Adjustment of the hydraulic fan drive

Default settings – Initial settings

Drills with hydraulic fan drives should be adjusted to the nominal rotational speed suiting the specific tractor. For Rabe seed drills, the following nominal rotational speeds are valid.

Model	**Nominal fan speed at 1000 rpm**	
	Coarse seed minimum	Fine seed rpm range
T 300 L /XL	3000	2300
T 400 XL to 600 XL	3500	2300
T 600	3500	2200 to 2500
T 602 F	3500	2800 to 3200

Table 1

All machines have been adjusted before delivery, and generally run in the correct rotational speed range.

However, assure and exact setting is only possible in connection with the tractor to be used, and is therefore imperative.

It is imperative that the machine is set up correctly, in order to avoid sowing faults due to insufficient rpm, as well as fan damage from excessive rpm

Set up/control should be carried out as described below.

1. Check before setting

I.1) The tractor must fulfil the following basic requirements:

a) Regardless of the oil circuit of the tractor hydraulics, a minimum oil supply of 35 l/min is required, such as the Fendt Favorit 600 with second hydraulic circuit.

b) or else a closed or Load Sensing hydraulic system with adjustable oil quantities, such as John Deere, Fendt Favorit 800 or Case Magnum, with hydraulic system pressure of at least 150 bar.

a) free return to the hydraulic oil reservoir (hydraulic couplings be supplied, type 4 with a pipe diameter of at least 22 mm. Connection point as per tractor manufacturer's instructions. (Fitting of the hydraulic couplings to the tractor for the return supply is not carried out by Rabe service)
b) Confirmation by tractor manufacturer that the hydraulic system is suitable for hydraulic motors.
c) Oil cooler for hydraulic oil.

I.2) Only adjust the rotational speed when the hydraulic oil is at working temperature.

I.3) Whenever possible, fit the hydraulic coupling to a spool valve on the tractor which will be served first.

II. Setting up

Attention: For drills with hydraulic blower drive, run with the airflow valve open for both coarse and fine seeds.

Remove the airflow valve or set it in a fixed position mechanically (at the factory).

II.1 Set up for coarse seed

In Fig. 1:

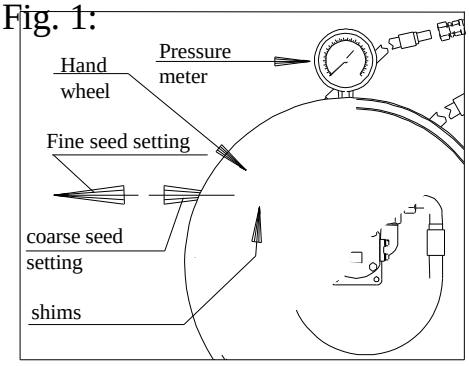


Fig. 1
Mounted drill

1. Turn the hand wheel completely in towards the control block (until checked).

2. Set the oil quantity adjustment lever on the tractor to low throughflow (about 1/3).

3. Start the fan (PTO- rpm at n=1000 rpm)
4. Test the fan speed with a proximity revolution counter.

See table 1 for nominal rotational speeds.
See figure 2 for measuring point.

Measurement of rotational speed and of pressure

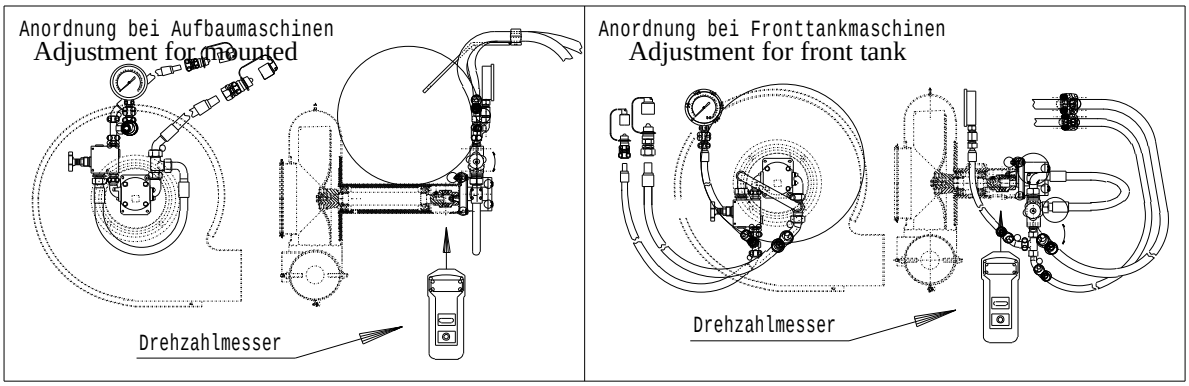


Fig. 2

Drills drills

1. If the nominal rotational speed of the fan is not reached, increase the oil rate on the tractor in steps.

If the required fan revs is still not achieved, a further increase to reach the nominal speed can only be obtained by removing shims individually from under the hand wheel on the control block (figure 1).

2. Reduce the revs to the PTO speed of n=850 rpm.

At this speed, the fan monitor (acustical and lights) should not be activated; if this does happen, slightly increase the oil quantity on the tractor (warning is cancelled).

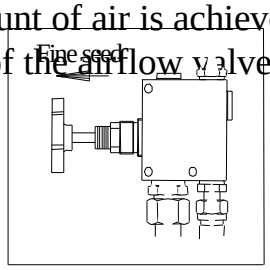
Note the settings: 1. Oil quantity lever on the tractor.
2. Oil pressure display on the drill.

Indicate the level on the pressure manometer with the marking arrow provided

Attention: This setting is only valid for the tractor which is connected.
If a different tractor is used, set up again.

II.2 Set up for fine seed

For drills with hydraulic fan drive, the reduced amount of air is achieved by reducing the fan speed, not by changing the setting of the airflow valve.



Carry out the adjustment as follows:

1. Turn the hand wheel completely away from the control block (until checked). See figure 3.
2. The oil quantity setting on the tractor remains unchanged from what has already been determined.

The required reduced fan speed is achieved automatically by the valve. If the fan speed is too low for fine seed, increase it according to table 1 by turning the hand wheel in.

Note the settings: 1. Oil quantity lever on the tractor.
2. Oil pressure display on the drill.

Indicate the level on the pressure manometer with the marking arrow provided

A well adjusted hydraulic fan drive works in the following pressure ranges:

Working setting	Pressure range	
	Up to 3m	4m to 6m
Coarse seed	70 to 90 bar	80 to 100 bar
Fine seed	30 to 40 bar	30 to 50 bar

Attention:

To achieve **constant revs** using tractors with Load Sensing System, all other connected hydraulic systems (coulter pressure, marker arms, pre-emergence marking) must be **reduced** to the **least possible oil quantity** which will ensure functioning.

Important:

For hydraulic fan drives, the seed drill must be equipped with fan monitoring, and the monitored speed should be set to 2300 rpm (see instructions manual for Multitronic II). This must be observed if the hydraulic drive is retrofitted.