

# PURCHASE ORDER SPECIFICATIONS

## QC TEXT CODES

TMC-TXT REV 26 (19-0138) – 4/3/2019

**A1 EVIDENCE OF QUALITY REQUIREMENTS FOR PURCHASE ORDER--** Evidence of quality requirements is invoked on this purchase order. In the event a term cannot be met, notify CIRCOR Monroe, NC buyer immediately.

**A2 GOVERNMENT SOURCE INSPECTION--** Government inspection is required prior to shipment from your plant. Upon receipt of the order, promptly notify and furnish a copy of the purchase order to the Government Representative who normally services your plant so that appropriate planning for Government inspection can be accomplished.

**A3 CIRCOR MONROE, NC SOURCE INSPECTION--** All work performed under this order requires CIRCOR Monroe, NC inspection and/or test verification at the supplier's facility. Notify CIRCOR Monroe, NC buyer at least ten days in advance of the item being ready for test and final source inspection.

**A4 MATERIAL IDENTIFICATION--** All purchased items must be identified to the CIRCOR Monroe, NC part number and purchase order number. Raw material may be identified via heat number, cast date, or other standard industry practice in place of the purchase order number. When markings are required on material and equipment using impact die stamps, only low-stress, radius die stamps shall be used. The use of high-stress die stamps is strictly prohibited. Mechanical seals must be identified with the date of manufacture.

**A5 DOD ORDER-- A5 DOD ORDER--**The item being purchased on this purchase order are for a government contract which carries a DPAS rating. Unless otherwise indicated on this purchase order, the DPAS rating DO-A3 applies. Additional information regarding the DPAS rating can be obtained at <https://www.dcms.mil/DPAS/>.

The supplier's quality program shall comply with the International Organization for Standardization (ISO) 9001, or a "tailored" program meeting the following ISO 9001:2015 paragraphs:

- o 7.5, Document Control: Limited to inspection and testing as well as applicable drawings, specifications and instructions as required by the Purchase Order.
- o 8.4.1 Purchasing 8.4.1 Control of externally provided processes, products and services
- o 8.5.3, Customer-Supplied Product.
- o 8.5.2, Product Identification & Traceability o 8.6, Inspection and Testing
- o 7.1.5, Inspection, Measuring and Test Equipment
- o 10.2, Control of Non-Conforming Product, Corrective and Preventative Action. Preventative action to apply to product only.
- o 7.5, Documented Information
- o in the event of a conflict / dispute CIRCOR's customer's contract or purchase order takes precedence.

(The ISO 9001 Standard can be ordered from the International Organization of Standardization (ISO) at <https://www.iso.org/>)

In the event of a conflict / dispute CIRCOR Monroe, NC's customer's contract or purchase order takes precedence.

If we do not have a copy of your current Quality Manual, you are requested to forward one for our review. Suppliers maintaining quality programs certified by independent registrars to ISO 9001

can forward a copy of their current certificate in lieu of their Quality Manual. Your place of business may be surveyed to evaluate the adequacy of your quality system, to verify the conformance of the item(s) and services to the purchase order at any location or at any stage of development or manufacture if deemed necessary by CIRCOR Monroe, NC, it's customer and/or the Government. Questions concerning this requirement should be directed to CIRCOR Monroe, NC Quality Manager.

This order is placed under a United States Contract or a subcontract under a United States Government Contract. The conditions per attachment (A) are applicable.

The following restrictions shall apply to Seller and Seller's subcontractors. Accordingly, Seller shall insert the following clauses in all subcontracts awarded by Seller under this Order:

- i. MERCURY EXCLUSION. Mercury or mercury containing compounds shall not be intentionally added or come in direct contact with hardware or supplies furnished under this Order.
- ii. POLYCHLORINATED BIPHENYLS PROHIBITION. Seller shall not employ equipment or use material that is known or suspected of containing polychlorinated biphenyls.
- iii. PROHIBITION OF YELLOW WRAPPINGS OR PROTECTION DEVICES. Seller shall not use yellow wrapping material or attached yellow protection devices such as caps or plugs.
- iv. BRASS AND COPPER BLACK OXIDE COATED THREADED FASTENER PROHIBITION. Seller shall not use brass or copper black oxide coated threaded fasteners when installing or replacing threaded fasteners in the accomplishment of any work required by this Order.

**A6 PRODUCT NON-CONFORMANCE--** Items, products, or materials not conforming to requirements of this purchase order/subcontract, drawing, specification test, etc., shall not be shipped to CIRCOR Monroe, NC without prior approval of CIRCOR Monroe, NC Quality Assurance. Request approval for shipment through the CIRCOR Monroe, NC buyer. Failure to comply can result in return of the shipment at the supplier's expense.

**A7 TRACEABILITY--** All items furnished on this purchase order shall have documentation on file for a period of seven years after date of delivery to permit traceability from the delivered item back through its manufacture and inspection to the procurement records on its constituent parts and materials. These records shall be sufficient to prove conformance to all applicable specifications and drawings and shall provide means for identifying all like items.

**A8 MERCURY FREE CONTAMINATION CLAUSE--** Mercury Free Certification: A Certificate of Compliance stating that materials being supplied are free of mercury contamination is required with each shipment to CIRCOR Monroe, NC. This requirement must be passed along to all sub-tier suppliers. Distributors are required to file an annual certification stating compliance with the mercury free clause or you must submit a certificate of compliance with each individual shipment. Questions concerning this requirement should be directed to CIRCOR Monroe, NC quality manager.

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**A9 WARNING--** All test reports supplied in fulfillment of this order shall be in the form of reports issued by the organization performing the tests or exact copies thereof. If data is transcribed to another organization's form due to computerization, the organization performing all original tests must be identified and material supplied must be traceable to original heat number, cast date, serial number, etc. The supplier shall allow CIRCOR Monroe, NC personnel to audit records at the supplier's facility substantiating the transcribed data. If the actual data from the test facility is requested, it shall be supplied within 48 hours. Test report copies shall be clear, legible, and of first-rate quality. All test reports/certificates must indicate our purchase order and item number(s) of the hardware item(s) to which they apply and are to be dated and signed by an authorized company representative. The signature of the company representative should be handwritten. In cases where handwritten is impracticable, a mechanically reproduced signature (e.g., printed, stamped, typewritten, engraved, photographed/lithographed, or generated by computer) is acceptable where there is present an intent to authenticate the document. Provision of test reports / certificates so signed shall be considered evidence of your intent to authenticate the documents. These test reports/certificates are to be mailed with each shipment of the material.

### Corrections to Documents:

- Corrections to official records shall be made by drawing a single line through the incorrect entry and must be initialed and dated in permanent ink. Corrections to official records should be made by the person who made the original entry, a supervisor or a person assigned by the supervisor. The original entry must remain legible. Erasure or other obliteration of information on official records is prohibited.
- When additional information is added it shall be initialed and dated.
- When a document is retyped, in portion or completely, to correct or add information, it shall be identified as a corrected copy and all changes shall be identified (e.g.\*). The document shall be resigned and dated.

**Note:** Test reports/certificates are essential for the acceptance of material and must be received for the hardware items to which they apply. Your invoice will not be honored, nor payment made until the required documents are received.

**B1 ORDER ATTACHMENTS--** This order contains attached specification sheets that are an integral part of the order. Refer to basic purchase order for identification of attachments.

**B2 SPECIAL SHIPMENT--** Material ordered on this purchase order is to be shipped directly to our customer. Specific instructions are contained in the basic purchase order. A signed copy of the truckers Bill-of-Lading or other proof-of- shipment must accompany invoice to avoid delays in payment.

**B3 SUBCONTRACTING OPERATIONS--** Material has been supplied to you to complete operations or processes as outlined on the attached drawings, routes, and Engineering Specifications. Advise CIRCOR Monroe, NC buyer of unit price prior to shipment and invoicing. Material was sent to you on CIRCOR Monroe, NC's Shipper #.

**B4 MIL-STD-278/TP278 & MIL-STD-271/TP271 WELD & NDT--** MIL-STD-278 or NAVSEA TECH. PUB. S9074-AR-GIB-010/278 and MIL-STD-271 or NAVSEA TECH. PUB. T9074-AS-GIB-010/271 apply to this purchase order. All weld procedures, procedure qualification records, and NDT procedures shall be approved by CIRCOR Monroe, NC prior to proceeding with any welding or NDT on material specified on this purchase order. A certificate must also be provided stating that all required RT, MT, PT, or VT examinations have been performed in accordance with an approved test procedure and that the material is acceptable. This certificate shall also state:

1. Type of test(s) and coverage(s).
2. Applicable specification(s).
3. Acceptance standard and level.
4. The name of the company that actually performed the testing, and the title, number, and revision of the procedure(s) to which the testing was performed.
5. That all non-destructive test personnel are qualified to MIL-STD-271 and/or NAVSEA TECH. PUB. T9074-AS-GIB-010/271, as applicable.

Non-compliance will be cause for rejection and return of material at supplier's expense.

**B5 ELASTOMER CURE DATE REQUIREMENTS--** All parts that are entirely made from or contain elastomeric material(s), and that are designed to contain pressurized fluids (e.g., O-rings, lip seals, etc.) shall have cure dates within eight quarters of the supplier's ship date. In addition, these parts and/or their containers shall be marked with the cure date (quarter/year).

### **B6 SPECIFIC COMPLIANCE FOR SPECIALLY MANUFACTURED ITEMS**

C.O.C. -- "Specially manufactured items" are those made or purchased specifically for CIRCOR Monroe, NC. The supplier may submit, at its option, its own Certificate of Conformance.

### **B7 SPECIFIC COMPLIANCE FOR OTS (Off-the-Shelf) ITEMS FORM /C.O.C--**

"OTS items" are those stocked by a distributor or items produced and placed in stock by a manufacturer or contractor before receiving orders of contracts for their sale. The supplier may submit, at its option, its own Certificate of Conformance (COC).

**B8 ASME / AWS WELD & NDT--** All weld procedures, procedure qualification records and NDT procedures shall be approved by CIRCOR Monroe, NC prior to proceeding with any welding on material specified on this purchase order. For pressure containing fabrications and repairs, weld procedures shall be written and qualified to the requirements of ASME Section IX and NDT procedures shall be in accordance with ASME Section V. For non-pressure containing fabrications and repairs, weld procedures shall be written and qualified to the requirements of ASME Section IX or AWS D1.1. For special repairs to castings, weld maps including weld repair procedure, pre-heat/post-weld heat treatments, NDT procedure and results shall be forwarded with each shipment. NDT personnel shall be qualified to ASNT Recommended Practice TC-1A, as applicable.

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**B9 EB SC-10-36--** Plating of alloy steel socket head cap screws shall be processed by baking at 375° Fahrenheit, ± 25° Fahrenheit, for a minimum of 23 hours, within 1 hour of removal from plate bath. One copy of a certification of satisfactory completion of the above process and baking is to accompany each shipment. The certification shall be signed and dated by the seller's authorized representative.

**C1 CHEMICAL ANALYSIS--**At least one copy of the material manufacturer's actual test report, traceable to the items supplied, shall be furnished for and shall accompany all shipments made against this order. Test reports must include manufacturer's name; material specification designation (including type, grade, and condition, if applicable) as referenced by the CIRCOR Monroe, NC Engineering Specification Number (E.S. No.); heat number or cast-lot identification; size or CIRCOR Monroe, NC part number; authorized signature and title; and actual results of the cast or heat chemical analysis tests performed in accordance with the referenced specifications.

**C2 MECHANICAL PROPERTIES--** At least one copy of the material manufacturer's actual test report, traceable to the items supplied, shall be furnished for, and shall accompany all shipments made against this order. Test reports must include manufacturer's name; material specification designation (including type, grade, and condition, if applicable) as referenced by the CIRCOR Monroe, NC Engineering Specification Number (E.S. No.); heat number or cast-lot identification; size or CIRCOR Monroe, NC part number; authorized signature and title; and actual results of mechanical property tests performed in accordance with the referenced specifications.

**C3 PHOTOMICROGRAPH / MICROSTRUCTURE--** At least one copy of the material manufacturer's actual test report, traceable to the items supplied, shall be furnished for and shall accompany all shipments made against this order. Test reports must include manufacturer's name; material specification designation (including type, grade, and condition, if applicable) as referenced by the CIRCOR Monroe, NC Engineering Specification Number (E.S. No.); heat number or cast-lot identification; size or CIRCOR Monroe, NC part number; authorized signature and title; and either a written evaluation of the representative microstructure to include graphite type, graphite size, and matrix micro constituents (each expressed as percentages to equal 100) or an actual photomicrograph taken of a representative sample in the etched condition at 100 x magnifications.

**C4 HARDNESS--** At least one copy of the material manufacturer's actual test report, traceable to the items supplied, shall be furnished for and shall accompany all shipments made against this order. Test reports must include manufacturer's name; material specification designation (including type, grade, and condition, if applicable) as referenced by the CIRCOR Monroe, NC Engineering Specification Number (E.S. No.); heat number or cast-lot identification; size or CIRCOR Monroe, NC part number; authorized signature and title; and actual results of hardness tests performed in accordance with the referenced specifications.

**C5 MATERIAL TEST REPORT/C.O.C.--** One copy of the material manufacturer or distributor's standard Certificate of Conformance (COC), representing the items supplied, shall be furnished for and shall accompany all shipments made against this order. Certificates of Conformance must include material manufacturer or distributor's name; material specification designation (including type, grade, and condition, if applicable) as referenced by the CIRCOR Monroe, NC Engineering Specification Number (E.S. No.); and authorized signature and title. The supplier shall allow CIRCOR Monroe, NC personnel to audit records at the supplier's facility substantiating the COC.

**C6 ULTRASONIC TESTING--** At least one copy of the material manufacturer's actual test report, traceable to the items supplied, shall be furnished for and shall accompany all shipments made against this order. Test reports must include manufacturer's name; material specification designation (including type, grade, and condition, if applicable) as referenced by the CIRCOR Monroe, NC Engineering Specification Number (E.S. No.); heat number or cast-lot identification; size or CIRCOR Monroe, NC part number; authorized signature and title; and actual results of ultrasonic testing performed and evaluated in accordance with the referenced specifications.

**C7 HEAT TREATMENT--**At least one copy of the material manufacturer's actual test report, traceable to the items supplied, shall be furnished for and shall accompany all shipments made against this order. Test reports must include manufacturer's name; material specification designation (including type, grade, and condition, if applicable) as referenced by the CIRCOR Monroe, NC Engineering Specification Number (E.S. No.); heat number or cast-lot identification; size or CIRCOR Monroe, NC part number; authorized signature and title; and record of all heat treatments performed, including actual temperatures and times-at-temperatures.

**C8 PHOTOMACROGRAPH / MACROSTRUCTURE--** At least one copy of the material manufacturer's actual test report, traceable to the items supplied, shall be furnished for and shall accompany all shipments made against this order. Test reports must include manufacturer's name; material specification designation (including type, grade, and condition, if applicable) as referenced by the CIRCOR Monroe, NC Engineering Specification Number (E.S. No.); heat number or cast-lot identification; size or CIRCOR Monroe, NC part number; authorized signature and title; and either a written evaluation of the representative macrostructure when examined in accordance with the referenced CIRCOR Monroe, NC Engineering Specification Number (E.S. No.) or the actual photomicrograph's taken of the actual samples selected and examined.

**C9 Material Test Reports (MTR) / Actual--** At least one copy of the material manufacturer's actual test report, traceable to the items supplied, shall be furnished for and shall accompany all shipments made against this order. Test reports must include manufacturer's name, material specification designation (including type, grade, and condition if applicable), heat number or cast-lot identification, authorized signature and title, and the actual results of all tests required by the referenced international

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standards organization specification (i.e.: ASTM, AISI). This certificate must meet the requirements of EN 10204 Type 3.1.

**D1 AMENDMENT--** Contract is amended to authorize access to Reliance Electric/Motor Division by representatives of Saint John's Shipbuilding Limited and the Canadian Defense Force. Access and approvals will be channeled through CIRCOR Monroe, NC Purchasing Department. Access authorization granted otherwise will relieve CIRCOR Monroe, NC of any liability for actions undertaken between Reliance Electric and Saint John's Shipbuilding Limited/Canadian Defense Force.

**D2 INDEMNIFICATION--** (Cost Accounting Standards) Supplier hereby indemnifies Purchaser against any claims for recovery of costs and interest, to include loss of profit and general and administrative expenses, which may be assessed the Purchaser by the Government for failure by the Supplier to (A) comply with cost accounting standards applicable to the Purchase Order, and (B) to follow its disclosed accounting practices.

**D3 DEFECTIVE COST AND PRICING--** If the Government determines that any price, including profit or fee negotiated in connection with this Purchase Order, was increased by any significant sums because the Supplier, under this Purchase Order, furnished incomplete, inaccurate, or noncurrent cost or pricing data, then such price shall be reduced accordingly and the Purchase Order shall be modified in writing to reflect such adjustment. The Seller, under this Purchase Order, fully indemnifies the Buyer from any financial loss, to include profit and general and administrative expenses, where the Government has determined that defective cost and pricing data were submitted by the Supplier under this Purchase Order because said data provided to the Buyer was furnished incomplete, inaccurate, or noncurrent. This clause shall survive this Purchase Order.

**D4 DOD BEARINGS--** All shipments of ball and roller bearings made against this order shall be accompanied by a completed SUPPLIER CERTIFICATE / CLAUSE 252.225-7009 & -7016 (FORMQUAL0035) or equivalent form. Copies of FORMQUAL0035 may be obtained through the Buyer or Quality Manager.

**D5 HYDROTEST--** At least one copy of the supplier's actual hydrostatic test report, traceable to the items supplied, shall be furnished for and shall accompany all shipments made against this order. Test reports must include supplier's name, test fluid temperature, hold time, pressure, and procedure number.

**D6 NACE STANDARD--** At least one copy of the supplier's Certificate of Compliance must state that all wetted parts are in accordance with the requirements of NACE Standard MR-01-75.

**D7 PQC 44/1--** Specification PQC 44/1 Rev. C, "Quality Control Requirements for Submarine Rotating Electric Machinery", forms a part of this order, and it is essential that a copy of the required data sheets accompany the material. On reworked or repaired material, if original data sheets are invalidated by rework or repair, new data sheets are required.

**D8 INSPECTION AND TEST PLAN--** The Seller shall submit an "Inspection and Test Plan" to the Buyer for approval before

starting any production. Any revision or modification to the plan shall require the Buyer's approval prior to implementation. The Inspection and Test Plan shall, as a minimum, provide the following:

1. A Flow Chart and/or Traveler Sheet(s) which shall describe in sequence each processing operation and inspection/test point from receipt of purchased material through shipment of the finished product.
2. Indication of all specified Customer and/or Government hold points.
3. Reference to all special process specifications, test procedures, and workmanship standards, as applicable.
4. A list of all documents with samples of forms is to be furnished in the shipment Quality Data Package.

**D9 CERTIFICATION APPROVAL--** At least one copy of all certifications specified on the Purchase Order is required for approval prior to shipment of hardware.

**E1 INSPECTION CHARTING--** Documentation records of inspection of all critical dimensions and attributes are required with shipment. ANSI / ASQC Z1.4 AQL1.0 General Inspection Level II applies.

**E2 "O"-RING PACKAGING--** All "O"-Rings made against this order are intended for military applications. "O"-Rings shall be individually packaged and marked in strict accordance with the applicable controlling military specification.

**E3 FASTENER MARKING--** Fasteners supplied for this order shall bear the manufacturer's identification markings and shall be identifiable to the Industrial Fasteners Institute Report, IFI-122 (latest issue).

**E4 SUPPLIER QUALITY--** Material supplied for this purchase order historically has a high-reject rate. The supplier is urged to modify their process or processes to ensure that only quality products are received at CIRCOR Monroe, NC.

**E5 BEARING MARKING--** All imported bearings are to be marked in a legible, conspicuous, permanent manner, in English, with the country of origin. (Refer to

U.S. Customs Service correspondence "Country of Origin Marking Guidelines for Bearing Imports".)

**E6 OVERHAUL -- GOVERNMENT PROPERTY--** Subcontractors, which do not have an approved procedure for scrapping Government Property, shall return scrap parts to CIRCOR Monroe, NC for disposal.

**E7 AUTOMOTIVE QUALITY--** The supplier's quality program shall be in accordance with the International Organization for Standardization (ISO) 9001 and/or TS 16949. Items supplied that have features identified on the drawings as "Key Features" must have PPAP approval, Level 3 or Level 5. Questions regarding this requirement should be directed to the Quality Manager, CIRCOR Monroe, NC.

**E8 SPECIALTY METALS--** Specialty metals shall comply with DFARS 252.225- 7009 and/or DFARS 252.225-7014. All shipments made against this order shall be accompanied by a Certificate of Conformance with this specific requirement and

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the actual material test report from the mill(s) that melted the metal(s).

**E9 Part Number Suffix “-DC”** -- All products supplied that are designated by Part Numbers with Suffix “-DC” shall have an origin of USA, Canada, Japan, Switzerland, Norway or European Union countries. All shipments made against this order shall be accompanied by actual material test reports from the mills that melted the metals which specify their origin.

**F1 Motor Documents Required** – When QC text code F1 is invoked, the document requirements will be specified on the PO and shall be furnished for and shall accompany all shipments made against this order. If no requirements appear on the PO, contact the CIRCOR buyer.

**F2 MIL-DTL-18240 Self Locking Elements** - Actual Results of all Quality Conformance Inspection Tests IAW MIL-DTL-18240 are required for this order.

**F3 POSITIVE MATERIAL IDENTIFICATION** - At least one copy of a positive Material Identification actual report, which shall include at a minimum: Report No.

- Project Name
- Purchase Order Number
- Report Preparation Date
- Item No./Description
- Location where PMI performed such as; weld, base metal shell, head etc.
- Material Specification/type such as; ASTM A240 Type 304 etc. with acceptance criteria.
- PMI inspection date
- Type of instrument
- Measured Chemical element values (%) Result of PMI (Accept or Reject)
- Name & Signature of person approving the PMI results.

**F4 PERFORMANCE TEST REPORT** - At least one copy of the Performance Test Report, which should include at a minimum:

- Report No.
- Purchase Order Number
- Report Preparation Date
- Item No./Description
- Actual Result with acceptance criteria.
- Performance Test date
- Name, Title & Signature of person approving the Performance Test results.

**F5 PROTECTIVE PACKAGING** - Material supplied for this purchase order is susceptible to shipment damage. All material must be packaged to prevent shipment damage. Defective product received by CIRCOR without evidence of mis-handling by the freight company will be scrapped at the suppliers' cost.

**F6 PRESERVATION AND PACKAGING** - Items must be clean and visually free of corrosion, dirt or other foreign matter at the time of packaging. Items susceptible to rusting must be coated with a light oil and wrapped in greaseproof paper or placed in a vapor corrosion inhibitive (VCI) bag to prevent rusting. Parts

must be wrapped, bagged, or placed in a fiberboard box with the part and PO number clearly marked. Cushioning or dunnage material must be used to prevent free movement inside the shipping container.

**F7 API 676 WELDING** - Applies to pressure containing welded fabrications. Plate edges shall be inspected by magnetic particle or liquid penetrant examination as required by Section VIII, Division 1, UG93(d) (34), of the ASME code. All welding and inspection shall be performed by operators and procedures qualified in accordance with Section VIII, Div. 1, and Section IX of the ASME BPVC code. P-1 carbon steel fabrications shall be post weld heat treated after all welding is complete and all welded connections have been installed. Heat treatment parameters shall be per the qualified weld procedure and meet ASME Section VIII Div. 1 requirements. Fabrications of other materials such as alloy or stainless steels shall be post weld heat treated when required by the applicable base material specification or ASME Section VIII, Div. 1, UW 40. Back gouged surfaces and finished weld surfaces shall be inspected by one of the following methods. Surfaces that are accessible after completion of the fabrication shall be inspected after post weld heat treatment (when PWHT is applicable). Surfaces that are inaccessible on the completed fabrication may be inspected prior to completion and PWHT by Magnetic particle inspection per ASME Section V Articles 7 and 25 with acceptance to ASME Section VIII, Div. 1, Appendix 6 or Liquid penetrant inspection per ASME Section V Articles 6 and 24 with acceptance to ASME Section VIII, Div. 1, Appendix 8. Weld repair: As a minimum, the excavation and final weld surfaces shall be inspected per items 4a or 4b above. The purchaser shall be notified before major repairs are performed (as defined in API 676 3rd edition para. 6.13.1.3). Major repairs must be post weld heat treated (when PWHT is applicable per item 3 above). Ⓓ