

This update applies to the Operator Reference (Bulletin MN06103L Issue/Rev. 0.0 (8/96) for all AccuLoad IIs that are operating with AccuLoad II - SQR Version 7 and above firmware.

The version 7 firmware provides the capability for a component overrun alarm to be programmed for each component in the recipe. A new command code 213 has been added to each of the Product Flow Control Directories that allows the operator to program in whole units the amount of overrun that is allowed for each of the products. If the component overruns its preset value by the amount programmed, the component overrun alarm (CO) will be set for that component.

### **102, 103, 104, 105 Product Alarm Check and Reset**

These program codes are used to check the alarm(s) related to the products that have been triggered and to clear the alarm (after the fault has been corrected to allow continued operation). The codes apply to the products as follows:

- Code 102** - Product 1
- Code 103** - Product 2
- Code 104** - Product 3
- Code 105** - Product 4

The following faults will cause the AccuLoad II to alarm and signal the valve(s) to close. Depending on how program code 143 is programmed, the faults may energize the alarm relay.

Code : Fault

**BH: Blend High** - Indicates that the blend tolerance has been exceeded and the product being delivered is over the volume required for the batch or transaction.

<b>102 BH: Blend High</b>
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**BL: Blend Low** - Indicates that the blend tolerance has not been met and the product being delivered is under the volume required for the batch or transaction.

**102 BL: Blend Low**

**BP: Back Pressure Control** - Indicates that the back pressure cannot be maintained for the minimum back pressure flow rate entry set.

**102 BP: Back Pressure**

**BV: Block Valve Fault** - Indicates that the block valve did not open or close as signaled by the AccuLoad II.

**102 BV: Block Valve**

**CO: Component Overrun Alarm** - Indicates that the component overran its preset amount.

**102 CO: Comp Overrun**

*Note: This alarm applies to SQR-7 and above firmware.*

**HD: High Density** - Indicates the density transducer is out of range of the high alarm setting.

**102 HD: High Density**

**HF: Excess High Flow** - Indicates that the flow rate has exceeded the flow limit set in the excess high flow program code for more than 4 seconds.

**102 HF: Excess High Flow**

**HP: High Pressure** - Indicates that the pressure transducer is out of range of the high pressure setting.

**102 HP: High Pressure**

**HT: High Temperature** - Indicates that the temperature probe or transducer is out of range of the high temperature setting.

**102 HT: High Temperature**

**LD: Low Density** - Indicates that the density transducer is out of range of the low alarm setting.

**102 LD: Low Density**

**LF: Low Flow** - Indicates that the flow rate was at or below the minimum flow rate established by the low flow limit program code for longer than 8 seconds.

**102 LF: Low Flow**

*Note: When flow is zero, the low flow condition is not monitored.*

**LP: Low Pressure** - Indicates that the pressure transducer is out of range of the low alarm setting.

**102 LP: Low Pressure**

**LT: Low Temperature** - Indicates that the temperature probe or transducer is out of range of the low alarm setting.

**102 LT: Low Temperature**

**145 - Ready/Run Mode Clearable Alarms Selection**

*Note: This code applies to SQR - 7 and above firmware.*

This code allows the operator to program the alarms that may be cleared in the Ready/Run Mode of operation. Each alarm has an entry number that has to be entered to display the alarm (see the following table). Once the alarm entry number has been entered and the alarm displayed, a 0 or a 1 can be entered to indicate if the alarm can be cleared or not cleared (0 = clearable, 1 = not clearable).

- Note:**
1. Diagnostic alarms are never clearable in the Ready/Run Mode.
  2. If program code 141 is programmed 0 indicating that no alarms can be cleared in the Ready/Run Mode, then "No Alarm Clearing" will be displayed in this code and no entries will be allowed.
  3. All alarms are initialized at the factory to 0 (clearable).

Programming the clearable alarms is accomplished by the following procedure:

1. The display will appear as follows:

**145 Run Clearable Alarms**

2. Enter the table number of the alarm that is to be changed (i.e., 40 Zero Flow).

**145 Run Clearable Alar40**

3. Press 'ENTER' to display the alarm.

**0 ZF: Zero Flow Alarm**

4. To change the alarm from clearable to not clearable, enter a "1".

**0 ZF: Zero Flow Alarm 1**

5. Press 'ENTER'.

**1 ZF: Zero Flow Alarm**

After the alarms have been programmed to fit the application the settings should be recorded in the Appendix of the Programming Workbook (AB06030) for future reference.

**Help Message**

Select which alarms may be cleared in the Run and Ready Modes.

**Alarm Table**

<b>Entry</b>	<b>Alarm</b>
1	CM: Communications
2	TK: Ticket
3	TP: Temperature Probe
4	OA: Overrun
5	PT: Pulse Transmission
6	VF: Valve Fault
7	PR: Pressure Transducer
8	PC: Pulse Collision
9	PS: Pulse Security
10	DP: Down Pulse Error
11	DR: Density Transducer
12	TT: Temperature Transducer
13	SP: Set at Entry 751
14	SF: Local Storage Full
15	F1: Additive Feedback 1
16	F2: Additive Feedback 2
17	F3: Additive Feedback 3
18	F4: Additive Feedback 4
19	F5: Additive Feedback 5
20	F6: Additive Feedback 6
21	F7: Additive Feedback 7
22	H2: Set at Entry 755 (232 Printer Hardware)
23	O2: Set at Entry 755 (232 Printer Paper Out)

24	A2: Set at Entry 755 (232 Printer Cover Open)
25	P2: Set at Entry 755 (232 Printer Buffer Overflow)
26	B2: Set at Entry 755 (232 Printer Buffer Overflow)
27	D2: Set at Entry 755 (232 Printer Deselected)
28	E2: Set at Entry 755 (232 General Printer Error)
29	I2: Set at Entry 755 (232 Printer Not Responding)
30	H4: Set at Entry 755 (475 Printer Hardware)
31	O4: Set at Entry 755 (485 Printer Paper Out)
32	A4: Set at Entry 755 (485 Printer Cover Open)
33	D4: Set at Entry 755 (485 Printer Deselected)
34	B4: Set at Entry 755 (485 Printer Buffer Overflow)
35	P4: Set at Entry 755 (485 Printer Comm)
36	E4: Set at Entry 755 (485 Printer General)
37	I4: Set at Entry 755 (485 Printer Not Responding)
38	CL: Clean Line
39	PA: Power-fail
40	ZF: Zero Flow
41	HT: High Temperature
42	LT: Low Temperature
43	HP: High Pressure
44	LP: Low Pressure
45	HD: High Density
46	LD: Low Density
47	BP: Back Pressure
48	LF: Low Flow
49	HF: Excess High Flow
50	BV: Block Valve
51	BH: Blend High
52	BL: Blend Low
53	AC: Additive Communications
54	IA: Injector Alarm
55	R1: Additive 1 Frequency
56	R2: Additive 2 Frequency
57	R3: Additive 3 Frequency
58	R4: Additive 4 Frequency

59	R5: Additive 5 Frequency
60	R6: Additive 6 Frequency
61	R7: Additive 7 Frequency
62	L1: Additive 1 Pulse
63	L2: Additive 2 Pulse
64	L3: Additive 3 Pulse
65	L4: Additive 4 Pulse
66	L5: Additive 5 Pulse
67	L6: Additive 6 Pulse
68	L7: Additive 7 Pulse
69	N1: No Pulses Detected Additive 1
70	N2: No Pulses Detected Additive 2
71	N3: No Pulses Detected Additive 3
72	N4: No Pulses Detected Additive 4
73	N5: No Pulses Detected Additive 5
74	N6: No Pulses Detected Additive 6
75	N7: No Pulses Detected Additive 7
76	M1: Too Many Pulses Additive 1
77	M2: Too Many Pulses Additive 2
78	M3: Too Many Pulses Additive 3
79	M4: Too Many Pulses Additive 4
80	M5: Too Many Pulses Additive 5
81	M6: Too Many Pulses Additive 6
82	M7: Too Many Pulses Additive 7
83	K1: Low Additive 1
84	K2: Low Additive 2
85	K3: Low Additive 3
86	K4: Low Additive 4
87	K5: Low Additive 5
88	K6: Low Additive 6
89	K7: Low Additive 7
90	U1: Unauthorized Failed Additive 1
91	U2: Unauthorized Failed Additive 2
92	U3: Unauthorized Failed Additive 3
93	U4: Unauthorized Failed Additive 4

94	U5: Unauthorized Failed Additive 5
95	U6: Unauthorized Failed Additive 6
96	U7: Unauthorized Failed Additive 7
97	CO: Component Overrun

- Note:**
1. Alarms that have the statement "Set at Entry ????" are programmable in their respective program codes as to whether they are clearable or not clearable in the Run and Ready Mode of operation.
  2. Entry numbers 1 through 40 are system alarms and entry numbers 41 through 52 are product alarms.
  3. Entry numbers 53 through 96 are System Alarms and apply to the Smart Additive Injector Systems. Available in Revision 13 and above firmware.
  4. Entry 97 is the Product Component Alarm and is available in Revision 19 and above firmware.

## Product Directory

### 213 – Component Overrun Alarm Limit

This two digit entry defines the number of whole units required to trigger the component overrun alarm. The range of this entry is 01 to 99 units.

<b>213 05 Overrun Limit</b>
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**Note:** "00" disables the overrun alarm limit.

### Help Message

Enter number of units delivered over preset amount before alarm occurs.

### Warning

Warning: A zero entry will disable this Overrun Alarm feature.

**Note:** This program code applies to SQR - 7 and above firmware.

**Note:** When this alarm is disabled in the AccuLoad II (set to 0), a valve fault alarm will occur after the valve fault timer expires if the valve does not close.