

CA9

**CA99** 

Not Properly Trimmed

Forging/Casting Defects Non-Specific

#### **Group Supplier Nonconformance Codes**

Revision Changes Added code MD7 G **Defect Description** Code **Assembly - Defects That are Specific to the Assembly Process** AS **Assembly mismatch** AS1 AS2 Bushing defects, seating / flushness / size / material Clearance, details AS3 Damaged AS4 Edge Distance, details, holes AS5 Fastener, rivet defects, seating / gaps / flushness / head shape AS6 Foreign Object - Contamination AS7 Gaps, details AS8 AS9 Incomplete Assembly **AS10** Incorrect Assembly Insulation, missing / incorrect / torn / misapplied **AS11** Leakage AS12 Loose **AS13 AS14** Mislocated assembly details **AS15** Mislocated fabrication features / holes / slots **AS16** Missing detai(s) I or hardware Overlap **AS17** Reversed or opposite **AS18** Sealant, missing / lack of squeeze out / incorrect **AS19** Water entrapment **AS20** Weight, over / under **AS21** Test Failure Other **AS22** AS23 Torque over/under Test Failure Elect ESS AS24 AS25 Test Failure Elect CCA Programming Test Failure Elect CCA Assembly **AS26** Test Failure Elect Bonding **AS27** Test Failure Elect Room Temp ATP AS28 Test Failure Elect S/W Loading **AS29** Test Failure ATP **AS30** Test Failure Leak Test **AS31** Test Failure Break in AS32 **Test Failure Calibration AS33** Test Failure FAT **AS34** Test Failure Leakage AS35 Lock/Safety Wire Problem **AS36 AS37** Component Missing **AS38** Component - Reversed Component - Damaged **AS39** Asseembly Defect Non Specific **AS99 Casting Specific - Defects That are Specific to the Casting Production Process** CA Blowhole CA1 Cracks, surface / internal CA2 Distortion CA3 Gas hole CA4 Inclusion CA5 Insufficient fill CA6 Laps CA7 Porosity, surface / included / internal CA8



**Defect Description** Code Certification and Documentation - Issues Related to Errors that Occur in the Certification or CE **Documentation Process** Incomplete or open supplier operations CE1 No certificate of conformance CE2 No first article documentation CE3 No shipper CE4 Missing test reports or testing documents CE5 Unapproved processor utilized CE6 CE7 Unapproved supplier utilized Incorrect Part Number CE8 Serial Number Duplicated CE9 CE10 Serial Number Incorrect Special Handling Ignored **CE11** CE12 Wrong Part Received Inadequate Process **CE13 Doccumentation Errors CE14 CE15** Missig Stamp or Date **CE16** Configuration Issue **CE99** Error in Cert/Docs Non-Specific **Configuration - Errors that Occur in the Determination of Proper Configuration** CF **Incorrect Configuration** CF1 Obsolete Part CF2 Wrong Part CF3 Incorrect Design CF4 **CF99** Configuration Non-Specific

CO Composites - Defects That are are Specific to the Composite Fabrication Process

**CO1** Adhesive Bond

CO2 Core, damage / mislocation / crushed / condensed

CO3 Cracking, crazing
CO4 Cure, incorrect cycle
CO5 Cut, sanded plys
CO6 Delamination
CO7 Disbond

CO8 Inserts, size / location / missing / damaged / high / low

CO9 Ply, cut / missing / extra / mislocated / overlap / distortion / wrinkles

**CO10** Porosity, internal / surface

CO11 Potting, missing / high / low / voids /

CO12 Resin Starvation
CO13 Voids, internal / surface

CO14 Drilled Hole punch through, delamination

**CO99** Composites Defects Non Specific

DI Dimension - Defects That are Specific to the Dimensional Aspect of Detail Part Inspection

**DI1** Angularity

**DI2** Circularity / roundness

DI3 Cylindricity
DI4 Depth
DI5 Extra
Hole diame

DI6 Hole diameter
DI7 Hole location

**DI8** Length / linear dimension

**DI9** Mislocated

**DI10** Dimension Missing

DI11 Parallelism
DI12 Profile
DI13 Radius

**DI14** Thickness, over / under

**DI15** True position **DI16** Warped, twisted

**DI17** Width



**Defect Description** Code Dimension - Defects That are Specific to the Dimensional Aspect of Detail Part Inspection DI Perpendicularity **DI18** Straightness **DI19** Flatness **DI20** Circular Runout **DI21 Total Runout DI22 DI23** Profile of a Line Profile of a Surface **DI24 DI25** Concentricity Symmetry **DI26** Diameter Oversize **DI27** Diameter Undersize **DI28** Dimension Oversize **DI29 DI30** Dimension Undersize Feature is Mislocated **DI31** Feature Missing **DI32 DI33** Hole is Missing Hole, Extra **DI34** Thread Minor Diameter Oversized **DI35** Thread Minor Diameter Undersized **DI36 DI37** Thread Pitch Diameter Oversized **DI38** Thread Pitch Diameter Undersized Profile All-Around **DI39 DI40** Non-Cleanup Timing **DI41** Stock Removal **DI42** Dimensional Defect Non-Specific **DI99** Electrical - Defects That are Specific to Electrical Components Supplied or Provided as Part of an E **Assembly E1** Conductivity Impedance **E2** Improper electrical bond **E3** Resistance **E4** Short **E**5 Damaged - Other **E6** Solder problem **E7** Solderballs or Splash **E8** Lock/Safety Wire Problem **E9** Component Missing E10 Component - Wrong E11 Component - Reversed E12 E13 Component - Damaged E14 **Ecobond Problem** E15 Terminal problems - poor crimp, etc. Jumper Wires Incorrectly Routed E16 Lifted Solder Pad E17 PCB Damaged E18

Conformal coating issue

Electrical Non Specific

**E19** E99



Codo	Defect Description
Code F	Fabrication - Defects That are Specific to the Detail Part Fabrication Process
F1	Bearings, incorrect installation / binding
F2	Bent
F3	Burrs, holes / trim
F4	Chamfer, missing / size / depth
F5	Counterbore, missing / size / depth
F6	Countersink, missing / size / depth
F7	Cutter chatter marks
F8	Double drill hole(s)
F9	Drill mark(s)
F10	Edge trim
F11	Fabricated angle incorrect
F12	Heat induced discoloration
F13	Hole edge distance, short / long
F14	Hole elongated
F15	Hole mislocated
F16	Hole missing
F17	Hole quantity incorrect
F18	Hole size incorrect
F19	Incomplete fabrication
F20	Inside diameter incorrect
F21	Machining - Milling - Grinding - Turning mis-cut / undercut / gouged/false cut
F22	Misformed/mismatch
F23	Oil Can
F24	Outside diameter incorrect
F25	Radius incorrect / large / small / location
F26	Slot location
F27	Thickness, thick / thin
F28	Threads - diameter / depth / pitch / burrs / torn
F29	Balance
F30	Deburr, Blend, Edge Break
F31	Grind Burns
F32	Improper Oil / protectant
F33	Mutilated
F34	Damaged - Other
F99	Fabrication Non Specific
GS	Gears / Splines
GS1	Backlash
GS2	Curvic Coupling Error
GS3	DOP / DUP Dim. OVer between pins
GS4	Lead Error
GS5	Major Diameter
GS6	Number of Teeth
GS7	Pitch Line Runout
GS8	Root Diameter / Dimension
GS9	Root Radius
GS10	Tooth Profile / Form
GS11	Tooth Spacing
GS12	Damaged - Other
GS99	Gear/Spline Defects Non Specific



Code	Defect Description
	Handling-Packaging-Preservation-Delivery - Defects That are Specific to the Handling, Packaging
н	Preservation & Delivery of Supplied Products
H1	Bent or Broken
H2	Crushed
Н3	Incorrectly delivered quantities
H4	Material out of temperature
H5	Missing Temperature recorders
Н6	No electro discharge protection per requirements
H7	Delivered Quantity Incorrect (Missing, Over, etc.)
H99	Handling Damage Non-Specific
	Identification and Marking - Defects That Specific to the part / Material / Assembly Identification
I	and Marking Process
I1	Identification error
I2	Identification missing
I3	Incorrect markings, marking materials / plates / locations / methods
I4	Missing stamps or Date
M	Material - Defects That are Specific to Supplied Materials
M1	Conductivity
M2	Discoloration
M3	Expired material (Shelf Life)
M4	Hardness not to requirement
M5	Incorrect grain direction
M6	Incorrect material
M7	Length
M8	Over temperature
М9	Porosity
M10	Test failure
M11	Thickness
M12	Traceability
M13	Width
M14	Wrong material
M15	Part Destroyed for Test
M16	Old Stock
MD	Machining - Defects That are Specific to Supplied Machine Parts
MD1	Broken Tap
MD2	Broken Tool
MD3	Extra Hole(s)/Feature(s)
MD4	Gouged
MD5	Threads Damaged
MD6	Hole/Feature Drilled Too Deep
MD7	Laser Strike
MD99	Machine Damage Non-Specific
MEC	Triumph Aerostructures MES Defect Codes
MES	[assy errors]ADJUSTMENT ERROR
AB	[assy errors]ALIGNMENT ERROR
AC	[assy errors]ASSEMBLY INCOMPLETE
AD	
CK	[assy errors]CLOCKING ERROR
CP	[assy errors]COMPONENT MALFUNCTION
IP	[assy errors]INCORRECT PART INSTALLED



**Code** Defect Description

MES Triumph Aerostructures MES Defect Codes

IS [assy errors]INCORRECTLY INSTALLED PART (OTHER THAN A FASTENER)

PM [assy errors]PART MISLOCATED
PX [assy errors]PART EXTRA/MISSING

WT [assy errors]WELD DEFECT
BP [bonding]BACK PRESSURE
CC [bonding]CORE CRUSHED
CF [bonding]CURE CYCLE FAILURE
CG [bonding]CORE MIGRATION

CU [bonding]CUT PLIES

DO [bonding]DELAMINATION

EH [bonding]EXCESSIVE HEAT

FB [bonding]FIBER BREAKOUT

GI [bonding]GLUE LINE VOID

HC [bonding]HEATUP/COOLDOWN RATE

IV [bonding]INTERNAL VOIDS

IW [bonding]INCORRECT WARP/FILL/PLY ORIENTATION NP [bonding]INCORRECT NUMBER OR MISLOCATED PLIES

[bonding]NODE SEPARATION NS [bonding]POTTING ERROR [bonding]POROSITY PG PO [bonding]RESIN RICH AREA **RR** [bonding]RESIN STARVED AREA RS [bonding]SPLICING DEFECTS SD [bonding]SANDED THRU PLIES SP [bonding]VACUUM LOSS VL [bondina]WRINKLED WN

BK [damage]BROKEN OR MUTILATED
BS [damage]BLANKING SHEARS OR TEARS

CM [damage]CHEM-MILL DEFECT
CZ [damage]CORROSION

DR [damage]DRILL STARTS/ DRILL RUNS

EX [damage]EXCESSIVE BLENDING

FC [damage]FALSE CUT

FY [damage]FRAYED/ABRADED
GR [damage]GRINDING DEFECT
PB [damage]BENT/DENTED
PK [damage]TORN PLIES

**PS** [damage]SCRATCHED/SCORED/BURRS

PU [damage]NICKS OR GOUGES

SC [damage]SURFACE CRACK OR CRACKS
TO [damage]TOOL SET OR CHATTER MARKS

**AK** [dimensional]ANGULARITY ERROR

CH [dimensional]CHORDAL HEIGHT / FLANGE ANGLE

CI [dimensional]CONTOUR IS INCORRECT
CQ [dimensional]CONCENTRICITY ERROR
FL [dimensional]FLATNESS BOW OR TWIST

**JO** [dimensional]JOGGLE ERROR

LW [dimensional]LENGTH OR WIDTH IN ERROR

MF [dimensional]MINIMUM FLAT VIOLATION

OS [dimensional]OVERSIZE THICKNESS

PF [dimensional]PROFILE DEFICIENCY



**Code** Defect Description

MES Triumph Aerostructures MES Defect Codes

RE [dimensional]RADIUS IN ERROR
TE [dimensional]THREADING ERROR
TP [dimensional]TRIM PROBLEM
UT [dimensional]UNDERSIZE THICKNESS

**E4** [electrical]WIRING FOULING

**EA** [electrical]ELECTRICAL ATTRIBUTE ERROR

WE [electrical]WIRING ERROR

DF [fastener]DAMAGED FASTENER

ET [fastener]MISSING FASTENERS

FF [fastener]FASTENER FLUSHNESS

FH [fastener]FASTENER HEIGHT INCORRECT

FI [fastener]INCORRECT FASTENER
LH [fastener]LOOSE HARDWARE

**OF** [fastener]OPEN HEAD/OPEN SHANK FASTENER

OT [fastener]TORQUE OVER OR UNDER AO [fit]AERO GAP, STEP OR WAVE

BD [fit]BINDING
CN [fit]CANS (OIL CAN)

**GP** [fit]GAP, STEP OR WAVE (USE AO FOR AERO SURFACE)

IN [fit]INTERFERENCE/RIDING CONDITION

PD [fit]PRELOAD

CW [hole prep]COUNTERSINK OR SPOTFACE ERROR

**DD** [hole prep]DOUBLE DRILLED HOLES

EO [hole prep]EXTRA HOLES

HS [hole prep]HOLE SPLINTERED

MH [hole prep]MISLOCATED HOLES

OH [hole prep]OVERSIZE HOLES

OM [hole prep]OMITTED HOLES, SLOTS OR CUTOUTS

PH [hole prep]PILOT HOLE OR TOOL HOLE NOT COORDINATED

SH [hole prep]SHORT EDGE DISTANCE/ MARGIN

UH [hole prep]UNDERSIZE HOLES
CT [misc]CONTAMINATION

FG [misc]FOREIGN OBJECT DEBRIS
ID [misc]IDENTIFICATION ERROR
LB [misc]INCORRECT WEIGHT

**LK** [misc]LEAK

PN [misc]PACKAGING NOT ACCEPTABLE
TT [misc]TEST FAILURE/ NO TEST PANEL
AF [ndi]ACOUSTIC TEST FAILURE

HD [ndi]HARDNESS/CONDUCTIVITY ERROR
MZ [ndi]MAGNAFLUX/ZYGLO INDICATION

Indi]ULTRASONIC REJECTION (USE ONLY WHEN NO OTHER CODE SUCH AS FG, CT, DO, IV, PO, ETC. APPLIES)

XR [ndi]X-RAY REJECTION (USE ONLY WHEN NO OTHER CODE SUCH AS FG, CT, DO, IV, PO, ETC. APPLIES)

**DO** [process]DEVIATION FROM PLANNED SEQUENCE

MI [process]MATERIAL INCORRECT
PP [process]PAPERWORK ERROR



**Defect Description** Code **Triumph Aerostructures MES Defect Codes** MES [process]PROCESS SPEC VIOLATION PV [process]SEALANT APPLICATION ERROR SA [process]VOID IN SEAL VS [surface]APPEARANCE UNACCEPTABLE ΑU [surface]CONVEX CONDITION (BUMP OR PROTRUSION) CV [surface]COATING THICKNESS INCORRECT CX DΡ [surface]DEPRESSION FΝ [surface]FINISH DISCOLORED [surface]INCORRECT FINISH APPLIED ΙF [surface]MARKOFF (tool impression) MO [surface]PLATING ERROR PΕ [surface]SURFACE ROUGHNESS ERROR (NOT FOR USE WHERE SKIN QUALITY IS REQUIRED) SR [surface]SURFACE BLISTER/RAISED AREA SU Non Destructive Testing- Defects That are Specific to Parts or Materials that Received Non N **Destructive Testing** N1 Inclusion N2 **Incomplete Penetration N3** Mag Particle Non Fusion **N4 N5** Penatrant N6 Porosity Inline Porosity Round **N7 N8** Radiographic N9 Surface Indication **N10** Ultrasonic Non-Destructive Testing Non-Specific **N99 Other** 0 01 Other Multiple Errors 02 Supplier Recall 03 Processing - Defects That are Specific to Parts or Materials that Receive Processing P Alpha Case / Case Depth **P1** Anodize defects **P2** Brazing defects Р3 Ρ4 Chem-mill burns Coating blisters **P5** Coating crazed **P6 P7** Coating or Plating adhesion **P8** Coating orange peel Р9 Coating overspray P10 Coating peeling Coating runs P11 Coating, missing / flaking / thickness / uneven P12 Heat treating, incorrect / missing / not to requirements P13 NDT, incomplete / incorrect / missing / indications P14 Plating - missing / flaking / thickness / uneven / cracks / burns / melts P15 Surface treatment defects – Shot peen / non-machining surface inhancements P16 P17 Welding defects - C160cracks / porosity / lack of fusion / undercut / arc strike / start / stop

Contamination

Foreign Material

Wrong Material/Process

P18

P19 P20



Code	Defect Description
P21	Incorrectly Masked
P22	Not Properly Etched
P23	Over Etched
P24	Pitted Surface
P25	Scratched/Chipped Coating
P26	Wrong Color
P27	White Layer Removal
P28	Cleaning Process
P29	Incomplete Processing
P99	Process Defects Non-Specific
S	Surface - Defects That are Specific to a Part or Material Surface or Finish
S1	Bent, bowed, curved, contour
S2	Cracked material
<b>S3</b>	Creased, not cracked
<b>S4</b>	Cut, Scratched, nicked, gouged, dinged or chipped
<b>S5</b>	Flatness not to requirements
<b>S6</b>	Forming marks on surface
<b>S7</b>	Puctured, through surface
<b>S8</b>	Surface finishing / Smoothness not to requirements
S9	Surface corrosion, rust / pitting / oxidation / discoloration
S10	Surface dent
S11	Surface waviness
S12	Surface wrinkles
S13	Tool marks in surface
S14	NDT, incomplete / incorrect / missing / indications