



Lathe Work Probe - Installation

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The Lathe Work Probe Option (LPRO-R) has these components:

- the work probe
- the optical machine interface (OMI)
- a lathe tool probe (LTP) cable

This document shows installation of these components into a Haas lathe. This procedure is not applicable to OL and TL lathes. For operation and calibration, refer to the Renishaw documents in the kit and available from Renishaw.



Prerequisites

Your kit includes a CD with macro programs. These macro programs are possibly not the new ones. Make sure you have the newest macro programs for **Step 5** of this procedure. Go to <https://diy.haascnc.com/>. Use the **Search** function and enter the words "work probe macro" to find the correct .NC "Download" files for your machine.

Get these macro programs for standard, 2-Axis lathes:


- 2-Axis Lathes - Work Probe Macro Program - Probe On (NC File) (O09032)
- 2-Axis Lathes - Work Probe Macro Program - Probe Off (NC File) (O09033)


Get these macro programs for Y-Axis lathes:

- Y-Axis Lathes - Work Probe Macro Program - Probe On (NC File) (O09332)
- Y-Axis Lathes - Work Probe Macro Program - Probe Off (NC File) (O09333)

Machine Compatibility

Do this procedure for ST/DS lathes. Do not do this procedure for OL and TL lathes. The control cable installation is different for different kits. To install LPRO-R when you install a new machine, use kit P/N: LPRO-R. To install LPRO-R for an installed machine, use kit P/N: 93-2092.

 **Note:** For I/O PCBs version AC and after, the connector is a 10-pin socket. Cable 33-0619 connects directly to P77 on the I/O PCB.

 **Note:** For I/O PCBs version AB and before, the connector is an 8-pin socket. For these PCBs, you must have the cable adapter 33-0333. This cable is included in 93-2092.

Parts Included



KIT LPRO-R QTY: 1
OPTION, WORK GAUGING PROBE



KIT 93-2092 QTY: 1
OPTION, LPRO SERVICE KIT



33-0619A BOTH KITS
CABLE, 1070 LPRO PROBE I/F



33-0333 93-2092 ONLY
LPRO ADAPTER IO-Z TO AB

Tools Required



Drill



Sealant

STEP 1

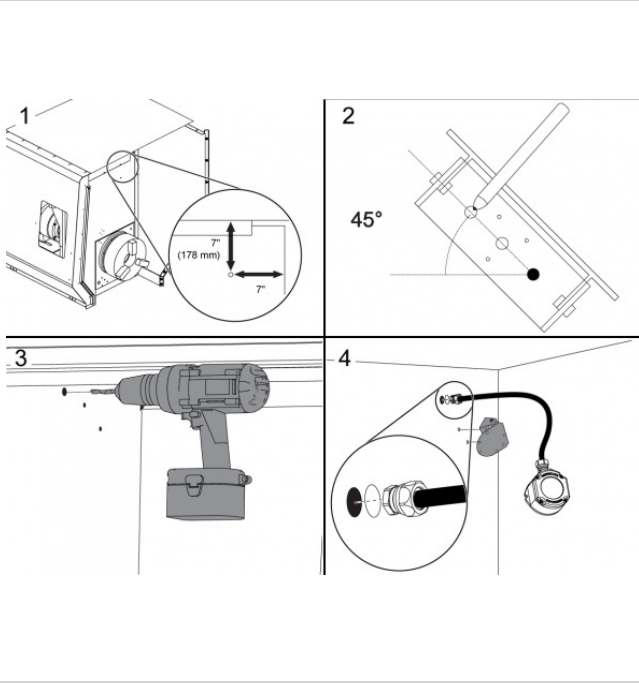


Push **[POWER OFF]**.

Set the main circuit breaker to the **OFF** position.

Lock the main circuit breaker.

STEP 2



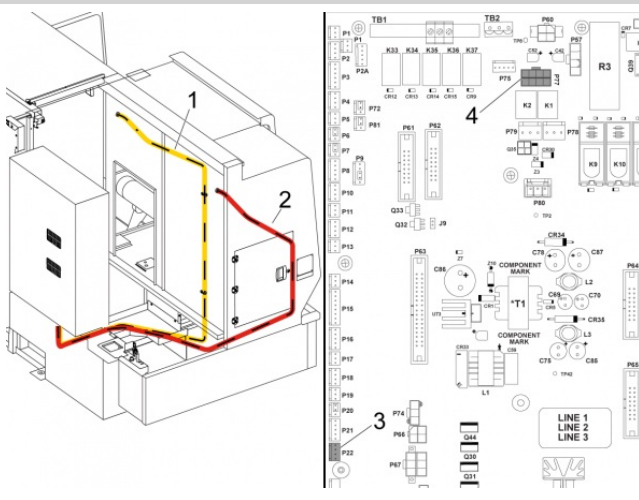
[1] On the spindle-side of the bulkhead cover inside the lathe, put a point mark approximately 7" (178 mm) from the top of the panel and 7" from the far side of the cover.

[2] Temporarily put the OMI bracket onto the bulkhead in the correct position as follows: Point the triangular pattern of dimples down. Keep the right-side hole aligned with the mark, while you turn the bracket approximately 45 degrees clockwise. Put a mark for the third hole.

[3] Drill (2) 9/32" (7 mm) holes through the bulkhead at the point marks. Drill a 7/8" (22 mm) hole through the bulkhead, approximately 1" (25 mm) above and 3" (76 mm) to the left of the top 9/32" (7 mm) hole.

[4] Pull the OMI cable through the 7/8" (22 mm) hole in the bulkhead panel. Install the sealing washer and nut onto the fitting at the end of the OMI cable. The rubber side of the sealing washer must face the bulkhead panel. Install the OMI bracket with the screws and nuts on the other side of the bulkhead. Apply sealant to the screws. Install the OMI unit onto the bracket.

STEP 3

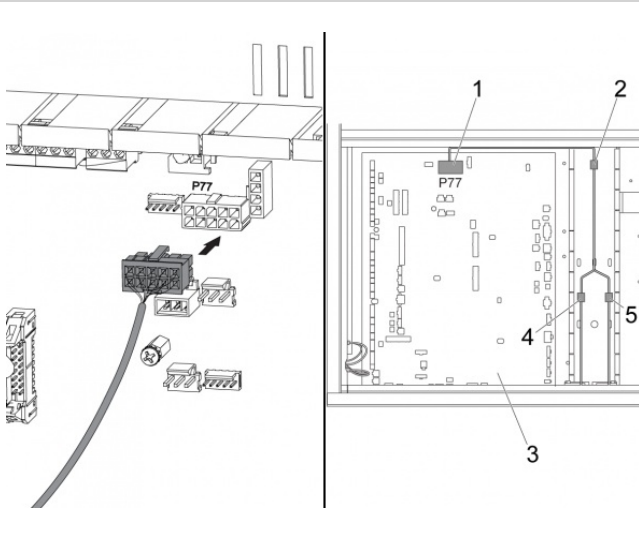


Put the OMI cable [1] through the enclosure to the control cabinet.

For lathes made before February 2013, disconnect the Lathe Tool Probe (LTP) cable [2] from connector P22 [3] on the I/O PCB.

For lathes made after February 2013, disconnect the LTP cable [2] from P77 [4] on the I/O PCB.

STEP 4



For I/O PCBs with version AC or after, connect the control cable (P/N: 33-0619A) to P77 on the I/O PCB.

For I/O PCBs with version AB or before:

1. Connect a cable adapter (P/N: 33-0333) [1] to P77 on the I/O PCB [3].
2. Connect the control cable (P/N: 33-0619A) [2] to the other end of the cable adapter [1].
3. Put the cable adapter [1] and control cable [2] through the cable channel.

For all I/O PCB versions, connect the LTP cable [4] to the 10-pin connector of the control cable [2]. Connect the OMI cable [5] to the 6-pin connector of the control cable [2].

STEP 5



Load the applicable Work Probe Macro Programs to the lathe. Refer to [Macro Programming Information](#).

Load these macro programs for standard, 2-Axis lathes:



- 2-Axis Lathes - Work Probe Macro Program - Probe On (NC File) (O09032)
- 2-Axis Lathes - Work Probe Macro Program - Probe Off (NC File) (O09033)

Load these macro programs for Y-Axis lathes:

- Y-Axis Lathes - Work Probe Macro Program - Probe On (NC File) (O09332)
- Y-Axis Lathes - Work Probe Macro Program - Probe Off (NC File) (O09333)




STEP 6

Do this step to make sure the Work Probe operates correctly:

1.  Start the Work Probe as follows:
For standard 2-Axis lathes, operate this code in MDI mode: **G65 P9032**.
For Y-Axis lathes, operate this code in MDI mode: **G65 P9332**.
2. Look for a steady green "SIGNAL" light on the OMI and a green light that flashes on the probe.
3. If the probe operates correctly, you hear a "beep" each time you tap the probe tip.
4.  Stop the Work Probe as follows:
For standard 2-axis lathes, operate this code in MDI mode: **G65 P9033**.
For Y-Axis lathes, operate this code in MDI mode: **G65 P9333**.
5. If the probe operates correctly, the green signal light on the OMI goes off, and the green light on the probe does not flash.

STEP 7

Do this step to make sure the Tool Probe operates correctly:

1.  Operate this code in **MDI** mode: **M104**. This lowers the tool-probe arm.
2. Tap the probe stylus. If the probe operates correctly, you hear a "beep" each time you tap the probe tip.
 **Note:** If the Tool Probe does not operate correctly, examine the wire connection from the control cable.
3.  Operate this code in **MDI** mode: **M105**. This lifts the tool-probe arm.