Addendum
WPC 2000 Touch Screen Display

⚠ DANGER

Read and follow all safety instructions and warnings in this addendum and your WPC 2000 User Manual.

Failure to comply with these instructions will result in death or serious injury.

NOTICE

Use your WPC 2000 User Manual to install, set up, and run your press. Refer to this addendum for information about the WPC 2000 with touch screen display and the information and controls on it.

The WPC 2000 clutch/brake control now features a touch screen display. Figure 1 shows the front panel of the WPC. Some procedures, steps, indications, etc. are different on the touch screen version. Refer to your WPC 2000 User Manual and this addendum to set up and operate your WPC unit.
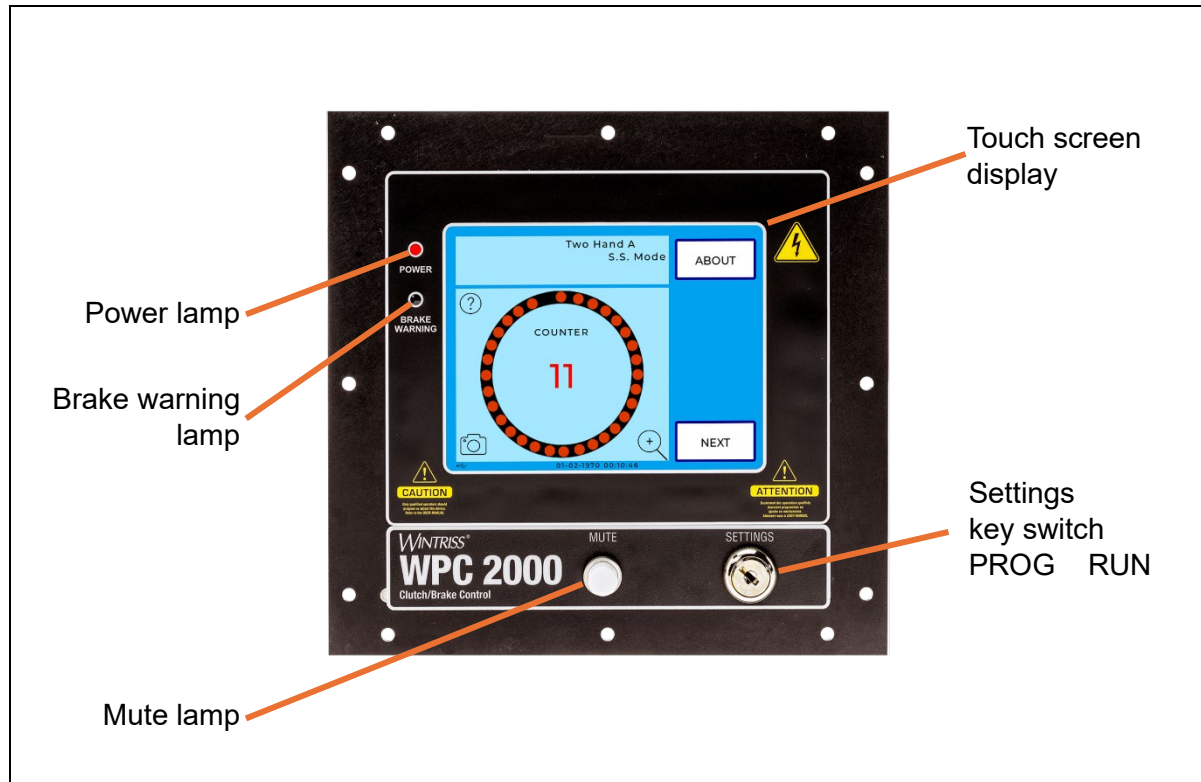
Figure 1. WPC 2000 with Touch Screen: Panel Mount

NOTICE

"Please Insert USB Key to Update Code"

If you see this message when you first power on the WPC 2000, it needs to have display firmware installed. Go to *Updating the Firmware on the WPC 2000 Touch Screen Display*, page 38, and follow the instructions to update the display firmware.

For more information see *"Please Insert USB Key to Update* Code," page *40*.

WPC 2000 Touch Screen Display
(See Chapter 1, Introduction, in the WPC 2000 User Manual)

Figure 2 and Figure 3 show details of the touch screen display in PROG mode (green) and RUN mode (blue).

- Turn the Settings key switch to the left for Program Mode (PROG). The display (Figure 2) shows the information needed for setup/programming of various parameters.
- Turn the Settings key switch to the right for Run Mode. The display (Figure 3) shows the information needed for setup/programming of various parameters.
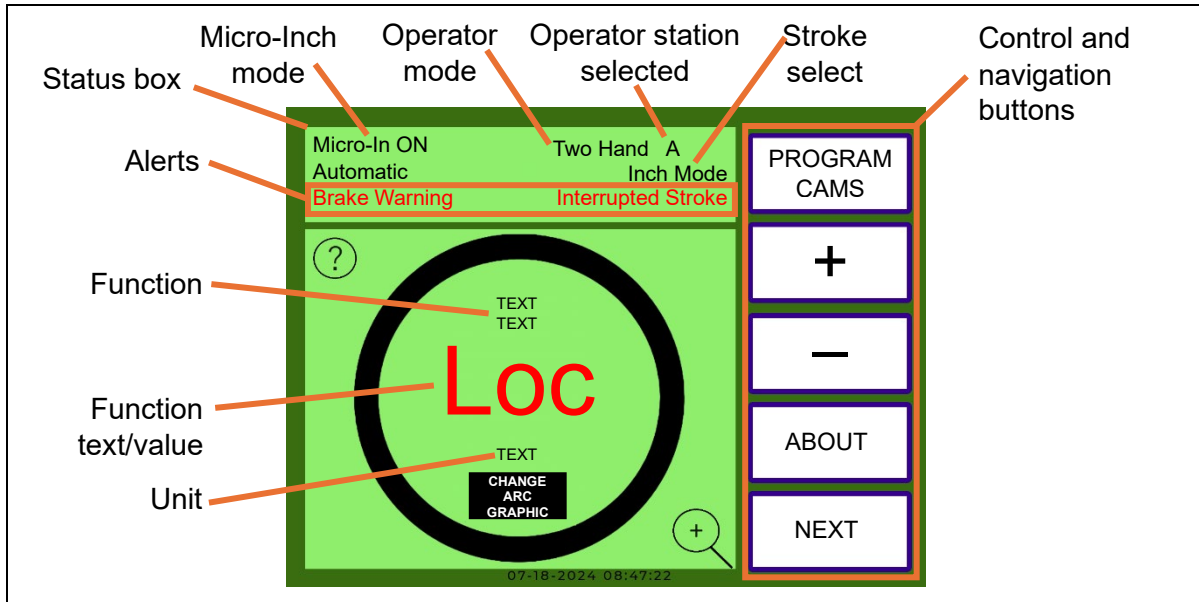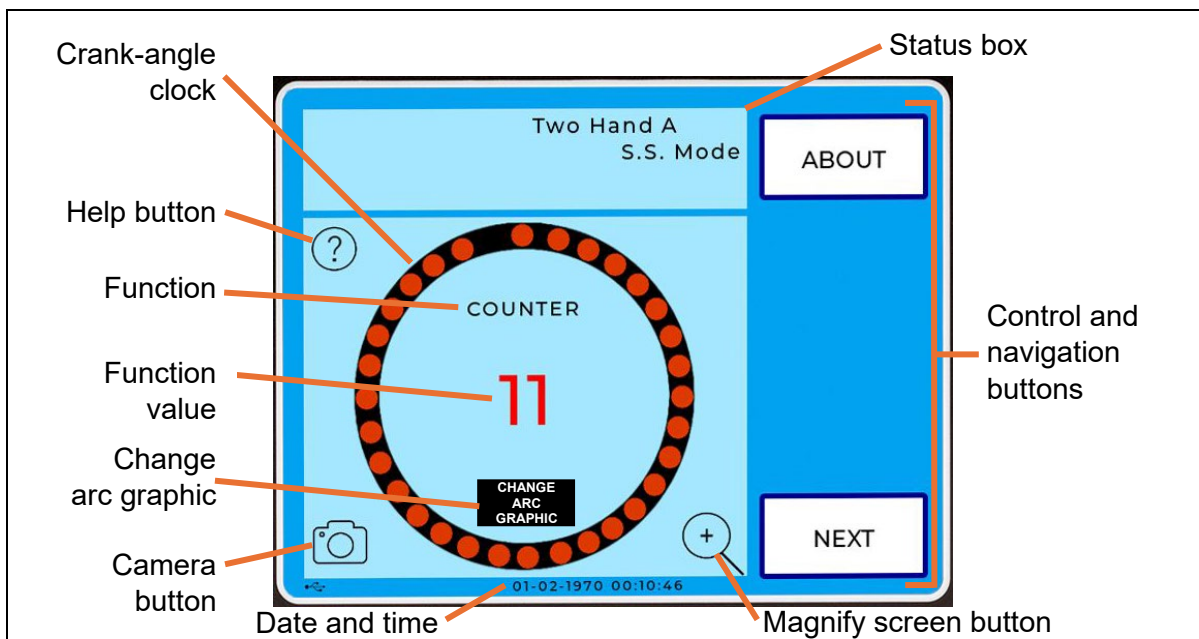

Figure 2. Touch Screen, Program (PROG) Mode

Figure 3. WPC 2000 Touch Screen, Run Mode

Crank-angle clock – The circular graphic on the display. It shows the angular position of the crankshaft whether the press is running or idle. It can be displayed as either a series of small red circles on a black circle (about 10° per red circle) or a solid blue and gray circle. To change between these two graphics, press the rectangular black button labeled CHANGE ARC GRAPHIC. Inside the crank-angle clock is a large, red numeric value that indicates the crank angle in degrees when the press is stopped and the press speed in strokes/minute when the press is running. Alphabetic information can also display in this area.
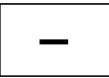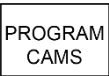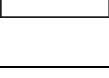
Brake Warning – When the stopping time of the press increases to within 10 milliseconds of the preset Stop-time Limit, the brake warning lamp illuminates and "Brake Warning" flashes in the status box at the top of the display. This alerts the operator that it is time to schedule maintenance on the brake. The lamp and the message can be turned off only by powering down WPC 2000, then powering it back up.

Mute Lamp – A lamp that illuminates when the light curtain is muted during the upstroke. Requires installation of a light curtain and optional light curtain firmware.

Interrupted Stroke – when an interrupted stroke occurs, a red "Interrupted Stroke" message appears in the status box at the top of the display.

Table 1 details the touch controls on the display. The rectangular control and navigation buttons appear at the right side of the display.

Table 1. Control and Navigation Buttons

+	**Plus button** Press to increase a value
–	**Minus button** Press to reduce a value.
PROGRAM CAMS	**PROGRAM CAMS button** Press to program cams. This button is red when you are programming cams.
ABOUT	**ABOUT button** Press to see information about your WPC 2000.
NEXT	**NEXT button** Press to see the next screen or menu choice. NOTE: In most cases where your WPC 2000 User Manual says, "press the Reset/Select button," you should press NEXT.
(?)	**Help button (on most screens)** Press to see instructions for the screen you are viewing.
📷	**Camera button** Press to capture an image of the current screen and store it in a USB drive plugged into the USB receptacle on the back of the display, Figure 4.
(+)	**Magnify button** Press to magnify the screen. Press again to return to the normal screen.	

Figure 4. Back of Display Board Indicating USB Receptacle

Installation
(See Chapter 2 in the WPC 2000 User Manual)

⚠ DANGER

IMPROPER INSTALLATION, USE OR MAINTENANCE

- Follow all procedures in this manual. Perform only the tests and repairs listed in this manual. Use only factory-supplied replacement parts.

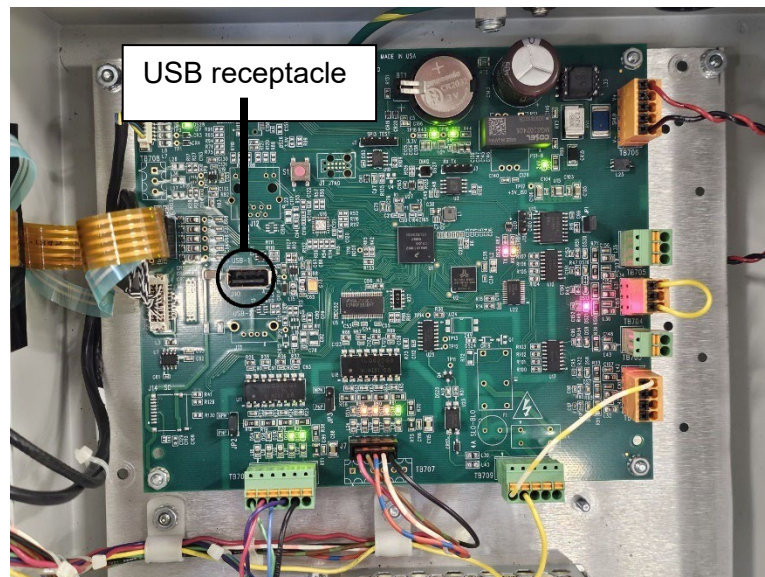- Ensure that WPC 2000 clutch/brake control is installed, tested and repaired by qualified personnel.

- Wire, install and maintain WPC 2000 clutch/brake control in accordance with the applicable safety standards. Carry out all inspection procedures in OSHA 1910.217.

- Wire and install all equipment in accordance with the requirements of OSHA 1910.147 Control of Hazardous Energy (Lockout/Tagout).

- Install and maintain your machine guarding system according to OSHA standard 1910.217, ANSI B11.1, ANSI B11.19 and any other regulations and standards that apply. Ensure that guarding is properly installed to prevent access to the machine over, under or around any guarding device.

- Perform the checkout sequence after installation and after any modification or repair of the WPC 2000 clutch/brake control.

- Lockout/Tagout the press during all installation, modification, repair or maintenance procedures.

- Ensure that supervisors, die-setters, maintenance persons, machine operators, foremen, and any others responsible for operation of the machinery have read and understood all instructions for use of the WPC 2000 clutch/brake control.

- Disconnect the "Continuous" mode position of your stroke selector switch and cover the "CONT" label on your control if the press is not properly guarded for use in Continuous mode.

Failure to comply with these instructions will result in death or serious injury.

⚠ DANGER

Read and follow all safety instructions and warnings in this addendum and your WPC 2000 User Manual.

Failure to comply with these instructions will result in death or serious injury.

⚠ DANGER

FAULTY INSTALLATION

- Ensure that wiring is correct.

- Use only safety-certified components for safety functions, including interlock switches used in safety applications.

- Install guarding to prevent access to hazardous areas. Prevent access to hazardous areas over, under, or around any guarding devices.

- Ensure that there is one active Operator Station for each operator if you are using Two-hand mode.

Failure to comply with these instructions will result in death or serious injury.

⚠ DANGER

ELECTRIC SHOCK OR HAZARDOUS ENERGY

- Disconnect main power before installation.
- Remove all power to the press, press control, and other equipment used with the press.
- Remove all fuses and "tag out" per OSHA 1910.147 Control of Hazardous Energy (Lockout/Tagout).
- Ensure that installation is performed by qualified personnel.
- Complete all installation procedures before connecting to the AC power source.

Failure to comply with these instructions will result in death or serious injury.

NOTICE

Use your WPC 2000 User Manual to install, set up, and run your press. Refer to this addendum for information about the WPC 2000 with touch screen display and the information and controls on it.

NOTICE

When you have completed installation procedures, perform the tests in the Installation Verification section, Chapter 2 in your WPC 2000 User Manual, to ensure that WPC 2000 is installed correctly and working properly before proceeding to Chapter 3.

NOTICE

ALL SIGNAL GROUNDS MUST BE CONNECTED THROUGH MAIN PROCESSOR BOARD

Connect all signal grounds through pins on the WPC 2000 Main Processor board.

NOTICE

READ INSTALLATION INSTRUCTIONS BEFORE STARTING INSTALLATION

If you install WPC 2000 yourself, read this installation chapter carefully and plan how you are going to proceed before you start drilling holes, running conduit, or cutting wires. Make sure you are familiar with the WPC 2000 display (see pages 3 - 5). If you encounter problems during installation, contact Wintriss Tech. Support.

NOTICE

PRESS MUST BE AT TDC

Before starting installation, make sure that the die has been removed from the press and the press ram has been moved to top dead center (TDC). The press must be at TDC when you make final adjustments for the resolver. The TDC setting should be 0° ±2°. Use a dial indicator on the face of the ram, if necessary, to ensure that the ram is positioned correctly..

Install your WPC 2000 as instructed in Chapter 2 of your user manual. The panel cutout and mounting holes are different for the touch screen version; see Figure 5. For reference, see the dimensions of the WPC 2000 touch screen panel in Figure 6.
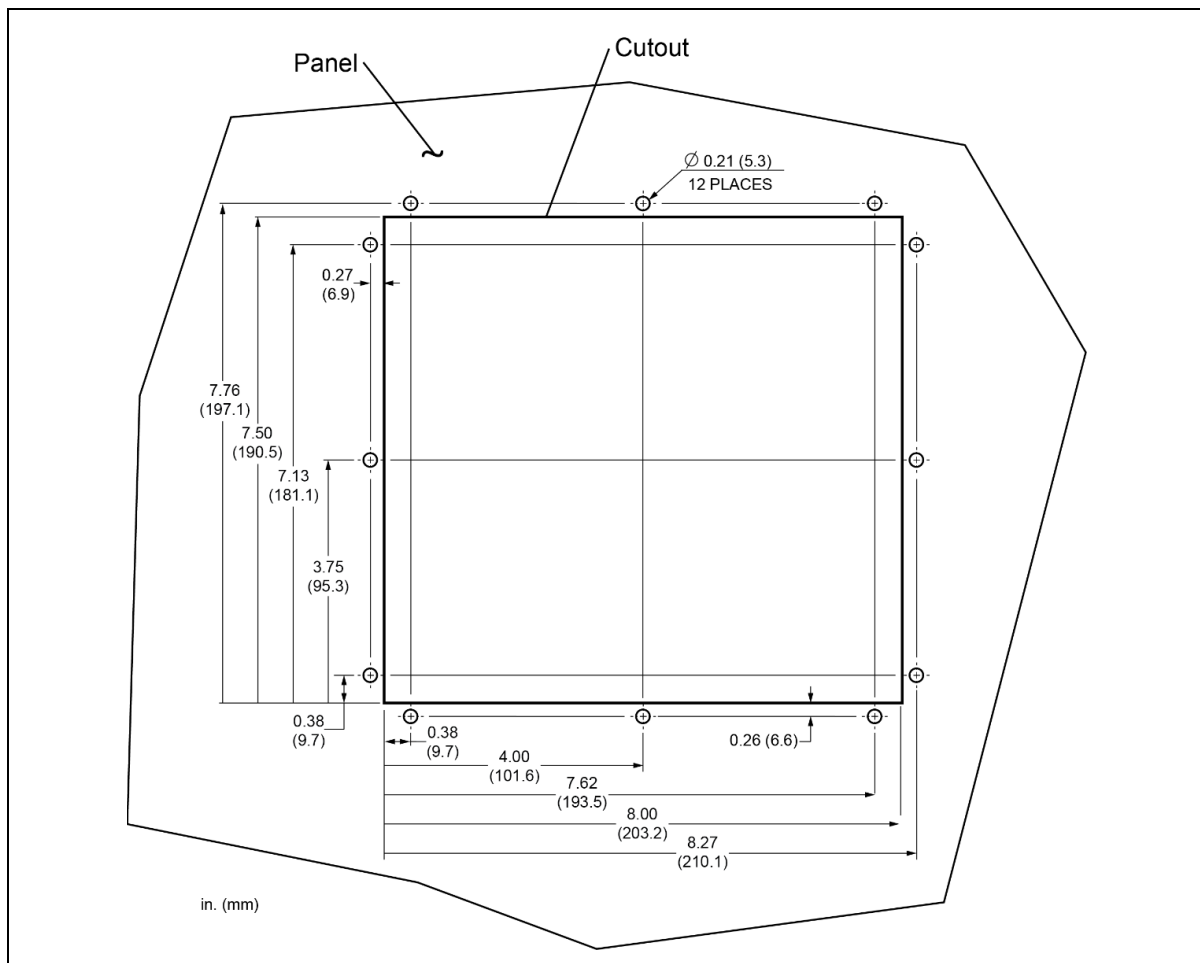

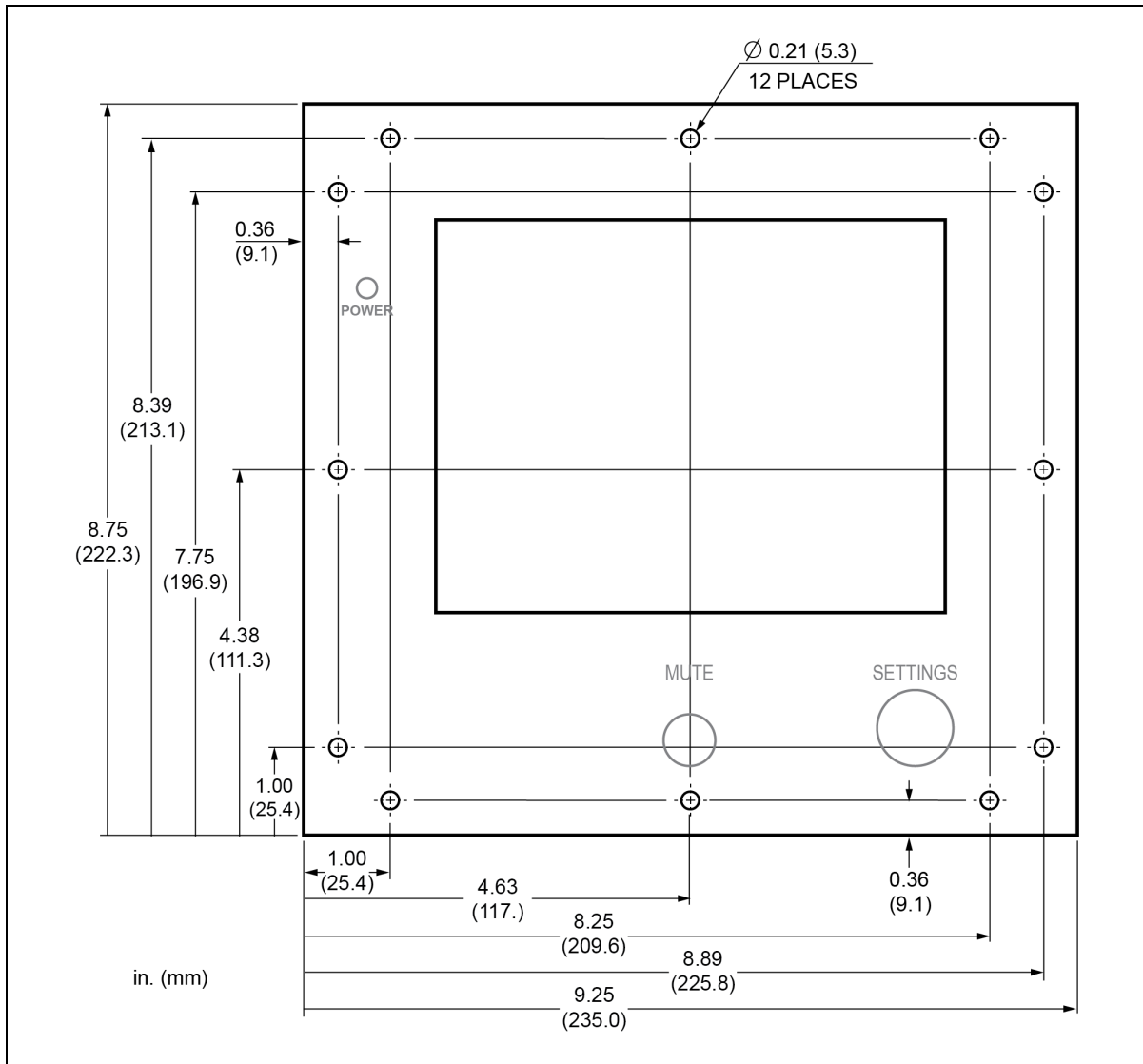*Figure 5. Cutout for Panel Mount WPC 2000 with Touch Screen Display*

Figure 6. Panel Mount WPC 2000 with Touch Screen Display

Initialization, Setup and Checkout
(See Chapter 3 in the WPC 2000 User Manual)

⚠ DANGER

Read and follow all safety instructions and warnings in this addendum and your WPC 2000 User Manual.

Failure to comply with these instructions will result in death or serious injury.

⚠ DANGER

OPERATOR STATION WIRED INCORRECTLY

Run all necessary tests to verify that each Operator Station is wired correctly and provides proper anti-tie-down and anti-repeat protection.

Failure to comply with these instructions will result in death or serious injury.

⚠ DANGER

MORE OPERATORS THAN OPERATOR STATIONS

- Ensure that there are the same number of active operator stations as there are operators if the press is not equipped with properly installed and operating light curtains.
- During setup, lockout/tagout the press if there are more operators than operator stations.
- Verify at every shift change that there are the same number of active operator stations as there are operators if the press is not equipped with properly installed and operating light curtains.

Failure to comply with these instructions will result in death or serious injury.

⚠ DANGER

TWO-HAND CONTROL TOO CLOSE TO HAZARDOUS AREA

Verify at each shift change that any moveable Two-hand controls are located at least the safety distance from the pinch point or hazardous area.

Failure to comply with these instructions will result in death or serious injury.

NOTICE

Use your WPC 2000 User Manual to install, set up, and run your press. Refer to this addendum for information about the WPC 2000 with touch screen display and the information and controls on it.

The WPC 2000 allows you to view and, in some cases, to set the press parameters listed below:

- Crankshaft angle or strokes per minute (SPM)
- 90° stop time test result
- Counter
- Stopping time
- Counter preset
- Stopping angle
- Top-stop angle
- Stop-time limit
- Auto carry-up angle
- Micro-inch time setting

In the touch screen version, access the different parameters and settings by pressing the NEXT control/navigation button to step through the choices somewhat similar to choosing an indicator segment on the previous WPC 2000.

Access the press parameters on the touch screen as follows:

1. Turn the Settings key to the left (PROG).
2. Press NEXT repeatedly to see the parameters and settings.

Initializing the System

(See also *Initializing the System* in Chapter 3 of the WPC 2000 User Manual.)

⚠ **DANGER**

INCORRECT STOP-TIME LIMIT AFTER INITIALIZATION

Determine the Stopping Time and set the Stop-time Limit to a value that reflects the actual Stopping Time of your press whenever you initialize WPC 2000. Use the stop time measured in the 90° stop time test to calculate the safety distance. When you initialize WPC 2000, the Stop-time Limit is returned to its factory setting of 500 ms.

Failure to comply with these instructions will result in death or serious injury.

NOTICE

To initialize only the Start-time Limit, see *Initializing Only the Start-Time Limit,* page 18.

NOTICE

THERE ARE NOW TWO METHODS FOR INITIALIZING THE SYSTEM

Method 1: Pressing display during power up
(*Method 1: Initializing the System by Pressing the Display, page 12*)

Method 2: Saving changes to memory and applying them at next power up.
(*Method 2: Initializing the System by Saving to Memory and Applying on Power-Up*, page 13)

Initializing your WPC 2000 returns the parameters below to their factory settings.

- Stop-time Limit–Set to 500 milliseconds. When you begin operating your press, you must adjust this setting (see *Setting the Stop-time Limit* in Chapter 3 of your WPC 2000 User Manual and in this addendum).

- Start-time Limit–Set to two times the Start Time measured by WPC 2000 on the first stroke after the system has been initialized. The Start Time is the interval between the closing (turning on) of the output relays on the DSV/Lockout Relay board, which provides the signal for the Dual Safety Valve (DSV) to energize, and the resolver signal, which indicates that the crankshaft has begun to turn. The greater part of this interval is the time it takes for the clutch mechanism to activate and engage. The Start-time Limit allows WPC 2000 to detect resolver drive failure. When the measured Start Time exceeds the Start-time Limit, WPC 2000 sends a Stop signal to the press and displays fault code F79 (see *Loss of Rotation* in Chapter 5 of your WPC 2000 User Manual). Sometimes you may need to initialize only the Start-time Limit, such as during troubleshooting (see *Initializing Only the Start-Time Limit*, page 18 in this addendum).

- Resolver Zero Setting–Set to zero. To set the resolver setting to zero without affecting any other setting, see *Re-zeroing the Resolver*, page 15 in this addendum.

Use one of the following methods to initialize the system:

Method 1: Pressing display during power up
(*Method 1: Initializing the System by Pressing the Display*, next section)

Method 2: Saving changes to memory and applying them at next power up.
(*Method 2: Initializing the System by Saving to Memory and Applying on Power-Up*, page 13)

Method 1: Initializing the System by Pressing the Display

1. Verify that your press is at top dead center (TDC), using a dial indicator or other means. TDC is considered to be any position between 358° and 2°. Inch the press to TDC if necessary.

2. Turn the Settings key to PROG (Program, to the left).

3. Turn off power to the WPC 2000.

4. Press and hold pressure somewhere in the lower left area of the display, indicated in Figure 7, while you power-on the WPC 2000. When it starts and shows the confirmation in Figure 8, stop pressing the display.

At power-up, press in this area for System Initialization. This will be equal to the "+" key on the older WPC 2000 display.

Figure 7. Where to Press the Display During Power-Up to Initialize the System

Figure 8. System Initialized Confirmation

Method 2: Initializing the System by Saving to Memory and Applying on Power-Up

1. Turn the Settings key switch to the left (PROG).

2. On the Program screen, Figure 9, press ABOUT. The Initialization screen appears, Figure 10.
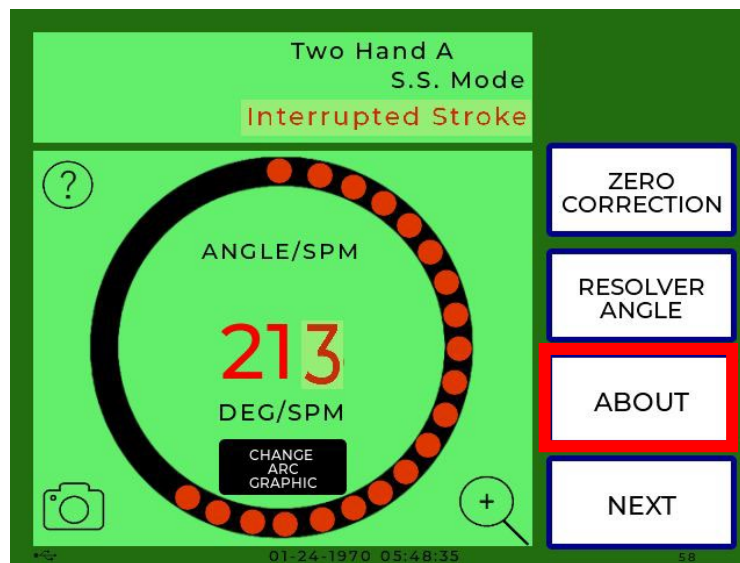
Figure 9. Program Screen, Indicating ABOUT Button
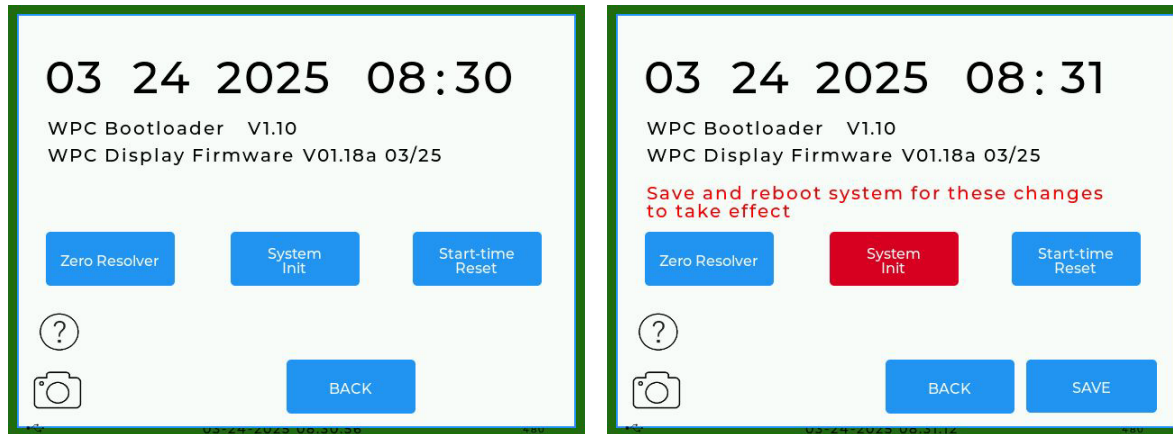
Figure 10. Initialization Screen Initialization Screen Before (left) and After Pressing System Init

1. Press System Init. That button turns red.

2. Press SAVE to proceed with initializing the system. Press BACK to exit without saving.

3. Cycle power to the WPC 2000. When it restarts, the confirmation screen, Figure 11, appears.

Figure 11. System Initialized Confirmation

Re-zeroing the Resolver

(See also *Re-zeroing the Resolver* in Chapter 3 of the WPC 2000 User Manual.)

NOTICE

THERE ARE NOW TWO METHODS FOR RE-ZEROING THE RESOLVER

Method 1: Pressing display during powerup
(*Method 1: Re-zeroing the Resolver by Pressing the Display During Power-up*, next section).

Method 2: Save changes to memory and apply them at next power up
(*Method 2: Re-zeroing the Resolver by Saving to Memory and Applying on Power-Up*, page 16).

Use one of the two methods below to re-zero the resolver without changing any other setting.

Method 1: Re-zeroing the Resolver by Pressing the Display During Power-up

If you need to zero the resolver without re-initializing the Start-time and Stop-time limits, follow these steps:

1. Verify that your press is at top dead center (TDC), using a dial indicator or other means. TDC is considered to be any position between 358° and 2°. Inch the press to TDC if necessary.

2. Turn the Settings key to PROG (Program, to the left).

3. Turn off power to the WPC 2000.

4. Press and hold pressure somewhere on the top half of the display, indicated in Figure 12, while you power-on the WPC 2000. When it starts and shows the confirmation in Figure 13, stop pressing the display.
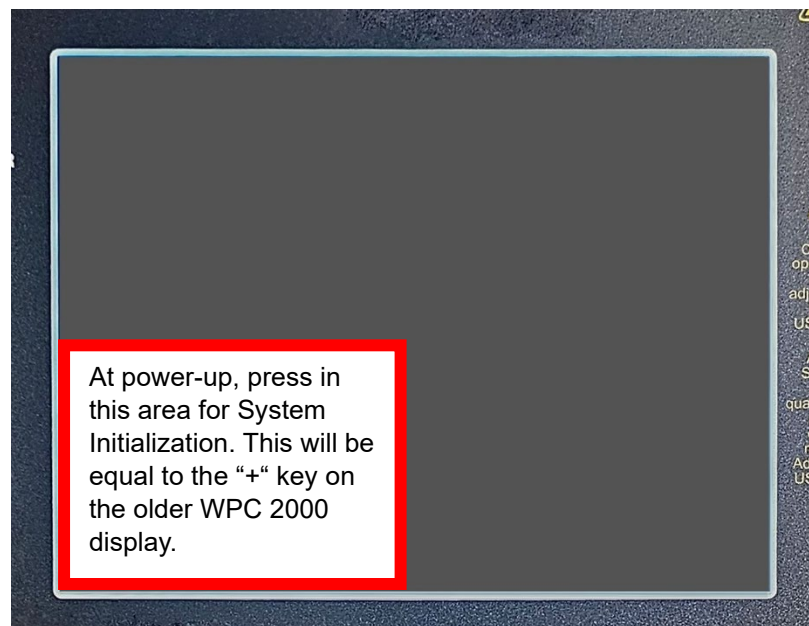

At power-up, press in this area to zero the resolver. This will equal the SELECT button on the older WPC 2000 display
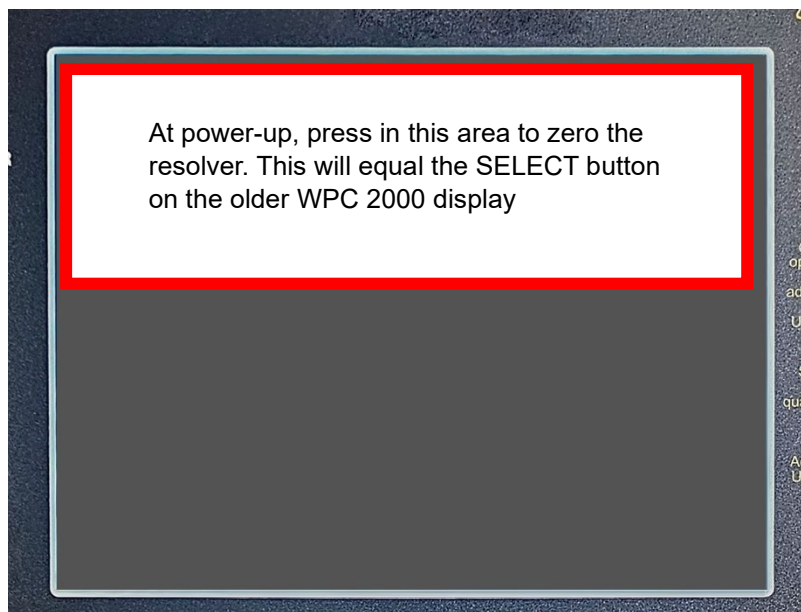
Figure 12. Where to Press the Display During Power-Up to Zero the Resolver
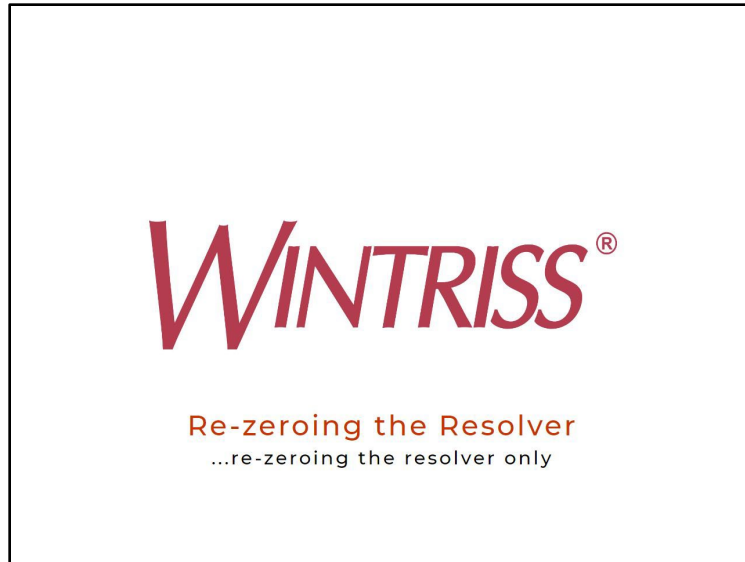
Figure 13. Re-zeroing the Resolver Confirmation

When you use this procedure to zero the resolver, WPC 2000 electronically adds or subtracts any offset between the resolver and the crankshaft, so the resolver always knows the true zero position of the ram. After zeroing, if the press is at TDC, the crank angle value in the LED display should read 0°. If it does not, repeat the zeroing process.

Method 2: Re-zeroing the Resolver by Saving to Memory and Applying on Power-Up

If you need to zero the resolver without re-initializing the Start-time and Stop-time limits, follow these steps:

1. Verify that your press is at top dead center (TDC), using a dial indicator or other means. TDC is considered to be any position between 358° and 2°. Inch the press to TDC if necessary.

2. Turn the Settings key switch to the left (PROG).

3. On the screen that appears, Figure 14, press ABOUT. The Initialization screen, Figure 15, appears.

Figure 14. Program Screen, Indicating ABOUT Button

Figure 15. Initialization Screen Initialization Screen Before (left) and After Pressing Zero Resolver

1. Press Zero Resolver. That button turns red.

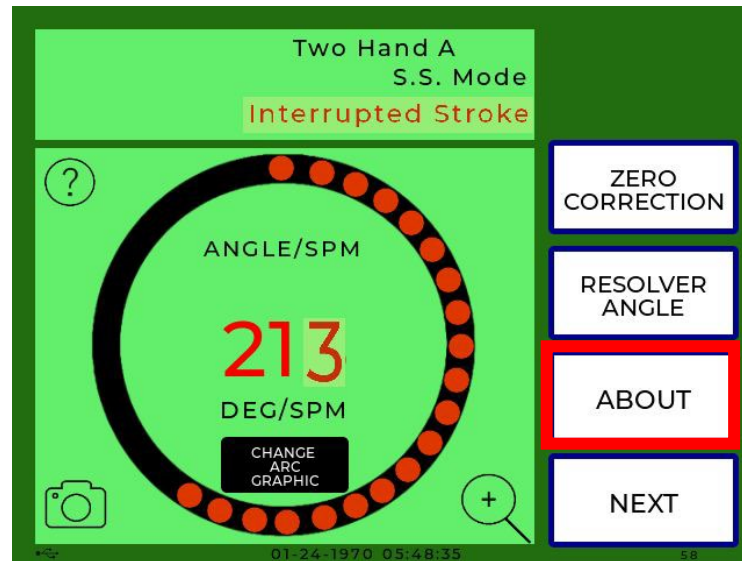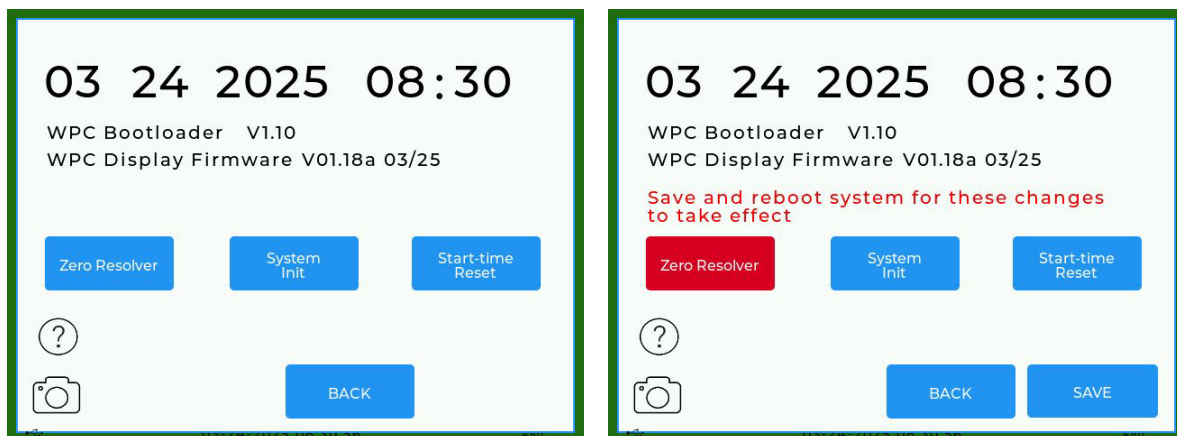2. Press SAVE to proceed with zeroing the resolver. Press BACK to exit without saving.

3. Cycle power to the WPC 2000. When it restarts, the confirmation screen, Figure 16, appears.
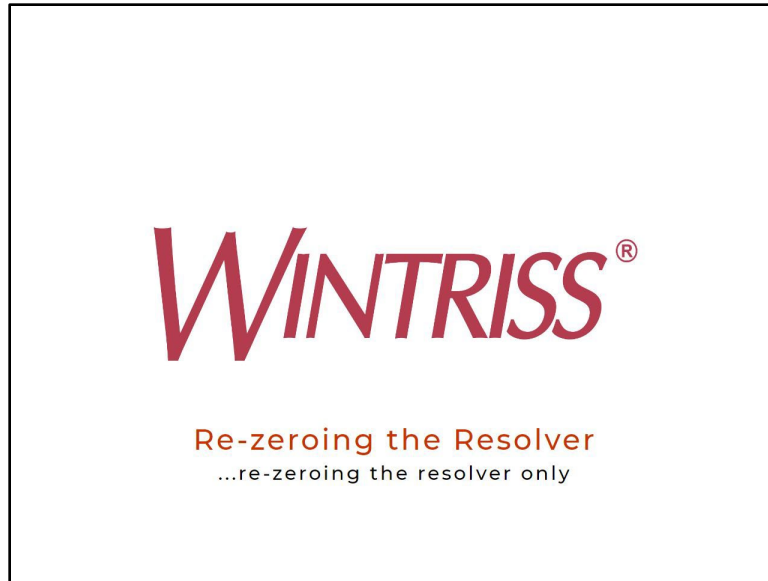
Figure 16. Re-Zeroing Resolver Confirmation

Initializing Only the Start-Time Limit

(See *Initializing Only the Start-Time Limit* in Chapter 3 of the WPC 2000 User Manual.)

NOTICE

The Start-Time Limit value cannot be changed manually.

NOTICE

THERE ARE NOW TWO METHODS FOR INITIALIZING ONLY THE START-TIME LIMIT

Method 1: Pressing display during powerup (*Method 1: Initializing Only the Start-Time Limit by Pressing the Display During Power-up*, next section).

Method 2: Save changes to memory and apply them at next power up. (*Method 2: Initializing Only the Start-Time Limit by Saving to Memory and Applying* on Power-Up, page 19).

Use one of the following methods to initialize the start-time limit without changing any other setting.

Method 1: Initializing Only the Start-Time Limit by Pressing the Display During Power-up

If you want to re-initialize only the Start-time Limit without re-initializing other parameters, such as the Resolver Zero setting, do the following:

1. Turn the Settings key to PROG (Program, to the left).

2. Turn off power to the WPC 2000.

3. Press and hold pressure somewhere in the lower right area of the display, indicated in Figure 17 while you power-on the WPC 2000. When it starts and shows the confirmation in Figure 18, stop pressing the display.

The next time you start the press, WPC 2000 will set the Start-time Limit to twice the Start Time measured on the first stroke. This value cannot be changed manually.

At power-up, press in this area to initialize start-time limit. This will be equal to the "–" key on the older WPC 2000 display.

Figure 17. Where to Press and Hold During Power-Up to Initialize Only the Start-time Limit

Figure 18. Start-time Reset Confirmation

Method 2: Initializing Only the Start-Time Limit by Saving to Memory and Applying on Power-Up

If you need to reset the start-time, follow these steps:

1. Turn the Settings key switch to the left (PROG).

2. On the screen that appears, Figure 19, press ABOUT. The Save Screen, Figure 20, appears.
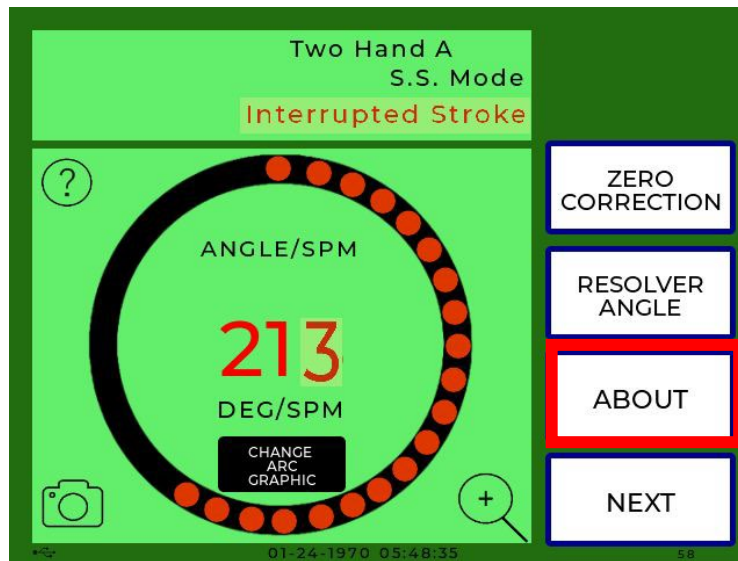
Figure 19. Program Screen, Indicating ABOUT Button
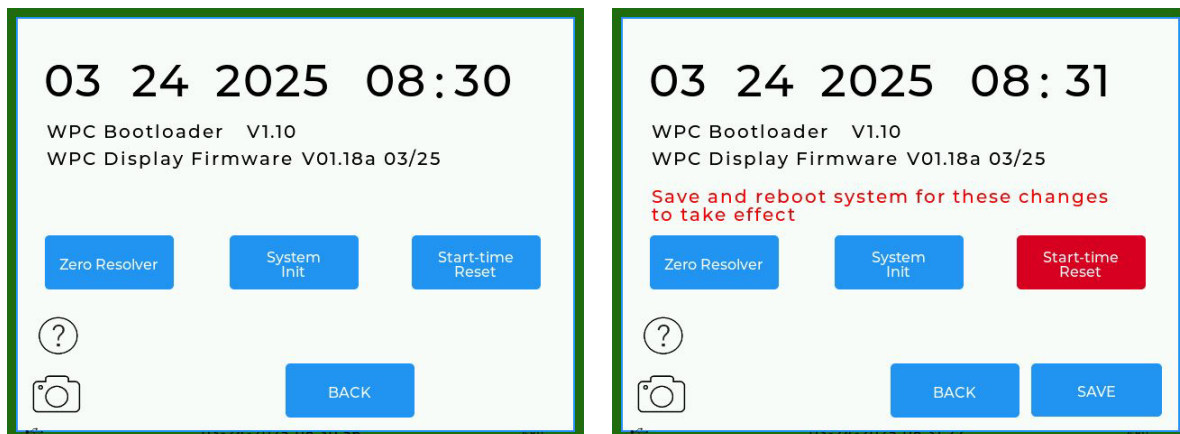
Figure 20. Initialization Screen Before (left) and After Pressing Start Time Reset

3. Press Start-time Reset. That button turns red.

4. Press SAVE to proceed with resetting the start-time. Press BACK to exit without saving.

5. Cycle power to the WPC 2000. When it restarts, the confirmation screen, Figure 21, appears.

Figure 21. Resetting Only the Start-time Confirmation

The next time you start the press, WPC 2000 will set the Start-time Limit to twice the Start Time measured on the first stroke. This value cannot be changed manually.
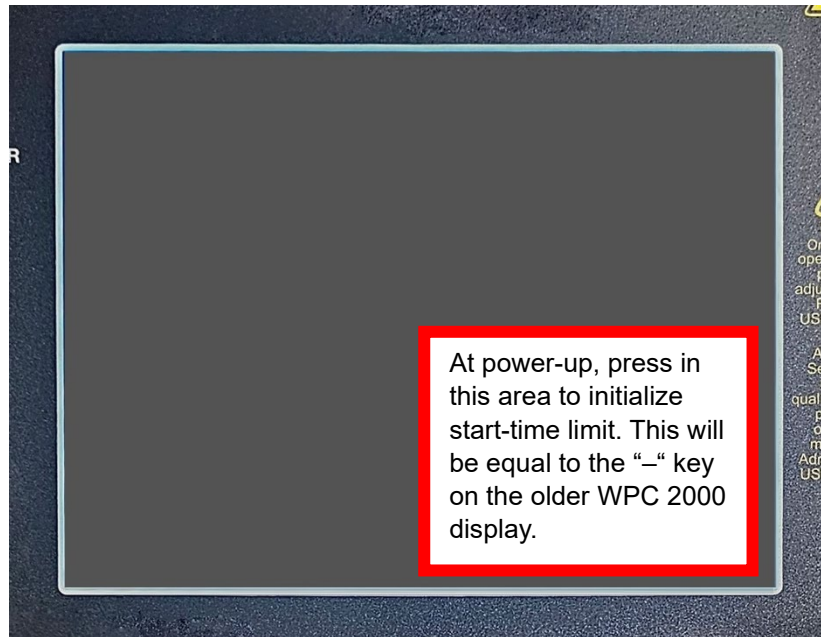
Viewing the Start-Time Limit

To view the Start-time Limit, do the following:

1. With the Settings key turned to the left (PROG), press NEXT repeatedly, until START TIME LIMIT appears on a control/navigation button.

2. Press START TIME LIMIT. The current start time appears on the display.
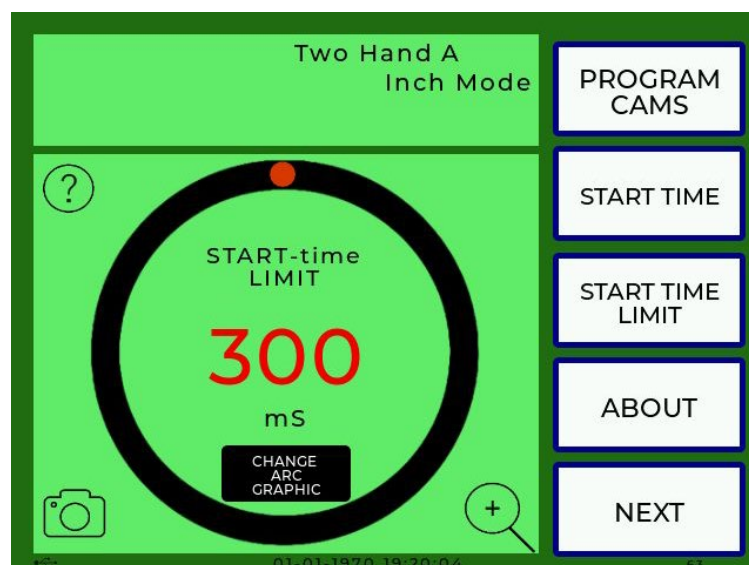
Figure 22. Start-Time Limit

Viewing the Last Start Time

(See *Viewing the Last Start Time* in Chapter 3 of the WPC 2000 User Manual.)
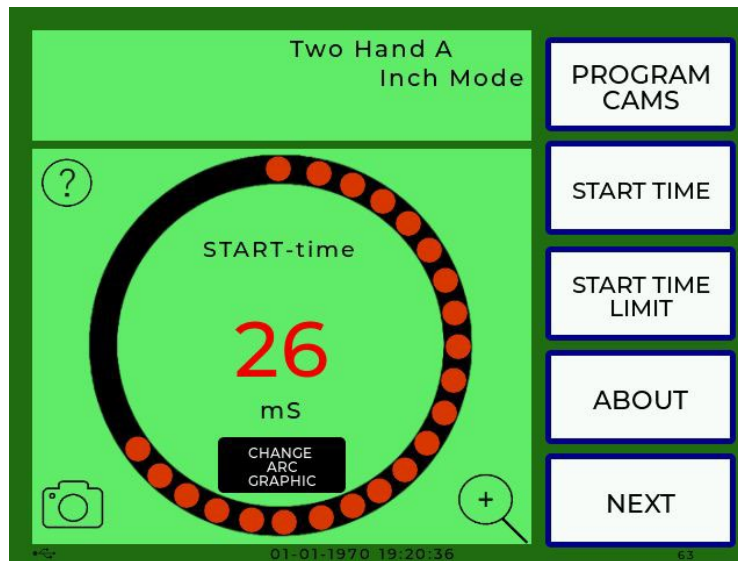
Figure 23. Start Time (Previous Start)

To view the Start Time measured the last time you started your press, do the following:

1. With the Settings key turned to the left (PROG), press NEXT repeatedly, until START TIME appears on a control/navigation button (as in Figure 22).

2. Press START TIME. The display shows the Start Time in milliseconds that was measured the last time you started the press.

Installing the Overrun Sensor Magnet

(See *Installing the Overrun Sensor Magnet* in Chapter 3 of the WPC 2000 User Manual.)

> ### ⚠ DANGER
>
> **INCORRECT INSTALLATION OF OVERRUN LIMIT SWITCH**
>
> Ensure that the overrun sensor magnet is installed at a proper location if you have Two-hand Control without light curtains, or light curtains with muting. Proper installation of the magnet ensures that if the Top-stop output relay fails, a hazardous situation will not occur on the downstroke. The magnet must be mounted as close as possible to the Top-stop "On" Angle (see your WPC 2000 User Manual).
>
> **Failure to comply with these instructions could result in death or serious injury.**

Setting the Top-stop "On" Angle

(See *Setting the Top-stop "On" Angle* in Chapter 3 of the WPC 2000 User Manual.)

NOTICE

For a variable-speed press, you need to determine the latest Top-stop "On" Angle, which is the angle at which the press top-stops at its slowest speed and with the shortest stopping angle/time.

NOTICE

BEFORE YOU SET THE TOP-STOP "ON" ANGLE, MAKE SURE THAT

- The press ram has been mechanically set to top dead center (TDC) (see "PRESS MUST BE AT TDC notice before Figure 5 in this addendum)

- The resolver has been aligned as close as possible to TDC (i.e., 0° ±2°) (see Mounting the Resolver, Chapter 2 in your WPD 2000 User Manual)

- The resolver has been zeroed (see *Re-zeroing the Resolver*, page 15 in this addendum)..

Figure 24. Top Stop Angle Screen

Follow the instruction in *Setting the Top-stop "On" Angle* in Chapter 3 of the WPC 2000 User Manual. A few actions are different with the touch screen display, as described below.

Before you begin the setting process, turn the Settings key to the left (PROG).

To clear the "Loc" message turn the Stroke Select switch to OFF, then to INCH.

For the steps beginning with "Temporarily set the Top-stop "On" Angle to 211°":

1. With the press in Inch mode, and the Settings key turned to the left (PROG), press NEXT repeatedly until TOP STOP ANGLE appears among the control/navigation buttons.

2. Press TOP STOP ANGLE. The Top Stop Angle display appears, Figure 24.

3. Use the + and – buttons to adjust the setting.

4. Then, press NEXT repeatedly until the Angle/SPM display appears.

Return to your WPC 2000 User Manual and continue from the following step:

"With the press still in Inch mode and the main motor on, press and hold both Run/Inch palm buttons until the press top-stops."

Adjusting the Top-stop Angle

(See *Adjusting the Top-stop Angle* in Chapter 3 of the WPC 2000 User Manual.)

⚠ DANGER

INCORRECT OVERRUN SENSOR ANGLE AFTER RESETTING TOP-STOP ANGLE

Re-check the overrun sensor angle setting whenever you change the Top-stop angle, and reset the overrun sensor setting if necessary.

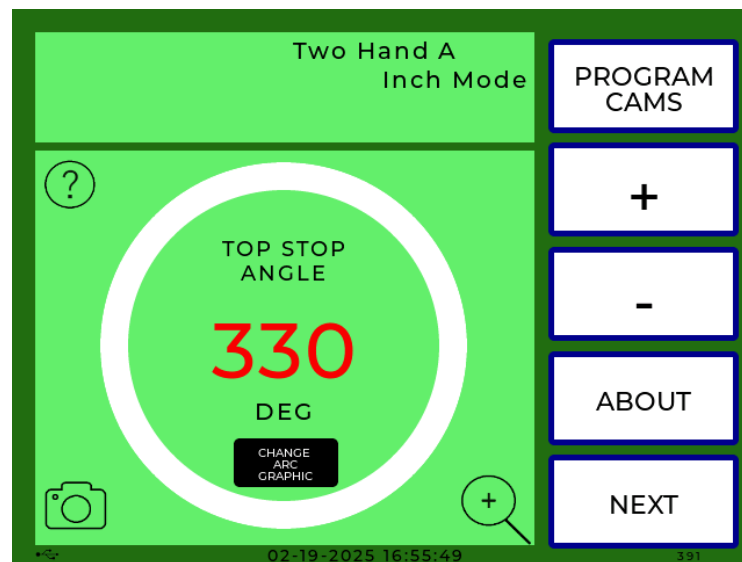**Failure to comply with these instructions will result in death or serious injury.**
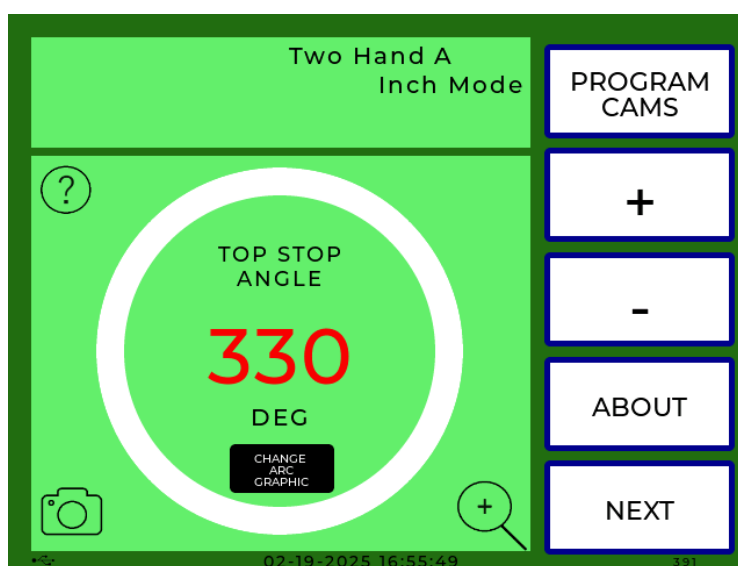
Figure 25. Top Stop Angle Screen

Follow the instruction in *Setting the Top-stop "On" Angle* in Chapter 3 of the WPC 2000 User Manual.

After you complete steps 1 and 2, follow these steps:

    a.   With the Settings key turned to the left (PROG), press NEXT repeatedly, until TOP STOP ANGLE appears on a control/navigation button.

    b.   Press TOP STOP ANGLE. The Top Stop Angle screen appears, Figure 25.

    c.   Set the Top Stop Angle you determined at the beginning of the procedure, pressing the + and – buttons as needed.

Now, return to the instructions in your WPC 2000 User Manual, at the following step and complete the rest of the procedure.

Setting the Auto Carry-up Angle

(See *Setting the Auto Carry-up Angle* in Chapter 3 of the WPC 2000 User Manual.)

⚠ DANGER

INCORRECT AUTO CARRY-UP ANGLE

- Ensure that the Auto Carry-up Angle is correct. If the operator can reach the pinch point, the Auto Carry-up Angle must be set so that any hazardous openings are smaller than 1/4 in. by the time the crankshaft reaches the Auto Carry-up Angle.
- Determine the Auto Carry-up Angle for each tool, based on the crank angle at which the tool's hazardous openings are smaller than 1/4 in.
- Change the Auto Carry-up Angle to the correct value when you change tools.

Failure to comply with these instructions will result in death or serious injury.

⚠ DANGER

PREVENT CHANGES TO AUTO CARRY-UP ANGLE WHEN SETTINGS KEY IS PRESENT

Use option switch 7 to prevent anyone from making changes to the Auto Carry-up Angle (see *Switch 7 – Disabling Access to Stop-time Limit and Auto Carry-up Angle Settings* in Chapter 3 of your WPC 2000 User Manual).

Failure to comply with these instructions will result in death or serious injury.

⚠ WARNING

ELECTRIC SHOCK HAZARD WHEN WORKING INSIDE ITS ENCLOSURE

Turn off and disconnect power from the WPC 2000 clutch/brake control, the press and any other machinery it is connected to before working inside its enclosure. This includes power to the press motor.

Failure to comply with these instructions could result in death or serious injury.

NOTICE

The following Auto Carry-up function also applies to Foot Control. For more information about using Foot Control for Single Stroke mode, see *Single-stroke, Foot Operation*, page 4-15 and *Enabling Foot Control in a Foot Switch* in Chapter 3 of your WPC 2000 User Manual.

NOTICE

Use your WPC 2000 User Manual to install, set up, and run your press. Refer to this addendum for information about the WPC 2000 with touch screen display and the information and controls on it.
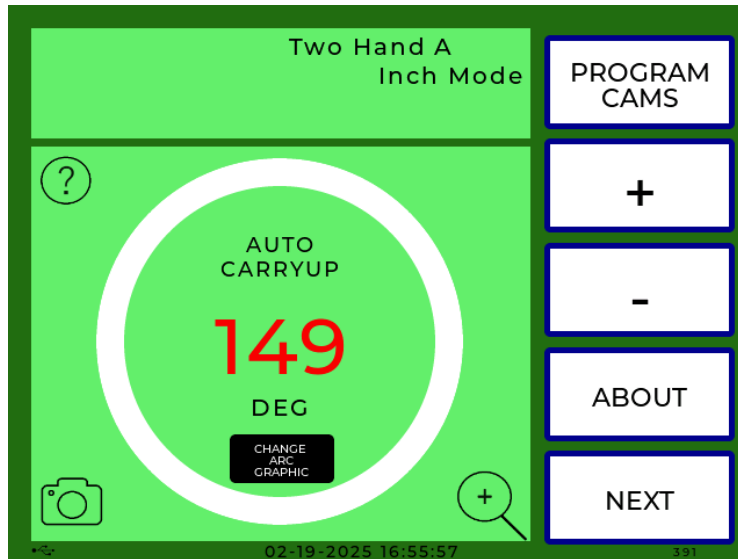
Figure 26. Auto Carry-up Screen

Follow the instructions in *Setting the Auto Carry-up Angle* in Chapter 3 of the WPC 2000 User Manual. Instead of steps 3-5, use these:

1. With the press in Inch mode, press the NEXT repeatedly until an AUTO CARRYUP button appears among the control/navigation buttons. Press AUTO CARRYUP.

2. Adjust the auto carry-up angle by pressing + and – as needed.

3. When the value you want is shown on the display, save your setting by pressing NEXT repeatedly until the "Angle/SPM" appears.

Follow the rest of the instructions in your WPC 2000 User Manual.

Running Brake Monitor Tests and Making Settings

(See *Running Brake Monitor Tests and Making Settings* in Chapter 3 of the WPC 2000 User Manual.)

Determining the Stopping Time of Your Press

(See *Determining the Stopping Time of Your Press* in Chapter 3 of the WPC 2000 User Manual.)

Calculating the Stop-time Limit

(See *Calculating the Stop-time Limit* in Chapter 3 of the WPC 2000 User Manual.)

Setting the Stop-time Limit

(See *Setting the Stop-time Limit* in Chapter 3 of the WPC 2000 User Manual.)

⚠ DANGER
INCORRECT SAFETY DISTANCE DUE TO INCORRECT STOP TIME
• Determine and enter the correct Stop-time Limit when you set up your WPC 2000.
• Perform a 90° Stop Test any time you change the Stop-time Limit of WPC 2000. (See *Determining the 90° Stop Time*, Chapter 3 in your WPC 2000 User Manual) Base the Stop-time Limit on the actual Stopping Time.
• Recalculate the safety distance based on the new Stop-time Limit and adjust or reinstall safeguarding devices according to the new safety distance (see *Calculating the Safety Distance* in Chapter 3 of your WPC 2000 User Manual).
Failure to comply with these instructions will result in death or serious injury.

⚠ DANGER
PREVENT CHANGES TO AUTO CARRY-UP ANGLE WHEN SETTINGS KEY IS PRESENT
Use option switch 7 to prevent anyone from making changes to the Auto Carry-up Angle (see *Switch 7 – Disabling Access to Stop-time Limit and Auto Carry-up Angle Settings* in Chapter 3 of your WPC 2000 User Manual).
Failure to comply with these instructions will result in death or serious injury.

Figure 27. Stop Time Limit Screen

Follow step 1 in *Setting the Stop-time Limit* in Chapter 3 of your WPC 2000 User Manual. Then do the following:

1. With power on to the WPC 2000 and the press in "Inch" mode, press NEXT repeatedly until the Stop Time Limit screen appears. It shows the last stop-time limit you set or, if you have not previously set the stop-time limit, it shows the factory setting of 500 mS.

2. Adjust the stop-time limit by pressing + and – as needed. The Stop-time Limit setting increases or decreases in 10 mS increments.

3. When the value you want is shown, save your setting by pressing the NEXT repeatedly until the Angle/SPM screen is shown.

Follow steps 5 and 6 in your WPC 2000 User Manual.

Determining the 90° Stop Time

(See *Determining the 90° Stop Time* in Chapter 3 of the WPC 2000 User Manual.)

Performing the 90° Stop Test (Continuous Mode)

(See *Performing the 90° Stop Test (Continuous Mode)* in Chapter 3 of the WPC 2000 User Manual.)

⚠ DANGER

INCORRECT SAFETY DISTANCE DUE TO INCORRECT STOP TIME

- Perform a 90° Stop Test any time you change the Stop-time Limit of WPC 2000.
- Recalculate the safety distance based on the new Stop-time Limit and adjust or reinstall safeguarding devices according to the new safety distance (see *Calculating the Safety Distance* in Chapter 3 of your WPC 2000 User Manual)..

Failure to comply with these instructions will result in death or serious injury.

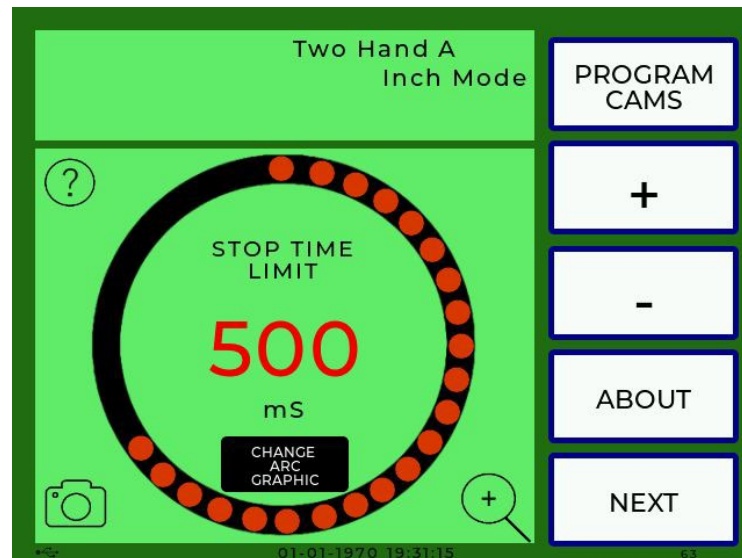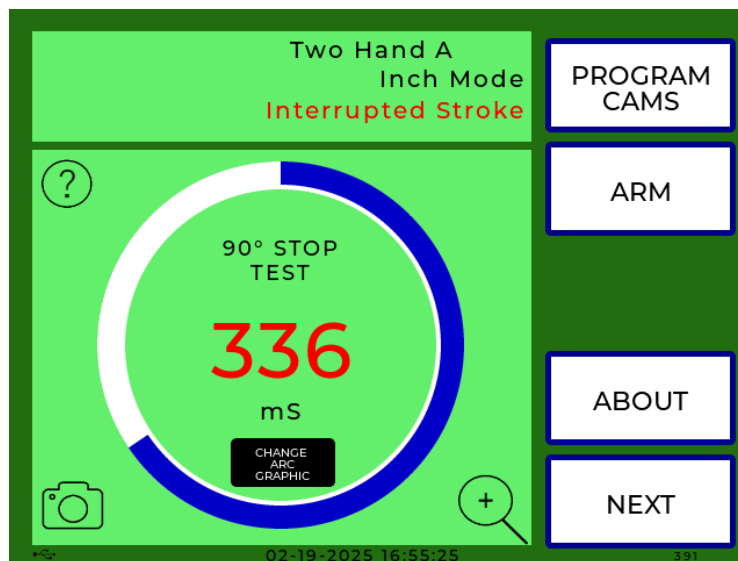*Figure 28. 90° Stop Test Screen*

Follow the instructions in *Performing the 90° Stop Test (Continuous Mode)* in your WPC 2000 User Manual. Then, do the following:

1. Turn the Settings key switch to the left (PROG).

2. In step 3, press NEXT repeatedly until the 90° Stop Test screen appears, Figure 28.

3. In step 4, press ARM to arm the test.

Performing the 90° Stop Test (Single-stroke Mode)

(See *Performing the 90° Stop Test (Single-stroke Mode)* in Chapter 3 of the WPC 2000 User Manual.)

> ## ⚠ DANGER
>
> **INCORRECT SAFETY DISTANCE DUE TO INCORRECT STOP TIME**
>
> - Perform a 90° Stop Test any time you change the Stop-time Limit of WPC 2000.
> - Recalculate the safety distance based on the new Stop-time Limit and adjust or reinstall safeguarding devices according to the new safety distance (see *Calculating the Safety Distance* in Chapter 3 of your WPC 2000 User Manual).
> - Run the 90° Stop Test in Continuous mode if your press can operate in Continuous. See the instructions in the previous section.
>
> **Failure to comply with these instructions will result in death or serious injury.**

Follow the instructions in *Performing the 90° Stop Test (Continuous Mode)* in your WPC 2000 User Manual, with the following differences:

- Turn the Settings key switch to the left (PROG).
- In step 3, press NEXT repeatedly until the 90° Stop Test screen appears, Figure 28.
- In step 4, press ARM to arm the test.

Setting Micro-Inch

(See *Setting Micro-Inch* in Chapter 3 of the WPC 2000 User Manual.)
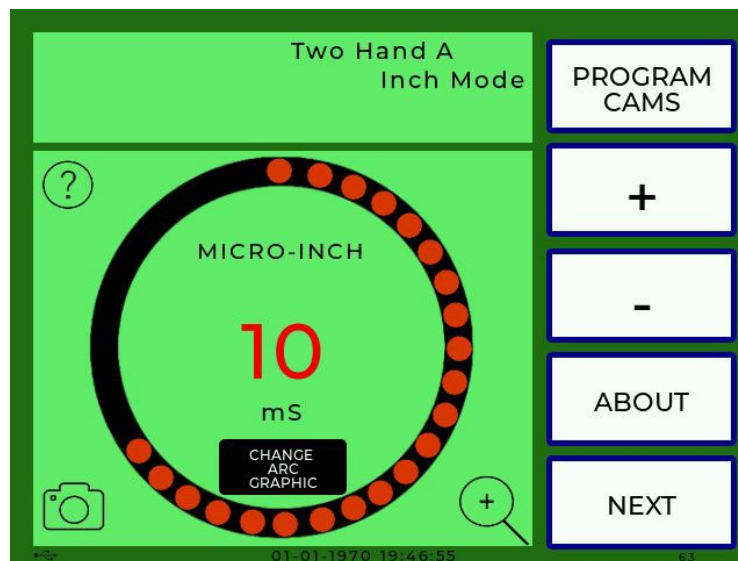
Figure 29. Micro-Inch Time Setting

Follow the instructions in *Setting Micro-Inch* in Chapter 3 of your WPC 2000 User Manual, with the following differences:

- Turn the Settings key switch to the left (PROG).

- In step 1, press NEXT repeatedly until the Micro-inch screen appears, Figure 29.

- In step 2, press + and – as needed to enter the Micro-inch time setting.

Setting Programmable Cams

(See *Setting Programmable Cams* in Chapter 3 of the WPC 2000 User Manual.)
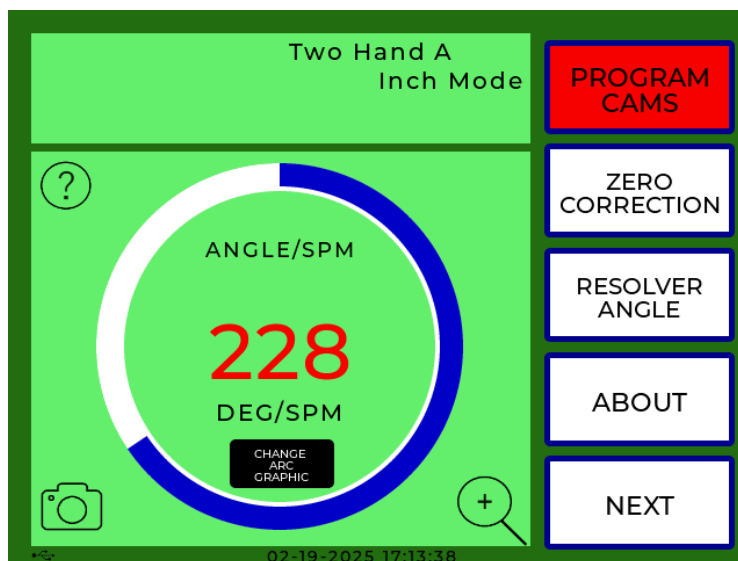
Figure 30. Program Screen Showing PROGRAM CAMS
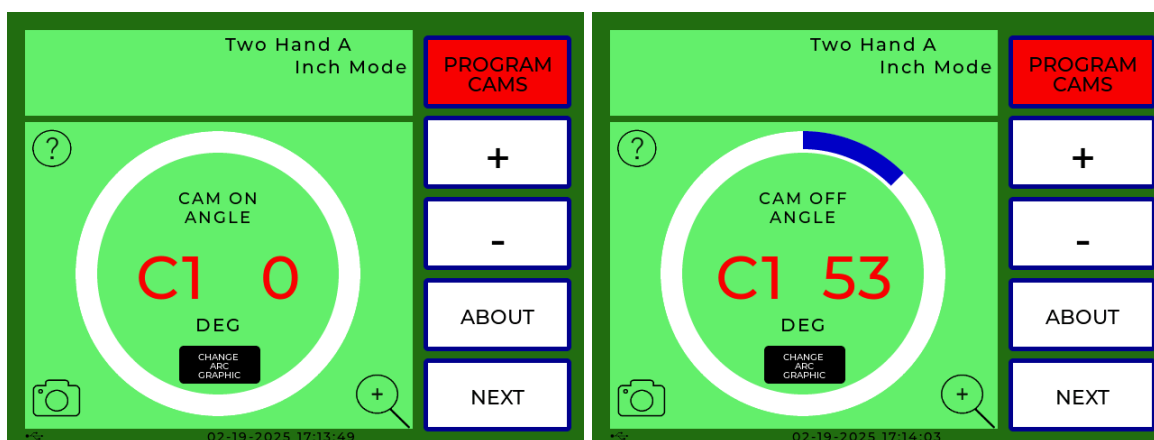
Figure 31. Setting Cam 1 ON Angle (left) and OFF Angle

Follow the instructions in *Setting Programmable Cams*, Chapter 3 of the WPC 2000 User Manual, with the following differences:

- Turn the Settings key switch to PROG (left).

- In any Program screen press PROGRAM CAMS. The Program Cams screen appears and the PROGRAM CAMS button turns red. The display indicates at left which cam is being programmed (here, C1 – Cam 1) and at right the cam's ON angle.

- Adjust the ON angle by pressing + and –. See When done, press NEXT.

- Adjust the OFF angle by pressing + and –. When done, press NEXT to program the next cam.

Setting and Maintaining the Counter Preset Value

(See *Setting and Maintaining the Counter Preset Value* in Chapter 4 of the WPC 2000 User Manual.)

NOTICE

Older versions of WPC 2000 allowed counter preset operations in Run mode. Now, most are done in Program mode (PROG).

You can also view the counter preset in Run mode; see *Displaying the Stroke Counter*, page 35 in this addendum.

Setting the Counter Preset

(See *Setting the Counter Preset* in Chapter 4 of the WPC 2000 User Manual.)
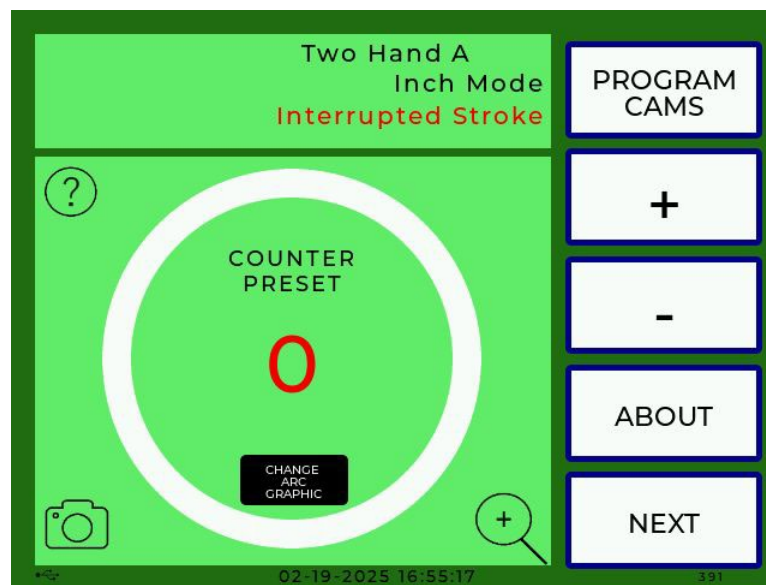
Figure 32. Counter Preset Screen

1. Turn the Settings key switch PROG. The Program screen appears, Figure 32.

2. Press NEXT repeatedly until the COUNTER PRESET screen appears, showing the current counter preset setting.

3. Press the + and – buttons to adjust the counter preset value. To rapidly change the value, press and hold the + or – button.

Disabling the Counter Preset

(See *Disabling the Counter Preset* in Chapter 4 of the WPC 2000 User Manual.)

To disable the counter preset, set it to zero (0) as follows:

1. Turn the Settings key switch PROG. The Program screen appears.

2. Press NEXT repeatedly until the counter preset screen appears, Figure 32.

3. Press and hold the – key until the display shows zero (0).

Operation (Chapter 4 in the WPC 2000 User Manual)

> ### ⚠ DANGER
>
> **IMPROPER INSTALLATION, USE OR MAINTENANCE**
>
> * Follow all procedures in this manual.
> * Lockout/Tagout the press during all installation, modification, repair or maintenance procedures.
> * Perform and ensure that WPC 2000 passes all tests described in previous chapters.
> * Ensure that the machine guarding system is installed and maintained according to OSHA standard 1910.217, ANSI B11.1, ANSI B11.19 and any other regulations and standards that apply. Ensure that guarding is properly installed to prevent access to the machine over, under
> * or around any guarding device.
> * Perform the checkout sequence (see page 3-36) after installation and after any modification or repair of the WPC 2000.
> * Ensure that supervisors, die-setters, maintenance persons, machine operators, foremen, and any others responsible for operation of the machinery have read and understood all instructions for use of the WPC 2000.
> * Disconnect the "Continuous" position on the Stroke Select switch to prevent your press from being run in Continuous mode if it is not guarded correctly for use in Continuous mode. Also cover the "CONT" label on your control's Stroke Select switch.
>
> **Failure to comply with these instructions will result in death or serious injury.**

> ### ⚠ DANGER
>
> **MORE OPERATORS THAN OPERATOR STATIONS**
>
> * Ensure that there are the same number of active operator stations as there are operators if the press is not equipped with properly installed and operating light curtains.
> * During setup, lockout/tagout the press if there are more operators than operator stations.
> * Verify at every shift change that there are the same number of active operator stations as there are operators if the press is not equipped with properly installed and operating light curtains.
>
> **Failure to comply with these instructions will result in death or serious injury.**

> ### ⚠ DANGER
>
> **INCORRECT AUTO CARRY-UP ANGLE**
>
> * Ensure that the Auto Carry-up Angle is correct. If the operator can reach the pinch point, the Auto Carry-up Angle must be set so that any hazardous openings are smaller than 1/4 in. by the time the crankshaft reaches the Auto Carry-up Angle.
> * Determine the Auto Carry-up Angle for each tool based on the crank angle at which the tool's hazardous openings are smaller than 1/4 in.
> * Change the Auto Carry-up Angle to the correct value for the new tool whenever you change tools.
>
> **Failure to comply with these instructions will result in death or serious injury..**

> ### ⚠ DANGER
>
> **TWO-HAND CONTROL TOO CLOSE TO HAZARDOUS AREA**
>
> Verify at each shift change that any moveable Two-hand controls are located at least the safety distance from the pinch point or hazardous area.
>
> **Failure to comply with these instructions will result in death or serious injury.**

> ### ⚠ DANGER
>
> **FAULTY INSTALLATION**
>
> - Ensure that wiring is correct.
> - Use only safety-certified components for safety functions, including interlock switches used in safety applications.
> - Install guarding to prevent access to hazardous areas. Prevent access to hazardous areas over, under or around any guarding devices.
> - Ensure that there is one active Operator Station for each operator if you are using Two-hand mode.
> - Use Foot Switch or One-hand Control only with properly installed light curtains.
>
> **Failure to comply with these instructions will result in death or serious injury.**

> ## NOTICE
>
> **CLEARING "LOC" WHEN YOU TURN ON POWER TO THE PRESS**
>
> Whenever you turn on power to your press, the message "Loc" appears in the LED display (see *Lockout Message*, page 37 in this addendum). To clear this message, simply turn the Stroke Select switch to "OFF" and then back to the previous operating mode. If the Stroke Select switch is already in the "OFF" position when you power up, turn it to the desired stroke selection to clear the "Loc" message.
>
> Once "Loc" has been cleared, you can resume operation.

> ## NOTICE
>
> **PRESS STOPS WHEN SYSTEM FAULT DETECTED OR LIGHT CURTAIN BLOCKED**
>
> - The WPC 2000 stops the press if a system fault is detected or if the light curtain is blocked during the non-muted portion of the stroke.
> - If the press stops, the display shows the Interrupted Stroke message in the status box and a fault code appears on the display.
> - When an Interrupted Stroke occurs, WPC 2000 automatically switches to Two-hand Maintained Single-stroke mode for the remainder of the stroke (see *Responding to an Interrupted Stroke* in Chapter 4 of your WPC 2000 User Manual and next section in this addendum). To clear a system fault, press the Reset/Select button on the WPC 2000 display.

> ## NOTICE
>
> Use your WPC 2000 User Manual to install, set up, and run your press. Refer to this addendum for information about the WPC 2000 with touch screen display and the information and controls on it.

Responding to an Interrupted Stroke

(See *Responding to an Interrupted Stroke* in Chapter 4 of the WPC 2000 User Manual.)

⚠ **DANGER**

INTERRUPTED STROKE DUE TO MACHINE MALFUNCTION

Investigate and correct the cause of the Interrupted Stroke before resuming operation of the press.

Failure to comply with these instructions will result in death or serious injury.
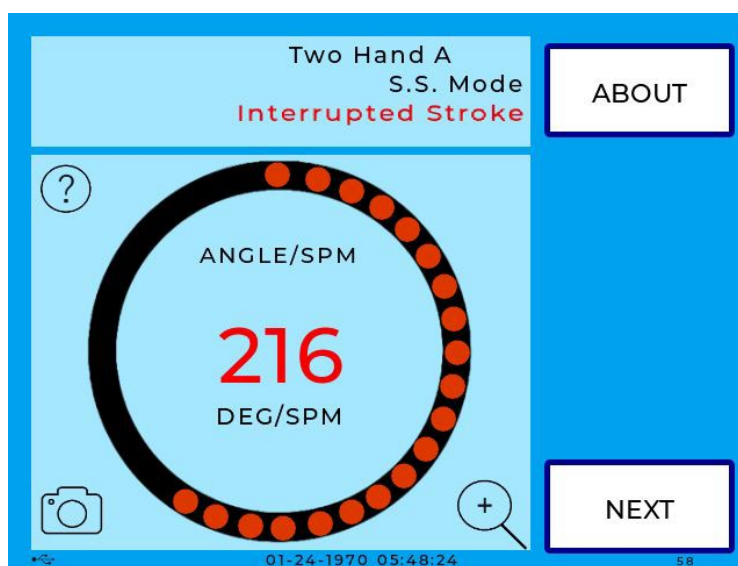

Figure 33. Interrupted Stroke Alert

When an interrupted stroke occurs, "Interrupted Stroke" appears in red in the display's status box.

Stopping Angle

(See *Stopping Angle* in Chapter 4 of the WPC 2000 User Manual.)
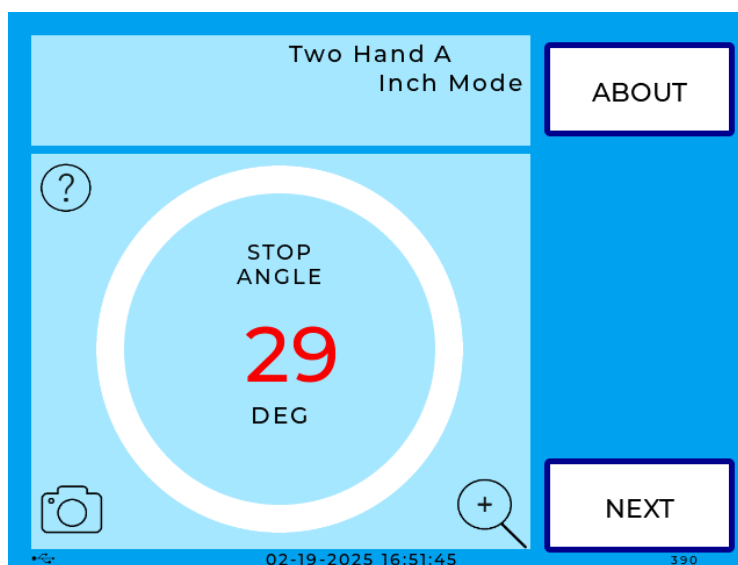
Figure 34. Stopping Angle Screen

To get to the stopping angle display, follow these steps:

1. Turn the Settings key switch to Run (to the right).

2. Press NEXT repeatedly until the Stop Angle screen appears showing the angle, Figure 34.

Displaying the Stroke Counter

(See *Displaying and Clearing the Stroke Counter* in Chapter 4 of the WPC 2000 User Manual.)

Viewing the Counter Value

(See *Viewing the Counter Value* in Chapter 4 of the WPC 2000 User Manual.)

Figure 35. Counter Screen

1. Turn the Settings key switch to Run (to the right).

2. Press NEXT repeatedly until the Counter screen appears, showing the counter value, Figure 35.

NOTICE

All other Counter Preset operations are now done in Program mode (PROG). See *Setting and Maintaining the Counter Preset Value*, page 31.

Troubleshooting (Chapter 5 in the WPC 2000 User Manual)
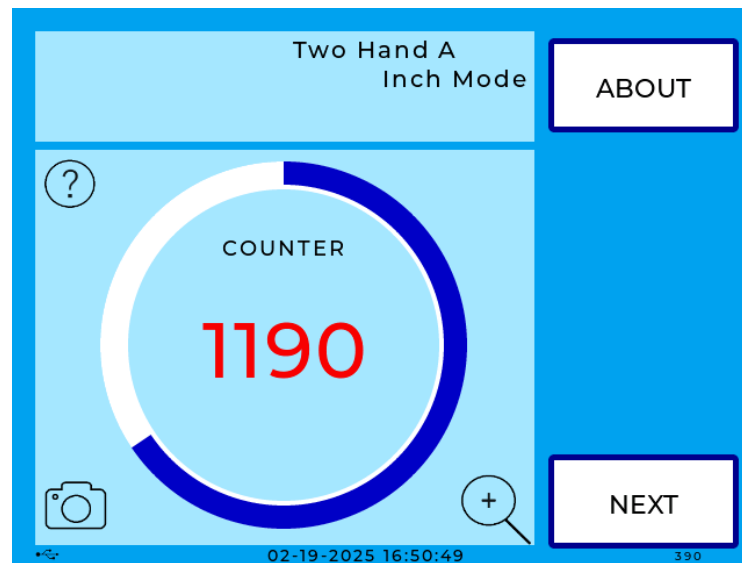

⚠ **DANGER**

IMPROPER REPAIR PROCEDURES

- Follow all procedures in this manual.

- Perform only the tests and repairs listed in this manual.

- Lockout/Tagout the press during all installation, modification, repair, or maintenance procedures.

- Use only factory-supplied replacement parts.

- Ensure that all safety procedures are followed during installation, operation, and repair of WPC 2000.

- Ensure that WPC 2000 is installed, tested, and repaired by qualified personnel.

- Perform the installation verification and final checkout after every modification, repair, or change to the press, press control or other equipment.as instructed in your WPC 2000 User Manual.

Failure to comply with these instructions will result in death or serious injury.

⚠ **DANGER**

IMPROPER SAFETY SWITCHING RELAY REPAIR

Replace the DSV/Lockout Relay board or Auxiliary E-stop Relay board (see Chapter 2 of your WPC 2000 User Manual) before placing the WPC 2000 back into operation after the first occurrence of a fused relay.

If a relay fuses

- DO NOT reset the WPC 2000 to restart the machine.

- Remove the WPC 2000 from operation immediately and replace the defective relay board before operating the press again.

Failure to comply with these instructions will result in death or serious injury.

NOTICE

ALL SIGNAL GROUNDS MUST BE CONNECTED THROUGH THE MAIN PROCESSOR BOARD

Connect all signal grounds through pins on the WPC 2000 Main Processor board.

NOTICE

Use your WPC 2000 User Manual to install, set up, and run your press. Refer to this addendum for information about the WPC 2000 with touch screen display and the information and controls on it.

NOTICE

INFORMATION NEEDED BY WINTRISS TECH. SUPPORT DURING TROUBLESHOOTING

Whenever you need to contact Wintriss Tech Support for technical assistance, be ready to provide some important information to help solve the problem. Please supply: product name (e.g., WPC 2000); installed options; and firmware version number (e.g., Vs. 2.77). You can determine firmware version number from either processor chip (A or B) on the WPC 2000 Main Processor board (see Chapter 2 of your WPC 2000 User Manual).

<div style="border">

NOTICE

Use your WPC 2000 User Manual to install, set up, and run your press. Refer to this addendum for information about the WPC 2000 with touch screen display and the information and controls on it.
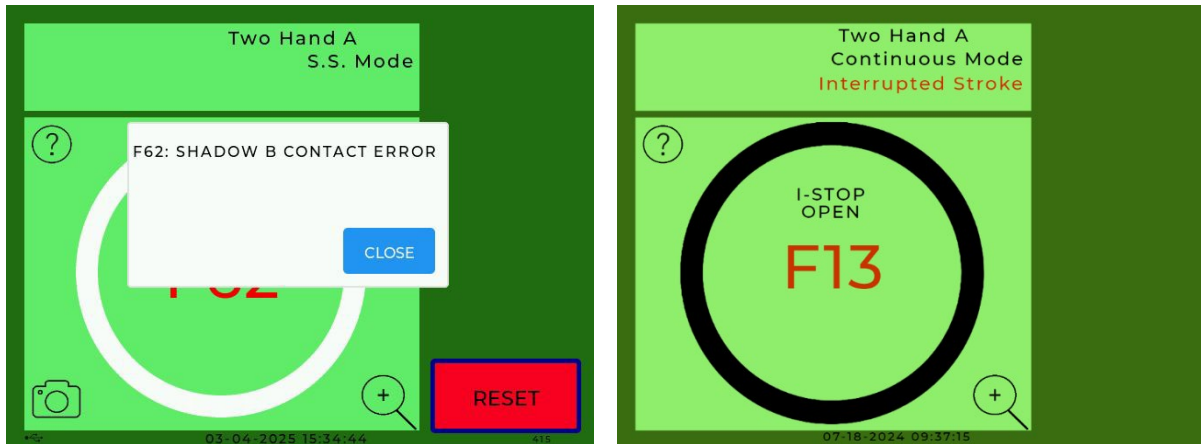
</div>

Figure 36. Examples of fault code and brief description

The fault messages and remedies are the same as listed in the WPC User Manual, Chapter 5. Fault codes and brief descriptions are shown on the touch screen display. See Figure 36. For most fault messages, press RESET to clear the message. One fault message, F13 automatically resets when the Stop button is released or the Estop circuit closes.

Lockout Message

(See *Lockout Message* in Chapter 5 of the WPC 2000 User Manual.)
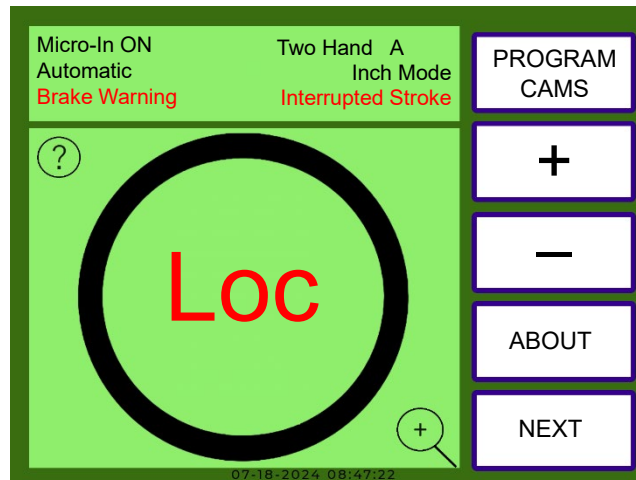
Figure 37. Lockout (Loc) Message

Certain faults, called Lockout faults, generate the message "Loc" on the display (Figure 37) after the fault is cleared. These are serious error conditions and require an additional step. When the problem has been corrected and the fault cleared, you must turn the Stroke Select switch to "OFF," then back to "INCH" or one of the other stroke selections to clear the "Loc" message. Fault codes that generate the "Loc" message are identified by an asterisk (*) in your WPC 2000 User Manual (*E, F, and H Faults* in Chapter 5).

Updating the Firmware on the WPC 2000 Touch Screen Display

To update the firmware on your WPC 2000 touch screen display, first obtain update the firmware file by email from Wintriss Tech Support.

Then, follow these steps:

1. Copy the firmware file to a USB stick (also called a *USB key* or *USB device*) at the root directory location.

2. Power down the WPC 2000.

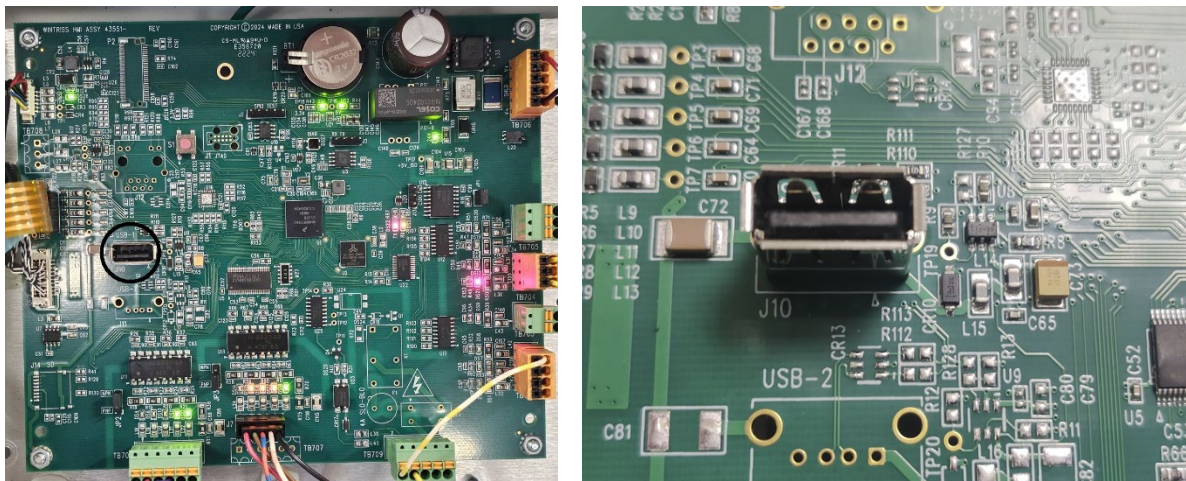3. Insert the USB stick into the J10 USB receptacle on the back of the display board, Figure 38.

Figure 38. USB Receptacle on the Back of the Display Board

4. Power up the WPC 2000. If the WPC 2000 detects the USB stick and the firmware update file, it enters bootloader mode. The messages below (starting with Figure 39) appear on the display while the firmware update code is installed.

NOTICE

- If the display shows the purple Bootloader Mode screen with a message different from Figure 39 through Figure 42, go to *Firmware Update Troubleshooting*, page 40.

- If the WPC 2000 does not show a Bootloader Mode screen (similar to Figure 39), power down the WPC 2000 and check that the USB stick is correctly inserted in the USB receptacle on the back of the display board. Try the update again, starting with Step 4.

Bootloader Mode. USB Key Detected

USB Key Detected at Power Up. Starting Flash Programming

Figure 39. USB Key Detected at Power Up. Starting Flash Programming

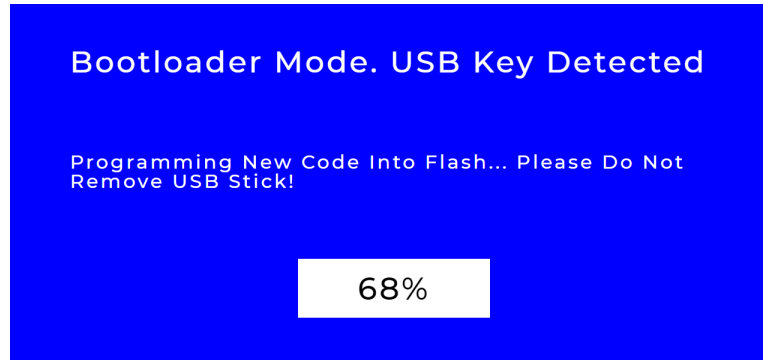*Figure 40. Please Wait… Erasing Flash Memory!*

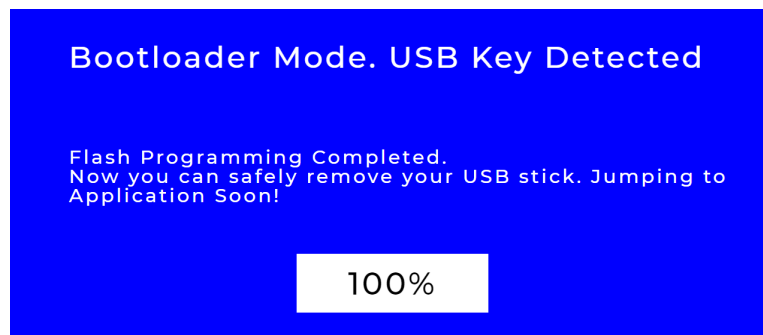*Figure 41. Programming New Code Into Flash… Please Do Not Remove USB Stick!*

Figure 42. Flash Programming Completed. Now you can safely remove your USB stick. Jumping to Application Soon!

5. When you see this screen indicate 100%, the update is complete. Remove the USB stick. When the WPC 2000 display appears, you can go ahead and operate the unit as usual.

Firmware Update Troubleshooting

If there is a problem with the firmware code update, one of the messages below appears on the display. Go to the appropriate section for instructions.

"Please Insert USB Key to Update Code," page 40

"Flash Programming Suspended. Failed to Read Data Block from MSD Device. Please Try Again." page 40

"Same firmware installed. Jumping to Application Soon!*"* page 41

"Failed to Open File. Wrong File or Name!*"* page 41

"Please Insert USB Key to Update Code"
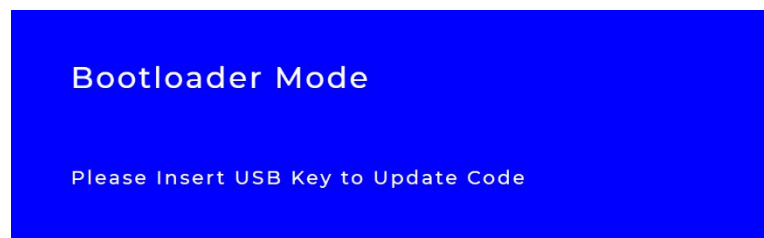
Figure 43. Please insert USB Stick to Update Code

This message automatically appears on power-up if the WPC 2000 has no display firmware installed. It needs to have firmware installed and requests you insert a USB stick containing the firmware update file.

If you see this message, follow the instructions under *Updating the Firmware on the WPC 2000 Touch Screen Display*, page 38, starting with obtaining the firmware update file from Wintriss Tech Support.

"Flash Programming Suspended. Failed to Read Data Block from MSD Device. Please Try Again."

Figure 44. Flash Programming Suspended. Failed to Read Data Block from MSD Device. Please Try Again.

This message appears if the USB stick disconnects or the update process is interrupted.

If you see this message follow these steps:

1. Power off the WPC 2000.

2. Remove the USB stick and check that the firmware update file is on the USB stick in the root directory (not in a folder).

3. Re-insert the USB stick in the receptacle on the back of the display board and check that it is correctly inserted
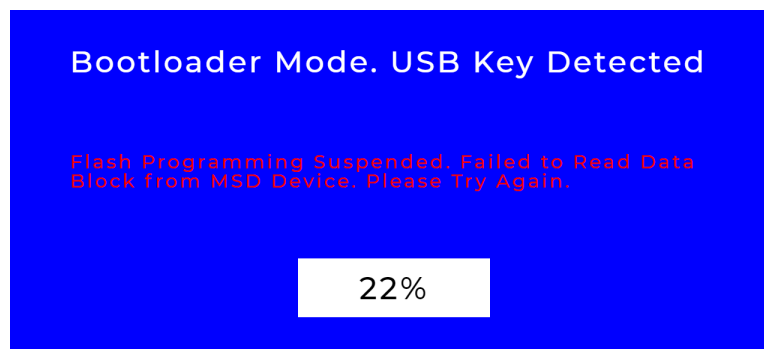
4. Power on the WPC 2000 to try installing the update again.

If the update still does not happen, contact Wintriss Tech Support.

"Same firmware installed. Jumping to Application Soon!"
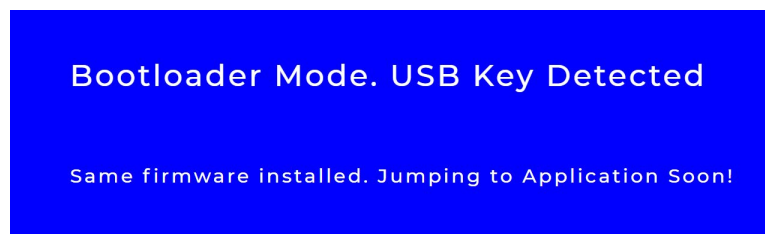
Figure 45. Same firmware installed. Jumping to Application Soon!

This message appears if the latest firmware is already installed. The WPC 2000 will start normally after showing this message. You can remove the USB stick.

"Failed to Open File. Wrong File or Name!"
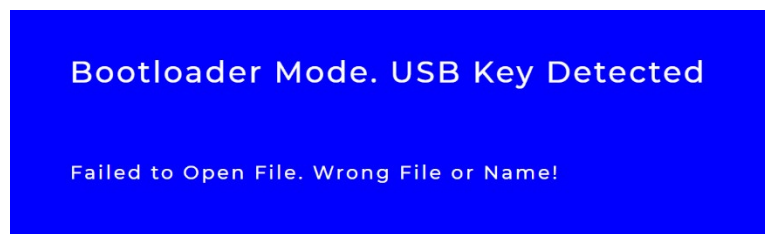
Figure 46. Failed to Open File. Wrong File or Name!

If you see this message follow these steps:

1. Power down the WPC 2000.

2. Remove the USB stick and check that the firmware update file is on the USB stick in the root directory (not in a folder).

3. Re-insert the USB stick in the receptacle on the back of the display board and check that it is correctly inserted

4. Power on the WPC 2000 to try installing the update again.

If the update still does not happen, contact Wintriss Tech Support.

STROKE SELECTOR
OFF
INCH
SINGLE
CONT

OOOX
OXOO
XOOO

TB 701
JP2   NPN   PNP
145 (OFF)
144 (INCH)
143 (S.S.)
142 (CONT)
141 (GND)
(+24V)

TB 708
AN1
AN2
(GND)

Wireless WPCL LCD Display/HMI

LED #DS 4
LED #DS 6
LED #DS 10
LED #DS 11

TB 707
JP3   NPN   PNP
(GND)
(GND)
(GND)
(GND)
(GND)
(+24V)

J7
LED #DS14
LED #DS13
LED #DS12

PROGRAM SW
OFF
ON

TB 709
(SS Out)
(N.C.)
(RLY.)

LED #DS 9
LED #DS 8
LED #DS 7
LED #DS 5

TB 702
149 (ONE H)
148 (FOOT)
147 (PSD)
146 (GND)

LED #DS 11
LED #DS 13

TB 703
150 (GND)
151 (AUTO)

LED #DS20
LED #DS19

TB 704
152 (GND)
153 (OP 2)
154 (OP 1)

TB 705
155 (GND)
156 (CAMS)
157 (MICRO)

TB 706
158 (+24 VDC)
159 (CAN +)
160 (SHIELD)
161 (CAN -)
162 (COM)

BLK
WHT
RED

TB 106
BLK   120 (COM)
GRN   119 (CAN -)
       118 (SHIELD)
WHT   117 (CAN +)
RED   116 (+24 VDC)

TB106 IS LOCATED ON THE END OF THE MAIN PROCESSOR BOARD.

MODE SELECTOR
FOOT   TWO H
       ONE H
XOO
OOX

AUTOMATIC SINGLE STROKE

ON
OFF

OPERATOR STATION SELECT
B
BOTH
A
XOO
OOX

MICRO-INCH
ON
OFF

SET AUXILIARY CAMS
ON
OFF

WPC OUTPUT
+24 VDC
#J6
MUTE LAMP 1
WH1
MUTE LAMP

WPC OUTPUT
+24 VDC
#J5
MUTE LAMP 2
WH1
OPTIONAL 2ND MUTE LAMP

WPC OUTPUT
#J4
GROUND

REVISIONS
REV   DESCRIPTION   DATE   APP'D

DRAWN   JOC   DATE   5/06/25
CHK
APPROVALS
ENG
MFG
RELEASE
REL

WINTRISS CONTROLS GROUP

TITLE
WPC 2000 MODE SELECTOR
SWITCHES WIRING

CODE IDENT NO.   SIZE   D   DRAWING NUMBER   REV

SCALE   SHEET   OF