



SUPPLIER CALIBRATION GUIDELINE

Supplier Calibration Guideline

Objective: To ensure that calibration equipment is identified, managed, and controlled.

Scope: Certain tools will be calibrated on a periodic basis. The tool types that may require calibration are outlined below. The calibration schedule is tool-specific and can be via the J.A. King website under our equipment log.

All calibrated tools will be uniquely labeled, logged, and controlled at identified locations within each facility as Genesis Systems calibrated tools. Only these Genesis Systems calibrated tools will be used to verify out-going product.

Tool types that may require periodic calibration are shown below:

- Coordinate Measuring Machine (CMM)
- Precision Level
- IR Scanner
- Power Meter (For Laser Enclosure Testing)
- Tensile Tester
- Carbon Monoxide Sensor
- Laser measuring devices (Leica)
- Digital measuring devices (Romer arm & ball bar)
- Calipers
- Micrometers
- Torque Wrench / Torque Driver
- Torque Testing Instrument
- Gage Block / Gage Pin

All other instruments & tools used in the manufacture, assembly & repair of equipment, whether labeled as “For Reference Only” or unlabeled and not uniquely identified, are to be considered reference-only and will not be used to evaluate quality of out-going product. The Genesis Quality Manager and/or applicable buyer will be notified of any equipment that is sent in for calibration that falls outside of this listing.

Compliance:

- All certificates will include the test method and acceptance criteria.
- All certificates will include detailed notes regarding the unique tool id, model, brand and further specifications regarding the calibration or tool where applicable.
- Supplier is responsible for ensuring that environmental conditions are suitable for the calibrations, inspection and measurement being carried out. Details may be noted on certificate as applicable.
- Calibrations will be completed at specified intervals, against measurement standards traceable to international or national measurement standards.



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Out of Service Tools:

- Any tools that fall under the calibration process should have calibration labeling removed and be removed from the building or quarantined when taken out of service.
- When tools are rejected due to calibration results, validity of previous measurement results should be considered and noted. The Quality Manager will record detail shared within the equipment log, along with actions taken if necessary.

Verification:

- All certificates will be given to the Quality Manager upon return for review prior to updating within J.A. King Calibration Listing.

Check Method:

Calipers & Micrometers – Vendor-supplied calibration:

- Using the appropriate gages, the instrument owner / user will check and adjust as necessary to bring calibration into the range as described in the acceptance criteria.
- Remove existing calibration label, if present.
- Perform calibration.
 - Ensure that the device is measured at its minimum and maximum settings and a representative sampling in between these extremes. For example, for a 0"-12" caliper calibrate the device at 0", 12" and 3", 6" & 9" increments, as a suggestion.
 - Record "zero" reading and any adjustment required to achieve it. For example, had to rotate dial .001" to achieve the corrected zero setting. For a digital caliper, record the initial reading then indicate that "reset" was utilized to achieve zero.
 - Record the readings that correspond to the maximum rated position for the device.
 - Record a suitable number of readings between the min & max readings.
- Upon receipt ensure new calibration label is attached to the instrument.
 - Includes Unique tool identification number from certificate.
 - Includes calibration date (Month and year)
- All Calibration documentation will be submitted to the Quality Manager for record keeping.
- Reference equipment log for calibration interval and complete label with the due date for the instruments next calibration.
- Return the tool to service.

Torque Wrenches / Torque Drivers / Torque Testing Instrument – Vendor-supplied calibration:

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- Using the appropriate gages, the instrument owner / user will check and adjust as necessary to bring calibration into the range as described in the acceptance criteria.
- Remove existing calibration label, if present.
- Perform calibration.
 - Ensure that the device is measured at its minimum and maximum settings and a representative sampling in between these extremes. For example, for a 0"-12" caliper calibrate the device at 0", 12" and 3", 6" & 9" increments, as a suggestion.
 - Record "zero" reading and any adjustment required to achieve it. For example, had to rotate dial .001" to achieve the corrected zero setting. For a digital caliper, record the initial reading then indicate that "reset" was utilized to achieve zero.
 - Record the readings that correspond to the maximum rated position for the device.
 - Record a suitable number of readings between the min & max readings.
- Upon receipt ensure new calibration label is attached to the instrument.
 - Includes Unique tool identification number from certificate.
 - Includes calibration date (Month and year)
- Reference equipment log for calibration interval and complete label with the due date for the instruments next calibration.
- Return the tool to service.

CMM, Laser Measuring Devices, Tensile Tester & Digital Measuring Devices

(May include but not limited to IR Scanner, Carbon Monoxide Sensor, Power Meter, Tensile Tester)

- These instruments will be calibrated by outside suppliers.
- **Supplier Calibration Guideline** should be provided to all outside calibration suppliers.
- Upon receipt ensure new calibration label is attached to the instrument.
 - Includes Unique tool identification number from certificate.
 - Includes calibration date (Month and year)
- Reference equipment log for calibration interval and complete label with the due date for the instruments next calibration.
- Return the tool to service.

Gage Block / Gage Pin Measuring Devices

- These instruments will be calibrated by outside suppliers.
- **Supplier Calibration Guideline** should be provided to all outside calibration suppliers.
- Upon receipt ensure new calibration label is attached to the instrument.
 - Includes Unique tool identification number from certificate.
 - Includes calibration date (Month and year)
- Reference equipment log for calibration interval and complete label with the due date for the instruments next calibration.



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- Return the tool to service.

Acceptance Criteria:

- Coordinate Measuring Machine (CMM) – as supplied from calibration supplier.
- Precision Level – as supplied from calibration supplier.
- IR Scanner – as supplied from calibration supplier.
- Power Meter (For Laser Enclosure Testing) – as supplied from calibration supplier.
- Tensile Tester – as supplied from calibration supplier.
- Carbon Monoxide Sensor – as supplied from calibration supplier.
- Laser measuring devices (Leica) – as supplied from calibration supplier.
- Digital measuring devices (Romer arm & ball bar) – as supplied from calibration supplier.
- Calipers - +/- .001" from target gage dimension.
- Micrometers - +/- .001" from target gage dimension.
- Torque Wrench / Torque Driver –as supplied from calibration supplier.
- Torque Testing Instrument – as supplied from calibration supplier.
- Gage Block / Gage Pin – as supplied from calibration supplier.

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Related Forms and Documents:

Section 8.2.4 Monitoring & Measurement (M&M) of Product Guideline

Control of Monitoring and Measuring Guideline (7.1.5)