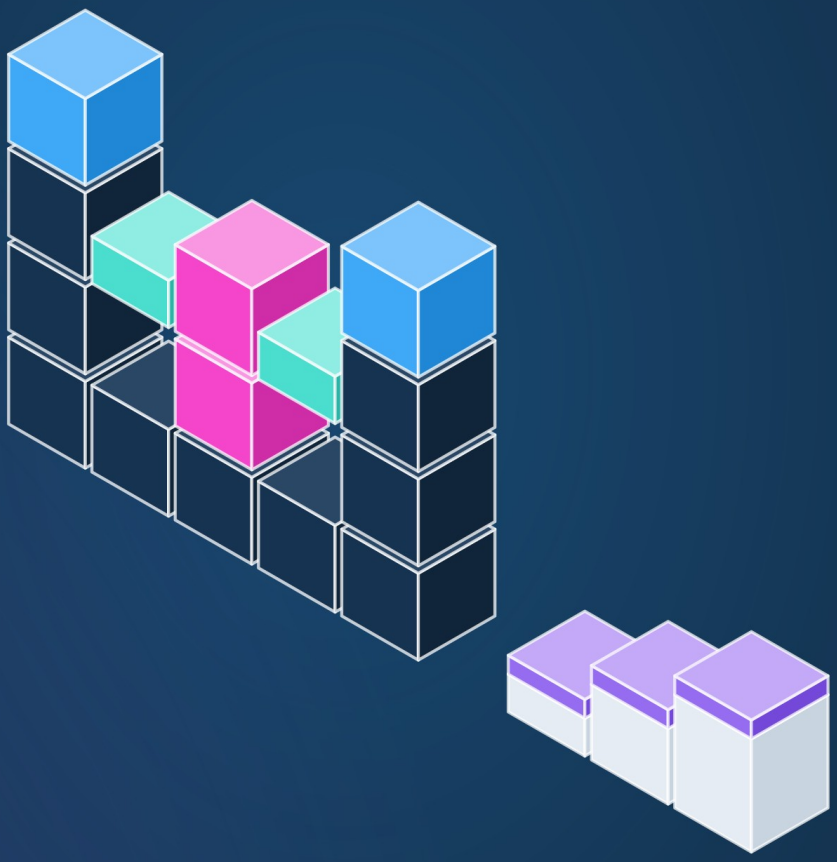
OPERATIONS INSIDER

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MEASUREMENT SYSTEMS AND GAUGE MANAGEMENT

QUICK START CHECKLIST

Score the gauges of one area in one hour, with records you can point at.



LIST. CALIBRATE. PROVE. REACT.

START HERE

How to Use This Check

One production area, one hour with the quality technician and a supervisor, twenty-five statements, one number.

01 LOOK	02 SCORE	03 ACT
Go to the workstations and open the real records: the gauge list, three gauges picked at random, their calibration records and one inspection plan.	Score each statement from 0 to 4. Without a list, a label or a record you can point at, the score is 2 or lower.	Pick the weakest block and agree one action with an owner and a date before you leave.

The Scoring Scale

POINTS	MEANING
0	Not in place.
1	Happens occasionally, depends on individuals.
2	Partly in place, not consistent across areas or shifts.
3	Mostly in place and visible in the records.
4	Consistently in place, visible, reviewed and improved.

> **WHY GAUGES**
>
> **Every decision about a part is a decision about a number or a look. If the gauge is wrong or the measurement varies, good parts are scrapped, bad parts are shipped and nobody knows which.**

Before You Start

- **Scope:** one area with 20 to 60 gauges, for example one line with its final inspection.
- **Evidence:** the gauge list, the calibration records of the last year, measurement system studies and one inspection plan.
- **Tone:** you check the system, not the operators. Ask how they know the gauge is right, not why the label is missing.

THE CHECK

01 Gauge List and Identification

NO.	CHECK	SCORE 0 TO 4
01	Every gauge that decides about product is in one list with a unique number, type, range, resolution, location and owner.	
02	Every gauge carries its number and a label that shows the calibration status and the next due date.	
03	Private, borrowed and unlisted gauges are not used for product decisions, and a walk through the area in the last twelve months confirmed it.	
04	Every gauge has a defined place at the workstation or in the cabinet, and missing gauges are noticed within one week.	
05	New, repaired, blocked and scrapped gauges follow a written route, and the list is updated on the same day.	

02 Calibration and Intervals

NO.	CHECK	SCORE 0 TO 4
06	Every gauge in use is calibrated against a reference that is traceable to a national standard, and the record shows the values found.	
07	No gauge in use is overdue, and the share of calibrations done on time is known and reviewed monthly.	
08	Calibration intervals are set per gauge by type, use and history, and they are shortened or extended by a written rule.	
09	A calibration plan shows the workload per month for the next twelve months, and gauges are called in before the due date.	
10	Gauges at critical characteristics are checked between calibrations with a setting master or reference part at a fixed frequency.	

THE CHECK

03 Selection and Suitability

NO.	CHECK	SCORE 0 TO 4
11	For every measured characteristic, the resolution of the gauge is at most one tenth of the tolerance.	
12	The permissible error of the gauge is compared with the tolerance before a gauge is assigned to a characteristic.	
13	The inspection plan names the gauge type for each characteristic, and operators do not choose a different one.	
14	Go and no-go gauges and visual checks have limit samples or masters that define the boundary between good and bad.	
15	Measuring conditions such as cleanliness, temperature, clamping and measuring point are defined for tight tolerances.	

04 Measurement System Studies

NO.	CHECK	SCORE 0 TO 4
16	Every critical characteristic has a repeatability and reproducibility study with the gauge, the people and the parts of daily use.	
17	The result is expressed as a share of the tolerance, and the variance components show whether gauge or method is the cause.	
18	Attribute checks such as visual inspection have an agreement study with known good, bad and borderline parts.	
19	Studies above the agreed limit lead to an action on the gauge, the method or the training, and the study is repeated.	
20	Studies are repeated after a change of gauge, method or tolerance, and a register shows the date and result of each.	

THE CHECK

05 Reaction and Inspection Planning

NO.	CHECK	SCORE 0 TO 4
21	When a gauge is found out of tolerance, a written procedure starts on the same day: block the gauge, size the error, trace the parts.	
22	Inspection records name the gauge number, so that the parts measured with one gauge can be traced.	
23	The affected lots since the last good check are assessed with the size and direction of the error, and the decision is recorded.	
24	The inspection plan at the workstation shows characteristic, gauge, sample size, frequency, record and reaction on one page.	
25	Operators are trained on the gauges they use, and the training covers handling, zero setting and what to do after a drop.	

Your Result

BLOCK	POINTS	OUT OF
01 Gauge List and Identification		20
02 Calibration and Intervals		20
03 Selection and Suitability		20
04 Measurement System Studies		20
05 Reaction and Inspection Planning		20
TOTAL		100

YOUR RESULT

Read the Number

The total tells you how much of your quality data you can trust. The weakest block tells you where to start.

TOTAL	WHAT IT MEANS	WHAT TO DO FIRST
0 to 39	Unknown. Nobody knows how many gauges there are.	Walk one area. List and label every gauge you find.
40 to 59	Listed. Gauges are known, intervals follow habit.	Clear overdue gauges. Check gauges against tolerances.
60 to 79	Calibrated. Calibration is on time, selection follows a rule.	Study the critical characteristics.
80 to 100	Proven. Measurements are shown to be fit.	Hold the level. Adjust intervals by history, extend to the next area.

Your Three Priorities

NO.	WHAT TO IMPROVE	FIRST ACTION	OWNER	DUE

THE RULE FOR EVERY ACTION

Owner and date, or it did not happen. Repeat the check after three months and compare the blocks, not the feeling.

What to Do Next

NEXT STEP	WHAT YOU GET
GAUGE MANAGEMENT STARTER KIT	The guide for the first 30 days in one area, plus the gauge workbook in Excel with gauge list, due dates, calibration plan and gauge selection.
GAUGE MANAGEMENT EXCELLENCE BUNDLE	The full playbook, a two-day workshop pack, six templates, the Excel system with interval rule, studies, out of tolerance case and inspection plan, and a workshop deck.

Both are available at operationsinsider.com.