



**MINISTÉRIO DA DEFESA
COMANDO DA AERONAUTICA
PARQUE DE MATERIAL AERONAUTICO DO GALEAO**

TECHNICAL SPECIFICATION (TS)

TS nº 0002/TENG/2023

Revision: BASIC

Issued on: July 26th 2023

Classification: NONE

Distribution: CABW

1. INTRODUCTION

Brazilian Air Force (BAF) decided to increase the operating fleet from 20 to 24 aircrafts. However, instead of sending unserviceable engines to some Authorized Maintenance Center (AMC), in order to avoid long lead-times and unpredictable cost of shop visit, the Logistics Command (COMGAP) decided to buy used engines, with minimum availability of 1 to 2 years operation, before stopping for next shop visit.

This TS intends to present engine condition that must be complied by the engine parameters to be offered as commercial proposal of a bid that will be conducted by CABW. The referred engine must be delivered on engine transport set (dolly + engine protection case) specified by Rolls-Royce Manuals for long travels and their property will be transferred for Brazilian Air Force.

2. ENGINE / DOLLY IDENTIFICATION

2.1 Engine

2.1.1 Engine model: AE3007A1 / AE3007A1P / AE3007A1/3

2.1.2 Engine Part Number: 23070991 /23070401 /23070402

2.1.3 Manufacturer: Rolls-Royce Corp

2.1.4 Application: EMB-145

2.1.5 Quantity: 01 EA

2.2 Dolly for engine transportation

2.2.1 Dolly

2.2.1.1 Dolly Part Number: 23054395

2.2.1.2 Manufacturer: ALLISON

2.2.1.3 Application: Engines from item 2.1 of this Technical Specification.

2.2.1.4 Quantity: 01 EA

2.2.2 Engine protection case

2.2.2.1 Engine protection case Part Number: 23054396

2.2.2.2 Manufacturer: ALLISON

2.2.2.3 Application: Engines from item 2.1 of this Technical Specification.

2.2.2.4 Quantity: 01 EA

3. ENGINE / DOLLY CONDITIONS (BAF PARAMETERS)

3.1. Engine Hours availability:

3.1.1. Maximum of 45,000 hours since new (TSN)

3.1.2. Maximum of 45,000 cycles since new (CSN)

3.2. The engines must be configured with Life Limited Parts which log availability of 8,000 cycles minimum.

3.3. Engine Condition: Serviceable.

3.4. Line Replaceable Units (LRU), e.g., engine accessories must have availability accordingly.

3.5. The engine must be equipped with FUEL NOZZLE PN: 23087207 or PN: 23077006 or PN: 23075904 or PN: 23090046 with minimum 4,500 FH available.

3.6. The engine must be equipped with IGNITOR PN: 23062672 with minimum 4,000 FH available.

3.7. The engine trend monitoring logs must show no abnormal operation or parameter exceedance since its last shop visit.

3.8. No Airworthiness Directive should expire along following twelve four months or 300 cycles after engine delivery for Brazilian Air Force.

3.9. The engine must be preserved according Rolls-Royce Manuals for longest acceptable period of time.

3.10. If the engine presented by the supplier has left the shop visit, it must present reports from the bench test (TEST CELL). In this case, there is no need for requirements 3.11.5 and 3.11.6 to be met.

3.11. At bid, SELLER must present following data:

- 3.11.1. TSN, CSN, TSLSV, CSLSV;
- 3.11.2. Cycle availability for all LLP;
- 3.11.3. Copy of FORM 8130-3 — Airworthiness Certificate;
- 3.11.4 Flight Hours availability for Fuel Nozzle and Ignitor;
- 3.11.5. Copy of the Report of the last videoscope inspection of the engines;
- 3.11.6. Copy of the last COMPASS/ trend monitoring chart.

3.12. Documents to be submitted with engines:

- 3.12.1. Engine Logbook;
- 3.12.2. Last engine preservation record;
- 3.12.3. Last COMPASS/ trend monitoring chart;
- 3.12.4. Report of the last videoscope inspection of the engine; and,
- 3.12.5. FORM 8130-3 — Airworthiness Certificate.

3.13. Engine transport set conditions: The engine transport set (dolly + engine protection case) to be delivered with the engine must be new and in perfect use conditions.

4. DELIVERY CONDITIONS

4.1. The engine must be delivered ready for installation, equipped with all LRU, cables, harness and all accessories, except for expendable and consumable items, that permits its installation and operation as received from SELLER.

4.2. Engine must be delivered on engine transport set (dolly + engine protection case) specified by Rolls-Royce Manuals for long travels and their property will be transferred for Brazilian Air Force.

4.3. The Engine and Dolly will delivered according INCOTERMS 2020 - DAP (Delivered at Place), customs clearance responsibility by the BACW, at the address to be defined in the notice.

4.4. Acceptance will be provided by a Commission, named "Comissao de Recebimento de Material e Servicos" (COMREC) that will be enrolled by PAMAGL technicians and staff representatives. A document, named "Termo de Recebimento Definitivo" (Definitive Acceptance Claim), will be issued for each engine and dolly after an inspection that will be performed by above mentioned Commission at PAMAGL premises.

4.4.1. If some non-conformity (related of engine or engine transport set) is observed by above mentioned Commission, acceptance will not be

performed, and SELLER will provide its correction prior to a second inspection.

5. DELIVERY SCHEDULE AND RECEIVING

5.1. The delivery of the engine and engine transport set should happen until 15 days from Purchase Order.

5.2. The ENGINE and ENGINE TRANSPORT SET will be received as follows:

5.2.1. Provisory by the BACW; and

5.2.2. Permanent, by the COMREC in Brazil, after verification of the quality and quantity of the material delivered.

5.3. The delivery must obey the rules set in this TS. Packaging and transport must obey the rules set forth in the OEM Manual.

6. WARRANTY

6.1. SELLER should guarantee all engine operation for the first 150 cycles or with 6 months after engine install at Brazilian Air Force Aircraft.

6.1.1. In case a shop visit is demanded, SELLER will provide, on its own expenses, engine's transportation from PAMAGL to the AMC and from AMC to PAMAGL, after service.

6.1.2. In case of on-wing repair, SELLER will provide, on its own expenses, spare parts, tools transportation, special tools transportation, plus personal, hotel and travel expenses, in order to recover engine airworthiness condition.

6.2. Brazilian Air Force will be responsible for damages or abnormal functions in case of operation, handling or preservation, using procedures not defined at Rolls-Royce Manuals.

6.3. In case of non-conformity during Warranty Period, Brazilian Air Force must provide a written claim, within 72 hours after its occurrence, describing in details: Problem, Operation conditions prior malfunctioning, Maintenance performed by technicians, Rolls-Royce Manual references of maintenance performed.

6.4. After recovering airworthiness condition of engine, SELLER must present a Technical Report describing: Problem observed, Causes, Maintenance procedure adopted.

6.5. The Warranty Period for the engine recovered under recognized Warranty will have its end increased by the amount of days corresponding to period starting at Warranty Claim presentation and finishing at engines delivery to Air Force.



6.6. In case a warranty is not confirmed by SELLER technicians or representatives, all expenses will be Brazilian Air Force responsibility.

6.7. SELLER will be responsible for the cost of any necessary transportation of any Product of Part subject to a valid Warranty Claim to, or from, the its Facility.

7. TECHNICAL ASSISTANCE

7.1. Brazilian Air Force may request SELLERS technicians support during first engine installation and run, in order to ensure the operation will be performed accordingly Rolls-Royce Manuals.

7.2. During Warranty period, Brazilian Air Force maintenance staff may request SELLERS technicians support on troubleshooting activities. Tools and special tools transportation, personal, hotel and travel expenses, and spare parts demanded, in order to recover airworthiness condition of the engine, will be Brazilian Air Force responsibility.

7.2.1. In case of engine malfunctioning is object of Warranty, all costs related with the Technical Assistance will be SELLER responsibility.

8. PAYMENT

8.1. Payment will be provided after Definitive Acceptance Claim issue.

8.2. Brazilian Aeronautical Commission will pay each engine and dolly, according above mentioned Claim is presented at Commissions office.

8.3. Payments will be made by BACW to the CONTRACTED PARTY within thirty (30) days of the receipt by the PAMAGL of the engine.

9. TAXES AND FEES

9.1. All US Government taxes, fees, etc, concerning the selling itself and USA Customs procedures for definitive exportation will be due by the SELLER.

9.2. All Brazilian Government taxes, fees, etc, concerning the business itself and Brazilian Customs procedures for definitive importation will be due by BUYER.

9.3. Price presented by SELLER must include all taxes and fees concerning US Law.

10. FINAL DISPOSALS

10.1. Doubts concerning the present Request for Quotation should be presented to PAMA-GL, addressed to:

PAMA-GL / Engineering Department



Ph # +55 21 3184-5087

E-mail: renanjmd@fab.mil.br

Signed on: July 26th 2023



RENAN JÚNIOR DE MELO DAMACIANO 1º Ten Eng

Technical Advisor of the C/E/R-99 Projets