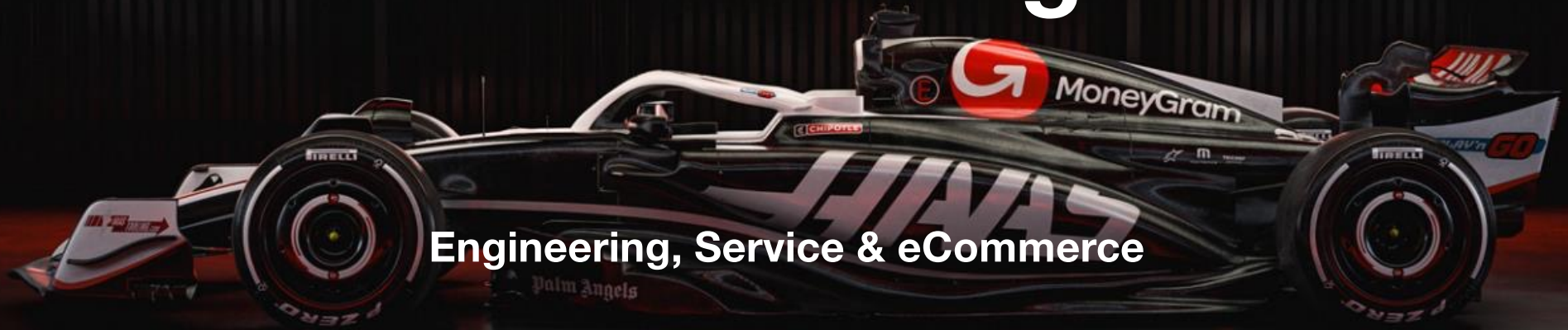


# Dealer Meeting '25

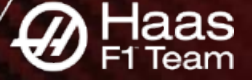


Engineering, Service & eCommerce



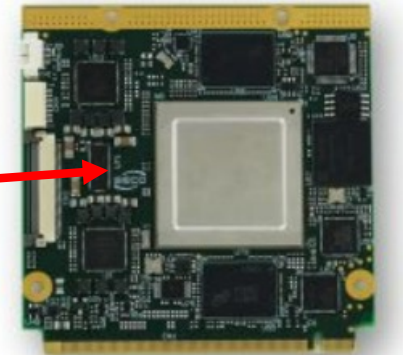
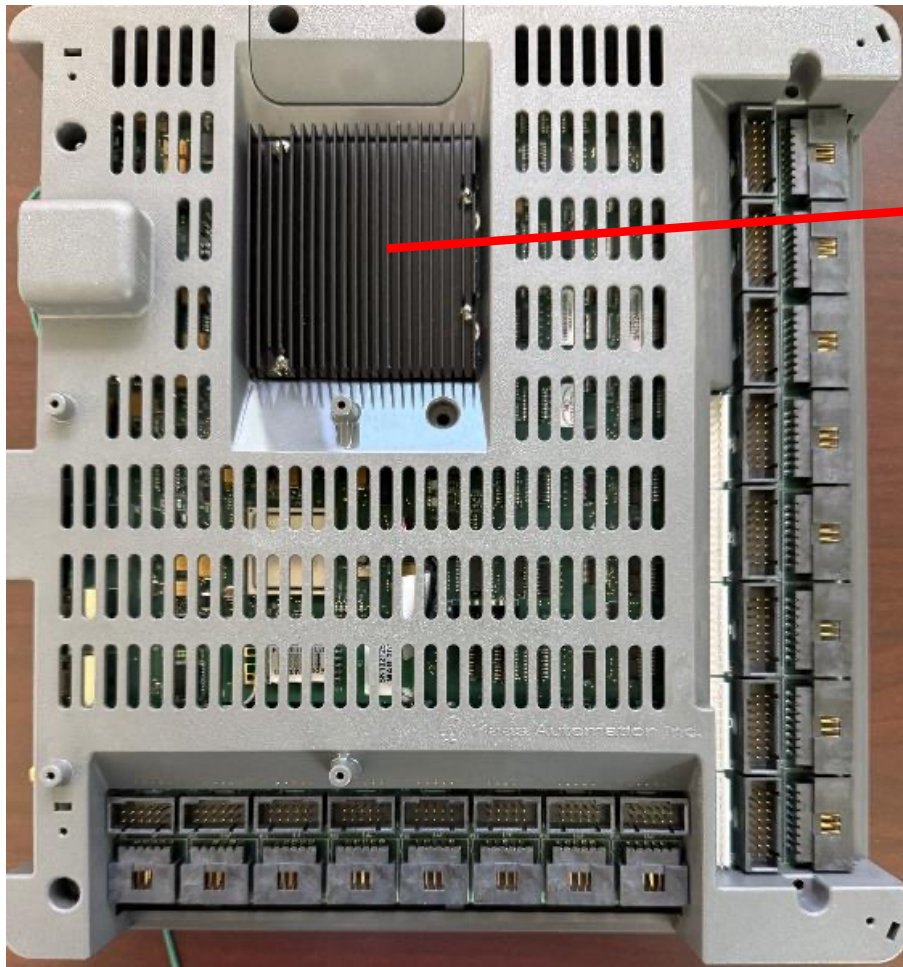
**Sergey Lototsky**  
**Electrical and Software Engineering**  
06/21/2025

# At a glance...



- New CNC controller(main). Why? and what's new?
  - Characteristics
  - Relevance
- Examples of new features:
  - Diagnostics (troubleshooting)
  - Favorites (GUI, “easy of use”, productivity)
  - Eco mode (new functionality)
  - Lathe engraving (new functionality- computation intensive)

# DS9 – new HAAS CNC controller!



**iMX8, 64bits, x8 cores SOC**

# DS9 – new HAAS CNC controller!



- DS9 – new 64bit x8 cores HAAS CNC controller, successive update to existing 32bit NGC CNC controller. System's backward compatible.
- New controller has significantly higher performance (nearly x7!) and less hardware constrains for farther software features development.
- DS9 hardware can support high resolution graphics and large size screens
- DS9 – more speed, more memory, more computational power, uses newest generation of 64bit ARM CPU.



## i.MX6 Quad

- 4x Arm® Cortex®-A9 @ 792MHz per core
- DDR3L 1GB
- Video Decode
  - 1080p 60 h.264
- Four USB2.0
- Ethernet 1 Gbps (HW errata limits to <400Mbps)
- 5x SPI, 5x UART, 3x I<sup>2</sup>C
- PCIe 2.0 (1 lane)

## i.MX 8 QuadMax

- 2x Cortex®-A72 cores @1.6GHz
- 4x Cortex®-A53 cores @1.2GHz
- 2x Cortex®-M4F cores @264MHz
- LPDDR4-3200 memory, 64-bit interface, up to 8GB
- HW decoding of HEVC/H.265, AVC/H.264, MPEG-2, VC-1, RV9, VP8, H.263 and MPEG4
- 1 x Gigabit Ethernet interface
- 4 x USB 2.0 Host Ports  
1 x USB 3.0 Host Port  
1 x USB 2.0 OTG port
- 2x PCI-e x1 Gen3 ports
- 1x UART Tx/Rx/RTS/CTS  
1x CAN Bus (TTL level)

# DS9 – new 19” high resolution screen



- CNC machines with DS9 now standard with new high resolution 19” screen!
- 19” screen - more real estate, better graphics, more functionality and “easy to use” aimed features.
- More internal diagnostics and real time monitoring to assist in better troubleshooting and diagnostics
- x7 faster CPU and larger and faster memory will allow to develop many sophisticated computationally intensive features in the future



# NGC screens: original screen 15"



The screenshot displays the Haas NGC control interface. At the top, it shows 'Setup: Zero' and the time '15:38:00'. The main window is titled 'Alarms And Messages' and contains a list of active alarms, with '102 SERVOS TURNED OFF' selected. Below the alarm list, a detailed description is provided: '102 SERVOS TURNED OFF. The servo motors are off. This can be caused by Emergency Stop, an alarm, or Power-On. Follow instructions from associated alarms and clear the condition which is causing the servo to shut off. RESET button to turn on servos.' The bottom of the screen features several data panels: 'Main Spindle' with a red stop sign icon and 'Overrides' (Feed: 100%, Spindle: 100%, Rapid: 100%); 'Positions' showing X, Y, Z, B, and C coordinates; 'Program G54 G43 H1'; and 'Timers And Counters' with cycle and remaining time data. A red status bar at the bottom right indicates the active alarm: '102 SERVOS TURNED OFF'.

-Original Screen size (15")

Height: 9"

Width: 12"

# DS9 screens: High resolution 19"



The screenshot displays the Haas DS9 control panel interface, which is divided into several functional areas:

- MDI (Manual Data Input):** Shows a program block for tool length and diameter measurement:
 

```
(4. Auto Length and Diameter);
      ( PROBE TOOL LENGTH AND DIAMETER - ROTATING );
      ( TOOL = 1 );
      ( APPROXIMATE LENGTH = 5. );
      ( APPROXIMATE DIAMETER = 0.5 );
      ( EDGE MEASURE = 0.25 );
      G00 G17 G40 G49 G80 G90;
      T1 M06;
      G65 P9995 A0. B4. C3. T1. E5. D0.5 K0.25;
      M30;
```
- Offsets Table:** A table listing tool offsets for various tools. The active tool is Tool 1 (Spindle Probe).
 

| Offset | Type     | X Geometry | Z Geometry | Radius Geometry(D) | X Geometry Wear | Z Geometry Wear |
|--------|----------|------------|------------|--------------------|-----------------|-----------------|
| 1      | Spindle  | Probe      | 6.0340     | 0.                 | 0.1181          | 0.              |
| 2      | 00 Turn  | 6.5420     | 1.7720     | 0.                 | 0.              | 0.              |
| 3      | End Mill | 5.0520     | 0.         | 0.2501             | 0.              | 0.              |
| 4      | None     | 0.         | 0.         | 0.                 | 0.              | 0.              |
| 5      | None     | 0.         | 0.         | 0.                 | 0.              | 0.              |
| 6      | None     | 0.         | 0.         | 0.                 | 0.              | 0.              |
| 7      | None     | 0.         | 0.         | 0.                 | 0.              | 0.              |
| 8      | None     | 0.         | 0.         | 0.                 | 0.              | 0.              |
| 9      | None     | 0.         | 0.         | 0.                 | 0.              | 0.              |
| 10     | None     | 0.         | 0.         | 0.                 | 0.              | 0.              |
| 11     | None     | 0.         | 0.         | 0.                 | 0.              | 0.              |
| 12     | None     | 0.         | 0.         | 0.                 | 0.              | 0.              |
| 13     | None     | 0.         | 0.         | 0.                 | 0.              | 0.              |
| 14     | None     | 0.         | 0.         | 0.                 | 0.              | 0.              |
| 15     | None     | 0.         | 0.         | 0.                 | 0.              | 0.              |
| 16     | None     | 0.         | 0.         | 0.                 | 0.              | 0.              |
- Main Spindle:** Shows a STOP button and spindle parameters: Spindle Speed: 0 RPM, Spindle Power: 0.0 KW, Surface Speed: 0 FPM, Chip Load: 0.000 IPT, Feed Rate: 0.0000 IPM, Active Feed: 0.0000 IPM. Spindle Load is shown as 0%.
- Positions:** Displays coordinates for Program G54 G43 H1: X: 0.0000, Y: 0.0000, Z: 21.7500. Load bars are shown for X (0%), Y (0%), and Z (34%).
- Timers And Counters:** Shows cycle times: This Cycle: 0:00:00, Last Cycle: 0:00:00, Remaining: 0:00:00. M30 Counter #1: 41, M30 Counter #2: 41, Loops Remaining: 0.
- Active Codes:** Lists active G-codes: G00 (Rapid Motion), G90 (Absolute Position), G40 (Cutter Compensation Cancel), G80 (Cycle Cancel), G54 (Work Offset #54).
- Favorites:** Includes icons for Coolant, Chuck Clamp, Chuck Unclamp, and TSC.
- Active Tool:** Shows Tool 1 (End Mill) with 100% life and 60% coolant level.

New Screen Size (19")

-Same Height: 9"

-New Width: ~16.7"

Increase in width: ~4.7"

-New Favorites Feature

# Important Diagnostic and service aids



- Guage page. Important run time values such as pressure, temperature etc.
- System monitor page. Machine subsystems errors and usage information
- Shift-F3 Diagnostic logs of all CNC system subcomponents. List of logs growing continuously
- Tools usage page
- HAAS Connect
- Remote display
- Remote (over network) upgrade/update.

# Diagnostic aids: Tools usage



MDI
N100
CPU 21.74%
MDI

| Offset # / Start Time | Total Time     | Feed time      | Load(%)   | Feed / Total time | Relative Use |
|-----------------------|----------------|----------------|-----------|-------------------|--------------|
| <b>v Offset 1</b>     | <b>0:02:01</b> | <b>0:00:20</b> | <b>13</b> |                   |              |
| 8 18:31               | 0:01:02        | 0:00:13        | 8         |                   |              |
| 8 35:23               | 0:00:59        | 0:00:07        | 13        |                   |              |
| <b>v Offset 4</b>     | <b>0:06:10</b> | <b>0:04:20</b> | <b>42</b> |                   |              |
| 8 18:23               | 0:00:08        | 0:00:00        |           |                   |              |
| 8 21:33               | 0:06:02        | 0:04:20        | 42        |                   |              |
| <b>v Offset 5</b>     | <b>0:04:39</b> | <b>0:02:01</b> | <b>5</b>  |                   |              |
| 8 27:37               | 0:04:39        | 0:02:01        | 5         |                   |              |
| <b>v Offset 6</b>     | <b>0:01:32</b> | <b>0:00:50</b> | <b>5</b>  |                   |              |
| 8 32:18               | 0:01:32        | 0:00:50        | 5         |                   |              |
| <b>v Offset 8</b>     | <b>0:03:34</b> | <b>0:01:10</b> | <b>4</b>  |                   |              |
| 8 36:23               | 0:03:35        | 0:01:10        | 4         |                   |              |
| <b>v Offset 10</b>    | <b>0:00:43</b> | <b>0:00:17</b> | <b>13</b> |                   |              |
| 8 33:51               | 0:00:43        | 0:00:17        | 13        |                   |              |
| <b>v Offset 11</b>    | <b>0:00:33</b> | <b>0:00:04</b> | <b>5</b>  |                   |              |
| 8 19:34               | 0:00:34        | 0:00:04        | 5         |                   |              |
| <b>v Offset 12</b>    | <b>0:01:23</b> | <b>0:00:18</b> | <b>15</b> |                   |              |
| 8 20:08               | 0:01:24        | 0:00:18        | 15        |                   |              |
| <b>v Offset 13</b>    | <b>0:00:46</b> | <b>0:00:14</b> | <b>45</b> |                   |              |
| 8 34:35               | 0:00:47        | 0:00:14        | 45        |                   |              |
| <b>v Offset 14</b>    | <b>0:01:07</b> | <b>0:00:08</b> | <b>4</b>  |                   |              |
| 8 39:59               | 0:01:07        | 0:00:08        | 4         |                   |              |
| <b>v Offset 15</b>    | <b>0:19:41</b> | <b>0:00:05</b> | <b>45</b> |                   |              |
| 8 41:07               | 0:19:41        | 0:00:05        | 45        |                   |              |

Overall time: 0:42:15 / 0:09:52

■ Total Time ■ Feed time

**Active Tool**

Tool: 14  
 Offset: 14  
 Type: None  
 Tool Group: --  
 Max Load: 6  
 Life: 100%  
 Next Tool:  
 Pocket: 1  
 Tool #: 13

**Active Alarms**

107 EMERGENCY STOP

**Timers And Counters**

This Cycle: 0:19:03  
 Last Cycle: 0:19:03  
 Remaining: 0:00:00  
 M30 Counter #1: 5160  
 M30 Counter #2: 5160  
 Loops Remaining: 0  
 5223 0.000000  
 5221 0.000000

**Favorites**

Calculator: Milling  
 S32: Coolant Override  
 User Positions  
 Safe Run: Activate

**Main Spindle**

Spindle Speed: 0 RPM  
 Spindle Power: 0.0 KW  
 Surface Speed: 0 FPM

**Overrides**  
 Chip Load: 0.000 IPT  
 Feed: 100% Feed Rate: 0.0000 IPM  
 Spindle: 100% Active Feed: 0.0000 IPM  
 Rapid: 100%

Load 0% Temp 85°F Coolant 92%

**Positions**

(IN) Work G54 G43 H1 Operator Load

|   |          |          |    |
|---|----------|----------|----|
| X | -23.8408 | -23.8408 | 0% |
| Y | -3.2181  | -3.2181  | 0% |
| Z | -0.0002  | -0.0002  | 0% |
| B | 0.001    | 0.001    | 0% |
| C | 0.001    | 0.001    | 0% |

Setup
E Stop
Opt Stop

MANGR:
107 EMERGENCY STOP
10:00:07

# Diagnostic aids: System Monitor



CPU: 24.77%

Parameters, Diagnostics And Maintenance

Diagnosics Maintenance Parameters

Gauges System Axis I/O CAN Bus MOCON MISC. Keyboard I/O I/O Config Servo Tuning System Monitor

Last Reset: 06-14-2025 18:27

Search F1

| Description                            | Since Reset | Total       | Filter                   |
|--|-------------|-------------|--------------------------|
| Cycle Time                             | 4:48:55     | 4:48:55     | <input type="checkbox"/> |
| Power On Time                          | 97:00:48    | 97:00:48    | <input type="checkbox"/> |
| Servo Time                             | 27:44:34    | 27:44:34    | <input type="checkbox"/> |
| Feed time                              | 1:16:06     | 1:16:06     | <input type="checkbox"/> |
| Power Cycles                           | 237         | 237         | <input type="checkbox"/> |
| Number of Tool Changes                 | 208         | 208         | <input type="checkbox"/> |
| Main Spindle Total Usage               | 1:47:11     | 1:47:11     | <input type="checkbox"/> |
| Main Spindle : < 8K RPM                | 1:25:17     | 1:25:17     | <input type="checkbox"/> |
| Main Spindle : 8K - 12K RPM            | 0:21:54     | 0:21:54     | <input type="checkbox"/> |
| Maximum Spindle Motor Temperature      | 91 F        | 91 F        | <input type="checkbox"/> |
| Spindle Lube Failure Events            | 0           | 0           | <input type="checkbox"/> |
| Axis Lube Not Detected Events          | 0           | 0           | <input type="checkbox"/> |
| Axis Lube Cycle Failure Events         | 1           | 1           | <input type="checkbox"/> |
| Under Air Pressure Events              | 11          | 11          | <input type="checkbox"/> |
| TSC Low Air Pressure Events            | 4           | 4           | <input type="checkbox"/> |
| TAB Low Air Pressure Events            | 1           | 1           | <input type="checkbox"/> |
| Axis Lube Low Pressure Events          | 0           | 0           | <input type="checkbox"/> |
| Ground Fault Events                    | 0           | 0           | <input type="checkbox"/> |
| Tripped Circuit Breaker Events         | 1           | 1           | <input type="checkbox"/> |
| TSC Low Pressure Events                | 8           | 8           | <input type="checkbox"/> |
| Tool Load Exceeded Events              | 0           | 0           | <input type="checkbox"/> |
| Low Hydraulic Pressure On Start Events | 0           | 0           | <input type="checkbox"/> |
| Crashes Detected                       | 0           | 0           | <input type="checkbox"/> |
| Under Voltage Events                   | 1           | 1           | <input type="checkbox"/> |
| Over Voltage Events                    | 0           | 0           | <input type="checkbox"/> |
| X: Axis Servo Errors                   | 0           | 0           | <input type="checkbox"/> |
| Y: Axis Servo Errors                   | 0           | 0           | <input type="checkbox"/> |
| Z: Axis Servo Errors                   | 0           | 0           | <input type="checkbox"/> |
| S: Axis Servo Errors                   | 0           | 0           | <input type="checkbox"/> |
| B: Axis Servo Errors                   | 0           | 0           | <input type="checkbox"/> |
| C: Axis Servo Errors                   | 0           | 0           | <input type="checkbox"/> |
| TT: Axis Servo Errors                  | 0           | 0           | <input type="checkbox"/> |
| IA: Axis Servo Errors                  | 0           | 0           | <input type="checkbox"/> |
| Axis Lube Cycles                       | 248         | 248         | <input type="checkbox"/> |
| Last Axis Lube Cycle                   | 00:01:58:19 | 00:01:58:19 | <input type="checkbox"/> |
| Maximum DC Voltage                     | 407 V       | 407 V       | <input type="checkbox"/> |
| Minimum DC Voltage                     | 45 V        | 45 V        | <input type="checkbox"/> |
| Maximum AC Voltage                     | 102 %       | 102 %       | <input type="checkbox"/> |
| Minimum AC Voltage                     | 5 %         | 5 %         | <input type="checkbox"/> |
| Maximum Resistor Temperature           | 142 F       | 142 F       | <input type="checkbox"/> |

Resize Tab

Default Tab Display

Height Tab Display

Width Tab Display

Fullscreen Tab Display

Exit [CANCEL]

ENTER Select filter    ALTER Filter Selected    F2 Clear all filters    ORIGIN Reset Values

CPU: 22.07%

Parameters, Diagnostics And Maintenance

Diagnosics Maintenance Parameters

Gauges System Axis I/O CAN Bus MOCON MISC. Keyboard I/O I/O Config Servo Tuning System Monitor

Last Reset: 06-14-2025 18:27

Search F1

| Description                       | Since Reset | Total    | Filter                              |
|-----------------------------------|-------------|----------|-------------------------------------|
| Cycle Time                        | 4:48:55     | 4:48:55  | <input checked="" type="checkbox"/> |
| Power On Time                     | 97:04:18    | 97:04:18 | <input checked="" type="checkbox"/> |
| Servo Time                        | 27:44:34    | 27:44:34 | <input checked="" type="checkbox"/> |
| Feed time                         | 1:16:06     | 1:16:06  | <input checked="" type="checkbox"/> |
| Power Cycles                      | 237         | 237      | <input checked="" type="checkbox"/> |
| Number of Tool Changes            | 208         | 208      | <input checked="" type="checkbox"/> |
| Main Spindle Total Usage          | 1:47:11     | 1:47:11  | <input checked="" type="checkbox"/> |
| Main Spindle : < 8K RPM           | 1:25:17     | 1:25:17  | <input checked="" type="checkbox"/> |
| Main Spindle : 8K - 12K RPM       | 0:21:54     | 0:21:54  | <input checked="" type="checkbox"/> |
| Maximum Spindle Motor Temperature | 91 F        | 91 F     | <input checked="" type="checkbox"/> |
| Axis Lube Cycle Failure Events    | 1           | 1        | <input checked="" type="checkbox"/> |
| Under Air Pressure Events         | 11          | 11       | <input checked="" type="checkbox"/> |
| Crashes Detected                  | 0           | 0        | <input checked="" type="checkbox"/> |
| Over Voltage Events               | 0           | 0        | <input checked="" type="checkbox"/> |
| Maximum AC Voltage                | 102 %       | 102 %    | <input checked="" type="checkbox"/> |

ENTER Select filter    ALTER Filter Selected    F2 Clear all filters    ORIGIN Reset Values

# Diagnostic aids: Tab control (vertical)



MDI
N100
CPU: 25.95%

**Parameters, Diagnostics And Maintenance**

Diagnostics
Maintenance
Parameters

Gauges
System
Axis
VO
CAN Bus
MOTION
MISC
Keyboard I/O
I/O Config
Servo Tuning
System Monitor

Last Reset: 06-14-2025 18:27
Search **F1**

| Description                            | Since Reset | Total       | Filter                              |
|--|-------------|-------------|-------------------------------------|
| Cycle Time                             | 4:48:55     | 4:48:55     | <input type="checkbox"/>            |
| Power On Time                          | 57:00:40    | 57:00:40    | <input checked="" type="checkbox"/> |
| Servo Time                             | 27:44:34    | 27:44:34    | <input type="checkbox"/>            |
| Feed time                              | 1:16:06     | 1:16:06     | <input type="checkbox"/>            |
| Power Cycles                           | 237         | 237         | <input type="checkbox"/>            |
| Number of Tool Changes                 | 208         | 208         | <input type="checkbox"/>            |
| Main Spindle Total Usage               | 1:47:11     | 1:47:11     | <input type="checkbox"/>            |
| Main Spindle : < 8K RPM                | 1:25:17     | 1:25:17     | <input type="checkbox"/>            |
| Main Spindle : 8K - 12K RPM            | 0:21:54     | 0:21:54     | <input type="checkbox"/>            |
| Maximum Spindle Motor Temperature      | 91 F        | 91 F        | <input type="checkbox"/>            |
| Spindle Lube Failure Events            | 0           | 0           | <input type="checkbox"/>            |
| Axis Lube Not Detected Events          | 0           | 0           | <input type="checkbox"/>            |
| Axis Lube Cycle Failure Events         | 1           | 1           | <input type="checkbox"/>            |
| Under Air Pressure Events              | 11          | 11          | <input type="checkbox"/>            |
| TSC Low Air Pressure Events            | 4           | 4           | <input type="checkbox"/>            |
| TAB Low Air Pressure Events            | 1           | 1           | <input type="checkbox"/>            |
| Axis Lube Low Pressure Events          | 0           | 0           | <input type="checkbox"/>            |
| Ground Fault Events                    | 0           | 0           | <input type="checkbox"/>            |
| Tripped Circuit Breaker Events         | 1           | 1           | <input type="checkbox"/>            |
| TSC Low Pressure Events                | 8           | 8           | <input type="checkbox"/>            |
| Tool Load Exceeded Events              | 0           | 0           | <input type="checkbox"/>            |
| Low Hydraulic Pressure On Start Events | 0           | 0           | <input type="checkbox"/>            |
| Crashes Detected                       | 0           | 0           | <input type="checkbox"/>            |
| Under Voltage Events                   | 1           | 1           | <input type="checkbox"/>            |
| Over Voltage Events                    | 0           | 0           | <input type="checkbox"/>            |
| X: Axis Servo Errors                   | 0           | 0           | <input type="checkbox"/>            |
| Y: Axis Servo Errors                   | 0           | 0           | <input type="checkbox"/>            |
| Z: Axis Servo Errors                   | 0           | 0           | <input type="checkbox"/>            |
| S: Axis Servo Errors                   | 0           | 0           | <input type="checkbox"/>            |
| B: Axis Servo Errors                   | 0           | 0           | <input type="checkbox"/>            |
| C: Axis Servo Errors                   | 0           | 0           | <input type="checkbox"/>            |
| TT: Axis Servo Errors                  | 0           | 0           | <input type="checkbox"/>            |
| TA: Axis Servo Errors                  | 0           | 0           | <input type="checkbox"/>            |
| Axis Lube Cycles                       | 248         | 248         | <input type="checkbox"/>            |
| Last Axis Lube Cycle                   | 00:01:58:12 | 00:01:58:12 | <input type="checkbox"/>            |
| Maximum DC Voltage                     | 407 V       | 407 V       | <input type="checkbox"/>            |
| Minimum DC Voltage                     | 45 V        | 45 V        | <input type="checkbox"/>            |
| Maximum AC Voltage                     | 102 %       | 102 %       | <input type="checkbox"/>            |
| Minimum AC Voltage                     | 5 %         | 5 %         | <input type="checkbox"/>            |
| Max. Electronics Temperature           | 143 F       | 143 F       | <input type="checkbox"/>            |

ENTER Select filter
ALTER Filter Selected
F2 Clear all filters
ORIGIN Reset Values

**Main Spindle**

Spindle Speed: 0 RPM  
Spindle Power: 0.0 KW  
Surface Speed: 0 FPM

**Overrides**

Feed: 100%    Chip Load: 0.000 IPT  
Spindle: 100%    Feed Rate: 0.0000 IPM  
Rapid: 100%    Active Feed: 0.0000 IPM

Load 0%    Temp 85°F    Coolant 92%

**Active Tool**

Tool: 14  
Offset: 14  
Type: None  
Tool Group: -  
Max Load: 6  
Life: 100%  
Next Tool  
Pocket: 1  
Tool #: 13

**Active Alarms**

107 EMERGENCY STOP

**Timers And Counters**

This Cycle: 0:19:03  
Last Cycle: 0:19:03  
Remaining: 0:00:00  
M30 Counter #1: 5160  
M30 Counter #2: 5160  
Loops Remaining: 0  
5223: 0.000000  
5221: 0.000000

**Favorites**

Calculator: Milling    S32: Coolant Override    User Positions

Safe Run: Activate

Setup
Emergency Stop
Opt Stop

MANGR: |
107 EMERGENCY STOP
10:02:04



# Diagnostic aids: Tab control (horizontal)



CPU: 27.66%

Parameters, Diagnostics And Maintenance

Diagnostics Maintenance Parameters

Gauges System Axis I/O CAN Bus MOCON MISC Keyboard I/O I/O Config Servo Tuning **System Monitor**

Last Reset: 05-14-2025 18:27

Search F1

| Description                            | Since Reset | Total       | Filter                   |
|--|-------------|-------------|--------------------------|
| Cycle Time                             | 4:48:55     | 4:48:55     | <input type="checkbox"/> |
| Power On Time                          | 96:59:41    | 96:59:41    | <input type="checkbox"/> |
| Servo Time                             | 27:44:34    | 27:44:34    | <input type="checkbox"/> |
| Feed time                              | 1:16:06     | 1:16:06     | <input type="checkbox"/> |
| Power Cycles                           | 237         | 237         | <input type="checkbox"/> |
| Number of Tool Changes                 | 208         | 208         | <input type="checkbox"/> |
| Main Spindle Total Usage               | 1:47:11     | 1:47:11     | <input type="checkbox"/> |
| Main Spindle : < BK RPM                | 1:25:17     | 1:25:17     | <input type="checkbox"/> |
| Main Spindle : BK - 12K RPM            | 0:21:54     | 0:21:54     | <input type="checkbox"/> |
| Maximum Spindle Motor Temperature      | 91 F        | 91 F        | <input type="checkbox"/> |
| Spindle Lube Failure Events            | 0           | 0           | <input type="checkbox"/> |
| Axis Lube Not Detected Events          | 0           | 0           | <input type="checkbox"/> |
| Axis Lube Cycle Failure Events         | 1           | 1           | <input type="checkbox"/> |
| Under Air Pressure Events              | 11          | 11          | <input type="checkbox"/> |
| TSC Low Air Pressure Events            | 4           | 4           | <input type="checkbox"/> |
| TAB Low Air Pressure Events            | 1           | 1           | <input type="checkbox"/> |
| Axis Lube Low Pressure Events          | 0           | 0           | <input type="checkbox"/> |
| Ground Fault Events                    | 0           | 0           | <input type="checkbox"/> |
| Tripped Circuit Breaker Events         | 1           | 1           | <input type="checkbox"/> |
| TSC Low Pressure Events                | 8           | 8           | <input type="checkbox"/> |
| Tool Load Exceeded Events              | 0           | 0           | <input type="checkbox"/> |
| Low Hydraulic Pressure On Start Events | 0           | 0           | <input type="checkbox"/> |
| Crashes Detected                       | 0           | 0           | <input type="checkbox"/> |
| Under Voltage Events                   | 1           | 1           | <input type="checkbox"/> |
| Over Voltage Events                    | 0           | 0           | <input type="checkbox"/> |
| X: Axis Servo Errors                   | 0           | 0           | <input type="checkbox"/> |
| Y: Axis Servo Errors                   | 0           | 0           | <input type="checkbox"/> |
| Z: Axis Servo Errors                   | 0           | 0           | <input type="checkbox"/> |
| S: Axis Servo Errors                   | 0           | 0           | <input type="checkbox"/> |
| B: Axis Servo Errors                   | 0           | 0           | <input type="checkbox"/> |
| C: Axis Servo Errors                   | 0           | 0           | <input type="checkbox"/> |
| TT: Axis Servo Errors                  | 0           | 0           | <input type="checkbox"/> |
| TA: Axis Servo Errors                  | 0           | 0           | <input type="checkbox"/> |
| Axis Lube Cycles                       | 248         | 248         | <input type="checkbox"/> |
| Last Axis Lube Cycle                   | 00:01:57:13 | 00:01:57:13 | <input type="checkbox"/> |
| Maximum DC Voltage                     | 40.7 V      | 40.7 V      | <input type="checkbox"/> |
| Minimum DC Voltage                     | 45 V        | 45 V        | <input type="checkbox"/> |
| Maximum AC Voltage                     | 102 %       | 102 %       | <input type="checkbox"/> |
| Minimum AC Voltage                     | 5 %         | 5 %         | <input type="checkbox"/> |
| Max. Spindle Temperature               | 142 F       | 142 F       | <input type="checkbox"/> |

Select filter Filter Selected F2 Clear all filters Reset Values

Setup E-Stop Op. Stop

MANGR: 107 EMERGENCY STOP 10:01:05



# Diagnostic aids: Shift-F3 diagnostic report



Current Commands

Devices Timers Macro Vars Active Codes Tools Plane Calculator Media

Mechanisms Workholding

Group Listings Search **F1** Main Spindle

| Group        | Device              | State |
|--------------|---------------------|-------|
| Main Spindle | Main Spindle Orient | 0.000 |

Main Spindle Orient

**F2** Orient spindle

Rotates the spindle to the zero position.  
Press [F2] to orient the spindle.

input line

Generating Error Report

- Collecting Hardware Debug Data
- Saving System Configuration Files
- Saving System Data Files
- Saving System Log Files
- Saving Diagnostic Information**
- Saving History Files
- Saving Active Program
- Saving XML Data
- Saving IO States
- Saving PSTOR Metadata
- Saving Log Files
- Zipping File

Current status: Processing...

Error\_1125301\_061825134807.zip

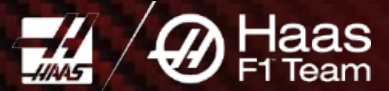
| Name                          | Type                 | Compressed size |
|-------------------------------|----------------------|-----------------|
| HaasData                      | File folder          |                 |
| AlarmHistory.txt              | Text Document        | 2 KB            |
| AlarmHistoryEnglish.txt       | Text Document        | 2 KB            |
| ATM.ATM                       | ATM File             | 1 KB            |
| Diagnostics.txt               | Text Document        | 12 KB           |
| Favorites.xml                 | XML Document         | 1 KB            |
| IOStates.txt                  | Text Document        | 7 KB            |
| KeyHistory.txt                | Text Document        | 6 KB            |
| LSC.LSCX                      | LSCX File            | 6 KB            |
| Macro.VAR                     | VAR File             | 3 KB            |
| MoreDiagnostics.txt           | Text Document        | 1 KB            |
| O00005_Universal_Drip_Test.nc | NC File              | 1 KB            |
| Offsets.OFS                   | Outlook Form Regions | 4 KB            |
| screenshot.png                | PNG File             | 150 KB          |

# Diagnostic aids: HAAS Connect and Remote display



- HAAS connect is HAAS service cloud connection and necessary component for remote diagnostics, updates and upgrades.
- HAAS is going to continue to develop aids for remote troubleshooting and diagnostics including upcoming remote support similar to PC remote Help Desk
- Therefore, connecting machine to internet and creation of HAAS Connect account is greatly encouraged!

# Machine ECO mode and power monitoring



- HAAS DS9 CNC controller have power monitoring and ECO mode enabled features.
- As a standard, power monitoring is done through tracking of enabled/disabled mechanisms and applying their modeled and expected power.
- Power consumption is represented via number of useful graphs and tables. Thought, expected machine power consumption can be monitored.
- As an option, true incoming **power measurement module** can be installed and therefore can give exact, precisely measured machine consumed power. Module includes correction for power factor.
- “ECO mode” is a set of values applied to various mechanisms to provide less power consumption. It is fully user customizable.

# Machine ECO mode power monitoring alternatives



Estimated power per mechanism from the table

Spindle Power (Estimated X Eff)

Cooling pump

TSC

Lights

Conveyor

Hydraulics

Servos

Servos run power

Pallet pool

Parts loader

240/480  
, 3ph AC

Power measurement module

Measured active power P

=

In Cycle (SUM of active mechanism's estimated P)

Machine mode

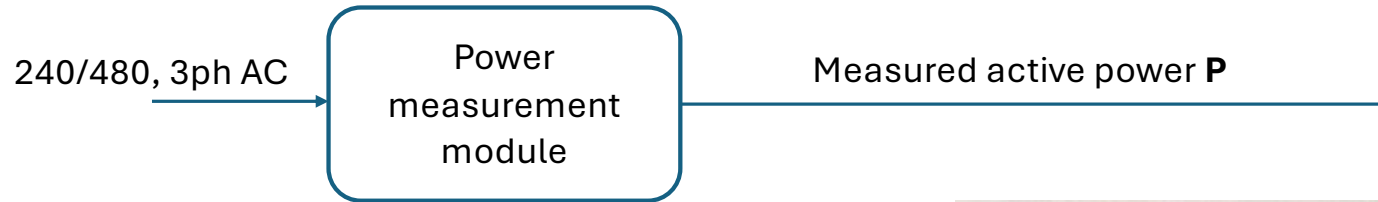
Idle State estimate

Idle State E-stop estimate

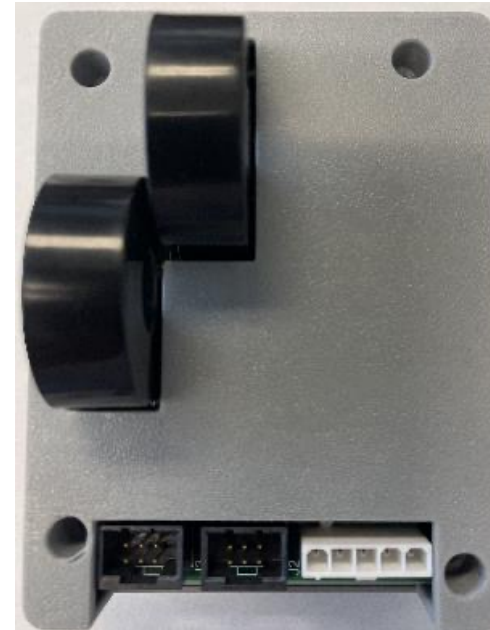
Stand By (Power saving) estimate

Measured active power P

# Machine ECO mode power monitoring hardware option



- 240/480 3 phase AC in,
- 2 line V + 2 Lines Current measure model
- True measurements of real , apparent powers and cos phi
- Connects to machine CAN bus



# Machine ECO mode power monitoring



MDI
N0
CPU: 26.74%
Settings

Settings
Network
Rotary
User Positions
Alias Codes
Eco Mode

Eco Settings
Eco Data

**F1**

|     | Name                          | Eco Value | Value | Unit |
|-----|-------------------------------|-----------|-------|------|
| 1   | Auto Power Off Timer          | 30        | 0     | Min  |
| 2   | Power Off At M30              | On        | Off   |      |
| 196 | Conveyor Shutoff              | 10        | 30    | Min  |
| 197 | Coolant Shutoff               | 1         | 5     | Min  |
| 199 | Display Off Timer             | 5         | 30    | Min  |
| 216 | Servo And Hydraulic Shutoff   | 5         | 5900  | Sec  |
| 238 | High Intensity Light Timer    | 5         | 10    | Min  |
| 239 | Worklight Off Timer           | 5         | 0     | Min  |
| 267 | Exit Jog Mode Alter Idle Time | 5         | 30    | Min  |

Range: 0.000 to 7200.000  Restore default settings menu.

**1 - Auto Power Off Timer**

This setting is used to automatically power-down the machine after a period of idle time. The value entered in this setting is the number of minutes the machine remains idle until it is powered down. The machine does not power down while a program is running, and the time (number of minutes) starts back at zero anytime a button is pressed or the [HANDLE\_OG] control is used. The auto-off sequence gives the operator a 15-second warning before power down, at which time pressing any button stops the power down.

Electricity Price Per kWh: 0.50

Incoming AC Voltage: 240 V

Live Power Factor: 0.60

Energy Usage this Month: 140 kWh

Live Usage:  87 KW

**F2** Enable Eco Mode
 To read full description

**Main Spindle**

Spindle Speed: 0 RPM

Spindle Power: 0.0 KW

Surface Speed: 0 FPM

**Overrides**

Feed: 100% Chip Load: 0.000 PT

Spindle: 100% Feed Rate: 0.0000 IPM

Rapid: 100% Active Feed: 0.0000 PM

Load: 0%    Temp: 32°F    Coolant: 0%

SDEV: |

**Positions**

| (IN) | Work G54 G43 H1 | Distance To Go | Load  |
|------|-----------------|----------------|---|
| X    | 0.0000          | 0.0000         | <span style="display: inline-block; width: 50px; height: 10px; background: linear-gradient(to right, green, yellow, red);"></span> 0% |
| Y    | 0.0000          | 0.0000         | <span style="display: inline-block; width: 50px; height: 10px; background: linear-gradient(to right, green, yellow, red);"></span> 0% |
| Z    | 0.0000          | 0.0000         | <span style="display: inline-block; width: 50px; height: 10px; background: linear-gradient(to right, green, yellow, red);"></span> 0% |
| B    | 0.000           | 0.000          | <span style="display: inline-block; width: 50px; height: 10px; background: linear-gradient(to right, green, yellow, red);"></span> 0% |
| C    | 0.000           | 0.000          | <span style="display: inline-block; width: 50px; height: 10px; background: linear-gradient(to right, green, yellow, red);"></span> 0% |

**Active Tool**

Tool: 1

Offset: 1

Type: None

Tool Group: --

Max Load: 0

Life: 100%

---

**Active Codes**

G00 Rapid Motion

G90 Absolute Position

G40 Cutter Compensation Cancel

G80 Cycle Cancel

G54 Work Offset # 54

D00 H00 M00 T0

---

**Timers And Counters**

This Cycle: 0 00:00

Last Cycle: 0 00:00

Remaining: 0 00:00

M30 Counter #1: 0

M30 Counter #2: 0

Loops Remaining: 0

---

**Favorites**

Safe Run: Activate

User Positions

S32: Coolant Override

Calculator: Milling

  
07:58:00



# Machine ECO mode power monitoring



Zero Place holder file.nc N0

(Place holder file):

Settings

Settings | Network | Rotary | User Positions | Alias Codes | Eco Mode

Eco Settings | **Eco Data**

Live [1] | Day [2] | Month [3]

| Day | Usage (kWh) |
|-----|-------------|
| 6   | 45          |
| 7   | 125         |
| 8   | 135         |
| 9   | 75          |
| 10  | 100         |
| 11  | 70          |
| 12  | 95          |
| 13  | 95          |
| 14  | 10          |
| 15  | 65          |
| 16  | 110         |
| 17  | 100         |
| 18  | 125         |
| 19  | 175         |
| 20  | 140         |
| 21  | 45          |

Electricity Price Per kWh: 0.50

Incoming AC Voltage: 240 V

Live Power Factor: 0.80

Average Energy Usage: 106 KWH

Total Energy Usage: 488 KWH

F2 Display Price Graph  
F3 Export Data

Active Tool

Tool: 1  
Offset: 1  
Type: None  
Tool Group: --  
Max Load: 0  
Life: 100%

---

Active Codes

G00 Rapid Motion  
G09 Absolute Position  
G40 Cutter Compensation Cancel  
G80 Cycle Cancel  
G54 Work Offset #54

D00 I-00 M00 T0

---

Timers And Counters

This Cycle: 00:00:00  
Last Cycle: 00:00:00  
Remaining: 00:00:00  
M30 Counter #1: 0  
M30 Counter #2: 0  
Loops Remaining: 0

---

Favorites

Safe Run: Activate  
User Positions  
S32: Coolant Override  
Calculator: Milling

Main Spindle

**STOP**

Spindle Speed: 0 RPM  
Spindle Power: 0.0 KW  
Surface Speed: 0 FPM  
Chip Load: 0.000 IPT  
Feed: 100% Feed Rate: 0.0000 FPM  
Spindle: 100% Active Feed: 0.0000 FPM  
Rapid: 100%

Load 0% Temp 32°F Coolant 0%

Setup Power Save

Positions

Work: G54 G43 H1

| (IN) | Distance To Go | Load |
|------|----------------|------|
| X    | 0.0000         | 0%   |
| Y    | 0.0000         | 0%   |
| Z    | 0.0000         | 0%   |
| B    | 0.000          | 0%   |
| C    | 0.000          | 0%   |

SDEV: |

13:36:22



# Adding "Favorites" to main screen. Step 1



The screenshot displays the Haas CNC control interface. The main window shows 'Current Commands' with a search for 'Main Spindle'. A 'Modify Favorites' dialog box is open, showing the 'Main Spindle Orient' macro being added to the favorites. A red arrow points to the 'Enter [ENTER]' button in the dialog, with a circled '2' next to it. Another red arrow points to the star icon in the 'Favorites' section of the bottom right, with a circled '1' next to it.

**MEM** ...niversal\_Drip\_Test.nc NO

000005 (LMC750 Leak Test)  
[LAST REVISED 06/26/12 Rob Arambula]  
[Revised 06/11/15 John Ramadan]  
[Deleted unneeded macro scales program] ;  
[#157= 0];  
[#158= 0];  
[#159= 0];  
G00 G91 G28 Z0;  
G00 G91 G28 X0 Y0;  
G103 P1;  
#160= 0;  
#161= 0;  
#162= 0;  
#163= 0;  
#160= #30001.036 / -25.4 (#160= -1 \* #6506 / #6505  
change for storm) (X MAX TRAVEL);  
#161= #30002.036 / -25.4 (#161= -1 \* #6520 / #6519  
change for storm) (Y MAX TRAVEL);  
#162= #30003.036 / -25.4 (#162= -1 \* #6534 / #6533  
change for storm) (Z MAX TRAVEL);  
N1 (X, Y, Z);  
N2 (Rotary macro scales program);  
N3 (Not needed);  
N4 (for Storm);  
N5 (Deprecated);  
N6 (See Storm EC 1600 program);  
M03 S3000 (Spindle spin forward);  
M08 (TURN COOLANT ON);  
G58 X[#160] Y[#161] Z[#162];  
M34;  
G04 P0;

**Current Commands**

Devices Timers Macro Vars Active Codes Tools Plane Calculator Media  
Mechanisms Workholding

Group Listings Search F1 Main Spindle

| Group        | Device              | State |
|--------------|---------------------|-------|
| Main Spindle | Main Spindle Orient | 0.000 |

**Active Tool**

Tool: --  
Offset: --  
Type: None  
Tool Group: --  
Max Load: 0  
Life: 100%

**Active Codes**

G00 Rapid Motion  
G91 Incremental Position  
G40 Cutter Compensation Cancel  
G80 Cycle Cancel  
G54 Work Offset #54

D00 H00 M00 T0

**Timers And Counters**

This Cycle: 0:00:00  
Last Cycle: 0:00:00  
Remaining: 0:00:00  
M30 Counter #1: 0  
M30 Counter #2: 0  
Loops Remaining: 0

**Main Spindle**

STOP Spindle Speed: 0 RPM  
Spindle Power: 0.0 KW  
Surface Speed: 0 FPM  
Overrides: Chk Load: 0.000 IPT  
Feed: 100% Feed Rate: 0.0000 IPM  
Spindle: 100% Active Feed: 0.0000 IPM  
Rapid: 100%

Load 0% Temp 79°F Coolant 60%

**Positions**

| (IN) | Work G54 G43 H0 | Distance To Go | Load |
|------|-----------------|----------------|------|
| X    | 0.0000          | 0.0000         | 0%   |
| Y    | 0.0000          | 0.0000         | 0%   |
| Z    | 2.5301          | 0.0000         | 0%   |
| B    | 0.000           | 0.000          | 0%   |
| C    | 0.000           | 0.000          | 0%   |

**Favorites**

Safe Run: Activate  
Calculator: Milling  
S33: Coordinate System  
S335: Linear Rapid Mode

Setup Power Save Single Bk

SIM 13:49:31

# Adding "Favorites" to main screen. Step 2



MEM ...niversal\_Drip\_Test.nc NO

```

000005 (LMC750 Leak Test)
(LAST REVISED 06/26/12 Roo Arambula)
(Revised 06/11/15 John Ramadan)
(Deleted unneeded macro scales program) :
[#157= 0];
[#158= 0];
[#159= 0];

G00 G91 G28 Z0;
G00 G91 G28 X0 Y0;

G103 P1;

#160= 0;
#161= 0;
#162= 0;
#163= 0;

#160= #30001.036 / -25.4 (#160= -1 * #6506 / #6505
change for storm) (X MAX TRAVEL) ;
#161= #30002.036 / -25.4 (#161= -1 * #6520 / #6519
change for storm) (Y MAX TRAVEL) ;
#162= #30003.036 / -25.4 (#162= -1 * #6534 / #6533
change for storm) (Z MAX TRAVEL);

N1 (X, Y, Z);
N2 (Rotary macro scales program);
N3 (Not needed);
N4 (for Storm);
N5 (Deprecated);
N6 (See Storm EC 1600 program);

M03 S3000 (Spindle spin forward) ;
.
M08 (TURN COOLANT ON) ;
.
G58 X[#160] Y[#161] Z[#162];
M34 ;
G04 P0 ;
                
```

Current Commands

Devices Timers Macro Vars Active Codes Tools Plane Calculator Media

Mechanisms Workholding

Group Listings Search F1 Main Spindle

| Group        | Device              | State |
|--------------|---------------------|-------|
| Main Spindle | Main Spindle Orient | 0.000 |

Main Spindle Orient

**F2** Orient spindle

Rotates the spindle to the zero position. If M19 feature is purchased rotates to the angle on the input line Press [F2] to orient the spindle

Active Tool

Tool: --  
Offset: --  
Type: None  
Tool Group: --  
Max Load: 0  
Life: 100%

Active Codes

G00 Rapid Motion  
G91 Incremental Position  
G40 Cutter Compensation Cancel  
G80 Cycle Cancel  
G54 Work Offset #54

D00 H00 M00 T0

Timers And Counters

This Cycle: 0:00:00  
Last Cycle: 0:00:00  
Remaining: 0:00:00  
M30 Counter #1: 0  
M30 Counter #2: 0  
Loops Remaining: 0

Favorites

Safe Run: Activate  
Calculator: Milling  
S33: Coordinate System  
S335: Linear Rapid Mode  
Main Spindle Orient: Orient spindle

Main Spindle

**STOP**

Spindle Speed 0 RPM  
Spindle Power 0.0 KW  
Surface Speed 0 FPM

Overrides

Chio Load 0.000 IPT  
Feed: 100% Feed Rate 0.0000 IPM  
Spindle: 100% Active Feed 0.0000 IPM  
Rapid: 100%

Load 0% Temp 79°F Coolant 60%

Positions

| (IN) | Work G54-G43 H0 | Distance To Go | Load |
|------|-----------------|----------------|------|
| X    | 0.0000          | 0.0000         | 0%   |
| Y    | 0.0000          | 0.0000         | 0%   |
| Z    | 2.5301          | 0.0000         | 0%   |
| B    | 0.000           | 0.000          | 0%   |
| C    | 0.000           | 0.000          | 0%   |

Setup Power Save

Single Blk

SIM

# Editing "Favorites"



MEM ...niversal\_Drip\_Test.nc N0

```

000005 (UMC750 Leak Test);
(LAST REVISED 06/26/12 Rob Arambula);
(Revised 06/11/15 John Ramadan);
(Deleted unneeded macro scales program) ;
[#157= 0 ];
[#158= 0 ];
[#159= 0 ];

G00 G91 G28 Z0;
G00 G91 G28 X0 Y0;

G103 P1;

#160= 0 ;
#161= 0 ;
#162= 0 ;
#163= 0 ;

#160= #30001.036 / -25.4 (#160= -1 + #6506 / #6505
change for storm) (X MAX TRAVEL) ;
#161= #30002.036 / -25.4 (#161= -1 + #6520 / #6519
change for storm) (Y MAX TRAVEL) ;
#162= #30003.036 / -25.4 (#162= -1 + #6534 / #6533
change for storm) (Z MAX TRAVEL);

N1 (X, Y, Z);
N2 (Rotary macro scales program);
N3 (Not needed);
N4 (for Storm);
N5 (Deprecated);
N6 (See Storm EC-1600 program);

M03 S3000 (Spindle spin forward) ;

M08 (TURN COOLANT ON) ;

G58 X [ #160 ] Y [ #161 ] G28 ;
M34 ;
G04 D0 ;
                
```

Current Commands

Devices Timers Macro Vars Active Codes Tools Plane Calculator Media

Mechanisms Workholding

Search **F1** Main Spindle

| Group       | Device              | State |
|-------------|---------------------|-------|
| Man Spindle | Man Spindle Orient. | 0.000 |

Main Spindle Orient

**F2** Orient spindle

Rotates the spindle to the zero position. If M19 feature is purchased rotates to the angle on the input line. Press [F2] to orient the spindle.

Active Tool

Tool: --  
Offset: --  
Type: None  
Tool Group: --  
Max Load: 0  
Life: 100%

Active Codes

G00 Rapid Motion  
G91 Incremental Position  
G40 Cutter Compensation Cancel  
G80 Cycle Cancel  
G54 Work Offset #54

D00 H00 M00 T0

Timers And Counters

This Cycle: 0:00:00  
Last Cycle: 0:00:00  
Remaining: 0:00:00  
M30 Counter # 1: 0

Main Spindle

Spindle Speed: 0 RPM  
Spindle Power: 0.0 KW  
Surface Speed: 0 FPM

Overrides

Chip Load: 0.000 PT  
Feed: 100% Feed Rate: 0.0000 PM  
Spindle: 100% Active Feed: 0.0000 PM  
Rapid: 100%

Load 0% Temp 75°F Coolant 60%

Setup Power Save

Positions

(N) Work G54 G43 H0 Distance To Go

| X | 0.0000 | 0.0000 |
|---|--------|--------|
| Y | 0.0000 | 0.0000 |
| Z | 2.5301 | 0.0000 |
| B | 0.000  | 0.000  |
| C | 0.000  | 0.000  |

Single Bk

Safe Run! Activate

Calculator: Milling

S33: Coordinate System

S335: Linear Rapid Mode

Main Spindle Orient: Orient spindle

Modify On

13:50:08

# G47 Engraving to Lathes



- Rotation, scaling, smoothing and cylindrical mapping
- Works in XY/ZY plane (G17/G19)
- Works with sub spindle
- DS9 Feature

# G47 Lathe Demo



Haas  
F1 Team



G47 P0 Y0.1 Z-1.4 X1.795 I0 J0.2 F25. (DS-30Y) ;

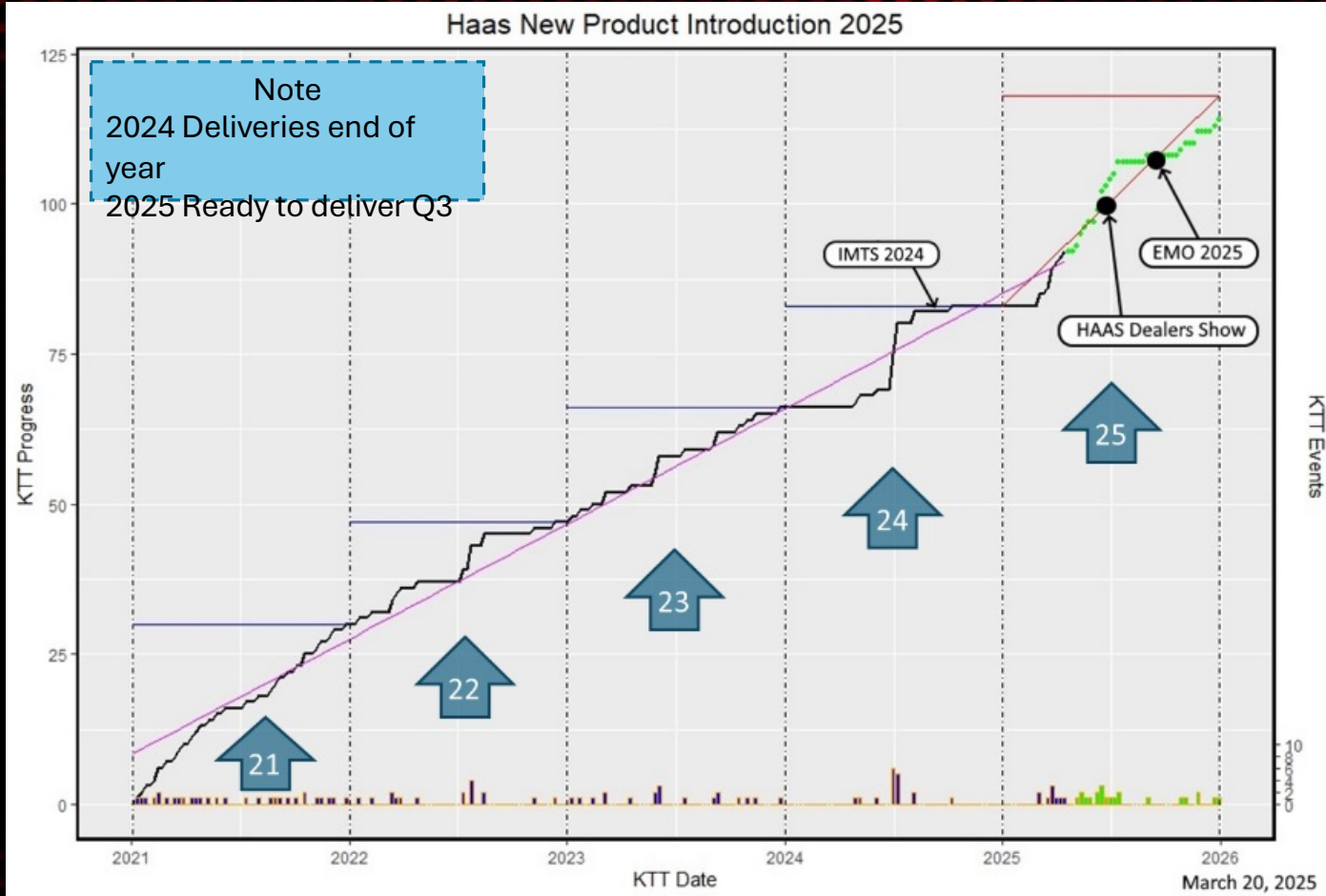


# Bill Tandrow

- **Products**
- **Service**



# Kick The Tires (KTT) = New Products



103 KTT since 2021

- Haas Designs
- Integrated Haas CNC
- Branded

2025 = 20 \*  
2024 = 17  
2023 = 19  
2022 = 17  
2021 = 30

\* 20 in 2025 so far !!

# 2025 Distributor Meeting – 13 New Products



|                                | HAAS | Integrated | Branded | Mill | Lathe | Rotary | Router | Fab |
|--------------------------------|------|------------|---------|------|-------|--------|--------|-----|
| UMC-750 120SMTC & RPL          | X    |            |         | X    |       |        |        |     |
| UMC-1250 50T inline            | X    |            |         | X    |       |        |        |     |
| EC-1600ZT Pallet Pool          | X    |            |         | X    |       |        |        |     |
| Pocket Mill                    | X    |            |         | X    |       |        |        |     |
| HQDA5 Rotary                   | X    |            |         |      |       | X      |        |     |
| GM-1                           | X    |            |         | X    |       |        |        |     |
| DS-30Y Hydraulic bar feeder    |      |            |         |      | X     |        |        |     |
| DC-4                           |      | X          |         | X    |       |        |        |     |
| SR-4020P-4ax                   |      | X          |         |      |       |        | X      |     |
| SR-3015P                       |      | X          |         |      |       |        | X      |     |
| DS-20Y ( DS family expansion ) | X    |            |         |      | X     |        |        |     |
| SB-28Y Box Way Lathe           |      | X          |         |      | X     |        |        |     |
| HFL-3015 Fiber Sheet Laser     |      |            | X       |      |       |        |        | X   |

# DUAL SPINDLE: DS-20Y

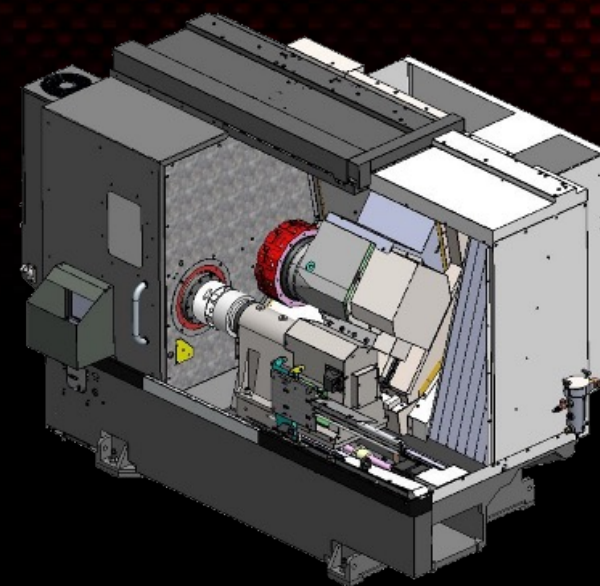


**DS-20Y**

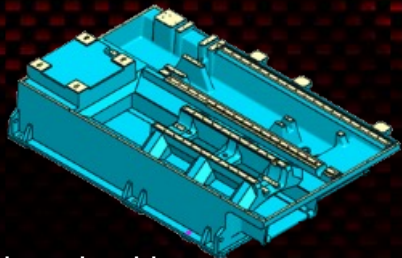


**DS-30Y**

- ST-20Y platform
- BMT Live tooling
- Dual Spindle assembly from DS-30
- Servo drive with Hydraulic Brake



# Large Lathe Family (ST-40 to ST-55)



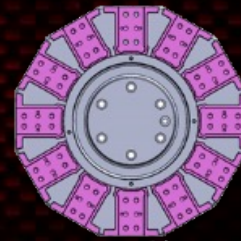
Short bed base



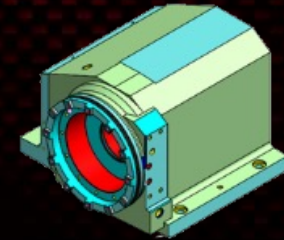
ST-40 spindle head A2-8



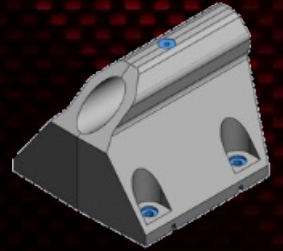
Standard wedge



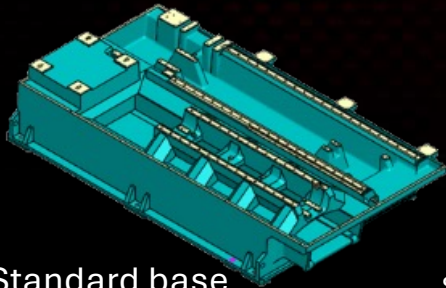
BOT turret



1 turret housing casting



1 tailstock casting



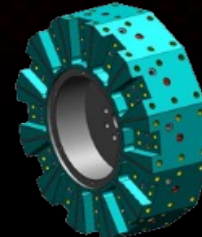
Standard base



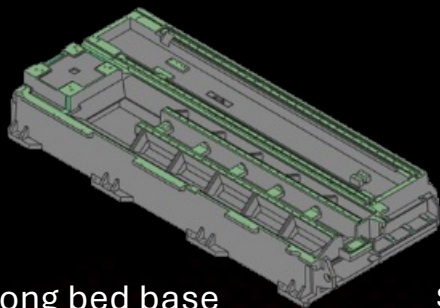
ST-45 spindle head A2-11



Y-axis wedge and saddle



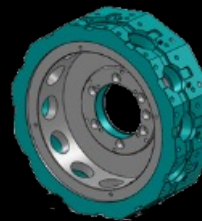
Ext BOT turret



Long bed base



ST-55 spindle head A1-20



BMT turret

**14 unique models**

|         |         |        |
|---------|---------|--------|
| ST-40   | ST-45   | ST-55  |
| ST-40Y  | ST-45Y  | ST-55Y |
| ST-40L  | ST-45L  |        |
| ST-40LY | ST-45LY |        |
| ST-40S  | ST-45S  |        |
| ST-40SY | ST-45SY |        |

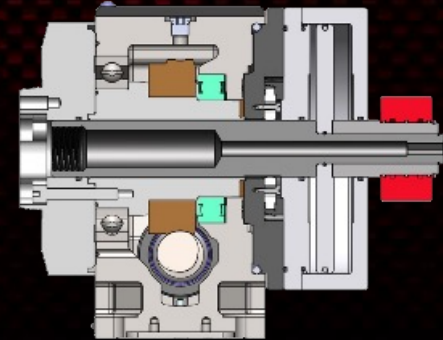
# Rotary Continues to Expand



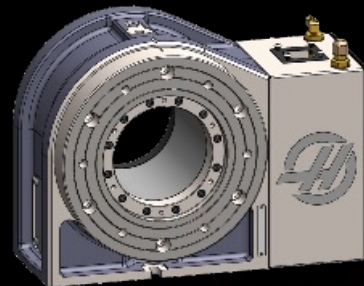
- Built in Air closer
  - 3 Jaw Chuck
  - 5C collet
  - Lathe Collets



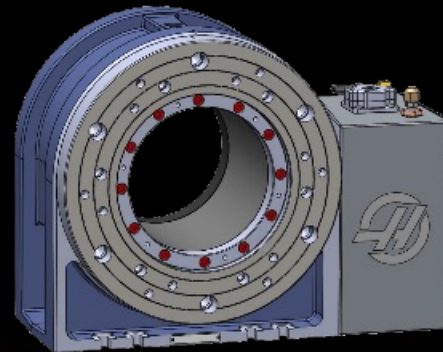
HQDA5



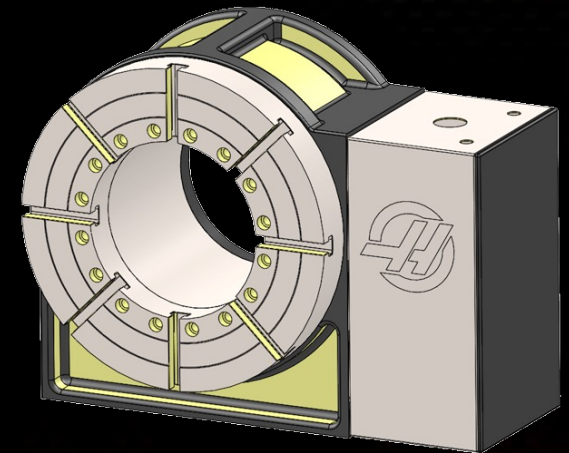
- BIG Bore Rotary
  - LT470 >10" thru ( in design )



LT260



LT350

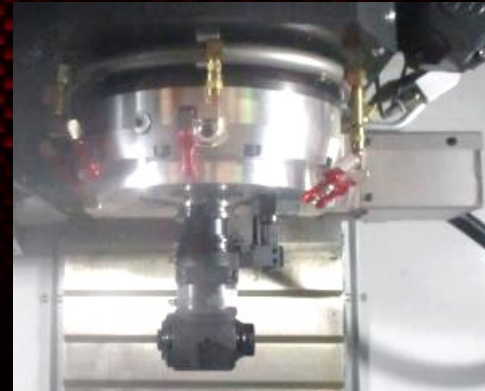


LT470

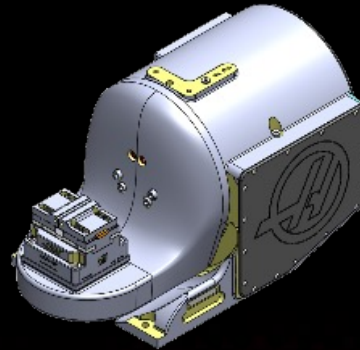
# Rotary Continues to Expand



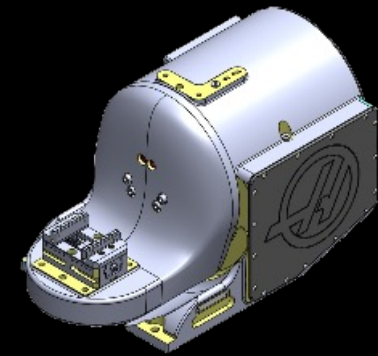
- C Axis Drive accessory for mills
  - Bolts onto 40 spindle housing
  - ATB for coolant inducer
  - Catalogue of German & Japanese tools



- HRT210VM
  - Single axis
  - Table overhang TR body
  - Integrated Vise



**75mm Air Vise**



**3" Manual Vise**

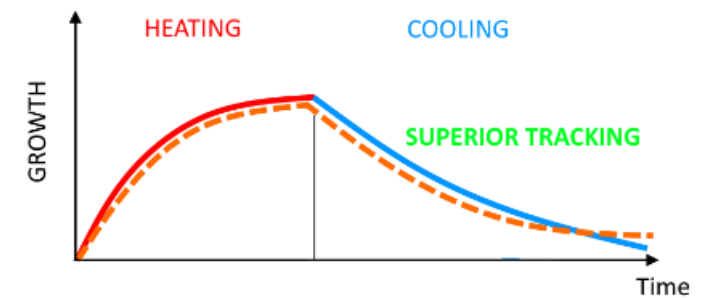
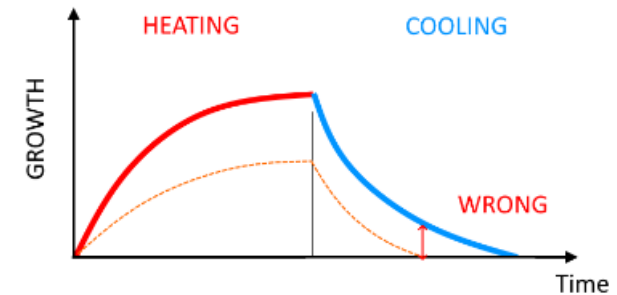
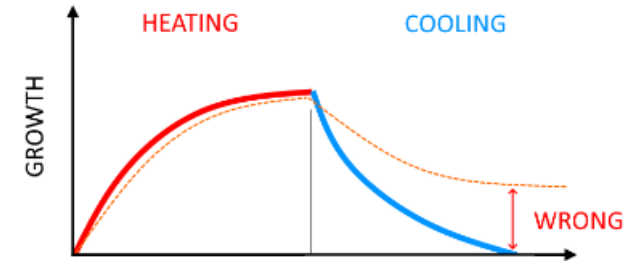
# Technical Improvement: “Dual Rate” Axis Thermal Compensation



- Original AXIS compensation assumed Heating and Cooling Rates Identical

Not always true

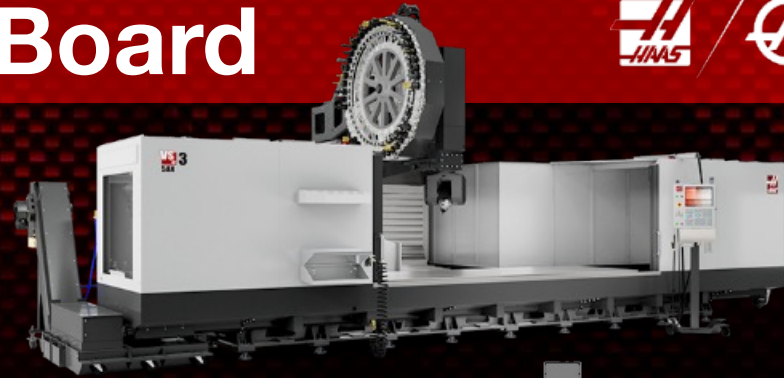
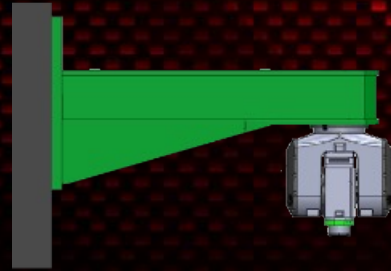
- Heat goes in **faster** than it **comes out**
- New comp has separate **Heating** and **Cooling** calculations
- Superior Tracking Results
- More Elaborate Setup



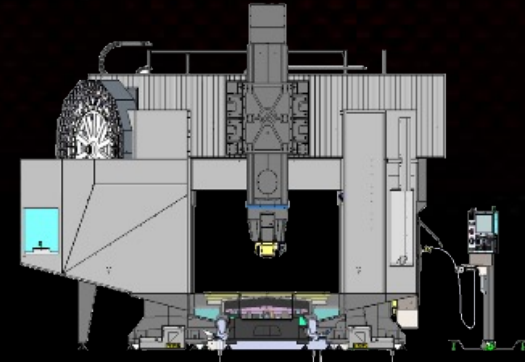
# On the Drawing Board



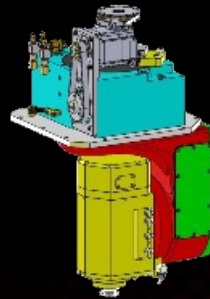
- VS-3 gimbaled
  - Using VR head



- 50T inline will make possible:
  - VF-6SS/50 SS and up
  - HDC-3 3 Axis 50T Bridge Mill



- Gimbaled Head GM-1-5AX
  - Updated from VR-5 Proto
  - 30T - Larger Spindle motor
  - 5x more torque

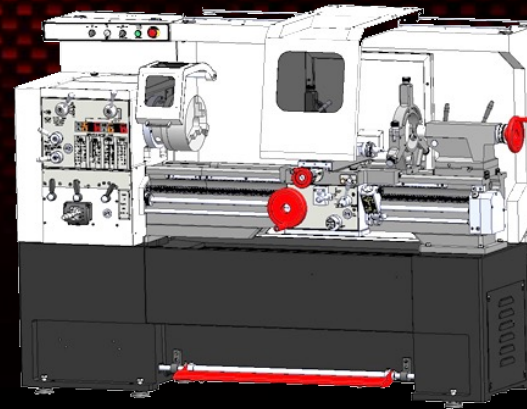


# Pending New Products



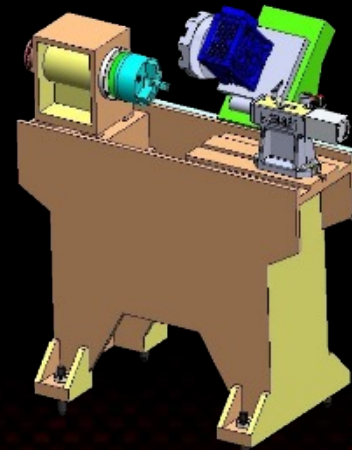
- HML-1 - HAAS Manual Lathe

- FOOT BRAKE
- DRO ( Inch <-> Metric )
- Sliding Guards
- Initial lot on order



- Pocket Lathe

- Companion to HAAS Pocket Mill
- In development
- Looking for Feedback on Pocket Mill

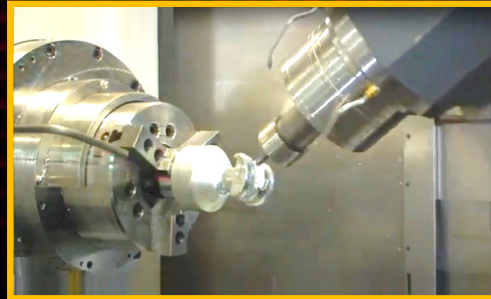


# What's Ahead in Integrated Products



- Haas Mill Turn

- Integrated HAAS CNC
- NGC-CNC developed for VMT-750
- Selecting partner now



- Fixed bed mills for large heavy parts

- Sized for HSKA100 Gimbal Head
- Selecting partner now



# Reliability and Returns



2024

10,532 Machine built

2411 Warrantee EFA parts, 977 unique items

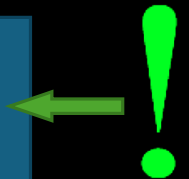
1 in 6 Warrantee machines had a part replaced

EFA-24

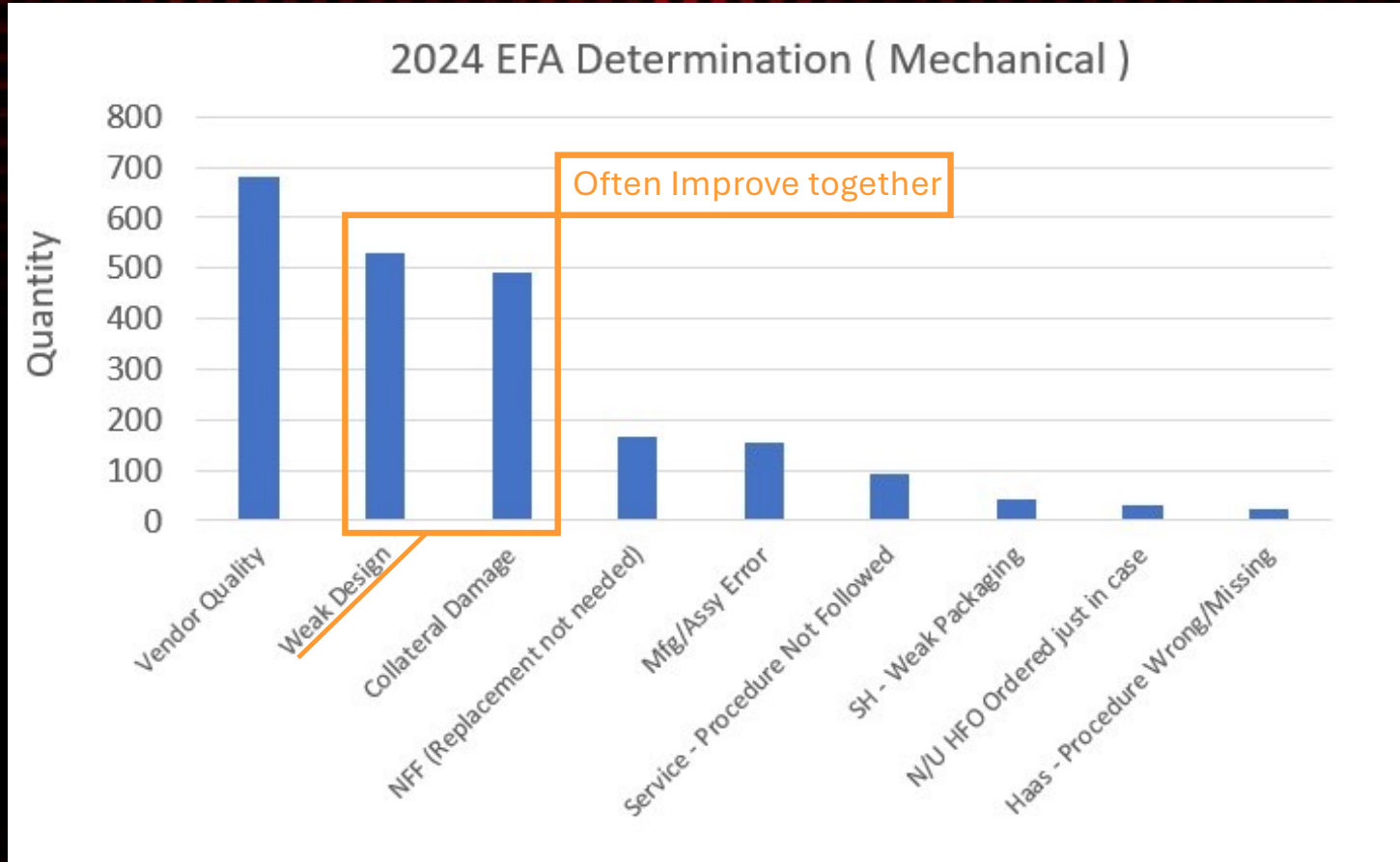
NO FAULT FOUND at an all time low under 9%

Vendor component problems largest category

**102** Unique Engineering Changes ( 2/week )

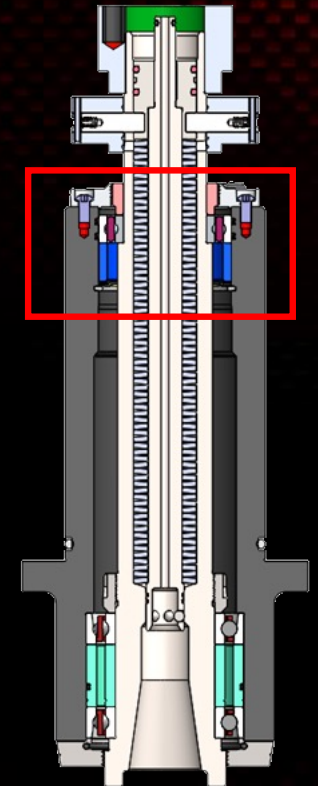
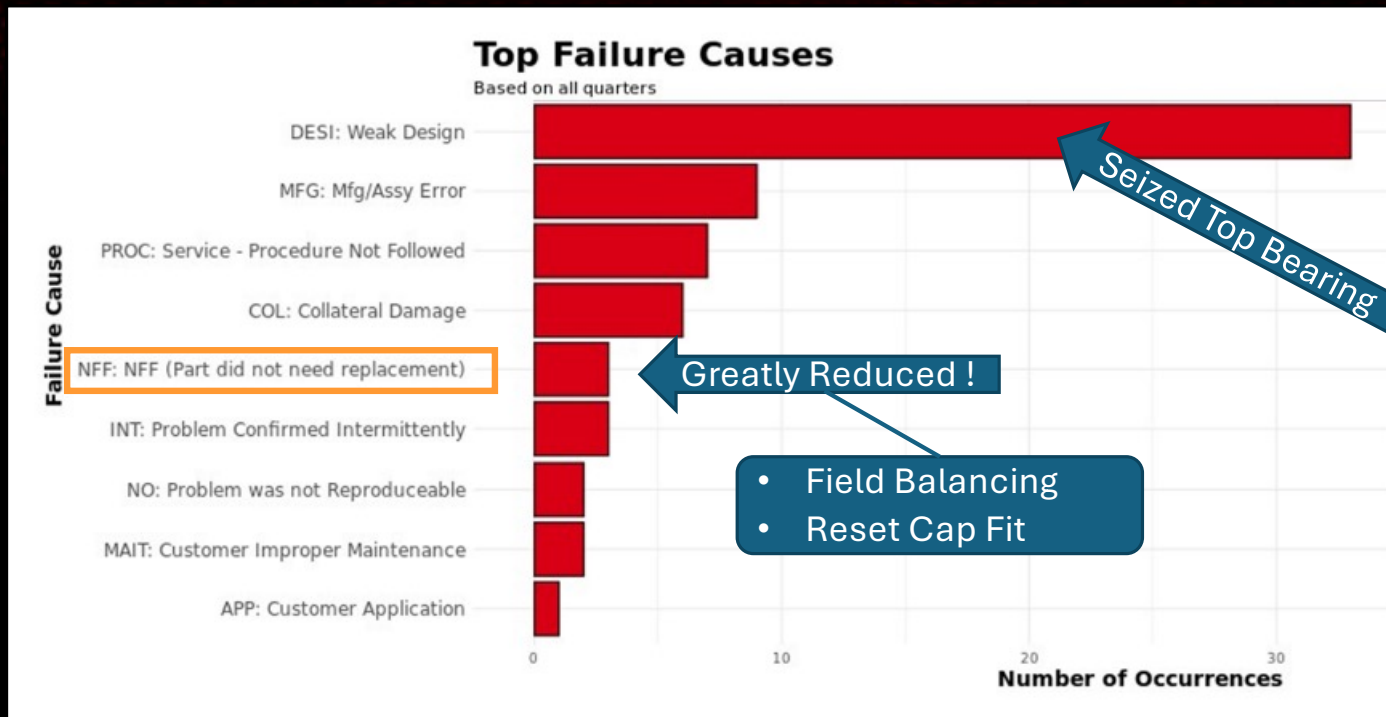


# Part Return Analysis



# EFA on CORE Returns

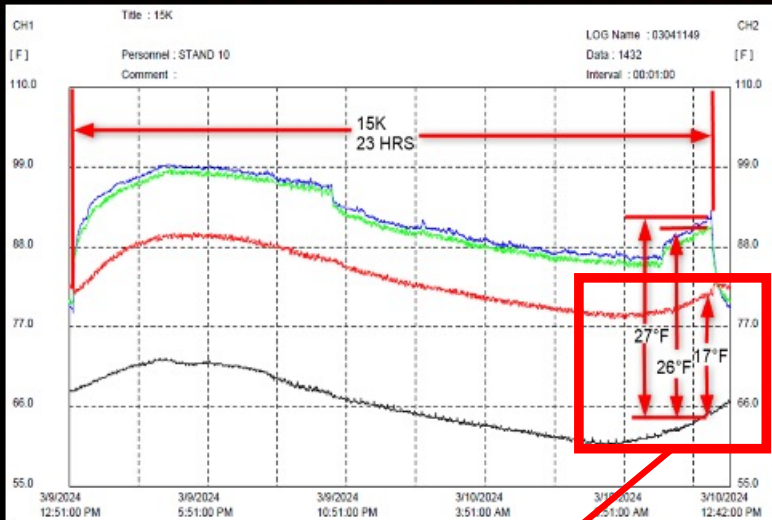
## EFA of 15,000 RPM Spindles – Since 2021



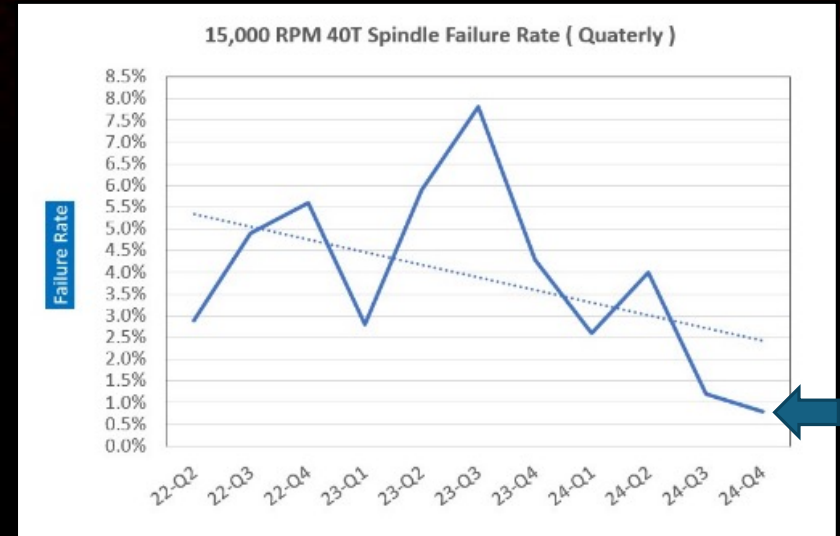
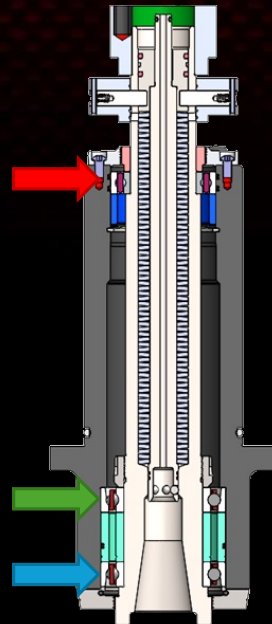
# Ex: EFA – Design Updates

Change Bearing Type, Bearing Fit and Load & Lower Temperatures = Long Life

### 15,000 RPM Bearing Temperatures



17 deg F over ambient



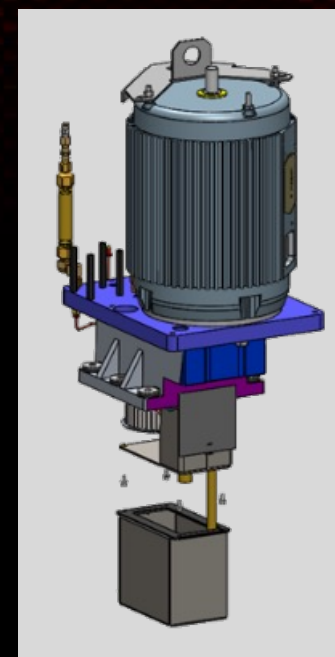
Applying the same improvement onto 18,000 RPM spindle also.

# EFA – Damaged in Transit

40 Taper GB  
Tip Over in Transit /  
Handling



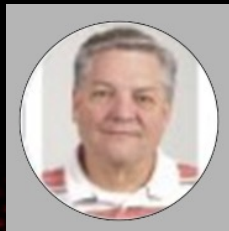
LAY FLAT



# Branded Products Strike Team



- Team of Engineering, Service and Sales Staff
- Reliability and Quality of Branded Products
- Prioritize resources. Provide field fix
- **Expedite parts.** Direct QA at supplier
- Team led by Manager Joe McKenna



| Product         | Model        | Field Issues |
|-----------------|--------------|--------------|
| Band Saw        | HAB-3232     | 31           |
| CMM             | HMM430       | 1            |
| Compressor      | 15hp VS      | 8            |
| Compressor      | 15hp         | 3            |
| DC-1            | DC-1         | 1            |
| DC-2/30         | DC-2/30      | 3            |
| Knee Mill       | HKM-1        | 1            |
| Laser Engraver  | HL50E        | 6            |
| Router          | SR-3015P-4AX | 2            |
| Surface Grinder | HSG-2550     | 1            |
| Tool Presetter  | HTS400       | 2            |



# Machine Repair Customer Service

# Field Support and Service Relationship



CUSTOMER SATISFACTION

DELAYS

FRUSTRATION

COORDINATION

TEAMWORK

STRESS

PARTNERSHIP

PAIN POINTS

COMMUNICATIONS

SUPPORT

FEEDBACK

PROCESS FRICTION

FOLLOWUP

# Directions of Improvement



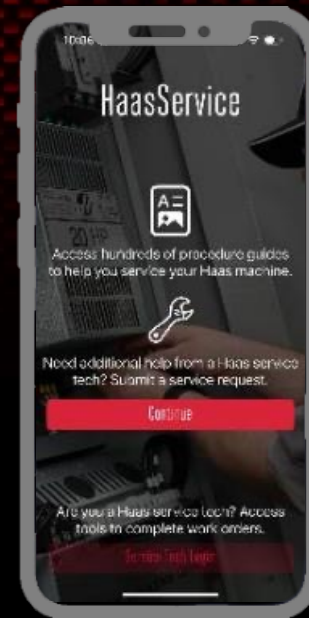
1. Restructure Factory Response
2. Fast Action Policies
3. Information Tools – Service Case Management ( SCM )
4. Invest in HAI Staff Training; Soft Skills,
5. Measure Processes and Progress
6. Promote Exciting and Rewarding Career Paths for Workers
7. Work Together on Outcomes

Industry Leading Machine Service Reputation

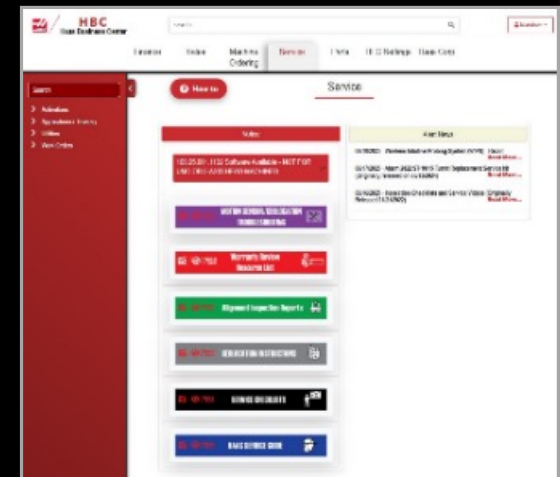
# Service Case Management System



- Haas Service Case Manager ( HSCM )
  - Case ID, Serial Number, Customer
  - Status: Open / In process / Closed
  - Actions Workflow
  - Follow-up Timer, Automatic Notifications
  - Performance Alerts
- **HFO Dashboard**
- Includes **LTFK** and problem reporting
- Metrics, Measurement & Reporting
- Escalation Hot Button – HFO Mgmt
- **Ai chatbot search across service data**

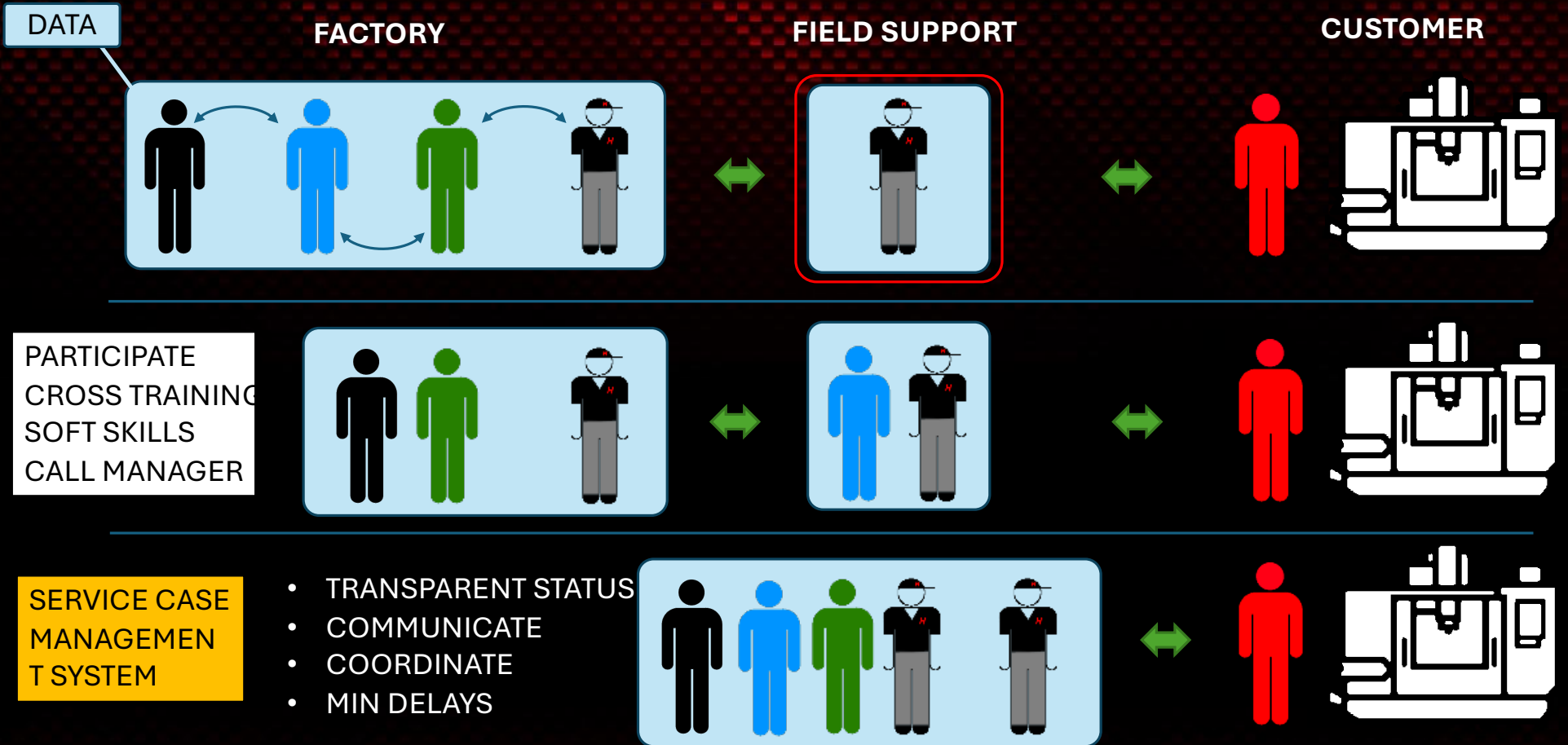


Haas Service App



Haas Business Center

# Customer Satisfaction and Exceptional Service



# Dealers Advisory Council



**Haas and the HFO Network Maintaining Industry Leading Customer Service**

**Date:** 5/27/25

**Declaration of Outcomes and Next Steps from the Customer Service Discussion on May 21, 2025**

**Attendees:** Haas Automation: Bill Tandrow, Scott Gasich, Jeff Law  
HFO Representatives: Mark MacVicar, Neil McGill, Nick Schuchardt, Michael Garner

**Purpose for Meeting:**  
Haas and the HFO Network are committed to providing industry leading customer service. This characteristic differentiates us from the competition. The purpose of this meeting was to discuss the current state of customer service and the necessity of the communication between Haas Service and Engineering.

**Declaration of Outcomes and Next Steps:**  
Haas and the HFO Network will not solve the communication problem in one meeting. The HFO Network understands there is much to discuss. The solution will require effort from both Haas and the HFO Network. A good outcome from this initial discussion includes:

- An agreed upon definition of the problem
  - o The HFO Network provided straightforward evidence of the erosion of Haas' and the HFO Network's ability to provide industry leading customer service.
  - o Haas and the HFO Network are losing a historical competitive advantage.
  - o The loss of the competitive advantage is negatively affecting customer relationships.
  - o Haas agrees that the drive for technical accuracy has impeded the delivery of industry leading customer service.
  - o Haas committed to returning to a culture of partnership and teamwork.
- The identification of areas for improvement
  - o Haas Service and HFO Service Management must possess the ability to collaborate to quickly provide industry leading customer service.
    - Clear decision-making process
    - Monitor and Measure
  - o The need for a Case Management System to identify Open, Closed and Escalated service work orders.
  - o Haas Service technicians understanding of the history of Haas and the HFO Network delivering industry leading customer service.
  - o Haas Service technicians improve their customer service skills or "soft skills."
  - o Haas Service technicians understanding the field experience of HFO Service Technicians.
- The creation of a short-term escalation process
  - o HFO Network Senior Management to email Tandrow, Gasich and Law when a customer relationship is in jeopardy.
- Mutually understood "next steps"
  - o Haas Senior Service Management will work to ensure close work with Haas service.
  - o Haas Senior Service Management will voice Haas' commitment to returning to a culture of partnership and teamwork in the Dealer Meeting.
  - o The HFO Network will continue to bring the challenging service issues directly to Haas Service.
  - o Haas develops a Case Management System to identify Open, Closed and Escalated service work orders.
  - o Educating the Haas Service technicians on the history of Haas and the HFO Network delivering industry leading customer service.
  - o Improve the customer service skills or "soft skills" of Haas Service Technicians.
  - o Schedule time for Haas Service Technicians to work in the field with HFO Service Technicians.
  - o Schedule time for Haas Service Technicians to train at Phillips service training center.
- A commitment to creating a long-term sustainable solution.
  - o Haas develops a "closed loop" Case Management system to identify Open, Closed and Escalated service work orders.
    - Monitor and Measure.
- A return to a partnership that provides industry leading customer service.
  - o The Service Managers Handbook provides baselines for measuring success.
    - Section 1 Overview
    - Section 2 The Vision
    - Section 3 Expectations of Haas Customer Service
  - o A follow-up meeting is set for Wednesday, September 10, 2025, at Haas.
  - o The same seven attendees will participate in the follow-up meeting.

DAC has Provided Important Feedback  
We Listened and Care to Make it Better

Haas' commitment to a culture of partnership and teamwork



# Haas Tooling

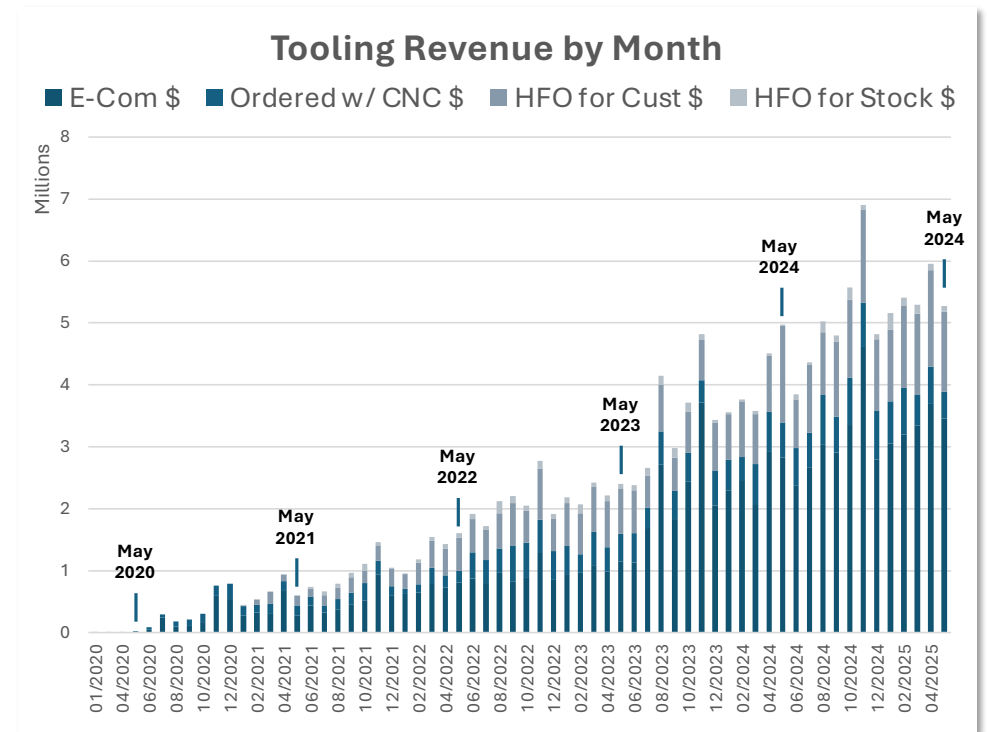
+New Web Site Sneak Preview

# Haas Tooling Since Inception



**We have accomplished a lot together so far...**

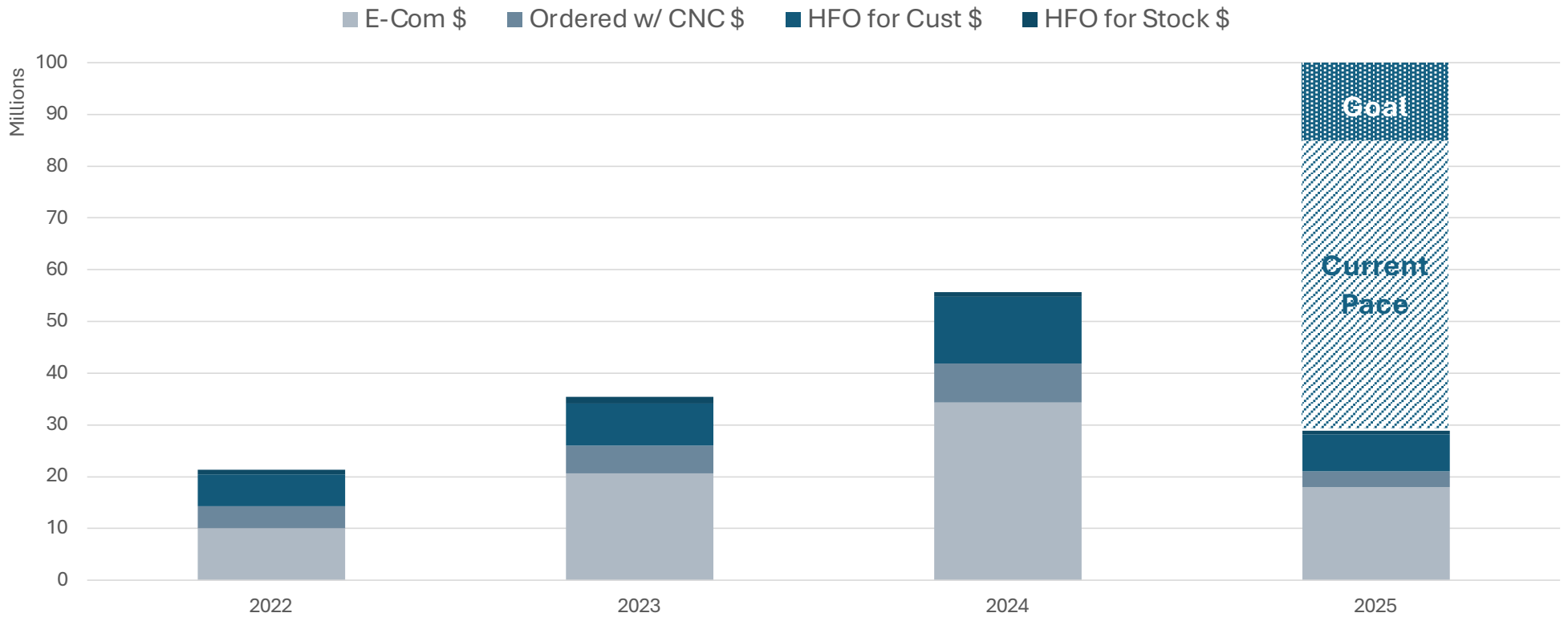
- Took 304,094 Orders
- Sold 5,418,437 Tools
- Booked \$155,275,450
- Earned 55,141 Customers



# YOY Tooling Revenue



## Tooling Revenue by Year and Channel



# 2025 YTD Sales Update



- Growth in the past 3 months has slowed compared to 2023-2024
- Sales with Machines are especially impacted
- **Need to make up \$15M in Tooling Revenue to stay on course but we have what it takes**

| YTD                 | Total \$ (USD) | E-Com \$   | Ordered w/ CNC \$ | HFO for Cust \$ | HFO for Stock \$ |
|---------------------|----------------|------------|-------------------|-----------------|------------------|
| 2025                | 29,948,907     | 18,703,665 | 3,148,809         | 7,312,283       | 784,151          |
| 2024                | 22,294,426     | 13,720,157 | 3,083,852         | 5,287,003       | 203,415          |
| 2024-2025 Growth \$ | 7,654,481      | 4,983,508  | 64,956            | 2,025,280       | 580,736          |
| 2024-2025 Growth %  | 34%            | 36%        | 2%                | 38%             | 285%             |
| 2023-2024 Growth%   | 77%            | 139%       | 30%               | 34%             | -62%             |

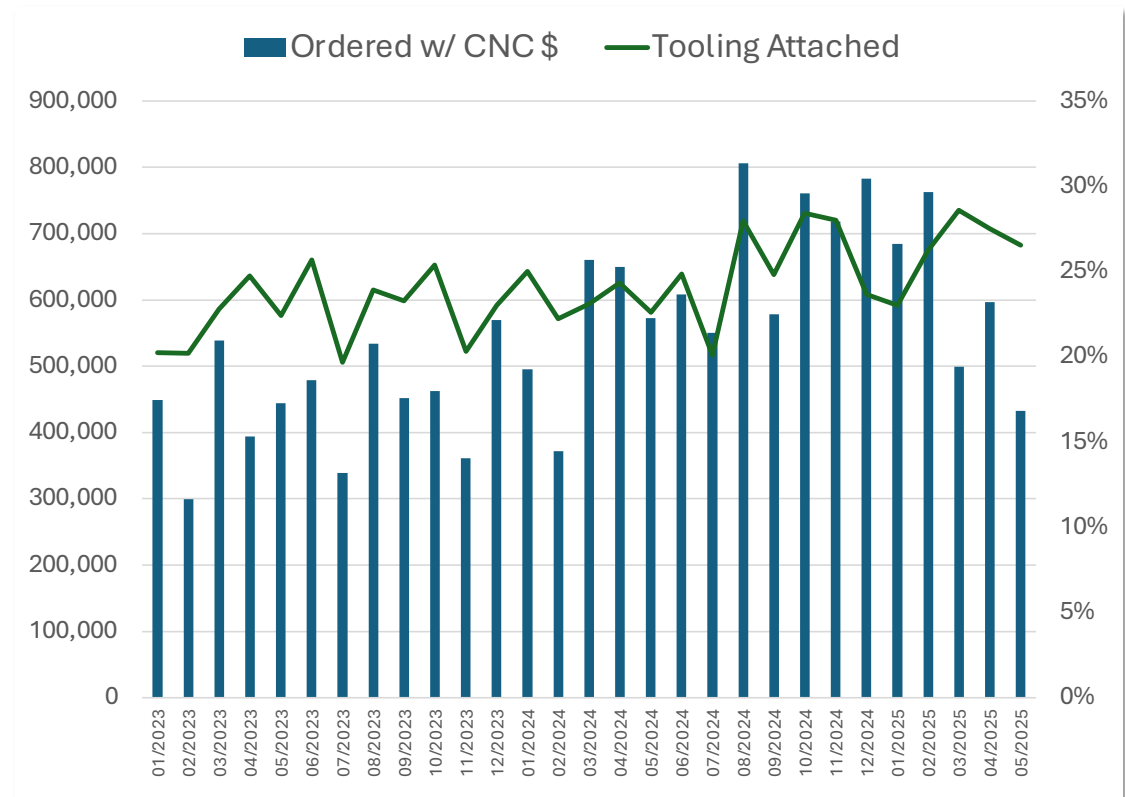
Sales through June 17, 2025

# Selling Tools with Machines



- Only 26% of Machines have sold with Tooling in 2025
- Just a slight improvement from 25% in 2024
- **Set a goal of 50% Tooling Attachment for Machine sales at your HFO**

**50% Attachment Cuts Our Sales Gap in Half**



# Customers



- **Total Customers Grew to 55% to 55K YOY**

- US Customers Grew +50% to 47K
- HAE Customers Grew +94% to 8K

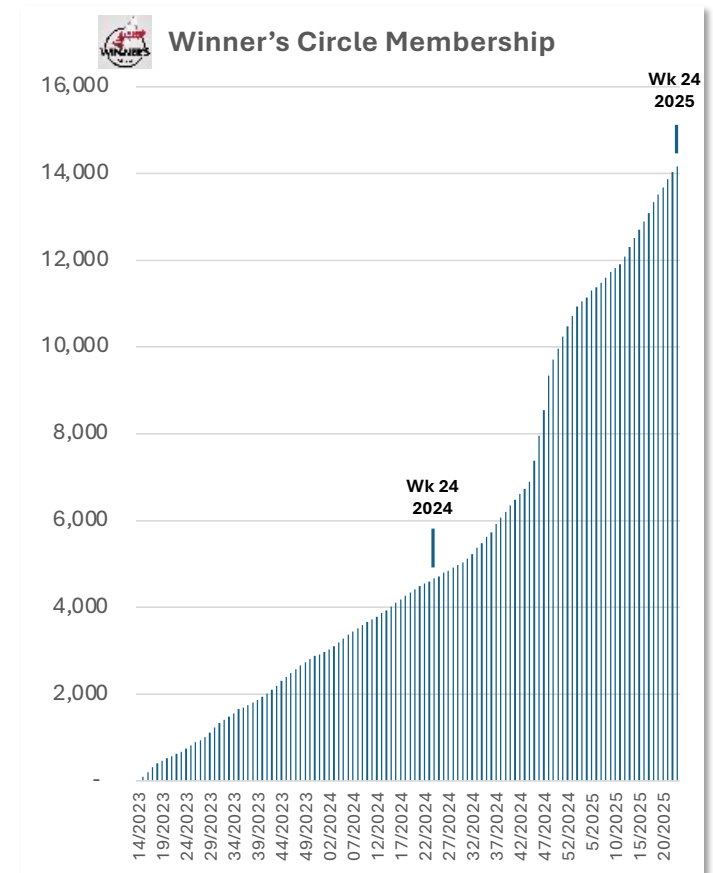
- **Winner's Circle Growth**

- +10K New Members in the past year >14K
- 2.5X Growth

- **Winners are Winning Customers**

- 25% of Customers make up 68% of Revenue
- And 71% of Orders
- Purchase 2X as Frequently

**Keep pushing this program**



# Top Tooling Products



**1% of Products make up 14% of US and HAE Revenue**

## USA

| Material # | Product                                  | Revenue |
|------------|--|---------|
| 08-1983    | HL50E FIBER LASER MARKER & EXTRACTOR     | 808,565 |
| 08-1982    | AIR COMP, 15HP, VARIABLE SPEED, HAC15-VS | 500,552 |
| 08-1739A   | Mill Tooling and Workholding Starter Kit | 388,609 |
| 08-0004A   | 20 PCS CT40 TOOL HOLDER KIT TSC          | 325,607 |
| 05-0404    | HKDX6 VISE                               | 311,288 |
| 04-0773    | BMT65-90-DEGREE-EXSYS\EPPINGER           | 292,514 |
| 93-3584    | AXIS LUBE OIL 1GL/3.78L                  | 249,408 |
| 04-0772    | BMT65-90-DEGREE-BENZ-TOOLING             | 210,531 |
| 06-0200    | HAAS SHOP LIFT                           | 210,218 |
| 03-0073    | HP EM 5 FLUTE 1/2" DIAMETER W/FLATE      | 191,500 |

## HAE

| Material # | Product                                 | Revenue |
|------------|---|---------|
| 08-1984    | HL50E-EU FIBER LASER MARKER & EXTRACTOR | 106,396 |
| 05-0259    | HMV-150x300                             | 69,732  |
| 04-0772    | BMT65-90-DEGREE-BENZ-TOOLING            | 57,773  |
| 05-0260    | HMV-150x400                             | 56,803  |
| 04-0773    | BMT65-90-DEGREE-EXSYS\EPPINGER          | 44,960  |
| 05-0004    | HSCV-5-05                               | 43,148  |
| 05-0258    | HMV-150x200                             | 37,082  |
| 04-0768    | BMT65-STRAIGHT-BENZ-TOOLING             | 36,860  |
| 04-0993    | BMT45-90-DEGREE-BENZ-TOOLING            | 34,576  |
| 05-0213    | HKDX6M                                  | 30,830  |

# Product Expansion



**We have already Launched >700 new products this year**

- **Another 146 Expansion Lines in Roadmap**
- **We will sell >50% MORE New Products this year than last year**
  - High-Priced items like the Laser Marker & Air Compressors are proving very successful
  - More sizes of core lines (end mills, etc)
  - Premium Line of Haas Tooling End Mills

Your Feedback Helps Drive This

Don't forget to check out the New Tooling Catalog



# Delivering Tooling Growth Together



**Haas is putting skin in the game to support achieving our shared goal of \$100M in 2025**

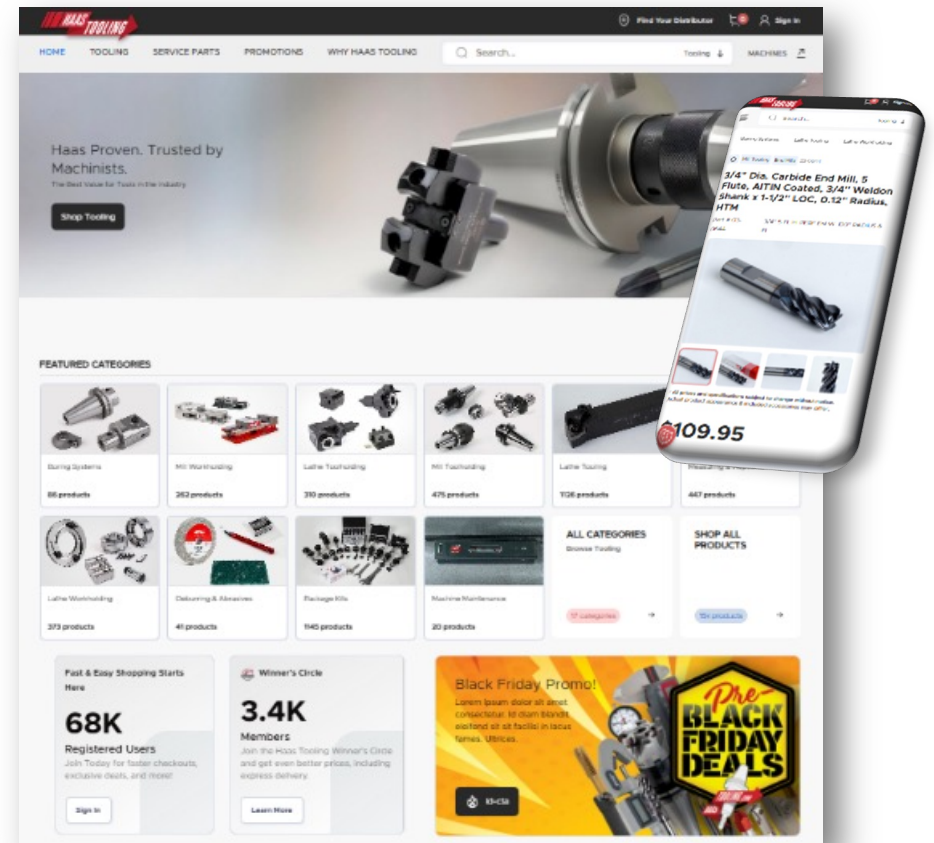
- Providing **Products** to support growth
  - >700 High-demand products launched this year and a lot more to come
- Finding **Customers** to support growth
  - Investing \$2.5M in Advertising, \$4M in Winner's Circle Discounts
- Creating **Sales Tools** to support growth
  - Stable Pricing and Strong Promos, New Site

# The New HaasTooling.com



## What's so Special about the new site?

- Improved User Experience
  - Look & Feel Visually Reinforces our Authority as the Market Leader
  - Personalized Experience (based on user)
  - Mobile-Friendly
  - Lightning-Fast Speed: 16X Faster
- Low-Friction Navigation
  - AI-Driven “Learning” Search
  - Filters are Easy-to-Find & Easy-to-Use
- Product Pages Packed with Information
  - Easy Access to Specs, Videos, Speeds & Feeds, Interactive 3D Models
- Room to Grow
  - Stable Platform Built for Commerce
  - Easier to Add New Features



Thank You.

