



BCM CONTROL SERIES

T7 Control Operator Manual

Core operation, setup, diagnostics and application-specific addendums

CURRENT RELEASE

Rev H | 2026.09.03

Document BCM-T7-OM - Modular edition



LIVE DOCUMENTS

BearCat Pumps

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ONE CONTROL, ONE WORKFLOW

Identify the control, verify startup, operate in the selected mode, use protected setup only when authorized, and troubleshoot from evidence. Read it once before you need it. Troubleshooting is a poor time to discover your commitment to improvisation.

Overview and safety

This manual is for operators and first-line service personnel using a BearCat Pumps T7 control. It follows the control from identification and startup through Manual Mode operation, protected setup, troubleshooting and service escalation.

SAFETY BOUNDARY

The HMI is an operating interface, not an energy-isolation device. Before inspection or service, stop the process, follow the machine owner's lockout/tagout procedure, verify zero hazardous energy and account for hot product, stored pressure and moving equipment.

Use this manual in this order

- 1 Identify the control**
Read the configured name and software pair before changing anything.
- 2 Verify startup**
A populated PLC revision is the quickest evidence that the HMI is reading the PLC.
- 3 Operate the machine**
Use Manual Mode, DFR, Target and application-specific modes only as configured for that system.
- 4 Enter protected setup deliberately**
Meter Data and Screen Setup require authorized access and recorded changes.
- 5 Troubleshoot from evidence**
Read the complete message, capture the screen and correct the identified condition.

SCREEN VALUES ARE MACHINE-SPECIFIC

The names, enabled buttons and revision values shown in this manual are examples. Matching revision suffixes matter more than matching the example numbers printed here. If the screen and the example disagree, the installed control wins.

Control identification

Identify the hardware from the cabinet label, then verify the software pair on the T7 startup screen.

Model number anatomy

BCM - DD2 - T7 - 1AC - PC10

family PLC display power enclosure

Code	Meaning	Example / check
BCM	BearCat control family	Use the full cabinet label when requesting service.
DD2	CLICK PLC type	C0-12DD2E-D family in the established BCM code.
T7	7-inch touch display	The startup title should read T7 Control.
1AC	Power-supply option	Do not infer field voltage from the HMI; use the electrical label/drawing.
PC10	Optional enclosure code	Options vary by build.

Software pair

T7.87

:

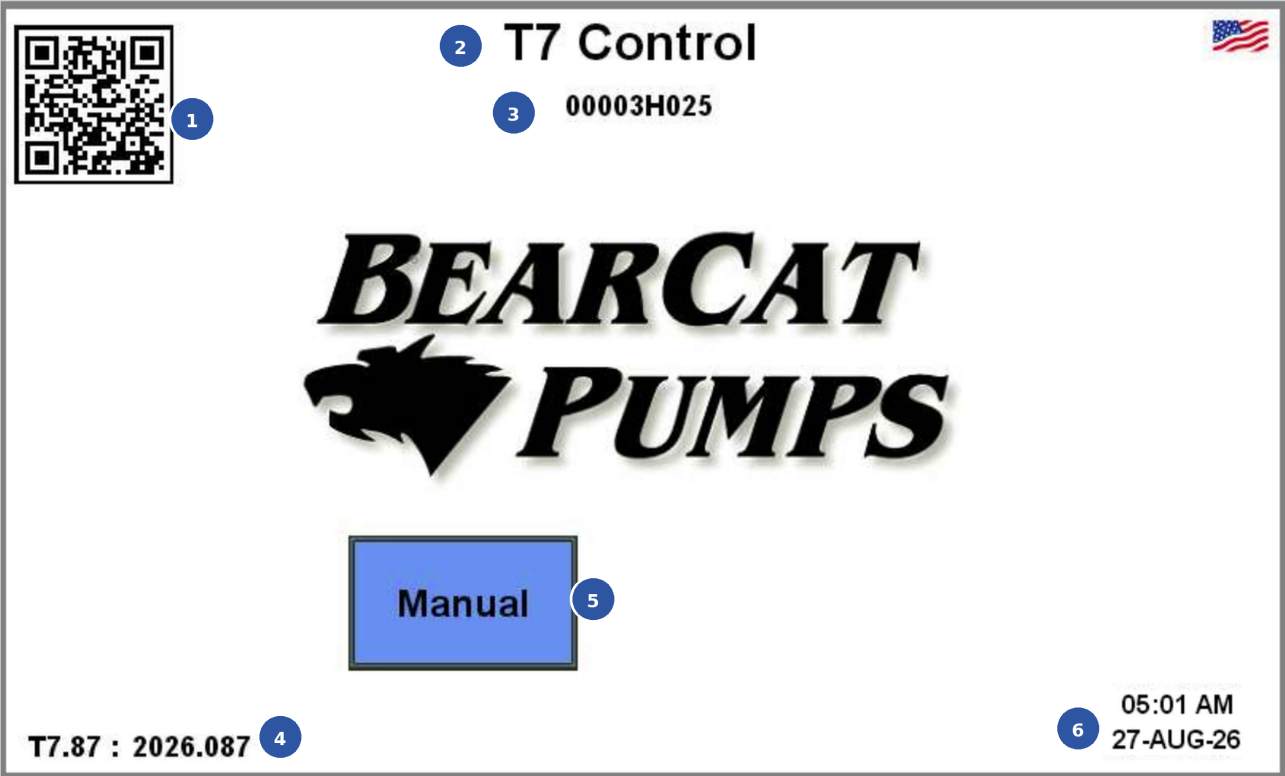
2026.087

Example shown

HMI PROGRAM

PLC PROGRAM

The HMI revision appears first; the PLC revision appears second. The final two or three digits should match (87 and 087 in this example), indicating the HMI and PLC programs were created as a compatible pair.



#	Field	What it tells you
1	QR code	Opens BearCat training videos, operating material and manuals.
2	Screen title	Confirms that the T7 application has loaded.
3	Configured name	Machine/system name assigned in parameters; this example is 00003H025.
4	Software pair	HMI revision : PLC revision. A zero PLC value points to a likely communication fault.
5	Operating modes	Buttons populate from configuration. This example has Manual enabled.
6	Clock	HMI date/time used for operator reference and timestamped records.

Normal startup

Use this sequence every time the T7 control is energized.

01**Energize and allow boot**

Apply power using the machine's normal procedure. Allow the HMI and PLC to complete startup before judging a communication condition.

02**Confirm the screen identity**

Verify T7 Control appears at the top and the configured machine name below it is the expected one.

03**Read the software pair**

Check the lower-left corner. Both values should be present and the final revision digits should match. Example: T7.87 : 2026.087.

04**Select an enabled operating mode**

Touch the required button below the BearCat logo. The available buttons depend on the machine parameter setup.

05**Use the QR resource when needed**

Scan the QR code for current BearCat manuals and training material. The same link is printed on page 16.

IF A BUTTON IS MISSING OR GRAY

That operating mode has not been enabled in the parameters. Do not treat it as a touchscreen failure. Have an authorized person verify the intended setup.

Manual Mode screen

Manual Mode
00003H025

BEARCAT PUMPS
T7.88 2026.088

S	1 3198	RFH/025	100	M
AMPS	Hz	Drive Gain %		
0.00	0.00	1.1		
Dens lbs/gal	Sat %	Temp F °		
8.3478	100.0 %	77.474		

Flow 0.000
lbs / min

Total 0.0000
lbs

DFR off

Target off

Start (Hz)
20.00

RESET

R **START**

04:45 AM
2026 JG-26

#	Field	Function
1	Mode / name	Manual Mode and the configured system name.
2	Feedback	Meter and VFD information, including amps, frequency and meter health values.
3	S	Protected Screen Setup access; see Section 5.2.
4	M	Protected Meter Data access; see Section 5.1.
5	Software pair	HMI revision on the left; PLC revision on the right.
6	Machine controls	RESET, yellow reverse R, and START/STOP.
7	Clock / exit	Touch the clock/date area to return to the startup screen.
8	Flow / total	Live flow rate and accumulated total in the selected units.
9	Start Hz	Exact fixed frequency used when starting in manual frequency control.
10	DFR / Target	Enables Desired Flow Rate control and/or an automatic stopping target.

Manual controls

Manual Mode can run at an exact fixed frequency, regulate to a Desired Flow Rate, stop at a target total, or combine DFR and Target.

PRESS-AND-HOLD CONTROLS

RESET, START/STOP and reverse R use an intentional delay. Press and hold for approximately one to two seconds. A quick tap accomplishes approximately nothing.

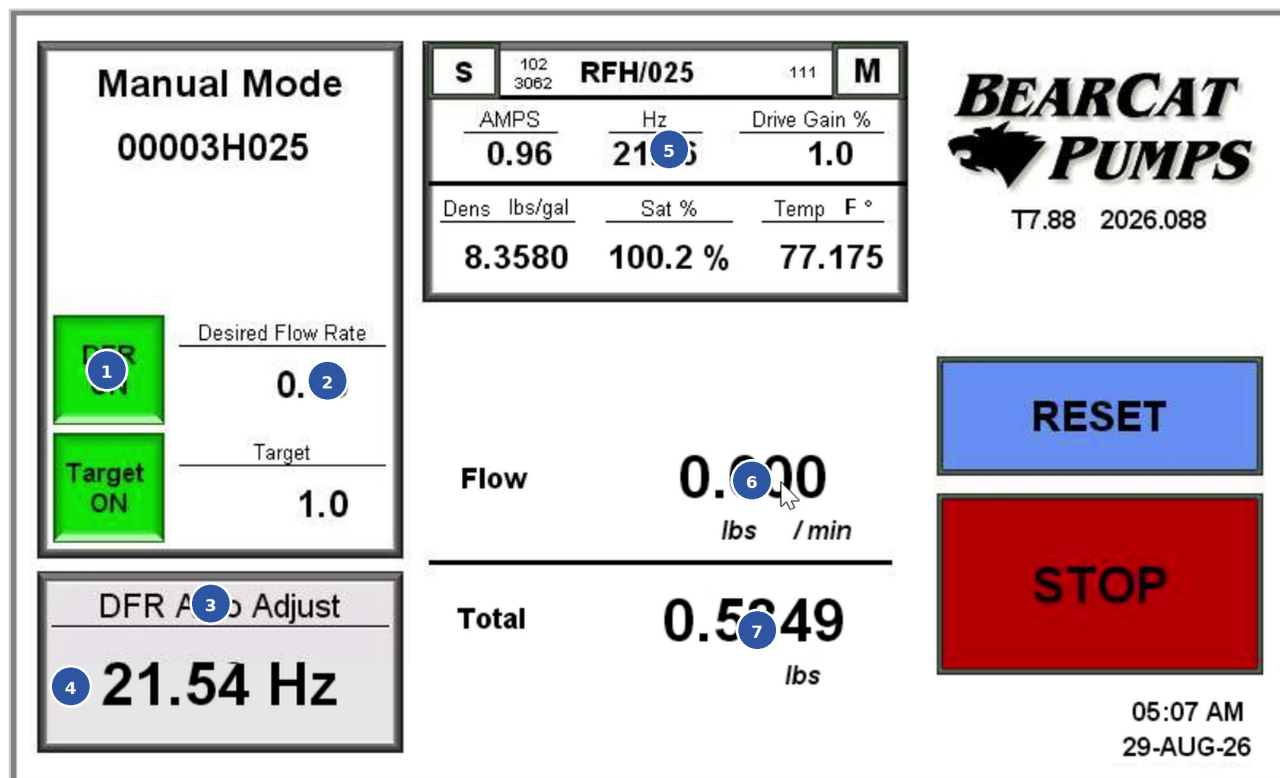
Control	Operator action	Result
Start Hz	Use + / - to set the exact frequency.	With DFR off, the pump runs at this commanded frequency.
START	Press and hold.	Starts the pump; the green START button becomes a red STOP button.
STOP	Press and hold.	Stops the pump during operation.
R	Press and hold the yellow button.	Commands reverse operation when the machine configuration permits it.
RESET	Press and hold.	Clears the current total/completion state for the next run.
Clock / date	Touch the lower-right display.	Exits Manual Mode and returns to the startup screen.

Optional automatic modes

Mode	What the operator sets	What the controller does
DFR	Desired Flow Rate	Automatically adjusts pump frequency to seek and hold the requested flow rate.
Target	Stopping total	Slows near the target, stops, performs a short reverse and reports Load Complete.
DFR + Target	Desired rate and target total	Regulates flow during the run, then transitions to target deceleration and stopping.

Desired Flow Rate operation

DFR replaces fixed-frequency control with automatic flow regulation. This screen requests 0.60 lb/min; the controller has adjusted the VFD to hold the measured flow at the same value.



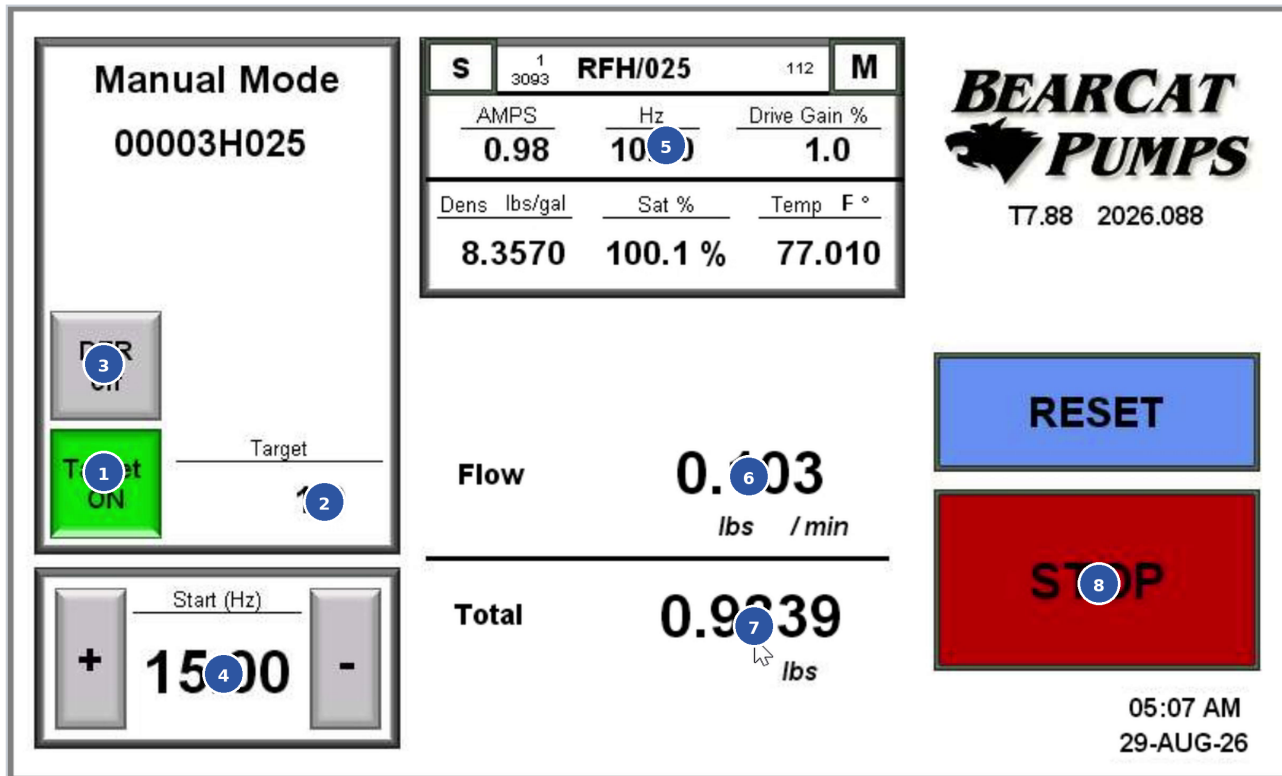
#	Field	Function
1	DFR ON	Enables automatic flow regulation. Touch the control again to return to fixed-frequency operation.
2	Desired Flow Rate	Operator-entered flow request in the displayed units; this example is 0.60 lb/min.
3	DFR Auto Adjust	Confirms that the initial starting-speed hold has ended and automatic correction is active.
4	Adjustment direction	A + means frequency is being raised; a - means it is being reduced to seek the set rate.
5	Hz feedback	Actual VFD frequency. DFR changes this value as process resistance changes.
6	Flow	Live measured rate. Compare it with the Desired Flow Rate to judge regulation.
7	Total	Accumulated delivered quantity; it continues counting while the pump runs.

WHAT HAPPENS AFTER DFR IS ENABLED

The scaled starting frequency is held for approximately 15 seconds. Then Auto Adjust appears and DFR raises or lowers frequency as needed. The setpoint is the promise; the live flow is the receipt.

Target operation

Target mode stops the load at a commanded total. This screen shows the final approach to a 1.0 lb target: DFR has handed control back and the pump is running at the configured slowdown speed.



#	Field	Function
1	Target ON	Enables automatic stopping at the commanded accumulated total.
2	Target	Operator-entered stopping quantity in the displayed total units.
3	DFR handoff	DFR turns off near the target so the configured target slowdown can control the final approach.
4	Start Hz	Normal fixed-frequency start value retained for manual operation.
5	Hz feedback	Actual VFD frequency; the example has slowed from 15.00 Hz to 10.00 Hz.
6	Flow	Live flow confirms material is still moving during the controlled approach.
7	Total	Accumulated quantity compared continuously with the target.
8	STOP / completion	The controller stops, may perform a short configured reverse, reports Load Complete, and waits for RESET.

WHY IT SLOWS BEFORE THE TARGET

Material already in motion does not read the target display. Deceleration and stop timing account for that inertia so the load finishes with less overshoot. Authorized field definitions are shown in Section 5.3.

Meter Data

Meter Data is the protected reference and setup page for the configured meter, live communications and operating-mode selection. From Manual Mode, touch M and enter the authorized passcode. Blue values are editable; black values are not invitations.

The screenshot displays the 'Main - Parameters' screen with the following sections:

- Meter Type:** McrMo (blue)
- Units:** lbs (blue)
- Time:** /min (blue)
- Analog I/O:**
 - DA1i (OUT): 1.50 (blue)
 - AD1i (IN): 0.00 (blue)
 - DA2i (OUT): 0.00 (blue)
 - AD2i (IN): 0.00 (blue)
- Flow@60Hz:** 1.8 (blue)
- Max Allowed:** 1.7 (blue)
- Hi HZ:** 7.5 (blue)
- Buttons:** Save (3), Scale System (yellow)

Meter Parameters (RFH/025):

Tube (Hz)	Drive G (%)	LPO (V)	RPO (V)
212.749	1.01	0.7226	0.7215
Live Zero	Full Tube	CT (F)	
0.00017	999.90	77.40	
Temp (C)	Density (g/L)	CD (lb/gal)	
25.2158	1001.873	8.3458	
Flow (kg/s)	Mass (kg)	Sat (%)	
0.00000	0.4507	100.20	
Cut OFF (kg/sec)	Damp	DT / TC	
0.000600	0.80	4.25	
Mass Fact	Vol Fact	Dens Fact	
1.0000	1.0000	1.0000	
K1	K2	D1	D2
4450.90	4674.71	0.00	1.00
FCF	FT	FD	
39.3790	4.6500	0.000	

Buttons: Cal (5), Manual (8), Manual ON (green), Mode (7), Screen Setup (9), Close Edit Menu (10)

Identity / heartbeats: 00003H025

Heartbeats: T7.88 : 26.088 (blue), 4,000,000 (blue)

Time: 06:14 AM, 29-AUG-26

#	Field	Function
1	Main Parameters	Meter type, units, time base, analog I/O and scaled-system limits.
2	Blue values	Editable fields while the corresponding edit menu is open.
3	Save / Scale System	Saves Main Parameter changes; Scale System establishes the starting-speed relationship used by DFR.
4	Meter Parameters	Live meter and drive values plus cutoff, damping and calibration factors.
5	Cal Data	Opens meter calibration data. Change only with an authorized procedure.
6	Identity / heartbeats	Configured name, software pair and changing communication counters.
7	Mode	Cycles through enabled operating selections; continue cycling to return to the required mode.
8	Operating mode	Shows the active mode and provides the button used to return to it.
9	Screen Setup	Opens the advanced Screen Setup page described in Section 5.2.
10	Close Edit Menu / Exit	Close and save all edits before leaving. Exit returns when no edit menu remains open.

SAVE, CLOSE, THEN EXIT

Exit also stores a Meter Data screen capture on USB. If Exit has vanished, an edit menu is still open; the screen is not negotiating. See Section 6.2 for related error codes.

Screen Setup (S)

Screen Setup contains advanced control parameters. From Manual Mode, touch S and enter the authorized passcode. Blue values can be adjusted, black values are read-only, gray toggles are OFF and blue toggles are ON.

The screenshot shows the 'Screen Setup (S)' interface for BearCat Pumps. It features a banner at the top left with the 'BEARCAT PUMPS' logo. The interface is divided into several sections:

- 1 Target Parameters:** A section with three columns: (Hz) showing 10, Targ (S) showing 0.04, and Targ (E+) showing 0.009. A 'TREV OFF' toggle is also present.
- 2 Speed / Load / Vac:** A section with three columns: Speed (Max HZ: 57.5, Flow Limit: 1.7, G(+): 1, G(-): 1), Load (Raw Amps: 0.00, Amps20hz: 50.00, Rise: 0.55), and Vac (Raw DF2: 0, Vac Limit: 1,000, Empty Pipe: 0).
- 3 PID:** A section with three columns: P (id) showing 0.20, I (nt) showing 4.00, and D (er) showing 0.40. Below these are Low HZ (1.00), Max PV (100 %), and Filter PID (10).
- 4 Control toggles:** A section with 'Target RST' (gray), 'Y1 Out Freq OFF' (blue), 'RESET no Log' (blue), and 'RESET STOPS PUMP' (blue).
- 5 Outputs / tank level:** A section with 'Tank Level OFF' (gray), '(Y3) APP' showing 0.0050, 'Y3 (ms)' showing 100, and 'Y3 Total pulses' showing 198.
- 6 Exit:** A section with an 'Exit' button.

At the bottom right, the time and date are displayed: 06:41 AM, 29-AUG-26.

#	Area	Purpose
1	Target parameters	Controls target deceleration, stopping behavior and optional full reverse after a load.
2	Speed / Load / Vac	Maximum frequency, flow limit and load/vacuum governing values used for protection and maximum-flow control.
3	PID	Response tuning and limits. These values normally do not require field adjustment.
4	Control toggles	Application choices such as Target reset, Y1 output and reset behavior.
5	Outputs / tank level	Application-specific tank and Y3 output settings and live pulse information.
6	Exit	Returns to the operating screen after the authorized review or adjustment is complete.

ADVANCED MEANS ADVANCED

If you do not know what a value does, the correct setting is the one you have not changed. Contact BearCat before adjusting PID, governing, target or reverse parameters.

Protected field reference

These are definitions, not default settings. Fields vary with the installed meter, signal type and program. If a field is not displayed on the installed control, do not create a need for it.

REFERENCE, NOT A RECIPE

Record the original value and the reason for every authorized change. A number without its units, source and revision is not a setting; it is a future argument.

Meter and analog terms

Field	Meaning	Use it carefully
Factor / Fact	A correction multiplier applied to the configured meter calculation.	Change only from a documented calibration result; do not use it to chase one questionable load.
Density / Dens	Material density used when the control converts between volume and mass.	Confirm the displayed units and current material temperature basis.
ppR	Pulses per revolution for encoder or rotation feedback, when displayed.	The value must match the installed pulse source and mechanical relationship.
ppG	Pulses per gallon for pulse-input volume scaling, when displayed.	Use the meter-specific calibration record; do not borrow another machine's value.
Rate / Total	Selects whether the configured analog quantity represents live rate or accumulated total.	The selection must agree with the sending device and the active application.
Max	The maximum engineering value represented by the configured analog input span.	Verify both the electrical span and displayed units before changing it.

Target approach terms - current / legacy

Current / legacy	Function	What changes
(Hz) / F	Slowdown frequency used during the final approach.	Lower frequency reduces delivery rate near the target.
Targ (S) / S	Quantity before the target where slowdown begins.	A larger value starts the slower approach earlier.
Targ (E+) / S(+)	Early-stop offset used to account for material already moving.	The STOP command occurs before the displayed target by this amount.

CALIBRATION BOUNDARY

This page explains fields; it is not a calibration procedure. Use the approved meter-specific calibration instruction or contact BearCat.

USB records and logging

The USB drive stores mode-specific records and screen captures. The trigger and the file contents are not universal. Do not assume every RESET, Exit or timer creates the same record.

KNOW THE TRIGGER

The active mode and configuration decide what is recorded. The screen labels and the applicable mode addendum govern.

Trigger or condition	What Rev H can confirm	Operator check
Meter Data: Close Edit Menu, then Exit	Stores a screen capture of the displayed Meter Data page on USB.	Close all edit menus, touch Exit, and confirm no USB-missing code.
Tank Dose: RESET after the dose	Stores the entered load fields, requested target and actual total.	Use RESET after the load and retain the record with the load documentation.
Drum Mode: automatic logging when enabled	Stores operating information periodically at the configured interval.	Verify logging is enabled, the interval is appropriate and the USB is installed before the run.
Manual or another configured mode: RESET	Requests a log only when the control is configured for Log with Reset. The record set is program-specific.	Do not treat RESET as proof that a file was created unless the active mode documentation says so.
USB missing	The requested file cannot be stored on the absent drive. Error code 40,000,000 or a missing-drive indicator identifies the condition.	Install the drive before relying on a record and clear the cause as described in Section 6.2.

Before relying on a record

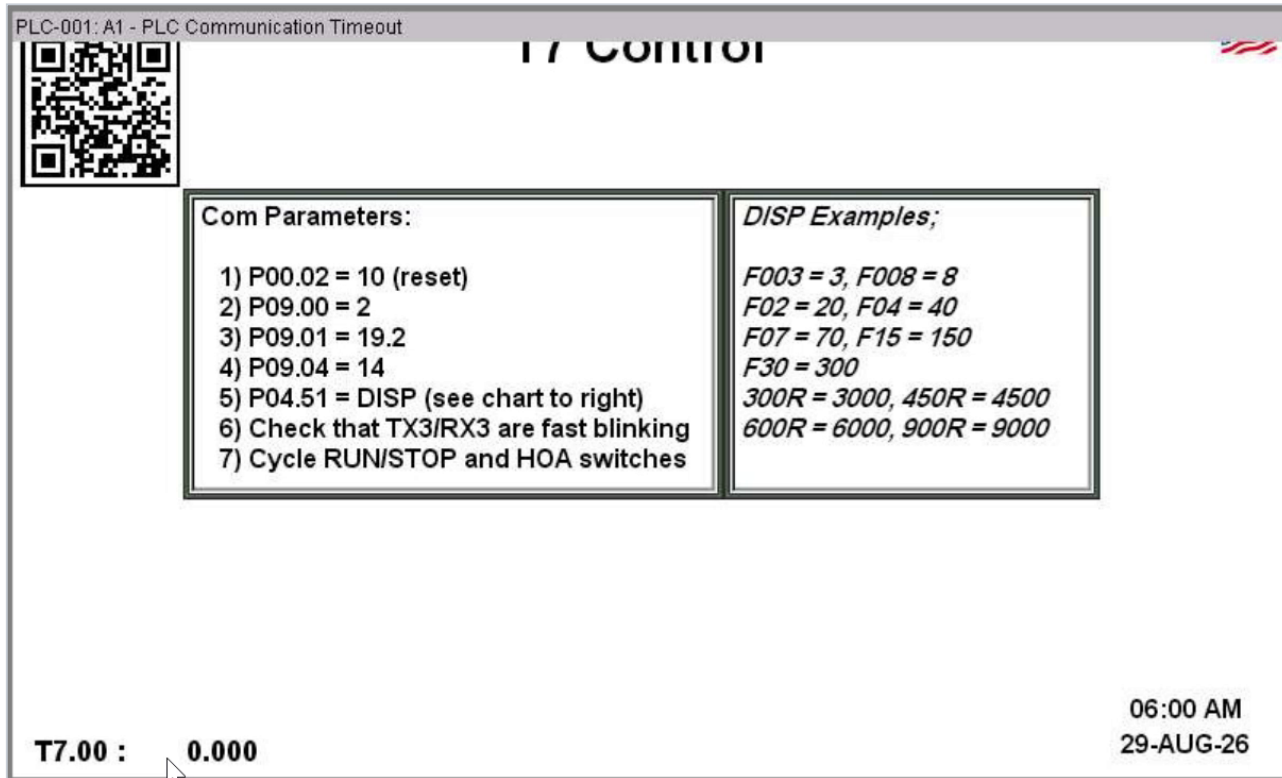
- 1. Install the USB drive before the run.
- 2. Correct the HMI clock before creating time-stamped records.
- 3. Complete the trigger required by the active mode.
- 4. Confirm no USB-missing code or indicator remains.
- 5. Remove the drive only when no record action is active.

NO DRIVE, NO FILE

The controller is not keeping a secret copy for later. If the record matters, confirm the drive and the trigger before the work begins.

Communication and startup fault

A blank or incomplete startup screen with a PLC communication banner usually means the HMI is not receiving data from the PLC. The PLC supplies the software value shown at the lower left.



Example: the PLC-001 communication timeout banner is present and the PLC software value remains 0.000.

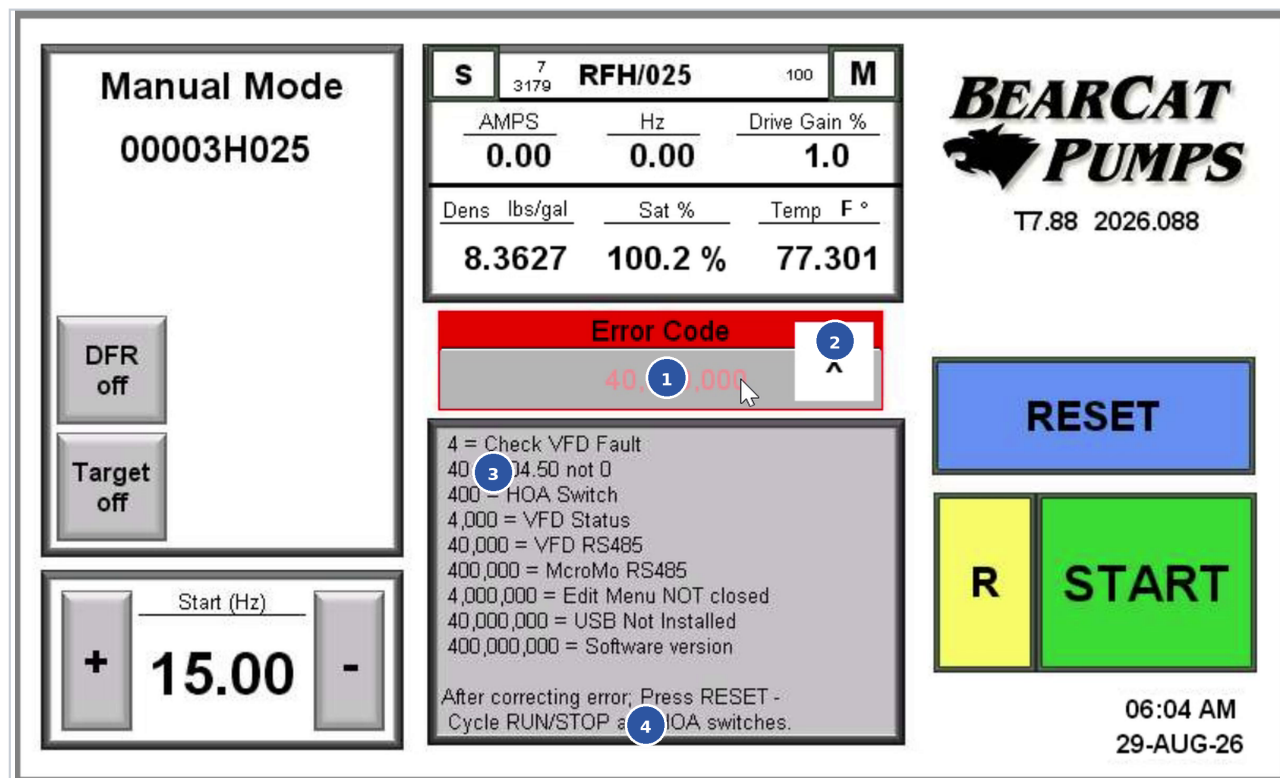
Check	What to confirm
Ethernet cable	The HMI-to-PLC Ethernet cable is connected at both ends and is not visibly damaged.
PLC power	The PLC is energized and its normal power indication is present.
RUN/STOP	The PLC RUN/STOP switch is in the RUN position.
Software pair	After communication returns, the lower-left PLC value populates. Confirm that its revision suffix matches the HMI suffix.

FIRST RESPONSE

Check the cable, PLC power and RUN position first. Restart once using the normal machine power procedure. If the screen still does not populate, photograph it and contact BearCat before changing communication parameters or programs.

Error codes and recovery

When an Error Code appears, use the on-screen question mark to open the code key. Match the complete displayed number before deciding what to correct. Read every zero; they are doing actual work here.



#	Field	Function
1	Displayed code	Complete active error value. Match the entire number before acting.
2	? / X	Opens and closes the on-screen code key.
3	Code key	4 - VFD fault; 40 - P04.50 not 0; 400 - HOA switch; 4,000 - VFD status; 40,000 - VFD RS485; 400,000 - Micro Motion RS485; 4,000,000 - edit menu open; 40,000,000 - USB missing; 400,000,000 - software version.
4	Recovery instruction	Correct the listed cause first, then follow the displayed RESET and switch-cycling instruction.

CLEAR THE CAUSE FIRST

Many codes clear after the listed condition is corrected. When the bottom instruction remains, press RESET and cycle the PLC RUN/STOP and HOA switches as directed. Repeated faults require service evidence and escalation.

Operating symptoms

For a blank startup screen or a zero PLC revision, begin with Section 6.1.

Symptom	Likely meaning	Operator action
HMI and PLC suffixes do not match	The programs may not be a coordinated pair.	Do not overwrite either program blindly. Photograph the version pair and contact BearCat before setup changes.
Expected mode button is missing or gray	The mode is not enabled in the machine parameters.	Confirm the intended configuration. Parameter access should be limited to authorized personnel.
Configured machine name is wrong	The name stored in parameters does not match the machine identity.	Confirm you are at the correct control. Record the displayed name before requesting a parameter correction.
Date/time is wrong	The HMI clock needs correction; logged records may receive bad timestamps.	Correct the HMI clock before relying on time-stamped logs. Preserve existing records before service changes.
START, STOP, RESET or R ignores a quick tap	The control uses an intentional press delay to prevent accidental activation.	Press and hold the button for approximately one to two seconds.
DFR is ON but frequency is not changing yet	The initial scaled starting speed is held for approximately 15 seconds.	Wait for the + indicator and DFR Auto Adjust display before judging regulation.
Load Complete remains on screen	The target cycle has finished and is waiting to be cleared.	Hold RESET to clear the completion state and prepare for the next run.

STOP AND SECURE THE EQUIPMENT

Stop troubleshooting from the HMI if there is unexpected motion, a hot-product leak, stored-pressure release, visible electrical damage or repeated drive tripping. Use the machine owner's safe shutdown and lockout procedure.

BEFORE YOU CALL IT WEIRD

Record what changed, what still works, the complete error number and the software pair. One clear screen photo is worth considerably more than a detailed description of 'the weird thing it did.'

Service record and revisions

Before calling for service

Capture	Record
Machine identity	Cabinet model/serial and the configured name shown below T7 Control.
Software pair	Exact lower-left values, including leading zeros and punctuation.
Fault behavior	What changed, what still works, and whether the condition began at power-up or during operation.
Evidence	One clear photo of the complete HMI screen and relevant PLC status indicators.
Recent work	Power interruption, cable movement, program update, parameter change or equipment replacement.



BearCat documents and training

bearcatpumps.com/pages/documents.html

Support: 623-587-1350

Revision history

Rev	Date	Change
A	2026-09-01	Initial modular edition: startup, revision matching and first-line troubleshooting.
B	2026-09-02	Added Manual Mode, DFR, Target and related troubleshooting.
C	2026-09-02	Added Meter Data, communication checks and error-code reference.
D	2026-09-02	Reorganized by operator workflow; added Screen Setup and consolidated troubleshooting.
E	2026-09-02	Standardized annotated screen references.
F	2026-09-02	Added Tank Dose and refined index and error-code format.
G	2026-09-02	Separated application modes; added Drum and Meter Only addendums.
H	2026-09-03	Added protected-field definitions, USB-record guidance and legacy mode-name references.

SOURCE PACKAGE FOR THIS RELEASE

T7 startup-screen video; Manual Mode videos 1 and 2; Tank Dose, Drum Mode and Meter Only Mode videos; Meter Data videos 1 and 2; Screen Data video 1; Trouble videos 1 and 2; BCM Main program printout 2026.082; BearCat Pumps BCM Control Manual 009.2023.009. Screen captures shown: T7.87 / 2026.087 and T7.88 / 2026.088.

Application-Specific Mode Addendums

The core manual applies to every T7 control. The addendums describe modes developed for a particular application or client type and apply only when the matching mode is configured on that control.

USE ONLY WHEN THE MODE IS CONFIGURED

A mode button on the startup screen establishes applicability. Do not use an addendum or an old mode name to infer features that are not present on the installed control.

Required core-manual knowledge

Core topic	Read first	Why it still applies
Startup	3.1-3.2	Identity, software pair and mode selection remain common.
Manual operation	4.1-4.4	Feedback, START/STOP, reverse, DFR and Target remain foundational.
Protected setup	5.1-5.4	Editing rules, field definitions and USB behavior still apply.
Diagnostics	6.1-6.3	Communication checks, error codes and safe troubleshooting still apply.

Current mode addendums

Addendum	Mode	Application-specific function
M-01	Tank Dose	Calculates a dose target from tank load and entered percentage.
M-02	Drum Mode	Calculates and regulates additive flow from plant AC flow and entered percentage.
M-03	Meter Only Mode	Provides measurement, health and target-stop output without VFD control.

Legacy mode-name reference

Earlier label	Current starting point	Use this rule
Manual Control	Manual Mode	Use Sections 4.1-4.4 and confirm the configured fields.
Drum Feed	Drum Mode	Use addendum M-02 when the installed button and program match.
Terminal Feed	Compare with Tank Dose	The ratio/target workflow is similar, but do not assume equivalence. Verify displayed fields and the software pair.
Batch Feed	Program-specific	No core Rev H equivalent is assumed. Use the machine-specific documentation.

IF THE BUTTON IS NOT THERE

The addendum is not playing hard to get. It does not apply to that control.

Tank Dose

Application-specific: use only on controls configured with Tank Dose. This addendum assumes familiarity with Sections 3-5 of the core manual and covers only the Tank Dose fields and behavior.

Tank Dose

Load Name
D 2 '1

Type **A 3 '1** Ratio % **0.4**

Tank Load **6,000.0** lbs

Target **30.00**

Start (Hz)
+ 25.00 -

S	112 3006	RFH/025	111	M
AMPS	Hz	Drive Gain %		
0.98	25.00	1.0		
Dens lbs/gal	Sat %	Temp F °		
8.3660	100.3 %	77.158		

Flow **0.232**
lbs / min

Total **0.9943**
lbs

T7.88 2026.088

LAS P1

RESET

STOP

08:19 AM
29-AUG-26

#	Field	Function
1	Tank Dose	Confirms the active operating mode.
2	Load Name	User-entered driver, invoice, load or other identifying name stored with the record.
3	Type	Product being dosed; typically the liquid or additive name.
4	Ratio %	Requested product percentage. Changing it immediately recalculates the target.
5	Tank Load	Total tank or truck load used as the basis for the dose calculation.
6	Target	Calculated dose: Tank Load x Ratio. Example: 6,000 lb x 0.50% = 30.00 lb.
7	Start Hz	Pump frequency; adjust with + / - or touch the value for direct entry.
8	RESET / record	After the dose, RESET stores the entered fields, requested target and actual total on the USB drive.

CORE CONTROLS ARE NOT REPEATED

Feedback, flow, total, START/STOP, reverse, press-and-hold behavior and Meter Data access remain as described in the core manual.

Drum Mode

Application-specific: use only on controls configured with Drum Mode. This addendum assumes familiarity with Sections 3-5 of the core manual and covers only the fields and automatic calculation unique to Drum Mode.

Drum

Load Name: **A21**

Type: **A31** Ratio %: **0.4**

AC Flow: **310.6** lbs / min

Desired Flow Rate: **0.621**

Auto Adjust: **+ 22.81 Hz**

S	10 2994	RFH/025	101	M
AMPS	Hz	Drive Gain %		
0.97	22.81	1.0		
Dens lbs/gal	Sat %	Temp F °		
8.3623	100.2 %	77.302		

BEARCAT PUMPS
T7.88 2026.088

LAS P1

RESET

STOP

Flow: **0.606** lbs / min

Total: **1.5095** lbs

08:29 AM
29-AUG-26

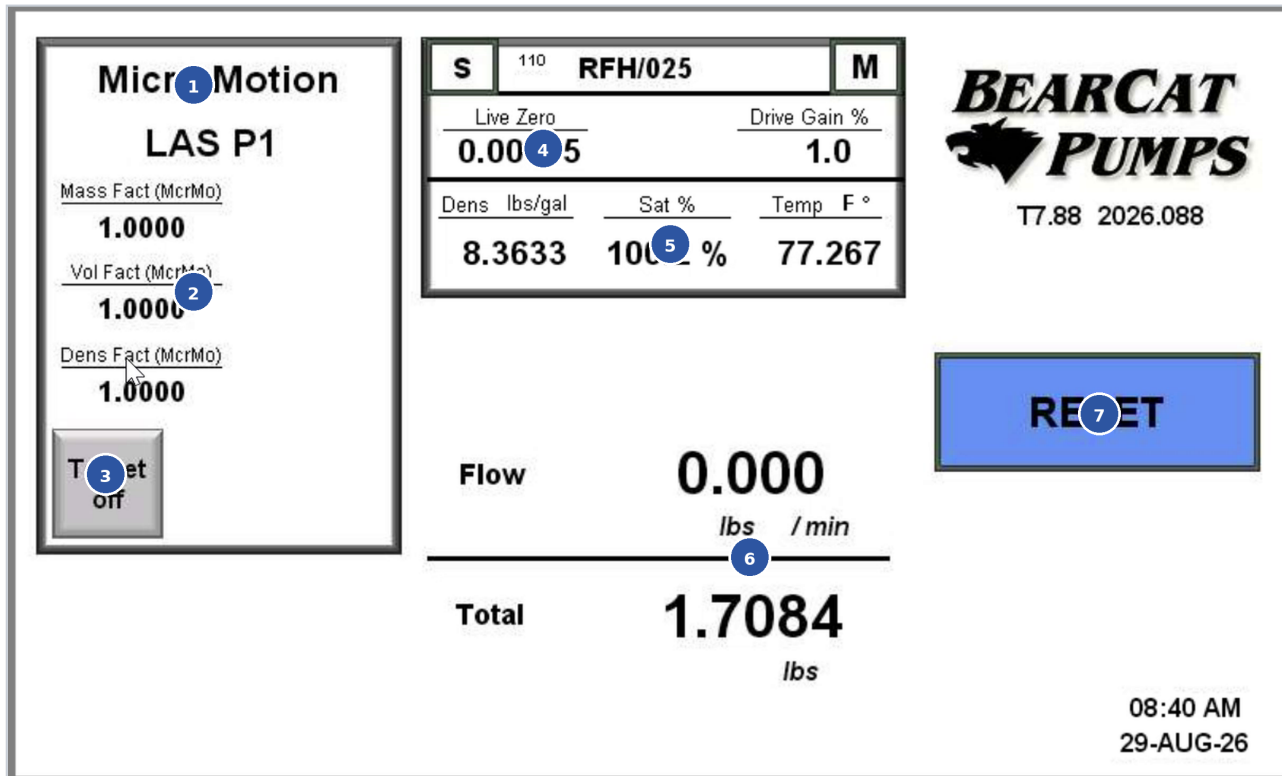
#	Field	Function
1	Drum	Confirms the active application-specific operating mode.
2	Load Name	User-entered load or product identifier stored with the USB record.
3	Type	Additive being pumped; commonly liquid anti-strip.
4	Ratio %	Requested additive percentage relative to the plant AC flow.
5	AC Flow	Live plant asphalt-cement flow received from a 4-20 mA signal or another flow meter.
6	Desired Flow Rate	Calculated additive rate: AC Flow x Ratio. Example: 310.6 lb/min x 0.20% = 0.621 lb/min.
7	Auto Adjust / Hz	After the approximately 15-second prime hold, pump speed adjusts to match actual flow to the calculated rate.

THE DOSE FOLLOWS THE PLANT

When AC flow changes, Drum Mode recalculates DFR and adjusts pump speed accordingly. The entered information is recorded periodically to USB.

Meter Only Mode

Application-specific: use only on controls configured for Meter Only operation. This addendum assumes familiarity with Sections 3-5 of the core manual and covers the meter-focused display and external target-stop function.



#	Field	Function
1	Micro Motion / name	Confirms Meter Only operation and identifies the configured system.
2	Meter factors	Displays the mass, volume and density factors applied to the meter measurement.
3	Target	Enables a target total; the PLC can send a discrete output for another device to initiate its stop.
4	Live Zero	Live Micro Motion zero-stability value for meter condition monitoring.
5	Meter health	Drive gain, density, saturation and temperature replace the VFD-related output fields.
6	Flow / Total	Live measured flow and accumulated quantity in the configured units.
7	RESET	Clears the current total or completed target state as configured.

NO VFD CONTROLS ARE MISSING

There is no VFD to command, so START/STOP, reverse and frequency controls do not appear. Meter Only is doing exactly what the name promised.