# STATEMENT OF WORK – Appendix A Engine Assembly with Container

## 1. SCOPE

### 1.1. Objective

The objective of this SOW is to describe the tasks necessary to return an LSVW engine and its container to a satisfactory operating condition.

### 1.2 Background

The R&O of the LSVW engine assembly has to be completed at a CAF 4th Line or a commercial, due to resource issues the CAF preference to use a commercial facility, wherein referred to as the Contractor..

### 1.3 Terminology

See Annex A

## 2. REFERENCE DOCUMENTS

C-30-230-000/MP-001 Part 2 Engine Assembly including all Annexes'.

## 3 REQUIREMENTS

### 3.1 Scope of Work

The Contractor must replace those parts classified and mandatory and complete all necessary processes and testing required to return the LSVW Engine Assembly to a fully serviceable condition, in accordance with the tasks detailed in the SOW. Annex D LOGSOW describes the responsibilities of all parties involved in the R&O process and the documentation and records required to validate the work.

### 3.2 Tasks

3.2.1 The Contractor is responsible all work related to the R&O services of the engine assembly including data preparation, maintenance of DND records, engineering and technical support, all materials and internal repair parts, disassembly, cleaning, inspection, repairs, overhaul, reassembly, calibration, testing, packaging and preparation for shipment.

3.2.2 The Contractor is responsible for procuring all mandatory replacement parts and material in support of the R&O services.

3.2.3 All work related to the engine assembly **must** be performed in accordance with the specifications identified below:

NSN 2815-21-910-7780 Engine Assembly IVECO The work **must** be in accordance with DND Specification C-30-230-000/MP-001, Part 2, and the most recent Original Equipment Manufacturers (OEM) specifications as required:

3.2.4 The mandatory and all replacement parts **must** be supplied by the OEM or their authorized distributors/dealers in accordance with the most recent OEM drawings and /or specifications:

a) IVECO Fiat Engine, 4 cylinder, in line, 115HP Maximum @ 3800RPM, liquid cooled complete with Turbocharger, flywheel and housing.
b) Borgwarner Turbocharger System 531 497 07004.
c) BOSCH Fuel Injector Pumps 0 460 414 100.

3.2.5 Modifications to the Auxiliary Drive Unit Housing **must** be completed on all Auxiliary Drive Units that have not been completed in previous engine overhaul procedures.

The Contractor **must** implement the modifications to the Auxiliary Drive Unit Housing in accordance with Figure A11 and **must** proceed as follows:

a) The Contractor **must** manufacture and install a jig on housing (13) in place of cover (26) to facilitate a reamer.
b) Using the jig, the Contractor **must** guide a 25 mm reamer through the center of casting hole for gear (18) for the installation of qty 2 brass bushings, type Oil Lite 20mm ID x 25mm OD x 20mm Lg.
c) A hole **must** be drilled 6.5mm in the center of one bushing to ensure the oil feed to shaft and gear (18).
d) Bushings **must** be installed flush to housing. The bushing with the drilled hole **must** be installed on the cover (26) side, ensuring that the hole aligns with the oil feed hole in the housing. Bushings **must** be press fit to the housing with a tolerance of -.003mm to -.004mm.
e) Using the jig and a reamer 20mm, the Contractor **must** ream the interior of the bushings to remove any burrs. The gear **must** be fit to bushing tolerance +.0025mm to +.004mm.

3.2.6 A preservation of rebuilt LSVW engines shall be carried out IAW C-30-230-000/MP-001, Section 10 with the following addition, during dynometer testing, the coolant system will be flushed with a 50/50 mixture antifreeze to prevent corrosion during extended storage.

3.2.7 A de-preservation list with all instructions to de-preserve the engine **must** be attached to each engine in a container with at least the following information:

a) To remove the adhesive tape qty_____
b) Removal of plastic caps the locations and qty _____
c) Cleaning of all surface with preservative with the exceptions _____
d) Indicating to install the " V " belts supplied with the engine Cooling System_____
e) Crankcase System _____

3.2.8 The Contractor **must** forward to the Technical Authority, a monthly report for all engines rebuilt during the preceding month. The report **must** include the following results:

a) Dynamometer test as per Specification C-30-230-000/MP-001
b) Oil pressure;
c) Oil temperature;
d) Coolant temperature;
e) Observations during the test;
f) Read adjustments that were required;
g) An indication that preservation was done as per specification.

3.2.9 Substitution:

All parts **must** be supplied by the OEM or their authorized distributors/dealers in accordance with the most recent OEM drawings and /or specifications.

Any proposed amendment or change to the specification of the parts shall be authorized by the Technical Authority (TA), through the Contracting and Procurement authorities.

Any parts that are not OEM **must** be approved by the TA prior to their use and **must** be of the same form, fit, function and quality as the original OEM parts.

The Contractor **must** provide to the TA, any information needed to evaluate the proposed substitute parts, including but not limited to; technical data, drawings and specifications.

3.2.10 Disassembly Beyond Economic Repair (BER) and Disposal:

Items that have been approved by the TA to be BER are considered as Government Furnished Overhaul Spares (GFOS) and remain the property of the Government of Canada. BER parts and assemblies in this contract must be disassembled, used when parts are found to be in serviceable condition, to repair

items identified in the SOW. These parts can be used to substitute any of the mandatory replacement parts as long as they are serviceable.

In the event a part, sub-assembly, or full assembly is reported as BER, the Contractor must dispose all parts or assemblies. The disposal of all related items must be done in accordance with the applicable local regulations and the relevant applicable laws. The Contractor must provide a written notice of conformation or certificate of compliance once the disposal is completed. For each items disposal, the Contractor must complete, sign and return to DND form DND 2586-E.

3.2.11 Repair and Overhaul Manager (R&OM):

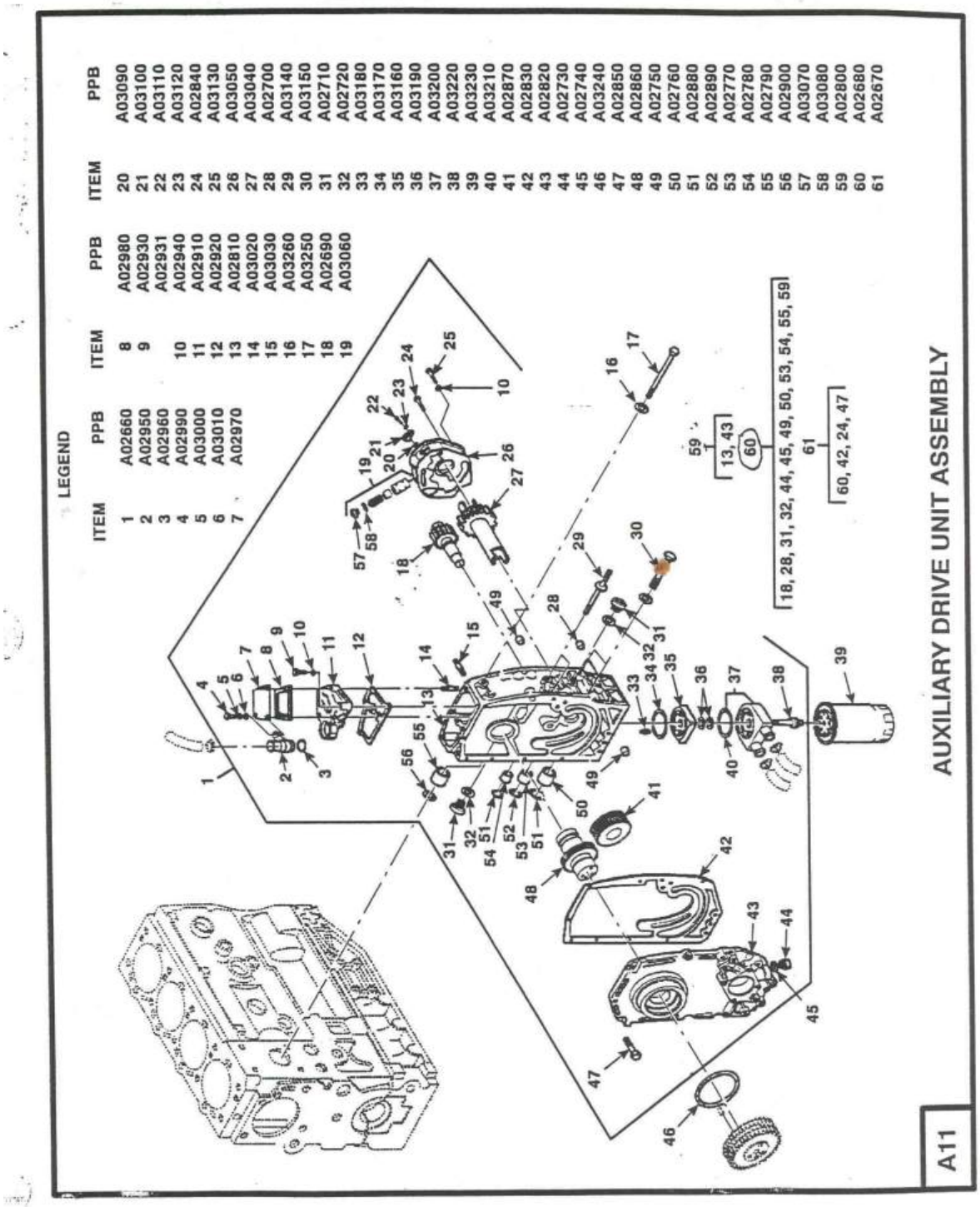
The Contractor **must** assign an R&OM for this R&O contract. The R&OM **must** have the responsibility and authority to manage all aspects of the work and be able to make decisions on behalf of the Contractor. The R&OM **must** be the main interface with DND.

The R&OM **must** have a minimum of three (3) continuous years of experience in the last eight (8) years in managing similar R&O activities as contained in this SOW and a minimum of one (1) continuous year of supervisory experience within the last five (5) years.

The Contractor **must** advise the TA and the PA of any changes in the assigned R&OM within 10 days of changes.

3.2.12 Quality Assurance

The acceptance criteria is as per C-30-230-000/MP-001, Part 2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3 A02960
4 A02990
5 A03000
6 A03010
7 A02970
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9 A02930
A02931
10 A02940
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AUXILIARY DRIVE UNIT ASSEMBLY
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