

BOSS Alarms & Events for I-Watch

Event Type	Information	Alarm
Chain Level Alarm	Trigger: Occurs anytime X consecutive chain level samples indicate that the chain level has fallen below the alarm level. X defaults to 3 samples. At speed, each sample occurs as each new shoe is detected. When stopped, each sample occurs once per second. During accel/decel, each sample occurs every 80 milliseconds. Event clears once the level is no longer below the alarm level.	Yes
Chain Level Shutdown	Trigger: Occurs anytime X consecutive chain level samples indicate that the chain level has fallen below the shutdown level. X defaults to 3 samples. At speed, each sample occurs as each new shoe is detected. When stopped, each sample occurs once per second. During accel/decel, each sample occurs every 80 milliseconds. Event clears once the level is no longer below the shutdown level. Event clears once the sorter start button is pressed.	Yes
Chain Jump Detected	Trigger: Monitoring only occurs whenever consecutive shoes are on opposite chains. Event occurs when the measured shoe interval is 25% greater (roughly 1.25 inches) than the expected shoe interval for 3 consecutive times. Event clears either if the bad interval is no longer detected or when the sorter stops.	Yes
Chain Jump Sensor Error	Trigger: Occurs when X consecutive shoes are missed at both chain jump photoeyes simultaneously. X defaults to 3 shoes. Event clears once shoes are detected at one of the chain jump photoeyes.	Yes
Uneven Chain Stretch Detected	Trigger: Uneven chain stretch is evaluated once every 24 hours. Event occurs when the stretch differential between the two chains is greater than 2". Event clears once the stretch differential between the two chains is less than 1/2".	Yes
Significant Uneven Stretch Detected	Trigger: Uneven chain stretch is evaluated once every 24 hours. Event occurs when the stretch differential between the two chains is greater than 3.5". Event clears once the stretch differential between the two chains is less than 1/2".	Yes
Oil Level Warning	Trigger: Occurs anytime X consecutive oil samples indicate that the oil level has fallen below the warning level. X defaults to 3 samples. Each sample occurs every 2 seconds so it requires 6 seconds of continuous read at that level. Event clears once the level is no longer below the warning level.	Yes
Oil Level Alarm	Trigger: Occurs anytime X consecutive oil samples indicate that the oil level has fallen below the alarm level. X defaults to 3 samples. Each sample occurs every 2 seconds so it requires 6 seconds of continuous read at that level. Event clears once the level is no longer below the alarm level.	Yes
Oil Level Shutdown	Trigger: Occurs anytime X consecutive oil samples indicate that the oil level has fallen below the shutdown level. X defaults to 3 samples. Each sample occurs every 2 seconds so it requires 6 seconds of continuous read at that level. Event clears once the level is no longer below the shutdown level. Event clears once the sorter start button is pressed.	Yes
Low Air Pressure	Trigger: Occurs whenever the air pressure switch transitions from ON to OFF. Event clears once air pressure switch transitions from OFF to ON.	Yes
Low Oil Pressure	Trigger: There are two ways this can occur: 1) Oil pressure never reaches the set active oil pressure setting (varies per site) within the allowed number of priming pulses (50 by default). 2) Oil pressure falls 2 PSI below the set active oil pressure setting during the ON (or active) portion of the oiling cycle. The event clears once the next oil priming cycle starts.	Yes

Oil Pressure Sensor Error	Trigger: Occurs when oil pressure falls above or below the min/max pressure values.	Triggers Low Oil Pressure Alarm
Corrective Oiling	Trigger: Occurs when corrective oiling is initiated. Event clears once corrective oiling ends.	Yes
Oil Refill Detected	Trigger: Oil level differential greater than limit for X consecutive samples - X defaults to 4 samples, each sample occurs every 2 seconds, so it requires 8 seconds of continuous reading of that level. The increase in oil level to trigger this alarm is approximately 3 ounces.	No
Sync Shoe Not Detected	Trigger: Occurs if the sync shoe is not detected within 5 shoes of the expected number of shoes on the sorter. Event clears once a valid detection of the sync shoe occurs.	Yes
Chain Care Calibration	Trigger: Occurs whenever chain calibration is enabled. Event clears whenever chain calibration is disabled.	Yes
File Load Error	Trigger: Occurs when Initialization data does not properly load from file at process start.	No
Settings Changed	Trigger: Occurs whenever IWatch settings are changed.	No
Slat Removal Detected	Trigger: Chain level differential greater than limit for X consecutive samples in conjunction with a valid shoe count differential (no more than 3 shoes different) seen for at least 3 consecutive sorter revolutions - X defaults to 4 samples, each sample occurs every 1 second (since sorter will be stopped), so it requires 4 seconds of continuous reading of that level. The decrease in chain sag to trigger this alarm is approximately 4".	No

InControlWare Alarms & Events for I-Watch					Publication Number 29383731 Version 2.03			
Index	Event Type		Event Status	MC Device/Area Info	Database Event Type	Information	Alarm Type	Severity
□	2	EVENT_LOW_AIR	Set / Clear	Current Air Pressure Sensor	Low Air Pressure	Trigger: New event set whenever the air pressure switch transitions from ON to OFF. Event clears once air pressure switch transitions from OFF to ON.	Device (one per air pressure switch)	Alarm
□	3	EVENT_OILER	Set	Current Oil Level Sensor	Oiler Fault	Trigger: Oil level differential greater than limit for X consecutive samples - X defaults to 4 samples, each sample occurs every 2 seconds, so it requires 8 seconds of continuous reading of that level - The message "Oil level refill detected" passed with event. The increase in oil level to trigger this alarm is approximately 3 ounces.	N/A	
□	3	EVENT_OILER	Set / Reset / Clear	Current Oil Pressure Sensor	Oiler Fault	Trigger: There are two ways this can occur: 1)Oil pressure never reaches the set active oil pressure setting (varies per site) within the allowed number of priming pulses (50 by default). 2) Oil pressure falls 2 PSI below the set active oil pressure setting during the ON (or active) portion of the oiling cycle. The event is reset (aka, going from red to blue alarm) once active oiling stops. The event clears once the next oil priming cycle starts.	Device (one per oil pressure sensor)	Alarm
□	42	EVENT_OIL_WARNING	Set / Clear	Current Oil Level Sensor	Oiler Level Warning	Trigger: Occurs anytime X consecutive oil samples indicate that the oil level has fallen below the warning level. X defaults to 3 samples. Each sample occurs every 2 seconds so it requires 6 seconds of continuous read at that level. Event clears once the level is no longer below the warning level.	Generic	Warning
□	44	EVENT_MISSED_SHOE	Set / Clear	Start/Stop Area Name	Missed Shoe	Trigger: Occurs if the sync shoe is not detected within 5 shoes of the expected number of shoes on the sorter. Event clears once a valid detection of the sync shoe occurs.	Generic	Alarm
□	47	EVENT_OIL_ALARM	Set / Clear	Current Oil Level Sensor	Oil Level Alarm	Trigger: Occurs anytime X consecutive oil samples indicate that the oil level has fallen below the alarm level. X defaults to 3 samples. Each sample occurs every 2 seconds so it requires 6 seconds of continuous read at that level. Event clears once the level is no longer below the alarm level.	Generic	Alarm
□	48	EVENT_OIL_SHUTDOWN	Set / Reset / Clear	Current Oil Level Sensor	Oil Level Shutdown	Trigger: Occurs anytime X consecutive oil samples indicate that the oil level has fallen below the shutdown level. X defaults to 3 samples. Each sample occurs every 2 seconds so it requires 6 seconds of continuous read at that level. Event resets once the level is no longer below the shutdown level. Event clears once the sorter start button is pressed.	Generic	Alarm
□	49	EVENT_CHAIN_ERROR	Set / Reset / Clear	Start/Stop Area Name	Sorter Chain Error	Trigger: Monitoring only occurs whenever consecutive shoes are on opposite chains. Event occurs when the measured shoe interval is 25% greater (roughly 1.25 inches) than the expected shoe interval for 3 consecutive times. Event resets either if the bad interval is no longer detected or when the sorter stops. Event clears once the sorter starts accelerating again. MC Description: " - Chain Jump Detected (Shoe = %d)(Interval = %d)",pSorter->CurrentShoeNumber, pSag->ShoeInterval	Generic	Alarm
□	50	EVENT_IWATCH_SENSOR_ERROR	Set / Reset / Clear	Current Chain Sag Sensor	IWatch Sensor Error	Trigger: Occurs anytime X consecutive chain level samples indicate that the chain level has fallen below the sensor error level. X defaults to 3 samples. At speed, each sample occurs as each new shoe is detected. When stopped, each sample occurs once per second. During accel/decel, each sample occurs every 80 milliseconds. Event resets once the level is no longer below the sensor error level. Event clears once the sorter start button is pressed.	Generic	Alarm
□	50	EVENT_IWATCH_SENSOR_ERROR	Set / Reset / Clear	Current Oil Level Sensor	IWatch Sensor Error	Trigger: Occurs anytime X consecutive oil samples indicate that the oil level has fallen below the sensor error level. X defaults to 3 samples. Each sample occurs every 2 seconds so it requires 6 seconds of continuous read at that level. Event resets once the level is no longer below the sensor error level. Event clears once the sorter start button is pressed.	Generic	Alarm
□	51	EVENT_CHAIN_LIMIT_ALARM	Set / Clear	Current Chain Sag Sensor	Sorter Chain Limit Alarm	Trigger: Occurs anytime X consecutive chain level samples indicate that the chain level has fallen below the alarm level. X defaults to 3 samples. At speed, each sample occurs as each new shoe is detected. When stopped, each sample occurs once per second. During accel/decel, each sample occurs every 80 milliseconds. Event clears once the level is no longer below the alarm level.	Generic	Alarm
□	52	EVENT_CHAIN_LIMIT_SHUTDOWN	Set / Reset / Clear	Current Chain Sag Sensor	Sorter Chain Limit Shutdown	Trigger: Occurs anytime X consecutive chain level samples indicate that the chain level has fallen below the shutdown level. X defaults to 3 samples. At speed, each sample occurs as each new shoe is detected. When stopped, each sample occurs once per second. During accel/decel, each sample occurs every 80 milliseconds. Event resets once the level is no longer below the shutdown level. Event clears once the sorter start button is pressed.	Generic	Alarm
□	53	EVENT_CHAIN_CALIB	Set / Clear	Start/Stop Area Name	Chain Calibration	Trigger: Event occurs whenever chain calibration is enabled. Event clears whenever chain calibration is disabled.	N/A	
□	53	EVENT_CHAIN_CALIB	Set	Start/Stop Area Name	Chain Calibration	Trigger: Chain level differential greater than limit for X consecutive samples in conjunction with a valid shoe count differential (no more than 3 shoes different) seen for at least 3 consecutive sorter revolutions - X defaults to 4 samples, each sample occurs every 1 second (since sorter will be stopped), so it requires 4 seconds of continuous reading of that level - The message "slat removal detected" passed with event. The decrease in chain sag to trigger this alarm is approximately 4". MC Description: "Slat Removal Detected"	N/A	
□	54	EVENT_CHAIN_UNEVEN	Set / Clear	Divert Chain Sag Sensor	Uneven Chain Stretch	Trigger: Uneven chain stretch is only evaluated while the sorter is running at speed. It occurs once per sorter revolution. Event occurs when the stretch differential between the two chains is greater than 2" for more than 10 consecutive revolutions. Event resets once the stretch differential between the two chains is less than 1/2". MC Description: "Uneven Stretch on Divert Chain Side"	Generic	Alarm

□	54	EVENT_CHAIN_UNEVEN	Set / Clear	Home Chain Sag Sensor	Uneven Chain Stretch	Trigger: Uneven chain stretch is only evaluated while the sorter is running at speed. It occurs once per sorter revolution. Event occurs when the stretch differential between the two chains is greater than 2" for more than 10 consecutive revolutions. Event resets once the stretch differential between the two chains is less than 1/2".	Generic	Alarm
□	55	EVENT_CHAIN_CORRECTION	Set / Clear	Start/Stop Area Name	Uneven Chain Stretch Correction	MC Description: Uneven Stretch on Home Chain Side Trigger: Occurs when corrective oiling is initiated. Event clears once corrective oiling ends.	Generic	Alarm

Signature: _____