



NOTICE

This documentation has been reviewed by the technical authority and does not contain controlled goods. Disclosure notices and handling instructions originally received with the document must continue to apply.

AVIS

Cette documentation a été révisée par l'autorité technique et ne contient pas de marchandises contrôlées. Les avis de divulgation et les instructions de manutention reçues originalement doivent continuer de s'appliquer.

ANNEX A – STATEMENT OF WORK

There is a requirement to repair and overhaul (R&O) the Heavy Logistics Vehicle Wheeled (HLVW) transmission.

1. The Contractor must carry out all necessary work required to return the following transmissions, their containers, and related items, such as internal parts, external parts, shafts protruding from the transmissions and attached components to a fully serviceable condition, in accordance with the scope of work detailed herein.
 - a) NSN 2520-21-906-3301 - Transmission with Torque Converter;
 - b) NSN 2520-21-908-3516 - Transmission with Torque Converter;
 - c) NSN 2520-21-920-6480 - Transmission with Torque Converter;
 - d) NSN 2520-12-326-5006 - Transmission with Torque Converter;
 - e) NSN 2520-12-328-0057 - Transmission with Torque Converter;
 - f) NSN 8145-21-907-6107 - Container; and
 - g) NSN 8145-21-909-0570 - Container.
2. The Contractor is responsible for completing all work related to the R&O services of the Transmissions in accordance with C-30-404-000/MP-000, A-LM-184-001/JS-001 and ZF Friedrichshafen AG's ZF Service Information bulletin No. 04/99, titled: Introduction of a new clutch lining for WSK 400.
3. The Contractor is responsible for procuring all replacement parts and materials in support of the R&O services to bring the aforementioned transmissions and containers in Para 1 to serviceable condition.
4. In the event of conflict between the documents referred to herein, the Original Equipment Manufacturer's (OEM) or current Intellectual Property (IP) Owner's specification must take precedence. The Technical Authority (TA) must be advised of such discrepancies.
5. The following work must be performed for all transmissions and related items.
 - a) Cleaning:

The Contractor must remove paint on external surfaces of housings and cases ensuring there are no cracks, and that the new paint adheres to all surfaces when repainted. Special care must be taken to inspect for potential contamination by sandblast material or any other foreign material in the transmission housing, components and torque converter.
 - b) Inspection:

The Transmission and related items must be inspected for worn, burnt, cracked and broken internal and external parts. The process is to include visual inspection of all threaded holes and inserts.
 - c) Clutch Disk Conversion:

For all transmission equipped with the old-style organic fiber disc clutch system, the modification to a ceramic lining model must be implemented. The Contractor must refer to: ZF Service Information bulletin No. 04/99, titled: Introduction of a new clutch lining for WSK 400.

d) Threads and Inserts:

All clutch housing threaded ports and studs inserts that are damaged must be repaired.

e) Reassembly:

For all transmissions, the clutch housing (ZF part number [P/N] 4130 206 037) and the corresponding housing that mates with the clutch housing must be coated with Loctite 574 Flange Sealant around the four (4) ports as shown in Figure 1. Sealant must not overflow inside the ports.



Figure 1: Clutch housing and mating housing (not shown) – Application of Loctite 574 Flange Sealant

For all transmissions, the transmission housing (ZF P/N 1269 301 138) must be coated with Loctite 515 Flange Sealant as shown in Figure 2. Care must be taken to ensure that minimal overflow of sealant goes inside oil passages.

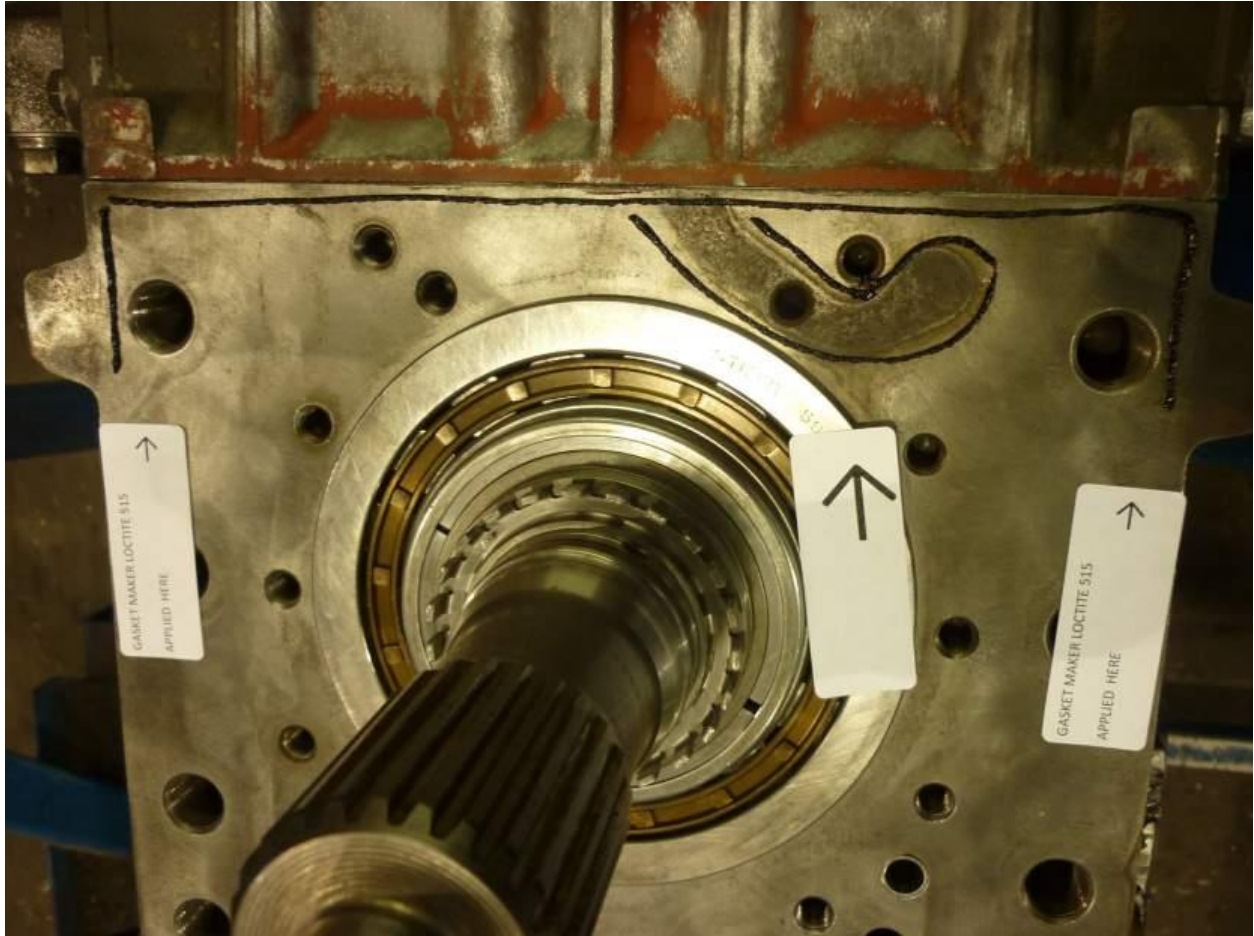


Figure 2: Transmission housing – Application of Loctite 515 Flange Sealant

For all transmissions, the connecting housing (ZF P/N 4130 306 166) must be coated with Loctite 515 Flange Sealant as shown in Figure 3. Care must be taken to ensure that minimal overflow of sealant goes inside oil passages.



Figure 3: Connecting housing – Application of Loctite 515 Flange Sealant

f) Painting:

The Transmission and related items must be coated with a commercial grade automotive paint, color 34094 (flat green).

During the painting process, the Contractor must ensure all exposed machine surfaces are left paint free with a high temperature corrosive resistant compound applied to the surface(s).

The Contractor must also ensure that all exposed seals and rubber protective covers (rubber boots) are kept paint free to prevent the surfaces from drying and cracking. The Contractor must ensure all electrical wiring, attached electrical components, sending units, vents, breathers and breather tubes (if made of plastic or rubber) are kept free of paint as well.

g) Testing:

A copy of the test results as per specification C30-404-000/MP-000, Part 3 and 4, Section 5 Figures 3-5-1 / 4-5-1, must be forwarded to the TA with every invoice for all transmission with torque converter rebuilds.

h) Packaging and preservation process:

Preservation and packaging must be completed as per C-30-404-000/MP-000 Part 3, Section 10.

6. Mandatory replacement Parts:

The Contractor must replace all parts and assemblies as detailed in the following documents:

- a) For NSN 2520-21-906-3301 - Transmission - Mandatory replacement parts are found in C-30-404-000/MP-000, Part 3, Section 8;
- b) For NSN 2520-21-908-3516 - Transmission - Mandatory replacement parts are found in C-30-404-000/MP-000, Part 4, Section 8;
- c) For NSN 2520-21-920-6480 - Transmission - Mandatory replacement parts are found in C-30-404-000/MP-000, Part 4, Section 8;
- d) For NSN 2520-12-326-5006 - Transmission - Mandatory replacement parts are found in C-30-404-000/MP-000, Part 3, Section 8; and
- e) For NSN 2520-12-328-0057 - Transmission - Mandatory replacement parts are found in C-30-404-000/MP-000, Part 4, Section 8.

6.1. The Contractor must repair and overhaul the torque converter and housing in conjunction with the instructions below.

6.1.1. Torque converter assembly

- a) Replace bearings;
- b) Machine the input shaft;
- c) Install speedy sleeve;
- d) Replace Seal Kit NSN 5330-12-170-7728; and
- e) Replace all other compulsory replacement parts.

6.2. The Contractor must repair the container in conjunction with the instructions below.

6.2.1. The Contractor will be responsible for repairing containers, to make them compliant, in accordance with drawing # 8877848-1 and 8878130-1. Containers must be completely sealed against the intrusion of moisture and the moisture indicators must be replaced. The Contractor will be paid for the repairs at the Contractor's laid-down cost, and at a firm hourly labour rate. Related parts to be invoiced as per pricing annex.

7. Substitution:

- a) All parts must be supplied by the OEM or current IP Owner or their authorized distributors or dealers, in accordance with the most up to date IP Owner drawings or specifications.
- b) Any proposed amendment or change to the part specifications must be authorized in writing by the TA, by communicating to the Contracting Authority (CA) .
- c) All Non-OEM or Current IP Owner parts must be approved in writing by the TA prior to their use and must be of the same form, fit, function and quality as the OEM's or current IP Owner's specification.
- d) The Contractor must provide to the TA the information required to evaluate the proposed substitute parts, including technical data, drawings and specifications.

8. Government Supplied Material (GSM):

DND will not normally provide any GSM to the Contractor for all work performed under this SOW. However, where costs are prohibitive or where parts cannot be procured by the Contractor, DND and the Contractor may agree to the provision of specific parts. GSM owned parts will not be invoiced to DND, nor will markup or administrative fees be charged to DND for this purpose.

9. Work authorized to exceed the Maximum Repair Cost (MRC):

For work expected to exceed the MRC (Ref A-LM-184-001/JS-001), the Contractor must not commence work prior to a written TA approval.

10. Beyond Economic Repair (BER):

Equipment that has been approved by the TA to be BER are considered GSM and remain the property of the Government of Canada.

BER items in this Contract must be disassembled, used when required in the repair of the parts detailed in Para 1 and must not be used to substitute any of the mandatory replacement parts.

11. Technical Investigations & Engineering Studies (TIES) and Special Investigations & Technical Studies (SITS):

When requested through a DND 626 Task Authorization, the Contractor must perform TIES and SITS.

12. Repair and Overhaul Manager (R&OM):

The Contractor must assign a R&OM for this R&O contract. The R&OM will be responsible for managing all work under this contract and will be the Contractor's sole point of contact for work arising out of this contract. The Contractor must advise the TA and the Contracting Authority (CA) of any changes in the assigned R&OM within 10 days of changes.

13. Quality assurance requirements:

a) Responsibility:

- i) The Contractor must provide a proof that they have continuously provided R&O services of similar items for at least 3 years over the last 15 years.
- ii) The Contractor must provide a proof from the OEM or current IP Owner for the equipment under this SOW, that they are, and remain a licensed repair and overhaul facility for the equipment in this SOW.
- iii) The Contractor is responsible to meet a turnaround time of 90 days for equipment under para 1.
- iv) The Contractor is responsible for the performance for all inspection requirements under this SOW.

14. R&O Contractor Effectiveness Report

14.1 In order for the TA to properly track the work that is in progress, and which has been completed, the Contractor must provide an R&O Contractor Effectiveness Report to the TA and CA on a quarterly basis and within 5 business days whenever requested.

14.2 The quarterly periods are defined as follows:

- a) 1st quarter: April 1 to June 30;
- b) 2nd quarter: July 1 to September 30;
- c) 3rd quarter: October 1 to December 31;
- d) and 4th quarter: January 1 to March 31.

14.3 The report must be submitted to the TA no later than 5 calendar days following the end of the quarterly reporting period.

14.4 The report must contain at least the following details:

- a) Quantity (qty) of items;
- b) NSN;
- c) Description;
- d) Work Order number;
- e) Date received;
- f) Current status; and
- g) Estimated completion dates.

14.5 Any deviations to this list of required details must be approved by the TA.