



## QUALITY ASSURANCE REQUIREMENTS LIST (QARL)

### MANDATORY REQUIREMENTS (All Orders)

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1. INSPECTION AND TEST. CALSPAN SYSTEMS CORPORATION (BUYER) AND ITS CUSTOMER MAY INSPECT AND/OR TEST MATERIALS, WORK IN PROGRESS, AND COMPLETED SUPPLIES AT ALL REASONABLE TIMES AND PLACES DURING PERFORMANCE OF THE WORK AND PRIOR TO SHIPMENT. REJECTED SUPPLIES SHALL BE CORRECTED OR REPLACED. REJECTED SERVICES SHALL BE RE-PERFORMED IN AN ACCEPTABLE MANNER. IF INSPECTION AND TEST ARE MADE ON SELLER'S PREMISES, SELLER SHALL, WITHOUT ADDITIONAL CHARGE, PROVIDE REASONABLE FACILITIES AND ASSISTANCE FOR THE SAFETY AND CONVENIENCE OF THE INSPECTORS PERFORMING THESE DUTIES. INSPECTIONS AND TESTS SHALL BE PERFORMED IN SUCH A MANNER AS NOT TO UNDULY DELAY WORK IN PROGRESS. UNLESS OTHERWISE AGREED IN WRITING, ALL SUPPLIES FURNISHED UNDER THIS PURCHASE ORDER ARE SUBJECT TO BUYER'S INSPECTION AND ACCEPTANCE OR REJECTION AT DESTINATION, NOTWITHSTANDING ANY PREVIOUS BUYER OR ITS CUSTOMER'S SOURCE INSPECTION OR TEST. INSPECTION/TEST AT SOURCE OR AT DESTINATION SHALL NOT RELIEVE SELLER OF ITS RESPONSIBILITY TO FURNISH THE SUPPLIES/SERVICES IN STRICT CONFORMANCE WITH THE PURCHASE ORDER REQUIREMENTS. SELLER SHALL MAINTAIN AN INSPECTION AND QUALITY CONTROL SYSTEM ACCEPTABLE TO BUYER AND ITS CUSTOMER. SELLER SHALL FURNISH BUYER THE RECORDS OF INSPECTION/TEST FOR SUPPLIES AND SERVICES FURNISHED HEREUNDER AT ANY TIME DURING THE WARRANTY PERIOD UPON BUYER'S REQUEST.
2. QUALITY ASSURANCE RECORDS AND RETENTION REQUIREMENTS. SUPPLIER SHALL MAINTAIN QUALITY ASSURANCE RELATED RECORDS AND RETAIN THEM FOR A PERIOD OF NOT LESS THAN TEN (10) YEARS.
3. SUBMIT ALL NON-CONFORMANCES TO CALSPAN SYSTEMS CORPORATION FOR DISPOSITION. EVIDENCE OF CORRECTIVE ACTION SHALL BE PROVIDED. NONCONFORMING PARTS MAY NOT SHIP UNTIL NONCONFORMANCE HAS BEEN RESOLVED BY CALSPAN SYSTEMS CORPORATION ENGINEERING AND QUALITY.
4. FINAL ACCEPTANCE WILL BE PERFORMED BY CALSPAN SYSTEMS CORPORATION QUALITY ASSURANCE UPON RECEIPT AT OUR FACILITY.
5. COUNTERFEIT MATERIAL CONTROL PLAN. SUPPLIER MUST SOURCE AUTHENTIC PARTS AND MATERIALS TO PREVENT THE INCLUSION OF INADEQUATE PARTS IN DELIVERABLE PRODUCT. MATERIALS AND PARTS SHALL BE PROCURED FROM ORIGINAL MANUFACTURERS, RECOGNIZED DISTRIBUTORS, OR AUTHORIZED AFTERMARKET MANUFACTURERS. IN THE EVENT THAT SUSPECTED COUNTERFEIT PARTS HAVE MADE THEIR WAY INTO THE PRODUCT, THE SUPPLIER SHALL TAKE ACTION APPROPRIATE TO THE EFFECTS OR POTENTIAL EFFECTS OF THE NONCONFORMITY. THE SUPPLIER SHALL IMMEDIATELY NOTIFY CALSPAN SYSTEMS CORPORATION AND SUSPEND DELIVERY UNTIL THE ISSUE IS RESOLVED AND ACCEPTED BY CALSPAN SYSTEMS CORPORATION ENGINEERING AND QUALITY.
6. COMMITMENT TO QUALITY. THE SELLER IS SOLELY RESPONSIBLE FOR THE QUALITY OF THEIR PRODUCTS, INCLUDING ANY FEATURES OR PROCESSES CONTRACTED TO A SUB-TIER SUPPLIER. THE SELLER SHALL ENSURE THE SUB-TIER MEETS ALL OF THE REQUIREMENTS, AS DEFINED IN THE PURCHASE ORDER, AND SHALL FLOW DOWN THE REQUIREMENTS OF THE PO AND ANY OTHER APPLICABLE SPECIFICATIONS WHEN SUBCONTRACTING WORK. THE SELLER SHALL ENSURE THAT ALL INDIVIDUALS PARTICIPATING IN PRODUCT REALIZATION UNDERSTAND THEIR IMPORTANCE AND ROLE IN MEETING BUYER/CUSTOMER REQUIREMENTS.

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### MATERIAL REQUIREMENTS [SUPPLIER]

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| 1000 | MATERIAL TEST REPORTS ARE REQUIRED IN ACCORDANCE WITH THE REFERENCED SPECIFICATIONS. ORIGINAL MILL TEST REPORTS DOCUMENTING ACTUAL CHEMICAL ANALYSIS, MECHANICAL PROPERTIES AND HEAT/LOT NUMBER ARE REQUIRED WITH SHIPMENT. HEAT/LOT NUMBER, MATERIAL TYPE AND TEMPER SHALL BE PHYSICALLY MARKED ON ALL MATERIALS. NO MATERIAL SUBSTITUTIONS ARE PERMITTED WITHOUT THE EXPRESS WRITTEN CONSENT OF THE CALSPAN SYSTEMS CORPORATION BUYER. |
| 1001 | CERTIFICATE OF CONFORMANCE IS REQUIRED.  |
| 1002 | PROVIDE A TEST COUPON FROM PURCHASED HEAT/LOT FOR MECHANICAL TESTING TO BE PERFORMED BY CALSPAN SYSTEMS CORPORATION. COUPON MINIMUM SIZE IS 1" X 1" X 1/4".  |
| 1003 | LIMITED LIFE PRODUCTS SHALL HAVE SHELF LIFE DATA PRINTED ON CONTAINER AND/OR THE CERTIFICATION.  |
| 1004 | NO MIXED HEAT/LOT PER LINE ITEM.   |



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- 1005 RAW MATERIAL PURCHASE ORDERS MUST BE ISSUED TO ISO REGISTERED SUPPLIERS. COPIES OF THE REGISTRATION CERTIFICATES MUST BE SUBMITTED TO CALSPAN SYSTEMS CORPORATION WITH FINAL HARDWARE DELIVERY.

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### OFF THE SHELF HARDWARE REQUIREMENTS [SUPPLIER]

- 2000 SUPPLIER CERTIFICATE OF COMPLIANCE REQUIRED.
- 2002 MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED.
- 2003 LOT TRACEABILITY REQUIRED.
- 2004 MANUFACTURER'S TEST REPORTS REQUIRED.
- 2005 FASTENERS MUST BE OF U.S. MANUFACTURE.

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### SPECIAL PROCESSING [SUBCONTRACTOR]

- 3000 CERTIFICATE OF COMPLIANCE (COC) REQUIRED. COC MUST INDICATE COMPLIANCE FOR EACH INDIVIDUAL REQUIREMENT AND SPECIFICATION AS STATED ON THE DRAWING / PURCHASE ORDER. ALL APPLICABLE DOCUMENTATION MUST BE SUBMITTED WITH DELIVERY
- 3001 HEAT TREAT CERTIFICATE OF COMPLIANCE (COC) REQUIRED. RECORD THE POST HEAT TREAT MATERIAL HARDNESS VALUE ON THE COC.
- 3002 HEAT TREAT CERTIFICATE OF COMPLIANCE (COC) AND FURNACE CHARTS REQUIRED. RECORD THE POST HEAT TREAT MATERIAL HARDNESS VALUE ON THE COC. .
- 3003 HEAT TREAT CERTIFICATE OF COMPLIANCE (COC) REQUIRED. RECORD THE POST HEAT TREAT MATERIAL HARDNESS VALUE ON THE COC. HARDNESS VALUE MUST BE WITHIN THE SPECIFIED RANGE. FURNACE CHARTS THAT IDENTIFY THE HEAT TREATER, TIME OF HEAT TREATMENT, THE HEAT TREAT LOT NUMBER, FURNACE IDENTIFICATION, OPERATION, DATE, QUANTITY, HEAT NUMBERS, AND ITEM DESCRIPTION. IN ADDITION TO THE AUTOGRAPHIC RECORDER RATE (I.E. INCHES/HOUR) SHALL BE ANNOTATED AND THE MATERIAL SHALL BE UNIQUELY RE-IDENTIFIED TO PROVIDE TRACEABILITY TO THE FINAL HEAT TREATMENT AND MECHANICAL PROPERTIES CERTIFIED FOR THE HEAT TREATED MATERIAL.
- 3004 PRIOR TO PERFORMANCE OF WELDING, SUBMIT WELDING PROCEDURE AND WELDER PERFORMANCE QUALIFICATION IN ACCORDANCE WITH REFERENCED SPECIFICATION DOCUMENTS.
- 3005 SUBMIT WELDING PROCEDURE AND WELDER PERFORMANCE QUALIFICATION IN ACCORDANCE WITH REFERENCED SPECIFICATION DOCUMENTS WITH FINAL SHIPMENT.
- 3006 TYPICAL CHEMICAL CERTIFICATION IS REQUIRED FOR ALL WELD FILLER MATERIAL. SUBMIT DOCUMENTATION WITH FINAL SHIPMENT.
- 3007 ACTUAL CHEMICAL AND PHYSICAL CERTIFICATION IS REQUIRED FOR ALL WELD FILLER MATERIAL. SUBMIT DOCUMENTATION WITH FINAL SHIPMENT.
- 3008 PRIOR TO PERFORMANCE OF SPECIAL PROCESS, SUBMIT SPECIAL PROCESS PROCEDURE TO CALSPAN SYSTEMS CORPORATION. PROCEDURE MUST BE IN ACCORDANCE WITH REFERENCED DRAWING/PO SPECIFICATION.
- 3009 SPECIAL PROCESS PROCEDURE MUST BE IN ACCORDANCE WITH REFERENCED DRAWING/PO SPECIFICATION. SUBMIT DOCUMENTATION WITH FINAL SHIPMENT.
- 3010 PERFORM NON DESTRUCTIVE TESTING USING QUALIFIED PERSONNEL PER REFERENCED SPECIFICATIONS, TEST REPORT(S) INCLUDING MAPPING OF ALL RELEVANT INDICATIONS IS REQUIRED WITH SHIPMENT.
- 3011 NDE PERSONNEL QUALIFICATION DOCUMENTS REQUIRED WITH SHIPMENT.




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- 3012 OVEN BRAZE CERTIFICATE OF COMPLIANCE (COC) AND FURNACE CHARTS REQUIRED. RECORD THE POST OVEN BRAZE MATERIAL HARDNESS VALUE ON THE COC. . TYPICAL CHEMICAL CERTIFICATION IS REQUIRED FOR ALL BRAZE FILLER MATERIAL. SUBMIT DOCUMENTATION WITH FINAL SHIPMENT.
- 3013 SHOULD THE SELLER USE SUBCONTRACTORS TO EXECUTE THE TERMS OF THE PURCHASE ORDER, THOSE SUBCONTRACTORS MUST BE APPROVED BY THE BUYER.

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### INSPECTION REQUIREMENTS [SUBCONTRACTOR]

- 4001 PRIOR TO SHIPMENT, FINAL ACCEPTANCE WILL BE PERFORMED BY CALSPAN SYSTEMS CORPORATION QUALITY ASSURANCE AND / OR THE CUSTOMER AT THE SUPPLIER'S FACILITY
- 4002 100% DIMENSIONAL INSPECTION AND DOCUMENTATION IS REQUIRED TO BE PERFORMED BY THE SUPPLIER. INSPECTION REPORTS ARE REQUIRED UPON DELIVERY
- 4003 100% DIMENSIONAL INSPECTION IS REQUIRED TO BE PERFORMED BY THE SUPPLIER. DOCUMENTATION OF DIMENSIONS, KEY CHARACTERISTICS, CRITICAL ITEMS, AND/OR NON-CONFORMANCES ARE REQUIRED ON INSPECTION REPORTS UPON DELIVERY.
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- 4004 100% DIMENSIONAL INSPECTION AND DOCUMENTATION OF THE FIRST ARTICLE IS REQUIRED TO BE PERFORMED BY THE SUPPLIER. INSPECTION REPORTS ARE REQUIRED UPON DELIVERY.
- 4005 FIRST ARTICLE INSPECTION IN COMPLIANCE WITH AS9102 IS REQUIRED TO BE PERFORMED BY THE SUPPLIER. INSPECTION REPORTS ARE REQUIRED UPON DELIVERY.
- 4006 GOVERNMENT SOURCE INSPECTION IS REQUIRED. ALL WORK ON THIS ORDER IS SUBJECT TO INSPECTION AND TEST BY THE GOVERNMENT AT ANY TIME AND PLACE. THE SUPPLIER WILL NOTIFY CALSPAN SYSTEMS CORPORATION FORTY-EIGHT (48) HOURS IN ADVANCE OF THE TIME ARTICLES OR MATERIALS ARE READY FOR INSPECTION OR TEST.
- 4007 CERTIFICATE OF CONFORMANCE (COC) IS REQUIRED. COC MUST INCLUDE A STATEMENT INDICATING THAT ALL MATERIAL CERTIFICATIONS, SPECIAL PROCESS CERTIFICATIONS, AND INSPECTION DOCUMENTATION AS REQUIRED BY THE DRAWINGS, SPECIFICATIONS, AND/OR THE STATEMENT OF WORK WILL BE KEPT ON FILE AND AVAILABLE FOR REVIEW. ANY DEVIATION FROM THE P.O. TECHNICAL REQUIREMENTS MUST BE NOTED ON THE COC.
- 4008 INSPECTION REPORTS REQUIRED.
- 4009 PRIOR TO PERFORMANCE OF WORK, THE SUPPLIER MUST SUBMIT A QUALITY ASSURANCE PLAN TO CALSPAN SYSTEMS CORPORATION FOR APPROVAL.
- 4010 SELLER SHALL CREATE A STATISTICAL PROCESS CONTROL PLAN, STATING THE DETAILS OF THE TECHNIQUES TO BE USED ON BOTH DIMENSIONS AND PROCESSES FOR THE HARDWARE DELIVERED UNDER THIS PO. THE PLAN MUST BE SUBMITTED TO THE BUYER FOR APPROVAL.
- 4011 BUYER SHALL PROVIDE A STATISTICAL PROCESS CONTROL PLAN, STATING THE DETAILS OF THE TECHNIQUES TO BE USED ON BOTH DIMENSIONS AND PROCESSES FOR THE HARDWARE DELIVERED UNDER THIS PO.
- 4012 ALL TRACEABILITY MARKINGS ARE REQUIRED TO BE MAINTAINED THROUGHOUT THE MANUFACTURING / FABRICATION PROCESS.

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### GENERAL

- 7000 THIS ORDER CONTAINS CRITICAL SPACE FLIGHT HARDWARE! HANDLE WITH EXTREME CARE!
- 7001 SUPPLIER MUST HAVE A DOCUMENTED PROCESS WHICH ENSURES THAT THEY CAN TRANSLATE, RECEIVE, AND VALIDATE ALL AUTHORITY DATASETS WITHOUT CHANGE TO DATA INTEGRITY. ALL DERIVATIVE DATASETS MUST BE TRACEABLE TO THE AUTHORITY DATASET.