelines if the machine is equipped with the optional extended Z-clearance table.</p>

Text Conventions Used in this Manual

Description	Text Example
A Code Block text gives program examples.	G00 G90 G54 X0. Y0. ;
A Control Button Reference gives the name of a control key or button that you are to press.	Press [CYCLE START] .
A File Path describes a sequence of file system directories.	<i>Service > Documents and Software >...</i>
A Mode Reference describes a machine mode.	MDI
A Screen Element describes an object on the machine's display that you interact with.	Select the SYSTEM tab.
A System Output describes text that the machine control displays in response to your actions.	PROGRAM END
A User Input describes text that you should enter into the machine control.	G04 P1. ;
A Variable n indicates a range of non-negative integers from 0 to 9.	Dnn represents D00 through D99.

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Chapter 1: Introduction

1.1 Overview

This operator's manual supplement describes the unique features and functions of the Toolroom Lathe. Refer to your Lathe Operator's Manual for control operation, programming, and other general Lathe information. Specific details about the Toolroom Lathe itself, including information that is beyond the scope of this document, can be found at www.HaasCNC.com.

1.2 Toolroom Lathe Features

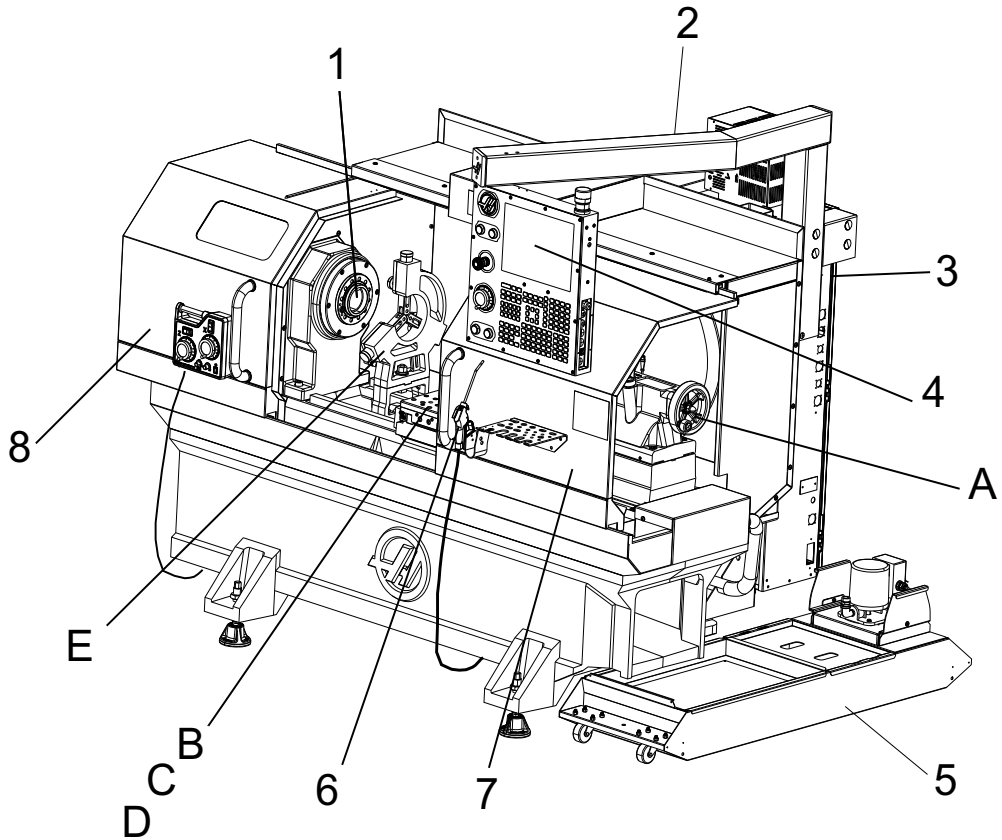
The following figures show some of the standard and optional features of your Haas lathe.



NOTE:

These figures are representative only; your machine's appearance may vary depending on the model and installed options.

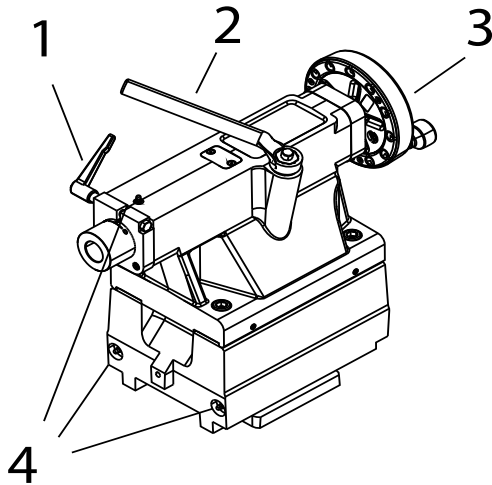
F1.1: Toolroom Lathe Features (TL-1 shown front view)



- 1. Spindle/Chuck
- 2. Main Circuit Breaker
- 3. Control Cabinet
- 4. Control Pendant
- 5. Coolant Pump Kit (optional)
- 6. Air Nozzle
- 7. Right Door

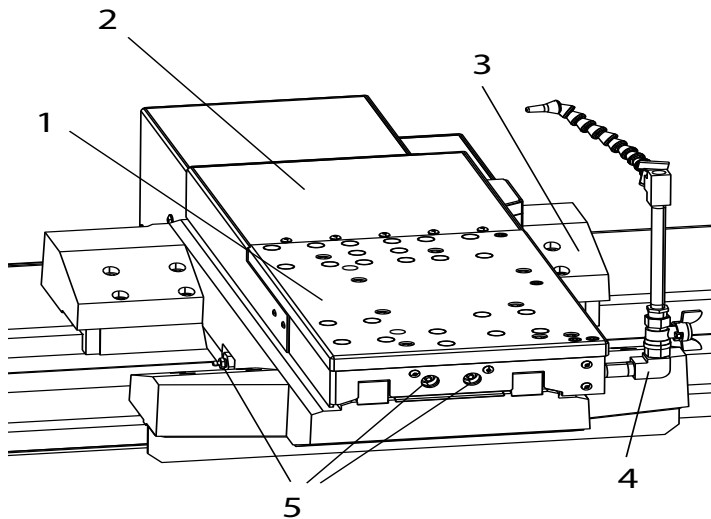
- 8. Left Door
- 9. eHandwheel
- A. Tailstock (optional)
- B. Cross-Side
- C. TT-4 Turret (optional, not shown)
- D. ATT8 Turret (optional, not shown)
- E. Steady Rest (optional)

F1.2: Detail A - Tailstock (TL-1)



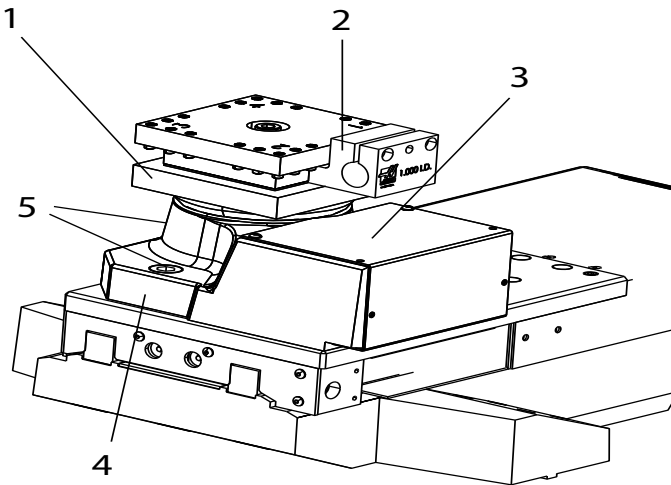
1. Quill Clamp Lock
2. Quill Adjustment Wheel
3. Base Lock Wrench
4. Grease Fittings (3 each)

F1.3: Detail B - Cross-Slide (TL-1/2)



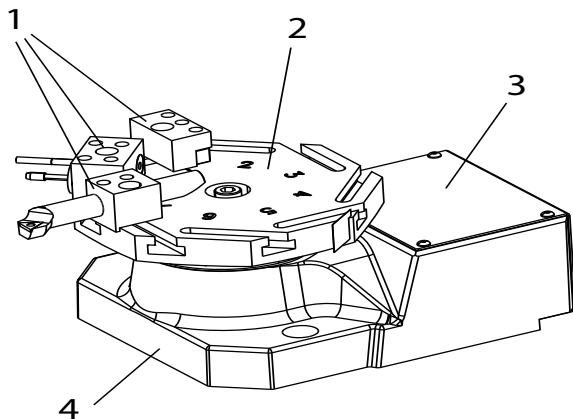
1. Cross-Slide Mounting Plate
2. Cross-Slide, X Axis
3. Table Saddle, Z Axis
4. Coolant Supply Block
5. Grease Fittings

F1.4: Detail C - TT-4 Turret (TL-1/2)

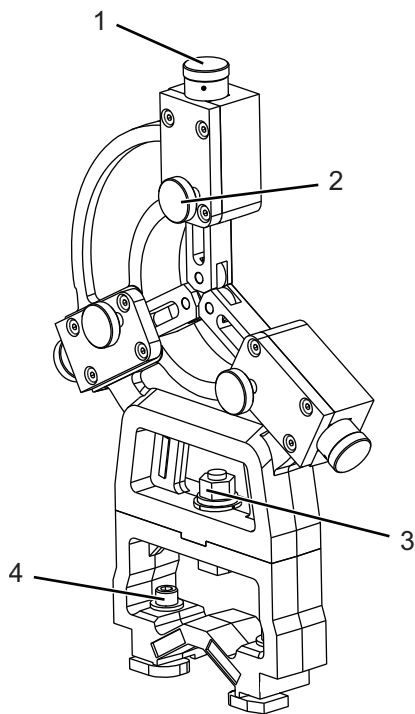


1. 4 Station Turret
2. Tool holder
3. Turret Motor Cover
4. TT-4 Mounting Base
5. Mounting Bolts (2 each)

F1.5: Detail D - ATT8 Turret (TL-1/2)



1. Tool Holders
2. 8 Station Turret
3. Turret Motor Cover
4. ATT8 Mounting Base

F1.6: Detail E- Steady Rest (TL-1/2)

1. Roller Adjustment (3 locations)
2. Roller Lock (3 locations)
3. Standoff Locking Nut
4. Guide Rail Locking Nuts (2 locations)

1.3 More Information Online

For updated and supplemental information, including tips, tricks, maintenance procedures, and more, visit the Haas Service page at www.HaasCNC.com. You can also scan the code below with your mobile device to go directly to the Haas Service page:



Chapter 2: Installation

2.1 TL-1/2 Installation

The TL-1/2 installation procedure is located on the Haas Service site. You can also scan the code below with your mobile device to go directly to the procedure.

F2.1: TL-1/2 Installation



Chapter 3: Operation

3.1 Introduction

You will find the majority of the information on how to operate your Toolroom Lathe in the Lathe Operator's Manual. Operational differences are described in the following sections:

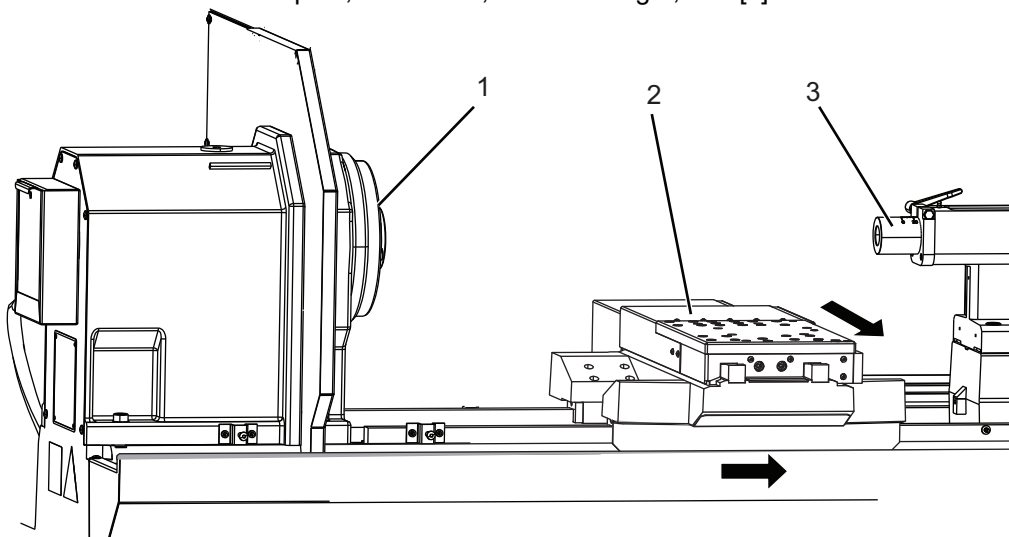
- Machine Power-On
- eHandwheels
- Tailstock Operation
- TT4 / ATT8 Turret Operation
- Steady Rest Operation

3.2 Machine Power-On

Follow this procedure to turn on a Toolroom Lathe for the first time.

Before you do this procedure, remove all shipping brackets and steady rest if equipped from the machine. Make sure that possible crash areas, such as the spindle, cross-slide, and tailstock, are clear.

F3.1: Power-Up Cross-slide Home Movement and Possible Crash Areas: [1] spindle, [2] cross-slide with tool post, riser block, or tool changer, and [3] tailstock



1. Press and hold **[POWER ON]** until you see the Haas logo on the screen. After a self-test and boot sequence, the display shows the startup screen. The startup screen gives basic instructions to start the machine. Press **[CANCEL]** to dismiss the screen. You can also press **[F1]** to disable it.

2. Turn **[EMERGENCY STOP]** clockwise to reset it.
3. Press **[RESET]** to clear the startup alarms. If you cannot clear an alarm, the machine may need service. Contact your Haas Factory Outlet (HFO) for assistance.
4. Close the doors.



WARNING:

*Before you do the next step, remember that automatic motion begins immediately when you press **[POWER UP]**. Make sure the motion path is clear. If equipped, the steady rest cannot be installed between the cross slide and tailstock during the zero return procedure. Stay away from the spindle, cross-slide, and tailstock.*

5. Press **[POWER UP]**.

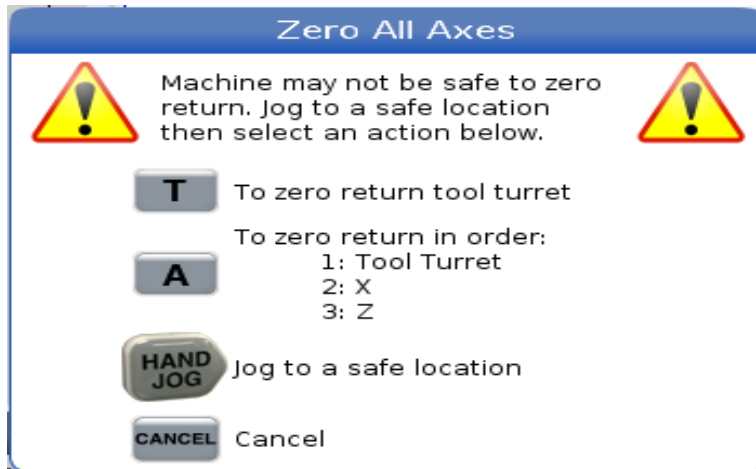


The axes move slowly until the machine finds the home switch for each axis. This establishes the machine home position. A flashing message, *INSTALL TOOL 1 PRESS CYCLE START*, prompts you to install tool 1 and press **[CYCLE START]**.



NOTE:

Some options, such as TT-4 or ATT8, disable the Power Up function. In this case, the zero return menu will be used to home the machine:



6. Check clearance before moving each axis.
 - a) If needed, push **[HANDLE JOG]** and move axes to a safe position. Remove tools if necessary. If the eHandwheel is installed the pendant jog wheel is only used to scroll through the control. You must use the eHandwheel to jog the axes if installed.
 - b) Zero return each axis separately. Press **[T]**, and only the tool changer will find home.
 - c) Press **[A]**, and the Tool Turret will find home first then X and last the Z-axis.

The control is now in **OPERATION:MEM** mode.

3.3 Manual Mode

The Toolroom Lathe can run in manual mode without being homed.

When in manual mode the machine will not read offsets, programs, or any G & M-codes. Travel limits are not active so use caution when moving the axis.

F3.2: Power-Up menu

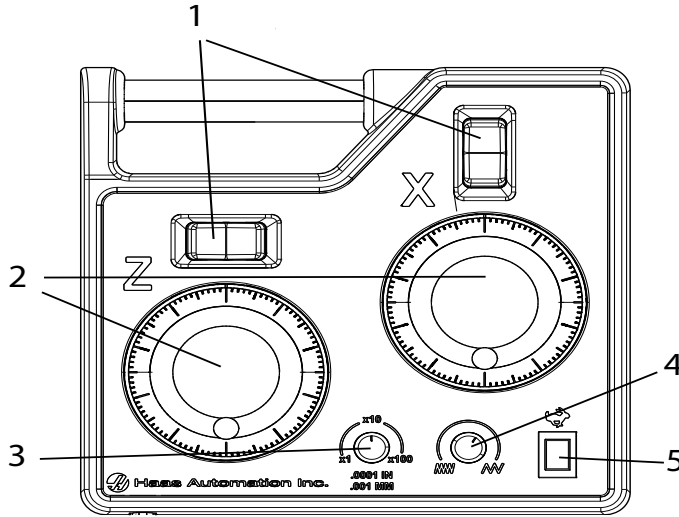
1. Setting325 Enable Manual Mode must be set to ON.
2. Press **[HAND JOG]** to enter the handle jog mode.
3. Use the eHandwheel to jog the axis.
4. To turn on the spindle, use the numeric keypad to enter an RPM value and press **[FWD]** or **[REV]**.
5. With the spindle running the Power Feed rocker switches will be active.
6. If the optional TT-4 or ATT-8 tool changer is installed, In MDI mode, press **[TURRET FWD]** or **[TURRET REV]** to change tools. Make sure there is enough clearance around the tool changer before changing tools.

3.4 eHandwheel

Follow these procedures to use the eHandwheel option.

Before you use the eHandwheel, make sure that possible crash areas, such as the spindle, cross-slide, and tailstock, are clear.

F3.3: eHandwheel overview: [1] Power Feed, [2] Handle Jog, [3] Jog Increment, [4] Power Feed Rate, and [5] Rapid Feed.



NOTE:

When the eHandwheel is installed the pendent jog wheel will only scroll through the control page. It cannot be used to jog the machine.



NOTE:

Feed Rocker switches only work when the spindle is turning or while Rapid Feed is pressed.

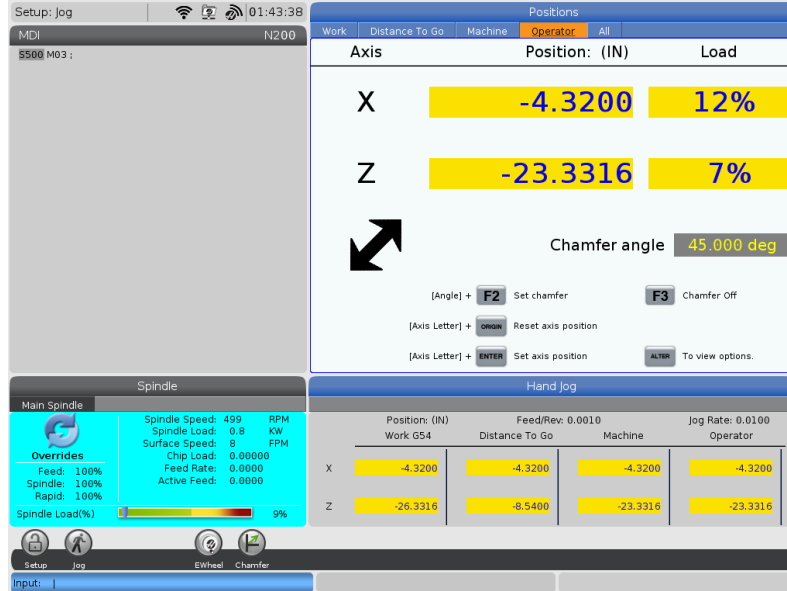
Jog Behavior: The eHandwheel on the new TL's with the Next Generation Control is setup to jog similarly to a manual lathe. This is different than how the older TL's with the Classic Haas Control are set up. The table below shows the differences. If you want your TL with the Next Generation Control to function the same as your older TL with the Classic Haas Control, you can have your local Haas Factory Outlet invert Parameter 1.177 AXIS JOG DIRECTION INVERTED.

	Standard Manual Lathe	TL with the Classic Haas Control	TL with the Next Generation Control
Turn the X-Axis jog handle	CW	CW	CW
The numbers on the handle	Increase	Increase	Increase
The movement relative to the operator	Moves Away	Moves towards	Moves away
The movement in terms of positive display	N/A	Numbers increase	Numbers decrease
The movement in terms of part size	Part gets smaller	Part gets bigger	Part gets smaller
Turret location	Close side of part	Close side of part	Close side of part

Axis Jog: Select the Jog Increment [3] then use the X or Z axis jog wheels [2] to position the axes.

Rapid Feed: Hold the Rapid Feed button [5] and press the desired Power Feed rocker switch [1].

Jog Chamfer: Use the Jog Wheels [2] to jog the tool to the starting point. While in the operator tab in handle jog mode, press **[F3]** to enable the chamfer option. The chamfer icon will appear on the screen.



Enter a number value and press **[F2]** to set the chamfer angle.

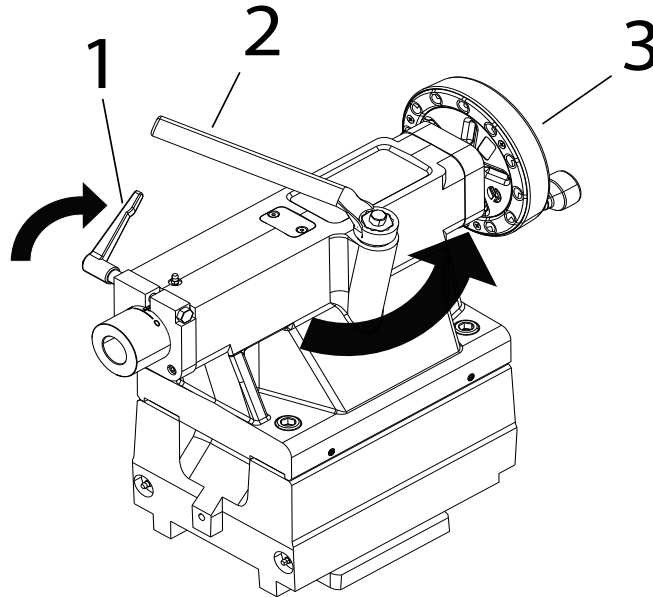
Use the Power Feed rocker switches [1] to jog in or out of a chamfer.

Press **[F3]** to exit chamfer mode.

3.5 Position TL-1/2 Tailstock

The tailstock is optional on all toolroom lathes.

F3.4: TL-1/2 Tailstock [1] Quill Clamp Lock, [2] Base Lock Wrench [3] Quill Adjustment Wheel,

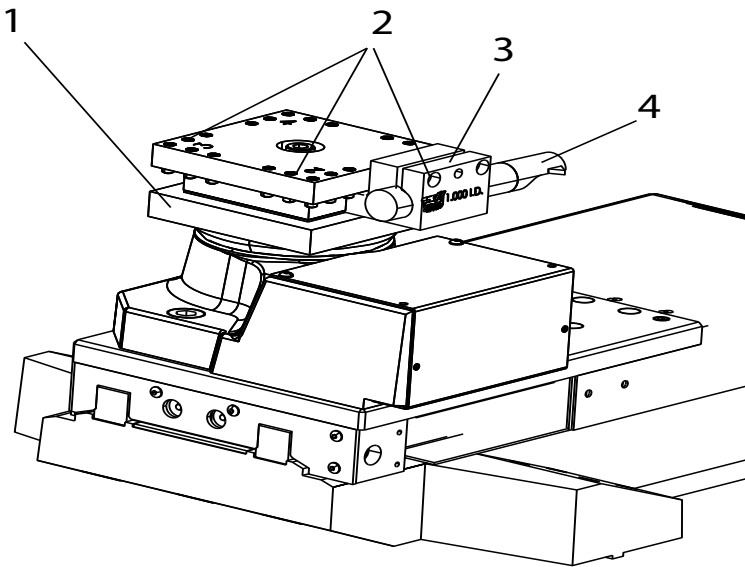


To operate the tailstock:

1. Loosen the clamp bolt at the base of the tailstock casting with the Base Lock Wrench [2]. Move the wrench counterclockwise to loosen.
2. Position the tailstock base manually, then tighten the clamp bolt at the base of the tailstock casting with the Base Lock Wrench [2]. Move the wrench clockwise to lock.
3. To drive the quill in and out, rotate the quill clamp lock [1] away from the spindle and rotate the hand wheel on the rear of the casting [2] counterclockwise and clockwise. The TL-1/2 tailstock has a #4 Morse taper (MT4).

3.6 TT-4 Turret Operation

F3.5: TT-4 Turret Detail: [1] turret, [2] tool-retention screws, [3] tool holder, [4] tool.



To set up the TT-4 turret:

1. Loosen the tool-retention screws [2]. Put the tool [4] into the tool holder [3] and tighten the tool-retention screws [2].



CAUTION:

There is a clearance of 0.25" (6 mm) between the bottom of the lower TT-4 plate [1] and the top of the servo-motor cover. Do not use a tool that extends below the top of the servo-motor cover. Use a boring-bar holder [3] of the type shown.

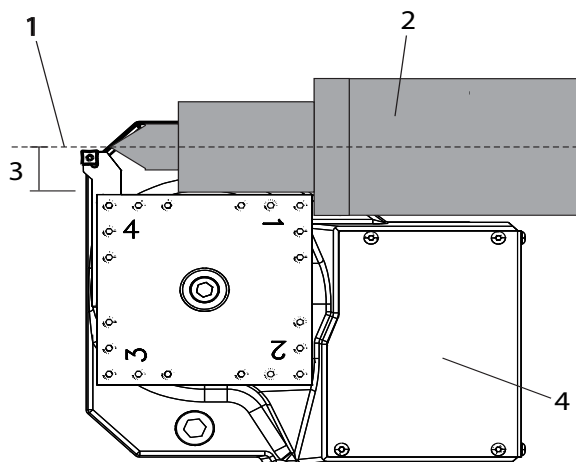


CAUTION:

If you use the air gun to remove chips and coolant from the turret, do not blow air into the ring cover at the base of the turret. Compressed air can force chips and coolant into the mechanism. This damages the unit.

2. In the following figure, make sure the tailstock [2] has sufficient clearance around the servo motor cover. To prevent interference between the tailstock and the servo-motor cover, extend the tool holder farther out of the turret.

F3.6: TT-4 Turret and Servo-motor Cover Clearance: [1] Tailstock centerline, [2] Tailstock, [3] Clearance, [4] Servo-motor Cover



3. Make sure the clearance [3] between the tailstock centerline [1] and the edge of the servo-motor cover [4] and the turret is more than 1.78" (45 mm).

3.6.1 TT-4 Operational Test

Use this program to test the tool changer:

1. Enter the following code:

```

%
T1 ;
T2 ;
T3 ;
T4 ;
T3 ;
T2 ;
M99 ;
;
;
;
%
    
```



NOTE:

Use T-address codes to operate the tool changer. For example, T303 rotates the tool changer to the number 3 tool position, and uses offset 3. Add the T-address code to the program like the other lines of code. Refer to the Lathe Operator's manual for more information on the T-codes and tool offsets.

2. Press [CYCLE START].

3.6.2 TT-4 Tool Change Recovery

To recover the tool changer from an incomplete tool change:

1. Press [MDI DNC].



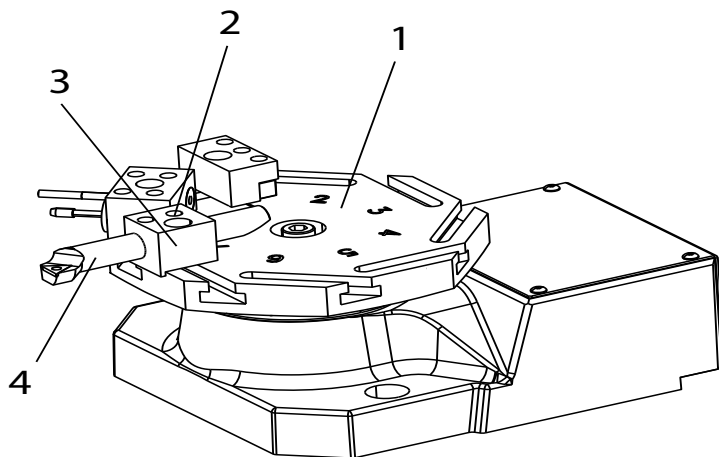
CAUTION:

The tool changer moves rapidly when you push [TURRET FWD] or [TURRET REV]. To prevent injury, give the turret sufficient clearance.

2. Press [TURRET FWD] or [TURRET REV].

3.7 ATT8 Turret Operation

F3.7: ATT8 Turret Detail: [1] Turret, [2] tool-retention screws, [3] tool holder, [4] tool,



NOTE:

The ATT8 has a 1/2 inch turning tool height from the top of the turret.

To set up the ATT8 turret:

1. Loosen the tool-retention screws [2].
2. Put the tool [4] into the tool holder [3] and tighten the tool-retention screws [2].



CAUTION:

It is not recommended to use the ATT8 tool changer on a machine with the tailstock option.



CAUTION:

If you use the air gun to remove chips and coolant from the turret, do not blow air into the ring cover at the base of the turret. Compressed air can force chips and coolant into the mechanism. This damages the unit.

3.7.1 ATT8 Operational Test

Use this program to test the tool changer:

1. Enter the following code:

```
%  
T1 ;  
T2 ;  
T3 ;  
T4 ;  
T5 ;  
T6 ;  
T7 ;  
T8 ;  
T7 ;  
T6 ;  
T5 ;  
T4 ;  
T3 ;  
T2 ;  
M99 ;  
 ;  
 ;  
 ;  
%
```



NOTE:

Use T-address codes to operate the tool changer. For example, T303 rotates the tool changer to the number 3 tool position, and uses offset 3. Add the T-address code to the program like the other lines of code. Refer to the Lathe Operator's manual for more information on the T-codes and tool offsets.

2. Press [CYCLE START].

3.7.2 ATT8 Tool Change Recovery

To recover the tool changer from an incomplete tool change:

1. Press [MDI].



CAUTION: *The tool changer moves rapidly when you push [TURRET FWD] or [TURRET REV]. To prevent injury, give the turret sufficient clearance.*

2. Press [TURRET FWD] or [TURRET REV].

3.8 TL Steady Rest Operation

The steady rest provides increased support for long- or narrow-shaft operations. Manually position the steady rest along the Z-Axis travel and lock it in place with the clamp bolts. It can be used with the tailstock option.



CAUTION: *Do not home the Z Axis until you have removed the steady rest out of its shipping position. The Z-Axis cannot be homed if the steady rest is between the cross slide and the tailstock. The carriage can collide with the steady rest and damage both components.*

1. If you have not moved the steady rest out of its shipping position, use a lift to move the steady rest from its shipping position between the cross-slide and the tailstock to its operational position between the chuck and the cross-slide.



CAUTION: *Make sure to use a lift that is rated for the weight of the steady rest.*

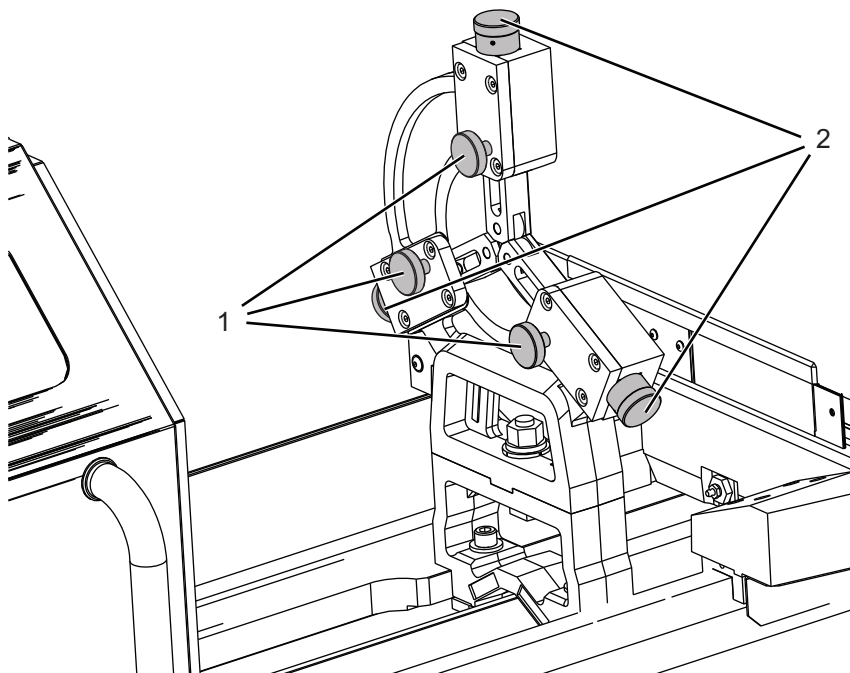
2. Tighten the clamps at the base of the steady rest.

3.8.1 C-Type Steady Rest Operation

To operate the C-type steady rest:

1. Turn the roller lock screws [1] to loosen the rollers.

F3.8: C-type Steady Rest



2. Retract the rollers by turning the adjustment screws [2].
3. Clamp the workpiece into the chuck.
4. If a tailstock is to be used, engage the tailstock live center and engage the tailstock brake.
5. Turn the steady rest roller adjustment screws [2] to move the rollers against the workpiece.
6. Tighten the roller lock screws [1] to secure the rollers in place.



NOTE:

Haas recommends that you do not place material with a rough finish in the steady rest. The steady rest holds more securely on a workpiece with a smooth surface.

7. Place a dial indicator on a Z-Axis linear guide and position the indicator tip near the outside edge of the workpiece.
8. Turn the workpiece by hand and check for deflection in the part.
9. Adjust and tighten the steady rest rollers as necessary.

Chapter 4: Maintenance

4.1 Introduction

Regular maintenance is important to make sure that your machine has a long and productive life with minimal downtime. The most common maintenance tasks are simple and you can do them yourself. You can also ask your HFO about their comprehensive preventive maintenance program for complex maintenance tasks.

4.2 Toolroom Lathe Lubrication

The linear guides, ball screws, optional tailstock, and optional steady rest are manually lubricated. Grease fittings provide lubrication to the Z-Axis saddle, four trucks, and ball screw, as well as, the X-Axis cross-slide, four trucks, and ball screw.

Manually lubricate the optional tailstock. Three grease fittings on the quill and two rails provide lubrication points. Manually lubricate the rail mounting-points on the optional steady rest.

Cycle the X-and Z-Axes daily and lubricate them weekly to ensure proper lubrication.

Manually lubricate the chuck or work holding every eight hours of operation to ensure proper lubrication.

The current maintenance schedule and recommended type of lubricant is found in the Haas website under the Service section www.haascnc.com

4.3 More Information Online

For updated and supplemental information, including tips, tricks, maintenance procedures, and more, visit the Haas Service page at www.HaasCNC.com. You can also scan the code below with your mobile device to go directly to the Haas Service page:



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