



OWNERS MANUAL

Air Seeder Series AS480

Serial # 075***21>>>



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Dealer / Local Agent

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Introduction

Congratulations on purchasing a Taege Air Seeder! Taege Engineering, a market leading agricultural company, who pride themselves on developing market leading solutions demanded by New Zealand farmers and contractors.

Taege Engineering want you to be satisfied with your Air Seeder, which has been designed and manufactured to provide years of dependable use.

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

By following our owner's manual (using, service, maintenance etc.) the life span and the second-hand value of the machine can be extended. If you ever lend or sell this machine, make sure that the borrower or buyer gets the operator's manual, so they will also know how to properly maintain and use it. You can download additional copies of your owner's manual from www.dealer.taege.com.

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

Reference to the left and righthand sides of the air seeder is as you see it from behind the air seeder looking toward the tractor. (direction of travel)

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

E.g. Series AS480 Model 480AS121D Serial/No 005 480 18 RC350 v01.12.

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.
- ❑ Always follow recommended safe practices for 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 20km/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.
- ❑ Always put the wing ram safety lockout valves in the off position when 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 the appropriate safety equipment while operating the drill, including when filling seed / fertilizer hoppers and/or adjusting the 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

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.
- **Before working under the machine, fit all delimiter blocks to prevent the hydraulic rams from closing in the event of a hydraulic hose failure**
- **Before working under the machine, always pin the frame stand down on machines that are uncoupled from the tractor**

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, with genuine parts or 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.

Getting the Air Seeder ready, the first time

Attach the tractor to the drill drawbar using the tractor drawbar.
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 nuts.

You 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.

Starting the Controller

Ensure 2 x Controller leads are connected correctly (red to red) and the Euro ("D") power plug or ("Anderson plug" if fitted) are connected to the tractor.

All hoppers are turned **OFF**. **"X"** and will only turn **ON** after they have been calibrated for the 1st time.

Calibration (from serial number #075***21)



1. Place the **CALIBRATION CHUTE** and **COLLECTOR BIN** under the hopper to be calibrated.

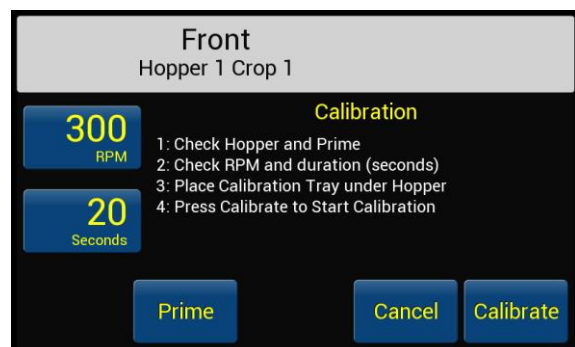


Drilling Position → Clip



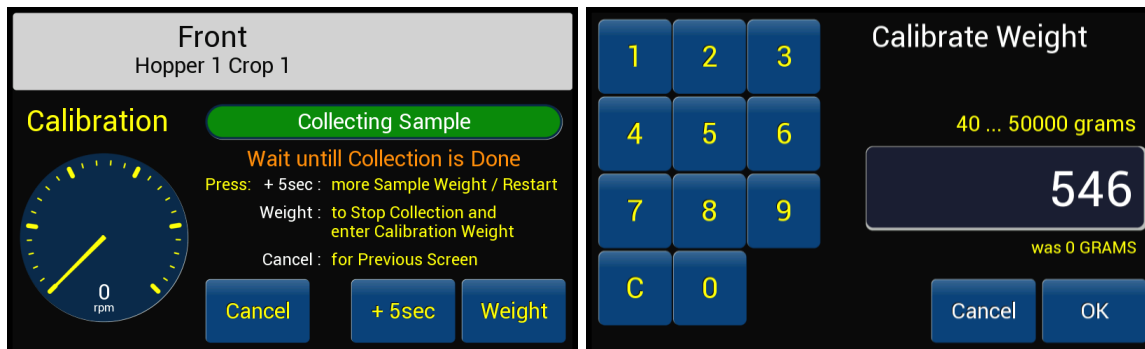
Calibration Position

2. Select (on the computer top line) which hopper to calibrate by touching the   arrows at the top of the screen.

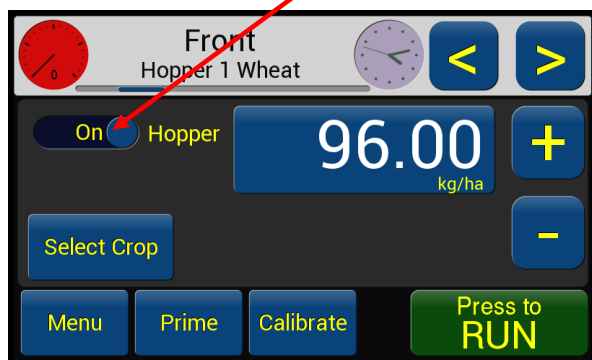


3. Touch the **CALIBRATE** button and on the next screen **HOLD** the **PRIME BUTTON** for approx. 5 seconds to see product being delivered.

4. Empty the bin and replace back under the chute
5. Touch the **Calibrate** button to see 20 seconds of product delivered.



6. Weigh the product **IN GRAMS**.
7. Touch the **WEIGHT** button and enter the amount weighed
8. Touch the **OK** button and check you have entered the amount correctly then touch **OK** again.
9. If this is the first calibration, touch the **“Off”** to turn **“On”**.



10. Enter the sowing rate by touching the kg/ha and putting in the sowing rate or +/-
11. Replace the calibration chute / flap to the drilling position and **” Clip the chute into the drilling position”** with the clip at the bottom of the chute. (see the arrow on drilling position photo)
13. Select other hoppers to be calibrated by repeating the setup procedure again from number 1

Calibration check

1. At anytime you can test the calibration setting by using the following method.
2. Choose the hopper and crop to be tested.
3. Lift the wheel or jockey wheel into a free running position
4. Then on the controller screen press "Menu"
5. On the menu screen press "Area Reset"
6. Press "Yes"
7. Press "Back"
8. Press
9. Move the wheel in the direction of travel until the "ha" on the controller records 0.010 ha and then stop the wheel. Weigh the amount of product, this should equal about 100th of the "kg/ha" target seeding weight

If there is more than a 10% difference. **Recalibrate**

If you are testing a double hopper system, you may need to turn off the hoppers you are not testing to save spilling the contents during the test. Do this by turning the levers on the other gearbox/s to the horizontal position or by turning the hoppers off on the controller.

Always remember to turn the hoppers on again.

Calibration continued -

Calibration ensures the correct weight of seed or fertilizer is spread on an area of seed bed. The controller has been programmed to know the sowing width of the Air Seeder, the distance travelled, and can speed up or slow down according 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 4 of the **Controller Manual**. It most important that this is accurate, and the weighing scales provided are used, these scales measure in 1 gm increments. Please prime the hopper before being calibrated, ensuring no bridging occurs.

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

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 delimiters on the hydraulic rams. Making sure that the same number and sized delimiters are fitted to each hydraulic ram shaft. (On AS480 select the correct delimiters on both wings)

Each collar size combination gives you increments of 4mm adjustment.
Adjust the level of the drill, using the turnbuckle on the drawbar. Make sure that the top turnbuckle pin is located in the fixed position and the locknut has been tightened.
If using 2pt linkage adjust the drawbar height.

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. This speed setting may need to be adjusted for heavier sowing rates. (Contact your dealer for instructions).

Air Seeder Operation

Once you have set the correct depth, mount the tractor and start drilling by turning the Controller to **GO**. You will see a moving indicator at the top 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 “**GO/STOP**” mode. Further information is available on the screen.

Removing Metering Cassettes

Pull the ON/OFF plate into the closed position, release the over-centre clamps on either side of the metering cage and remove the cassette. Change over the cassette for the desired seed/fert rate required. (Reverse the procedure to reassemble). When inserting the metering cassette, **please ensure the TAEGE logo is the correct way up.**

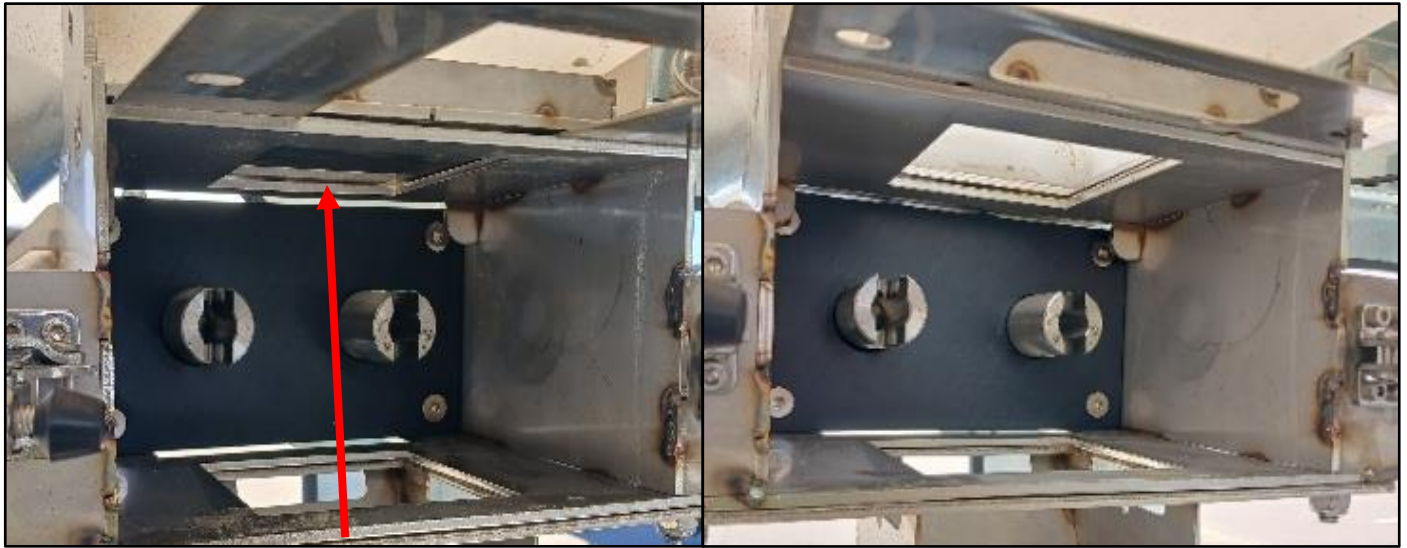
ON/OFF Slide Handle



Inserted Metering Cassette with Over-Centre Clamps



When refitting the cassette, you may need to re-align the driver pins inside the cassette to line up with the drive gears. **PLEASE REMEMBER TO PUSH THE BLANKING PLATE INTO THE OPEN POSITION TO ALLOW PRODUCT TO RUN OUT OF THE BIN WHEN DRILLING.**



Closed Position

Open Position

Metering Cassette Selection

The type of cassette roller used should reflect the type of seed and the sowing rate required for your job. Please ensure correct selection of metering cassette for optimal results.

The following options and examples are guidelines. If there are concerns about seeds, please contact your local Taege Dealer.



Small Seed Insert

- Low rate seed insert best suited for small seeds.
- **ONLY** inserted into double sponge cassette.
- Approx. 600 grams – 12 kgs per hectare.
- e.g. rapeseed, kale, swedes, turnips.



Twin Sponges

- All-purpose medium rate metering cassette.
- 10 – 100 kgs per hectare.
- **NOT FOR FERTILISER.**
- e.g. larger seeds, wheat, barley etc.



Sponge & Medium Fluted Roller

- Medium rate metering cassette well suited to lower rate grass seed.
- 15 – 100 kgs per hectare.
- e.g. grass seed, barley.



Sponge & High Speed Fluted Roller

- High rate metering cassette best suited for grain and fertiliser.
- 100 – 250 kgs per hectare and above.
- e.g. grain, fertiliser



Small Seed Inserts

The small seed insert will be required for low sowing rates (approximately 600 grams – 12 kgs per hectare). It can only be inserted into the double sponge cassette. **DO NOT USE FOR GRASS SEED.**



Secure the small seed insert as below.....



1. Turn the cassette the right way up as if inserting into the metering cage. (The smaller opening of the cassette should face upwards, the handle placed at the bottom below the TAEGE logo which should read the right way round).
2. Undo the four grub screws located on top edge of the cassette. Note that the screws should not be taken all the way out.
3. Place the small seed insert with the two peaks facing downwards such that they align with the outer face of the sponges. It should look like the attached picture.
4. Tighten the grub screws to hold the small seed insert in place.
5. Insert the cassette into the metering cage and lock in place with the over centre clamps just as any other cassette.
6. **REMEMBER TO PUSH THE SHUT-OFF SLIDE BACK INTO THE OPEN POSITION TO ALLOW PRODUCT TO FLOW OUT OF THE BIN WHEN SEEDING.**

Hopper Emptying Chute

The hopper emptying chute is used to quickly and cleanly empty the air seeder bin into more suitable storage, removing product from the bottom of the bin.



Hopper Emptying Chute

To empty your bin quickly and cleanly, follow instructions below.....

1. Pull the ON/OFF plate forward into the SHUT OFF position to prevent any flow out of the bin.
2. Remove the metering cassette by unlocking the clamps on the front of the metering cage.

3. Insert the hopper emptying chute into the metering cage and lock it in with the over centre clamps. The chute should point downwards and towards the over centre clamps.
4. Ensure that you have sufficient storage to catch the released product.
5. Push the ON/OFF plate in to release the flow of product from the bin.
6. Remove and replace the same as any other metering cassette.

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 be 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) is set between 2800rpm & 2900rpm at the factory.

The turbine (fan) speed must never exceed 4000rpm.

Turbine (fan) "RPM" is shown on the Controller.

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 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 oil flow (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).

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.

This is the larger **return hose** from oil cooler.

BLUE 2x = Turbine (fan). Pressure.

BLUE 1x = Turbine (fan). Return.

GREEN 2x= Pressure = Raise

GREEN 1x= Return = Lower

This circuit has an isolating valve must be used when the machine travelling on the road or when the machine is disconnected from the tractor.

Raise and lower the wing units

RED 2x = Pressure

RED 1x = Return

The tractor remote 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.

Tyre Pressure

The recommended tyre pressures are shown on the respective manufactures websites. Usually between 250 – 490 Kpa (18-35psi)

The drill will bounce excessively if the wheels are over inflated.

(If fitted the jockey wheel maximum pressure cold. 22 psi (1.5 bar))

Lubrication

Air Seeder Series 480 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.
- 2pt linkage

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

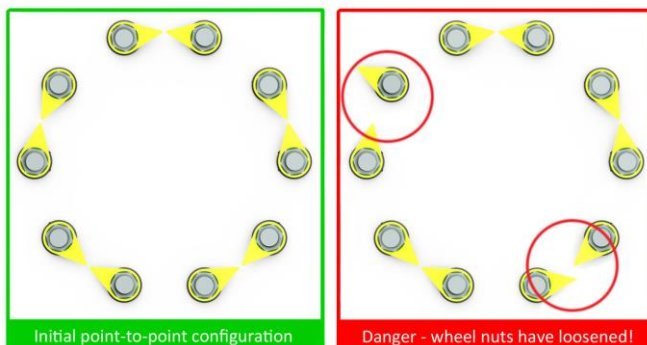
Always check that the jack is stored correctly.

Wheel Nut Indicators

Checkpoint®: High visibility loose wheel-nut indicators.

Wheel nuts torque setting 300Nm

Indication below shows before and after.



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	

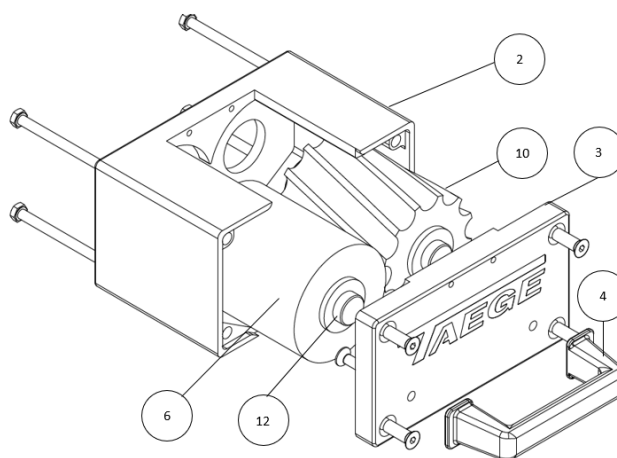
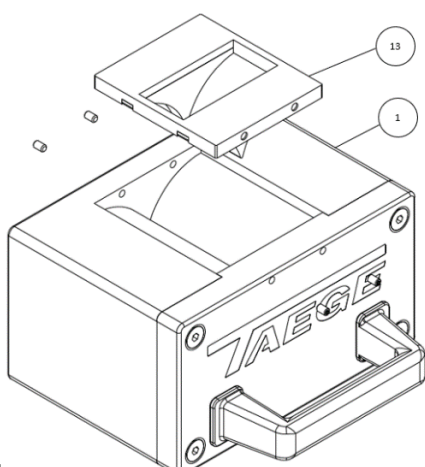
OPTIONS OF AVAILABLE COMBINATIONS UTILISING THE ABOVE DELIMITER SIZES

COMBINATION (NUMBERS)	TOTAL VALUE (MM)	COMBINATION (NUMBERS)	TOTAL VALUE (MM)
1	9	1+4+6	72
2	16	2+3+6	73
3	19	2+4+5	73
4	25	3+4+5	76
1+2	25	1+2+3+5	76
1+3	28	1+5+6	79
5	32	2+4+6	79
1+4	34	3+4+6	82
2+3	35`	1+2+3+6	82
6	38	1+2+4+5	82
1+5	41	1+3+4+5	85
2.4	41	2+5+6	86
3+4	44	1+2+4+6	88
1+2+3	44	3+5+6	89
1+6	47	1+3+4+6	91
2+5	48	2+3+4+5	92
1+2+4	50	4+5+6	95
3+5	51	1+2+5+6	95
1+3+4	53	2+3+4+6	98
2+6	54	1+2+3+4+5	101
3+6	57	1+4+5+6	104
4+5	57	2+3+5+6	105
1+2+5	57	1+2+3+4+6	107
1+3+5	60	2+4+5+6	111
2+3+4	60	3+4+5+6	114
4+6	63	1+2+3+5+6	114
1+2+6	63	1+2+4+5+6	120
1+3+6	66	1+3+4+5+6	123
1+4+5	66	2+3+4+5+6	130
2+3+5	67	1+2+3+4+5+6	139
1+2+3+4	69		
5+6	70		

DELIMITERS AVAILABLE		
NUMBER	SIZE (MM)	SIZE (INCH)
1	9	3/8
2	16	5/8
3	19	3/4
4	25	1
5	32	1 1/4
6	38	1 1/2



SPARES



Part Number	Description	Single Hopper	Double Hopper
1	AS2400.000 Cassette Standard 2x Sponges complete	(As required)	
2	AS2401.000 Metering Block Base		
3	AS2402.000 Metering Lid		
4	AS2403.000 "D" Handle		
5	AS2405.000 Cassette Hi-flow complete	(As required)	
	AS2410.000 Cassette Very Hi-flow complete (not shown)	(As required)	
6	AS2500.000 Standard Sponge complete	(as required)	
7	AS2550.000 Sponge only (for above)	(as required)	
8	AS2505.000 Hi-flow Sponge complete	(as required)	
9	AS2555.000 Hi-flow Sponge only (for above)	(as required)	
10	AS2510.000 Hi-flow Nylon complete	(as required)	
11	AS2511.000 Hi-flow Nylon only (for above)		
12	AS2580.000 Sponge collar P1 Stainless Steel	(As required)	
13	AS2450.000 Small Seed Insert	A/R	

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.

SAFETY

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.

Warranty Certificate

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 and complete both sides of this page if applicable.

Send to

Taege Engineering Ltd

Dealer Name and Address

Email to steve@taege.com

On delivery record the following **Basic Information**

Model.....

Chassis Number.....

Delivery Date.....

Owner: Dealer.....

Check for shipping damage. In cases of shipping damage, ask the 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.

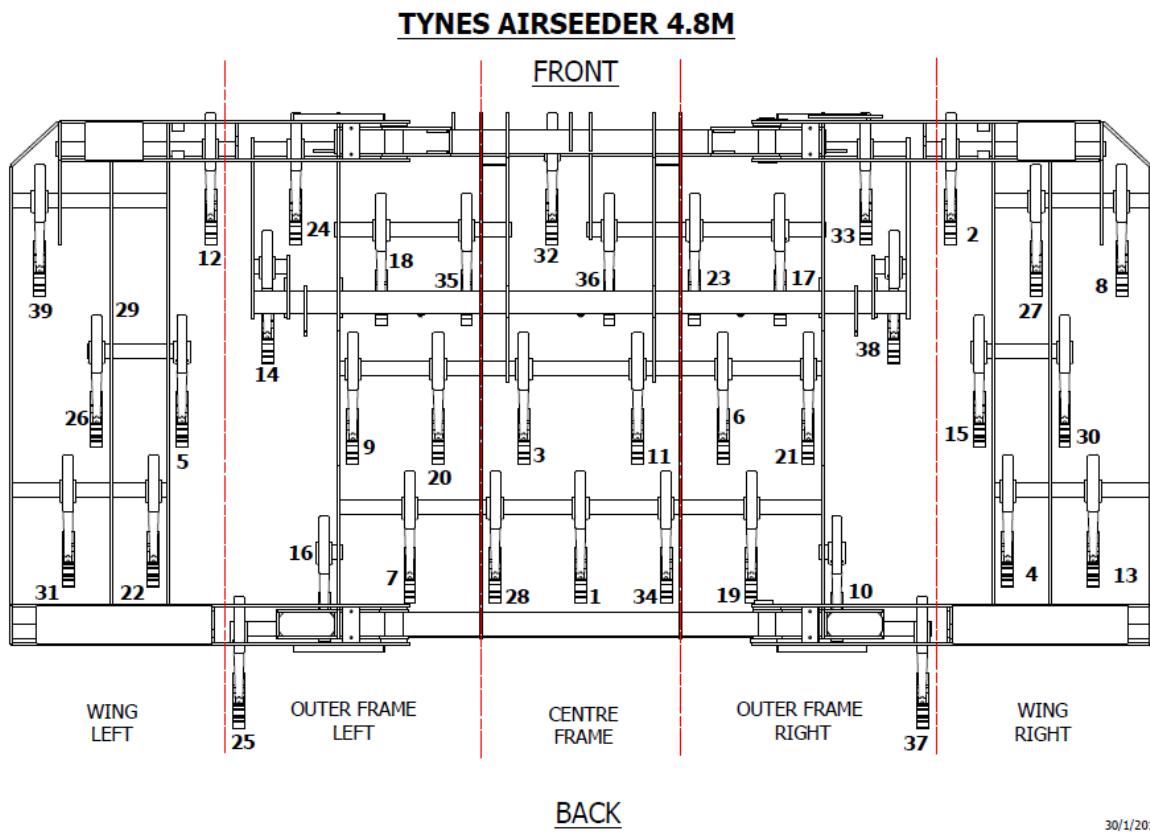
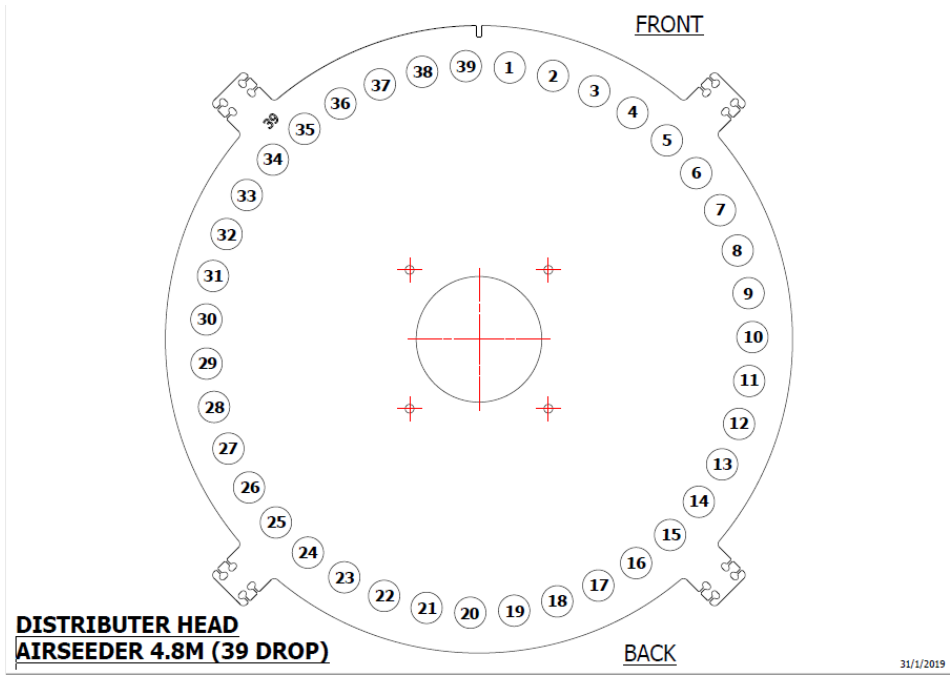
Disclaimer

Drilling with Taege® seed drills 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 correct 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.

Hosing Guide



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