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Schedule 5 – Repair Specification (Statement of Requirements) for Contract No: LSBU11/0002

SPECIFICATION FOR THE REPAIR AND REFURBISHMENT OF OPTICAL LINE REPLACEMENT UNITS UNDER CONTRACT LSBU11/0002

The contents of this specification must not be communicated to a third party or used for any other work than that for which the specification is issued without the written agreement of the Babcock DSG Repair Manager

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Amendment Record

Issue/ Amdt No	Identification of Change Page & Para No	Date Entered	Date Effective	Authorisation

1.0 Introduction

1.1 The equipment covered by this Statement of Work (SoW) belongs to the Armoured Vehicle Protection (AVP) and provide optical units and various equipment for the Challenger, Warrior, Titan and Trojan vehicles; this equipment is listed in Table 1; any previous versions of these items will be repaired and returned as the latest standard unless otherwise instructed.

Table 1 – Equipment Details

NSN	DESCRIPTION	PLATFORM
5836-99-975-4063	Video Switching Unit	T2
7025-99-351-4124	Display Unit	T2
2590-99-301 -8377(pre fab)	Control Unit	T2
2590-99-813-2337(post fab)	**Control Unit**	**T2**
5998-99-027-0854	Circuit Card	T2
1240-99-660-4273	Controller	9CR2
1290-99-383-4248	Panel Gunners Control	4CR2
6670-99-861-9706	Load Cell	4CR2
2540-99-212-7648	Camera Television	9CR2
6710-99-301-8484	L 3 Camera (T2) low level lighting	T2
1240-99-341-8137	Panel	9CR2
1240-99-938-2182	Front Panel	9CR2
2540-99-274-4344 (pre fab)	T2ERDSU	T2
2540-99-376-4132(post fab)	**T2ERDSU**	**T2**
1290-99-902-2395	Panel	9CR2
2510-99-321-1220	Commander Service Panel (T2)	T2
2510-99-356-1150(pre fab)	Drivers Control Panel (T2)	T2
2590-99-919-6411(post fab)	**Drivers Control Panel (T2)**	**T2**
5975-99-852-8942	Hull Rear Junction Box (T2)	T2
6110-99-292-4750(pre fab)	Power Dist Panel (T2)	T2
6110-99-877-4857(post fab)	**Power Dist Panel (T2)**	**T2**
2590-99-784-1891	Warrior Control Handle	WARRIOR
6150-99-812-8070	HFS	WARRIOR

1.2 This document is intended as an outline specification detailing the engineering requirement to enable a company to apply their expertise to produce a compliant product that meets the in-service user requirements, which shall be acceptable to the Authority and for which a warranty shall be provided. The performance of completed assemblies shall meet that of the original equipment manufacturers (OEM) specification and the criteria contained in this specification. Should any changes exist between the OEM and MoD specifications, either in build or test criteria, the OEM will generally take precedence. Clarification should be sought from the Babcock DSG Repair Manager.

1.3 The demanding operational role of Armed Service equipment is significantly different to that of equivalent commercial equipment. It is essential to ensure that this equipment proves reliable when used and that the end user has the necessary confidence that it will survive the rigours of Service application.

1.4 It is a requirement of the MoD that contractors hold a current recognised third party Quality Accreditation Certification (UKAS or International equivalent). For the work requirement of this specification, the contractor shall be registered in accordance with the requirement of ISO 9001:2008 suitably scoped as a minimum.

1.5 There may be circumstances, such as urgent operational requirements (UOR) where it will be to the Authority's benefit to accept delivery of products that do not conform to contract requirements, as detailed in Defence Standard 05-61 (Part 1) (Concessions), but there must be a clear and demonstrable benefit to the Authority and approval must be given by the Babcock DSG Repair Manager, (in writing), before this takes place.

1.6 Any quantities referred to are estimated quantities only. The Authority may order more or less than those referred to. Any figures are for guidance only and no guarantee can be given that any specific quantities of repairable items will become available.

2.0 Publications

2.1 Contractors are responsible for obtaining the latest OEM publications, parts lists and supersession lists for the equipment.

2.2 Publications produced by the MoD for service use are, in general, based upon the commercial publications but the format is specific to the service user.

2.3 Publications applicable to the assemblies within this requirement are covered in Table 2 below:

Table 2 – Support Publications

Publication	Title
JSP 886	Defence Logistics Support Chain Manual
AESP[1] 0200-A-220-013	Preservation, Identification and Packaging of Assemblies
DEF STAN: 05-57	Configuration Management
DEF STAN: 05-99	Government Furnished Equipment
DEF STAN: 05-92	Quality Systems in industry
DEF STAN: 05-61	Deviation/ Production Permits , Waivers / Concessions and QA of Sub Contractor Work
DEF STAN:00-56	Pt 1& 2 Issue 4 (safety Management Requirements for Defence Material)

[1] Army Equipment Support Publication

DEF STAN: 05-135	Avoidance of Counterfeit Material
DEF STAN: 81-41	Packaging of Defence Material
AESP 2350-F-Octad	Video Switching Unit
AESP 2350-F-Octad	Display Unit
AESP 2350-F-Octad	Control Unit (pre- fab)
AESP 2350-F-Octad	**Control Unit (post fab)**
AESP 1230-C-Octad	Circuit Card
AESP 1230-C-Octad	Controller
AESP 1230-C-Octad	Panel Gunners Control
AESP 2350-F-Octad	Load Cell
AESP 2350-F-Octad	Camera Television
AESP 2320-F-Octad	L 3 Camera (T2) low level lighting
AESP 1230-C-Octad	Panel
AESP 1230-C-Octad	Front Panel
AESP 2350-F-Octad	T2ERDSU(pre fab)
AESP 2350-F-Octad	**T2ERDSU (post fab)**
AESP 1230-C-Octad	Panel
AESP 2350-F-Octad	Commander Service Panel (T2)
AESP 2350-F-Octad	Drivers Control Panel (T2) (pre fab)
AESP 2350-F-Octad	**Drivers Control Panel (T2) (post fab)**
AESP 2350-F-Octad	Hull Rear Junction Box (T2)
AESP 2350-F-Octad	Power Dist Panel (T2) (pre fab)
AESP 2350-F-Octad	**Power Dist Panel (T2) (post fab)**
AESP 2350-T-Octad	Warrior Control Handle
AESP 2350-T-Octad	Hand Firing Switch

3.0 Documentation

3.1 A draft quality plan (QP) will be required at the ITT stage to demonstrate how equipment is to be managed. The completed QP shall be submitted within three months of the commencement of the contract. The QP should identify all risk areas and detail how they will be mitigated and managed throughout the duration of the contract. The QP shall reference procedures, developed in accordance with the Contractors Quality Registration, which detail how control of the repair relating to the Company Quality Assurance processes will be achieved. Inspection and test points shall be clearly indicated. Documentation relating to critical or safety related items and assemblies shall be highlighted.

3.2 If any equipment provided for repair under this contract[2] cannot be completed in accordance with the repair price menu at Appendix A to Schedule 2, then the Contractor is to submit a strip survey report to the Babcock DSG Repair Manager fully identifying the requirement for all work relating to the assembly. No work of this type is to be undertaken by the Contractor until this strip survey report and the associated costs have been sanctioned by the Babcock DSG Repair Manager as 'fair and reasonable' and authority is given to proceed.

3.3 At the commencement of the Contract, and thereafter at reasonable intervals depending upon need arising and priorities, the Babcock DSG Repair Manager and Contractor shall agree a "production plan" for the repair. The Contractor shall provide a monthly report on the progress of the repair work against the plan to the Babcock DSG Repair Manager. This report must include expected delivery dates, financial accrual information and any mitigating factors to support repair and/or delivery variations.

3.4 Records, comprising repair, calibration, inspection, spares and test reports as applicable and defined in this specification, shall be maintained by the Contractor. Additionally the Contractor is to keep records of all visits/survey reports, approvals and costs incurred in the repair/manufacture of the Contractor deliverables. Where there is a legislative requirement, documents are to be kept for the period specified in that legal requirement. All records must be made available to the Authority as required.

4.0 Repair Policy

4.1 **Repair**. Assemblies submitted for repair will have been removed from service for a multitude of reasons[3]. This specification is not to be considered as comprehensive for the work requirement and is not to be used as a reason to limit any work on the assembly. It is the Contractor's responsibility to produce a comprehensive repair specification for each item and to ensure that the quality of the assembly returned after refurbishment / repair shall meet the requirements.

[2] For the purposes of DEFCON 611 all contractor deliverables issued under the contract will be issued on as a Contract work Item (formerly Contract Loan) basis.
[3] The contractor is advised that no guarantee can be given or responsibilities accepted by the Authority regarding the completeness of equipment issued for repair, or given any indications of the level of repair required.

4.2 **Beyond Economical repair (BER**). Fully priced estimates shall be required for any assembly not considered by the repairer as economic to repair. These must be submitted at the survey stage (before work commences) and not be a result of back stripping or cannibalisation. The Authority will only agree Beyond Economic Repair (BER) classification where the Contractor has been able to demonstrate that their cost to repair is greater than the eighty percent of new cost[4] as supplied to the MoD. Once BER has been agreed the Authority will issue disposal instructions for the scrapped carcass accordingly.

4.3 **Replacement Parts**. Procurement of all replacement parts used in the repair shall be the responsibility of the Contractor. All parts shall meet the OEM specification and shall be purchased from approved suppliers. Certificates of conformity (COC) shall be obtained for all parts which have not been sourced through the OEM, and shall be made available to the Babcock DSG Repair Manager or a nominated representative when requested.

4.4 The following items are to be considered as replacement where necessary.

a. All seals, 'O' rings and gaskets.

b. All throw away locking devices, tab washers, nylon nuts, split pins, retaining rings and locking wire.

c. All flexible hoses.

d. All 'P' clips.

e. Screws, nuts, bolts and spacers.

f. Any shelf-life items.

4.5 **Safety.** The Contractor has an obligation towards safety. Any failures or incidents in relation to the equipment which affects safety shall be reported to the Babcock DSG Repair Manager without delay. The Babcock DSG Repair Manager shall be entitled to require action to be taken to correct the failure and to prevent reoccurrence.

4.6 **Modifications**. All modifications approved by the OEM & MoD as defined in the latest technical documentation shall be incorporated as part of the repair. Unauthorised modifications shall not be incorporated. Current known modifications and general instructions are detailed in Table 3.

[4] This is the general guide criteria, however due to the age, complexity and obsolescence issues inherent within this SOW for the equipment listed in table 1; the Contractor will not be able to determine the eighty percent value of the new cost as a guideline for (BER). Therefore the Contractor shall identify those parts which are obsolete and submit their findings via a strip and survey report and P2 form (Application for Disposal of BR/ BER Equipment) to the Repair Manager. This will be submitted to the Authority for consideration, the Babcock DSG Repair Manager will advise in all BER requests.

Table 3 – Equipment Modification

Publication	Modification	General List
AESP 2350-F-Octad	2590-99-301-8377 pre fab 2590-99-813-2337 post fab	Control Unit
AESP 2350-F-Octad	2540-99-274-4344 pre fab 2540-99-376-4132 post fab	ERDSU Camera
AESP 2350-F-Octad	2510-99-356-1150 pre fab 2590-99-919-6411 post fab	Drivers Control Panel
AESP 2350-F-Octad	6110-99-292-4750 pre fab 6110-99-877-4857 post fab	Power Distribution Panel

5.0 Repair Requirement

5.1 **Repair Inspection**. Assemblies received for repair are to be checked for correct nomenclature and part number and a report produced detailing the modification status (if applicable), serial number, any significant damage and/or missing items.

5.2 **MOD Form 445 (Discrepancy Report)**. Any discrepancies in the items delivered should be reported using MoD Form 445 (Discrepancy Report). These reports shall be completed in accordance with the criteria laid down in JSP 886, Volume 4, Chapter 3 and distributed as required by the Contract with two copies to the issuing depot and one to the Babcock DSG Repair Manager.

5.3 **Disassembly.** A detailed inspection of all components shall be carried out, with a full survey report raised to establish the extent of the work requirements. The survey report shall be sent to the Babcock DSG Repair Manager for repair approval as per para 3.2.

5.4 **Repair Requirement**. The scope of the repairs to be carried out shall be determined from the survey against OEM specification. At this stage, all those components being replaced are to be disposed of using Contractor's formal quality control procedures. All remaining components shall be inspected to establish their suitability for re-use or reclamation. Those found not suitable are to be disposed of by the Contractor once approval for the repair has been given by the Babcock DSG Repair Manager.

5.5 **Rebuild**. Assemblies are to be rebuilt in accordance with the latest OEM specification using reclaimed and new components, incorporating all approved modifications where applicable.

6.0 Performance and Test Acceptance

6.1 On completion of repair the assembly shall be subjected to suitable static and dynamic testing and acceptance by the Contractor.

6.2 Final testing of all assemblies shall be carried out in accordance with OEM/MoD procedures and standards. Where discrepancy exists between the OEM and MoD test specification the MoD specification will generally take precedence, but the Contractor shall ultimately seek clarification from the Babcock DSG Repair Manager. It is the responsibility of the Contractor to ensure that all test equipment is maintained and calibrated. OEM specification will take precedence.

6.3 Inspection/test records shall be retained for all assemblies for a period of four years in accordance with DEFCON 609 and made available for the Babcock DSG Repair Manager or nominated representatives of the Authority upon request.

7.0 Preservation & Packing

7.1 Completed assemblies shall be internally & externally preserved in accordance with DEF STAN 81-62 and DEF STAN 81-41.

7.2 All completed assemblies are to be painted, if applicable, to OEM specification in Light Stone Chemical Agent Resistant Coating (CARC) to DEFSTAN 80-208 and in accordance with the general procedures as laid down in DEF STAN 03-32. Units will be painted as defined in the OEM drawing pack.

7.3 Completed assemblies are to be packed in accordance with the relevant Service Packaging Instruction Sheet (SPIS) and to the level shown in the contract or order.

7.4 Any replacement wood used in packaging must be ISPM 15 compliant and carry the Forestry Commission, Heat Treated, mark (see below) (DEFCON 129 refers).

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