

Owners Manual

TAEGE ENGINEERING LIMITED

(www.taege.com)



Air Seeder Series AS600



Specializing in the Design and Manufacture of Innovative Farm
Equipment

Manufactured by:

Dealer / Local Agent

:

Taege Engineering Ltd

Main West Road,

Sheffield 7500

New Zealand

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Revision 3 19/04/2016

Introduction

This manual sets out the technical information for your guidance in the proper use and servicing of this implement.

Extra copies can be downloaded from **www.taege.com**.

The serial/chassis number are stamped and/or plated on the left hand side of the drill, located near the base of the wing ram mount.

Reference to the right and left hand side of the drill is as you see it from behind the drill looking toward the tractor.

Be sure to quote the drill model, chassis number and Controller version number when seeking advice and/or ordering spare parts.

E.g. Series 600 Model 600AS121D Serial/No 005 600 14 ver2.52d

Thank you for buying a **TAEGE** Air Seeder we pride ourselves with over 50 years of specializing in the design and manufacture of innovative farm machinery.

Your Air Seeder has been carefully designed and manufactured to provide years of dependable service, given normal care and proper operation.

Safety

- ❑ Focus on being prepared for emergencies.
- ❑ Read the operators manual carefully.
- ❑ Always follow recommended safe practices for operating this Air Seeder and its associated equipment.
- ❑ Including tractors and other machinery used in conjunction with this Air Seeder.
- ❑ Identify and avoid un-safe terrain.
- ❑ Always use lynch pins and safety chains on all drawbar pins.
- ❑ Do not exceed 30km/hr while towing the drill in normal working position.
- ❑ Keep all covers in place at all time unless removed for repairs or servicing.
- ❑ Stop the Air Seeder before making adjustments.
- ❑ Lower drill to ground or put on stands when working around or under the machine.
- ❑ Ensure tractor electrics are disconnected and/or turned off and machine hydraulics disconnected when working or repairing the Air Seeder.
- ❑ Tighten all nuts and bolts after initial use and thereafter at regular 30 hr intervals.
- ❑ It is recommended that the tractor hydraulics should not be operated in the float position. This to ensures full penetration and proper contour following.
- ❑ Put the safety lockout stays (spacers) on the wheel rams so they are locked in the fully extended position while transporting.
- ❑ Watch for moving parts and stay well clear of Air Seeder while it is moving.
- ❑ Practice safe handling of agricultural chemicals including treated seed.
- ❑ Wear appropriate safety equipment while operating the drill and including when filling seed / fertilizer hoppers and/or adjusting Air Seeder.
- ❑ This includes safety glasses, gloves, ear protection, close fitting clothing and steel capped boots.
- ❑ Visit www.osh.dol.govt.nz for additional guidance and instruction on safe practices in the rural sector and/or other sectors targeted for the intended use of this drill.

SAFE OPERATING PROCEDURES FOR TAEGE Air Seeders

Before operating the Taege Air Seeder please read the following:

Failure to comply with these warnings could result in serious injury. A careful and alert operator is the best insurance against incidents. Taege Air Seeders are designed to be safe to operate.

- Do not wear loose clothing, unrestrained long hair, jewellery or anything which could entangle in components or limit your vision.
- Never work or walk or allow any person/child under the equipment.
- If travelling on the road, the tractor must comply with the necessary lights, turn signals and all other legally required equipment.
- No person is ever to be between the tractor and this implement.
- **No person/child is to climb or ride onto this implement at any time.**
- When parking or before working on the machine. Stop the tractor on a firm level surface and apply the parking brake. Lower the machine to the ground and switch off the engine. Remove the key for added safety. Disconnect the 12vdc power supply.
- The machine should not to be used unless the operator has been trained in its safe use.

MAINTENANCE

Daily

Grease all grease points (see Lubrication)

Weekly

- Check the tyne nuts and wheel nuts are tight at all times
- Check hitch points for wear. Replace when necessary.
- Replace tynes if bent only by those recommended by the manufacturer.

STORAGE

- Store in shed away from vehicle or pedestrian traffic.
- Ensure machine is empty to eliminate rodent damage to rollers as this is not covered by warranty.

Warranty

From the date of purchase your **TAEGE** machine is covered by a 12-month warranty period for faulty parts and/or workmanship.

Ensure your dealer completes and returns a warranty certificate within 7-days of date of purchase

Send to

Taege Engineering Ltd
Main West Road
Sheffield 7500
New Zealand.

On delivery record the following **Basic Information**

Model:.....

Chassis Number:.....

Delivery Date:.....

Owner: Dealer:.....

Check for shipping damage. In cases of shipping damage, ask dealer to arrange for appropriate claim to be lodged immediately.

Ensure the attached registration / warranty validation card has been completed.

Place owners copy of warranty in safe place.

Check that the Dealers copy of the warranty has been correctly filled out and returned to the manufacturer.

Contact your dealer if you have any further queries.

Disclaimer

Drilling Or seeding with Taege® machines in conditions normally outside of the germination tolerances of the seed concerned cannot be expected to give satisfactory results.

Every attempt has been made to ensure the correctness of information and diagrams in this manual. Consequently, Taege Engineering Ltd will not be responsible for any damage or consequential loss arising out of misinterpretation of, or failure to follow, recommended practices and procedures. Nor will Taege Engineering Ltd be liable for any damage caused by, or arising out of modification or misuse of its product. Taege Engineering Ltd reserves the right to change technical details and prices without prior notice.

A full copy of Taege Engineering Ltd warranty document is available from sales@taege.com upon request.

Getting the Air Seeder ready the first time

Attach the tractor to the drill drawbar using the tractor lower linkage arms.

Connect the hydraulic hoses and plug in the drill power lead to the tractor 30amp auxiliary power supply.

Ensure that the hydraulic hoses and wiring loom are clear of the tractor linkage and drawbar.

Stow the Jack stand in the transport position.

Please tighten the wheel stud nuts.

You are now ready to put seed/fertilizer into the hopper/s.

Release the securing hook on the hopper cover and roll the cover to the open position, after filling the hopper, reverse this procedure.

Calibration

Calibration is the method by which you depend to put the correct amount of seed or fertilizer on an area of seed bed. The Controller has been programmed to know the sowing width of the Air Seeder, the distance travelled, and has the ability to speed up and slow down according to the ground speed.

What the operator needs to do "is to accurately measure by weight of the seed that is to be sown". This is done by reading and following the instructions on page two of the **Controller Manual**. It is most important that this is accurate, and that the weighing scales, that are provided be used, these scales measure in one gram increments. Care must be taken to prime the hopper before being calibrated, making sure that no bridging occurs.

Comment: When calibrating an Air Seeder ensure that sufficient seed is weighed.

E.g.

Small seeds at least 1.00Kg

Cereals 2 Kg

Fertilizer 2 -3Kg

Calibration

Go to the RC300L Controller ver2.5x Operators manual and follow the instructions

Page 2 **QUICK CALIBRATION**

Always disconnect the controller when not in use.

Always disconnect the power source when welding on the machine.

Travelling Speed

Taege Air Seeders are able to travel at faster average speeds achieving better tilth, average recommended speeds are from 8Kph to 12Kph. Obviously ground conditions play an important part in achieving this optimum speed. It is important to inspect your seed placement when determining optimum drilling speed and air speed when inspecting seed placement and taking into account seed bounce.

Setting the Sowing Depth

Your TAEGE Air Seeder is fitted with HD Flexible "S" tynes which contact the ground at a specific preset angle which gives greater contour following and ground penetration.

Check the sowing depth. We recommended that you travel at your optimum drilling speed and make sure that the seed placement is correct.

Set the depth, by changing the ram collars on the hydraulic rams.

Making sure that the same number and sized collars are fitted to each hydraulic ram shaft.

Each collar size combination gives you increments of 4mm adjustment.

Adjust the level of the drill, using the height of the lower linkage arms of the tractor and by adjusting the wing ram pins at the top of the wing rams in soft ground conditions.

Setting the Fan Speed

Your TAEGE Air Seeder is fitted with a hydraulically driven fan with cooling and "rpm" sensor.

Adjust the fan speed to suit the seed type being used by adjusting the flow control on the tractor hydraulic control. Optimum fan speed is variable so check and make sure that seed placement is correct. The fan speed is set between 2800rpm & 2900rpm at the factory.

Drill Operation

Once you have set the correct depth, mount the tractor and start drilling by turning the RC300L Controller to **RUN**. You will see a moving indicator on the top right hand of the controller display which indicates engaged operation. When you lift the drill at the end of a drilling run, the air seeder will automatically stop sowing seed and the indicator will stop moving, then start again when the drill is lowered. Check the air speed "RPM" for any variation in speed this shows in both "RUN/STOPPED" mode. Further information is available on the screen by pressing the OK button in the **RUN** mode.

Emptying the Hopper

To empty the hopper, pull the blanking plate that is situated above the metering sponges to the closed position, remove the metering cassette, place a receptacle under the hopper outlet, put the chute in position and push the slide to the open position. The hopper will now gravity empty.

Removing Metering Cassette Assemblies

Release the clamps on either side of the metering cassette after pulling the blanking plate into position closed position, then remove the cassette. Reverse the procedure to re-assemble.

When refitting the cassette assembly unit you may need to re-aligned the driver dogs inside the cassette assembly.

Bolted Connections

All bolts should be checked for tightness and re-tightened after the first day or 50Ha of use.

Thereafter the tyne and tip bolts should checked at regular intervals (i.e. daily or every 100 to 400 ha). Nyloc nuts should be replaced or a spring washer added if the nyloc nuts have been removed more than once.

Adjusting the air turbine (fan) using the tractor flow control

The air turbine (fan) is hydraulically driven with pressure protection for the oil cooler.

The turbine (fan) should be set between 2800rpm & 2900rpm.

Turbine (fan) "RPM" is indicated on the rate controller (RC300L).

Flow rate should be adjusted using the tractors flow control.

Adjust the tractor flow control as follows:-

1. Set the tractor RPM to the expected operating speed.
2. Adjust the flow control on the tractor hydraulic valve until the rpm on the rate controller (RC300L) slows.
3. Then adjust the tractor flow control until desired rpm is achieved.

Please discuss with your dealer and ensure that the tractor being used has sufficient L/min to operate the machine.

Hydraulic System

Your Taege Air Seeder is fitted with a double acting hydraulic system with phasing rams and hydraulically driven turbine (fan) and travelling diverter valve (optional)

Care must be taken when coupling the machine to the tractor, ensuring that you are clear of all overhead power wires and that all persons are clear of the machine.

The hydraulic couplings are fitted with colour coded plugs and caps which indicate the hydraulic circuit being used.

IMPORTANT Always couple the "RETURN" hose first and un-couple the "RETURN" hose last.

BLACK = Larger **return hose** from oil cooler.

BLACK = Turbine (fan).

GREEN = Raise and lower. This circuit has an isolating valve and a flow valve to be used when the machine travelling on the road or when the machine is disconnected from the tractor.

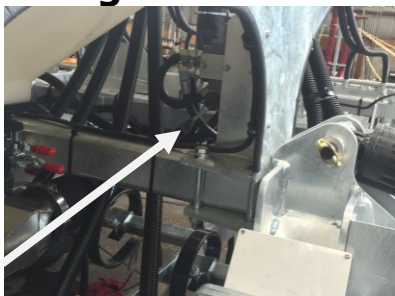
RED = Raising or lowering the right and left wing units.

The tractor raise and lower hydraulics should be operated without using the float option for optimum ground penetration and contour following this ensures that the ground wheels remain in contact with the ground at all times.

YELLOW = 1st Auxillary for rear implement (if fitted).

BLUE = 2nd Auxillary for rear implement (if fitted).

Using the "Travelling diverter valve"



It is important to understand the way this control operates as wrong use will cause incorrect sowing depth and/or incorrect travelling width (approx 3.0m)

Working Position

The lever must be in the "down" position

Road Traveling Position

The lever should be in the up position.

It is important that the lever be in either up or down positions.

Your Dealer will instruct you on the correct use of this feature.

Tyre Pressure

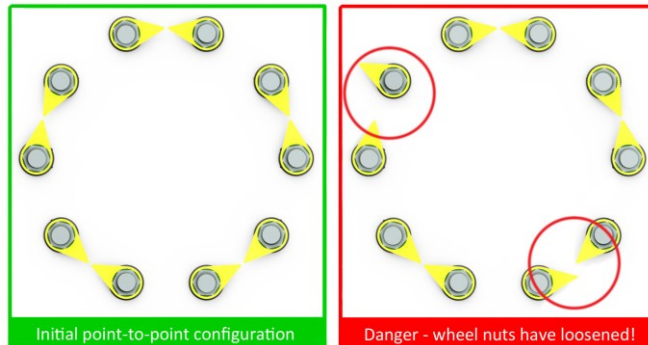
The recommended tyre pressures are shown on the respective manufactures websites. Generally 250 – 490 Kpa (18-35psi)
The drill will bounce excessively if the wheels are over inflated.
Jockey wheel maximum pressure cold. 22 psi (1.5 bar).

Wheel Nut Indicators

Checkpoint®: High visibility loose wheel-nut indicators.

Wheel nuts torque setting 300Nm

Indication below shows before and after.



Lubrication

Air Seeder Series 600 has 16 grease points, lubricate as follows:

Grease the hydraulic ram pivot points (6) every day or every 200Ha

Grease the LH & RH wing pivot points (4) every day or every 200Ha

Grease the linkage points every day (6) or every 200Ha

Grease the wheel hubs monthly.

Always use a high pressure grease gun.

Pump sufficient grease into pivot points until fresh grease becomes visible and extruded around the central shaft.

The jockey wheel has sealed bearings.

DO NOT LUBRICATE NYLON BUSHES AND/OR NYLON BEARINGS

This makes an abrasive paste that will accelerate wear. This applies to all nylon bearings, bearing hangers and snap locks on the seed and fertilizer hoppers.

Jack Stand

Always check that the jack is stored correctly.

Daily Maintenance

Electrical Connections	Drill to tractor auxiliary connection Lead connections Wiring loom for damage	
Drawbar	Lower linkage bar lynch pins	
Bolts	All bolts	
Tynes	Tyne tip bolts Dropper hose connections	
Hopper	Sponges for damage	
Hydraulics	Hose connections Oil leaks Hydraulic rams	
Wheels	Tyre inflation (pressure)	
Wheel nuts	Check tightness	
Jack stand	Correct position	
Lubrication	Grease daily where necessary	

NOTES

MARKER ARMS OPERATION (optional)

If marker arms are fitted to your Taege Air Seeder, Taege Engineering Ltd require you to acknowledge that you have received the proper instructions on their use.

Please sign the following acknowledgment statement.

I the undersigned acknowledge that Taege Engineering Ltd or their Dealer have instructed me on the correct use of the marker arms.

Name.....

Address.....

Signed..... **Date**.....

Taege Engineering Ltd and/or Dealer

Signed..... **Date**.....

The marker arms fitted to your AS600 Air Seeder are controlled from the tractor's remote controls by plugging the orange hydraulic quick attach couplings.

Only operate the marker arms when the Air Seeder wings are in their operating (down) position.

1. Plug in the orange hydraulic hoses into the tractor valve couplings
2. The operator needs to know which direction the arms will travel when the control valve is operated. Choose this direction by changing the quick release couplings position.
3. Either push or pull the control lever to extend the marker arm.
4. Either push or pull the control lever to move the marker arm to either side.
5. To fold the marker arms to the travelling position, hold the control lever until the arm retracts and release when both arms are retracted.

SAFTEY

It is imperative that the orange quick release couplings be disconnected when travelling. This prevents the accidental extension of the marker arms that may contact fences and power lines.

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