

GHSP Gage Standard Checklist

Part Number: _____

Part Revision Level: _____

Gage ID: _____

Gage Revision Level: _____

PO Number: _____

Gage Source: _____

Design Requirements

	Yes	No	N/A
1. GHSP received two sets of drawings for the gage.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Gage drawing details datums.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Gage datums match part print datums.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Gage features are dimensioned back to datums.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Gage drawing is suitable for gage certification and calibration.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Gage drawing tolerances are in conjunction with GHSP Gage Standard.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Gage drawing has dimensions for all clamping target areas.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Gage drawing BOM includes detail numbers that are descriptive in appropriate drawing views.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Gage drawing BOM includes purchased component number or material type if not purchased.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Gage drawing BOM identifies where purchased component(s) were modified.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Gage drawing BOM identifies key functional dimensions of component.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Gage drawing bill of materials (BOM) includes quantity used.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Gage drawing revision block includes GHSP purchased component part number(s).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Gage drawing revision block includes gage engineering level and date.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Gage drawing revision block includes fixture / gage build source.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Gage drawing revision block includes revision change description.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Gage drawing title block includes GHSP component supplier gage number.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Gage drawing title block includes gage build name and address.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Gage drawing title block includes number of sheets / pages.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Gage drawing title block includes GHSP Gage Standard and it's revision level.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Gage drawing title block includes gage builder job number and / or quote number.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Gage drawing title block does not include any default tolerances.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Authorization to Proceed

	Yes	No	N/A
23. Gage drawing has the approval of GHSP SDE.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. GHSP has a copy of the approved gage drawing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. GHSP has issued a PO to the supplier.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

GHSP Gage Standard Checklist

Construction Requirements

- 26. Gage base has feet and handles.
- 27. Base is flat and parallel within 0.0001" per 1.000" length
- 28. Base is square within 0.0001" per 1.000" length
- 29. Risers are black with a white identification stamp.
- 30. Risers are screwed and doweled in place.
- 31. Risers & base have identification numbers and location on base and match items listed in the BOM
- 32. No shims / adjustability on check fixture details unless otherwise specified on gage drawing.
- 33. Net & feeler surfaces, locators and functional areas related to part features made of harden steel
- 34. Net & feeler surfaces, locators and functional areas related to part features are 0.120" thickness min.
- 35. Datum points are hardened deck points with a 0.120" maximum flat diameter on top contact surface.
- 36. All harden steel features are black oxide.
- 37. All 2 and 4 way locators are RFS unless otherwise specified and approved.
- 38. No sharp edges
- 39. If gage is over 35 lbs, it has a cart and the cart is stable.

Yes	No	N/A
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Details

- 40. Multiple use details have appropriate storage provision provided and cable attachment.
- 41. Multiple use details (loose pins, plugs, feelers, etc.) are coded to locations.
- 42. Details clearly identify feature size.
- 43. Swing details are strong enough to not defect when 100 lbs is applied.
- 44. Sliding members are made from harden steel and have secondary locking feature.
- 45. Precision located checking features are doweled to base plate with hardened dowels and screws.
- 46. Positional checking pins, locating pins and go / no go pins sliding details are hardened to Rc 60 min.
- 47. Positional checking pins, locating pins sliding details are slip fit.
- 48. Vertically mounted sliding details & flush pin checks have a handle attached to the sliding detail.
- 49. Handles of sliding details are threaded into the sliding detail.
- 50. Handles of sliding are easily accessible when part is loaded.

Yes	No	N/A
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Statistical Process Control Features

- 51. Master blocks are permanently affixed to base.
- 52. Master block has a 30.00 mm minimum set position where appropriate.
- 53. All probe bushing are replaceable.
- 54. Probe bushings are 0.500" inside diameter unless otherwise specified on gage drawing.
- 55. Probe bushings are at all SPC ports and master set block.
- 56. Probe collars are 0.500" outside diameter and provide a slip fit to bushing.
- 57. Probe bushings are made of harden steel.
- 58. Appropriate storage provision provided on base for all probes and fully encapsulate entire perimeter.

Yes	No	N/A
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

GHSP Gage Standard Checklist

General Requirements

- 59. All sharp corners are broken or radiused.
- 60. Gage cart does not exceed 42" in height.
- 61. Gage cart's frame is made of 1-2" square tubing.
- 62. Gage cart has 4 wheels with 2 of which are locking and the other 2 rotating.
- 63. Gage cart top is made of 1/8" steel with welded corners.
- 64. Gage cart has one shelf and one handle opposite of non-swivel casters.
- 65. Gage cart is securely attached to gage and gage is removable.
- 66. Digital indicator(s) are Mitutoyo and read in both +/- directions.
- 67. Gage weighing over 35 lbs is indentified.
- 68. Digital indicator(s) read in both + & - directions
- 69. Clamping does not impede part loading, unloading or gage operation.
- 70. Clamping is directly in line with target datums.
- 71. Indicators provide minimum resolution to measure 10% of part specification
- 72. Pad eyes have inside diameter of 2", 1/2" thread and eye to the sky position.
- 73. Clamping sequence is identified on each clamp.

Yes No N/A

Build Tolerances

- 74. Net and datum surface(s) are within a build tolerance.
- 75. Four way locator(s) are within build tolerance.
- 76. Two way locator(s) are within a build tolerance.
- 77. SPC bushings(s) are within build tolerance.
- 78. Go/no go features and / or feelers meet build tolerance.
- 79. MMC pins are within build tolerances.
- 80. Feeler surfaces are within build tolerance.
- 81. Flush surfaces are within build tolerance.
- 82. Sight checks are withing build tolerance.

Yes No N/A

Identification

- 83. Identification plate is permanently affixed to base.
- 84. Identification plate includes GHSP item number(s).
- 85. Identification plate includes OEM part number if appliable.
- 86. Identification plate includes gage description.
- 87. Identification plate includes name of customer that owns the gage.
- 88. Identification plate includes gage design revision level and date.
- 89. Identification plate includes gage build source identification
- 90. Identification plate is made of plastic or Aluminum.

Yes No N/A

GHSP Gage Standard Checklist

Acceptance Criteria

Acceptance Criteria	Yes	No	N/A
91. Third party certification included with delivery of gage.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
92. Copy of inspection source accreditation certification included with delivery of gage.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
93. Third party certification clearly identifies the characteristic being checked.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
94. Third party certification details the specifications to all applicable axis.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
95. Third party certification details the actual gage characteristic measurement.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
96. Third party certification details actual measurement & pass/fail for each characteristic measured.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
97. Third party certification details the value from tolerance of failed characteristics.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
98. Third party certification is reported in datum position as coordinates or origins.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
99. Third party certification report corresponds correctly with balloons on gage drawing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
100. Gage drawing is ballooned & delivered with gage.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
101. Gage R & R completed by supplier, results acceptable & submitted with delivery of gage.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
102. If gage R & R is over the acceptable percentage, a corrective action plan needed from the builder.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Statements answered with a response of "no" require prior GHSP SDE approved deviation, and must be submitted with this checklist.

Gage Supplier Approval Date

GHSP Component Supplier Approval Date

GHSP SDE Approval Date