



**Supplier Quality Policy
(Contractors)**
Supplier Quality Policy
(Contractors)

FO-SH-004

Ausgabe/Issue: 24.01.2018
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Please read the contents of this document thoroughly. This Revision (06) supersedes all previous revisions.

The MTU Maintenance Supplier Quality Policy defines the quality related requirements for suppliers of repaired/overhauled products. Consistent compliance to these requirements ensures that the relationship between MTU and the supplier remains a mutually beneficial partnership, with common objectives to produce top quality aviation products in a cost effective and efficient manner.

Please complete points 1 through 11 on the front page electronically, then either apply an electronic/digital signature and date to Point 12, or alternatively print the front page, sign and date in the spaces provided in Point 12. Once completed and signed, please return the front page only, via email to the contact indicated in the blue area below:

MTU Purchasing:		MTU Supplier Quality Assurance: <input type="checkbox"/>	
Name:		E-Mail:	Choose e-mail address
E-Mail:			

Supplier: (Please complete all blocks)		Yes	No
1	Previous revisions of the Supplier Quality Policy have been removed from circulation.	<input type="checkbox"/>	<input type="checkbox"/>
2	This revision has been received, read, and understood.	<input type="checkbox"/>	<input type="checkbox"/>
3	The requirements of this revision are currently being met by our company. *	<input type="checkbox"/>	<input type="checkbox"/>
5	Ongoing compliance is ensured through internal audit and surveillance functions.	<input type="checkbox"/>	<input type="checkbox"/>
5	Company Name:		
6	Company Physical Address:	Postal Address (if different to physical address):	
7	Form Completed By:		
8	Job Title:		
9	Telephone Number:	Fax Number:	
10	Email Address:		
11	Company Website:		
12	Digital, Electronic, or Autographic Signature:	Date:	

** If there are any clauses or partial clauses with which your company is unable or unwilling to comply with, please enter the clauses and reasons for non-compliance in the area provided at the end of this document. These items shall be reviewed prior to granting approval or approval extension.*

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2. Revision History ([Top](#))

Revision No.	Revision Date	Approval Date	Approved By	Status	Remarks
01	01.05.2009	11.05.2009	K. Lemmer Quality Director	Superseded	Complete revision
02	22.09.2010	01.10.2010	K. Lemmer Quality Director	Superseded	Partial revision
03	22.02.2011	01.03.2011	K. Lemmer Quality Director	Superseded	Partial revision
04	17.10.2011	18.10.2011	K. Lemmer Quality Director	Superseded	Partial revision
05	25.09.2013	01.10.2013	K. Lemmer Quality Director	Superseded	Partial revision
06	09.12.2014	01.01.2015	K. Lemmer Quality Director	Current	Complete revision

2.1 Current Revision:

This Revision (**06**) supersedes all previous revisions of the MTU Maintenance Supplier Quality Policy for Contractors. Where necessary, please update the applicable procedures, instructions, etc. within your quality management system to reflect the requirements of this revision.

2.2 Revision Basis and Identification:

Revisions are implemented in the event of changes to aviation regulations, legislation, quality system standards, MTU and MTU's customer's requirements. Revisions may also be initiated to address significant rejection trends at MTU Receiving Inspection. Where partial revisions are implemented, the revised passages shall be highlighted to assist identification of the additional and/or modified requirements. Changes which correct grammar, spelling errors, and wording changes for clarification purposes which do not affect the intent in any way, are not highlighted.

3. Glossary of Terms [\(Top\)](#)

8D	8 Disciplines of Team Orientated Problem Solving
AD	Airworthiness Directive
ATA	Airline Transport Association
ARC	Authorized Release Certificate (<i>Form 1, 8130-3, AAC-038</i>)
C.A.S.E.	Coordinating Agency for Supplier Evaluation
CAAC	Civil Aviation Authority of China
CAR	Corrective Action Request
CAR (TCCA)	Canadian Aviation Regulation
CoC	Certificate of Conformance
DER	Designated Engineering Representative
DOA	Design Organisation Approval
DOE	Design of Experiments
EASA	European Aviation Safety Agency
ED	Executive Decision
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulation
FPY	First Pass Yield
IAW	In Accordance With
IPC	Illustrated Parts Catalogue
IL	Inspection Lot (<i>Receiving Inspection Passes with Usage Decision</i>)
MAG	Maintenance Annex Guidance
MOE	Maintenance Organization Exposition
MPM	Maintenance Policy Manual
MR	Maintenance Release
NAA	National Aviation Authority
NTSB	National Transportation Safety Board
OEM	Original Equipment Manufacturer
ODA	Organization Designation Authorization
PMA	Parts Manufacturing Approval
PO	Purchase Order
QN	Quality Notification
RDC	Repair Design Certificate
RTS	Return to Service
SB	Service Bulletin
SPC	Statistical Process Control
STC	Supplementary/Supplemental Type Certificate
TAT	Turn Around Time
TIP	Technical Implementation Procedures
TC	Type Certificate
TCCA	Transport Canada Civil Aviation
TCCA DAR	TCCA Design Approval Representative
TCCA RDC	TCCA Repair Design Certificate
TSO	Technical Standard Order
MSDS	Materials Safety Data sheet

4. Introduction ([Top](#))

4.1 Applicability

This Supplier Quality Policy applies to all potential and currently approved companies who will perform maintenance work on MTU product. Such companies are hereinafter referred to as Contractors (*see Point 5.1*). All Contractors shall be familiar with the contents of this document. The Contractor's internal procedures and processes shall ensure adherence at all times. The Supplier Quality Policy is referenced in the standard text of each purchase order and is thus contractual and binding on all companies performing maintenance work on MTU product.

4.2 Purpose

The purpose of this document is to assist Contractors to understand and comply with all quality requirements applicable to purchase orders originating from MTU. The quality requirements detailed in this document are not intended to replace or restate any part of the EASA, FAA, CAAC, or TCCA aviation authority requirements.

5. Definitions ([Top](#))

5.1 Contractor:

Companies with Aviation Authority certification. Able to certify the work performed with an Authorized Release Certificate. (*see Point 6.1*).

5.2 Sub-Contractor:

Sub-Contractors are companies without aviation authority certification. Not able to certify the work performed with an Authorized Release Certificate.

5.3 Distributor:

Distributors supply new and/or used finished engine parts and components. Distributors fall into three categories, OEM, New Parts Suppliers, Used Parts Suppliers.

6. Quality System ([Top](#))

6.1 Quality System Certification:

As a minimum all Contractors shall have EASA Part 145 and FAA Part 145 aviation authority certification. In addition to this minimum requirement, it is desirable that Contractors have CAAC Part 145 certification as well as accreditation to one or more of the following standards, ISO:9001/AS:9100, ISO:14001 and OHSAS:18001.

6.2 Airworthiness Certification:

Prior to accepting the order, the Contractor shall ensure that authority to perform the required maintenance work on MTU product (*inspect, repair, overhaul, etc.*) is included in their respective aviation authority certification, capability lists, etc.

6.2.1 Contractors Located in Europe or USA:

Contractors located in Europe or the USA who hold both EASA and FAA aviation authority certification, shall return the item with the appropriate Authorized Release Certificate fully and accurately completed as a dual release.

6.2.2 Contractors Located in Europe:

Contractors located in Europe who hold EASA, FAA and TCCA aviation authority certification, shall return the item with the appropriate Authorized Release Certificate fully and accurately completed as a triple release.

6.2.3 Contractors With CAAC Approval in Addition to EASA and FAA Approval:

Where the Contractor has CAAC aviation authority certification in addition to EASA and FAA certification, and the MTU purchase order and/or contract stipulates that a CAAC Authorized Release Certificate (AAC-038) is also required, this shall be supplied in addition to the dual/triple release Authorized Release Certificate.

6.2.4 Bilateral Agreement:

Where no bilateral agreement is in existence between the USA, Europe or Canada and the applicable independent state, individual Authorized Release Certificates shall be generated. All Authorized Release Certificates generated for the same item shall make clear and accurate reference to each other.

6.2.5 Digital Signature:

The Contractor may only apply electronic/digital signatures to Authorized Release Certificates when authorized to do so by the applicable aviation authority.

6.2.6 Exceptions

Exceptions to the rulings above will be decided on an individual basis depending on end user requirements where specific instructions will be issued. In all cases of doubt, the Contractor shall contact MTU Supplier Quality Assurance for clarification. Incorrect, incomplete, ambiguous, missing or damaged documentation will cause parts to be rejected at Receiving Inspection, placed in quarantine. The non-conformance shall be recorded against the supplier (QN) and included in quality performance calculations (see Point 7.2).

6.3 Requirements for Times and Cycles:

6.3.1 TSN (Times Since New) and CSN (Cycles Since New)

- In all cases where the purchase order indicates TSN and CSN, regardless of whether the part is a life limited/tracking part or not, these data shall be included in the remarks section of the Authorized Release Certificate.
- When MTU does not know the TSN/CSN, then UNK (*unknown*) will be indicated in the purchase order. When UNK is indicated in the purchase order, this must be included in the remarks section of the Authorized Release Certificate.
- When MTU does not provide any data for TSN and CSN, then TSN: UNK and CSN: UNK shall be included in the remarks section.

6.3.2 TSO (Times Since Overhaul) and CSO (Cycles Since Overhaul)

- When the part is overhauled and certified as Overhauled, the TSO and CSO shall be set to zero (0) and included in the remarks section, TSO: 0 and CSO: 0.
- When the part is not certified as Overhauled (e.g. *Repaired, Inspected, Tested, etc.*), and the TSO and CSO values are indicated in the purchase order, these TSO and CSO values shall be included in the remarks field of the Authorized Release Certificate.
- When the TSO/CSO values are not included in the purchase order TSO: UNK and CSO: UNK shall be included in the remarks field of the Authorized Release Certificate.

The cycles remaining for any parts (*including LLPs*) shall not be included on the Authorized Release

Certificate.

6.4 AD's (Airworthiness Directives) and SB's (Service Bulletins)

6.4.1 General

The Contractor shall ensure that all AD's and SB's which are applicable to any item maintained for MTU, are both known and reviewed. The Contractor shall ensure that the method used for obtaining this information, is documented and adhered to at all times. Both EASA and FAA airworthiness directives apply. (MAG Section V Special Conditions, Para 1.1.1 {viii}) and (MAG Section V Special Conditions, Para 2.1.1(b){x}).

6.4.2 AD Confirmation ("Dirty Fingerprint")

In order for MTU to comply with regulatory and customer requirements, in all cases where an AD is required and accomplished, the shop floor paperwork confirming the inclusion of the AD shall be delivered together with the part and the airworthiness approval. This paperwork may be either the "Dirty Fingerprint" shop floor traveller/router/job card etc., a printout of the computerized routing card, or a detailed shop repair report clearly indicating the inclusion of the AD.

6.5 Engine Manuals and Technical Data

The Contractor shall have a robust system in place to obtain and implement the latest level technical information (e.g. engine manuals, AD's, SB's, etc.). When the MTU purchase order contains a specific reference with revision and date, this information shall be used for the maintenance activity ordered. When only the chapter reference, is stated on the purchase order, without revision and date, then the latest revision of that data shall be used for the maintenance activities ordered.

6.6 Anti-Drug and Alcohol Programme:

Contractors within the USA shall actively participate in an accepted anti-drug and alcohol misuse prevention testing programme. Proof of the programme existence is demonstrated through page A449 of the FAA Operations Specifications. Copies of page A449 shall be supplied to MTU Supplier Quality Assurance for record purposes. Proof of active participation in the anti-drug and alcohol misuse prevention programme will be periodically verified during on-site audits, desktop audits, or by special request for documented evidence. Contractors located outside the USA where applicable, shall have a programme which is compliant to any appropriate national law.

6.7 Record Retention:

The Contractor shall retain records of maintenance on MTU product for a minimum of three (3) years from the date the article was approved for return to service. When specified in the purchasing contract, the record retention period may be extended to longer than three (3) years. However, the purchasing contract may not specify a period of less than three (3) years. Records shall be complete and maintained in a manner which avoids loss, damage and deterioration.

6.8 Contracting and Subcontracting Work:

If the Contractor, outside of normal operations, intends to use another Contractor or Sub-Contractor (as defined in Point 5.1 and 5.2) to perform maintenance work on the their behalf, MTU Purchasing shall be informed of this intention prior to placing the order with that company. In the event that maintenance work on MTU items is delegated to sub-tier maintenance providers, the Contractor is responsible for the quality of all work and documentation produced by its sub-tier maintenance providers. The Contractor shall ensure that sub-tier maintenance providers which are located in the USA, at all tiers, whether certificated or non-certificated, actively participate in an appropriate anti-drug and alcohol misuse prevention programme.

6.9 Supplier Approval

6.9.1 Approval Duration

MTU approved supplier status is valid for thirty six (36) months from the date of approval unless otherwise revoked or surrendered. Initial supplier approval and re-approval is dependent upon the receipt of the required documents, which includes as appropriate, aviation authority approval certificates, quality system approval certificates, capability lists, correctly and satisfactorily completed desktop audit, and the signed front page of this Supplier Quality Policy.

6.9.2 Revisions to Quality System Certificates and Organisational Changes

Contractors shall ensure that copies of all revised, updated or changed quality system documentation (*certificates, operations specifications, capability lists, etc.*) are supplied to MTU Supplier Quality Assurance within five (5) working days of the revision.

When organisational changes to the designated quality contact person(s) occurs, the Contractor shall provide MTU Supplier Quality Assurance with the new contact details within five (5) working days of the organisational change. All document copies may be sent directly to the following email address:

MTUH-SUPPLIER-QUALITY-ASSURANCE@mtu.de

Failure to comply with these requirements may result in suspension or revocation of approved supplier status.

7. GENERAL [\(Top\)](#)

7.1 Training Programme:

The Contractor shall have a documented and approved training programme for initial and recurrent training. The programme shall include Human Factors training of an appropriate duration, and shall be conducted no later than 24 months from the previous Human Factors training date. Human Factors training shall include as a minimum, the items commonly known as the “Dirty Dozen”, i.e. Complacency, Distraction, Fatigue, Norms, Pressure, Stress, Lack of Assertiveness, Lack of Awareness, Lack of Communication, Lack of Knowledge, Lack of Resources, Lack of Teamwork.

7.2 Quality Performance Evaluation:

Quality performance for all Contractors is calculated and reviewed on a monthly, annual, and *ad hoc* basis. The criterion used is First Pass Yield (*see Point 7.2.2*). Unsatisfactory quality performance may lead to the imposition of penalties as defined in the contract between MTU and the Contractor.

7.2.1 Rejection Criteria:

Rejection Criteria are divided into four (4) main categories, which are further subdivided into specific failure modes.

A: Order Related		B: Documentation Related	
A1	Incorrect Quantity	B1	Certificate Incorrectly Completed
A2	Wrong Part Delivered	B2	Certificate Missing
A3	Discrepancy with Purchase Order	B3	Other Paperwork Missing/Incorrect
A4	DER Not Allowed/Unknown	B4	Certificate Copies Only (Originals Missing)
A5	Parts Missing/Incomplete Kit	B5	Paperwork Traceability Problem
C: Transport Related		D: Product Quality Related	
C1	Transport (Part Damaged)	D1	Part Out of Limit

C2	Transport (Packaging Damaged)	D2	Incorrect Assembly
		D3	Operation Missed
		D4	Performance Failure
		D5	General Product Quality Problem

7.2.2 First Pass Yield:

First Pass Yield percentage is the percentage of inspection lots which pass through MTU without rejection. First Pass Yield performance is divided into three (3) levels and rated in the “traffic light” system:

- **Green Zone: FPY ≥ 98,8%**
Quality performance level acceptable, follow internal continuous improvement programme to remain in Green Zone
- **Amber Zone: FPY < 98,8% and ≥ 97,0%**
Quality performance level warning area, improvement programme necessary to reduce incoming rejections
- **Red Zone: FPY < 97,0%**
Quality performance level unacceptable, immediate improvement action required to improve quality performance

In the event that within a given delivery, several inspection lots are identified with quality problems, each inspection lot is rated as a separate non-conformance (QN).

7.3 Corrective Action:

Corrective action may be requested from the Contractor when deliveries are rejected at Receiving Inspection, or when quality problems are identified during assembly and/or test. Corrective action has two (2) levels, as shown below:

7.3.1 Heads-Up

This level is informal in nature and is used mainly when a deterioration in quality performance is identified which has a limited effect on MTU internal processes. Information is provided to the Contractor to enable remedial action to be defined and implemented before the issue deteriorates further. The Contractor is required to address the issues internally and provide appropriate feedback to MTU Supplier Quality Assurance. No specific document or method is defined.

7.3.2 Corrective Action Request

This level is a request for formal corrective action and is used when a deterioration in quality performance is identified which has a significant effect on MTU internal processes. In most cases rejection for product quality will result in a formal corrective action request.

When a formal corrective action request is issued, the Contractor is required to utilize recognized methods and techniques (e.g. 8D, 5 WHY's, PDCA, Cause & Effect, etc.) to ensure that the true root cause is determined and eliminated. The following steps must adequately addressed:

- Immediate containment action to limit the effect of in transit, impending and planned shipments
- Identification of the true Root Cause
- Develop and implement corrective action to address the true Root Cause
- Verify that the implemented corrective action is effective

- Develop and implement preventative action to ensure problem reoccurrence is negated
- Provide documented evidence to support and substantiate the action taken and its effectiveness

7.4 Quality System Review

All Contractors are subject to periodic quality system review. This will either be through an on-site audit by MTU authorized auditors, or a detailed electronic survey questionnaire. Both audit types encompass the requirements of MTU, MTU customers and aviation authorities.

7.4.1 Desktop Audit

The desktop audit is used for initial supplier approval, and supplier re-approval when the thirty six (36) month approved supplier status expires. The desktop audit is a detailed questionnaire which should be completed electronically, it need not to be printed or signed. When the desktop audit is used, the Contractor is required to complete the questionnaire completely, accurately, honestly, and in a timely manner. The completed desktop audit is reviewed in detail upon return, all anomalies, errors and omissions must be satisfactorily corrected and/or clarified before approved supplier status can be granted, reinstated or extended.

7.4.2 On-Site Audit

On-site audits are based on quality performance and/or purchasing department requests. Contractors with quality performance in the "Red Zone" will automatically be included for potential on-site audit. When an on-site audit has been scheduled, the main purpose is to review the individual quality escapes and evaluate the corrective action taken. The intention is to assist the Contractor to identify areas of potential improvement and initiate appropriate action to eliminate non-conformances and improve performance. Audits conducted as a result of purchasing requests will concentrate on the specific areas determined by the purchasing department.

7.5 Environmental Management:

MTU is accredited to ISO:14001 and thus is incumbent to encourage all Contractors to actively participate in the effective management of activities that impact on the environment. All Contractors are encouraged to implement an environmental management system and thus proactively protect our common environment and future. Environmental rating levels are as follows:

- Level 1: Contractors with formally accredited environmental management system (*ISO:14001 or equivalent*)
- Level 2: Contractors with verifiable internal environmental management controls but no formal accreditation
- Level 3: Contractors without verifiable environmental controls in place

7.6 Health and Safety:

MTU is accredited to OHSAS:18001 and is thus incumbent to encourage all Contractors to be proactive in their approach to employee health, safety and well-being. All Contractors are encouraged to implement an employee health and safety management system which includes, but is not limited to, the following:

- Personal protection equipment, e.g. safety glasses, overalls, safety shoes, etc., as appropriate
- Training in chemical/materials use according to the applicable MSDS sheet, as appropriate
- Training in emergency action in case of accidental chemical spillage/contamination, as appropriate
- Training in fire prevention, firefighting, fire extinguishers and emergency alarm plans
- Ensure that no underage persons are employed within the organisation

8. Exclusions ([Top](#))

In the event that there are clauses or partial clauses with which your company is unable or unwilling to comply with, please enter the clauses and reasons for non-compliance in the area provided below. Where exclusion



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8.1 Exclusion Requests

Exclusions Requested	
Clause No.	Reason