Version: 1.1 EN / Item no.: 00601-3-472

Conversion instructions for Viton seal F10 5 HG 300 M1

Please read carefully before initial operation!

ORIGINAL OPERATING INSTRUCTIONS

APV www.apv.at ®

Table of contents

1 Items included

08000-2-007 Conversion kit for Viton seal F10 5 HG300:

00601-3-100	Simmering Viton SLSF 22-35-6	1 pc.
00601-3-102	Support disc 35-22 F10 5	1 pc.
00605-3-643	Temperature measuring strip +71 +110	1x
BN823-35	Locking ring	1x

2 Dismantling the axial piston motor F10 5 HG300

2.1 up to serial no. 08001-03499

- Dismount both hydraulic hoses from the hydraulic motor (Figure 1).
- Unscrew the HG 300 M1 from the PS (Figures 2 and 3).

Figure 1

Figure 2

Figure 3

- Remove the cover from the HG 300 M1 (Figure 4).
- Disconnect the connection between the fan wheel and motor shaft (Figure 5).
- Remove the two M12 nuts, then take off the motor (Figure 6).

Figure 4

Figure 5

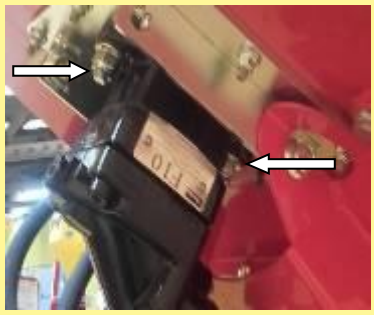

Fig. 6

2.2 as of serial no. 08001-03500

- Remove the cover from the HG 300 M1 (Figure 7).
- Disconnect the connection between the fan wheel and motor shaft (Figure 8).
- Remove the two M12 nuts, then take off the motor (Figure 9).

Figure 7

Figure 8

Figure 9

3 Removing the Viton seal for the axial piston motor F10 5 HG300

- Take off the locking ring with a suitable tool (Figure 10).
- Remove the support disc (Figure 11) and then remove the Viton seal (Figure 12); mechanical damage of the motor must not occur while doing so.

Figure 10

Figure 11

Figure 12

4 Installation of the new Viton seal for the axial piston motor F10 5 HG300

- Insert the new Viton seal with the open side towards the motor (Figure 14).

CAUTION! Put on the support disc such that the side with the chamfer points towards the Viton seal (Figure 13, 14, 15).

Figure 13

Fig. 14

Fig. 15

- Insert the support disc (Figure 16) and with two drift punches or a suitable tube, press the support disc together with the Viton seal evenly into the motor (Figure 17).
- Then fit the locking ring into the recess (Figure 18).

Fig. 16

Figure 17

Figure 18

CAUTION!
The locking ring must be installed with the sharp edge pointing upwards. (Figure 19).

Figure 19

- Remove the old temperature measuring strip from the motor and replace it with the new temperature measuring strip (Figure 20).

Figure 20

Figure 21

5 Installation of the axial piston motor F10 5 HG300
5.1 up to serial no. 08001-03499

- Now the hydraulic motor can be installed again and fixed in place with the two nuts. Ensure that the fan wheel is correctly seated on the motor shaft (Figure 21).
- With the existing hexagon bolt and a liquid thread locker, fasten the fan wheel on the motor shaft with a tightening torque of 10 Nm (Figure 22).
- Then put the fan cover back on and attach with the existing bolts (Figure 23).

Fig. 22

Figure 23

- Put the fan on the PS and fasten it with the existing bolts (Figure 24).
- Connect the motor and the control block with the existing hydraulic hoses. Connection A Motor to connection B on the control block, and connection B motor to connection A control block (Figure 25).

Fig. 24

Figure 25

5.2 as of serial no. 08001-03500

- Fasten the motor with the two nuts M12 (Figure 26).
- Put the fan wheel on the motor shaft and fasten with the hexagon bolt (Figure 27).
- Apply liquid thread locker on the hexagon bolt.
- Install the cover of the HG 300 M1 (Figure 28).

Figure 26

Figure 27

Fig. 28

6 Instructions for working correctly with the HG 300

The fan produces an air current that carries the seed through the hoses to the dispersion plates. The required air pressure and air quantity depend strongly on the seed (type and weight), the spread rate, working width and speed. For this reason, it is not possible to give precise specifications for the correct fan settings, it must be determined in field trials!

CAUTION!
The air flow must not be too low under any circumstances, otherwise the seed can get stuck and clog the hoses! This results in a lot of work, since the hoses must then be disconnected and emptied manually. In addition, the seed might be ground in the metering unit!
An excessive air flow can also have negative impacts on the seed distribution.
Guiding principle: As much air as required, but as little air as possible!!

The air quantity is limited by the spreading material used, which must not be damaged when it hits the spreading plate, nor must it bounce off too high in order to achieve the desired placement!
The fan speed increases proportionally with the oil flow.

Setting procedure (HG)

Version 1 (constant pump – non-adjustable oil quantity)

- Completely screw in the control valve (- minus)
- Start up the fan (tractor engine speed as in field operation)
- Adjust the fan speed using the control valve on the control block
- The control block protects the motor against overspeed

Figure 29

TIP!
The hydraulic pump on the tractor must supply sufficient oil so that the blower fan speed does not drop when the tractor motor speed drops or when other hydraulic functions are actuated.

Version 2 (Variable pump or oil quantity adjustable on the tractor)

- Completely turn out the control valve (+ plus)
- Close the flow control valve on the tractor (set the oil quantity to **ZERO**)
- Start up the fan and run up to the desired fan speed (slowly increase the oil quantity)

TIP!
The control block is only designed for 80 l/min. The system can overheat if the tractor pump produces a greater quantity of oil or if the tractor does not have an oil cooling system.

CAUTION! The setting is only valid for the tractor used. If a different tractor is connected, the fan must be readjusted!
Correct adjustment is essential to prevent possible seeding errors when the speed is too slow or damage to the fan when the speed is too fast!

Setting table for the control valve:
(valid for approx. 50°C oil temperature)

		Working width					
		3 m		6 m		12 m	
Seed	**Rate**	**Pressure**	**Speed**	**Pressure**	**Speed**	**Pressure**	**Speed**
Fine seed	5 kg/ha	5 bar	1400 rpm	8 bar	1550 rpm	10 bar	1650 rpm
Fine seed	30 kg/ha	15 bar	2900 rpm	20 bar	3300 rpm	35 bar	4000 rpm
Coarse seed	50 kg/ha	18 bar	3000 rpm	21 bar	3400 rpm	39 bar	4200 rpm
Coarse seed	100 kg/ha	19 bar	3100 rpm	22 bar	3500 rpm	41 bar	4300 rpm

These pressure specifications apply for the manometer attached on the control block.

TIP: A measuring strip is applied on the hydraulic motor. If the temperature increases in a range of the scale (from 71°C to 110°C), the strip is coloured black.

Temperatures above 80 °C are not permitted!

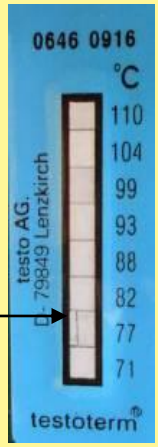

Figure 30

Function of the fan sensor and of the pressure switch

The pressure monitor (Figure 31) prevents the seeding shaft from being switched on as long as the hydraulic fan is not yet switched on, and thus prevents clogging of the seed drill through accidental or premature switch-on.
The hydraulic switch (Figure 32) signals on the control box if too much pressure (10 bar) is applied in the tank line of the hydraulic motor. This can destroy the seal.

Fig. 31

Fig. 32

As soon as one of the two sensors reports an error, the message "Blower fan error" appears on the screen of the Control Box 5.2 or 6.2.

If the blower fan is not running yet, then turn it on. The fault message then disappears and the seeding shaft can be started.
If the blower fan is already running, then there is too much pressure in the tank line of the motor. The causes on the tractor could be a clogged oil filter or a **tank line** to the coupling that is **too small**.

CAUTION!
It is imperative to reduce the pressure, otherwise the motor can be destroyed!

Hydraulic system (HG)

CAUTION!
The hydraulic system is under high pressure!
If the connections are interchanged, there will be an inverse function and/or certain destruction of the hydraulic motor! Risk of accident!

- When connecting hydraulic motors, the specified connection of the hydraulic hoses must be observed!
- When connecting the hydraulic hoses to the tractor hydraulic system, make sure that the hydraulic system on the tractor and implement side is unpressurised!
  For hydraulic function connections between the tractor and implement, coupling sleeves and connectors should be marked to exclude the possibility of operating errors!
- Inspect the hydraulic hose lines at regular intervals and replace in case of damage or wear! The replacement lines must comply with the technical requirements of the implement manufacturer!
- Due to the risk of injury, use suitable tools when searching for leaks!
- Liquids escaping under high pressure (hydraulic oil) can penetrate skin and cause serious injuries! Consult a doctor immediately in case of injury! (Risk of infection!)

CAUTION!
Before working on the hydraulic system, set down the implement, depressurize the system and switch off the motor!

Notes

Qualität für Profis

- seit 1997 -

APV – Technische Produkte GmbH
HEADQUARTERS
Dallein 15, AT-3753 Hötzelsdorf, Austria
Telephone: +43 (0) 2913 / 8001 email: office@apv.at
Fax: +43 (0) 2913 / 8002 Web: www.apv.at

Legal notice:
APV - Technische Produkte GmbH, Managing director: Ing. Jürgen Schöls, Dallein 15
AT-3753 Hötzelsdorf, Austria, marketing@apv.at, www.apv.at, VAT ID no.: ATU 5067 1107

Photos: Company photos (© APV)
Concept & text: Mag. Michaela Klein, Julia Zach, M.A., Ing. Peter Bauer, Claudia Redl
Graphics: Jürgen Undeutsch, M.A. (Undeutsch Media eU), Carina Fressner, B.A. (Undeutsch Media eU), Claudia Redl