Vrolen

Downtime reason-code guide

Use a short, stable list on the plant floor. Record the detected state and best-known reason during the stop; confirm a cause only after investigation.

1. Level 1 records the loss family; keep choices short and clear for operators.
2. Level 2 records the mechanism; do not turn a symptom into a confirmed cause.
3. Level 3 records a confirmed cause only when evidence supports it after investigation.
4. Keep the originating asset separate from affected assets. Avoid counting one event twice.
5. Keep detected state, best-known reason and confirmed cause in separate fields.

Loss family	Mechanism	Definition	Example
Equipment	Electrical	Stop caused by an electrical component or supply	Motor trip; contactor failure
Equipment	Mechanical	Stop caused by a worn or broken mechanical part	Bearing seizure; belt break
Equipment	Controls	Stop caused by PLC logic or drive faults	Interlock fault; drive alarm
Equipment	Tooling	Stop caused by tooling or format parts	Worn die; damaged guide
Equipment	Sensor	Stop caused by a sensor or its alignment	Photo-eye misalignment; dirty lens
Material	Shortage	Required material is not at the point of use	Empty hopper; missing components
Material	Quality	Material is present but unusable	Out-of-spec input; damaged packaging
Quality	Inspection hold	Line held for a quality check or decision	Vision reject investigation; first-piece approval

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Reason-code taxonomy, continued

Loss family	Mechanism	Definition	Example
Quality	Reject handling	Stop to clear or rework rejects	Reject bin full; rework loop
Changeover	Method	Changeover exceeded standard because of method	Missing step; unclear sequence
Changeover	Tools and parts	Changeover delayed by tools or parts	Tool not staged; wrong format part
Changeover	Startup	Time to reach first good product after changeover	Adjustments after restart
Labor	Staffing	Required person not available	Absent operator; break not covered
Labor	Skill	Person present but not qualified for the task	Untrained on new format
Planning	Schedule	No work scheduled or wrong work released	No order; wrong sequence
Planning	Information	Missing instructions or documents	Missing recipe; wrong work order
Upstream starvation	Upstream stop	Waiting for output from an upstream resource	Filler starved by mixer stop
Downstream blocking	Downstream stop	Unable to discharge because of a downstream resource	Packer full; conveyor blocked
Utilities	Supply	Loss of power air water or steam	Compressed air pressure drop
Planned	Maintenance	Scheduled maintenance inside planned time	Lubrication round; calibration
Planned	Cleaning	Scheduled cleaning or sanitation	End-of-shift clean