Reimer Mobile Mixer

> Operator's Manual CMT1000



REIMCMT1000-15

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CMT1000 Odyssey

Home Page Icons



The same icons shown on the Home Page may also occur on other screens on the display. These icons allow the operator to navigate to other locations in the display without having to be on the Home Page. In most cases, the indicated function can be activated by touching the symbol on the display or by pressing the soft key (push button) next to the symbol.

- 1. **Belt Speed Increase.** Increases the belt speed in increments of 1 RPM.
- 2. Belt Speed Decrease. Decreases the belt speed in increments of 1 RPM.
- 3. Actual belt speed set point value in RPM.
- 4. Set points screen icon. Selects the set points screen.
- 5. **Meters screen icon.** Selects the process meters screen.

- 6. **Mix Select screen icon.** Selects the mix select screen.
- 7. **Totals screen icon.** Selects the mix totals screen.
- 8. Auger Speed Increase. Increases the auger speed in increments of 1%.
- 9. Auger Speed Decrease. Decreases the auger speed in increments of 1%.
- 10. Actual auger speed set point value in %.
- 11. Settings screen icon. Selects the mixer/meters settings screen.
- 12. **Display screen icon.** Selects the display settings screen.
- 13. **Mix Entry screen icon.** Selects the mix entry screen. This screen will not be available if a total volume of concrete is shown. This prevents changing mix design information before a RESET.

- 14. **Printer icon.** Starts printing a ticket. Allow the ticket to finish printing before changing screens otherwise the ticket will not print all the required data. Wait until the printing status message is cleared before switching the screen.
- 15. Home Screen button. Press to go back to Home Screen from any other screen.
- 16. **Esc button.** Press to go back to the previous screen.
- 17. Encoder. Rotate to change values or navigate the screen. Push to make selection.
- 18. USB stick port. Keep closed if not in use.



Home Page Operation

The Home Page screen is the operations screen where the basic mix design information is shown and the operational parameters for achieving the desired mix output. See description of key components below.

- 1. Total volume of concrete produced in the current job. This total will accumulate until a reset is activated and the total is set to zero.
- Gate positions for sand and stone. Used as a reference for the operator to ensure gate positions are correct for the selected mix design before starting operations.

- 3. Strength of the concrete selected in the current mix design.
- 4. The mix design number selected for the current job.
- Adjustable water to cement ratio. This is preselected in the mix design, but can be manually adjusted up or down to ensure desired slump is correct. Adjusting W/C Ratio will affect the W/C actual on the Totals screen.
- Water to cement (W/C) ratio adjustment knob. The W/C ratio is adjustable on the display by rotating the encoder. On this

screen the encoder is dedicated to W/C ratio adjustments only.

- 7. Water flow rate gauge. This gauge is used to monitor the water flow rate during the mixing process. Double needles are used to show desired flow rate and actual flow rate. The yellow needle is the actual flow rate and the red needle is the desired flow rate. If the water is being controlled manually the operator would adjust the metering valve, so these two needles align. Desired flow rates are calculated by values entered into the mix design or adjustment of W/C ratio. The desired flow rate will also change with a change in belt speed.
- 8. Admix 1 flow rate gauge. This gauge is used to monitor the admix flow rate during the mixing process. Double needles are used to show desired flow rate and actual flow rate. The yellow needle is the actual flow rate and the red needle is the desired flow rate. If the admix is being controlled manually the operator would adjust the metering valve, so these two needles align. Desired flow rates are calculated by values entered into the mix design. The desired flow rate will also change with a change in belt speed.
- 9. Admix 2 flow rate gauge. See item #8 for description.
- 10. Belt Speed in RPM.
- 11. Cement Auger Speed in RPM. Used for diagnostics.
- 12. Colour Auger Speed in RPM. Used for diagnostics.
- 13. Current water control valve position. Used for diagnostics.

Set Points Page Operation



The Set Points screen is used to adjust belt and auger speeds as well as unload functions. It is also a location for showing current powder ratios and diagnostics. See description of key components below.

- The buttons in this group are quick select speed settings for the belt. The values are RPM values. The operator can select the desired RPM by touching the icon on the display or by pressing the soft key.
- The buttons in this group are quick select speed settings for the auger. The values are % values. The operator can select the desired speed % by touching the icon on the display or by pressing the soft key.
- Current belt speed. The operator can also change the belt speed here by touching the box and rotating the encoder to the desired setting. Push the encoder centre button to accept the selection.

- Current auger speed. The operator can also change the auger speed here by touching the box and rotating the encoder to the desired setting. Push the encoder centre button to accept the selection.
- Touch this button if you wish to unload the belt without running any of the downstream functions such as the cement auger. This function would be used to unload the aggregates from the bins only.
- If equipped, touch this button if you wish to unload the colour without running any of the other functions such as the belt or cement auger. This function would be used to unload the colour powder from the bin only.
- Touch this button if you wish to unload the cement without running any of the other functions such as the belt or auxiliary functions. This function would be used to

unload the cement powder from the bin only.

- If equipped, touch this button if you wish to unload the silica without running any of the other functions such as the belt or cement auger. This function would be used to unload the silica powder from the bin only.
- 9. Selected mix design cement ratio. This is the ratio used during calibration when setting up the cement powder output versus belt counts. The "actual" reading can be used as a reference when diagnosing problems with the ratio control system. It can also be used to manually set a ratio if there are any problems with the electrical valves that control the cement auger speed.
- 10. Selected mix design silica ratio. This is the ratio used during calibration when setting up the silica powder output versus belt counts. The "actual" reading can be used as a reference when diagnosing problems with the ratio control system. It can also be used to manually set-up a ratio if there are any problems with the electrical actuation of the valves that control the silica auger speed.
- 11. Selected mix design colour ratio. This is the ratio used during calibration when setting up the colour powder output versus belt counts. The "actual" reading can be used as a reference when diagnosing problems with the ratio control system. It can also be used to manually set-up a ratio if there are any problems with the electrical actuation of the valves that control the colour auger speed.

Mix Entry Page Operation



The Mix Entry screen is used to enter all mix design information. A password screen comes up before the Mix Entry screen is displayed. The password is by default set to "admin", but can be changed in the Mix Entry screen. It will hold a total of 15 different mix designs. Below is a description of how the screen functions and the data within it.

 The Mix Entry table is were information for the mix design is entered. Some values are calculated values by the computer and the others are user entered. The entry boxes highlighted in blue are values that the user can enter. Values are entered by touching the desired box on the screen or scrolling through the boxes using the encoder and pressing the encoder center button. Depending on the type of data being entered the user will either get a popup keypad or the box will turn yellow indicating that the encoder should be used to enter the value. The values on the display are as follows:

- a. Mix #: Value for the mix number being entered. Use the encoder to scroll through 1-15 values and push encoder to select desired mix number. All pertinent data for that mix number will then populate the mix entry table.
- b. **Mix Description:** This is a user definable description of the mix design. It can be any

combination of letters, characters or numbers up to a total of 19.

- c. Counts: This is the total number of calibrated counts required to make 1 m³ or 1 yd³ of concrete.
- d. **GT A:** This is the position of Gate A on the dial. Used to reference the gate position during calibration.
- e. **GT B:** This is the position of Gate B on the dial. Used to reference the gate position during calibration.
- f. Sand wt: Weight of sand per unit volume.
- g. **Cement wt:** Weight of cement per unit volume.
- h. Stone wt: Weight of stone per unit volume.
- i. **Strength:** Strength of concrete for the mix design.
- j. **W/C Ratio:** Mix W/C ratio. Can be adjusted on HOME screen for fine tuning slump.
- k. Admix 1: Value for amount of admix chemical required per unit volume.
- I. Admix 2: Value for amount of admix chemical required per unit volume.
- m. **Admix 3:** Value for amount of admix chemical required per unit volume.
- n. Cement: This value refers to the ratio of cement auger output to belt output and is used adjust for lean mixes. A value of 100 would be 100% or full. Anything below 100% would be considered lean. This value is very important when calibrating the mixer for a specific mix design and should not be adjusted once calibrated.
- H₂O Volume: Calculated value of water in the mix per unit volume. Value is based on W/C ratio, sand moisture percentage and admix chemicals.
- p. **Colour:** Value for amount of colour powder per unit volume.
- q. **Silica:** Value for amount of silica powder per unit volume.

- r. **Fibre:** Value for amount of fibre powder per unit volume.
- s. Sand H₂O %: Value entered on Mix Select screen.
- t. **Sand H₂O:** Calculated amount of water in the sand.
- u. **Colour Ratio:** This value refers to the ratio of colour auger output to belt output. The value ranges from 0 to 100%. If colour is not to be used in the mix then this value should be 0. If not the computer will think that colour should be on and will run the colour auger.
- v. Silica Ratio: This value refers to the ratio of silica auger output to belt output. The value ranges from 0 to 100%. If silica is not to be used in the mix then this value should be 0. If not the computer will think that silica should be on and will run the silica auger.
- w. Fibre Ratio: This value refers to the ratio of fibre cutter output to belt output. The value ranges from 0 to 100%. If fibre is not to be used in the mix then this value should be 0. If not the computer will think that fibre should be on and will run the fibre cutter.
- SAVE button. It is important that this button be pressed after changes to mix design are complete. Failure to either touch this button on the display or press the soft key will result in the mix data not being saved before leaving Mix Entry screen or changing to a new mix number.
- Entries containing text will open the keypad as shown. Press the DEL key to clear existing data one character at a time. Press CANCEL if no change is required or press DONE if changes are complete.
- 4. Entries containing larger numeric values will open the numeric keypad as shown. Press the DEL key to clear existing data one number at a time. Press CANCEL if no change is required or press DONE if changes are complete.

- The password required to enter the Mix Entry screen can be changed by entering a new value in the box.
- Below is the password entry screen. Press the center box to bring up keyboard. Type in password and then press the ENTER key. Passwords are case sensitive.





Mix Select Page Operation

The Mix Select screen is used to select the required mix design for the current job. The majority of the data on this screen is just a copy of what is entered into the Mix Entry screen. There are three calculated values, which include calibrated cement and silica volume/count and total admix chemical in the mix. See description of key components below.

 This field allows the operator to select the desired mix number for the current job. Either select the field by touching the box or push the encoder centre button. Rotate the encoder to make a selection for the mix number between 1-15. Push the encoder centre button to acknowledge selection.

- The operator can enter a JOB NAME into this field. The job name will be printed on the ticket and stored in the job log after a reset. This field allows up to 14 characters to be entered.
- This field allows the operator to enter the moisture in the sand. This value is not mix design specific and is used to calculate the added water required in the mix after sand moisture.

Totals Page Operation



The Totals screen shows a running total of all mix design components. Below is a description of the unique values on this screen.

- Reset screen icon. Touch the symbol on the display or the soft key to open the reset mix totals screen.
- 2. Job Log screen icon. Touch the symbol on the display or the soft key to open the job log screen.
- Total W/C ratio of the current mix. This is the value that will printed on tickets and saved in the job log.
- 4. Total concrete volume produced. This is same total shown on the HOME screen.

- 5. Total amount of water in the mix introduced from sand moisture.
- 6. Total concrete volume the mixer has produced from all jobs.
- 7. Total hours the belt has run.
- Auto Reset button. Used to automatically open RESET screen after a print on the HOME screen. To select this option touch button. Auto reset will show as selected on the display.
- 9. Scales screen icon. Touch the symbol or the soft key to open the scales screen.
- 10. The values on the bottom left of the total powder weights are the number of counts of the auger itself.

Rest Page Operation



The Reset screen allows the operator one last final check before they reset all the mix totals to zero. The totals are not lost after a reset they are simply stored in the job log were the last five jobs can be printed. Simply press YES to accept the reset or press NO to go back to the TOTALS screen without changing any of the accumulated values.

Job Log Page Operation



The Job Log screen allows the operator to print previous jobs and copy or move the data from the data log to a USB stick. The description of the key components on this screen are shown below.

- The job log table shows the last five jobs completed. Each job stored in the job log will show the date, time, job name and a sequential job number along with all the totals data printed on a ticket.
- 2. The printer icons allow the operator to print or re-print the last jobs completed. Printer #1 prints the job shown in the first row. Printer #2 prints the job shown in the second row on so on. Do not switch screen until ticket is finished printing. Doing so will result in ticket not printing all the required data. The display will show a printing status message with the line being printed. Wait until this message is cleared before screen is switched.

- The sequential job number can be reset to 1 at any time by touching this icon on the display or the soft key.
- 4. **Move job log data.** This operation will move the job log text file to the USB stick and will remove it from the display. The log file will reset to zero entries. A USB stick must be inserted into USB port on the front of the display before this function is activated or it will result in an error.
- 5. **Copy job log data.** This operation will copy the job log text file to the USB stick and will keep it on the display. The log file will continue to add data from last value. A USB stick must be inserted into USB port on the front of the display before this function is activated or it will result in an error.
- 6. Status bar showing amount of data used and progress of copy or move function.

Meters Page Operation



The Meters screen shows digital readouts for various mix process parameters. Most of these values are shown on the HOME screen. Below are some key functions and other diagnostic values available on the Meters screen.

- The liquid flow meters for water and admix have an additional read out showing desired flow on the bottom left. This can be used when manually setting up admix or water flows instead of the double needles on the HOME screen gauges.
- 2. Hydraulic oil temperature. Used to diagnose operation of hydraulic system.
- 3. Belt pump pressure. Used to set belt pump standby pressure and as a diagnostic tool for belt circuit functionality.
- Auger pump pressure. Used to set auger pump standby pressure and as a diagnostic tool for auger circuit functionality.

- 5. Sets oil temperature gauge units in Fahrenheit.
- 6. Sets the hydraulic gauge pressure units in PSI.
- 7. Sets the oil temperature gauge units in Celsius.
- 8. Sets the hydraulic gauge pressure units in BAR.
- 9. Change flow rate reading to GPM. Independent of mix design or mix units selection.
- Change flow rate reading to LPM.
 Independent of mix design/mix units selection.
- 11. RPM readout. The value on the bottom left indicates the set point value and the larger value in the middle is the actual value.

Settings Page Operation

	AUGER JAM SHUT-OFF 3480 psi	SETTINGS	TRUCK INAMEER TRUCK
X R MATER MANUAL	ELOW METERS	HEILE ONIS TRANSDUCERS 2 BELT T-MIN 4000	UIBARTORS 5 UIB 7 ON TIME S SEC
> 9 PID RESET > 10 BELT PID OFF	ADMIX2 SCALE 3962 PULSES.LTR ADMIX3 SCALE	BELTT-MAX 20000 ISS PSI AUGER T-MIN	ADMIX SETUPON SEC DRY MIX SEC DRY MIX OVERRIDE SEC
	3962 PULSES/LTR <i>H_eo scrite</i> 100	4000 4001 AUGER T-MAX 20000 2500	

The Settings screen is used to set the units of measure for the display (US or Metric). It is the location for scaling all flow meter devices and pressure transducers. See item descriptions below.

- 1. Flow meter scaling can be adjusted in these fields to ensure actual output matches displayed value. Default settings are pre-set on the display based on manufacturer values.
- Pressure transducer scaling. This is used to adjust zero point on transducers and confirm actual output vs. reference. Default settings are pre-set at the factory.
- 3. Change mix design and mix units to METRIC.
- 4. Change mix design and mix units to US.
- 5. Change automatic vibrator ON times and the time between sequenced vibrators or OFF time.

- Change mix auger pressure that shuts belt OFF. Used to prevent pilling up mix bowl with material if mix auger jams.
- Truck number. A number can be assigned to the truck for tracking purposes. Up to 8 characters are allowed. This is also printed on the tickets.
- 8. Water Manual Mode: This allows the operator to put the mixer in a manual water mode, which may be desired if really low flows are required or for wheel barrows where there is little time for the automatic control system to react to set point changes.
- 9. PID reset: If any of the PID fault error messages come up on the screen they can be reset back to the auto state by pressing this key. Note: If there is a consistent issue with the function causing the fault then it will go back into the alarm state even after resetting. Read the fault descriptions below for trouble shooting tips.

- 10. Belt PID OFF: This allows the operator to place the belt in a "manual" mode where it does not use the actual belt speed reading to maintain its set point. May be useful for cold start-up situations where the belt max speed can't be achieved and PID faults are coming up.
- 11. CAN Reset: If one of the CAN interface devices is unplugged (ie. Speed sensors) then they can be reset without turning the power OFF and ON.
- 12. Admix Set-Up ON: With or without the engine running this mode allows the operator to pre-set the admix flow rates by using the PRIME function on the keypad. Note: The totals will need to be reset before starting mixing otherwise it will include the amount of admix during the set-up / prime function.
- Dry Mix Override: This function allows the operator to run the mixer in auto mode without running the water pump.

- 14. VIB Select: Press the function to activate the vibrator select mode. When activated the operator can select on the keypad, which of the four vibrator functions they want to run in automatic mode. The yellow light will flash on the vibrator key when it is in automatic mode. De-select the VIB select key when finished. If you want to turn the automatic mode off for the vibrator then select the VIB select function again and press the vibrator key you want off.
- 15. The oil cooler can be manually turned OFF and ON. This is useful for trouble shooting purposes or if the ambient temperature is extremely hot and the operator does not want the mixer to wait until the default 110°F ON settings.

Scales Page Operation



The Scales screen is used to monitor actual weight output of the cement auger and adjustments to the scale system for calibration and alarms purposes. This screen will not be useable if no scales are installed. See item descriptions below.

- This reading shows the calculated weight/count based on the values entered into the Mix Entry screen.
- This reading is the actual cement auger weight/count of the auger only. This is used as an indication of the weight of cement coming out of the auger not in relation to the belt counts.
- 3. This reading shows the actual weight/count of the cement auger vs. counts of the belt.
- This reading shows the actual total cement delivered in this mix. The calculated value is based on the mix design value and the counts of the belt.

- 5. This reading shows the total cement weight in the bin.
- The tare reading shows what the weight value (zero value) was before the TARE was pressed.
- Press this button to TARE the scale. A warning screen will come up to allow the operator one last chance to cancel TARE. This screen is the similar to the RESET screen.
- 8. The mixer can be placed into a cement auto mode by pressing this button. The cement auto mode gives the mixer control over fine tuning the cement auger speed to achieve the desired weight / count. When in the OFF state the mixer runs at its normal fixed speed ratio in relation to belt speed.
- 9. The user can select the printout and the logged data to be based on calculated weight.
- 10. The user can select the printout and the logged data to be based on actual weight.

- 11. Indicator shows if the scale amplifier is working or if there is a fault. Green is working, red is there is a fault. See scale amplifier guide for description of faults and trouble shooting.
- 12. Adjust the scale weight output in KG. Used for calibration.
- 13. Adjust the scale amplifier analog signal output. Used for calibration and initial set-

up, but should be 0-10V or 0-10000mv as indicated.

- This is the analog signal read by the ECU from the scale amplifier. Used for trouble shooting and calibration.
- 15. This is an operator selectable bin cement weight for when the mixer should turn the belt off. This ensures the mixer does not still run when the cement is at a minimum weight.



Display Page Operation

The Display screen allows the operator to set display parameters such as date and time and adjustments to the backlighting brightness. See item descriptions below.

- 1. Adjustment of display brightness. Positive up. Negative down.
- 2. Adjustment of soft key brightness. Positive up. Negative down.
- Set real time clock. TIME SET. Touch field to select and rotate encoder to adjust values. Press encoder centre button to accept value.
- Set real time clock. DATE SET. Touch field to select and rotate encoder to adjust values. Press encoder centre button to accept value.
- 5. Voltage input to display. Used for system diagnostics.
- 6. Display temperature. Used for system diagnostics.

 CANBUS state. CAN1 is data to ECU and CAN2 is data to printer. State should be at "1" if communication is okay.



Alarm Symbols / Diagnostics

Alarm messages, when activated, show on the screen in the form of a triangle or circle with a brief description of the alarm. Depending on the alarm priority the alarm message may stay on the screen until the alarm is acknowledged by the operator. Lower priority alarms will show a blinking alarm message. Alarms can be acknowledged by pressing the ESC key, but does not remove the alarm if still active. Below is a summary of all alarms that are possible on the display.



Emergency Stop (E-Stop) pressed on the wireless remote (RED button). The mixer will stop when this alarm is activated. The alarm cannot be removed until the wireless E-Stop is reset.



Belt PID alarm. This alarm indicates the control system cannot reach the RPM set point. This alarm will stop the

mixer. The operator must acknowledge the alarm by pressing the belt button on the keypad. This will place the belt in open loop mode and the control system will ignore belt speed set points; however, the unit will continue to function. Downstream automatic functions such as cement metering will continue to follow the belt speed. Typically causes for this alarm are:

- The hydraulic system has not had sufficient time to become warm for high belt speeds. Slow the belt until operating temperature is achieved, typically above 90°F/32.2°C.
- The engine RPM is below high idle. If the pump is turning too slow, the oil flow rate required by the belt RPM setting may not be achievable. Increase engine RPM.
- There may be a problem with the RPM sensor. The control system requires feedback from the RPM sensor to maintain the desired belt speed. Check the sensor gap or replace the RPM proximity sensor.
- The coil on the belt hydraulic valve may be faulty or the valve may be sticking reducing the required oil flow rate to the motor.



Cement PID alarm. This alarm indicates the control system cannot reach the set point. This alarm will shut off the

mixer operation. The cement motor speed is based on the mix design ratio and on the belt motor output flow. For this reason the cement motor may be unable to reach its required speed if the belt cannot reach its required speed. This problem should be resolved before mixing operation continues to ensure concrete strength and quality is maintained. Other causes for this alarm unrelated to belt speed are:

 There may be a problem with the RPM sensor. The control system requires feedback from the RPM sensor to maintain the desired belt speed. Check the sensor gap or replace the RPM proximity sensor. The operator can manually over-ride the cement control valve to a "full" or 100% open position. More cement powder will be consumed if the mix design is a lean mix, but the strength will not be compromised.

2. The coil on the belt hydraulic valve may be faulty or the valve may be sticking reducing the required oil flow rate to the motor. If the problem is a faulty coil, the operator can manually over-ride the valve and set the desired cement ratio on the SETPOINTS screen using the "Actual" value shown at the bottom of the Cement Ratio dial indicator. This is a temporary solution and should be done with a fixed belt speed.



Colour PID alarm. This alarm indicates the control system cannot reach the set point. This alarm will shut off the

mixer operation. The colour motor speed is based on the mix design ratio and on the belt motor output flow. For this reason the colour motor may be unable to reach its required speed if the belt cannot reach its required speed. This problem should be resolved before mixing operation continues to ensure concrete strength and quality is maintained. Other causes for this alarm unrelated to belt speed are:

- 1. There may be a problem with the RPM sensor. The control system requires feedback from the RPM sensor to maintain the desired colour. Check the sensor gap or replace the RPM proximity sensor. If manual operation is desired then the operator will need to confirm the correct ratio by visual inspection of the product colour. A fixed belt speed will help achieve this.
- 2. The coil on the belt hydraulic valve may be faulty or the valve may be sticking

reducing the required oil flow rate to the motor. If the problem is a faulty coil, the operator can manually over-ride the valve and set the desired colour ratio on the SETPOINTS screen using the "Actual" value shown at the bottom of the Colour Ratio dial indicator. This is a temporary solution and should be done with a fixed belt speed.



Water PID alarm. This alarm indicates that the desired water flow rate cannot be achieved when the control

system is in automatic water mode. This alarm will shut off the mixing operation. The operator must acknowledge the alarm by pressing the belt button on the keypad. The mixing operation may be continued by performing the following operations.

The water control can be placed in manual water mode by pressing the shift (green button) on the wireless remote and button left button (#19). Water control is in manual mode when the yellow light flashes on the Water ON button on the keypad (top left). To return to automatic mode press the shift key and bottom right button (#20) on the wireless remote. Manual mode allows the operator to control the water pump or water valve manually using the Water to Cement (W/C) ratio dial on the HOME PAGE. The W/C ratio is no longer a real time value. It is simply a percentage out of 100 (eg. W/C of 1 = 50% open). If the problem is with the water valve controls then the operator can manually override the hydraulic valve and control the water flow using the manual water control valve at the back of the mixer. Typical causes for this alarm are:

- The hydraulic system has not had sufficient time to become warm before high water flows can be achieved. Reduce water flow requirement until operating temperature is achieved, typically above 90°F/32.2°C. Water flow required is reduced by lowering the belt speed.
- 2. The engine RPM is not at high idle. If the pump is not turning fast enough the oil flow rate required for the water pump and the belt circuit may not be achievable. Increase engine RPM.
- There may be a problem with the water flow meter. The control system requires feedback from the water flow meter to maintain the desired water flow rate. Check the water flow on the display to see if a reading is showing.
- The coil on the water hydraulic valve may be faulty or the valve may be sticking reducing the required oil flow rate to the water pump motor.
- 5. If the unit is equipped with an electric water control valve check to ensure the valve is turning. Remove the blue cover on the valve to see if a red light is on or flashing on the control board. This indicates the valve torque is too high (ball is binding inside) or the voltage is too low. Check torque specs on the ball valve bolts or the voltage input. The water valve position on the SETPOINTS or the HOME PAGE screen can be used for diagnostic purposes.
- Note in some instances manual water mode may be desired especially for really low flow mixes that may require some restriction from the manual water valve.



Radio remote has lost link to the receiver. This is typically caused when batteries need to be replaced or the remote

is too far away from the receiver. If this alarm is activated the machine will stop. The operator must acknowledge the alarm by pressing the belt button on the keypad. The machine can then be run using the keypad.



Auger limit alarm. The auger lid safety limit switch has been activated. When activated, the mix auger will stop. The

operator must resolve the problem before the mix auger can be run. Check to ensure the switch is working and the plunger is being contacted properly.



Auger jam alarm. The mix auger pressure has reached the pressure limit as entered into the Settings screen. Belt

stops. Check to see why pressure max has been reached (auger jammed) or increase pressure limit if need be.



Cement low alarm. If the unit is equipped with load cells this alarm will activate and stop the belt when cement weight

in the bin reaches pre-set level.



Closed loop off is a warning message telling the operator that the belt has been placed in an open loop mode. This means the

control system is no longer regulating the belt speed during operation.



Auto belt off is a warning message telling the operator that the belt has been placed in an open loop mode due to PID alarm. The alarm will continue to cycle on/off until the mixer power is reset or the "Auto-Link" button on the keypad is held on for 3 seconds (yellow light will flash) and then held on again for 3 seconds (yellow light will go out). This resets all PID faults, but the alarm may return if the problem is not resolved.



Auto cement off is a warning message telling the operator that the cement has been placed in an open loop mode due to PID

alarm. The alarm will continue to cycle on/off until the mixer power is reset or the "Auto-Link" button on the keypad is held on for 3 seconds (yellow light will flash) and then held on again for 3 seconds (yellow light will go out). This resets all PID faults, but the alarm may return if the problem is not resolved.



Auto water off is a warning message telling the operator that the water has been placed in an open loop mode due to PID

alarm. The alarm will continue to cycle on/off until the mixer power is reset or the "Auto-Link" button on the keypad is held on for 3 seconds (yellow light will flash) and then held on again for 3 seconds (yellow light will go out). This resets all PID faults, but the alarm may return if the problem is not resolved.



Auto colour off is a warning message telling the operator that the colour has been placed in an open loop mode due to PID alarm.

The alarm will continue to cycle on/off until the mixer power is reset or the "Auto-Link" button on the keypad is held on for 3 seconds (yellow light will flash) and then held on again for 3 seconds (yellow light will go out). This resets all PID faults, but the alarm may return if the problem is not resolved.



Water ON is a warning message indicating that the operator has not turned the water on (keypad button) before running the belt in

auto mode.



Low voltage warning. If voltage drops below 12V (10.5V) for 12 volt systems or 24V (21V) for 24 volt systems functionality of the

controls and output currents may be affected.



Belt limit warning indicates that the control system has automatically reduced the belt speed to ensure water flow

demand can be met. This occurs when the mix design calls for more water than the water pump can deliver at the desired belt speed.



Vibrator pulse select indicates the operator has placed the system in automatic vibrator select mode.

Any of the four vibrators may be selected to automatically turn on with the belt.



The mixer has been placed in belt unload mode by the operator. Go to the SETPOINTS screen to turn off.



The mixer has been placed in cement unload mode by the operator. Go to SETPOINTS screen to turn off.



The mixer has been placed in colour unload mode by the operator. Go to SETPOINTS screen to turn off.

HIGH OIL TEMP

The hydraulic oil temperature is reaching a critical limit and should be monitored. Check to ensure cooler is running and oil levels are sufficient.



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