Service Manual

Orbital Motor

LSHT Motors with Tacho-Connection
# Service Manual

## LSHT Motors with Tacho-Connection

### Revision History

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Safety Precautions

Always consider safety precautions before beginning a service procedure. Protect yourself and others from injury. Take the following general precautions whenever servicing a hydraulic system.

⚠️ Warning

Unintended Machine Movement

Unintended movement of the machine or mechanism may cause injury to the technician or bystanders. To prevent unintended movement, secure the machine or disable / disconnect the mechanism while servicing.

⚠️ Warning

Flammable Cleaning Solvents

Some cleaning solvents are flammable. To eliminate the risk of fire, do not use cleaning solvents in an area where a source of ignition may be present.

⚠️ Warning

Fluid under Pressure

Escaping hydraulic fluid under pressure can have sufficient force to penetrate your skin causing serious injury and/or infection. This fluid may also be hot enough to cause burns. Use caution when dealing with hydraulic fluid under pressure. Relieve pressure in the system before removing hoses, fittings, gauges, or components. Never use your hand or any other body part to check for leaks in a pressurized line. Seek medical attention immediately if you are cut by hydraulic fluid.

⚠️ Warning

Personal Safety

Protect yourself from injury. Use proper safety equipment, including safety glasses, at all times.
Introduction

Convert Standard OMS/T/V-motors into motors with Tacho-Connection

Standard OMS/T/V-motors can have Tacho-Connection subsequently installed in endcover by removing endcover on OMS/T/V-motors and installing complete endcover with Tacho-Connection, as described in this service manual.

Code Numbers

Complete end cover with tacho shaft.
OMS – T 151F0137
OMT – T 151B0132
OMV – T 151B0139

Symbols Used in Danfoss Literature

- • = Non removable part, use a new part
- • = External hex head
- • = Internal hex head
- • = Lubricate with hydraulic fluid
- • = Inspect for wear or damage
- • = Note correct orientation
- • = Mark orientation for reinstallation
- • = Torque specification
- • = Press in - press fit
- • = Pull out with tool - press fit
1. Fix motor in the holding tool.
2. Loosen the four screws (15) in end cover (14).
3. Lift end cover.
4. Fill oil into the spacer hole and use the spacer (12) as a piston to press up the balance plate (8).
5. Remove washer spring (13).
6. Separate disc valve (7) from valve drive (1).
7. Remove stop ring (5). (Only some short versions).
8. Separate channel plate (2 or 3) from gear wheel set. (Notice OMS has check valves (4)).
9. Remove valve drive (1) from gear wheel set.
Assembly of OMS/T/V-End Cover with Tacho-Connection

**OMS**

Mark the wheel of the gearwheel set at the point where the bottom of an internal tooth is opposite the bottom of an external tooth. (see drawing). Mark the tip of a spline tooth on the end of the valve drive with the widest splines. Line up mark on wheel and valve drive (1). The end with the widest splines and pin on valve drive must point upwards.

**OMT/OMV**

1. Mark the wheel of the gearwheel set at the point where the tip of a spline tooth is opposite the bottom of a tooth in the external tooth (see drawing). Mark the bottom of a spline tooth on the valve drive (1). Line up mark on wheel and valve drive. Pin on valve drive must point upwards.

a) Mount OMS channel plate (2) and mount O-ring (6).

b) Mount OMT/OMV channel plate (3) and mount O-ring (6) between gearwheel set and channel plate


3. Mount disc valve (7) on tacho valve drive (1).

4. Mount washer spring (13) and balance plate (8) in end cover (16).

5. Mount the spacer ring (17) on tacho shaft with grease
Assembly of OMS/T/V-End Cover with Tacho-Connection

6. Mount end cover (16) on the motor and guide the tacho shaft into valve drive so that it engage with the valve drive.

7. Lubricate threads and cross tighten screws (15). OMS 75 – 80 Nm
   OMT 135 – 145 Nm
   OMV 190 – 210 Nm

8. After assembly test the motor in a testpanel. Check it for external leakage and correct rotation direction.
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