

CODE: **PQA004-L-IT-D en rev. 03**
DATE: **07/04/2021**
DOCUMENT TYPE: **POLICY**
APPLICABILITY: **Defence Systems Business Unit**

Quality Requirements for Supplies to the Defence Systems Business Unit of Leonardo S.p.A.

SUMMARY:

This document specifies the general quality requirements applicable to supplies of products and services to the "Defence Systems" Business Unit of Leonardo S.p.A.

Additional quality requirements, specific to different types of supplies, are defined in the other procedures referred to in this document.

The content of this document is the property of Leonardo S.p.A. It is forbidden to reproduce, disclose or use it, even partially, without the express written authorization of Leonardo S.p.A.


The document is available on the Defence Systems BU Intranet. Copies, both in electronic and paper format, shall be checked, before use, against the current version available on the Intranet.

Author[s]	Responsibility/Unit	Name/Signature
	Manufacturing & Engineering Quality Assurance	C. Pagni <i>signed</i>
	Quality System, BMS & Certifications	M. Simonelli <i>signed</i>

Owner[s]	Responsibility/Unit	Name/Signature
	Process Owner - Product Quality Assurance	G. Sannino <i>Signed</i>

Authority	Responsibility/Unit	Name/Signature
	Process Authority - Product Quality Assurance	S. Violi <i>Signed</i>

For conformance to original Italian edition



Date: 2021/08/06

S. Violi

Process Authority – Product Quality Assurance

AMENDMENT RECORD

Rev.	Date	BMSCP	Description	Authors
00	08/03/2018	-	First issue Supersedes legacy documents: RQA0006 rev. 06 from OTO-MELARA and GUI907 rev. 5.0 from WASS	E. Albani, C. Pagni
01	22/10/2018	052	Whole document: updated ref. to UNI EN 9100:2018; Para. 1.2: Specified the exclusion of "suppliers under concession agreement"; Para. 2.1: Removed notes for applicability of AQAP-2110, EN-9100, ISO-9001; Para. 3.1: Added definition of "suppliers under concession agreement"; Para. 5.1.2: Added: conditions for derogation (I, II, III), obligation for source traceability (V), risk evaluation (VI), meaning of "Qualified under reserve"; Para. 5.3: Modified: interfaces for supplies of Spare Parts and Logistics Engineering Para. 6.2.1: Req. on documentation completeness moved to para. 7.9 Para. 6.3: Added requirements for competence, awareness and ethic behaviour Para. 7.2: Clarified that a QP is applicable to several PO positions or Several POs so long as issued within a 3-months window; Para. 7.11.1: Requirement for the residual life of limited shelf-life materials updated to 80% Appendix C: Added requirements for Risk Management Plan and Project Management Plan; added requirement for prior approval of Waiver/Concessions attached to CoCs.	C. Pagni

Rev.	Date	BMSCP	Description	Authors
02	31/03/2020	179	<p><u>Title</u>: changed "Division" to "Business Unit";</p> <p><u>Whole document</u>: Updated logo and changed "Division" to "Business Unit or BU" (not traced);</p> <p><u>Para. 2.1</u>: Added ref. to REACH, ROHS, CLP;</p> <p><u>Para. 3.2</u>: Added definition of REACH, ROHS, CLP, SVHC;</p> <p><u>Para. 5.2.1, 7.4</u>: Added ref. to the Suppliers WEB Portal of Leonardo-SDI;</p> <p><u>Para. 7.9</u>: Added ref. to PQA004-L and req. for the list of deliverable management plans;</p> <p><u>Appendix A.1</u>: Chemical products, substances and mixtures added to COTS;</p> <p><u>Appendix A.2</u>: Updated minimum required certification;</p> <p><u>Appendix C</u>: Added ref. to templates for the suppliers' Risk Management Plan, Quality Plan, Configuration Management Plan; Added REACH Declaration and ROHS Certificate; Modified Safety Data Sheet;</p> <p><u>Appendix E</u>: Updated requirements for the suppliers' management of nonconformities; Added para. E.6 "Reaction to Nonconformity and Root Cause Analysis" including a requirement for evaluation of "Human Factor"</p>	C. Pagni
03	07/04/2021	409	<p><u>Updated document code</u>.</p> <p><u>Chap. 2 (references)</u>: introduced AER (EP).P-145 and AQAP-2310. Deleted the refs. AER-Q-2110 and AER-Q-140;</p> <p><u>Introduced par. 7.11.2</u> (material with limited life) by separating what already reported in par. 7.11.1.;</p> <p><u>Appendix A</u>: updated types of supply and quality requirements;</p> <p><u>Appendix C</u>: Facsimile of REACH Declaration and ROHS Certificate forms have been added and the relevant requirements have been reworded for better specification; requirements for Gantt have been added;</p> <p><u>Appendix E</u>: amended point E6 (Reaction to Non-Conformity and Root Cause Analysis); point E8 introduced (documentation associated with reworked/repaired products to be returned to Leonardo-SDI);</p> <p><u>Added Appendix F</u>: Requirements for documentation associated with rework/repairs against payment;</p> <p><u>Added Appendix G</u>: maintenance requirements for Aeronautical products in accordance with AER (EP).P-145.</p>	C. Pagni M. Simonelli

TABLE OF CONTENTS

1	INTRODUCTION	6
1.1	Purpose.....	6
1.2	Applicability.....	6
1.3	RQF Code.....	6
2	REFERENCES	7
2.1	Documents.....	7
3	DEFINITIONS AND ACRONYMS	9
3.1	Definitions	9
3.2	Acronyms.....	10
4	GENERAL.....	12
4.1	Defence Systems Business Unit.....	12
4.2	Leonardo-SDI Quality Policy for Procurement.....	12
5	RELATIONS BETWEEN LEONARDO-SDI AND SUPPLIERS	14
5.1	Supplier evaluation and monitoring	14
5.2	Transmission of supply requirements.....	15
5.3	Leonardo-SDI Interfaces with the Supplier	16
6	REQUIREMENTS FOR THE SUPPLIER'S QUALITY SYSTEM	17
6.1	General Requirements.....	17
6.2	Documentation.....	17
6.3	Competence and Awareness.....	19
7	REQUIREMENTS FOR PRODUCT REALISATION	20
7.1	Determining and Reviewing Requirements	20
7.2	Planning	20
7.3	Design and Development	20
7.4	Management of supplies from sub-tiers	20
7.5	Production and service provision.....	21
7.6	Control of measuring equipment	21
7.7	Identification and Traceability	22
7.8	Configuration Management	22
7.9	Acceptance of the purchased product or service	23
7.10	Control of nonconforming products	24
7.11	Product preservation.....	24
7.12	Management of materials belonging to Leonardo-SDI.....	24
8	RIGHT OF ACCESS AND SUPPORT FOR THE CUSTOMER AND GQAR.....	25

LIST OF APPENDICES

APPENDIX A - SUPPLY TYPES AND QUALITY REQUIREMENTS	26
APPENDIX B - LEONARDO-SDI DOCUMENTATION ASSOCIATED WITH ORDERS	29
APPENDIX C - MAIN DOCUMENTS REQUIRED FROM THE SUPPLIER	34
APPENDIX D - PACKING AND SHIPPING REQUIREMENTS	44
APPENDIX E - REQUIREMENTS FOR MANAGEMENT OF SUPPLIER NONCONFORMITIES	48
APPENDIX F - REQUIREMENTS FOR DOCUMENTATION ASSOCIATED WITH REWORKS/ REPAIRS FOR CHARGE	53
APPENDIX G - REQUIREMENTS FOR THE MAINTENANCE OF AERONAUTICAL PRODUCTS ACCORDING TO THE AER (EP).P-145 STANDARD	54

LIST OF TABLES

Table 1 - Documents associated with Purchase Orders	15
Table 2 - Supply Types vs. Minimum Applicable Quality Requirements	28

LIST OF FIGURES

Figure 1 - Example designation of a built-to-drawing item (OTO Melara La Spezia)	30
Figure 2 - Example designation of a built-to-drawing item (OTO Melara Brescia)	30
Figure 3 - Example designation of a built-to-drawing item (Leonardo-SDI)	32
Figure 4 - Facsimile of Form for Request for Waiver / Concession	40
Figure 5 - Facsimile of REACH Declaration Form	41
Figure 6 - Facsimile of ROHS Certificate (PRG651-T-IT-D)	42

1 INTRODUCTION

1.1 Purpose

This document specifies the general quality requirements applicable to supplies of products and services to the Defence Systems Business Unit of Leonardo S.p.A. (hereinafter SDI or Leonardo-SDI).

The document is complementary (not an alternative) to standards ISO 9001 and UNI EN 9100:2018 as applicable, and AQAP-2110, AQAP-2210, AQAP-2131, AQAP-2310 and AER(EP).P-145 as applicable.

1.2 Applicability

This document applies to all supplies that are to be incorporated into products and services for Leonardo-SDI customers.

Additional quality requirements, specific to the different supply types, are specified in separate procedures as described in Appendix A.

The document does not apply to suppliers “under concession agreement”.

1.3 RQF Code

For Quality purposes, supplies are sub-divided into Types as follows:

Type	Supply of...
A	Design and Development
B	COTS Products
C	Manufacturing
D	Special Processes
E	Ammunition, Exploding Devices and Weapons
F	Raw materials and Semi-finished products
G	Services and Support
H	Software Design and Development

Depending on the supply type, in addition to the general requirements of this document, additional specific quality requirements apply as defined in dedicated documents PQAxix-L-IT-D¹. The supply types are better described in Appendix A, together with the applicable quality standards and PQAxix-L-IT-D documents.

Within its own type, each supply is also classified with a numerical index (Classification Index) which determines in detail the activities and documents required from the supplier, according to the characteristics of the product or service supplied, as described in the above-mentioned PQAxix-L-IT-D documents.

Type and Classification Index of supplies are indicated in the Purchase Order by the **RQF Code** associated with each position of the Order.

RQF Code = <Type> + <Classification Index>

Example:

RQF = C2 means the supply of Manufacturing products (Type C) with Classification Index 2. The quality requirements of PQA004-L-IT-D and PQA006-L apply to this supply (see Appendix A).

¹ The coding system is being updated: the first part of the code remains unaltered (eg. PQA004-L) and the suffix “-IT-D” is added (eg. PQA004-L-IT-D) without changing the contents of the document. The traceability of the documentation is however guaranteed. The documents still referred to with the previous code remain valid until next revision.

2 REFERENCES²

2.1 Documents

Code	Title
Contractual (applicable when required by the PO or the Contract)	
AQAP 2110 ed. D	NATO Quality Assurance Requirements for Design, Development and Production
AQAP 2210 ed. A	NATO supplementary Software Quality Assurance Requirements to AQAP-2110 or AQAP 2310.
AQAP-2310 ed. B	NATO Quality management system requirements for aviation, space and defence suppliers
UNI EN 9100:2018	Quality Management Systems-Requirements for Aviation, Space and Defense Organizations.
UNI EN ISO 3834:2006	Quality requirements for fusion welding of metallic materials
UNI EN ISO 9001:2015	Quality Management System – Requirements.
ISO/IEC 12207	Software Life Cycle
ISO/IEC 17025:2005	General requirements for the competence of testing and calibration laboratories
NAV-50-9999-0026-13-00B000	Obligations of Italian Industry towards technical bodies of the MMI (Italian Navy)
AER(EP).P-145	Requirements for Maintenance Organization
International Reference Standards	
ACMP 2100	Configuration Management Contractual Requirements.
AQAP 2070	NATO Mutual Government Quality Assurance (GQA) Process
AQAP 2105	NATO requirements for deliverable Quality Plans
UNI ISO 10005:2019	Quality Management System - Guidelines for quality plans
UNI ISO 10007:2017	Quality Management System - Guidelines for configuration management
UNI ISO 10012:2004	Measurement Management Systems – Requirements for measurement processes and measuring equipment
ISO 10013:2001	Guidelines for quality management system documentation
ISO 19011:2018	Guidelines for auditing management systems
S1000D	International specification for technical publications using a common source database
SAE AS9102	Aerospace First Article Inspection Requirement
STANAG 4107	Mutual Acceptance of Government Quality Assurance and usage of the Allied Quality Assurance Publications (AQAP).
UNI ISO 2859	Sampling Procedures for inspection by attributes

² The standards or publications cited without revision date or index must be considered as a reference in the latest available revision.

Code	Title
Mandatory Requirements³	
---	Organization, Management and Control Model pursuant to the Legislative Decree no. 231, 8 June 2001 of Finmeccanica - Leonardo
---	Ethics and Anti-Corruption Code of Finmeccanica- Leonardo Group
---	Consolidated Law on Health and Safety in the Workplace, Legislative Decree 81 of 9 April 2008 as amended
---	Royal Decree-Law 262 of 16 March 1942, as amended, the 'CIVIL CODE', in particular Book IV - Section III.
---	Law 192 of 18 June 1998 and Legislative Decree 231 of 9 October 2002, Rules on Subcontracting
---	Regulation (EC) n. 1907/2006 of 18 December 2006 of the European Parliament and of the Council concerning registration, evaluation, authorization and the restriction of chemicals and subsequent amendments (REACH Regulation)
---	Directive 2011/65 / EU of 8 June 2011 of the European Parliament and of the Council on the restriction of the use of certain hazardous substances in electrical and electronic equipment (recast) and subsequent amendments - (RoHS Directive).
---	Regulation (EC) n. 1272/2008 of 16 December 2008 of the European Parliament and of the Council on the classification, labeling and packaging of substances and mixtures which amends and repeals Directives 67/548 / EEC and 1999/45 / EC and which amends to Regulation (EC) No. 1907/2006 (Text with EEA relevance) and subsequent amendments
Internal Reference Documentation	
CFM103-T	Template for the suppliers Configuration Management Plan
PQA005-L	Quality requirements for supplies of COTS products
PQA006-L	Quality requirements for the supply of Manufacturing products
PQA008-L	Quality requirements for the supply of Special Processes
PQA009-L	Quality Requirements for supplies of Ammunition, Exploding devices and Weapons
PQA010-L	Quality requirements for the supply of Design and Development
PQA011-L	Quality requirements for the supply of Software Design and Development
PQA013-L	Quality requirements for the supply of Services and Support
PQA016-L	Quality requirements for the supply of Raw Materials and Semi-Finished Products
PQA049-T	Template for the suppliers Quality Plan
QUA017-T-IT-D	List of approved suppliers of Special Processes/NDT and their sub-tier supply chain including internal processes
RKM004-T	Template for the suppliers Risk Management Plan
---	Leonardo Spa form for REACH declaration (available on the Leonardo S.p.a. supplier portal)
PRG651-T-IT-D	ROHS Certificate Form.

³ Any mandatory requirements may be indicated in the PO.

3 DEFINITIONS AND ACRONYMS

3.1 Definitions

Definition	Description
Airworthiness	The ability of an Aircraft or other avionics system / equipment to operate in the air and on the ground without significant risk to the crew, ground personnel, passengers (when applicable) or other third parties.
Equipment	Equipment used for manufacturing, control and logistic support activities.
Concession/Deviation	Authorization, granted prior to production, to produce an article with physical, functional or interface characteristics different from those provided for by the specified requirements. As a general rule, this concession is restricted to a limited number of products or for a limited period of time.
Waiver	Authorization to release or use a product found nonconforming with requirements during inspections or tests (during or after production) but deemed suitable for use in its "as is" state or after reworking.
Design Authority	This means technical responsibility for the project. For supplies that require the supplier to undertake the design phase, the Design Authority is the supplier. Said supplier shall be responsible for clarifying and defining as fully as possible all of the elements necessary for defining and carrying out the activities entrusted to it. Leonardo-SDI is responsible for communicating the requirements with respect to which the Design should be produced: therefore, it shall always provide the Technical Specification and the Supply Specification attached to the PO.
Supplier	The company that undertakes to build goods and/or carry out work and/or perform services that Leonardo S.p.A. Defence Systems Business Unit requests in written form by purchase order, procurement contract or tender, in compliance with the technical, quality and supply specifications attached to the contractual obligations indicated.
Suppliers under Concession Agreement	Organizations falling within one of the following categories: <ul style="list-style-type: none"> - All Companies/Divisions of Leonardo Group and regulated companies - Public Institution, public and regulated companies or participated by Italian State (ex: university and public research institute, INPS, INAIL,) - Catering Institutes as big chains and Catering Institutes not managed by Travels Agency - Airline and railway companies - Certification Bodies - Commercial Partners - Postal Services (public bodies) - Retails - Publishing Company of magazines and newspapers (only in case of magazines and newspaper purchase; not applicable in case of entrustment of editorial product publication) - Leasing companies for fair areas - Water distribution companies - Banking, financial, and insurance Services (if not managed by the Procurement OU) - Commercial Promoters (that follow the Leonardo Group specific directive) - Non-profit associations (managed by specific procedure) - Advices and professional performances (managed by specific Leonardo procedure)
Non Conformity	Failure (of a product/service) to meet a specified requirement.
Purchase Order and Framework Agreement	Written agreement, signed by Leonardo SpA Defence Systems Business Unit and the Supplier for the purpose of establishing, regulating or extinguishing a legal relationship of a financial nature, for corresponding services (obligations to give and/or do)

Definition	Description
Special Process	A process is defined as <u>special</u> if its results cannot be fully ascertained by subsequent product checks, tests or trials and for which deficiencies can only be revealed when the product is in use and/or after a period of time from its delivery or entry into service, with the product remaining in the intended location of use.
Nonconforming Product	Product/Service that does not meet one or more requirements.
Intellectual/Industrial Property	<p><u>Intellectual Property</u> means all rights regarding the protection of works that have creative character (copyright) including software and databases as established by Law 633 of 22/04/1941.</p> <p><u>Industrial Property</u> is defined as all rights concerning the protection of the innovative contribution of industrial creations (e.g. patents, trademarks) according to the provisions of Italian Legislative Decree No. 30 of 10/02/2005.</p> <p>Leonardo-SDI has a policy of retaining the exclusive intellectual and industrial property of the information and documentation transmitted to the supplier, for the realisation of the supply articles, as well as the exclusive intellectual and industrial property of the results of the definition and design activities of the supply articles and the related documentation.</p>
Requirement	A need that may be: express, implied or mandatory. It can refer to technical or process characteristics.
Reworking	Work carried out on a nonconforming product to make it compliant with the requirements
Repair	Action taken on a nonconforming product to make it acceptable for its intended use. The repair may also involve the modification of nonconforming exploding devices of the product.
Supply Specification (SF)	<p>This is the instrument with which the specific requirements for each individual supply are transmitted to the Supplier in order to allow it to comply with the obligations applicable to the supply.</p> <p>In particular:</p> <ul style="list-style-type: none"> – It defines in an unambiguous, clear and complete way the object of the supply, the plan, the quality requirements and the standards to be complied with (without prejudice to the minimum requirement of the legal standards which shall always be respected), the supply documentation requirements, the requests for particular documentary and procedural standards, industrial and intellectual property; – It avoids ambiguities and conflicts of authority.
Technical Specification	Document with which the essential technical requirements of a product are transmitted to the Supplier to allow it to deliver the supply independently. The specification may consist of one or more technical drawings or a textual description of the requirements aimed at clearly defining the characteristics required for the product and the expected methods of verification and testing of the supply.

3.2 Acronyms

Acronym	Description
AQAP	Allied Quality Assurance Publication
ATP	Acceptance Test Procedure

Acronym	Description
BU	Business Unit
CLP	Classification Labelling and Packaging (EU Regulation 1272/2008)
CoC	Certificate of Conformity
COTS	Commercial off the shelf
DA	Design Authority
DD	Definition Dossier
DGD	Definition Justification Dossier
EAR	Export Administration Regulations
FAI	First Article Inspection
FAIR	First Article Inspection Record
GQA	Government Quality Assurance
GQAR	Government Quality Assurance Representative
HW	Hardware
ISO	International Standardization Organization
ITAR	International Traffic in Arms Regulations
MCP	Manufacturing and Control Plan
NATO	North Atlantic Treaty Organization
NADCAP	National Aerospace and Defense Contractors Accreditation Program
NC	Nonconformity
NCR	Nonconformity Report
OU	Organizational Unit
PdR	Reserve Parts
PN	Part Number
PO	Purchase Order
QP	Quality Plan
REACH	Registration Evaluation Authorization of Chemicals (EU Regulations 1907/2006)
ROHS	Restriction of Hazardous Substances EU Directive (EU Directive 2011/65)
RQF	Supply Quality Requirement
SDI	Defence Systems
SDS	Safety Data Sheet
STANAG	Standardization Agreement
SVHC	Substance of Very High Concern
SW	Software
WPS	Welding Procedure Specification

4 GENERAL

4.1 Defence Systems Business Unit

The "Defence Systems" Business Unit (BU) of the Electronics Division of Leonardo S.p.A. includes the following branch units:

- Brescia local unit, via Lunga, 2 - 25126 Brescia (BS).
- La Spezia local unit, via Valdilocchi 15 - 19136 La Spezia (SP).
- Livorno local unit, via di Levante, 48 - 57124 Livorno (LI).
- Pozzuoli local unit, via Monterusciello, 75 - 80078 Pozzuoli (Naples).

The registered office is in Piazza Montegrappa 4 - 00195 Rome.

The BU operates in the field of design, development, production, installation and support of weapon systems for land and naval defence, avionics, and ammunition (including related command and control software, embedded and non-embedded) and integrated systems for underwater surveillance and defence.

Besides having all mandatory legal authorizations, the Business Unit has been certified ISO 9001:2015 and UNI EN 9100:2018 by recognised certification bodies. It fully complies with the laws, regulations, directives and mandatory requirements of the defence sector, including the American ITAR and EAR⁴ standards and similar Italian, English and European standards. It also complies with restrictions on transactions in "sensitive" countries or with natural or legal persons subject to embargoes, sanctions or other restrictive trade measures.

The BU is subject to oversight by Italian Military Bodies (Army, Navy, Air Force, Carabinieri Police), which have the right of access to any place where manufacturing activities are carried out for their products for the Italian Defence Administration, including the factories of suppliers and sub-tiers. This oversight also extends to supplies for NATO countries, should they request it from the Defence Administration.

The supplies are produced in accordance with the "General terms and conditions for contracts entered into by the Defence Administration"⁵ and within NATO with NATO Publications AQAP 2110 and 2210 and the NATO agreements for the standardisation of materials. These standards require, among other things, the management of the materials configuration according to precise international standards.

4.2 Leonardo-SDI Quality Policy for Procurement

Leonardo-SDI holds a leadership position in the Defence sector at an international level, which it intends to defend against the competition and build upon.

In order to maintain and improve this market position, the BU has set itself the goal of always providing products and services that meet customer requirements and expectations.

Since it is primarily external supplies that determine the quality of products and services, the BU intends to share the responsibility for customer satisfaction with suppliers.

This document defines the rules and requirements to be complied with by Leonardo-SDI suppliers and their sub-contractors and the requirements to be applied to all supplies. This document, together with those which it references, is an integral part of every PO issued by the BU and its unreserved acceptance by the supplier is implicit in the acceptance of the order.

The quality of supplies is key to market competitiveness and the meeting of customer expectations but it will not suffice: we shall constantly improve our own performance in terms of efficiency and effectiveness. This is why Leonardo-SDI asks suppliers to pursue the continual improvement of their products, services and processes.

The BU measures this improvement by means of an indicator of supply quality (Vendor Rating), consisting of two key elements: compliance with delivery times and conformity with requirements.

⁶ International Traffic in Arms Regulations (ITAR) and Export Administration Regulation (EAR)

⁵ Decree no. 200 of 14 April 2000.

This rating is one of the parameters used to determine the level of controls to be applied to the supplier: at the discretion of Leonardo-SDI, the controls may reduce in extent and depth the more punctual a supplier is with its deliveries and the higher the quality level of its supplies.

The rating is also used to evaluate, during the tender, supply risks and the actions to be taken to prevent them and/or mitigate their effects. In practice, high risk factors can lead to higher costs for Leonardo-SDI for the management of the supply and therefore count against the supplier to which they are attributed. Conversely, reduced risk factors are typical of a trusted supplier and therefore facilitate its selection.

The BU considers any deficiencies in the Supplier's Quality Management System to be primary risk factors and the supplier is therefore required to resolve them quickly by taking effective corrective action, under penalty of suspension from the List, with a consequent block on the issue of new POs.

The BU only uses suppliers with adequate operating capabilities and qualifications, which have been previously accredited by Leonardo S.p.A. In order to obtain approval and therefore inclusion in the List as qualified suppliers for a specific operational area, suppliers shall successfully pass second party audits, carried out at their premises or through documentary analysis by Leonardo-SDI Quality personnel, to verify that the supplier meets the requirements specified in this document.

Similarly, the supplier is required to use sub-tiers that are able to meet the quality requirements that the supplier is obliged to convey to it, with the proviso that sub-tiers for special processes shall be approved by Leonardo-SDI.

5 RELATIONS BETWEEN LEONARDO-SDI AND SUPPLIERS

5.1 Supplier evaluation and monitoring

5.1.1 Inclusion in the Supplier List

In order to receive a PO, the Supplier shall be included in the BU Supplier List, with a scope of approval which is consistent with the products/services it is called upon to supply.

5.1.2 Minimum requirements for inclusion in the List

The requirements for registration of suppliers in the BU List of approved suppliers are as follows:

- I. The supplier is already accredited on the Leonardo S.p.A. purchasing portal and has successfully passed the pre-qualification phase (suppliers who do not pass the pre-qualification phase, may be Qualified by derogation if they fulfil the qualification requirements, and the Procurement OU decides to use them anyway).
- II. The supplier's Quality System has been certified by a Third Party as compliant with the requirements of ISO 9001:2015 (the requirement may be derogated if the supplier has operational capabilities and specific peculiar professional skills; in such case the supplier is included in the Supplier List "under reserve").
- III. The Supplier Quality System incorporates, as applicable, the additional requirements of UNI EN 9100:2018 and the specific requirements of NATO publications AQAP-2110 and AQAP-2210. In particular, the supplier's Quality System, as applicable, meets the requirements for configuration management referred to in AQAP-2110 (the requirement may be derogated if the supplier assures full availability and collaboration in case the above requirements are to be applied; in such case the supplier is included in the BU Supplier List "under reserve")
- IV. The supplier has the necessary operational and management capabilities. This implies that the supplier has properly completed the questionnaires published on the Procurement Portal, the required documentation attesting the supplier's capabilities has been provided, the responses to the questionnaires and the accompanying documentation have been positively evaluated (possibly also with inspections/audits at the supplier's premises). In this regard, documents already evaluated by other BUs of Leonardo S.p.A. can be taken into consideration.
Once the supplier's operating capabilities have been assessed and approved, they constitute the scope of the supplier's approval.
- V. The supplier shall ensure full traceability of the sources used for the procurement of materials and components and the necessary chain of records. This is to ensure the authenticity and origin of all parts of the supply, preventing the use of counterfeit or pirated parts or parts suspected of infringing an intellectual property right (mandatory requirement).
- VI. The risks for insertion in the BU Supplier List have been analysed, adequate actions have been defined, and the residual risks are considered acceptable.

Depending on fulfilment of the above requirements, the following evaluations may be carried out:

- A supplier found fully compliant with the requirements, is included in the List in "Qualified" state.
- A supplier may be included in the List in "Qualified under reserve" state if, during the assessment, some reserves arise that require specific attentions, like additional controls or constraints/limitations to be specified (e.g.: increased frequency of audits, direct surveillance of work specific phases, more in-depth incoming controls). In such case the supplier can adopt adjustments in his organization in order to remove the reserve.
- A supplier who does not meet the requirements cannot be entered in the BU Supplier List: in such case he will be registered in "Non-Qualified" state

Approval of the Supplier's Quality Management System does not relieve it of its responsibility to supply products that conform to the contractual requirements.

Accredited suppliers (not yet qualified) may be invited to participate in a tender.

Suppliers are not allowed to receive purchase orders if the following conditions arise:

- Pre-qualification denied or expired (in this case the supplier is suspended)
- Qualification denied, revoked or expired

5.1.3 Monitoring of suppliers

Suppliers are periodically re-evaluated on their qualification expiry date.

Leonardo-SDI reserves the right to monitor the suppliers in the List in order to:

- Evaluate compliance of the supplier's Quality System to the requirements of the applicable standards;
- Verify the operational and management capabilities declared by the supplier;
- Decide whether to keep the supplier on the List.

Monitoring is mainly carried out by means of the following specific activities:

- Periodic audits to verify maintenance of the Quality Management System;
- Extraordinary audits following problems encountered during the execution of a supply;
- Checks on supply products carried out at the supplier's site or internally at the BU.

Changes in production site, equipment used or company organization may affect the supplier's approval status and result in a reassessment.

5.2 Transmission of supply requirements

5.2.1 Purchase Orders and associated documents

Leonardo-SDI notifies to suppliers the technical and quality requirements for a supply by means of the documents shown in Table 1, that are referenced or attached to each Contract/PO, of which they become an integral part

Document	Purpose of the document
• PQA004-L-IT-D (this document)	General quality requirements applicable to all supplies.
• One of the followings: PQA005-L, PQA006-L, PQA008-L, PQA009-L, PQA010-L, PQA011-L, PQA013-L, PQA016-L	Quality requirements specific to the type of delivery required (see Appendix A for more details).
• Supply Specification (optional)	Defines in detail the list of products, documents and activities to be supplied with the relevant contractual milestones; it may also contain information for adapting the quality requirements defined in PQA004-L-IT-D and PQAxxx-L-IT-D to the purpose of the supply.
• Technical Specification and/or Drawing	Technical requirements for the products/services to be delivered (see Appendix B).

Table 1 - Documents associated with Purchase Orders

The above documents, together with the Contract/PO, define the set of requirements that the supplier shall be aware of and apply in order to ensure the conformity of a supply.

Appendix B contains indications to correctly interpret the Leonardo-SDI documents attached to POs.

The supplier shall ensure to have the latest version of this document and the other applicable documents PQAxxx (see Appendix A) which are available on the Suppliers WEB Portal of Leonardo S.p.a..

5.2.2 Priority of requirements

In case of conflict between the PQAxxx procedures and other supply requirements, the order of priority shall be as follows:

1. Mandatory standards and binding rules (highest priority);
2. Contract/PO and attached documents (Supply Specification, Technical Specifications, Drawings, etc.);
3. The PQAxxx procedure applicable to the specific type of supply;
4. This document

5.2.3 Acceptance of the PO

By accepting the Contract/Order, the supplier undertakes to comply with the requirements of the documents referred to in Table 1 and to provide products/services in accordance with the requirements expressed in such documents.

5.2.4 GQA requirement

Where the supply is subject to Government Quality Assurance (GQA), the Contract/PO shall contain a specific clause, in accordance with STANAG 4107 and NATO publication AQAP-2070.

5.3 Leonardo-SDI Interfaces with the Supplier

The Leonardo-SDI interfaces with the supplier are:

- The "Purchasing" OU for the submission of the offer, negotiation and signature of the contract, the technical documentation attached to it and related updates, the payment terms and any related disputes.
- The "Quality" OU for the supplier's approval status⁶ and scope of approval⁷, the approval of any alternative suppliers for special processes, for system and product auditing activities and for the shipping release authorization to the End Customer for supplies of Ammunition and Exploding Devices. The Quality OU is also the reference point for relations with the Government Oversight Representatives.
- For management of the delivery dates and expediting activities, the interfaces are identified basing on the type of supply, within the following OUs:
 - "Production and Supply Chain" for production materials,
 - "Engineering" for outsourcing of design and development activities, prototype materials and logistics engineering.
 - "Support & Service Solution" for spare parts management,

For products and documentation quality control (including FAI) and for final acceptance activities, the interfaces are located in one of the following OUs, depending on the supply type:

- "Production and Supply Chain" for production materials and spare parts,
- "Engineering" for outsourcing of design and development activities, prototype materials and logistics engineering.

Within these OUs, detailed interfaces will be defined as and when required, taking into account the type of supply and the destination site (Brescia, La Spezia, Livorno, Pozzuoli).

The supplier shall communicate to Leonardo-SDI its own interfaces for quality assurance relevant to the PO.

Communication channels (e.g. e-mail) shall be agreed in advance; the use of unsecured communication channels or "free" servers is prohibited.

⁶ "approved", "not approved", "approved with conditions".

⁷ E.g. "Qualified for delivery of electronic parts/components".

6 REQUIREMENTS FOR THE SUPPLIER'S QUALITY SYSTEM

6.1 General Requirements

The supplier shall implement and maintain for the entire duration of the supply a Quality System which complies with ISO 9001:2015.

The supplier's Quality System shall incorporate, where applicable, the additional requirements of UNI EN 9100:2018 and those specific to the publications AQAP-2110 (with particular reference to configuration management aspects), AQAP-2210 (in the case of software supplies), AQAP-2310 and AER(EP).P-145 (if required by contract).

The Supplier's Quality System shall in any case comply with any additional or differing requirements expressed in the PO.

6.2 Documentation

In general, the requirements of ISO 9001:2015 and UNI EN 9100:2018 and those of the specific standards mentioned in Table 2 shall apply.

In particular, the requirements set out in the following paragraphs shall be fulfilled.

6.2.1 General

The supplier shall provide all documentation required to demonstrate the conformity of the product/project.

The supplier shall manage and prepare the supporting documentation for the supply in accordance with Appendix C and the applicable PQAxxx procedure (see Table 2).

All documentation sent by Suppliers shall be written in Italian or in any other language specified in the Order.

Paper documents shall be delivered in such a way that they can be reproduced and electronically scanned.

Contractual documents shall be provided on paper with the original signatures and uniquely identified.

Where delivery in electronic form is envisaged, the media used shall be uniquely identified.

6.2.2 Security and confidentiality obligations

The Supplier shall take all precautions to avoid the disclosure or misuse of the documentation owned by Leonardo-SDI.

All of the documents used shall be considered confidential with respect to third parties, unless otherwise classified; the property rights of Leonardo-SDI shall be safeguarded.

Classified documentation shall be kept in accordance with the regulations in force.

6.2.3 Management of contractual documentation

After issuing the order confirmation, the Supplier shall prepare and retain the following documents:

- Order;
- Copy of the order confirmation;
- Any variations to the order;
- Technical documentation referred to in the order, such as drawings, technical specifications and standards;
- List of applicable documentation with relative revision index and evidence of controlled distribution both within its own Organization and to Sub-tiers;

- Documentation of Nonconformities detected by Leonardo-SDI in the inspection and acceptance tests, with relative analysis and planning of corrective, preventive or improvement actions.

This documentation shall be kept up to date and made available as part of any review or inspection conducted by Leonardo-SDI.

6.2.4 Control signatures and stamps

The supplier shall ensure the identification of signatures on documents, for example, by legibly indicating the name of the signatory near to the signature.

Any Inspection and Production stamps issued to authorized holders shall be registered with the signature of the holder and with the definition of the purpose for which the stamp will be used.

An illegible stamp shall be replaced.

All necessary measures shall be taken to avoid possible ambiguities on the identification of the stamp holder, for example:

- Do not re-issue for at least six months a stamp that has been withdrawn, e.g. because the holder has been transferred to another post.
- Withdraw stamps with the same identification as a lost stamp and wait at least one year before using them again.

6.2.5 Storage and control of production and quality records

Records of the Supplier's activities shall be kept available to the BU or its Customer for at least 10 years unless otherwise specified in the contract.

Documentation relating to aeronautical products and components with criticality level 1 (according to the information shown on the title block of the drawings) shall be kept and made available for a minimum period of 15 years. The design and qualification data shall be retained for the entire life of the product.

Leonardo-SDI may request documentation and certification to be sent at no additional cost.

Where Quality Assurance/Control documents or certifications are valid/applicable to more than one product, including products of different types, the Supplier may include them only in its file for the quality records of the first piece, by type of product.

Documentation shall be retained in a manner that prevents deterioration and ensures traceability (e.g. fire-proof cabinets, duplicate copies stored in different locations).

All data filed electronically shall be stored on reliable and secure media, regularly backed up and checked to verify its integrity.

Suppliers with a computer system for filing documentation shall have a data recovery procedure, prepared for implementation in the event of a disaster, that is defined, documented, implemented and regularly inspected for compliance.

In the event of its insolvency, the Supplier shall deliver all relevant records to Leonardo-SDI.

6.2.6 Retention of data

The records shall be kept in a secure and accessible location for at least 10 years.

This requirement is raised to 15 years for documentation relating to aeronautical products and safety-critical components, unless otherwise specified in the order.

Where records are kept in electronic format, appropriate data back-up and recovery procedures shall be defined.

Such records shall be stored in a secure location to prevent unauthorized alteration or modification and they shall not be altered by changes to the software or system.

6.2.7 Documentation for safety-critical components

If components are identified as being safety-critical within the scope of the supply, the Supplier shall, in addition to the stated provisions:

- Keep for a minimum period of 15 years from the date of the end of production of the product on which the component is fitted: orders and their variations; all the documentation certifying the controls carried out on the safety characteristics; completed processing or processing cycles record books; requests to modify the product or the construction process; reports of performance anomalies; test results.
This also applies in the event of termination of the supply to Leonardo-SDI;
- For each delivery, deliver documents certifying the characteristics of the material and records of the controls carried out on the safety characteristics required;
- Promptly report any anomalies in the safety characteristics to the BU Quality department;
- Report to the BU any proposals for modification of parts and/or components, materials, machining and control processes;
- Record the identification code, date or construction code on the products.
The date of manufacture shall identify the month and year of manufacture or the production batch if more than one batch is produced per month;
- Be willing to have the personnel appointed by Leonardo-SDI and its customer verify the effectiveness of their organization with regard to safety products;
- Make available to Leonardo-SDI all the relevant documentation relating to safety components in the event of cessation of activity.

Any critical requirement of an article is transmitted from Leonardo-SDI to the supplier by means of the Technical Specification or the Drawing (title block), depending on the type of supply.

It is the Supplier's responsibility to determine the critical items in the products which it designs.

6.3 Competence and Awareness

The supplier shall assure that personnel have appropriate competence and experience to conduct the assigned work activities. Information relative to persons' competence shall be documented and conserved.

The supplier shall know the Leonardo-SDI Code of Ethics and Anticorruption, and ensure compliance from his employees and suppliers.

The supplier shall assure that persons are aware of:

- The company policy and goals for quality;
- Their own contribute to the effectiveness of the company quality system, and to compliance and safety of the supplied products or services.

7 REQUIREMENTS FOR PRODUCT REALISATION

In general, the requirements of the standards ISO 9001:2015 and AS/EN 9100:2016 and those of the specific standards mentioned in Table 2 apply.

In particular, the requirements set out in the following paragraphs shall be complied with.

7.1 Determining and Reviewing Requirements

The supplier shall review the technical and quality requirements communicated by Leonardo-SDI via the PO and the associated documents to ensure that they are clear, complete and suitable for defining the characteristics of the supply. If the supplier considers the information received to be non-exhaustive, it shall agree with Leonardo-SDI on the necessary actions to fully share the supply requirements.

The supplier shall also identify the mandatory requirements applicable to the project, the implicit requirements deriving from the intended use of the product and any requirements not defined by Leonardo-SDI but considered necessary for carrying out the requested activities.

If changes are introduced by Leonardo-SDI to the technical and/or quality requirements associated with the PO, the supplier shall ensure that these changes are incorporated into the project and the related documentation.

The supplier shall maintain records of such activities.

7.2 Planning

All activities and processes related to the fulfilment of the supply shall be planned and documented so that evidence can be given to the Leonardo-SDI inspectors if requested. The plan shall include a risk assessment and a time schedule for the activities (GANTT).

The supplier shall keep the plan updated in order to trace any organizational or time changes to its activities and for changes made to the PO by Leonardo-SDI.

For NATO supplies and in any case if required by the applicable PQAxXX procedure (see Appendix A), the supplier shall produce a Quality Plan (QP)⁸ in accordance with the requirements of Appendix C.

7.3 Design and Development

The specific requirements for Design and Development supplies are defined in the procedure PQA010-L.

The specific requirements for the supply of Software Design and Development are defined in the procedure PQA011-L.

7.4 Management of supplies from sub-tiers

If the Supplier intends to use its own Sub-tiers to perform certain activities, it shall ensure the following:

- The Sub-tier supplier's suitability in terms of competence and production capacity, ensuring it is able to carry out the supply assigned to it on schedule and in full compliance with technical and quality requirements;
- Documentation of the relevant procurement process and control and acceptance activities;
- The capability to monitor the activities carried out by the Sub-tier and to verify the products it manufactures;
- The correct and complete transfer of all the provisions contained in this document and in the PO, applicable to the activity carried out by the Sub-tier.

⁸ A single QP can be produced to cover several PO positions or several POs so long as issued within a 3-months window. In such cases, the scope and applicability shall be clearly indicated in the QP.

The Supplier is in any case responsible for implementing all the methods provided for by its quality standard and the requirements deriving from the drawings, technical specifications, applicable standards and other Leonardo-SDI documents that define the performance and technical/qualitative characteristics of the supply.

In particular, if it intends to make use of Sub-tiers to carry out special processes, it shall fulfil the requirements of the procedure PQA008-L. In addition, Sub-tier suppliers for special processes shall be selected from the list contained in document QUA017-T which is available on the Suppliers WEB Portal of Leonardo-SpA / Electronics Division / Defence Systems BU.

In order to assign part of the PO/Contract received from Leonardo-SDI to a Sub-tier, the Supplier shall first request written authorization from the Leonardo-SDI Purchasing and Quality OUs.

The Supplier, following the approval of the Sub-supply by Leonardo-SDI, shall:

- Pass on to the entire sub-supply chain the requirements applicable to the supply, including the quality requirements defined or referred to in the PO;
- include in its own PO the provisions contained in this document and in the documents referred to in Table 2 applicable according to the type of supply;
- request from the Sub-tier, for the checks within its competence, the types of documents applicable to the supply, within the time limits and with the required content, and send them to Leonardo-SDI;
- ensure access to the Sub-tier's plants and documentation for Leonardo-SDI and for its Customer's representative for Inspection Checks and attendance of tests and trials;
- inform Leonardo-SDI in advance of any changes in Sub-tiers;
- verify the conformity of the sub-supplies.

The supplier is responsible for all the activities of its sub-tiers and for transmitting to them the requirements of the Leonardo-SDI POs; the Sub-tiers shall demonstrate that they have correctly understood them prior to commencing any activity.

The Supplier assigned the PO/Contract is also responsible for the implementation, by the sub-tier, of the requirements of this document.

Leonardo-SDI shall hold the Supplier solely responsible for any breach, even partial, of contractual or quality obligations or for delays in the supply (including documentation) and therefore reserves the right to apply the remedies prescribed in the general conditions or in the purchase order.

7.5 Production and service provision

Specific requirements for production supplies and/or services are defined in:

- PQA005-L - "Quality requirements for the supply of COTS products";
- PQA006-L - "Quality Requirements for the supply of Manufacturing products";
- PQA008-L - "Quality Requirements for the supply of Special Processes";
- PQA009-L - "Quality Requirements for the supply of Ammunition, Exploding devices and Weapons";
- PQA013-L - "Quality Requirements for the supply of Services and Support";
- PQA016-L - "Quality Requirements for the supply of Raw materials and Semi-finished products".

The requirements for the maintenance of aeronautical products according to the AER (EP).P-145 regulation are defined in Appendix G.

7.6 Control of measuring equipment

The supplier shall maintain and control the equipment used for monitoring, measuring and testing products intended for delivery to Leonardo-SDI.

At pre-determined intervals, or in any case before use, the equipment shall be calibrated and checked against the relevant requirements, ensuring traceability to the national/international metrological chain.

The results of the verifications and calibrations shall be recorded and retained.

The equipment shall be identified to ensure its traceability and enable its calibration status to be determined.

7.7 Identification and Traceability

7.7.1 Identification

The product shall be identified in an appropriate manner throughout the entire production cycle.

The identification process shall be controlled and the necessary records kept to enable traceability of the product.

Identification means an appropriate system for showing the name of the product and its configuration during the production process by appropriate means (markings, stamping, name plates, tags, transport documents, etc.).

Identification shall be achieved by affixing a means of identification (e.g. a name plate) on the physical product in a position where it is legible.

For product identification, the Supplier shall use suitable means that conform to any applicable requirements and are authorized for use in the operating environment of the product.

7.7.2 Traceability

Traceability means an appropriate system that allows each product or batch of products to be recognized and distinguished from others that are identical but produced separately and in different conditions and at different times and to be matched with the documentation certifying the processes, controls and tests to which it has been subjected.

The Supplier undertakes to ensure, throughout the entire production cycle, the traceability and preservation of materials, equipment and components received for incorporation in products.

7.7.3 Identification methods

To ensure product traceability, the supplier shall identify the items and batches of the supply materials, by marking the: Part Number (a unique alphanumeric code) with revision index, serial number, batch number (if applicable) and manufacturing and/or expiration dates (if applicable).

The methods and position of the markings shall be in accordance with the relevant technical documents.

Unless explicitly provided for in the PO and in the associated documents, the supplier shall agree with Leonardo-SDI on the characteristics of the P/N (alphanumeric code) and Serial Numbers (format and numbering).

The supplier shall also ensure that the origin of the part is identified and that there is evidence of checks.

7.8 Configuration Management

For NATO supplies, or if required by the order, the supplier shall implement a configuration management system that complies with the requirements of AQAP-2110 and which therefore includes procedures for:

- Configuration identification;
- Configuration change control;
- Configuration status accounting;
- Configuration audits;
- Preparation of configuration management plans

7.9 Acceptance of the purchased product or service

For each (batch of) supply, unless otherwise provided for in the order, the supplier is required to notify the invitation to the acceptance testing with at least 10 working days' prior notice; within that period Leonardo-SDI will communicate its intention to attend the activities or authorize the despatch based on the documentation submitted.

The invitation shall be accompanied by the Certificate of Conformity and all the documentation required, in accordance with this document (PQA004-L-IT-D), the applicable PQAxix procedures (see Appendix A), and the requirements specified in the PO and in the annexed documents. The invitation shall include the list of the supplier's deliverable management plans as required in accordance with the RQF code specified in the PO (e.g. Quality Plan, Configuration Management Plan, Risk Management Plan)

If required, according to the applicable quality requirements, the supplier shall document in an Acceptance Test Procedure (ATP) the methods for testing and accepting the supply and submit them to Leonardo-SDI for approval.

Any requests for acceptance with a waiver (deviation permit) shall be handled by the supplier according to the instructions in Appendix E and shall be approved by Leonardo-SDI before the invitation to testing.

Acceptance of the supply comprises two phases:

- Preliminary acceptance at the supplier's premises (testing at source)

The supplier shall submit the products for testing, accompanied by the necessary documentation.

Unless otherwise provided for in the order, the preliminary acceptance will take place by repeating the tests already performed at the end of production or, where applicable, according to the indications of the approved ATP.

In the case of supplies divided into batches, the criteria of standard UNI ISO 2859⁹ shall be applied to define the number of the batches to be submitted for testing and the rules to be adopted for preliminary acceptance.

- Final acceptance at Leonardo-SDI (inspection of incoming products)

The final acceptance test will take place at the Leonardo-SDI destination site for the supply, after receipt of the materials, according to the instructions contained in document PQA027-P-IT-D.

Completeness of documentation

The supply is considered to be completed when the material or service is accompanied by all the required documentation. That condition is necessary for supply acceptance and payment of the relative invoices.

Absence or incompleteness in documents or certificates related to test results (type testing; weight, chemical or physical characteristics; visual and dimensional checks; and any other test derived from PO or drawing requirements) will result in the rejection of the supply. If deemed appropriate (e.g. to ensure compliance with the time-schedule), the BU reserves the right to perform the missing tests or to have them performed by a Third Party of its choice, with costs and delays charged to the Supplier, at the BU's sole discretion.

Government Quality Assurance

If provided for by the PO, the testing and acceptance activities may be carried out in the presence of the GQAR.

⁹ Alternatively, if required by the order, the criteria of MIL-STD-105E or MIL-STD-414 may be applied.

7.10 Control of nonconforming products

See Appendix E.

7.11 Product preservation

In order to maintain the conformity of the product until delivery, the supplier shall ensure it is correctly preserved in terms of identification (see paragraph 7.7), storage and protection, packaging and shipping.

Preservation shall apply to all types of products supplied: systems and equipment, raw materials and semi-finished products, custom-made and COTS finished products, prototypes and spare parts.

If these requirements are not met, the materials supplied may not be accepted by Leonardo-SDI; any expenses incurred for the protection of the materials will be borne by the Supplier (notified through the Nonconformity Report for external supplies and the associated Debit Note).

7.11.1 Storage and protection

The supplier shall take all necessary precautions to safeguard the integrity of the materials:

1. The stores shall be suitable for keeping compliant materials protected while awaiting processing or dispatch; the material shall be accompanied by appropriate documents/tags enabling identification and traceability;
2. Materials for which controlled temperature and humidity conditions are specified shall be stored in suitable environments;
3. Components sensitive to electrostatic discharges shall be stored in special containers and in such a way as to safeguard their integrity and operation;
4. The materials provided by Leonardo-SDI supplied for incorporation in products shall be taken care of, inspected and kept together with the accompanying documentation in a suitable, dedicated and identified area (in relation to the specific characteristics).
5. Materials stored at the supplier's premises shall comply with storage criteria agreed with Leonardo-SDI.

7.11.2 Limited lifetime materials

The supplier shall apply a management process for Limited Lifetime Materials to ensure that upon receipt in Leonardo-SDI, the materials have a residual life not less than 80% of their useful life, unless otherwise specified in the order. In any case, for these materials, the date of manufacture and the expiry date must be reported on the product or on the packaging of each individual item.

7.11.3 Packaging and shipping

The packaging and shipping requirements are given in Appendix D.

7.12 Management of materials belonging to Leonardo-SDI

If, as part of the supply, any property belonging to Leonardo-SDI (materials, software and/or documents) is to be made available to the supplier, the associated list will be included in the PO or in the Supply Specification, together with any instructions for use.

In this case, the supplier shall provide (if applicable):

- a) Identification and inspection upon arrival of products/documents belonging to Leonardo-SDI, in order to verify their completeness and integrity;
- b) Taking in charge, storage and proper preservation of the materials received;
- c) Appropriate archiving and management of documents and/or software, according to their company and national security classification;
- d) Use of materials in accordance with the relevant instructions for use;
- e) Verification of the condition of the products before returning them to Leonardo-SDI (if applicable);
- f) Packaging and shipping to Leonardo-SDI at the end of the activities.

Any nonconformities, anomalies or malfunctions found by the supplier in the materials shall be suitably recorded and promptly communicated to Leonardo-SDI; similarly, any problems found on the documentation shall be reported.

8 RIGHT OF ACCESS AND SUPPORT FOR THE CUSTOMER AND GQAR

The supplier shall ensure the personnel of Leonardo-SDI and its Customers and their Representatives:

- the right of unrestricted access to the areas of the company's sites and those of its sub-tiers where the supply activities are carried out, in order to verify that they are carried out in conformity with the requirements;
- the right of access to information, data and documents relating to the object of the supply;
- the necessary assistance in carrying out the above quality assurance activities (assessments, verifications, tests, inspections, etc.)

Where a supply is subject to Government Quality Assurance, the relative clause will be included in the PO in accordance with STANAG 4107 and NATO publication AQAP-2070.

APPENDIX A - SUPPLY TYPES AND QUALITY REQUIREMENTS

A.1 - Type of Supply

Below is a description of the possible supply types, identified by a letter and defined on the basis of the activities requested from the supplier.

Type A - Design and Development

Design and development activities, including project qualification and prototype manufacture, based on the requirements defined by Leonardo-SDI in a Technical Specification attached to the PO.

The supply may relate to: systems, assemblies, sub-assemblies, parts, components and/or equipment.

Type B - COTS Products

Supply of commercial HW and/or SW products ready for use, standardised and available in the product list for sale to the public. These products are designed and manufactured according to market needs, not under specific contracts for specific customers, and can be easily integrated or used with no need for customisation.

Products may be manufactured directly by the supplier, or the supplier may be a distributor of products manufactured by others.

This type of supply includes Mechanical and Electrical/Electronic standard Components and chemical products, substances and/or mixtures available in product catalogues and selected on the basis of the relevant technical data sheets.

Type C - Manufacturing

Includes the following product types:

- Products made on the basis of a construction documentation dossier from Leonardo-SDI, which owns the related Industrial Property (IP) and the Design Authority (DA). The dossier may also include documentation developed by other suppliers, for which Leonardo-SDI owns the Industrial Property.
- Products manufactured to the specifications and drawings of the supplier, who has the IP and DA.
- Products designed and manufactured by the supplier on the basis of a Requirements Specification from Leonardo-SDI, which has financed the development. In this case, the supplier holds the DA of the project while the IP belongs to Leonardo-SDI.
- Prototype components made to Leonardo-SDI drawings and intended for internal design and development activities.

The supply may relate to: systems, assemblies, sub-assemblies, parts, components as well as equipment used for manufacturing and control activities, testing and logistic support.

The supply may include the application of special processes and the performance of the FAI by the supplier.

Type D - Special Processes

Concerns the application by the supplier of one or more special processes for products intended for Leonardo-SDI customers (e.g. phosphating, cementing, bonding, nailing, resin treatment, polymerisation, welding, painting etc.)

The application of a special process may be the object of a separate supply or be incorporated as part of more complex supplies (e.g. Manufacturing).

Type E – Ammunition, Exploding Devices and Weapons

The following belong to this type: shell or cartridge cases, warheads, explosives, fuses, propellant, detonators, etc. produced on the basis of technical documentation produced by Leonardo-SDI.

Also included are military products “off-the-shelf”: weapons of various calibres and weapon systems listed in the manufacturer’s catalogues and technical specifications, of a type that can be installed on ships and turrets for land vehicles or portable to complement the equipment of an armoured vehicle.

Type F - Raw Materials and Semi-Finished Products

Applies to the supply of: raw materials, castings, mouldings, forgings and semi-finished products

Type G - Services and Support

This type includes supplies of a different nature:

- Services - activities carried out by suppliers at the operational sites of the Leonardo-SDI customer. Usually these activities take place at worksites or firing ranges and involve the provision of technical assistance and logistics support to the customer for the commissioning and use of company products or for the management of reports and complaints;
- Support - Fixed price activities assigned to Suppliers who perform their activities at Leonardo-SDI production sites.
- Technical studies - supply of documents produced by the supplier as the outcome of studies typically commissioned by Leonardo-SDI to:
 - support, justify or verify design choices made by Leonardo-SDI during the product development phase, or
 - analyse the causes of malfunctions and/or failures found on products already made by Leonardo-SDI.
- Manuals - provision of user and maintenance manuals for systems/equipment developed by Leonardo-SDI or by the supplier
- Course Documentation - provision of documentation to support training courses to be delivered to the customer of Leonardo-SDI.

Type H - Software Design and Development

Design and development activities, including qualification and validation support where required, performed on the basis of the requirements defined by Leonardo-SDI in a Technical Specification or SRS attached to the PO.

The procedure applies to supplies of software/firmware developed and delivered as independent supply items, or produced during the development of more complex systems and delivered on board the hardware on which they are to operate.

NOTE

The supplies relating to the maintenance of aeronautical products in accordance with the AER(EP).P-145 regulation are managed through the RQF code associated with the product in the Purchase Order, and the requirements specified in Appendix G

A.2 - Applicable Quality Requirements

With reference to the RQF code in the first column, the following table summarizes the minimum quality requirements applicable to the different types of supply,.

Any other Quality requirements are transmitted to the supplier via the PO and the associated documentation.

Type of Supply	Applicable Leonardo-SDI procedures	Standards Applicable to the Supplier's Quality System	Minimum Certification Required from the Supplier
A - Design and Development	PQA004-L-IT-D, PQA010-L	ISO 9001 AQAP 2110 UNI EN 9100 AQAP 2310 (if required)	ISO 9001 UNI EN 9100 (desirable)
B - COTS Products	PQA004-L-IT-D, PQA005-L	ISO 9001 UNI EN 9100	ISO 9001 UNI EN 9100 (desirable)
C - Manufacturing	PQA004-L-IT-D, PQA006-L	ISO 9001 AQAP 2110 UNI EN 9100 AQAP 2310 (if required) AER (EP) . P-145 (if required)	ISO 9001 UNI EN 9100 (desirable)
D - Special Processes	PQA004-L-IT-D, PQA008-L	ISO 9001 AQAP-2110 UNI EN 9100 AQAP 2310 (if required) AER (EP) . P-145 (if required)) Leonardo-SDI Approved Standards	ISO 9001 Approval of Leonardo-SDI or NADCAP (desirable) for the specific special process.
E - Ammunition, Exploding devices and Weapons	PQA004-L-IT-D, PQA009-L	ISO 9001 AQAP-2110 AQAP 2310 (if required) AER (EP) . P-145 (if required)	ISO 9001 UNI EN 9100 (desirable)
F - Raw Materials and Semi-Finished Products	PQA004-L-IT-D, PQA016-L	ISO 9001 AQAP-2110 UNI EN 9100 AQAP 2310 (if required) AER(EP).P-145 (if required)	ISO 9001 UNI EN 9100 (desirable)
G – Services and Support	PQA004-L-IT-D, PQA013-L	ISO 9001 AQAP 2110 UNI EN 9100 S1000D series for technical publications AER(EP).0-0-2 for publications in the aeronautical field AQAP 2310 (if required) AER(EP).P-145 (if required)	ISO 9001 UNI EN 9100 (desirable)
H - SW Design and Development	PQA004-L-IT-D, PQA011-L	ISO 9001 AQAP 2110 AQAP 2210 UNI EN 9100 ISO/IEC 12207 (if required) AQAP 2310 (if required)	ISO 9001 UNI EN 9100 (desirable)

Table 2 - Supply Types vs. Minimum Applicable Quality Requirements

NOTE: The AER(EP).P-145 regulation is applied when requested on the Purchase Order for the activities of maintenance of aeronautical products.

APPENDIX B - LEONARDO-SDI DOCUMENTATION ASSOCIATED WITH ORDERS

B.1 - General

Since Leonardo-SDI is the result of the merger of the companies OTO Melara and WASS, part of the technical documentation still shows the logo and design characteristics of the original companies. The title blocks of the drawings and the format of the documents may therefore differ depending on the company that originally issued them.

Below are some instructions for interpreting the various documents in order to avoid confusion and misunderstandings that may generate product nonconformity and delays in delivery.

Below some information is provided that is necessary for interpreting the technical documents attached to the POs.

B.2 - Technical Documentation with OTO Melara Title Block and Logo

In the old OTO Melara technical documentation (on the title block of the drawing and/or the bill of materials), for each item, group, assembly etc., you will find the following information:

- a numeric code indicating the safety criticality level of the product;
- a letter indicating the commodity classification of the product

E.g.: code A1 denotes "Undefined non-metallic material (letter A) critical for safety (Figure 1)".

Commodity Classification

Below is the meaning of the letter which denotes the commodity classification:

TYPE OF PRODUCT OR SUPPLY	LETTER
Non-metallic indefinite materials	A
Functionally important non-metallic materials	B
Welded structures and mechanical components	C
Plant/systems	D
Processing of materials furnished by customer	E
Metallic indefinite materials and semi-finished products	F
Castings	G
Forged and moulded parts	H
Electrical panels, consoles	I
Nuts and bolts	L
Filler material	M
Complete assemblies	N
Electrical and electronic components	O
Optical and electro-optical component assemblies	P
Software	Q
Ammunition	R
Hydraulic or pneumatic components	S
Activities performed by Suppliers at the OTO Melara plant (internal decentralized)	T
Services performed by Suppliers at the Customer's site (external decentralized)	U
Commercial catalogue mechanical parts	V
Military products developed by suppliers and available in the catalogue	W
Equipment	Y

Table 3: Commodity Classification

Two examples of product designation are given below:

for OTO Melara La Spezia

A part obtained from machining by stock removal (safety criticality level 2, commodity classification C) is defined in a title block similar to that shown in Figure 1; this information, if the drawing is very old, may be inserted in the bill of materials or the PO.

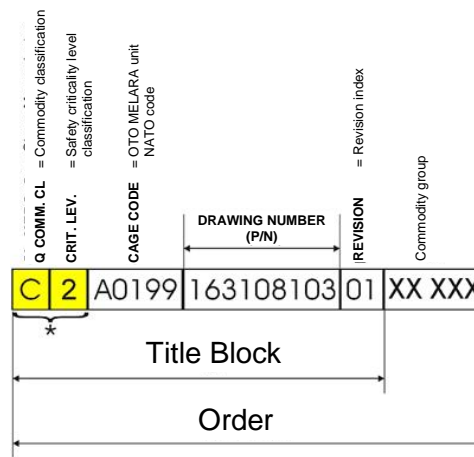


Figure 1 - Example designation of a built-to-drawing item (OTO Melara La Spezia)

for OTO Melara Brescia:

a (built-to-drawing) aluminium precision casting, critical for safety and designated as per the figure of the title block; this information, if the drawing is very old, may be included in the bill of materials or the PO.

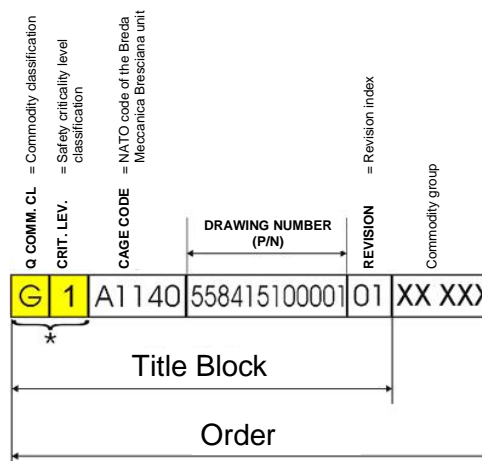


Figure 2 - Example designation of a built-to-drawing item (OTO Melara Brescia)

Identifying Key Characteristics on Drawings

Within the specific drawing, the key characteristics for criticality levels 1 and 2 are identified with a triangle symbol (Δ) containing the number corresponding to the assigned criticality level (for example, the dimensions may be indicated as key characteristics).

In addition to the content of the packaging and shipping requirements document, parts with key characteristics shall be adequately protected during handling and transportation.

B.3 - Technical Documentation with WASS Title Block and Logo

This section applies to old WASS technical documentation.

Old WASS drawings

The drawings are identified on the title block with a 12-letter code and revision index composed of two characters, as follows:

X₁ X₂ X₃ X₄ X₅ X₆ X₇ X₈ X₉ X₁₀ X₁₁ X₁₂ Rev. I₁ I₂ (e.g. WMD019100034 Rev. A1)

where:

X₁ : The first character is always "W".

X₂ : The second character identifies the type of drawing (mechanical, electrical, etc).

X₃ : The third character is always "D".

X₄ ÷ X₇: Identify the project

X₈ ÷ X₁₂: Sequential number

I₁: Index letter that is triggered when technical content of the document is changed (A, B, etc.)

I₂: Index number that is triggered when other types of changes made to the document (1, 2, etc.)

Previous codes

In accordance with a previous coding methodology, there are also old WASS drawings which are identified by a 7-character code (plus revision index) composed as follows:

X₁ X₂ X₃ X₄ X₅ X₆ X₇ Rev. I₁ I₂ (e.g. W034280 Rev. A1)

where:

X₁ : The first character is always "W".

X₂ ÷ X₇: Sequential number

I₁, I₂ : As in the previous case

The old WASS drawings do not provide information about: Criticality Level; Commodity Classification; Key Characteristics.

Old WASS Parts Lists

Old WASS Parts Lists have the same code as the drawing to which they refer, with the single following variant:

- The character in the 3rd position (X₃) is always "P" instead of "D" (e.g. WMP019100034 Rev. A1).

Previous codes

In accordance with a previous coding methodology, there are also old Parts Lists which are identified by a 7-character code (plus revision index). In this case an item's Drawing and the related Parts List always have exactly the same code.

- For example: W034280 Rev. A1

Other old WASS Documents

All old WASS documents (excluding Drawings and Parts Lists) are identified by a code composed as follows:

<Initials> X1 X2 X3 X4 X5 X6 X7 X8 Rev. I1 I2 (e.g. ST32440057 Rev. A1)

where:

<Acronym>: Is a group of two or three characters that identifies the type of document (MCP, Supply Spec, TS, etc.).

X1 ÷ X4: Identify the project

X5 ÷ X8: Sequential number

I1, I2: As for the drawings

B.4 - Technical Documentation with Leonardo-SDI Title Block and Logo

Due to the merger of OTO-Melara and WASS into the Leonardo-SDI Division, the title blocks of the organizations were harmonised.

A title block for technical documents (drawings and Bills of Materials) was introduced for issues by Leonardo-SDI, which is applicable without limitations of site and/or business (see Figure 3).

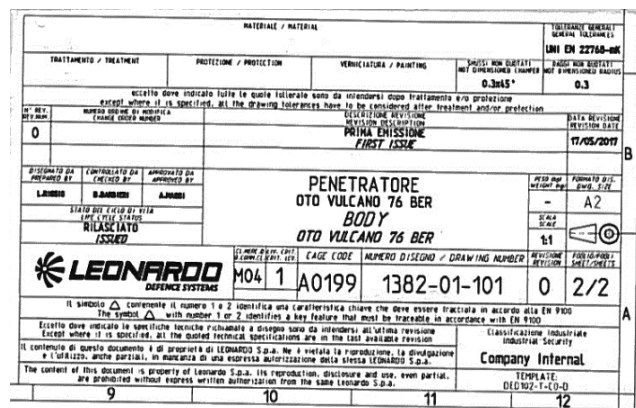


Figure 3 - Example designation of a built-to-drawing item (Leonardo-SDI)

B.5 - Documents associated with Orders

In accordance with the information contained in paragraph 5.2.1, the orders that Leonardo-SDI transmits to its suppliers may be accompanied by two documents:

- A Supply Specification
- A Technical Specification and/or Drawing

These documents define the mandatory requirements for the acceptance of the supply.

Any absence of one or both of the aforementioned documents is declared and justified by Leonardo-SDI in the order.

Supply Specification

The Supply Specification (SF) is the document that defines in detail the Quality requirements for the supply, including the activities required, the documentation and the actual composition of the supply.

Depending on the type and characteristics of the supply, the SF may contain the following information:

- Description of the supply: a detailed list of the supply items and composition of the batches, activities requested and list of the documents that shall accompany the supply;
- Estimated time for the completion of the activities and delivery of the supply items, including the related technical documentation;
- Control activities required of the supplier, with the possible participation of Leonardo-SDI (Design Review, Audit, Intermediate Tests, etc.);
- Request for the implementation by the supplier of a Quality System that meets the supply requirements (e.g.: AQAP-2110, ISO-9001);
- Request for application to the supply of specific Quality standards (e.g.: Safety, SW);
- Request for a Quality Plan that describes the supplier's Quality System and how it intends to meet the quality requirements of the order;
- Request for planning of contractual activities and related documents (Design and Development Plan, Programme Management Plan, GANTT, etc.);
- Request for a Risk Management Plan;
- Information on the Configuration Management process, including aspects of document and part identification and product marking;
- Information on the management of sub-tiers;
- Information on document management;
- Guidance on product preservation;
- Information on the acceptance testing methods and related documentation, including the Certificate of Conformity and any other certification required by Leonardo-SDI;
- Information to ensure that the staff of Leonardo-SDI and its customers are ensured assistance and free access to the premises of the supplier and its sub-tiers.

Technical Specifications, Drawings and Other Documents

The Technical Specification is the document (sometimes a set of documents) that defines the technical requirements of the product or service requested and has different characteristics depending on the type and characteristics of the supply.

Supply of products to be produced to Leonardo-SDI design

- The Technical Specification provides the requirements that the product shall meet in order to be accepted by Leonardo-SDI.
- The Drawing contains information on the physical characteristics of the product, materials, processing and assembly.
- Other documents may be associated with the PO to provide detailed instructions (which assume the value of a requirement) for processing procedures, tests, control methods or other activities to be carried out for the fulfilment of the supply.

Supply of projects or products developed to the supplier's design

The Technical Specification defines the functional, non-functional and interface requirements on the basis of which the supplier shall develop the design. These requirements form the technical benchmark to be met for the acceptance of the supply.

Supply of Software

- In instances where the supplier has to develop a system containing software, the requirements for the software are defined in the system Technical Specification.
- In the case of supplies of software only, the requirements are transmitted to the supplier via the Software Requirements Specification and Interface Requirements Specification documents.

APPENDIX C - MAIN DOCUMENTS REQUIRED FROM THE SUPPLIER

Indications are provided below on the main documents that can be requested from the supplier to accompany the supply.

The list of documents requested from the supplier is contained in the PQAxxx procedures associated with each type of supply (see Appendix A).

Quality plan

The Quality Plan shall be drawn up in conformity with the ISO 10005 or AQAP-2105 standards in accordance with the instructions given in the purchase order.

The document shall be prepared in Italian unless there are special provisions contained in the Purchase Order.

It shall be signed by the Quality Manager of the Supplier and presented to Leonardo-SDI for verification and approval within 30 calendar days of receipt of the Order and in any case before the start of activities.

In case of non-delivery, the BU shall have the right not to accept any supply material.

It is understood that during the supply period itself, this programme document shall be kept updated and submitted each time to Leonardo-SDI for verification and approval.

Where more convenient and in the absence of contrary indications in the purchase order or contract, the Quality Plan may include the design and development plan and the Configuration Management Plan, in order to avoid the excessive proliferation of documents.

The Supplier's Quality department shall verify its internal operational implementation of the Quality Plan and of the other plans referred to therein by means of inspections (auditing).

Leonardo's template PQA049-T can be used by suppliers, if deemed useful, to develop a Quality Plan which fulfils the above requirements. The template is available on the Suppliers WEB Portal of Leonardo-SpA / Electronics Division / Defence Systems BU.

Risk Management Plan

The Risk Management Plan shall describe the supplier approach to address risks and opportunities that can arise while carrying out the activities within the scope of the supply.

In particular, the document shall describe at least the following elements:

- Organization, role and responsibilities for risk management;
- Criteria and modalities for carrying out the following activities:
 - Identification and classification of risks;
 - Analysis and evaluation of risks: probability of occurrence and impact on the program
 - Risk mitigation: plans and actions for risk reduction
 - Risk monitoring: control and update of risk status and action plans
 - Effectiveness evaluation of the actuated actions
- Correlation of the above activities with:
 - Program Milestones,
 - Work packages of the Work Breakdown Structure (WBS),
 - Costs and performances of the involved physical Items
- List and contents of expected documents for risk management, including at least:
 - Risk Identification Report;
 - Risk Assessment Report;
 - Risk Action Plan;
 - Determination, allocation and management of contingencies (Contingency Report)

- Risk Analysis Sheet for main sub-supplies
- Summary table of risk actions status.

Leonardo's template RKM004-T can be used by suppliers, if deemed useful, to develop a Risk Management Plan which fulfils the above requirements. The template is available on the Suppliers WEB Portal of Leonardo-SpA / Electronics Division / Defence Systems BU.

Project Management Plan

The Project and Management Plan shall contain¹⁰ at least following information:

- Organization, role and responsibilities for project development.
- Interfaces toward Leonardo-SDI and other external organizations involved in the project;
- Documents and responsibilities related to the design input data (contract requirements, Technical Specifications, binding rules, company standards, etc.)
- Description of the "Design and Development" process, including the relevant phases and for any phase the involved company OUs; the company applicable procedures; the eventual points retained critics and the milestones of control;
- Schedule of activities, with a degree of detail that takes into account all contractual requirements, and indication of the dates envisaged for the verification, review and validation (if applicable) of the project;
- Management of any special requirements, key characteristic, critical items and safety aspects of the project;
- Specific goals of each phase and evaluation criteria of the degree of achievement;
- List of the documents to be produced as an output of each phase, with indication of the relevant contents and the expected emission date;
- Methods and criteria to perform verification and validation activities, including requirements traceability; test planning and organization, test-case definition and test results registration; involvement of Leonardo-SDI if expected;
- List of design reviews according to the contractual indications, modalities of conduction, involvement of Leonardo –SDI if expected;
- List and availability of technical equipment, information technologies and software used for design activities;
- Configuration Management of the supplied products and documents
- List of outsourced design activities and controls applied to the sub-suppliers and the purchased products.

Configuration Management Plan

The Configuration Management Plan shall be developed in accordance with the requirements of NATO AQAP-2110 and UNI EN 9100 as contractually applicable.

In all other cases ISO 10007 shall be applied.

Unless expressly required by the Order, the Supplier may associate the Configuration Management Plan with the Quality Plan to be submitted to Leonardo-SDI for approval within 60 calendar days of receipt of the Order and in any case before the start of activities. This Plan shall cover the following requirements according to the type of supply:

- Configuration identification,
- Configuration change control;
- Configuration Status Accounting,
- Configuration Audit.

¹⁰ Directly or by reference to other documents

The following topics shall also be described and agreed with Leonardo-SDI according to the applicable standard:

- The criteria for choosing Configured Articles and their identification
- the methodologies for identifying technical documentation, drawings and item lists;
- the methodology for coding the technical documentation and part numbers;
- the procedures for classification of changes and the relative evaluation criteria for the purposes of changing the Part Number and/or revision indexes, in compliance with the regulatory requirements concerning the interchangeability of materials;
- the methods for physically identifying the items;
- the methodologies for Baseline issue and management;
- the classification criteria for concessions/waivers (deviation permits);
- the methods of communication with Leonardo-SDI and GQAR for approval of modifications and major concessions/waivers (deviation permits);
- the procedures for sending modifications and minor concessions/waivers to Leonardo-SDI for notification and verification of the correctness of the classification.

Leonardo's template CFM103-T can be used by suppliers, if deemed useful, to develop a Configuration Management Plan which fulfils the above requirements. The template is available on the Suppliers WEB Portal of Leonardo-SpA / Electronics Division / Defence Systems BU.

Manufacturing and Control Plan

In case of products built to drawings provided by Leonardo-SDI, the supplier shall prepare the Manufacturing and Control Plan (MCP) and submit to Leonardo-SDI for verification and approval as Design Authority.

The Supplier shall plan the manufacturing process, the working phases, controls to be carried out and records to be retained. The procedures to be applied and the acceptance criteria shall also be specified.

It also allows Leonardo-SDI, which is responsible for delivering the product to the end customer, to be familiar with the manufacturing process.

During the approval phase, Leonardo-SDI will identify the Holding Points to be attended by its personnel and the Customer/GQA Representative, and records to be provided with the delivered product.

All agreements shall be reported in the plan, including indication of the acceptance phases for which invitation to Leonardo-SDI is required.

The MCP shall:

- Have an identification code with its revision index, date of issue and identification of the product for which the manufacturing cycle is described,
- Provide spaces for the approval signatures of the supplier, Leonardo-SDI and, where applicable, of the GQAR for orders subject to GQA;
- Indicate in sequence the manufacturing and control phases starting from order acceptance up to packaging and shipping, making reference to the applicable documents, for example the design number, the technical list, the testing procedure, the work cycle, the control cycle, the WPS, the manufacturing procedures, the data collection forms, etc.,
- Clearly indicate the stages to be assigned to sub-tiers, specifying the company name; if the realisation of special processes is to be assigned to third parties, these shall be selected from among those qualified by Leonardo-SDI (i.e. included in document QUA017-T-IT-D) or qualified by recognized third parties;
- Define the sites where machining/processing is performed;
- Define the list of equipment, machinery and installations used in the manufacturing process;
- Indicate responsibilities for carrying out the various control or self-audit stages;
- Indicate the sampling plan, where applicable;
- Provide for the weighing of the products supplied.

It is left to the supplier to choose whether to use the MCP as a tool to record the progress of the material in production by having the operators sign the various stages as they are carried out or to use other methods (such as computer systems for recording the progress of production).

The MCP can also be drawn up for more than one product or product family, provided that the P/Ns concerned are identified clearly and unambiguously and not with a generic description; for example, a generic "MCP for formation cables" cannot be accepted while "MCP for cable network PN nnnn.nn.nnn" can be used, composed of a series of well-defined and identified PNs.

Acceptance Test Procedure

When product testing is scheduled to take place prior to delivery, the supplier shall prepare an Acceptance Test Procedure (ATP) containing the following information:

- Unique code with document revision index
- Revision index
- Purpose of the document
- Object of the document
- Identification code with revision index of the material being tested
- Reference documents
- List of required equipment
- Preparation of the testing location, where applicable
- Full list of test points each including:
 - o Unique test point identifier
 - o Detailed description of the operations to be performed
 - o Criteria for passing the test (Expected result plus tolerance range, if applicable)
- A test report form shall be provided for data collection including recording of the result of each test point and the measuring instruments used, with their calibration status and S/N
- Space for approval signatures

The ATP shall be managed in accordance with Supplier's Quality System rules.

The ATP shall be submitted to Leonardo-SDI for approval at least 1 month before the test date.

Acceptance Test Report

For each delivered item, the acceptance test results shall be recorded in specific Acceptance Test Report (ATR).

Before testing, the document shall specify the exact list of the test steps required by the ATP and, for each step, the expected results/values and the acceptability range of the result (in the case of measurable values).

During the test the result/value shall be recorded on the document for each test step, with its explicit evaluation (OK/NOK)

The ATR shall be submitted to Leonardo-SDI for approval at least 10 working days before the test date.

Visual/dimensional inspection certificate

The document that provides evidence of the checks carried out on products for which it is not considered necessary to draw up an ATP with associated ATR, as the drawing is exhaustive with regard to the checks to be carried out.

The certificate shall contain as a minimum:

- the logo or name of the supplier;
- identification of the part (P/N with revision index);

- identification of the item measured with S/N or production batch if the part has no serial number;
- reference to the NC machining program (if applicable);
- details of the characteristic to identify it in the drawing table;
- characteristic, nominal dimension and tolerance;
- measured value;
- instruments used with indication of the calibration expiry date;
- process applied (e.g. surface treatment, heat treatment, NDT, etc.);
- acceptance or rejection;
- operator's signature;
- manager's signature.

First article inspection report (FAIR)

Package of documentation which certifies the carrying out of FAI (for details see PQA006-L, PQA009-L, or PQA016-L).

Raw materials summary sheet

The document that summarises the raw materials used to make an assembly in their delivered condition.

The document shall contain as a minimum:

- PN
- Custom-made material
- Material used
- Certificate of the mechanical and/or physical/chemical characteristics of the material with relevant sub-tier
- Any waiver (deviation permit) if the material is different from the custom-made material.

Certificate of Conformity

With the Certificate of Conformity (CoC), the supplier certifies, under its direct and exclusive legal responsibility, that the supply complies with the technical, quality and regulatory requirements specified in the order and in the documentation referred to therein (see paragraph 5.2.1), for this reason it shall be signed by the Supplier's Legal Representative or by a person from the organization delegated by the legal representative for this purpose, such as the Quality Manager.

This delegation shall be in writing and presented at the request of Leonardo-SDI or its customer.

The Certificate of Conformity shall contain the following items, where applicable to the type of supply:

- Supplier company name;
- address of the production site(s);
- reference to the Leonardo-SDI order and subsequent variants;
- date of issue of order;
- definition of the type of product supplied;
- quantity of products covered by the declaration;
- identification of the manufacturing batch or serial number allocated to each finished product to which the declaration relates;
- an assembly drawing and associated technical documentation with revision indexes and product identifiers;
- information required to define the configuration status of the product indicating, for software, the version installed;
- any "waiver/concession" concerning non-conformities on the supplied product, approved by Leonardo-SDI with "use as is" evaluation or "repair" corrective action;
- references to the list of missing parts, if any, in relation to the configuration of the finished product;
- reference to any FAIR identified by date and related code;

- date of issue of the certificate;
- signature of a person with company authorization;
- Declaration of Conformity: "It is hereby certified that the supply complies with the specifications, drawings and order to which it refers, except for the attached waivers/deviation permits, and that it has been inspected and tested according to the provisions and the requirements of the order";
- Signature of the GQA where required and in the dedicated sections of the CoC;

Waivers/Concessions requested by the supplier and formally approved by Leonardo-SDI shall be attached to the CoC.

The Supplier is advised to use the form in AQAP-2070-Annex B-8 as a standard for its Certificate of Conformity (mandatory where Government Quality Assurance applies).

Design documents

The requirements for the provision of design documents are specified in the PQA010-L procedure.

The requirements for the provision of software documents are specified in the PQA011-L procedure.

Gantt / Project schedule

A Gantt chart is a type of bar chart that illustrates in details a project schedule. The chart lists the tasks, with start and finish dates, to be performed by the supplier for execution of the Leonardo-SDI Purchase Order.

This document provides a graphic view of the calendar of activities in accordance with the Purchase Order, and allows to plan, coordinate and track all tasks in a program, including contractual milestones and delivery dates, so giving a clear representation of the program progress.

The Gantt chart is mainly used for project management. On the horizontal axis the total time span of the program is represented, divided into incremental phases (for example, days, weeks, months), and on the vertical axis the tasks and activities that make up the program.

Waiver/Concession Request Form

		RICHIESTA DI DEROGA / CONCESSIONE Request for Deviation / Waiver			Numero di riferimento / Reference Number	
		Costruzione / Program: <input type="checkbox"/> Deroga / Deviation <input type="checkbox"/> Concessione / Waiver			Data/Date:	
Part Number Sistema/System				Serial Number Sistema/System		
Part Number Item Item Part Number	Rev. Issue	Denominazione Name	S/N o L/N	Q tà Q ty	Item superiore Parent Item	
Classificazione Non Conformità Nonconformity Classification		Riguarda altre costruzioni Configuration items affected	Deroghe/Concessioni ripetitive Recurring Waiver /Deviation		Ordine/Contract Purchase Order/Contract number	
<input type="checkbox"/> Minore Minor <input type="checkbox"/> Maggiore Major <input type="checkbox"/> Critica Critical		<input type="checkbox"/> SI/YES <input type="checkbox"/> NO	<input type="checkbox"/> SI/YES <input type="checkbox"/> NO			
Argomento della richiesta Object of Deviation / Waiver						
Descrizione e impatto della Deroga/ Concessione Description and impact of Deviation / Waiver						
Causa della Non Conformità/ Cause of Nonconformity						
Azione correttiva/ Corrective Action						
Il costo per l'Acquirente sarà: / Cost to Acquirer will be: <input type="checkbox"/> Aumentato/Increased <input type="checkbox"/> Ridotto/Decreased <input type="checkbox"/> Invariato/Unchanged						
Caratteristiche interessate/ Affected Characteristics <input type="checkbox"/> Prestazioni/Performance <input type="checkbox"/> Sicurezza/Safety <input type="checkbox"/> Affidabilità/Reliability <input type="checkbox"/> Vita in servizio/Service Life <input type="checkbox"/> Ambiente/Environment <input type="checkbox"/> Intercambiabilità/Interchangeability <input type="checkbox"/> Manutenibilità/Maintainability <input type="checkbox"/> Aspetto/Appearance <input type="checkbox"/> Altro/Other (vedi Descrizione e impatto Deroga/Concessione/ see Description and impact of Deviation/Waiver)						
Reparto richiedente/Applying department			Firma / Signature			
Nome / Name						
Note / Remarks:						
APPROVAZIONI CO.RI.MA. / M.R.B. Approval						
Ingegneria / Engineering Nome / Name			Firma / Signature		Data/Date	
Qualità / Quality Nome / Name			Firma / Signature		Data/Date	
Rappresentante Assicurazione Qualità Governativa o del Cliente Government Quality Assurance Representative or Customer Nome / Name			Firma / Signature		Data/Date	
Ente Gestore del Contratto (Quando richiesto) Contract Managing Authority (When required) Nome / Name			Firma / Signature		Data/Date	
<input type="checkbox"/> Approvazione /Approval <input type="checkbox"/> Approvazione condizionata /Conditional approval <input type="checkbox"/> Non approvato / Disapproved						

Figure 4 - Facsimile of Form for Request for Waiver / Concession

REACH Declaration

Pursuant to the REACH regulation (EU standard 1907/2006), a REACH declaration under Art. 33 shall be produced for each supply item in which the presence or absence of SVHC substances (Substances of Very High Concern) in quantities exceeding 0.1% weight / weight. The supplier shall notify Leonardo-SDI using the appropriate form that can be downloaded from the Leonardo Spa supplier portal – link: <https://www.leonardocompany.com/it/suppliers/supplier-portal>. The form shall be sent to Leonardo-SDI together with each supply and via email to: reach.declarations.electronics_ds@leonardocompany.com

The PO number of the supply shall be indicated in the subject of the e-mail.

Supplier Logo/Stamp required here		Supplier Details		Purchase Order:	
Company Name		Name:		Leonardo P.O. Nr.:	
REACH (Responsible) Contact:		Phone number:		Note:	
		E-mail:			

We declare that:

Each Part supplied by our company identified by Leonardo Part Numbers and listed in the table below, and each of its constituent articles, does not contain any substance included in the "Candidates List of substances of very high concern for Authorization" issued by European Chemicals Agency (ECHA) at website <https://www.echa.europa.eu/candidate-list-table> in a percentage above 0.1% w/w

Leonardo Part number	Part description	Vendor Part Number	Manufacturer Name	Notes
				1 No SVHCs identified in the Part or any constituent Article of the Part
				2 No SVHC is estimated to be present in a concentration equal to or exceeding 0.1% w/w for the Part, or any constituent Article of the Part

The Parts supplied by our company identified by Leonardo Part Numbers and listed in the table below contain a substance included in the "Candidates List of substances of very high concern for Authorization" issued by European Chemicals Agency (ECHA) at website <https://www.echa.europa.eu/candidate-list-table> with a percentage above 0.1% w/w in 1 or any constituent Article as detailed in the table below together with the relevant information for the safe use of the part.

Leonardo Part number	Part description	Vendor Part Number	Manufacturer Name	Article containing Substance	Substance Use(s) in Part/Articles	Substance name	CAS number	EC number	Max Total Quantity in Leonardo Part (g)	Leonardo Part Weight (g)	Information for the Safe Use of the Part

REACH Regulation

Declaration about Declaration about Annex XIV (Authorization List) & Annex XVII (Restriction List) substances used to produce articles

In case of use of substances included in Annex XIV to produce the articles delivered, listed in the table below, we confirm our compliance with Conditions of Authorization. See details on URL: <https://echa.europa.eu/conditions-for-authorization-prodour-coa-conditions>

Substance name	CAS number	EC number	Start Date	Substance Use(s) in Process	Mitigation

In case of use of substances included in Annex XVII to produce the articles delivered, we confirm our compliance with Conditions of Restriction. For the full text of the list, see URL: <https://echa.europa.eu/substances-restricted-under-reach>

Date:	
Supplier Signature:	
Name:	
Title:	

Submit the xls file, the pdf signed file to declaration_sd@leonardocompany.com and enclose a paper copy to the goods

Figure 5 - Facsimile of REACH Declaration Form

RoHS Certificate

For supplies of Electrical and Electronic Equipment, in compliance with the RoHS 2011/65 / EU regulation, the supplier is required to draw up a certification as indicated in the appropriate form PRG651-T-IT-D (the fillable and updated version is shown in the Leonardo S.p.a. Supplier Portal).

The form shall accompany each supply and also be sent by e-mail to:

reach.declarations.electronics_ds@leonardocompany.com

The PO number of the supply shall be indicated in the subject of the e-mail

Supplier Logo

Ref: *Name of the product* – P.O. Purchase Order

Subject: Declaration according to RoHS Directive 2011/65/EU

With reference to the European RoHS Directive 2011/65/EU of 8 June 2011 and successive amendments on the restriction of the use of certain hazardous substances in electrical and electronic equipment, requiring that the maximum concentration values tolerated by weight in homogeneous materials for the restricted substances listed below referred into Annex II with the applicability note in Article 2 para. 4. and Annex II, and the exemptions described in Annex III and Annex IV **Supplier Name** as product manufacturer,

DECLARES

that at the date of this document the product *Name of the product* delivered under the contract in reference and listed in the following table conforms to the Directive 2011/65/EU.

Manufacturer P/N	Article Name	Q.ty	Manufacturer	Note
Manufacturer P/N	Article Name	Q.ty	Manufacturer

Note:

- (1) No restricted substances above the maximum concentration values has been identified.
- (2) Directive not applicable according to Article 2 - 4(a) because equipment intended for specifically military purposes. Every equipment part of this equipment containing restricted substances is designed for specifically military purposes thus not falling in the scope of the Directive according to Article 2 – 4(c)
- (3) Presence of lead identified in components finishes, soldering paste
- (4) Presence of cadmium identified in connector plating
- (5) Directive not applicable because the reported system article is not an electronic equipment
- (6) Applicable exemption n°....
- (7)

Date: DD/MM/YYYY

Company Stamp and Sign

Figure 6 - Facsimile of ROHS Certificate (PRG651-T-IT-D)

Other documents

Hereafter some documents for catalogue or commercial materials that need to be accompanied with specific safety data sheets.

These materials can be considered hazardous and therefore need to be accompanied by legal documentation that define the storage, packaging and preservation criteria.

Data sheets for non-metallic materials and chemical substances

The technical data sheets indicate the specific characteristics of non-metallic materials and chemical substances supplied. The list of substances for which a data sheet is to be submitted shall include at least:

- painting products (paints, solvents, thinners, catalysts, fillers, etc.);
- cleaning products (soaps, acids, alkalis, detergents, etc.);
- adhesives and sealants (adhesives, mastics, sealants, adhesion promoters, etc.);
- lubricants (oils, greases, cleaners);
- welding materials (electrodes, welding wire, flux pastes, sealing pastes, insulating pastes, non-stick pastes, etc.);
- composite materials;
- resins of various types;
- thermal, acoustic, fire-resistant, self-extinguishing insulating materials, etc;
- special metal sheets;
- technical gases;
- grinding products (metallic or non-metallic grit/cut-wire shot for sand-blasting, lubricant-cooling fluids, penetrating liquids, diesel);
- products for purification systems (acids, alkalis, etc.);
- coolants;
- fire-extinguishing products (foams, powders, etc.).

These forms shall be sent to BU Materials Management at each delivery.

Safety Data Sheets

Safety Data Sheets (SDS) are the most important technical documents to get information on chemical substances and their mixtures. SDSs describe the physico-chemical and toxicological properties included risks for danger to the environment, and provide the necessary instructions for correct and safe use of the substance.

SDSs allow:

1. Employers to determine whether dangerous chemical substances are handled in the workplace, so as to evaluate possible risks for health and safety of personnel, deriving from their use.
2. Users to adopt any necessary measures for protection of health, environment, and safety of the workplace

Thanks to SDS it is therefore possible to mitigate the risk of accidents at the workplace while handling and maintenance of materials or products

In compliance with REACH and CLP regulations, a Safety Data Sheet in Italian language shall be provided for each delivered chemical substance and/or mixture. SDSs shall accompany the delivered materials and also be sent by email at reach.msds.electronics_ds@leonardocompany.com. The PO number shall be indicated in the email subject.

The contents of Safety Data Sheets shall be compliant with applicable legal requirements

APPENDIX D - PACKING AND SHIPPING REQUIREMENTS

The following provisions lay down the minimum requirements for the packaging of supplies, it being understood that the supplier is responsible for selecting the most appropriate solutions to avoid problems, preventing the risk of deterioration or degradation of the supplies.

D.1 - Logistic Packing Requirements

The materials shall be packaged in such a way as to preserve their integrity during all stages of transport and storage and to ensure their safe and easy handling, storage and identification.

Any precision machining shall be adequately protected during handling and transport.

D.2 - General Requirements

These are the provisions that always apply with the exceptions and clarifications contained in the paragraph "Special Requirements".

Individual Protection

All materials shall be individually packaged as defined below:

- Material: polyethylene;
- Form: bubble wrap or expanded foam;
- Packing: a bag or sheet suitably wrapped and secured around the materials.

It is forbidden to use metallic staples or staples or any other kind of clips (metallic or not) that could lead to spread of dust or debris into the environment once opened (requirement for prevention against Foreign Object Debris damage).

Transport Containers

After individual packaging, the material shall always be placed in a transport container of appropriate size and strength, chosen on the basis of the weight and shape of the load from the following types:

- Transport container designed by the Supplier;
- Wooden crate;
- Cardboard box;
- Truck bed.

Containers need not necessarily be new but shall not in any circumstances be damaged in a way that could compromise their integrity; to facilitate traceability, it is also advisable to mark them with the name of the company shipping them.

Whatever solution is chosen, if the container weighs more than 20 kg, it shall be equipped with suitable interfaces (wooden pallets or similar) for handling with a forklift truck.

The material shall not protrude from the outer body of the container, which in turn shall not have nails, swarf, burrs, or anything else that could harm the operators or jeopardise their safety.

In addition, the material shall be secured in the transport container by suitable devices to prevent it from moving around, thus preventing damage. These devices shall be selected according to the weight and shape of the load from the following types:

- Saddle supports;
- Expanded foam or plastic mouldings;
- Expanded polystyrene (when UNI EN 9100 applies, the use of this material is not allowed);
- Straps or stretch film.

If a single final transport container is used for different materials, there shall be as many intermediate containers as there are types of materials, which in turn meet the requirements listed above.

In addition, if the object of the supply is a kit formed of partially assembled parts (pre-assemblies), a single transport container shall be provided for each kit.

Identification

All materials when delivered to SDI shall be identified on their packaging, using markings, stamping, labels, tags and shipping documents, with the following data:

- Supplier company name;
- Reference to the SDI Purchase Order and any Variations;
- Line number of the Purchase Order;
- Material code taken from the order;
- Serial number or manufacturing batch or date of manufacture;
- Description of the material as shown in the order;
- Quantity.

For products with an expiration date, the date of expiry of the material shall be stated; in particular, for elastomer products, the date of polymerisation shall be stated.

Exceptions to the provisions of this paragraph are catalogue products with the Supplier's own marking or code.

This identification shall be applied externally to the intermediate and final transport containers.

A transparent plastic bag containing a copy of the transport document and the required certifications shall then be affixed to one of the outer surfaces of the final container.

D.3 - Special Requirements

In the specific cases mentioned below, the following special provisions shall apply:

Small Custom-Made Materials

- For small items with a unit weight of less than 0.1 kg, transparent polyethylene bags (thickness \geq 0.2 mm) are allowed;
- for small unpainted pieces without surfaces that can be damaged, multiple items may be packaged in a single bubble wrap or expanded foam bag with a maximum total weight of 0.5 kg

Raw materials

Except for precision castings, individual packaging is not required for sheets, bars/rods, extruded items, castings and forgings; the necessary protection can be achieved with the transport container.

Mechanical Standardized Parts (screws, nuts, washers, etc.)

Multiple packaging in a single transparent polyethylene bag (thickness \geq 0,2 mm) with a weight limit per bag of 3 kg is permitted.

Hydraulic Materials

- All openings of hydraulic components (motors/pumps, valves, drawers, slide valves, pipes/hoses, connectors, etc.) shall be protected by plastic plugs of a suitable size; alternative solutions are not permitted;
- The pipes or hoses may be packaged directly in the transport container, however there shall be a different container for each type of pipe; individual protection is required in the case of painted rigid pipes;
- Hoses can be rolled up as long as the bending radius is not less than the minimum prescribed in the catalogue;

- The packaging of the rubber hoses shall have an identification card stating the date of polymerisation or vulcanisation of the hose, the date on which the connectors were fitted to the hose (materials with limited service life) and the name of the company that performed the assembly of the hose.
- The identification number shall appear on the rubber hose, even if it is not packaged.

Electrical/Electronic Materials

- Multiple packaging is permitted for electrical/electronic components provided that compliance with the requirements of this paragraph is ensured. D.1 ;
- The connectors of the devices and cables shall be protected by the caps provided or, in their absence, by plastic caps of a suitable size; alternative solutions are not permitted;
- Materials sensitive to electrostatic discharges shall be kept and delivered in suitable protective packaging, appropriately identified;
- "Inertial" materials (gyroscopic platforms and gyroscopes) shall be kept and delivered in protective packaging, appropriately identified and equipped with suitable shock detectors.
- The equipment shall be protected in suitable containers in order to ensure that conformity with the requirements is maintained (the quality and conservation of the products shall be ensured in order to ensure they are protected from atmospheric and environmental agents).

"Generic" elastomers

Materials made of elastomer, in whole or in part, excluding hoses.

- All packages shall have an identification card with the date of polymerisation or vulcanisation (materials with a limited lifetime);
- Packaging for rubber gaskets shall have suitable characteristics to protect the contents from sunlight, ultraviolet rays and fluids (oil, fuel, water, etc.);
- Multiple packaging within the following limits is permitted:
- The items shall have the same drawing number and the same polymerisation or vulcanisation date;
- Their internal diameter shall be ≤ 400 mm and their length ≤ 1600 mm;
- The quantities per package shall not exceed 20 pieces and a total weight of 100 kg;
- In any case, each part shall be individually packaged.

Commercial Materials

Standard packaging is allowed provided it ensures compliance with the requirements of point D.1_.

Finished Ferrous Materials Without Surface Protection Treatment

For these materials, in addition to meeting the requirements of the APPLICABILITY, LOGISTIC PACKAGING REQUIREMENTS and GENERAL REQUIREMENTS paragraphs, protective treatment using Tectyl 900 (Valvoline Oil Company) shall be provided.

Material shipped directly to another Leonardo-SDI Supplier.

If the Supplier is required to ship the product to another SDI Supplier, it shall follow the above instructions for packaging and shipping of the product (which will be identified as accepted) and at the same time shall also transmit the following to SDI Materials Management and Quality:

- Copy of the shipping document;
- Required certification (which however shall not be transmitted to the SDI Supplier);
- Certificate of Conformity signed by the Quality Manager or the legal representative (a copy of the subsequent activities is also to be sent to the Supplier, along with the materials/products).

The absence of such documents means that SDI cannot accept the material, cannot perform the acceptance checks and, consequently, cannot pay any invoices.

The absence of certification, inconsistencies between certification documentation and the product and incomplete values or ones which differ from the expected values mean that a Nonconformity Report will also be issued in this case and, consequently, the payment of the invoices will be suspended.

Moisture sensitive material

If a material is sensitive to humidity, the package should include suitable desiccation units in order to keep the relative humidity within the transport and storage box under 30%.

The desiccation units shall be placed inside heat-sealable protection with dimensions calculated according to the following formula:

$$Q = (P \times S \times T + 2C) / 80$$

where:

Q= number of desiccation units to be put in the package (1 unit = 540 g ± 10%).

P(*) = Effective permeability gr/(m² x 24h)

S = Total surface area of the enclosure (in square metres) (enclosure means heat-sealable protection).

T = Storage and transport time (in days).

C = Weight of filling and wedging materials (in kg) (material inside the heat-sealing protection, e.g. wood).

(*) *The values to be used are as follows: Laminate barrier gr 0.01/0.05; cardboard gr 0.3; polyethylene gr 3.*

APPENDIX E - REQUIREMENTS FOR MANAGEMENT OF SUPPLIER NONCONFORMITIES

E.1 - General

The supplier shall deliver products that meet the requirements defined:

- in the Contract or Purchase Order (SO) and in the attached technical documentation;
- in the technical and delivery Specifications;
- in communications accepted by the parties (e.g. meeting minutes, e-mail communications, letters, etc.);
- in the applicable Standards;
- in the mandatory Standards and Regulations;
- or also determined by the intended conditions of use (packaging, transport, installation, use and maintenance) by the end user.

The conformity of the product with the requirements shall be certified by a Certificate of Conformity (CoC) signed by the legal representative of the supplying company or his/her delegate.

E.2 - Nonconforming Product

Nonconforming Product means any deviation of the material from what was ordered; this definition applies to any supply, therefore it also includes services and design supplies (Hardware and Software).

If a nonconforming product is detected, this shall be appropriately managed by the supplier in compliance with the applicable regulations, and according to its own internal procedures and operating methods, introducing the related corrections and corrective actions, and notifying Leonardo-SDI for involvement in the following decisions. In the field of aeronautical products, the requirements of the AER(EP).Q-2101 regulation (non-compliant product management process) also apply

In any case, the nonconforming product shall be identified with special labels or stamps in order to prevent accidental use and it shall be segregated in special storage areas separate from the normal storage areas.

E.3 - Nonconformity identified by the Supplier

Nonconformities identified by the supplier during the processing phases and which can be resolved by reworking the product to bring it into compliant condition shall be managed by the supplier independently, following its own procedures.

Nonconformities identified by the supplier that can be resolved by a repair that does not return the material to a state of conformity but to a state where it may nevertheless be used, shall be managed with a request for a concession submitted to Leonardo-SDI for approval, details of which shall be cited on the CoC. The form to be used is at Appendix C.

In the event that the waiver or concession may lead to a reduction in the price of the supply for which the offer was agreed, Leonardo-SDI reserves the right to update the purchase price.

E.4 – Nonconformity detected by Leonardo-SDI

Non-conformities can be detected by Leonardo-SDI at one of the following stages:

- a) at the Supplier's premises during the conduct of control and/or testing activities;
- b) at the premises of Sub-tiers involved by the Supplier in the realisation of the product;
- c) at Leonardo-SDI's facilities during the incoming acceptance test or during the commissioning of the supplied product¹¹;
- d) at the premises of other Leonardo-SDI suppliers to whom the Supplier has sent the product, upon Leonardo-SDI instructions;
- e) at the Leonardo-SDI Customer's premises for reasons attributable to the Supplier.

¹¹"Commissioning" also means the submission of PdRs and equipment for testing.

The following paragraphs describe how to manage each type of NC described above.

a) At the Supplier's premises during the testing activities carried out by Leonardo-SDI

Nonconformities identified during the testing at source in the presence of Leonardo-SDI technicians and any representatives of the End Customer shall be managed by the supplier, presenting the results of the investigations carried out and the consequent actions, which the supplier shall manage according to its own procedures.

In addition, NCRs will be issued and recorded during the testing at source phase by Leonardo-SDI technicians and managed as rejects, thus affecting the calculation of the Vendor Rating and will be communicated to the supplier as rejects in acceptance.

The supplier shall perform an analysis of the detected NC, including the resulting corrective actions, and notify Leonardo-SDI of the results. The documented results shall also accompany the products when delivered to Leonardo-SDI.

Leonardo-SDI will also have the right to verify the management of NCs during the audit process.

b) At the premises of Sub-tiers involved by the Supplier in the production of the product

The Nonconformities identified during the testing at source at the premises of sub-tiers in the presence of Leonardo-SDI technicians and any representatives of the End Customer shall be managed in accordance with the requirements described by Leonardo-SDI in the PO and in the applicable technical documentation, verifying in particular that the specific requirements for the supply have been passed onto the sub-tier.

The supplier which has delegated part of the work to a sub-tier is responsible for the control of the sub-tier; therefore, the NCRs identified will be issued to the supplier during the testing at source phase by Leonardo-SDI technicians and will be managed as rejects, thus affecting the calculation of the Vendor Rating and will be communicated to the supplier as rejects which it shall manage according to its own procedures.

The supplier shall perform an analysis of detected NC, including the resulting corrective actions, and notify Leonardo-SDI of the results. The documented results shall also accompany the products when delivered to Leonardo-SDI.

Leonardo-SDI will also have the right to verify the management of NCs during the audit process and the sub-tier monitoring process.

c) At Leonardo-SDI's facilities at the time of the incoming acceptance check or during the commissioning of the product supplied

Leonardo-SDI reserves the right to verify, during the incoming test phase, the supply material in order to verify its conformity with the requirements specified in the applicable technical documentation and in the PO, carrying out the checks considered necessary from time to time and repeating all or part of the checks already carried out by the supplier at its plants.

Leonardo-SDI reserves the right, in the event of nonconformity with the sampling of a supply batch, to discard the complete batch.

If Nonconformities are detected at the incoming acceptance verification, the product is not accepted, considered as never delivered and returned to the supplier, who shall repeat the invitation for acceptance testing of the product (new or reworked). The supplier will receive a Non-Conformity Report and shall process the NC according to its internal procedures and at its own expense, as specified at para. E.6. The supplier shall perform an analysis of detected NC, including the resulting corrective actions, and notify Leonardo-SDI of the results. The documented results shall also accompany the products when delivered to Leonardo-SDI.

If the supplier has to carry out repairs to restore conformity, the supplier shall request a concession from Leonardo-SDI, accompanied by suitable technical documentation (e.g. work cycles, etc.) and drawn up based on the form in Appendix C.

Nonconformities notified by Leonardo-SDI shall be considered Customer complaints

If a defect is found during the installation of the finished product due to supplier errors, an NCR will be issued which will be managed as if it were a reject at the Materials Reception stage and which will similarly require a search for the causes of the defect. This material will be managed by returning it under warranty, against a repair order issued free of charge.

- d) At the premises of other Leonardo-SDI Suppliers to which the Supplier has sent the product, at the request of Leonardo-SDI

The provisions of paragraph c) above apply: the NC that the supplier shall manage according to its own procedures will be issued and controlled by Leonardo- SDI.

- e) At the premises of Leonardo-SDI's Customers, for reasons attributable to the Supplier

The above paragraph c) apply: the NC that the supplier shall manage according to its own procedures will be issued and controlled by Leonardo- SDI.

E.5 - Classification of NCs and associated management procedures

Nonconformities can be managed as follows:

- NC classified as "REJECT"
Leonardo-SDI will return the product to the Supplier or prevent delivery to its facilities.
- NC classified as "USE AS IS"
Leonardo-SDI will manage the related Waiver (Deviation Permit)/Concession request that the supplier shall prepare and send to Leonardo-SDI (see Appendix C).
- NC classified as "REPAIR or REWORK"
These NCs shall be managed through waivers and the management procedures are set out in paragraph E.6.

If the NC is identified at the Supplier's premises, it will be recorded and managed in accordance with the applicable procedures and according to the process provided for (in the case of a Waiver/Concession request).

If the NC is identified during the Acceptance Test, Leonardo-SDI will contact the Supplier to agree on the procedures to be implemented at the Leonardo-SDI Plant where the product is used. In the absence of intervention by the Supplier within the agreed timescale, Leonardo-SDI will start the restoration/repair (subject to management with the Waiver/Concession request from the Supplier) or reworking.

Costs of work-hours and materials, and other technical costs due to repairing or reworking and related control activities, shall be charged to the supplier. Work-hours will be calculated by Leonardo-SDI basing on internal objective data.

The supplier shall agree with Leonardo-SDI whether to:

- repair or rework the product himself at Leonardo-SDI Plant or at its own site;
- have the product repaired or reworked by Leonardo-SDI, charged to the supplier.

The supplier shall therefore take steps to ensure that the timings indicated by Leonardo-SDI are respected, regardless of whether the repair is carried out at Leonardo-SDI (in compliance with the standards laid down for those working in the plant) or at its own workshop.

In any case, a NCR will be issued to the supplier, who shall perform an analysis of the NC, including necessary corrective actions, and notify Leonardo-SDI of the results. The documented results shall also accompany the products when delivered to Leonardo-SDI.

E.6 – Reaction to Non Conformity and Root Cause Analysis

When Non Conformities are detected, the supplier shall react according the following process:

- a) Record the detected NC;

- b) Take timely action necessary to contain the effects of nonconformity and prevent possible propagation;
- c) Review the NC and notify Leonardo-SDI of results and identified solutions;
- d) Apply Correction to remove the NC (replacement of product, repair, rework, ...). The supplier shall also assure and provide evidence that similar stocks, if any, have been cleared.
If the Correction leads to rework/repair of the product, this shall be carried out in compliance with the applicable configuration and technical documents (according to the manufacturing / control cycle applied in the production phase). Leonardo-SDI shall be notified of any eventual problem or repair treatment by a formal request for Waiver/Concession; upon completion, testing shall be carried out on 100% of the reworked / repaired products in accordance with the applicable procedures;
- e) Perform a Root Cause Analysis to determine the causes of nonconformity and Corrective Actions to ensure that nonconformity does not recur. The analysis shall address the supplier's processes, organization, resources, and include, as possible causes, those related to human factors¹²
- f) Plan and implement the Corrective Actions;
- g) Review the effectiveness of the Corrective Actions taken
- h) Notify Leonardo-SDI of Corrective Actions results

Records of the above activities shall be maintained by the supplier. Objective evidence of actions taken and the relevant records shall be made available, on request, to Leonardo-SDI and his customer/GQAR.

E.7 - Management of Waivers/Concessions

Where it is not possible to manufacture the product in full conformity or if the material has to be repaired due to machining or processing errors, the supplier shall issue a request for a waiver (deviation permit) or concession (see definitions in para. 3.1).

The waiver/concession request shall be submitted using the form in Appendix C and shall be approved by the Leonardo-SDI functions involved in the acceptance process; when necessary, Leonardo-SDI will involve the End Customer, which will assess the proposed waiver/concession.

In the event that the supplies are produced based on the supplier's drawings and/or specifications, the supplier shall notify Leonardo-SDI of Nonconformities which may impact on the *form, fit, function*, performance, safety and spare parts. These Nonconformities shall be resolved by way of waiver/concession.

Requests for waivers/concessions shall be submitted in a way that ensures traceability; for materials which do not have serial numbers, the supplier shall suitably identify the nonconforming parts in a manner agreed with Leonardo-SDI.

Details of the waiver/concession shall be given on the CoC.

In the case of orders subject to Government Quality Assurance, the waiver/concession shall also be submitted to the competent GQAR.

The waiver request shall contain as a minimum the following information:

- Identification of nonconforming material;
- a description of the compliance deviation;
- the causes which led to the deviation;
- the proposed containment actions aimed at repairing and subsequently using the material;
- any corrective action proposed to prevent the issue from recurring;
- any technical documentation supporting the request.

The supplier shall submit waivers/concessions using the form in Appendix C.

¹² Human Error is commonly defined as a failure of a planned mental or physical action to achieve a desired outcome; breach of prescriptions are also included. Several conditions, associated to persons or the work environment, can result in human errors; a typical list includes: Lack of communication, Distraction, Lack of resources, Pressure, Complacency, Lack of teamwork, Stress, Lack of awareness, Fatigue, Lack of knowledge, Lack of assertiveness, Negative Norms.

E.8 – Documentation associated with the reworked / repaired product to be returned to Leonardo-SDI

In case of non-conformity detected upon Leonardo-SDI incoming acceptance test, the Supplier shall deliver the reworked/repaired material accompanied by the documents indicated at para. E4.c.

In all other cases of non-conformity, the supplier, shall deliver the reworked / repaired material, accompanied by the following documents

- a. Analysis of the cause of the non-conformity, including related corrective actions
- b. Any Manufacturing and Control Plans or other applied procedures (previously approved by Leonardo-SDI) as applicable in the context of rework / repair;
- c. Original version of the Final Test Report for 100% of the reworked/repaired items, in accordance with the applicable testing procedures, including the results found and the product configuration status.
- d. Any other certifications as applicable to the activity carried out
- e. Certifications required for special processes, if applied in the context of rework/repair
- f. Any Waivers/Concessions previously approved by Leonardo-SDI
- g. Certificate of Conformity^(*) of the rework/repair with annexed Certificates of Conformity of any subassemblies, components and materials replaced in accordance with the applicable configuration

^(*) This Certificate of Conformity, to be prepared in accordance with the indications given in Appendix C, shall specify that the product has been reworked/repared, and refer the RNC number transmitted by Leonardo SDI and any Waivers/Concessions requested by the Supplier.

E.9 - Consequences

Supplier nonconformities are recorded by Leonardo-SDI and have an impact on the Vendor Rating.

Leonardo-SDI reserves the right to apply penalties or to request compensation for damage caused by Nonconformities.

Acceptance of waivers/concessions that provide for the use of materials or work which is less expensive than that provided for in the design may be a reason for renegotiation of the agreed purchase price.

E.10 - Nonconforming materials - Responsibility of Leonardo-SDI

If nonconformities are found that are not attributable to the supplier but which are clearly the responsibility of Leonardo-SDI, for example errors in documentation, the supply shall be accepted and Leonardo-SDI may request any rework only by issuing a variation to the order or through a dedicated PO.

The supplier is obliged, if possible, to carry out a nonconformity analysis and to provide Leonardo-SDI with instructions on how to implement corrective actions to prevent further problems.

At the end of the repair operations, the material shall be re-presented for testing and a CoC shall be issued.

APPENDIX F - REQUIREMENTS FOR DOCUMENTATION ASSOCIATED WITH REWORKS/ REPAIRS FOR CHARGE

The requirements in this Appendix apply in the case of reworks/repairs for consideration by Leonardo-SDI, which do not fall within the types described in Appendix E.

On a general level, the supplier shall apply the requirements addressed by the RQF code reported on the Purchase Order (see PQA004-L-IT-D and other recalled procedures), integrated by the requirements in this Appendix F. In the field of aeronautical products the requirements of AER(EP).Q-2101 (Non-compliant product management process) also apply.

Unless otherwise indicated in the Order with reference to specific applicable standards, the Supplier shall provide the following documentation together with the reworked/repared material.

- a. Inspection report upon incoming at the supplier site
- b. Failure analysis technical report
- c. Any Manufacturing and Control Plans or other applied procedures (previously approved by Leonardo-SDI) as applicable in the context of rework/repair;
- d. Original version of the Final Test Report for 100% of the reworked/repared items, in accordance with the applicable testing procedures, including the results found and the product configuration status.
- e. Any other certifications as required in the Purchase Order
- f. Certifications of special processes, if applied in the context of rework/repair
- g. Certificate of Conformity of the rework/repair with annexed Certificates of Conformity of any subassemblies, components and materials replaced in accordance with the applicable configuration

If the indicated documents are not attached to the packing list, the supply cannot be accepted and will be returned with relative costs to be borne by the Supplier

Return of Non-Recoverable parts to Leonardo-SDI

When the parts to be reworked/repared are found to be Non-Recoverable, it is necessary to notify Leonardo-SDI at the reference site for the appropriate decisions.

These parts, specifically identified as Non-Recoverable, shall be returned to Leonardo-SDI at the reference site for the actions of competence

The Non-Recoverable identification associated with such products shall include the code, quantity, serial number (if any), the cause(s), and the relevant Leonardo-SDI PO Number.

APPENDIX G - REQUIREMENTS FOR THE MAINTENANCE OF AERONAUTICAL PRODUCTS ACCORDING TO THE AER (EP).P-145 STANDARD

On a general level, the supplier shall apply the requirements addressed by the RQF code reported on the Purchase Order (see PQA004-L-IT-D and other recalled procedures) integrated by the indications of this Appendix G, and the requirements of the AER (EP).P-145 regulation. Unless otherwise indicated in the Order, the Supplier shall provide the documents required by this Appendix G.

The suppliers who hold the Design Authority, the maintenance activities shall be carried out according to a Maintenance Plan approved by Leonardo-SDI, in compliance with the provisions of the Purchase Order and the AER(EP).P-145 regulation.

In other cases, suppliers shall carry out their activities according to requirements and technical documents referred to in the Purchase Orders.

In all cases it is required:

G.1 Verification report upon receipt of materials and relative identification

Upon receipt, the Supplier shall check and record the status of the received materials. The report (signed by Leonardo-SDI personnel and the Customer's representative, when required), shall be archived by the supplier and sent to Leonardo-SDI together with the documents indicated at point G.5 below.

In case of positive check, the material is taken over by the Supplier and identified with the "Inefficient Material" tag (i.e.: not to be used unless the planned maintenance activities have been successfully completed), bearing the code of the material, the quantity, the serial number (if present) and the reference to the Leonardo-SDI Purchase Order.

The Leonardo-SDI Maintenance Manager of the reference site shall be promptly informed of any missing, damaged or otherwise unsuitable material to define the consequent actions, including communication to the Customer as applicable.

G.2 - Carrying out the maintenance activity

Maintenance shall be carried out in accordance with the applicable documents, reporting any problems to Leonardo-SDI and dealing with any repairs with a Request for Waiver/Concession to be submitted for Leonardo-SDI approval.

The Supplier is required to procure any sub-assemblies, components and materials necessary for the maintenance activity, in compliance with the applicable configuration, ensuring full traceability of the sources used for such procurement and the necessary registration chain, and preventing the use of counterfeit parts. Such documents shall be attached to the Certificate of Conformity delivered to Leonardo SDI and retained for at least 10 years after delivery, unless otherwise provided in the purchase order.

The operators assigned to Non-Destructive Testing (NDT) shall be certified by a recognized Body according to UNI EN 4179 (Aerospace Series - Qualification and approval of personnel assigned to non-destructive tests).

G.3 Return of defective parts to Leonardo-SDI

When the parts to be maintained are found to be unrecoverable (Unsalvageable), it is necessary to notify the Leonardo-SDI Maintenance Manager of the reference site for appropriate decisions.

The parts can be defined as non-recoverable for one of the following reasons:

- Unrepairable defects;
- Not economically convenient repair;
- Not able to ensure the specified performance, even after rework;
- Subject to unacceptable changes or irreversible rework;
- Exceeding the life limits or lack of related records;
- Impossibility of returning the part to airworthiness conditions due to exposure to mechanical, thermal or environmental stress beyond the limits;
- Inability to apply an Airworthiness Prescription;
- Impossibility of tracing the part to the Manufacturer (e.g. serialized parts for which a verification at the manufacturer has allowed to determine their non-authenticity);
- Lack of Maintenance or Use records, when considered essential for the recertification of Airworthiness

These parts, specifically identified as Non-Recoverable, shall be returned to Leonardo-SDI at the reference site for the relevant actions and the relative management in agreement with the Customer.

The Non-Recoverable identification associated with such products shall include the code, quantity, serial number (if any) and refer the relevant Leonardo-SDI Purchase Order.

Waiting to be returned, these parts must be segregated in a dedicated area

G.4 – Final Testing on 100% of supplies

For each product submitted to maintenance, the Supplier shall perform the Final Tests required according to the procedures provided by Leonardo-SDI or developed by the Supplier and approved by Leonardo-SDI. This control shall include verification to make sure that the aircraft components are free of any foreign parts or materials (FOD prevention).

Leonardo-SDI, and his Customer's representative, have the right to attend the Final Tests, according to the procedures described in this document, PQA004-L-IT-D.

The products that successfully pass the required Final Tests shall be returned to Leonardo-SDI identified with an "Efficient Material" tag which includes the material code, quantity, serial number (if present) and refers the relevant Leonardo-SDI Purchase Order.

G.5 – Required documentation

- Maintenance Plan to be delivered before the start of activities, in the Supplier holds the Design Authority.
- The supply shall be accompanied by the following documents:
 - a. Inspection report upon incoming at the supplier site
 - b. Original version of the Final Test Report including the results found and the product configuration status, following the maintenance carried out
 - c. Any other certifications as required in the Purchase Order for maintenance
 - d. Certifications of special processes, if applied in the context of the maintenance activity
 - e. Certificate of Conformity for the maintenance carried out and EMAR Form 1 Certificate in the case of AER(EP).P-145 certified company for the maintenance of that specific product. The certificates of conformity of any subassemblies, components and materials replaced in accordance with the applicable configuration shall be attached to these certificates.

If the indicated documents are not attached to the packing list, the supply cannot be accepted and will be returned with relative costs to be borne by the Supplier

G.6 - Packaging and shipping

The requirements set out in Appendix D of this document and any additional requirements listed in the Purchase Order apply.

G.7 Notification of non-conformity relating to delivered products - Quality Alert

The Supplier shall send a "Quality Alert" communication (written on its own headed paper) to notify Leonardo-SDI of any circumstance that may affect the integrity of the previously delivered product or any error or deficiency in the Use and Maintenance Manuals that may affect the use and / or maintenance of the product for the purpose of its management in accordance with the regulations of ARMAEREO AER(EP).00-01-06 (Instructions for the compilation, forwarding and management of Incident Reports relating to aeronautical material) and AER.0-0-8 (Issue, compilation and forwarding of Incident Reports Publications (SIP), concerning Aeronautical Technical Publications under the responsibility of ARMAEREO).

The information shall be sent to Leonardo-SDI at the reference site (Brescia), more specifically to the following personnel:

- The Maintenance Manager;
- The Quality Manager.