

(A) GENERAL:

(A.1) PRATT & WHITNEY (P&W) IS THE END USER.

(A.2) DURING PERFORMANCE OF THIS ORDER, YOUR QUALITY CONTROL SYSTEMS AND MANUFACTURING PROCESS ARE SUBJECT TO REVIEW, VERIFICATION, ANALYSIS, AND APPROVAL BY TCT, AND AUTHORIZED VOLVO AND FAA REPRESENTATIVES.

(A.3) TCT, VOLVO, AND THE FAA SHALL BE AFFORDED THE RIGHT TO VERIFY AT THE SUPPLIER'S PREMISES ANY INFORMATION RELATING TO THE MANUFACTURE, PROCUREMENT, TESTING, AND/OR INSPECTION OF PRODUCT REQUIRED FOR THE PERFORMANCE OF THIS ORDER.

(A.4) SUPPLIER IS RESPONSIBLE FOR COMPLYING WITH ALL OF THE REQUIREMENTS OF THIS PURCHASE ORDER INCLUDING PROVIDING COMPLETE AND PROPER DOCUMENTATION WITH EACH SHIPMENT OF PRODUCT. IF THE REQUIRED DOCUMENTATION IS INCOMPLETE OR INCORRECT, THE SUPPLIER'S ACCOUNT MAY BE DEBITED \$200.00 PER OCCURRENCE.

(A.5) SUPPLIER IS SUBJECT TO ALL TERMS AND CONDITIONS SPECIFIED ON THE REVERSE SIDE OF THIS PURCHASE ORDER.

(A.6) THE INFORMATION DISCLOSED HEREIN IS PROPRIETARY WITH TURBOCOMBUSTOR TECHNOLOGY, INC (TCT), VOLVO, AND/OR P&W, AND SHALL NOT BE DUPLICATED, USED, OR DISCLOSED TO REPRODUCE ARTICLES OR SUBJECT MATTER COVERED THEREIN WITHOUT WRITTEN PERMISSION OF TCT. BY ACCEPTANCE OF THIS P.O., THE SUPPLIER AGREES TO AFFIX THIS STATEMENT TO ANY DUPLICATION THEREOF IN WHOLE OR IN PART.

(A.7) UNLESS OTHERWISE STATED, ALL QUANTITIES STATED HEREIN ARE ESTIMATED QUANTITIES ONLY. TCT'S ACTUAL REQUIREMENTS MAY IN FACT BE LESS THAN THE AMOUNTS LISTED AS "MAXIMUM" OR "TOTAL". THE FACT THAT

NO RELEASES ARE MADE, OR THAT THE RELEASES MADE ARE LESS THAN THE ESTIMATED QUANTITIES, WILL NOT SERVE AS A BASIS FOR AN EQUITABLE ADJUSTMENT UNDER THE "CHANGE" CLAUSE OR ANY TERMINATION CLAUSE. TCT MAKES NO GUARANTEE, WARRANTY, OR ANY OTHER REPRESENTATION THAT ANY OF THE QUANTITIES STATED IN THIS AGREEMENT WILL IN FACT BE REQUIRED. ANY COST SELLER INCURS OUTSIDE THE AGREED UPON LEAD TIME IN ANTICIPATION OF RELEASED REQUIREMENTS WILL BE SOLELY AT THE SELLER'S OWN RISK AND TCT ASSUMES NO LIABILITY THEREFOR.

(A.8) ANY EXPEDITED DELIVERY COSTS (E.G. AIR FREIGHT) CAUSED BY NON-ADHERENCE TO THE PURCHASE ORDER SCHEDULE SHALL BE THE RESPONSIBILITY OF THE SUPPLIER.

(A.9) UNLESS OTHERWISE APPROVED IN WRITING BY TCT, PRODUCT SHALL NOT BE DELIVERED EARLIER THAN TEN (10) DAYS PRIOR TO THE REQUIRED DELIVERY DATE SPECIFIED ON THE PURCHASE ORDER. AT TCT'S DISCRETION, THIS PRODUCT MAY BE RETURNED AT THE SUPPLIER'S EXPENSE.

(B) QUALITY SYSTEMS:

(B.1) SUPPLIER MUST BE CERTIFIED TO ISO9001.

(B.2) SUPPLIER'S QUALITY SYSTEM MUST CONFORM TO SQAR 210.

(B.3) ALL MATERIALS AND PROCESSES SHALL BE CONTROLLED IN ACCORDANCE WITH THE APPLICABLE P&W MCL-LCS REQUIREMENTS. APPROVED MCL-LCS

SUPPLIERS ARE IDENTIFIED IN P&W MCL APPENDIX 36. WHEN USED, APPROVED NDT SOURCES MUST BE LISTED IN MCL APPENDIX A, APPROVED COMMERCIAL LABS

MUST BE LISTED IN APPENDIX 56, AND APPROVED SPECIAL PROCESS SUPPLIERS

MUST BE MCL APPROVED AND LISTED IN TH P&W MCL SQL.

(B-4) SUPPLIER IS RESPONSIBLE FOR FLOWING DOWN AND FOR ENSURING ADHERENCE TO THE REQUIREMENTS OF THIS PURCHASE ORDER BY ALL SUB-TIERS.

(B.5) NADCAP APPROVAL IS REQUIRED FOR THE PERFORMANCE OF ALL SPECIAL PROCESSES AS IDENTIFIED IN

SQAR 210.

(B.6) SUPPLIER WILL RETAIN ALL RECORDS IN ACCORDANCE WITH SQAR 210 (UP TO 40 YEARS, DEPENDING ON THE RECORD TYPE), AND WILL MAKE THESE RECORDS AVAILABLE TO TCT AND/OR VOLVO UPON REQUEST WITHIN 24 HOURS.

(B.7) AS REQUIRED TO VERIFY PRODUCTS AND PROCESSES, SUPPLIER SHALL USE AND MAINTAIN CALIBRATED INSPECTION AND TEST EQUIPMENT IN ACCORDANCE WITH ANSI/NCSL Z540.1, ISO 10012, AND ISO/IEC 17025, AS APPLICABLE.

(C) SOURCE SUBSTANTIATION AND FIRST ARTICLE REQUIREMENTS:

(C.1) SPECIAL PROCESSES SHALL NOT BE PERFORMED WITHOUT WRITTEN AUTHORIZATION (VIA BLUEPRINT, P.O., OR SIMILAR). SOURCE SUBSTANTIATION

/ APPROVAL IS REQUIRED FOR ALL SPECIAL PROCESSES IN ACCORDANCE WITH SQAR 310 AND PWA 300. NO CHANGES MAY BE MADE TO APPROVED SOURCES OR PROCESSES WITHOUT TCT AND/OR VOLVO APPROVAL, AS APPLICABLE.

(C.2) N/A

(C.3) UNLESS OTHERWISE SPECIFIED ON THE PURCHASE ORDER, A FIRST ARTICLE SHALL BE MANUFACTURED, AND INSPECTION RESULTS SHALL BE

DOCUMENTED IN ACCORDANCE WITH SQAR 300 (OR SQAR 302, IF P&W IS THE DESIGN AUTHORITY) AND AS9102. BOTH THE PRODUCT AND INSPECTION RESULTS SHALL BE SUBMITTED TO AND APPROVED BY TCT ENGINEERING (AND/OR VOLVO IF APPLICABLE) PRIOR TO CONTINUING PRODUCTION.

(D) PRODUCT REQUIREMENTS:

(D.1) UNLESS OTHERWISE APPROVED IN WRITING BY TCT OR VOLVO, 100% INSPECTION TO THE BLUEPRINT (B/P) AND/OR P.O. REQUIREMENTS SHALL BE PERFORMED ON ALL PRODUCT PRIOR TO SHIPMENT. ALL SAMPLING PLANS SUBMITTED FOR APPROVAL SHALL BE STATISTICALLY VALIDATED USING A SAMPLE SIZE OF AT LEAST 25. ONCE APPROVED, SPC METHODS SHALL CONTINUE TO BE USED TO ENSURE THE PROCESS CAPABILITY (CPK) IS MAINTAINED AT OR ABOVE A 1.3.

(D.2) HEAT NUMBER / LOT TRACEABILITY SHALL BE MAINTAINED FOR ALL MATERIALS / PRODUCT DURING ALL STAGES OF PROCESSING THROUGH SHIPMENT TO TCT.

(D.3) UNLESS OTHERWISE SPECIFIED, RAW MATERIAL SHALL BE LINE MARKED WITH THE MATERIAL TYPE AND INDUSTRY SPECIFICATION, SIZE, MILL NAME, AND HEAT NUMBER. PROCESSED MATERIALS SUCH AS CASTINGS, FORGINGS, AND BLANKS SHALL BE INK MARKED WITH THE PART NUMBER AND HEAT NUMBER IF NOT OTHERWISE SPECIFIED ON THE P.O., B/P, OR OTHER REFERENCED DOCUMENTS.

(D.4) IF RAW MATERIAL INCORPORATED INTO THE PRODUCT IS NOT CERTIFIED IN ACCORDANCE WITH MCL-LCS REQUIREMENTS, A SAMPLE OF MATERIAL OF THE SAME HEAT CODE AS THE PRODUCT SHALL BE PROVIDED FREE OF CHARGE TO TCT FOR INDEPENDENT VERIFICATION OF RAW MATERIAL PROPERTIES. THE SAMPLE SIZE SHALL BE 6" X 6" FOR SHEET, STRIP, OR PLATE; 6" LENGTH FOR WIRE, TUBE, OR BAR; OR AS OTHERWISE AGREED UPON FOR OTHER PRODUCT TYPES. THIS REQUIREMENT WILL BE IMPOSED BY MATERIAL SPECIFICATION AT A MAXIMUM FREQUENCY OF ANNUALLY OR WITH EACH SHIPMENT, WHICHEVER IS LESS. (GROUPING OF MULTIPLE PRODUCTS AND/OR MULTIPLE P.O.'S BY COMMON MATERIAL SPECIFICATIONS IS ACCEPTABLE.)

(D.5) ANY SPECIALTY METALS INCORPORATED IN ARTICLES DELIVERED UNDER THIS PO SHALL BE MELTED IN THE UNITED STATES OR OTHER QUALIFYING COUNTRY IN ACCORDANCE WITH DFARS CLAUSE 252.225-7014, "PREFERENCE FOR DOMESTIC SPECIALTY METALS", AND DFARS CLAUSE 225.872-1, "CONTRACTING WITH QUALIFYING COUNTRY SOURCES - GENERAL".

(E) SHIPPING REQUIREMENTS:

(E.1) PACKAGING SHALL BE ADEQUATE TO PREVENT DAMAGE AS WELL AS EXCESSIVE SHIFTING DURING TRANSIT.

(E.2) ALL CONTAINERS OVER 50 LB GROSS WEIGHT SHALL BE PLACED ON A PALLET TO ENABLE MECHANICAL HANDLING.

(E.3) PAPER, CARDBOARD, OR OTHER SUITABLE MEANS SHALL BE USED TO

PREVENT METAL-TO-METAL CONTACT BETWEEN ALL MACHINED/FINISHED SURFACES OF PRODUCT.

(E.4) PACKAGING SHALL BE CLEARLY IDENTIFIED WITH THE FOLLOWING INFORMATION: SUPPLIER NAME, P.O. NUMBER, PART NUMBER OR PRODUCT DESCRIPTION, BATCH NUMBER OR HEAT NUMBER, AND SHELF LIFE (IF APPLICABLE).

(F) DOCUMENTATION REQUIREMENTS:

(F.1) PACKING SLIP, WHICH INCLUDES SUPPLIER'S INFORMATION, THE PART NUMBER AND QUANTITY BEING SHIPPED, THE PACKING SLIP NUMBER, AND THE P.O. NUMBER (INCLUDING LINE AND RELEASE NUMBERS).

(F.2) CERTIFICATE OF CONFORMANCE, WHICH INCLUDES SUPPLIER'S INFORMATION, THE PART NUMBER AND QUANTITY BEING SHIPPED, HEAT NUMBER, THE PACKING SLIP NUMBER, REFERENCE TO DOCUMENTATION AUTHORIZING SHIPMENT OF NONCONFORMING PRODUCT (IF APPLICABLE), AND THE P.O. NUMBER.

(F.3) UNALTERED PRODUCING MILL CERTIFICATION FROM A P&W APPROVED TESTING LAB, INCLUDING RAW MATERIAL TESTING RESULTS AND REFERENCES TO MATERIAL SPECIFICATIONS AS REQUIRED BY P.O. OR B/P AND TRACEABLE TO EACH HEAT NUMBER, SHALL BE INCLUDED WITH EACH SHIPMENT.

(F.4) MATERIAL SAFETY DATA SHEET (MSDS) - ONLY REQUIRED WITH THE INITIAL SHIPMENT ON THIS P.O.

(F.5) DOCUMENTATION FROM TCT AUTHORIZING SHIPMENT OF NONCONFORMING PRODUCT (IF APPLICABLE), WHICH REFERENCES THE P.O. NUMBER, PART NUMBER AND QUANTITY AUTHORIZED FOR SHIPMENT.

(F.6) PRATT & WHITNEY-SPECIFIC REQUIREMENT: CERTIFY TO MCL MANUAL SECTION F-17. IN ADDITION, TEST AND CERTIFY TO THE FOLLOWING

SPECIFICATIONS AS APPLICABLE FOR NON-ROTOR APPLICATIONS:

-BAR, ROD, TUBE, PLATE, SHEET, STRIP, WIRE: F-14, E-25 AND TO THE FOLLOWING MATERIAL SPECIFIC REQUIREMENTS (THIS LIST IS FOR REFERENCE, AND DOES NOT WAIVE ANY ADDITIONAL REQUIREMENTS CONTAINED WITHIN F-14):

-INCO 718 SHEET/STRIP: TEST AND CERTIFY TO E-44.

-WASPALLOY: TEST AND CERTIFY TO E-39.

-BRAZE/WELD WIRE: TEST AND CERTIFY TO F-53.

-FORGINGS: F-4, F-65

-CASTINGS: F-11

(F.7) N/A.

(G) NONCONFORMING PRODUCT:

(G.1) IF TCT ENGINEERING HAS AGREED IN WRITING (PRIOR TO SHIPMENT) TO ACCEPT NONCONFORMING PRODUCT IN ITS CURRENT CONDITION, THE SUPPLIER SHALL SUPPLY A SEPARATE CERTIFICATE OF CONFORMANCE FOR THE NONCONFORMING PRODUCT, REFERENCING THE P.O. NUMBER, PART NUMBER, QUANTITY, MEANS OF TRACEABILITY, ETC. THE DOCUMENT SHALL ALSO STATE THAT THE PRODUCT DOES NOT FULLY CONFORM TO THE PURCHASE ORDER REQUIREMENTS AND SHALL IDENTIFY AND TAKE EXCEPTION TO THE SPECIFIC NONCONFORMANCES IDENTIFIED. SUPPLIER SHALL ALSO INCLUDE DOCUMENTATION FROM TCT AUTHORIZING ITS SHIPMENT.

(G.2) IF PRODUCT IS FOUND TO BE NONCONFORMING UPON RECEIPT BY TCT (AND WITHOUT PRIOR NOTIFICATION OF THE NONCONFORMANCE BY THE SUPPLIER AND SHIPMENT AUTHORIZATION BY TCT), AND IS DEEMED BY TCT ENGINEERING TO BE REWORKABLE TO A USABLE CONDITION, SUPPLIER MAY BE HELD RESPONSIBLE FOR ALL COSTS INCURRED BY TCT ASSOCIATED WITH REWORKING THE PRODUCT, UP TO

ITS ORIGINAL PURCHASE PRICE.

(G.3) WHEN SHIPPING TO TCT, NONCONFORMING PRODUCT SHALL BE PHYSICALLY IDENTIFIED USING A TEMPORARY METHOD OF IDENTIFICATION (PREFERABLY A RED TAG). NONCONFORMING PRODUCT, WHEN SHIPPED WITH CONFORMING PRODUCT, SHALL BE SEGREGATED IN SEPARATE BAGS, BOXES, OR OTHER APPROPRIATE PACKAGING. THE PACKING SLIP SHALL IDENTIFY THE NONCONFORMING PRODUCT (QUANTITY AND IDENTIFICATION/TRACEABILITY) SEPARATELY FROM THE CONFORMING PRODUCT.

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