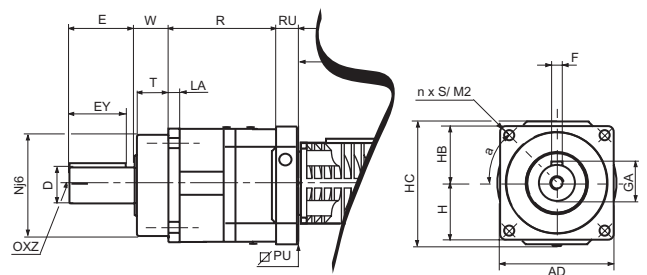




This manual is to be given
to the end user



Pjn

Servo gearboxes

Installation and maintenance

Pjn
Servo gearboxes
 NOTE - CAUTION - CONTENTS

NOTE

LERROY-SOMER reserves the right to modify the characteristics of its products at any time in order to incorporate the latest technological developments. The information contained in this document may therefore be changed without notice. LERROY-SOMER gives no contractual guarantee whatsoever concerning the information published in this document and cannot be held responsible for any errors it may contain, nor for any damage resulting from its use.

CAUTION



Throughout the manual, this symbol warns of consequences which may arise from inappropriate use of the servo gearbox Pjn since risks may lead to material or physical damage.

Despite all the care taken in the manufacture and checking of this equipment, LERROY-SOMER cannot guarantee that lubricant will not escape during the product's lifetime. If slight leaks could have serious consequences for the safety of people and property, the installer and user should take all necessary precautions to avoid such consequences.

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Pjn

Servo gearboxes

STORAGE - INSTALLATION RECOMMENDATIONS - LUBRICATION

1 - STORAGE

Pjn servo gearboxes can be stored horizontally in a dry place at a temperature between 0° and 30°C in their original packaging (for a maximum of one year). (The threads and the area below the screw heads of the locking clamps are lubricated with molybdenum disulphide).
The service life of servo gearboxes increasingly depends on how well they are maintained.

2 - INSTALLATION RECOMMENDATIONS

Servo gearbox :

For the installation of Pjn servo gearbox, follow the "Recommendations" chapter in the general manual (ref. 2557).

Servo motor :

For connection of the complete drive system (with brake), follow the instructions of corresponding maintenance delivered with the goods in the parcel.

3 - LUBRICATION

The Pjn servo gearbox is supplied as standard lubricated with an oil with a viscosity of 150 mm²/S that is heavy pressure wear-resistant against the risks of pitting, spalling and abrasion with a very high natural viscosity index and complete stability at shearing. (Klüber ref. GH6-150).



You must use an oil of the recommended type. Please observe the oil quantities specified in the table opposite. (Magnetic plugs make filling, pressure relieving and draining easier, and retain any metallic particles).

POLYGLYCOL LUBRICANTS CANNOT BE MIXED WITH MINERAL OR SYNTHETIC LUBRICANTS OF A DIFFERENT TYPE.

3.1 - Maintenance, draining

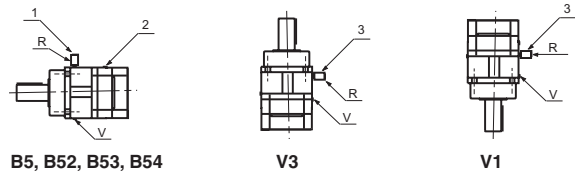
It is advisable to carry out initial draining after between 100 and 500 operating hours in order to remove the initial residue from operation. Subsequent draining should preferably be carried out every 10,000 hours. For harsh applications, please consult Leroy-Somer. **Observe the recommended draining intervals and oil quantities.**

3.2 - Plugs position

a - Servo gearboxes have an upper plug for **refilling** and a lower plug for **draining**. The position of these plugs depends on the operating position of the servo gearbox, which must be **specified at the time of ordering**.

b - For continuous operation at rated speed, the optional breather plug must be installed.
After installing the servo gearbox on site, insert the breather plug in the place of one of the standard plugs and observe the orientation of the vent hole.

Operating position



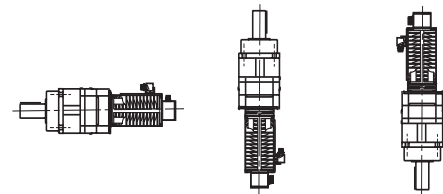
1. Indifferent orientation of the vent hole
2. Position of the plug for servo gearboxes ratio 3 to 10

3. Orientation of the vent hole at the top

R: Fill plug
V: Drain plug

3.3 - Oil capacity (cm³)

Operating position



| Type Pjn | B5, B52, B53, B54 | V3 | V1 |
|----------|-------------------|------|------|
| 0801 | 30 | 30 | 50 |
| 0802 | 50 | 50 | 70 |
| 0803 | 70 | 70 | 100 |
| 1101 | 90 | 90 | 100 |
| 1102 | 130 | 130 | 220 |
| 1103 | 190 | 190 | 340 |
| 1401 | 170 | 170 | 190 |
| 1402 | 250 | 315 | 390 |
| 1403 | 330 | 400 | 590 |
| 1801 | 250 | 250 | 285 |
| 1802 | 400 | 500 | 685 |
| 1803 | 550 | 800 | 1085 |
| 1901 | 250 | 250 | 285 |
| 1902 | 400 | 500 | 685 |
| 1903 | 550 | 800 | 1085 |
| 2401 | 600 | 600 | 600 |
| 2402 | 900 | 1200 | 1550 |
| 2403 | 1200 | 2000 | 2400 |

For all other operating positions, follow the quantities specified in column V3.

Lubricants:

| Brands | Reference | Viscosity |
|--------|------------------|------------------------|
| KLÜBER | GH 6-150 | 150 mm ² /S |
| MOBIL | Glygoyle-22 | 163 mm ² /S |
| MOTUL | Berubynth EP 150 | 158 mm ² /S |
| SHELL | Tivela WA | 158 mm ² /S |

Approved lubricant

Pjn Servo gearboxes

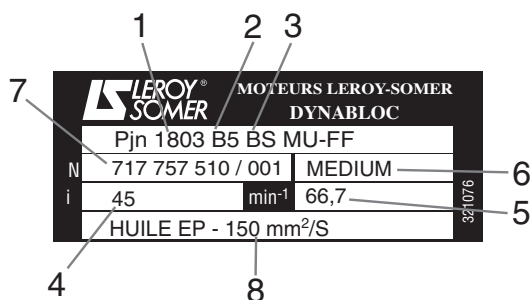
TECHNICAL CHARACTERISTICS - INSTRUCTIONS FOR DISMANTLING AND REBUILDING

4 - TECHNICAL CHARACTERISTICS

Necessary information

a) from the servo gearbox nameplate :

- 1- servo gearbox model and size
- 2- operating position
- 3- fixing form : BS
- 4- exact reduction
- 5- output speed (min⁻¹)
- 6- backlash : MEDIUM
- 7- serial number
- 8- lubrication



b) Where a servo motor is fitted to the servo gearbox, from the servo motor nameplate :

(for the servo motor : see the corresponding manual)

- servo motor type, example : **95UMB300CACAA**

- Bring into contact the 2 sleeve locking screws.
- Tighten the screws of the servo motor.
- Tighten the 2 coupling screws (gradually, one after the other, in three steps) until the recommended tightening torque is reached (see table below).
- Slightly loosen then tighten the fixing screws of the servo motor diagonally.

| Servo gearbox Pjn | Servo motor (according to Ø) | Locking screw (12.9) | Tightening torque (N.m) | Ø of key hole |
|-------------------|------------------------------|----------------------|-------------------------|---------------|
| 0801, 2, 3 | 75 A à D, 95A | M6 | 17 | 15 |
| | 95 B à E, 115, 142 | M8 | 40 | 15 |
| 1101, 2, 3 | 75 A à D, 95A | M6 | 17 | 15 |
| | 95 B à E, 115, 142 | M8 | 40 | 15 |
| 1401, 2, 3 | 75 A à D, 95A | M6 | 17 | 19 |
| | 95 B à E, 115, 142 | M8 | 40 | 19 |
| | 190 A à D | M10 | 80 | 19 |
| 1801, 2, 3 | 95 B à E, 115, 142 | M8 | 40 | 19 |
| | 190 A à D | M10 | 40 | 19 |
| 1901, 2, 3 | 95 B à E, 115, 142 | M8 | 40 | 19 |
| | 190 A à D | M10 | 40 | 19 |
| 2401, 2, 3 | 142 | M8 | 40 | 19 |
| | 190 | M10 | 80 | 19 |

5 - INSTRUCTIONS FOR DISMANTLING AND REBUILDING



Only use appropriate tools (adequately-sized torque wrenches, calibrated screwdrivers, etc.) or contact a service centre (see back of servo motor manual) or a Leroy-Somer approved centre.

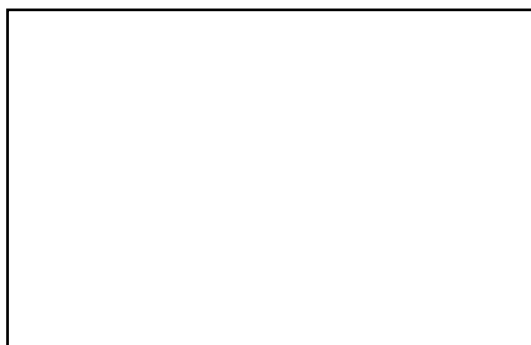
Contact one of the centres to ensure the original standard of the product is maintained.

5.1 - Dismantling

- Uncouple the servo gearbox from the machine.
- Remove the servo motor.
- Dismantle the servo gearbox.

5.2 - Rebuilding

- Proceed in the reverse order to dismantling.
- If the servo motor shaft is keyed, remove the key and check that there is no burr on the groove.
- Degrease the servo motor shaft, the sleeve bore and the mating surface of the flange.
- Position the 2 sleeve screws opposite the orifices used to insert the key in the input bearing.
- If possible, assemble in a vertical position with the servo motor above.



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