

**AITCHISON
SEEDMATIC
PROFESSIONAL
8140
TINE SEED DRILL**



REESE ENGINEERING LTD
41 KELVIN GROVE ROAD – PO BOX 5056
PALMERSTON NORTH, NEW ZEALAND
PH: +64 6 357 9323 FAX: +64 6 357 3155
www.reeseagri.com

TABLE OF CONTENTS

INTRODUCTION	4
WARRANTY INFORMATION	5
TO THE OWNER & OPERATOR	6
TECHNICAL SPECIFICATION	7
SAFETY FIRST	9
GENERAL OPERATION IN THE FIELD	12
PASTURELAND FARMING WITH THE AIR-PRO	12
MANAGEMENT CONSIDERATIONS	12
TECHNIQUES AND TIMING FOR PASTURE RENOVATION	13
SIMPLE RULES TO FOLLOW FOR SUCCESSFUL PASTURE RENOVATION	14
MICRO INSECTICIDE GRANULES IN PASTURE	15
SOWING IN CULTIVATED SOILS	16
SEED DEPTH ADJUSTMENT	17
FRONT DEPTH WHEELS	17
PACKER ROLLERS	17
FOLDING HYDRAULIC SYSTEM	18
HYDRAULIC RAMS	18
DRAWBAR RAMS	18
FOLDING & UNFOLDING WINGS	19
STEP 1: UNLOCK	19
STEP 2: LOWER BACKWARDS	19
HYDRAULIC FAN DRIVE	20
HYDRAULIC MOTORS SETUP	20
SYSTEM OVERVIEW	20
ELECTRONIC DRIVE HEAD UNIT & CALIBRATION	21
SEED & FERTILISER RATES	32
FINE SEEDS	32
FINE SEED SETTING	33
SMALL SEEDS BOX	34
PRODUCT DOWN MAIN AIRSTREAM	34
PRODUCT BROADCASTED	34
SMALL SEEDS BOX CALIBRATION	34
TINE PLACEMENT	35
PARTS BREAKDOWN	36

AITCHISON

Introduction

Dear Valued Owner,

Congratulations, you have just made an excellent investment.

Your new Aitchison drill has been designed and engineered to give years of dependable service. Every consideration has been taken to incorporate the latest technology, thus ensuring optimum seeding is achieved. Aitchison Drills provide the optimum agronomic environment, ensuring proper seedling germination, leading to superior crops and thus greater revenue earning potential.

It has often been said: “when all else fails-read the operators manual” and to ensure you get the best from your new Aitchison drill it is very important that you thoroughly read through the entire contents of the manual. Please also pay attention to the maintenance recommendations, understand the calibration system and consider the design features and their specific functionality.

Your local dealer carries an extensive range of genuine Aitchison spare parts and consumables that also have been engineered to provide long service and life. It is important that only genuine parts are used on your drill.

Thank you for making your investment in our expertise.

Yours Sincerely,

Ross Simpson

**Director
Reese Agri**

WARNING

THE OPERATION AND ADJUSTMENT OF THE REESE MACHINE REQUIRES A COMPLETE KNOWLEDGE OF THE CONTENTS OF THIS HANDBOOK. TO AVOID PERSONAL INJURY PLEASE ENSURE THAT ALL PERSONNEL ARE THOROUGHLY CONVERSANT WITH ALL DETAILS BEFORE COMMENCEMENT OF OPERATION OR MAINTENANCE.

WARRANTY

COMPLETE AND RETURN WARRANTY REGISTRATION TO ENSURE VALIDATION.

IN THE USA RETURN TO: REESE AGRI USA, 705.N MAIN STREET, BRAYMER, MISSOURI, 64624, USA.

IN AUSTRALIA AND NZ RETURN TO: REESE ENGINEERING LTD, PO BOX 5056, PALMERSTON NORTH, NEW ZEALAND

REESE warrants that the Machine delivered shall conform to the specifications set out in this Handbook.

REESE makes no warranty of saleability or fitness for a particular use, nor is there any other express or implied warranty.

Subject to such other conditions, warranties, and/or undertakings which may apply from time to time under any applicable law, REESE warrants with respect to each new AITCHISON Machine sold by its accredited agents, that for a period of twelve months from the dates of original retail sale, REESE will repair or replace free of charge any part found to be defective in factory materials or workmanship under normal use and operation within the United States of America, Canada, Australia and New Zealand provided that;

1. The Machine

- (a) has been properly assembled and adjusted
- (b) has been properly used and operated within the capacity and operating limitations specified by the manufacturer thereof, and
- (c) has been properly maintained and cared for.

2. This Warranty applies to direct purchase from an authorized AITCHISON dealer. If any defect or fault shall arise such purchaser must return the defective work or Machine to an authorized AITCHISON Dealer within ten working days of such defect or fault arising.

3. In the event of the purchaser attempting to repair or replace the work or product without prior written consent of an authorized AITCHISON Distributor this guarantee shall become void. REESE may replace or repair any damaged product or work at its discretion.

4. In respect of such Machine this warranty does not apply to:

- (d) misuse or carelessness in handling,
- (e) Noncompliance to REESE's operating and maintenance instruction,
- (f) Unauthorized repairs or alterations,
- (g) Consequential damage resulting from misuse or initial faults,
- (h) Parts subjected to wear or damage as a result of normal operation i.e.
 - i. Sponge pads and discs
 - ii. Tines and boots
 - iii. Discs
 - iv. Tyres
 - v. Hydraulic components

5. Any disputes in relation to this contract or product shall be governed by New Zealand law and shall be determined in a New Zealand court.

TO THE OWNER AND OPERATOR

Your Aitchison Drill was carefully designed and manufactured to give you years of dependable service. To keep it running efficiently, read and follow the instructions in this operator's manual. Any questions you may have that are not covered in this manual should be referred to your dealer:

Dealers Name: _____

Address: _____

Phone: Business: _____ Private: _____

Date of Purchase: _____

Model: _____ Serial Number: _____

The warranty card on your Seedmatic Drill is included with this manual. Please ensure that the registration card is correctly filled in.

The owner must ensure the dealer, upon delivery of the machine, has completed the **WARRANTY REGISTRATION CARD**. This must be signed by the owner and returned to the factory promptly. **Failure to carry out this function could nullify warranty claim opportunities against the factory in the future.** Warranty claims will only be accepted for registered products.

When ordering spare parts, quote the model and serial number of the drill and use the Aitchison part number given in the parts section. Reference to the right hand and left hand is taken from behind in the direction of travel.

TECHNICAL SPECIFICATIONS

SEEDMATIC Air-Pro	Airpro 8140
Overall Width – Transport	2.9m
Overall Width – Seeding	6.0m
Sowing Width	6.0m
Working Speed	6-15 km/h
Tractor HP (min)	140
Weight Empty	4400kg
Seed Hopper Capacity	1000lts
Fertiliser Hopper Capacity	1500lts
No. Tines	40
Row Spacing	150mm
Opener Stagger	400mm

Optional Extras:

Front Disc Coulter Kit.	#A3650-ASSY
Hiab Mount (Drawbar).	#A3660-ASSY
Rear Press Roller Kit.	#A3680-ASSY
Small Seeds Box Kit.	#A3690-ASSY / A3695-ASSY
Rear Chain Harrow Kit.	#A3670-ASSY

QUICK SYSTEM CHECK

1. Fan Hydraulics: has the drill been set to match your tractors hydraulic system? (Open/Closed centre system).....see page 18.
2. Fan Hydraulics: does your tractor have a **PRESSURE FREE** return dump port?.....see page 18.
3. Drawbar Lift Hydraulic: when seeding ensure that your tractors hydraulic bank connected the Drawbar Lift Rams is kept in FLOATsee page 16.
4. Seed Metering Units: has the metering units been set up to match your seed type & seeding rate? Ensure that the “Fine Seeds Lock” is locked in the correct position.....see page 31.

OPERATING TIPS

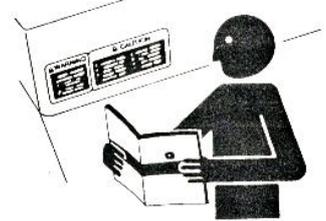
1. Run Fans Before Operating drill: by running the fans before seeding helps dry out the seed delivery tubes.
2. Run Fans After Seeding: this will help to clean out any seed/fertilizer that may still be in the air system.
3. Check Locks & Stops: check that the transport locks work & the carrier bolts are adjusted so they are carrying the weight of the machine in transit.
4. Transit Speed: keep your transport speeds below 40km/h at all times.
5. Turning: when seeding don't attempt tight turns, this will scuff up the ground and stress the tine especially in dry hard ground.
6. Storage: if you are storing the seed drill outside leave it in the unfolded state to prevent rain entering the delivery tubes.
7. Road Transport Wheels: If the AIRPRO is to do a lot of road work we recommend fitting Heavy Duty (truck style) Transport Legs and Wheel assemblies.

SAFETY FIRST

Keep all covers in place when using the drill.
Stop the drill before making adjustments.
Lower the drill to the ground or put on props when working around the machine.
Tighten all nuts and bolts after initial use.

FOLLOW SAFETY INSTRUCTIONS

Carefully read all safety messages in this manual and on your machine safety signs. Replace missing or damaged safety signs, these can be ordered from your local Aitchison dealer.



Learn how to operate the machine and how to use controls properly. Do not let anyone operate it without instruction.

Keep your machine in proper working condition. Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.

If you do not understand any part of this manual and need assistance, contact your Aitchison's dealer.

OPERATE YOUR MACHINE SAFELY

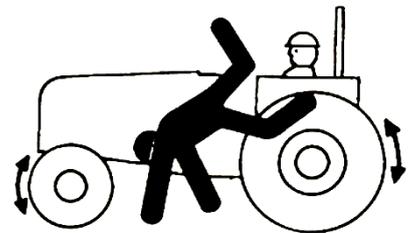
Be careful when operating machine to avoid injury.

Serious injury or death can result from contact with electric lines. Use care when moving or operating the machine near electric lines to avoid contact.



Be careful when operating on hillsides, tractor can tip sideways if it strikes a hole, ditch or other irregularity.

Permit only one person, the operator, on tractor platform while tractor and planter are in operation. Keep riders off. They are subject to injury such as being struck by foreign object and being thrown off the machine. They also obstruct the operators view.



WEAR PROTECTIVE GEAR

Wear close fitting clothes and safety equipment appropriate to the job.

Wear suitable hearing protective device as prolonged exposure to loud noise can cause impairment or loss of hearing.

Wear safety gloves when working with discs as they can have sharp edges.

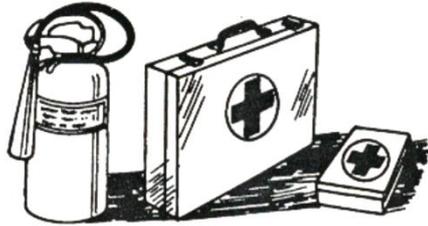


Operating equipment safely requires the full attention of the operator. Do not wear radio headphones while operating machine.

BE SAFE WITH CHEMICALS

Direct exposure to agricultural and hazardous chemicals can cause serious injury. Potentially hazardous chemicals used with Aitchison equipment include such items as lubricants, coolants, fertilizer, paint and adhesives. If in doubt, contact your local Aitchison dealer for information about chemical safety and first aid procedures.

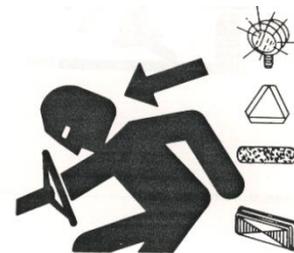
Keep a fire extinguisher and first aid kit handy



When disposing of chemicals, make sure hoppers are properly washed to get rid of any chemical residue and that any chemicals are disposed of in an approved manner. Follow instructions of chemical manufacturers for disposal methods.

USE SAFETY LIGHT AND DEVICE

Slow moving tractors and equipment can create a hazard when driven on public roads. They are difficult to see, especially at night. This could lead to personal injury or death if a collision with a vehicle occurs.



Whenever driving on public roads, use flashing warning lights. Provide extra lighting at night on machine and tractor. An implement safety lighting kit is available from Aitchison Industries.

TRANSPORT SAFELY

Do not exceed transport speed for machine; see your local Aitchison dealer. Never transport at any speed which does not permit adequate control of steering and stopping.

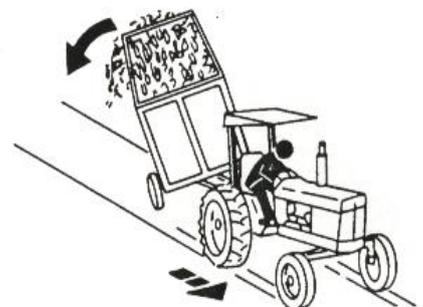
Reduce speed over rough ground

For safe transport, tractor must weigh more than machine.

REDUCE SPEED WHEN TOWING LOADS

Braking to stop towed loads from transport speeds can cause the towed load to swerve and upset. Reduce speed if towed load weighs more than the tractor and is not equipped with brakes.

Use additional caution when towing loads under adverse surface conditions, when turning and on road marking lines.



PRACTICE SAFE MAINTENANCE

Understand service procedure before doing work. Keep area clean and dry.

Never lubricate, service or adjust machine while it is moving. Keep hands, feet and clothing from power driven parts. Disengage all power and operate controls to relieve pressure. Lower equipment to the ground. Allow machine to cool.

Securely support any machine elements that must be raised for service work.

Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts. Remove any build-up of grease, oil, or debris.

Remove paint before welding or heating. Avoid potentially toxic fumes and dust when sanding, repainting or welding. Do all work outside in a well-ventilated area. Dispose of paint and solvent properly.



Avoid heating near pressurized fluid lines or other flammable materials. Pressurized lines can be accidentally cut when heat goes beyond the immediate flame, which could result in severe burns to yourself and bystanders.

Avoid high-pressure fluids. Escaping fluid under pressure can cause injury. Relieve pressure before disconnecting hydraulic or other lines.

DISPOSE OF WASTE PROPERLY

Improper disposing of waste can threaten the environment and ecology. Use leak-proof equipment when draining fluids. Do not use food or beverage containers that may mislead someone into drinking from them.



Do not pour waste onto the ground, down a drain, or into any water source. Use the manufacturer's directions on the correct way to recycle or dispose of waste.

GENERAL OPERATION IN THE FIELD

When the drill is in work in the field, adjust the front Depth Wheels evenly across the width of the drill; also adjust the rear Press Rollers across the width of the drill to give the required opener penetration.

The drill should always be moving forward when lowered or raised from work. Avoid stopping and never reverse with drill in work. These precautions will avoid blocking outlets; however make periodic checks for blockages while drilling.

The speed of travel is governed by the conditions e.g. if the ground is rough the drill may tend to bounce which would necessitate a lower speed. In optimum conditions 8 km/h may be maintained.

Always lift the drill out of the ground before turning sharp corners as this will protect the tines and openers and stop the turf from ripping.

Under no circumstances should the tractor wheels be allowed to slip excessively as this will break the turf and the following tines will tear up the ground. If slippage is a problem, use a tractor with more traction or wait for the ground to be in better condition. Towing chain or bar harrows behind the drill is very beneficial as this will crumble the groove and help to cover the seed.

PASTURELAND FARMING WITH THE AIRPRO

Continuous reaping of grasses either by machine or animal will eventually lead to their degeneration. Desired species of grasses and legumes will weaken and their ability to survive adverse climatic conditions will be diminished. Undesirable species of grasses and weeds will eventually tend to dominate or pasture may simply thin out with minimal plant populations. Of course conditions that cause pasture degenerations vary from location to location, and from country to country, but one can assume that every pasture can be improved no matter where its location.

MANAGEMENT CONSIDERATIONS

In describing the technique for sowing seeds into uncultivated soils, we should clarify the terminology. It is most common to refer to CONSERVATION TILLAGE (or CT) but it may be called SOD-SEEDING in Australia, or DIRECT DRILLING in UK or even NO-TILL SEEDING in North America. Wherever it is practical, successful conservation tillage requires well considered and thorough preparation, integrated with a whole farm management program.

The cropping rotation, optimum sowing dates and grazing fertilization program will depend on the seasonal vegetation or weed spectrum, paddock history, soil type, fertility and drainage, and many other factors.

Here is a checklist that should be followed for any CT program (courtesy of Monsanto NZ Ltd):

1. Check that the soil pH is around 6.0.
2. Check soil fertility levels for fertiliser requirement.
3. Ensure your spray boom has a marking system and is fully operational.
4. Establish optimum time for planting.

5. Check and control weeds present, before and during crop establishment.
6. Check and control insect and slug infestation before and during plant establishment.
7. Ensure soil conditions are suitable for drilling.
8. Inspect the crop regularly after planting.

Experience has shown that farmers new to CT often have crop failures on the first occasion, but as their skills and understanding of the technique improve, so do their crop results.

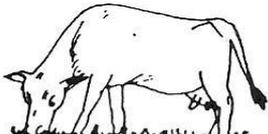
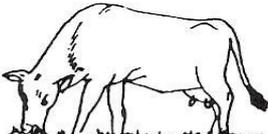
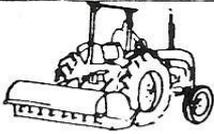
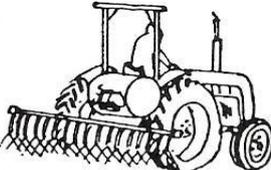
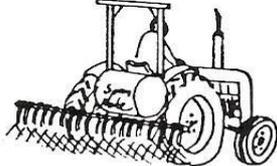
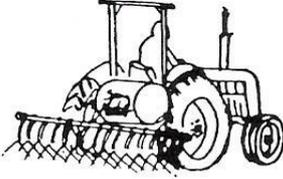
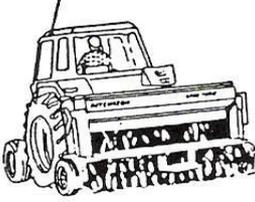
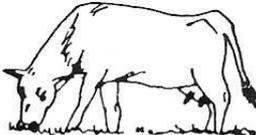
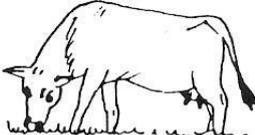
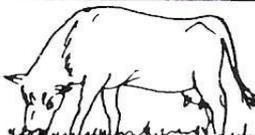
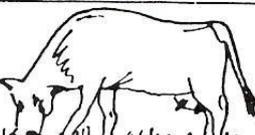
TECHNIQUES AND TIMING FOR PASTURE RENOVATION

There are two basic techniques for pasture renovation, i.e. rejuvenation and renewal. Rejuvenation is the most efficient technique and involves sowing the seeds of new and virile pasture grasses and legumes direct into existing pasture and have them gradually take over the old strain, without causing loss of production due to cultivation. This technique is known as 'stitching in'. Renewal involves a total herbage control system, i.e. spray off old pasture with a wide spectrum herbicide before drilling.

Local knowledge is invaluable when determining which techniques to use and when to use them. The best time for pasture renovation will vary by region, and is largely governed by the temperature and weather that follow. In temperate climates with mild winters the autumn is best; and tropical climates the spring is the best time when the tropical grasses have not recovered from their winter dormancy. In arid climates the time is directly before or after summer rains.

The basic requirement for seed germination is a warm moist seed bed. The aim should be to sow the seed at a time when there is sufficient moisture for quick germination, and little likelihood for later drought. The Aitchison opener/coulter however will promote germination in much drier soils than any other known coulter when used correctly.

SIMPLE RULES TO FOLLOW FOR SUCCESSFUL PASTURE RENOVATION

	TEMPERATE PASTURELAND		TROPICAL PASTURELAND	ARID PASTURELAND
	REJUVENATION	RENEWAL		
TIME ↓	Autumn or spring	Autumn	Spring	Before or after monsoonal rain
1.	 Graze heavily	 Graze heavily	 * Mow with flail type mower	
2.		 Allow 1 week to recover	 Allow 3 days to recover	
3.	 Seed with Seedmatic	 Spray with total spectrum herbicide. Include insecticide	 Spray for insects. Can use light herbicide rate to control competition	
4.	 Spray for insects and watch for withholding period requirements	 Seed with Seedmatic	 Seed with Seedmatic	 Seed with Seedmatic
5.	 Graze lightly	 Graze lightly	 Graze lightly	 Graze lightly
	* An application of a total spectrum herbicide may replace mowing if the ground cover is short. Sowing must be done within 10 days.			

MICRO INSECTICIDE GRANULES IN PASTURES

In New Zealand where grass grub is a problem, excellent control has been attained with the use of Gesapon, Dasanit, Dysiston, Mocap, and Lindane in control of this pasture destroyer. Normal rates applied on the pasture surface can be as high as 30 kg/ha but when sown in the soil and hence away from neutralizing effect sunlight, rates as low as four and five kg/ha can be used. If unexposed to sunlight these chemicals can remain effective in the soil as long as three months, thus killing generations of pupae as they emerge. Also, withholding of livestock after treatment is not necessary. Both these factors are important features with the Seedmatic Professional.

Watch for slugs. Slugs like the moist groove produced by the wing blade opener. If slugs become a problem (eating seeds or seedlings underground), a suitable pellet should be used.

DIRECT SEEDING OF FEED CROPS AND ARABLE CROPS WITH SEEDMATIC PROFESSIONAL.

We are not in a position to give total formal recommended seeding rates, chemical usage and fertiliser recommendations because of the circumstance that the Seedmatic will be used in will be so varied and diverse that some misunderstanding can occur.

Refer to the checklist and ALWAYS confirm with known successful CT operators as well as your local seed specialist and chemical company representatives. Remember that with this technique the environment is not as predictable as with cultivated soils, and take the precaution of using insecticide or increased fertiliser if there should be any element of doubt.

Seeding programs are wide and varied and it is best to look at rotation that starts with a legume or feed crop followed by a grain crop, followed by another feed crop and so on. Heavy pasture into grain can be disappointing, but grain after legume or brassica is outstanding.

Here are just a few possibilities:

Brassicas, Turnips, Swedes, Legumes – Can be sown early spring (for winter feed) or again in autumn for later winter early spring feed. The technique is to blanket spray the entire area and ensure that seeding depths are shallow. A light bar harrow pulled over the seeding areas is beneficial. Use fertiliser and see your chemical company specialist with regard to the correct insecticide to use.

Winter Feed Oats – This can be seeded direct into pasture in early autumn. Herbage control can be carried out also if necessary.

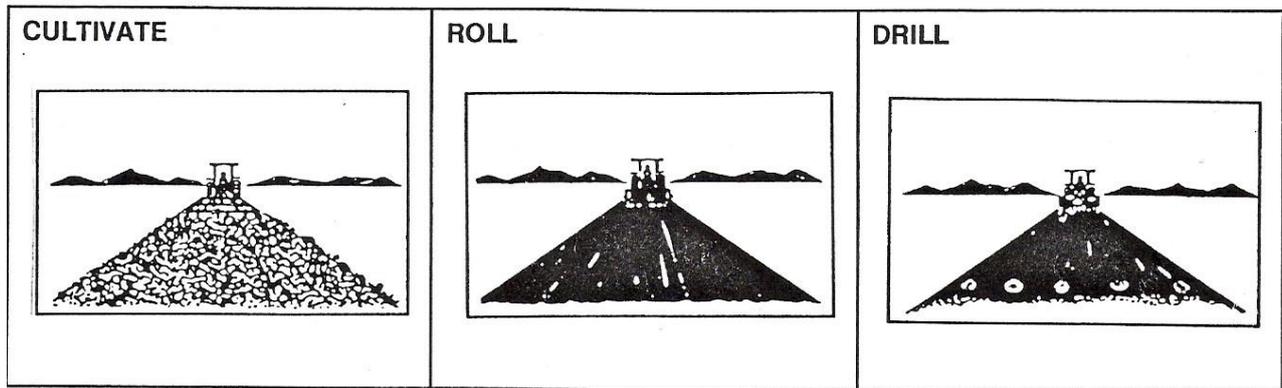
Wheat and Barley – Direct seeding in early spring or autumn depending on variety. Spray out pasture with approved herbicide (may not be necessary after brassica). Always sow with fertiliser.

Lucerne, Alfalfa – Sow in early spring after spraying out entire area with Roundup or Paraquat. It is always a good idea to do a soil test to ensure that the soil pH is satisfactory for plant establishment. Also it is necessary to ensure that the seeds are treated with inoculants to guarantee their germination and nodulation. Use fertiliser and ensure that spraying for insects is carried out – particularly for control of slugs and spring snails.

Green-feed Maize – Carry out in early spring and the same rules apply as with wheat, barley and oats. You may wish to seed in 30 or 45 cm rows and the technique for achieving that is shown under the section **SPECIAL PURPOSE SEEDING** shown later in this booklet.

SOWING IN CULTIVATED SOILS

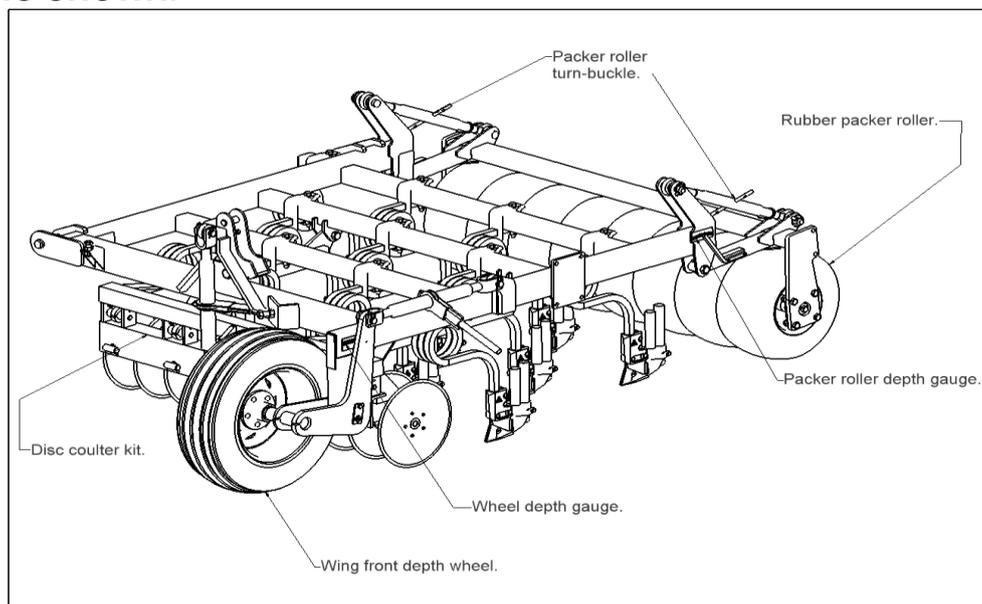
As this is a tined implement with a direct drill type opener, it is important to treat all seed beds as you would a pasture. With a conventional drill one works up the soil into a fine seedbed so that a broad boot type coulter will pass through leaving the seed behind, in the soil tilth. Cultivate the soil to destroy existing vegetation, then roll the seedbed thoroughly and finally drill the seeds required into this rolled seedbed with the Seedmatic. Good germination results will occur.



SEED DEPTH ADJUSTMENT

The seeding depth on the Air-Pro is controlled by the front row of depth and transport wheels and by the rear packer rollers.

LH WING SHOWN.



Note: When setting the seeding depth make sure you have the disc coulters clear of the ground. The disc coulters can sometimes interfere with the seeding depth.

FRONT DEPTH WHEELS

The transport wheels are also depth wheels, these wheels are set first after all three tined frames are lowered to the ground. These control the depth of the front of the centre frame assembly. In conjunction with setting this, set the back-depth adjusters on the centre frame which are either the roller kit or the rear depth wheels.

Each wing RH/LH have a front "Depth Wheel"; this wheel holds the end of the wing at the desired seeding depth.

To adjust these wheels, unlock the depth adjustment ratchet and set to the desired height. **Re-lock** the depth adjustment ratchet. **Damage** or changing depth may occur if the ratchets are **not** re-locked.

Use the "Depth Gauge" decals to set all the front wheels at the same height. **Re-lock**.

PACKER ROLLERS

The "Packer Rollers" do two jobs: 1. They help to cover the seed slots and 2. Control the seeding depth. The Packer Rollers should be set so that the depth of the rear row of tines is at the same depth as the front row of tines. To adjust these rollers, loosen the lock nut on the turn-buckles, adjust both turn-buckles in small increments until the desired depth is achieved. **Ensure that the turn-buckle handle (Pin) is pointing straight down**, re-tighten lock nut. **Damage** or changing depth may occur if lock nuts are **not** re-tightened.

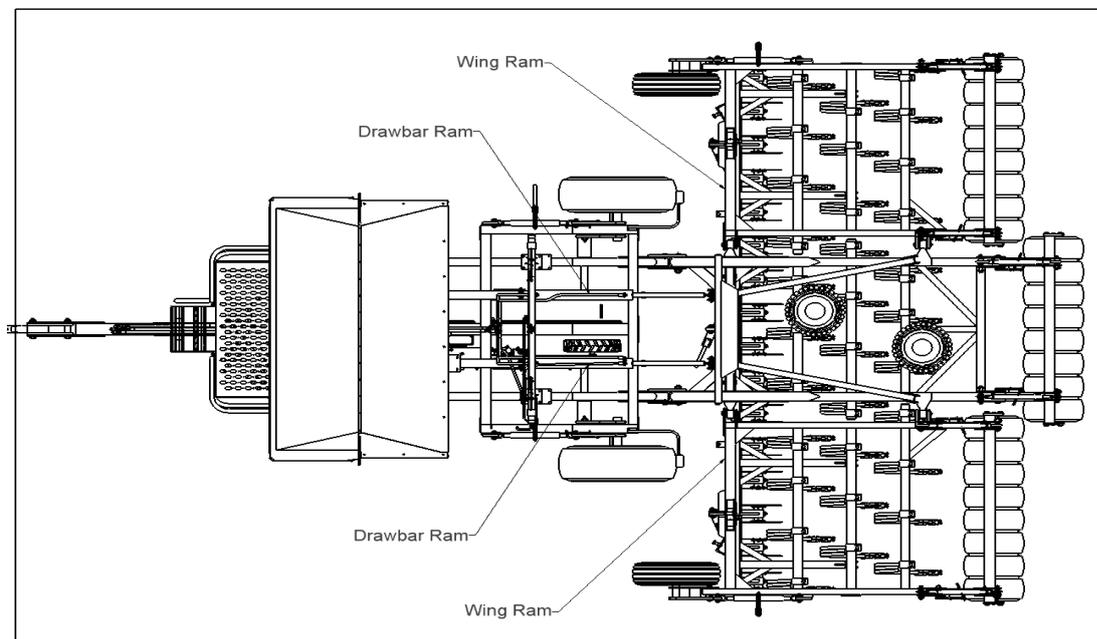
Now adjust the Disc coulters to be shallower than the tip of the points.

FOLDING HYDRAULIC SYSTEM

The AIRPRO is fitted with two separate folding hydraulic systems. One is the “Drawbar Rams” and the other is the “Wing Rams”.

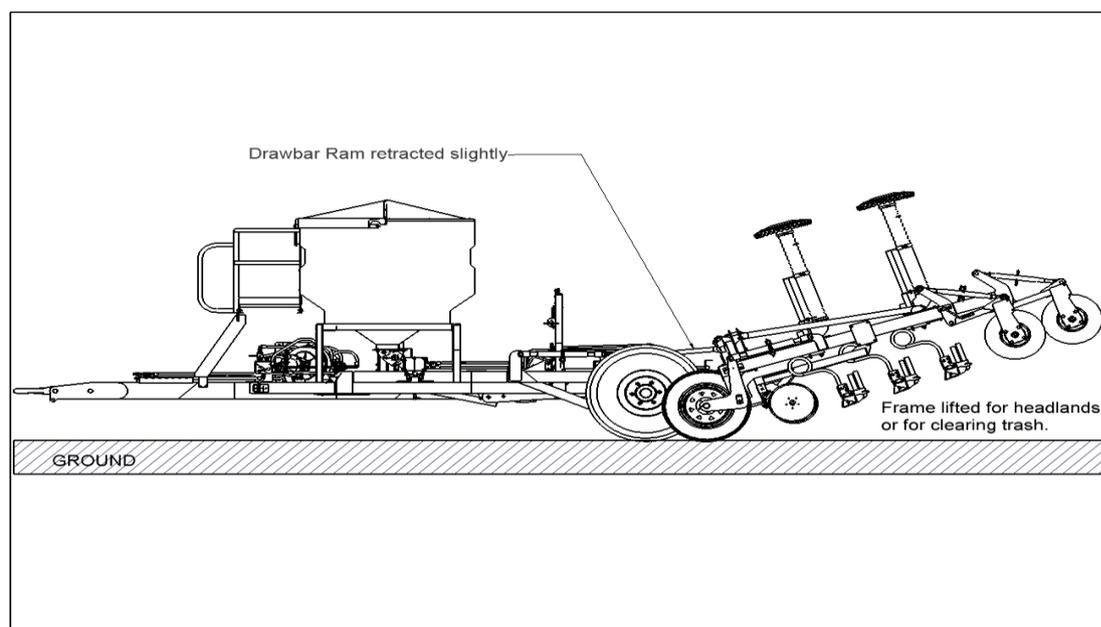
NOTE: Ensure that the AIRPRO is connected to the tractors drawbar before folding/unfolding to prevent damage or injury.

HYDRAULIC RAMS



DRAWBAR RAMS

The Drawbar Rams are used to fold/unfold the machine; they are also used to lift the three rear sections clear of the ground in the headlands of the paddocks. They can also be used to lift the rear sections to clear any trash that might be caught up in the tines.



NOTE: When the drill is in work planting seeds the **Drawbar Rams** should be left in float.

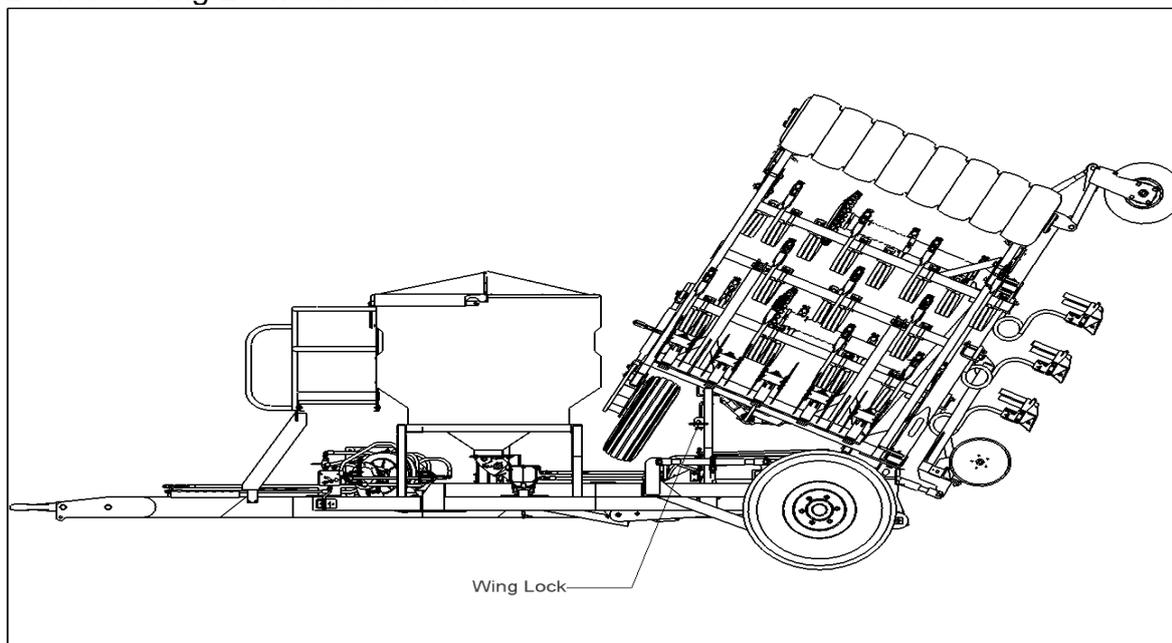
FOLDING & UNFOLDING WINGS

When you are about to unfold the AIRPRO the “Wing Lock” will need to be pulled outward and locked out. To do this the operator will need to exit the tractor and physically pull out and lock-out the Wing Lock mechanism.

NOTE: Ensure that the AIRPRO is connected to the tractors drawbar before folding/unfolding to prevent damage or injury.

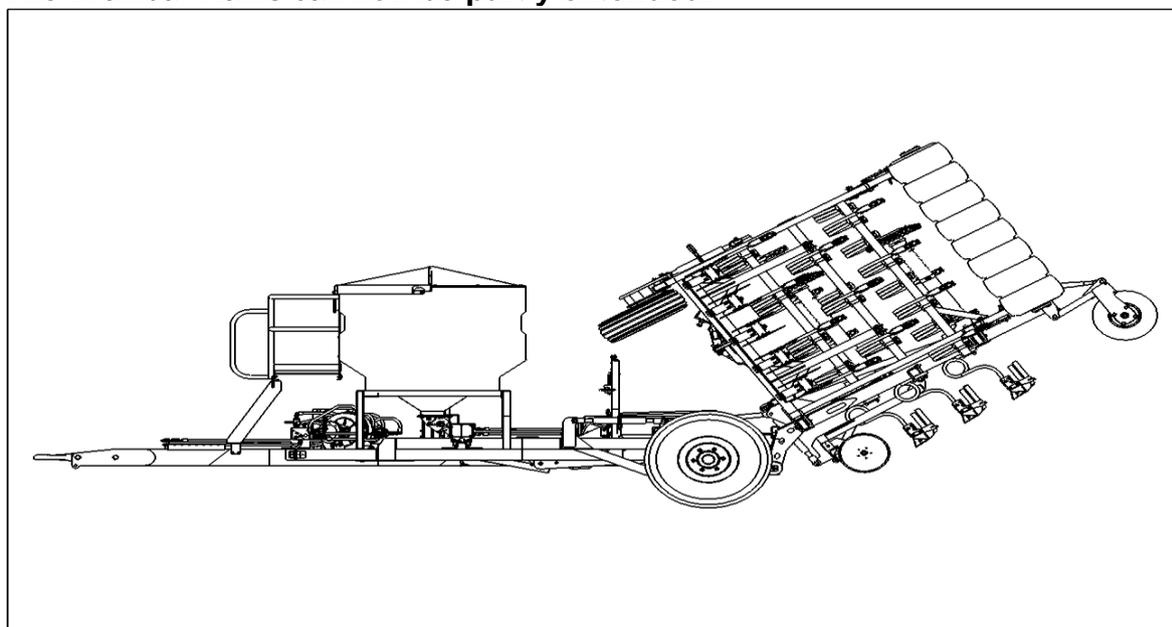
STEP 1. UNLOCK

Lock-out Wing Lock mechanism.



STEP 2. LOWER BACKWARDS

The Drawbar Rams can now be partly extended.



HYDRAULIC FAN DRIVE

The AIRPRO has one hydraulic fan drive system; this hydraulic system has two hydraulic motors controlled by two flow control valves.

One fan is used to deliver product from the seed hopper and the other fan is used to deliver product from the fertiliser hopper.

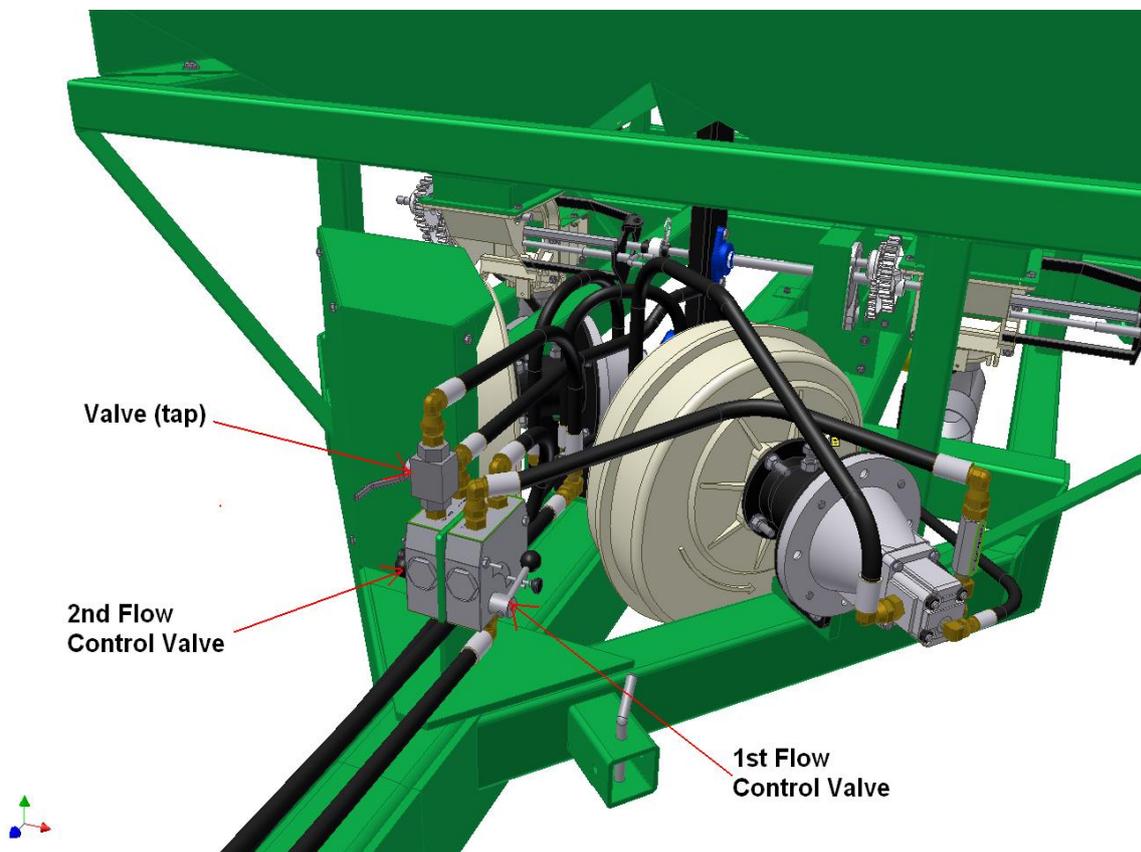
The hydraulic motors require 10 to 22 l/m to run and should turn at about 2000 to 4500rpm.

This hydraulic system has been designed to be compatible with either open centre or closed centre hydraulics; this is achieved by having a valve (tap) plumbed into the hydraulic circuit.

Have this valve **closed** for “**Closed Centre**” systems or **open** for “**Open Centre**” systems.

This system requires continuous oil flow. One PRIORITY hydraulic bank with the lever locked on, (motor spool) setting. It's very important that the fans maintain a constant speed especially when the seed drill is lifted for the headlands.

Hydraulic Motors set-up



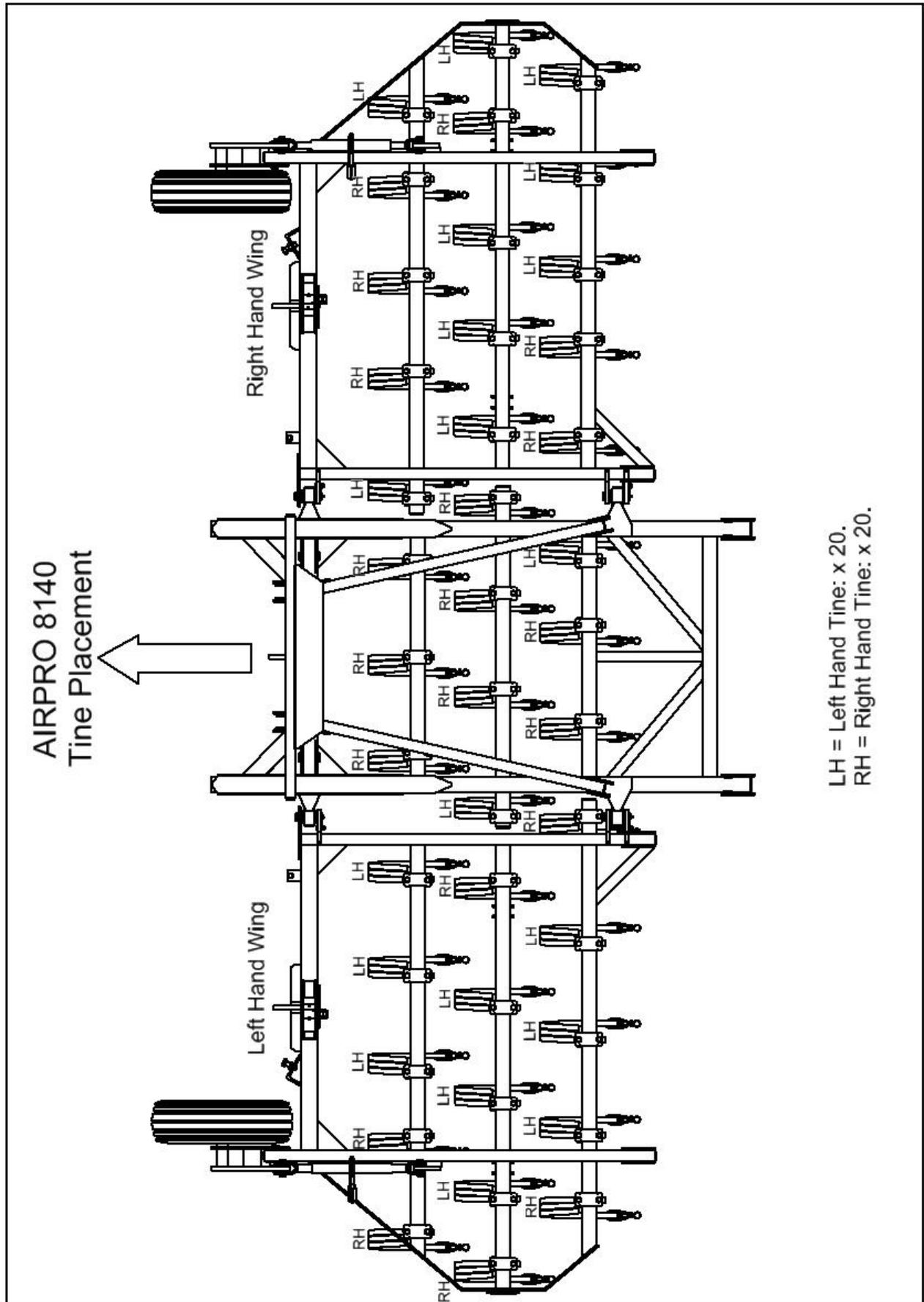
System overview.

The tractor oil is fed into the 1st Flow Control Valve, some oil is used to drive the SEED fan. The excess oil is then diverted to the 2nd Flow Control Valve, which is used to run the FERTILISER fan, the oil is then returned back to the tractor.

The **CASE DRAIN** hose (the hose with the female coupling) is used to drain any oil that has sneaked pass the main seals in both hydraulic motors. This CASE DRAIN hose needs to be connected to the tractor oil tank **without any restriction**.

NOTE: If the case drain hose is pressurised or blocked sever **damage will occur**

TINE PLACEMENT



TINE CLAMPS

The 8140 Seedmatic Professional is fitted with new 65mm Saddle Clamps, these clamps have been designed to stop the tines from “walking” along the tool bars.

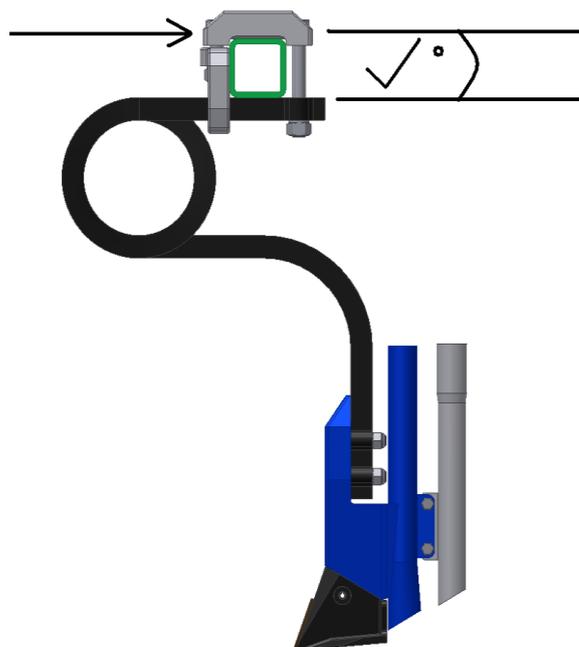
Some care needs to be taken when fitting these new clamps.

When fitting or adjusting ensure that the M16 bolts are tightened evenly so both the Saddle Clamp and the straight leg of the tine are parallel to each other.

The M16 bolts should be tightened to 200Nm (147ftlb) Maximum.

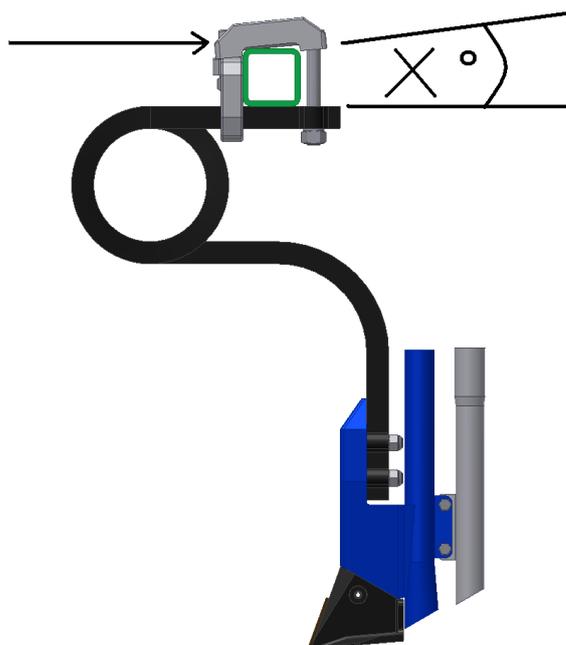
CORRECT FITMENT

Bolts tightened evenly, Saddle Clamp parallel with Tine Leg



INCORRECT FITMENT

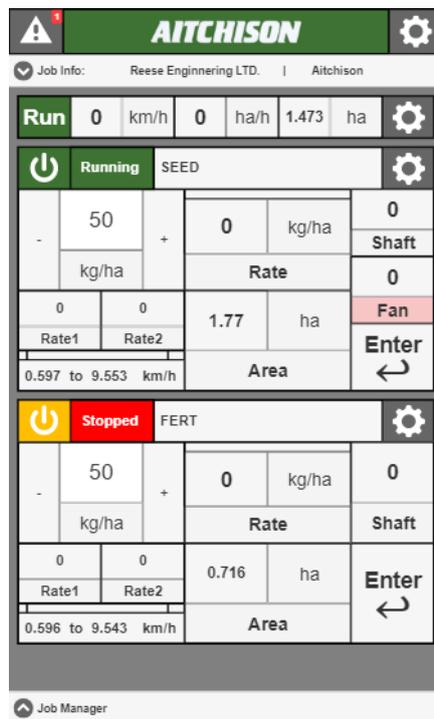
Front bolt too tight, Saddle Clamp leaning forward



AITCHISON

SEEDMATIC

Electric Drive Head Unit



Introduction:

The Aitchison E-Drive Head Unit provides a simple and convenient means of monitoring and controlling your seed drill. The interface has been designed to efficiently convey all relevant information on the home screen. All functionality is at most a few clicks away, with all the key features easily accessible.

The interface features an integrated touch screen keyboard that automatically appears when required. The advanced warning system lets you know when a fault occurs and provides useful information on how to resolve it. The home page has been designed to provide easy navigation by using a tile-based layout and high contrast. The operational state of each hopper on the machine can be seen at a glance using informative colour coded indicators.

It is important to become familiar with the interface before using it in the field. This guide describes the interface layout, navigation and how to operate the Aitchison E-Drive System.

It is recommended that all new users go through a dry run to become familiar with operating the Drill.

Overview:

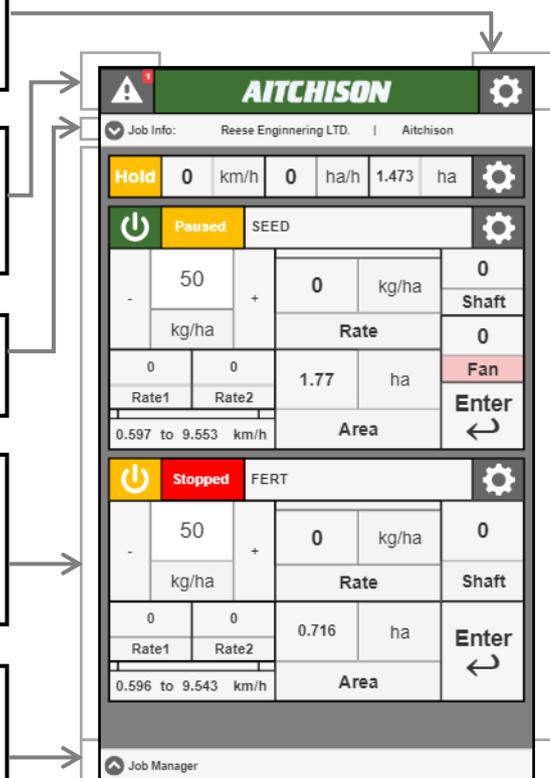
Settings: This button opens the settings panel. This is used to navigate to: Units, Calibrate, Empty Hoppers, User Manual and Advanced Settings. See [Settings](#).

Alerts: This button opens the “Alerts” window, where system messages and warnings can be viewed. This can be clicked to stop the buzzer. See [Alerts](#).

Job Info: This button shows/hides the “Job Info” form. It is used to set and edit the current job. See [Job Info](#).

Dashboard: This section shows the systems monitored data and the control widgets. This is categorised into clusters of related information: General, Seed Hopper and Fert Hopper. See [Dashboard](#).

Job Manager: This button opens/closes the “Job Manager” form. This is used to start a new job, save the current job or view/edit old jobs. See [Job Manager](#).

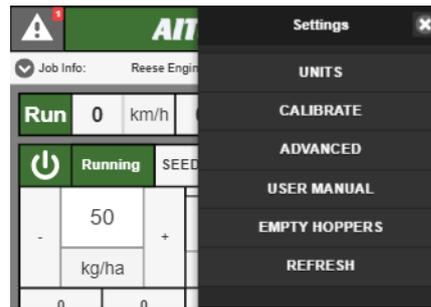


Settings:

This menu is used to set the display units, start calibration, access advanced system settings, view this user manual Empty hoppers and refresh the interface.

This menu is accessed from the home page by clicking the top right “Settings” button.

See: [Units](#), [Calibration](#), [Advanced Settings](#) and [Empty Hoppers](#).



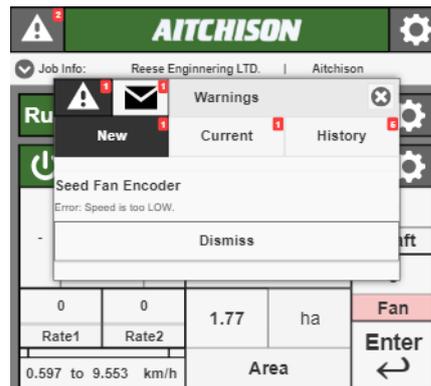
Alerts:

This window shows the current, the new and a history of system messages and warnings. It will pop up automatically when a new alert starts. Click the  button to see the warnings and the  button to see the messages. The number of active alerts is indicated by the numbered red icon.

To stop the buzzer, click anywhere within this window.

This window is accessed from the home page by clicking the top left “” button.

Any tile associated with an Alert will change colour to light red and can be clicked to view the warning message. When a device disconnects, the associated tiles will turn grey.



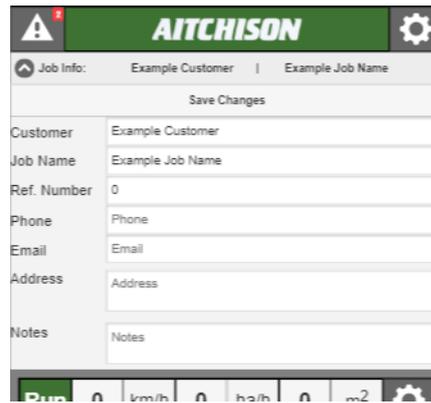
Job Info:

This is where all information for the current job is viewed and edited. Edits need to be saved using the “Save Changes” button to take effect. The Customer and Job Name are displayed on the drop-down button.

When an input field is selected a keyboard will pop up from the bottom of the screen with a specialised layout.

The “Job Info” button on the home screen is used to show and hide this window.

See: [Keyboard](#).



Job Manager:

This menu is used to save the current job, create a new job and view/edit saved jobs. All saved jobs are listed under the search bar and can be clicked to view the information page (See [Job Log](#)). The list tile shows: [Job Index, Customer, Job Name]. The search bar can be used to find old jobs using the information on the list tile. Jobs must be saved before a new job is started, otherwise progress will be lost.

The “Job Manager” button is used to show and hide this window on the home screen.



Job Index	Customer	Job Name
4	Customer	Job Name
3	Example Customer	Example 1
1	Reese Engineering Ltd.	Aitchison

Job Log:

This window shows the “Job Info” and report for the job selected using the “Job Manager”. Using this window you can: view, edit, download, delete or copy job information.

Edits made to the job information need to be saved by clicking the tick [top left] or canceled using the cross [top right].

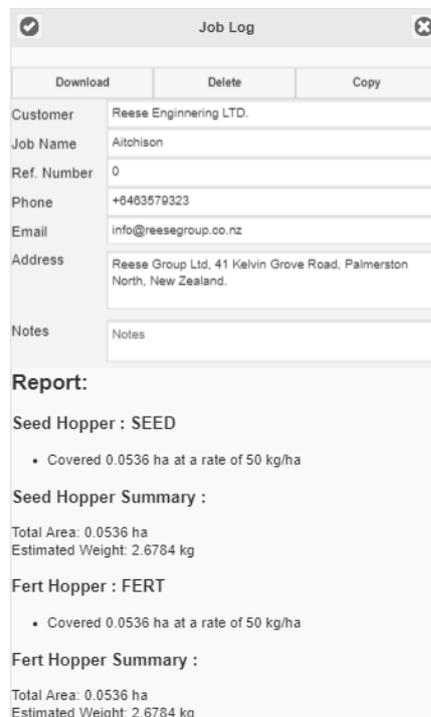
The **Download** button saves the job information and report to a connected USB flash drive under: “:\aitchison\reports”. If the device is not available, plug it back in and wait 10s.

The **Delete** button deletes the job from the job manager.

The **Copy** Button copies the job information to the current “Job Info” menu on the home screen.

The report shows the area covered for each set rate, for each hopper and provides a summary with total area covered by the hopper and the estimated applied product weight.

Each calibration will have a unique report entry.



Report:

Seed Hopper : SEED

- Covered 0.0536 ha at a rate of 50 kg/ha

Seed Hopper Summary :

Total Area: 0.0536 ha
Estimated Weight: 2.6784 kg

Fert Hopper : FERT

- Covered 0.0536 ha at a rate of 50 kg/ha

Fert Hopper Summary :

Total Area: 0.0536 ha
Estimated Weight: 2.6784 kg

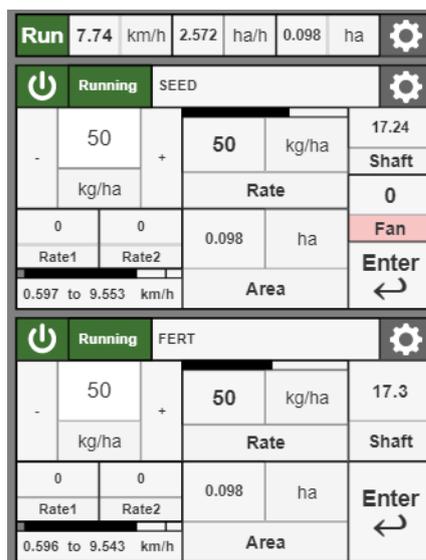
See: [Job Info](#) and [Job Manager](#).

Dashboard:

The dashboard has been designed to efficiently convey information to the operator. A tile-based layout organises related information into clusters, making it easy to navigate and interact with.

This model has three clusters: General, Seed Hopper and Fert Hopper. The Seed Hopper and Fert Hopper clusters provide monitor and control for the respective hoppers and are fundamentally the same. They will be referred to collectively as “the Hopper Cluster”.

The Menu button on the top right corner of each cluster will open a properties window for the contained tiles.



See: [General Cluster](#), [Hopper Cluster](#).

General Cluster:

Shows the general system information:

- **Lift:** Shows “Run” when the machine is in the ground and “Hold” when it is not.
- **Speed:** Shows the ground speed when the lift is in the “Run” position.
- **Area Rate:** Shows the area that would be covered in an hour at the current ground speed.
- **Area:** Shows the total area covered while running the seed or Fert hoppers.

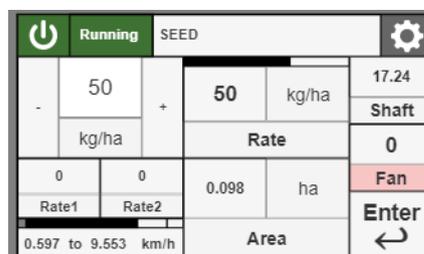
The distance and area tiles are automatically cleared when a new job is started. They can also be manually cleared using the cluster menu.



Hopper Cluster:

Provides information and controls to operate the Hopper. The hopper cluster header has three features at the top: Power, Status and Settings.

- **Power:** Used to enable and disable rate control for the hopper. Turns green when on and amber when off.
- **Status:** Shows the operational state of the hopper. This will indicate when the rate control is “Running” (green) when drilling; “Stopped” (red) when switched off and “Paused” (amber) when the lift is in the hold position.



- **Settings:** Used to alter the settings of the tiles contained by the cluster.

The hopper cluster tiles are used to set the application rate as well as monitor: the perceived rate, the shaft speed and the area covered by the hopper.

- **Rate:** This shows the perceived application rate in the selected units. The bar at the top shows the motor speed as a proportion of the motors top speed. Adjust the ground speed (within reason) to keep the motor comfortably within 5-90%. Change the gearing and re-calibrate if required to maintain the set rate.



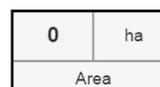
- **Shaft:** This tile shows the shaft speed in RPM and is used to detect drive chain faults. When the shaft speed doesn't match the expected shaft speed: the buzzer will start, a Warning message will popup describing the potential fault and the tile will change colour to a light red. The warning can be accessed directly by tapping on the tile or through the warnings tab (See [Alerts](#)).



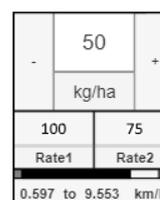
- **Fan:** This tile shows the RPM of the hydraulic fan. If the Fan speed is too high or too low during application, a warning will pop up. The limits can be set in the clusters settings menu.



- **Area:** This tile shows the total area covered by the hopper while running. It is automatically cleared when a new job is started and can be manually cleared using the cluster Menu.



- **Rate Controller and Enter:** The rate controller tile is used to select the application rate and the Enter button tile is used to submit the changes. The rate can be changed and submitted at any time. The rate can be changed by using the -/+ buttons or using the popup keyboard by clicking on the number field. Holding the + or - button will increment or decrement the rate quickly. The number field background will be white when the value matches the set rate and will change to yellow if it does not match. To set the number field back to the set rate, click on the units field below the number. The product name set during calibration can be seen at the bottom of the Rate Controller tile (See [Calibration](#)). There are two preset rates above the product name. These can be loaded by clicking on them and set by long pressing for 2-3 seconds. The bottom of the Rate Controller tile shows the speed ground speed range to achieve the set rate. The bar indicates the current speed in relation to these limits.

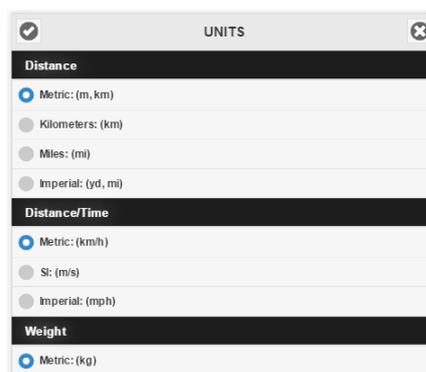


Units:

This window is used to customise the displayed units and can be set at any time. These units will also be used when generating the job reports.

Accessed using the “Settings” Menu.

See: [Settings](#).



Calibration:

The Aitchison E-Drive Calibration provides an easier and faster means of setting up your Seed Drill compared to the traditional calibration process. This section describes how to set up and complete the calibration process.

Important: Only calibrate one hopper at a time.

Preparation: Load the product, Prime the Hoppers and set up the product catchment.

- **Load the Product:** Load the product over the catchment outlets for calibration.
- **Prime Hoppers:** Press and hold the desired prime button until the product flows freely. Forgetting to prime the hoppers before calibration will result in a false application rate.
- **Product Catchment:** Place catchment under the calibration outlet.

Run Calibration:

1. **Enable Calibration Mode:** Click on the “CALIBRATE” button in the “Settings” Menu. Enter the Product Names for each Hopper. Then press the “Start” button. A blank “calibrating” page will appear.

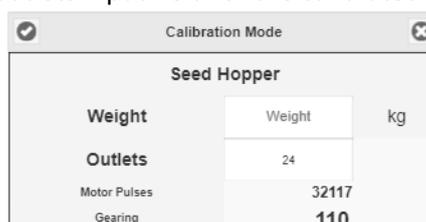
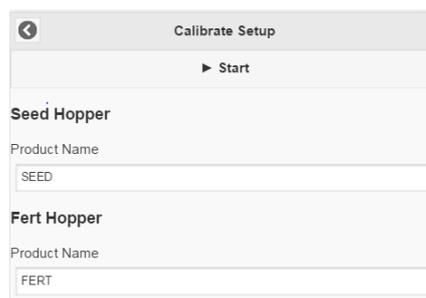
Note: An instructions tab can be found at the bottom of the window.

2. **Start Calibration:** To start/pause calibration, press the products prime button on the machine. The calibration will stop itself automatically when complete and the interface will buzz for 1s. The interface will update, showing a weight and outlets input field for the calibrated hopper. The second hopper can be calibrated once the buzzer signals completion.

- If the buzzer does not sound when the motor stops and the interface is not updated, quick press the prime button.
- Only calibrate one Hopper at a time.
- If the catchment is nearing overflow, pause the calibration using the prime button, collect the product and continue with an empty catchment.
- Take note of the weight units. This can be set in the “UNITS” menu (See [Units](#)).

3. **Collect and Weigh the Product:** Remember to “TARE” scales before weighing.
4. **Set Calibration Weight and Number of Outlets from the Hopper:** Go to the user interface and enter the total measured weight.

Press tick [top left] button to complete the calibration process. To cancel at any time, press the cross [top right] button. A conformation message will show up if the calibration is successful.



Advanced Settings:

The advanced settings menu is used for system configuration. This is where the wheel circumference can be set, and the dedicated-on-screen keyboard can be enabled/disabled.

At the top of the advanced settings menu, a tile cluster shows the: Top Speed, Total Seed Area and Total Fert Area for the lifetime of the system. This is not resettable and will track over the lifetime of the interface.

This menu is found using the settings menu at the top right of the home screen.

See: [Settings](#), [Keyboard](#).

LifeTime Logger					
13.8	km/h	0.12	ha	0	ha
Top Speed		Seed Area		Fert Area	

Enable Keyboard

Global

Wheel Circumference: 2.15 m

Machine Span: 3 m

Empty Hoppers:

This feature allows the operator to run the motors without holding down the prime buttons. It is enabled and disabled by selecting the “Empty Hoppers” button in the top right “Settings” menu of the home page. Once enabled, each motor can be started or paused by pressing and releasing the corresponding prime button on the machine.

See: [Settings](#).

Refresh:

This restarts the user interface and has no effect on the operation of the Machine. It is found in the top right “Settings” menu on the home page.

See: [Settings](#).

Keyboard:

An on-screen keyboard is shown when an input field is selected. The keyboards layout will be customised for the input field (i.e. “qwerty” for text and “numpad for” numbers). This keyboard can be disabled/enabled in the “Advanced” settings menu.

See: [Advanced Settings](#).

Quick Start Guide:

This section provides a brief description of how to operate the E-Drive Head Unit for a new Job instance.

1. **Check connections and mounting.**
 2. **Switch on:** using the green switch on the right side of the monitor. The boot sequence will take approximately 1.5 minutes.
 3. **Start Interface:** Hit the “Start” button on the bottom of the screen.
 4. **Create a New Job:** Open the Job Manager and start a new job by clicking “New Job”. Wait for the interface to load. Important: *Make sure the previous job was saved using the “Save Job” button as unsaved information will be lost when the new job is created.*
 5. **Set Job Info:** Open the Job Info Dropdown menu and fill in the relevant information. If applicable, copy information from a previous job (See [Job Log](#)). Once finished, hit the “Save Changes” button to commit the changes. Close the
-

dropdown menu.

Note: *To find this job in the future, it is important to give the Job a Name or set the customer.*

6. **Calibrate:** For the best results, it is important to calibrate often.
For a detailed description see [Calibration](#).
7. **Set Application Rate:** Input the desired rate and press enter.
To see how this is done, see [Hopper Cluster: - Rate Controller and Enter](#).
8. **Start Seeding:** To start seeding, press the hoppers power button.
The drill should be ready to use.
9. **System Check:** Ensure the perceived rate matches the seed rate and that the motor is not being driven out of bounds. Adjust ground speed appropriately using the Rate controllers ground speed range or change gearing if required.
10. **Finish:** when finished, power off the hoppers and save the job.

General Information:

- The application rate can be changed at any point and will update as soon as the “Enter” button is pressed.
 - The application can be stopped at any time by either pressing the hopper “Power” button or lifting the machine.
 - Jobs can be saved at any time, as many times as you would like.
 - The system can be switched off at any time using the green power switch on the right side of the Monitor without loss of data. The system will boot back into the last session.
-

SEED & FERTILISER RATES

Your AIRPRO is fitted with two adjustable fluted rollers; these fluted rollers gauge the amount of seed/fertiliser that is to be dispensed into the airstream. This chart can be used as a guide; the variable speed motors will take care of the rest.

SEED & FERTILISER RATES.

		SEED TYPE	BARLEY	OATS	GRASS	PHOSPHATE
		(Kg/Litre)	0.68	0.50	0.36	1.20
			Kg/ha	Kg/ha	Kg/ha	Kg/ha
SCALE " A "	20				15	
	40	40	35	30	50	
	60	65	55		75	
	80	90	75		100	
	90	115	95		125	
	100	140	115		150	

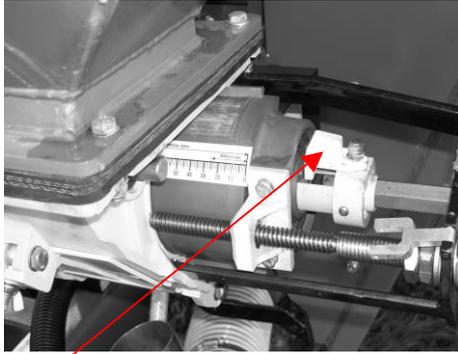
FINE SEEDS.

		RAPE	GRASS
		Kg/ha	Kg/ha
SCALE " Z "	5	0.5	0
	10	2	0
	15	4	2
	20	6	4
	25	8	6

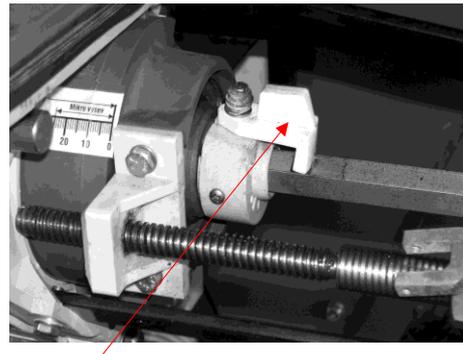
FINE SEED SETTING

Each fluted roller-metering unit has a FINE SEEDS setting; this fine seed setting is used for the metering of fine seeds or granules at very low rates.

The fine seed lever works on from 0 to 25 on the fine seed scale "Z", if higher rates than this are needed the fine seeds lever needs to be locked out and the STANDARD SOWING SCALE "A" used.



Fine seeds lever locked out (scale "A").
For sowing most seeds from 15kg/ha up.



Fine seeds lever locked (scale "Z").
0 < 25 only.
Adjustments over 25 with lever lock
will result in **damage**.

SMALL SEEDS BOX

Most Seedmatic Professional 8140's can be fitted with a small seeds box; it is fitted to the rear of the main hopper and can be used to apply small seeds or slug bates at independent rates.

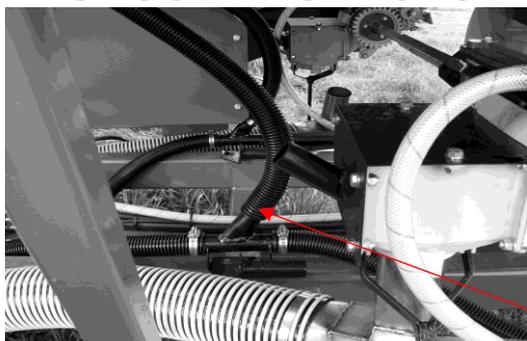
This small seeds box has a variable speed E-Drive to control its metering rates. Product metered from this box can be placed down the main airstream or broadcast at the rear of the seed drill.

PRODUCT DOWN MAIN AIRSTREAM



Delivery hose attached here for product down the main airstream.

PRODUCT BROADCASTED



Delivery hose attached here for product broadcasting.

SMALL SEEDS BOX CALIBRATION

The small seeds box is calibrated in the same manner as the main hopper. Unplug the bottom end of the **two seed tubes** from either main air stream or broadcast venturi and place **both** in container to catch metered product.

GENERAL MAINTENANCE

LUBRICATION

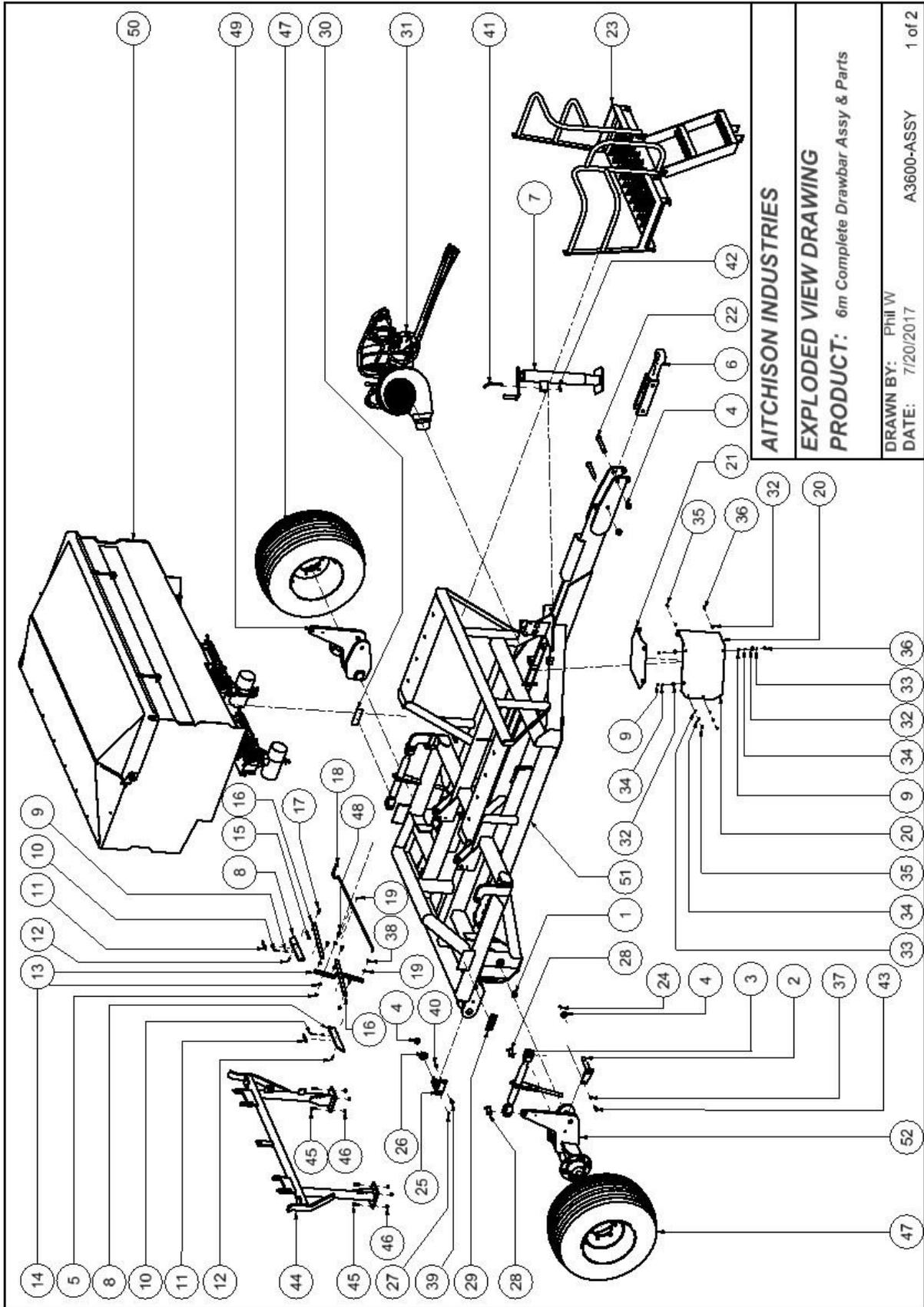
Machines Grease Points:

- 1 per Disc Coulter Pod assembly.
- Depth Leg assembly
- Main Pivot Pins
- Drawbar & Wings
- 2 per Ratchet Links
- 2 per Rear Roller Axels

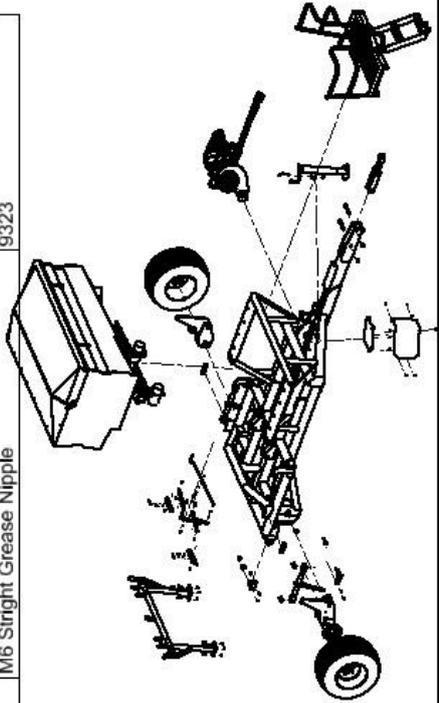


Greasing location points are labelled on the drill with the “Grease” sticker (shown above).

PARTS BREAKDOWN



Parts List				Parts List			
ITEM	QTY	DESCRIPTION	PART NUMBER	ITEM	QTY	DESCRIPTION	PART NUMBER
1	4	FMB 3026DU	A3720-40	28	4	Ratchet Link Pin & Clips	A2646 & A2647
2	2	MK2 Drawbar Depth Leg Pin Assembly	A3803	29	1	Decal - Depth Gauge RH	D3503
3	2	Ratchet Link	A23127	30	1	Decal - Depth Gauge LH	D3502
4	6	M24 Nylock Nut	9198	31	1	MK3 Big Fan Hydraulic System	A3810/ASSY
5	1	M12 Nut	9152	32	5	6mm Fender Washer	9022
6	1	Tow Eye Assembly	A3516	33	7	6mm Flat Washer	9023
7	1	5000kg Adjustable Stand.	A3500-10	34	7	6mm Spring Washer	9021
8	2	MK2 Drawbar Wing Lock Slide	A3816	35	5	M6 x 16 Bolt	8208H
9	7	M6 Nut	9121	36	2	M6x20 Bolt	8205H
10	2	M6x30 Bolt	8212H	37	2	12mm Spring Washer	9052
11	2	Gearbox Spring	A23104	38	1	10 mm Flat Washer	9042
12	2	6 x 30 Roll Pin	9250	39	2	M12 x 40 Bolt	8503H
13	1	MK2 Drawbar Lock Pivot Arm	A3817	40	2	M12 Nyloc Nut	9151
14	2	12mm Flat Washer	9051	41	1	Roller Lock Pin	A3560-01
15	4	M10 Nut	9141	42	1	R Clip	9280
16	2	MK2 Drawbar Lock Pivot Link	A3818	43	2	M12 x 25 Bolt	8527H
17	4	M10 x 30 Bolt	8415H	44	1	MK2 Drawbar Wing Rest Frame Assembly	A38010
18	1	MK2 Drawbar Wing Lock Handle	A3819	45	8	M10 x 35 Bolt	8402H
19	2	3 x 20 Roll Pin	9267	46	8	M10 Nyloc Nut	9142
20	1	MK3 Big Fan Cover Face	A3823	47	2	400/60x15.5AW Wheel Assembly	A2249-23
21	1	MK2 Fan Cover Top	A3824	48	1	M12 x 35 Bolt	8510H
22	2	Drawbar Tow Eye Bolt	A3700-53	49	1	MK3 Drawbar Depth Leg Assembly LH	A3904L
23	1	MK2 Front Treadboard Assembly	A3808/ASSY	50	1	6m Hopper Complete Assembly	A3602-ASSY
24	2	M6 Grease Nipple 90 Degree	9325	51	1	6m Drawbar Assembly	A3601-ASSY
25	2	MK2 Drawbar Main Pivot Pin Assembly	A3809	52	1	6m Drawbar Depth Leg Assembly RH	A3603R
26	2	MK2 Drawbar Main Pivot Washer	A3825	59	1	5" Venturi Keeper Assembly	A3611
27	2	M6 Stright Grease Nipple	9323				



AITCHISON INDUSTRIES

EXPLODED VIEW DRAWING

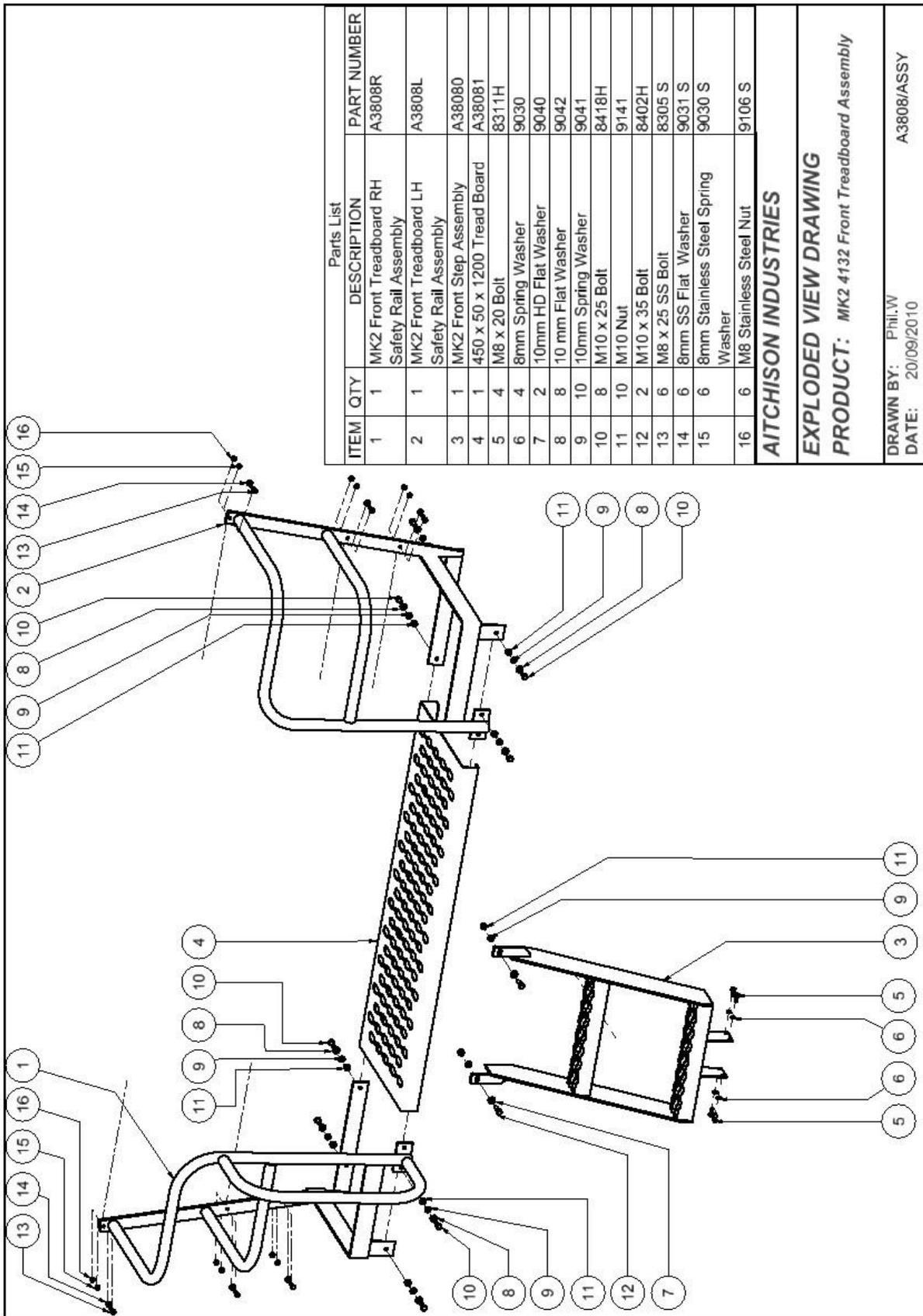
PRODUCT: 6m Complete Drawbar Assy & Part Numbers

DRAWN BY: Phil W

DATE: 7/20/2017

A3600-ASSY

2 of 2



Parts List			PART NUMBER
ITEM	QTY	DESCRIPTION	
1	1	MK2 Front Treadboard RH	A3808R
2	1	Safety Rail Assembly	A3808L
3	1	MK2 Front Step Assembly	A38080
4	1	450 x 50 x 1200 Tread Board	A38081
5	4	M8 x 20 Bolt	8311H
6	4	8mm Spring Washer	9030
7	2	10mm HD Flat Washer	9040
8	8	10 mm Flat Washer	9042
9	10	10mm Spring Washer	9041
10	8	M10 x 25 Bolt	8418H
11	10	M10 Nut	9141
12	2	M10 x 35 Bolt	8402H
13	6	M8 x 25 SS Bolt	8305 S
14	6	8mm SS Flat Washer	9031 S
15	6	8mm Stainless Steel Spring Washer	9030 S
16	6	M8 Stainless Steel Nut	9106 S

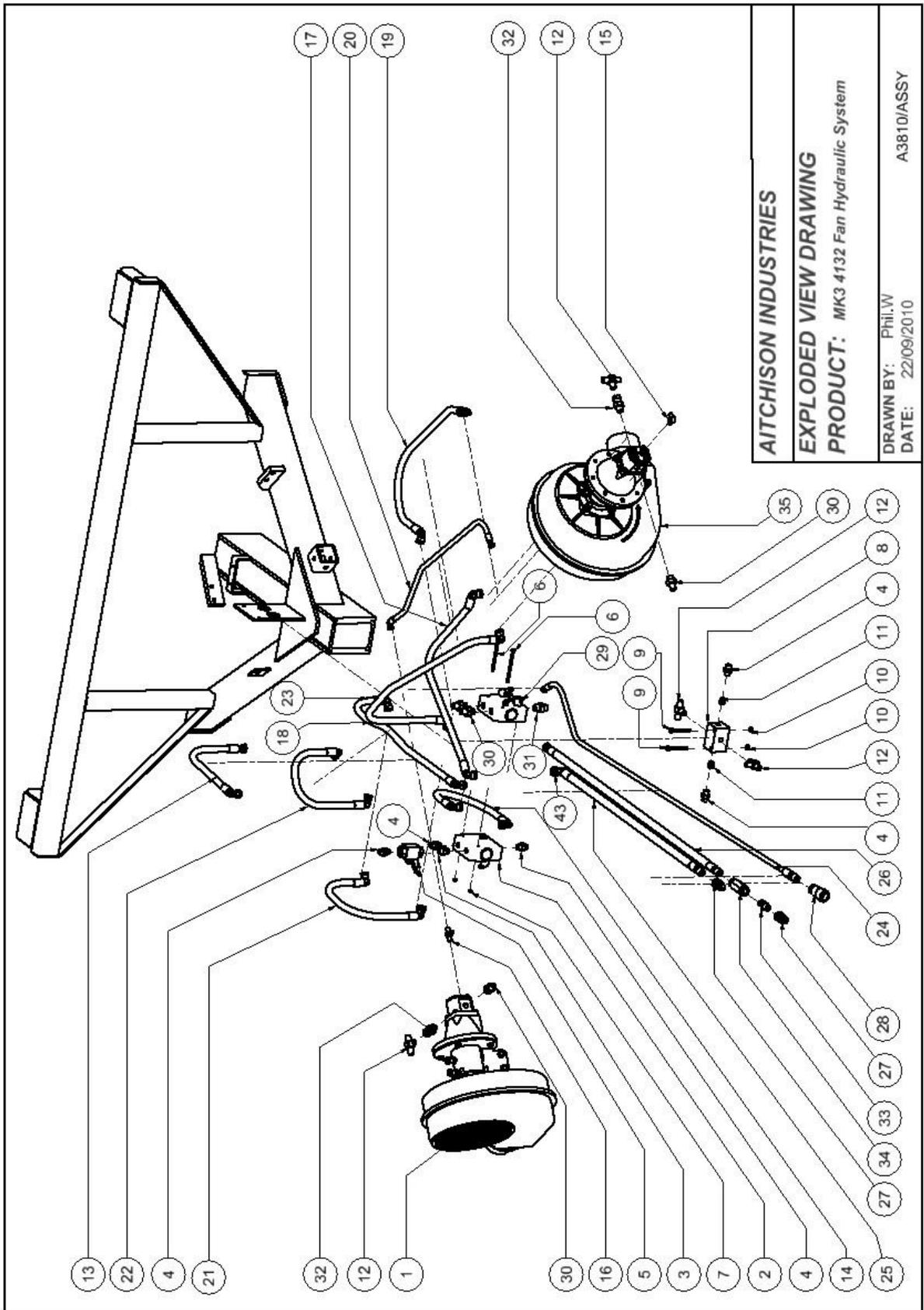
AITCHISON INDUSTRIES

EXPLODED VIEW DRAWING

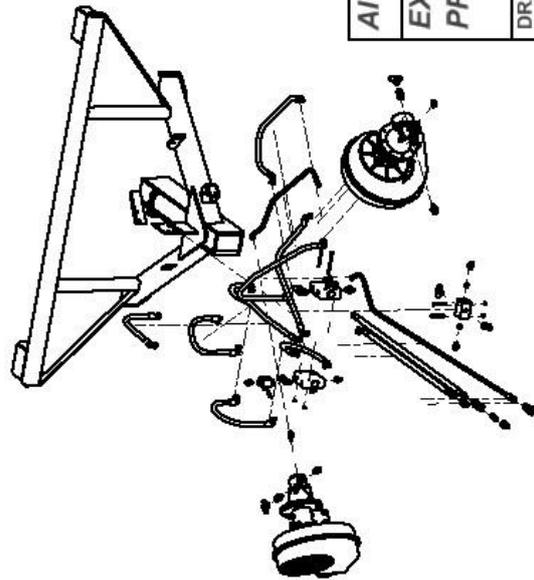
PRODUCT: MK2 4132 Front Treadboard Assembly

DRAWN BY: Phil.W
DATE: 20/09/2010

A3808/ASSY



Parts List		Parts List		Parts List			
ITEM	QTY	DESCRIPTION	PART NUMBER	ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	MK3 Big Fan & Drive Assembly (Fert)	A3810/A1	19	1	3/8" Hose 1st Motor out (Big Fan)	A3810H-13
2	1	CP-RD137-8 Flow Control	A38110	20	1	1/4" Hose Case drain M to M (Big Fan)	A3801H-14
3	1	3/8"BSPT to 3/8"BSPT Male Adaptor	A38111	21	1	3/8" Hose 2nd Motor out check	A3810H-07
4	5	3/8"BSPT to 3/8"BSPP Male Nipple	A38112	22	1	3/8" Hose 2nd Motor out	A3810H-08
5	1	3/8" Ball Valve	A3700-40-11	23	1	3/8" Hose FC out to 2nd HM	A3810H-09
6	2	M6 x 110 Bolt	8218H	24	1	3/8" Hose Case Drain to tank	A3810H-15
7	2	M6 Nylock Nut	9109	25	1	3/8" Hose Fan Drive in	A3810H-11
8	1	Check Valve Manifold	A38113	26	1	3/8" Hose Fan Drive out	A3810H-12
9	2	M8 x 65 Bolt	8315H	27	2	1/2" Quick Release Coupling	A3700-40-15
10	2	M8 Nylock Nut	9105	28	1	1/2" Quick Release Coupling Female	A38119
11	2	MTC-VUJ02 Check Valve Insert 3/8" BSP	A38114	29	1	CP-RD150 Flow Control	A3597-02
12	4	3/8"BSPT All Male T	A3700-41-6	30	4	1/2"BSPT to 3/8"BSPP Male Nipple	A3700-42-22
13	1	3/8" Hose EF Ball Valve Out	A3810H-01	31	1	1/2"BSPT to 1/2"BSPP Male Nipple	H38101
14	1	3/8" Hose FC out to FC in	A3810H-02	32	2	1/2"BSPT to 3/8"BSPP Swivel Nut; Male to Female Nipple	H38102
15	1	1/4" BSP C-Pac 90 with Locknut	A38117-01	33	1	1/2" BSPTM to 1/2" BSPTM Adaptor	H38103
16	1	3/8" BSP F/M/M Swivel Nut T	A3700-41-7	34	1	1/2" Check Valve 0.35Bar	A3700-42-20
17	1	3/8" Hose FC out to 1st HM	A3810H-03	35	1	MK2 Big Fan & Drive Assembly (Seed)	A3810/A2
18	1	3/8" Hose 1st motor out to check	A3810H-04	36	1	1/4"BSPT to 3/8" BSP M Hex Nipple with lock nut	H3823



AITCHISON INDUSTRIES

EXPLODED VIEW DRAWING

PRODUCT: MK3 Big Fan Hydraulic System.

Part Numbers

DRAWN BY: Phil.W

DATE: 22/09/2010

A3810/ASSY

Parts List			
ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	320mm Fan & Bearing Mount Assembly (Big Fan)	A3550
1.1	1	320mm Fan Outlet (100mm)	A3550-01
		320mm Fan Outlet 5"	A3551
2	1	MK3 Big Fan Drive Mount Assembly (Seed)	A38105
3	1	MK2 Fan Coupling Spacer	A38102
4	1	MK2 Fan to Motor Coupling	A3810-04
5	1	MK2 Fan Coupling Washer	A38103
6	7	M8 x 25 Bolt	8305H
7	1	8mm Spring Washer	9030
8	1	HC-R62 Coupling Insert	A3810-02
9	1	65mm OD, 1:8 Large Taper, 21.5mm Long Coupling	A3810-01
10	1	Hydraulic Motor 6.08cc Pal-Shaft 1/2" Ports	A3810
11	5	10mm Spring Washer	9041
12	1	M10x1 Half Nut	9140
13	1	Bell Housing, Grp1.5 - 80 Frame	A3810-03
14	4	M6 x 25 Bolt	8213H
15	4	6mm Spring Washer	9021
16	6	M8 Nyloc Nut	9105
17	2	M12 x 45 Bolt	8504H
18	2	M12 Nyloc Nut	9151
19	4	M10 x 25 Bolt	8418H
20	2	M12 Nut	9152
21	2	M12 x 30 Bolt	8523H

AITCHISON INDUSTRIES

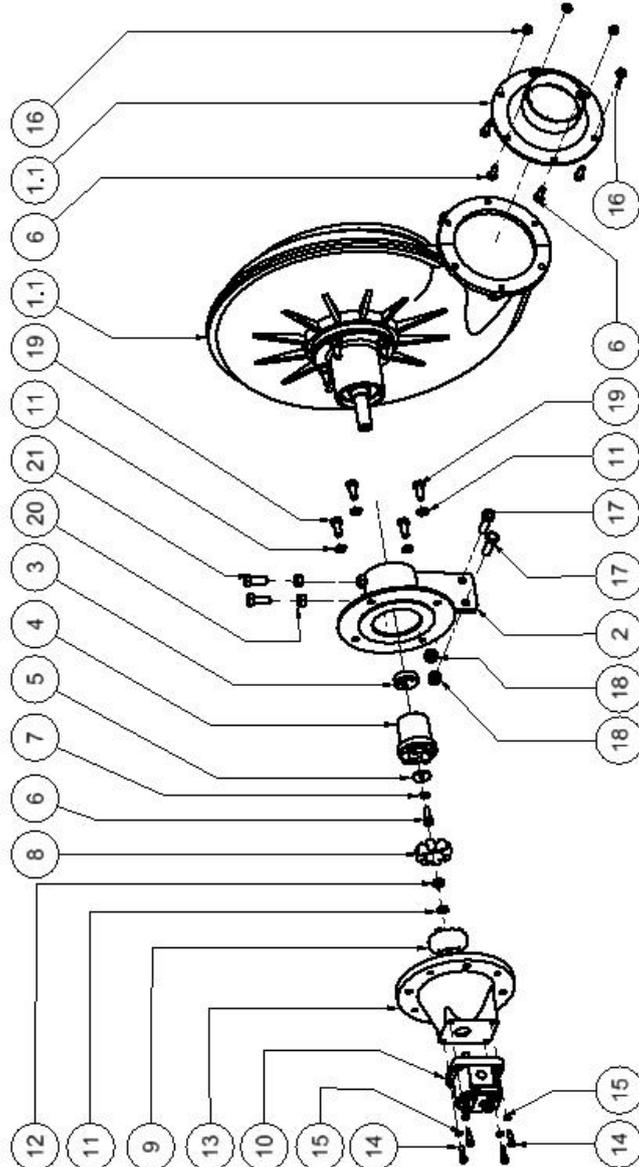
EXPLODED VIEW DRAWING

PRODUCT: MK3 Big Fan & Drive Assembly (Seed)

DRAWN BY: Phil.W

DATE: 1/11/2013

A3810/A2



Parts List			
ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	320mm Fan & Bearing Mount Assembly (Big Fan)	A3550
1.1	1	320mm Fan Outlet (100mm)	A3550-01
		320mm Fan Outlet 5"	A3551
2	1	MK3 Big Fan Drive Mount Assembly (Fert)	A38101
3	1	MK2 Fan Coupling Spacer	A38102
4	1	MK2 Fan to Motor Coupling	A3810-04
5	1	MK2 Fan Coupling Washer	A38103
6	7	M8 x 25 Bolt	8305H
7	1	8mm Spring Washer	9030
8	1	HC-R62 Coupling Insert	A3810-02
9	1	65mm OD, 1:8 Large Taper, 21.5mm Long Coupling	A3810-01
10	1	Hydraulic Motor 6.08cc Pal-Shaft, 1/2" Ports	A3810
11	5	10mm Spring Washer	9041
12	1	M10x1 Half Nut	9140
13	1	Bell Housing, Grp1.5 - 80 Frame	A3810-03
14	4	M6 x 25 Bolt	8213H
15	4	6mm Spring Washer	9021
16	6	M8 Nyloc Nut	9105
17	2	M12 x 45 Bolt	8504H
18	2	M12 Nyloc Nut	9151
19	4	M10 x 25 Bolt	8418H
20	2	M12 Nut	9152
21	2	M12 x 30 Bolt	8523H

AITCHISON INDUSTRIES

EXPLODED VIEW DRAWING

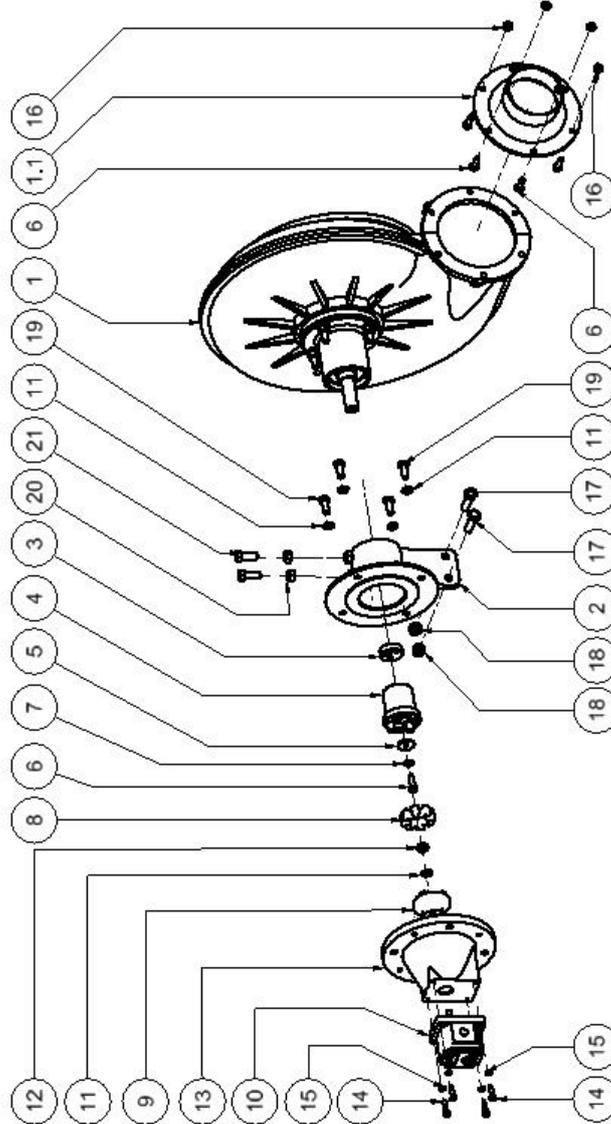
PRODUCT: MK3 Big Fan & Drive Assembly (Fert)

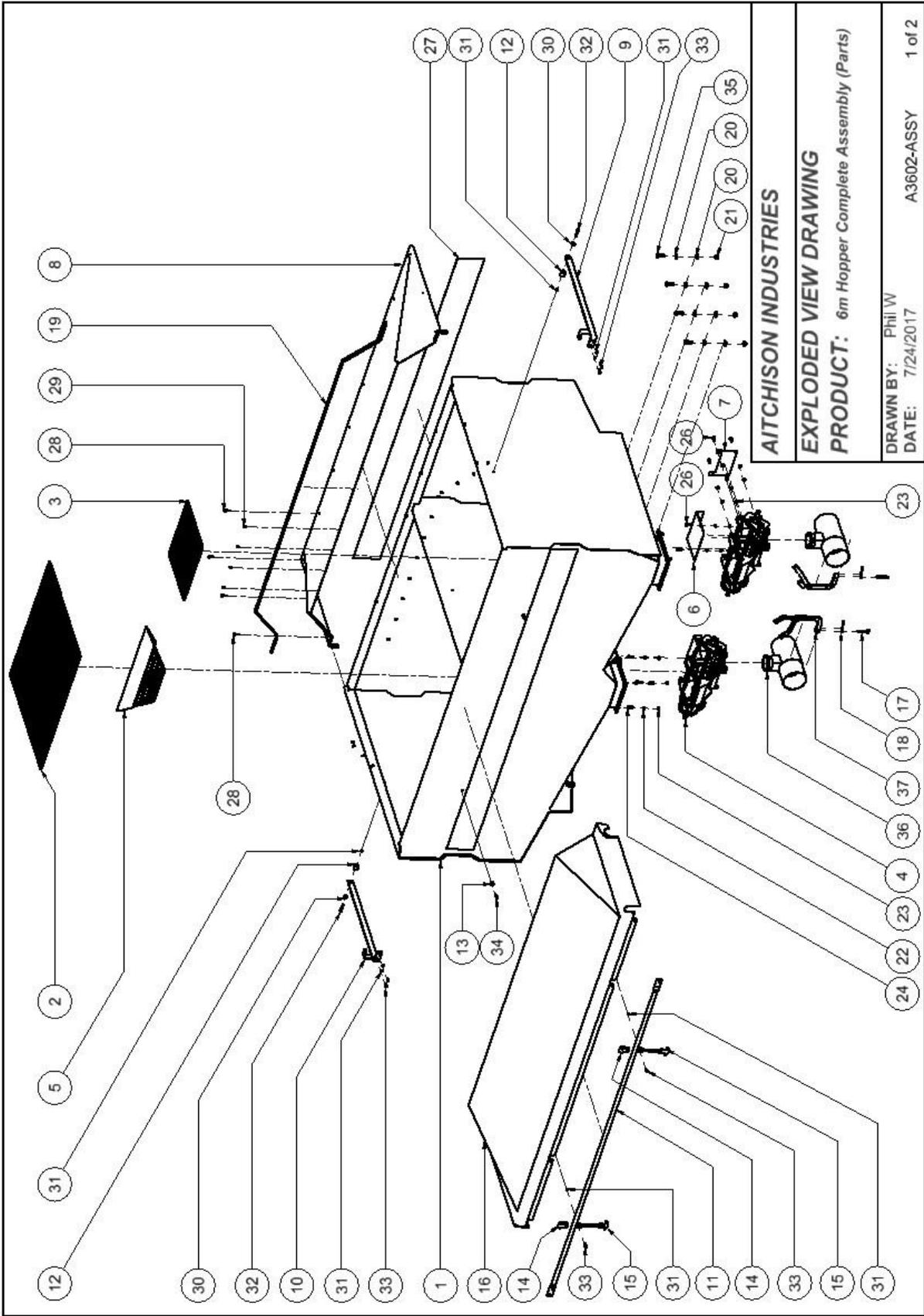
DRAWN BY: Phil.W

DATE: 1/11/2013

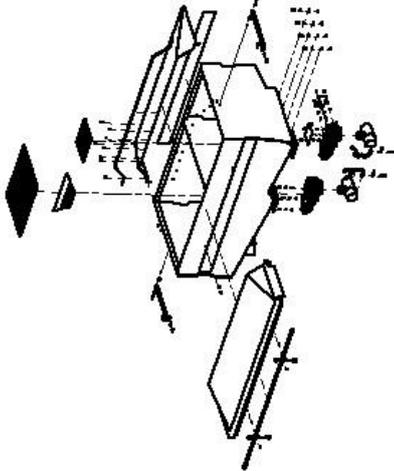
A3810/A1

ISSUE B





Parts List				Parts List			
ITEM	QTY	DESCRIPTION	PART NUMBER	ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	MK2 4132 Hopper Assembly	A3830	20	16	12mm HD Flat Washer	9052
2	1	MK2 4132 Hopper Fert Grill Assembly	A3831	21	8	M12 Nyloc Nut	9151
3	1	MK2 4132 Hopper Seed Grill Assembly	A3832	22	36	8mm S/S Flat Washer	9031S
4	2	Metering Unit Assembly	A3544	23	20	M8 S/S Nylock Nut	9105S
5	1	MK2 4132 Hopper Fert Bottom Grill Assembly	A3833	24	16	M8 x 25 SS Bolt	8305S
6	2	Metering Unit Injector Top Cover	A3544-60	25	8	M8 Nyloc Nut	9105
7	2	Metering Unit Injector Rear Cover	A3544-61	26	12	M8 x 20 S/S Bolt	8311S
8	1	MK2 Hopper Rear Lid Assembly	A3834	27	2	Decal - Yellow Panel Label 2.5m	D1509
9	1	MK2 Hopper Lid LH Hinge Assembly	A3835L	28	12	M5 x 25 Tec Screw	A4626
10	1	MK2 Hopper Lid RH Hinge Assembly	A3835R	29	21	Rivet - 4.8 x 12mm	9303
11	1	MK2 Hopper Lid Front Rail	A3840	30	2	6mm S/S Fender Washer	9022S
12	2	Soft Top Hinge	A3575-43	31	10	M6 S/S Nyloc Nut	9109S
13	2	Soft Top Catch	A3575-44	32	2	M6 x 45 SSBolt	8203S
14	2	Soft Top Front Rail Clamp Plate	A3575-45	33	6	M6 x 20 S/S Bolt	8205S
15	2	Rubber Hold-down Latch 120mm	00844	34	2	M6 x 30 SS Bolt	8212S
16	1	MK2 Hopper Soft Top Cover	A3841	35	8	M12 x 35 Bolt	8510H
17	2	Difussor Locking Bolt	A3577-89	36	2	5" Venturi Assembly	A3610
18	2	Difussor Locking Nut	A3577-90	37	2	5" Venturi Keeper Assembly	A3611
19	1	MK2 Hopper Soft Top Keeper	A3845	38	1	Air Pro 8140	D1553



AITCHISON INDUSTRIES

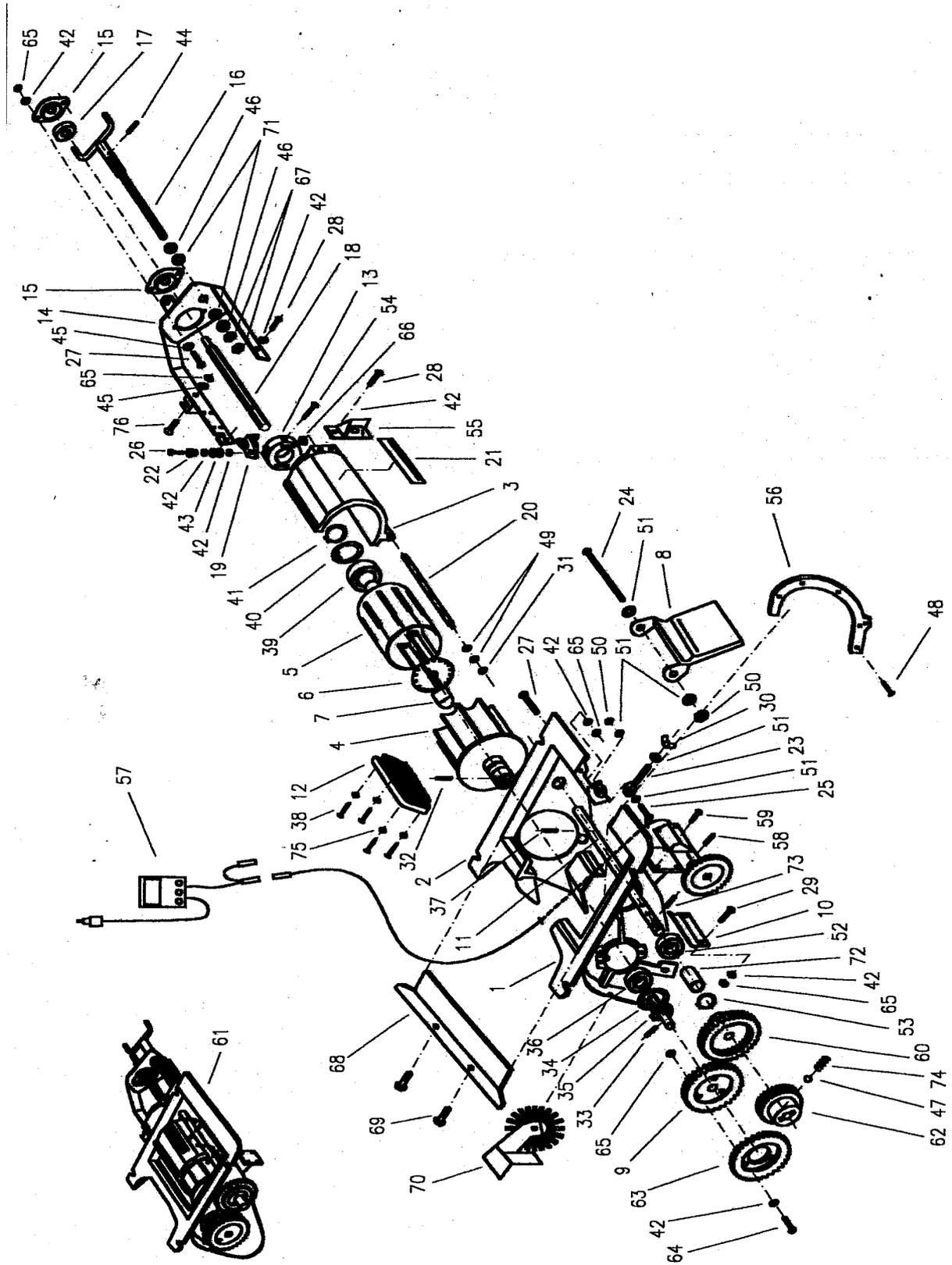
EXPLODED VIEW DRAWING

PRODUCT: 6m Hopper Complete Assembly (Numbers)

DRAWN BY: Phil W
DATE: 7/24/2017

A3602-ASSY 2 of 2

METERING UNIT



METERING UNIT PART NUMBERS

ITEM	DESCRIPTION	PART NUMBER	ITEM	DESCRIPTION	PART NUMBER
1	LH of Turnstile	A3544-01	39	Bearing 6009-2rs	A3544-54
2	RH of Turnstile	A3544-02	40	Safety Ring 75	A3544-37
3	Covering	A3544-03	41	Safety Ring 45	A3544-38
4	Cylinder	A3544-04	42	M6 Washer	9023
5	Cover	A3544-05	43	M6 Washer	9022
6	Curtain	A3544-06	44	Flexible Pin 4x32	A3544-33
7	Pin	A3544-07	45	M6 Washer	9022
8	Door	A3544-08	46	Washer 17	A3544-46
9	Wheel 19 Teeth	A3544-09	47	Metal Bullet 6.35	A3544-47
10	Scraper Rubber	A3544-10	48	Screw M3.5x16	A3544-48
11	Shaft	A3544-11	49	Washer 5.3	A3544-49
12	Brush	A3544-12	50	M8 Nut	9106
13	Sleeve	A3544-13	51	Washer 9	9032
14	Arm	A3544-14	52	Bearing 6002-2rs	A3544-55
15	Cup	A3544-15	53	Safety Ring 15	A3544-39
16	Screw	A3544-41	54	Screw M3.5x13	A3544-53
17	Bearing ay15- 2rs	A3544-59	55	Bracket	A3544-21
18	Shaft	A3544-16	56	Half-moon	A3544-22
19	Flap	A3544-17	57	El. Hectermetre	N/A
20	Bold	A3544-18	58	Flexible Pin 2x16	A3544-32
21	Mark	A3544-19	59	Screw M3x6	A3544-50
22	Bush	A3544-20	60	Wheel 19 Teeth	A3544-09
23	M8 x 35 Bolt	8310H	61	Turnstile Complete	A3544
24	M8 x 160 Bolt	8319H	62	Wheel 14 Teeth	A3544-26
25	M8 x 40 Bolt	8309H	63	Wheel 28 Teeth	A3544-27
26	M4 x 20 Screw	8200H	64	M6 x 20 Bolt	8205H
27	M6 x 20 Bolt	8205H	65	M6 Washer	9022
28	M6 x 18 Screw	8221H	66	M6 Nut	9121
29	M6 x 20 Bolt	8205H	67	M18 Nut	to-202106
30	M8 Nut	9106	68	Cover AL	A3544-28
31	M5 Nut	9102	69	Screw M2.2x6	A3544-57
32	Flexible Pin 6x36	A3544-34	70	Rotary Brush	A3544-29
33	Flexible Pin 6x45	A3544-35	71	Washer 17	A3544-46
34	Safety Ring 47	A3544-42	72	Bearing	A3544-56
35	Safety Ring 25	A3544-73	73	Flexible Pin 5x25	A3544-31
36	Bearing 6005-2rs	A3544-38	74	Thrust Spring	A3544-30
37	Flexible Pin 5x50	A3544-36	75	Washer 4.3	A3544-52
38	Screw M3.9 x 22	A3544-45	76	M6 x 20 Bolt	8205H

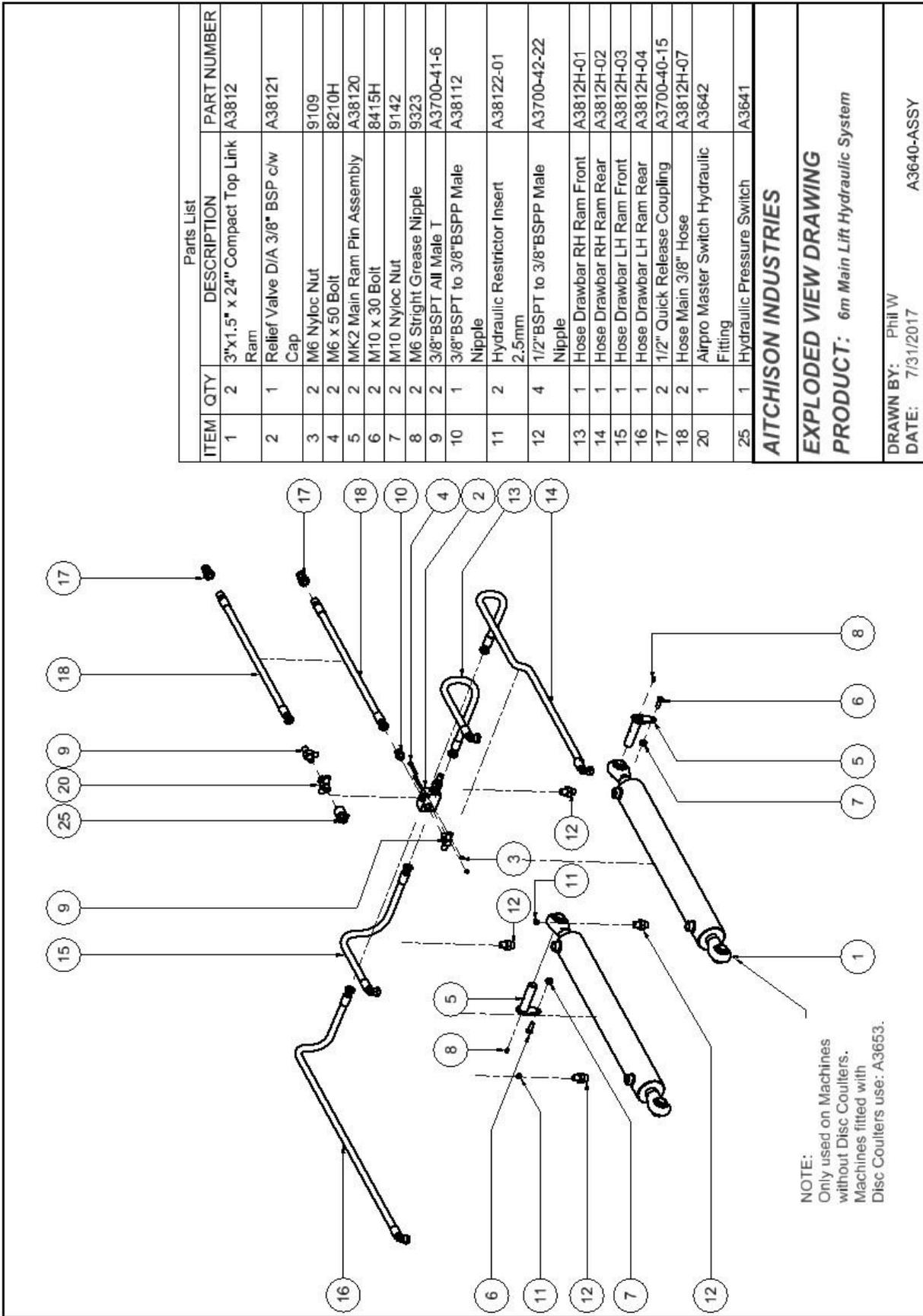
ITEM	QTY	DESCRIPTION	PART NUMBER
1	2	Airpro Motor Mount Plate	A3461-06
2	2	Airpro Motor Mount Lock Plate	A3461-07
3	2	320W 12VDC Motor & Gearbox with Encoder	A2529E
4	2	Switch Push Waterproof MOM SPST 5A DC	A2530E-11
5	4	12mm NPN NC Proximity Sensor	A2579E-03
6	2	Airpro Motor Drive Assembly	A3462
7	2	320W 12VDC Motor Drive Key	A2530E-02
8	5	M6 x 8 Grub Screw	8204
9	2	6 x 30 Roll Pin	9250
10	1	8124 Air Seeder Prime Button Mount	A3461-03
11	2	Airpro Metering Unit Sender Plate	A3461-04
12	1	Airpro Motor Control Mount Assembly	A3463
13	1	Airpro Node Cover Plate	A3461-05
14	1	Twin Motor Speed Controller Assembly	A2539E
15	2	Electric Drive Node	A2578E-03
16	6	M6 x 60 Bolt	8202H
17	8	M6 Nyloc Nut	9109
18	2	M10 x 25 Bolt	8418H
19	3	M12 x 35 Bolt	8510H
20	4	12mm Flat Washer	9051
21	3	M12 Nyloc Nut	9151
22	1	M10 Nut	9141
23	1	M10 Nyloc Nut	9142
24	2	10 mm Flat Washer	9042
25	1	8140 Air Seeder Fert Prime Mount	A3666-01
26	1	Airpro Ground Wheel Sender Plate	A3666-02
27	1	Airpro Master Switch Sensor Mount	A3666-03
28	1	Hydraulic Pressure Switch	A3641
31	2	M6 Nut	9121
32	4	6mm Flat Washer	9023
33	2	M6 x 50 Bolt	8210H
34	2	18mm Bin Level Sensor	A2579E-05
35	2	12mm Fan Speed Sensor	A2579E-07

AITCHISON INDUSTRIES

EXPLODED VIEW DRAWING

PRODUCT: 8140 Airpro Electric Drive Parts

DRAWN BY: Phil W
DATE: 11/2/2017
A3666-ASSY



NOTE:
 Only used on Machines
 without Disc Coulters.
 Machines fitted with
 Disc Coulters use: A3653.

Parts List			
ITEM	QTY	DESCRIPTION	PART NUMBER
1	2	3"x1.5" x 24" Compact Top Link Ram	A3812
2	1	Relief Valve D/A 3/8" BSP c/w Cap	A38121
3	2	M6 Nyloc Nut	9109
4	2	M6 x 50 Bolt	8210H
5	2	MK2 Main Ram Pin Assembly	A38120
6	2	M10 x 30 Bolt	8415H
7	2	M10 Nyloc Nut	9142
8	2	M6 Stright Grease Nipple	9323
9	2	3/8"BSPT All Male T	A3700-41-6
10	1	3/8"BSPT to 3/8"BSPP Male Nipple	A38112
11	2	Hydraulic Restrictor Insert 2.5mm	A38122-01
12	4	1/2"BSPT to 3/8"BSPP Male Nipple	A3700-42-22
13	1	Hose Drawbar RH Ram Front	A3812H-01
14	1	Hose Drawbar RH Ram Rear	A3812H-02
15	1	Hose Drawbar LH Ram Front	A3812H-03
16	1	Hose Drawbar LH Ram Rear	A3812H-04
17	2	1/2" Quick Release Coupling	A3700-40-15
18	2	Hose Main 3/8" Hose	A3812H-07
20	1	Airpro Master Switch Hydraulic Fitting	A3642
25	1	Hydraulic Pressure Switch	A3641

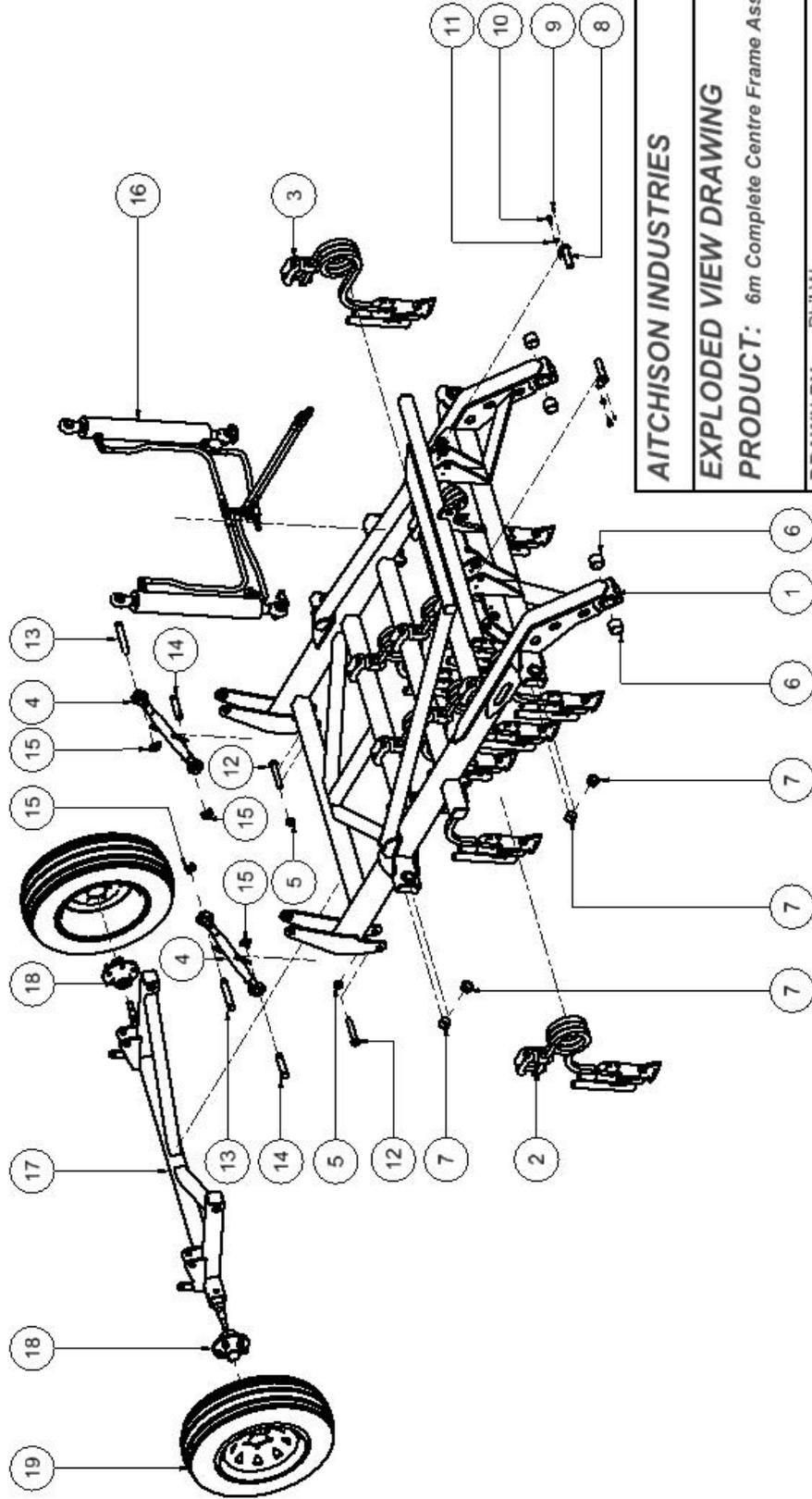
AITCHISON INDUSTRIES

EXPLODED VIEW DRAWING

PRODUCT: 6m Main Lift Hydraulic System

DRAWN BY: Phil W
DATE: 7/31/2017
A3640-ASSY

Parts List			Parts List				
ITEM	QTY	DESCRIPTION	PART NUMBER	ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	6m Centre Frame Assembly	A3620C	11	2	M10 Nyloc Nut	9142
2	8	25mm RH MK3 Tine Assy (32mm)	A38932R-ASSY	12	2	M20 x 120 Bolt	8704H
3	2	25mm LH MK3 Tine Assy (32mm)	A38932L-ASSY	13	2	Top Link Pin B81	AQH-1009
4	2	Cat 2 Turbuckle	A23189-01	14	2	Top Link Pin B1200	A3858
5	2	M20 Nyloc Nut	9172	15	4	11mm Lynch Pin	9288
6	4	MB 5040DU	A3855	16	1	Wing Lift Hydraulic System	A3854/ASSY
7	8	FMB 3526DU	A3710-53	17	1	6m Centre Frame Rear Axle Assembly	A3622
8	2	MK2 Main Ram Pin Assembly	A38120	18	2	Trojan 5 Stud Hub	TR 082030
9	2	M6 Grease Nipple Straight	9323	19	2	14" Wheel Assembly	A23184
10	2	M10 x 30 Bolt	8415H				



AITCHISON INDUSTRIES

EXPLODED VIEW DRAWING

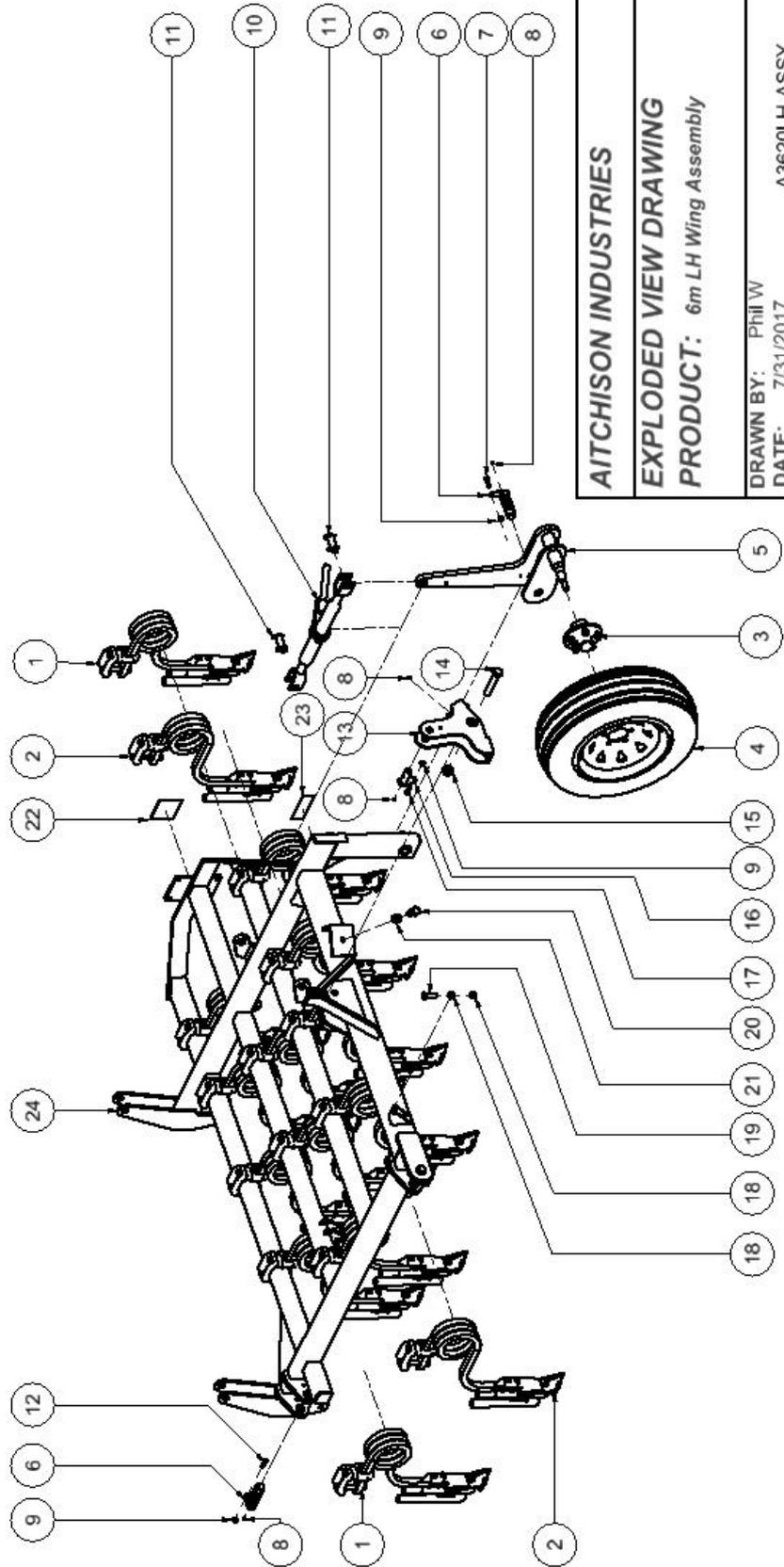
PRODUCT: 6m Complete Centre Frame Assy (Parts)

DRAWN BY: Phil W

DATE: 7/27/2017

A3620C-ASSY

Parts List				Parts List			
ITEM	QTY	DESCRIPTION	PART NUMBER	ITEM	QTY	DESCRIPTION	PART NUMBER
1	6	25mm RH MK3 Tine Assy (32mm)	A38932R-ASSY	13	1	MK2 Wing Float Plate Assembly	A3865
2	9	25mm LH MK3 Tine Assy (32mm)	A38932L-ASSY	14	1	M24 x 130 Bolt	8813H
3	1	Trojan 5 Stud Hub	TR 082030	15	1	M24 Nut	9193
4	1	14" Wheel Assembly	A23184	16	1	MK2 Wing Float Plate Pin Assembly	A3864
5	1	MK3 LH Depth Leg Assembly	A3903L	17	1	M10 x 30 Bolt	8415H
6	3	MK2 Wing Pivot Pin Assembly	A3862	18	2	M16 Nut	9161
7	1	M10 x 40 Bolt	8416H	19	1	M16 x 50 Bolt	8616H
8	5	M6 Grease Nipple Straight	9323	20	1	M20 x 55 Bolt	8718H
9	4	M10 Nyloc Nut	9142	21	1	M20 Nut	9171
10	1	Ratchet Link	A23127	22	1	Decal - 125kg Maximum	D3507
11	2	Ratchet Link Pin & Clips	A2646 & A2647	23	1	Decal - Depth Gauge RH	D3503
12	2	M10 x 35 Bolt	8402H	24	1	MK2 LH Wing Frame Assembly (6m)	A3620LH

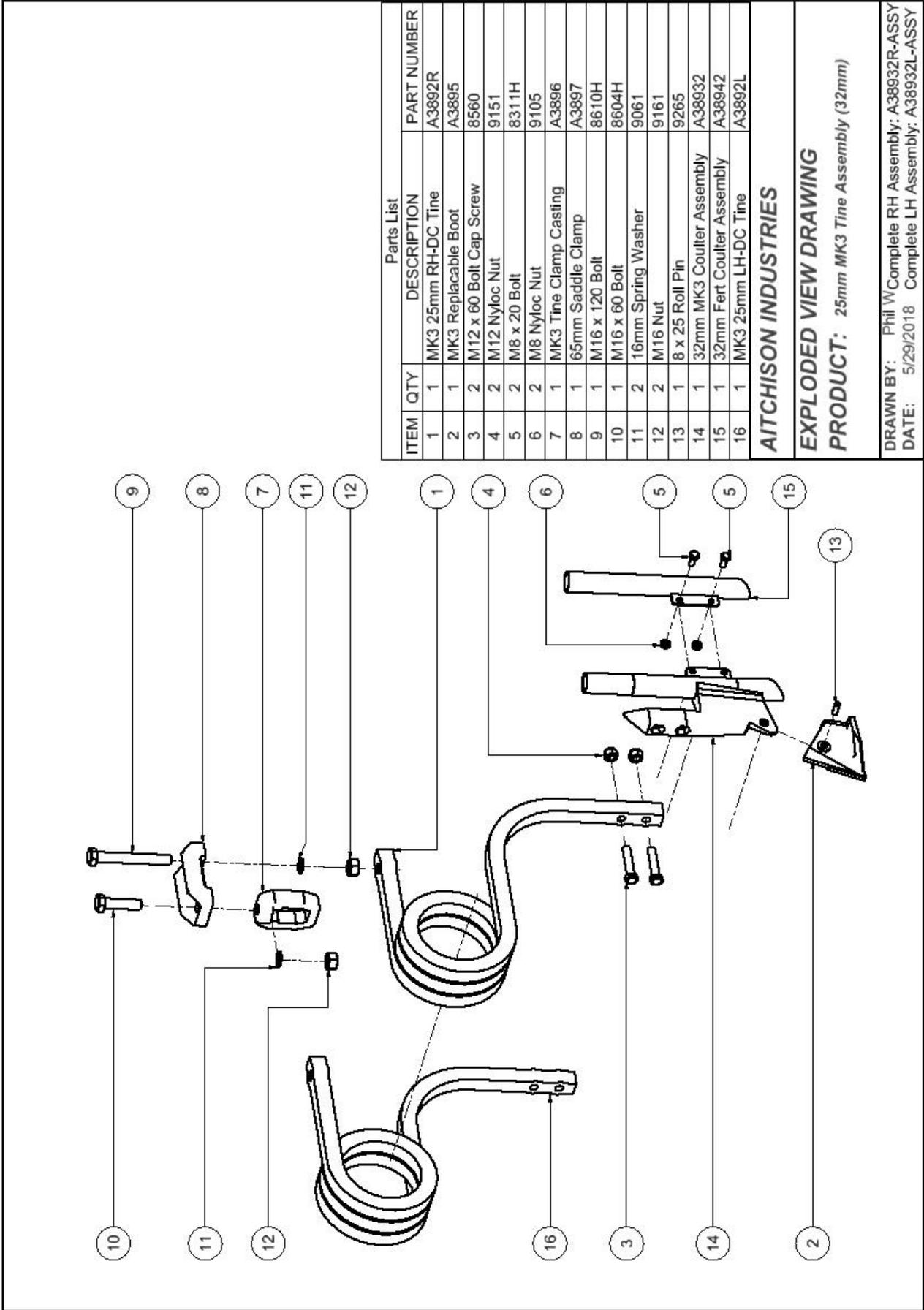


AITCHISON INDUSTRIES
EXPLODED VIEW DRAWING
PRODUCT: 6m LH Wing Assembly
 DRAWN BY: Phil W
 DATE: 7/31/2017
 A3620LH-ASSY

Parts List				Parts List			
ITEM	QTY	DESCRIPTION	PART NUMBER	ITEM	QTY	DESCRIPTION	PART NUMBER
1	6	25mm RH MK3 Tine Assy (32mm)	A38932R-ASSY	13	1	M24 x 130 Bolt	8813H
2	9	25mm LH MK3 Tine Assy (32mm)	A38932L-ASSY	14	1	M24 Nut	9193
3	1	MK3 RH Depth Leg Assembly	A3903R	15	1	MK2 Wing Float Plate Pin Assembly	A3864
4	1	Trojan 5 Stud Hub	TR 082030	16	1	M10 x 30 Bolt	8415H
5	1	14" Wheel Assembly	A23184	17	1	M20 x 55 Bolt	8718H
6	3	MK2 Wing Pivot Pin Assembly	A3862	18	1	M20 Nut	9171
7	1	M10 x 40 Bolt	8416H	19	1	M16 x 50 Bolt	8616H
8	4	M10 Nyloc Nut	9142	20	2	M16 Nut	9161
9	5	M6 Grease Nipple Straight	9323	21	2	M10 x 35 Bolt	8402H
10	1	Ratchet Link	A23127	22	1	Decal - 125kg Maximum	D3507
11	2	Ratchet Link Pin & Clips	A2646 & A2647	23	1	Decal - Depth Gauge LH	D3502
12	1	MK2 Wing Float Plate Assembly	A3865	24	1	6m RH Wing Frame Assembly	A3620RH

AITCHISON INDUSTRIES
EXPLODED VIEW DRAWING
PRODUCT: 6m RH Wing Assembly

DRAWN BY: Phil W
DATE: 7/28/2017
A3620RH-ASSY



Parts List			PART NUMBER
ITEM	QTY	DESCRIPTION	
1	1	MK3 25mm RH-DC Tine	A3892R
2	1	MK3 Replacable Boot	A3895
3	2	M12 x 60 Bolt Cap Screw	8560
4	2	M12 Nyloc Nut	9151
5	2	M8 x 20 Bolt	8311H
6	2	M8 Nyloc Nut	9105
7	1	MK3 Tine Clamp Casting	A3896
8	1	65mm Saddle Clamp	A3897
9	1	M16 x 120 Bolt	8610H
10	1	M16 x 60 Bolt	8604H
11	2	16mm Spring Washer	9061
12	2	M16 Nut	9161
13	1	8 x 25 Roll Pin	9265
14	1	32mm MK3 Coultler Assembly	A38932
15	1	32mm Fert Coultler Assembly	A38942
16	1	MK3 25mm LH-DC Tine	A3892L

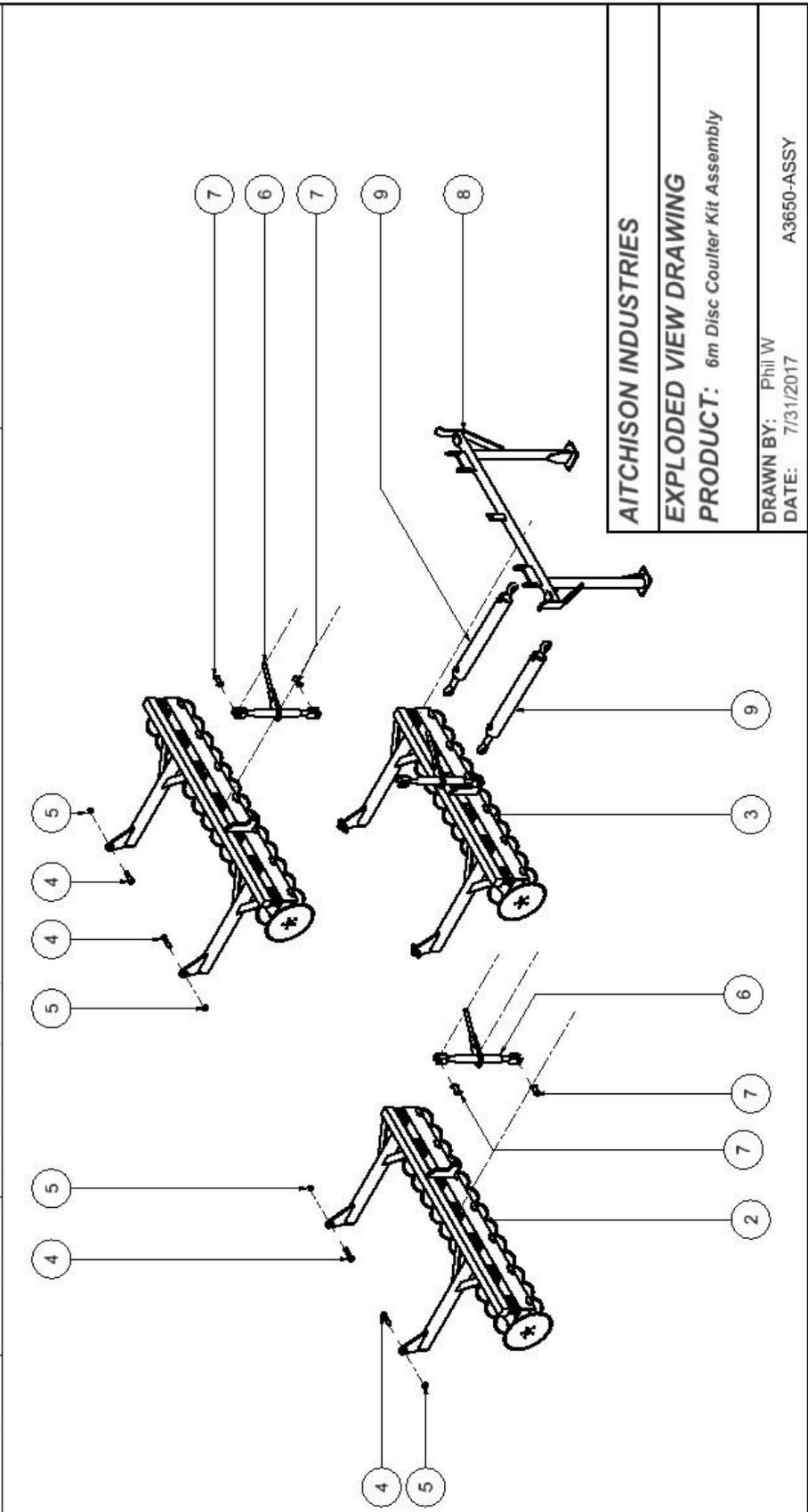
AITCHISON INDUSTRIES

EXPLODED VIEW DRAWING

PRODUCT: 25mm MK3 Tine Assembly (32mm)

DRAWN BY: Phil W
Complete RH Assembly: A38932R-ASSY
DATE: 5/29/2018 **Complete LH Assembly:** A38932L-ASSY

Parts List			
ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	6m Wing Disc Coupler Assembly LH	A3651LH-ASSY
2	1	6m Wing Disc Coupler Assembly RH	A3651RH-ASSY
3	1	MK3 Centre Disc Coupler Assembly	A3898-ASSY
4	6	M20 x 90 Bolt	8710H
5	6	M20 Nyloc Nut	9172
6	3	Ratchet Link	A23127
7	6	Ratchet Link Pin & Clips	A2646 & A2647
8	1	6m Disc Coupler Wing Rest Frame Assembly	A3652
9	2	3"x1.5" x 21" Compact Top Link Ram	A3653



AITCHISON INDUSTRIES

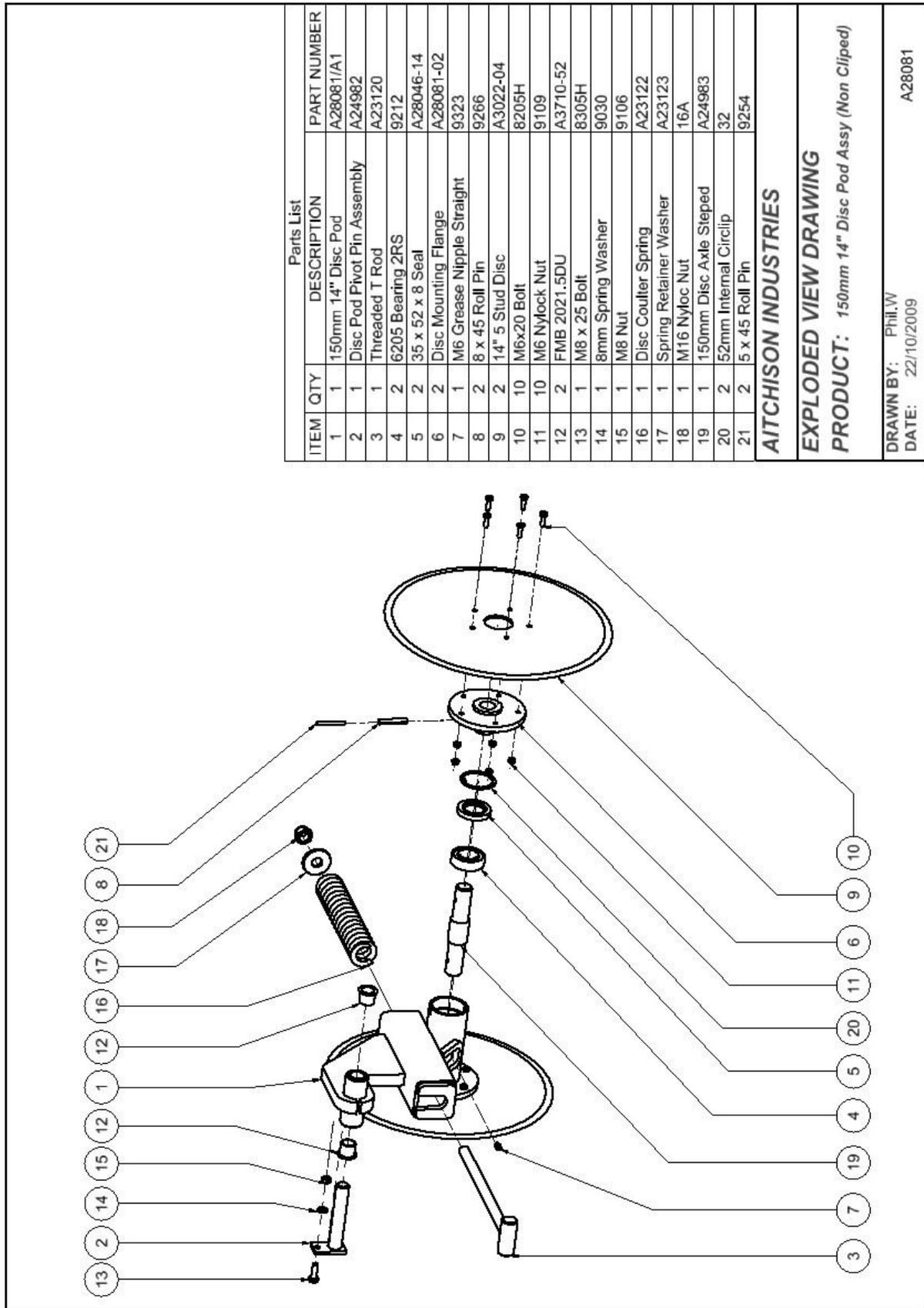
EXPLODED VIEW DRAWING

PRODUCT: 6m Disc Coupler Kit Assembly

DRAWN BY: Phil W

DATE: 7/31/2017

A3650-ASSY



Parts List			PART NUMBER
ITEM	QTY	DESCRIPTION	
1	1	150mm 14" Disc Pod	A28081/A1
2	1	Disc Pod Pivot Pin Assembly	A24982
3	1	Threaded T Rod	A23120
4	2	6205 Bearing 2RS	9212
5	2	35 x 52 x 8 Seal	A28046-14
6	2	Disc Mounting Flange	A28081-02
7	1	M6 Grease Nipple Straight	9323
8	2	8 x 45 Roll Pin	9266
9	2	14" 5 Stud Disc	A3022-04
10	10	M6x20 Bolt	8205H
11	10	M6 Nylock Nut	9109
12	2	FMB 2021.5DU	A3710-52
13	1	M8 x 25 Bolt	8305H
14	1	8mm Spring Washer	9030
15	1	M8 Nut	9106
16	1	Disc Coupler Spring	A23122
17	1	Spring Retainer Washer	A23123
18	1	M16 Nyloc Nut	16A
19	1	150mm Disc Axle Stepped	A24983
20	2	52mm Internal Circlip	32
21	2	5 x 45 Roll Pin	9254

AITCHISON INDUSTRIES

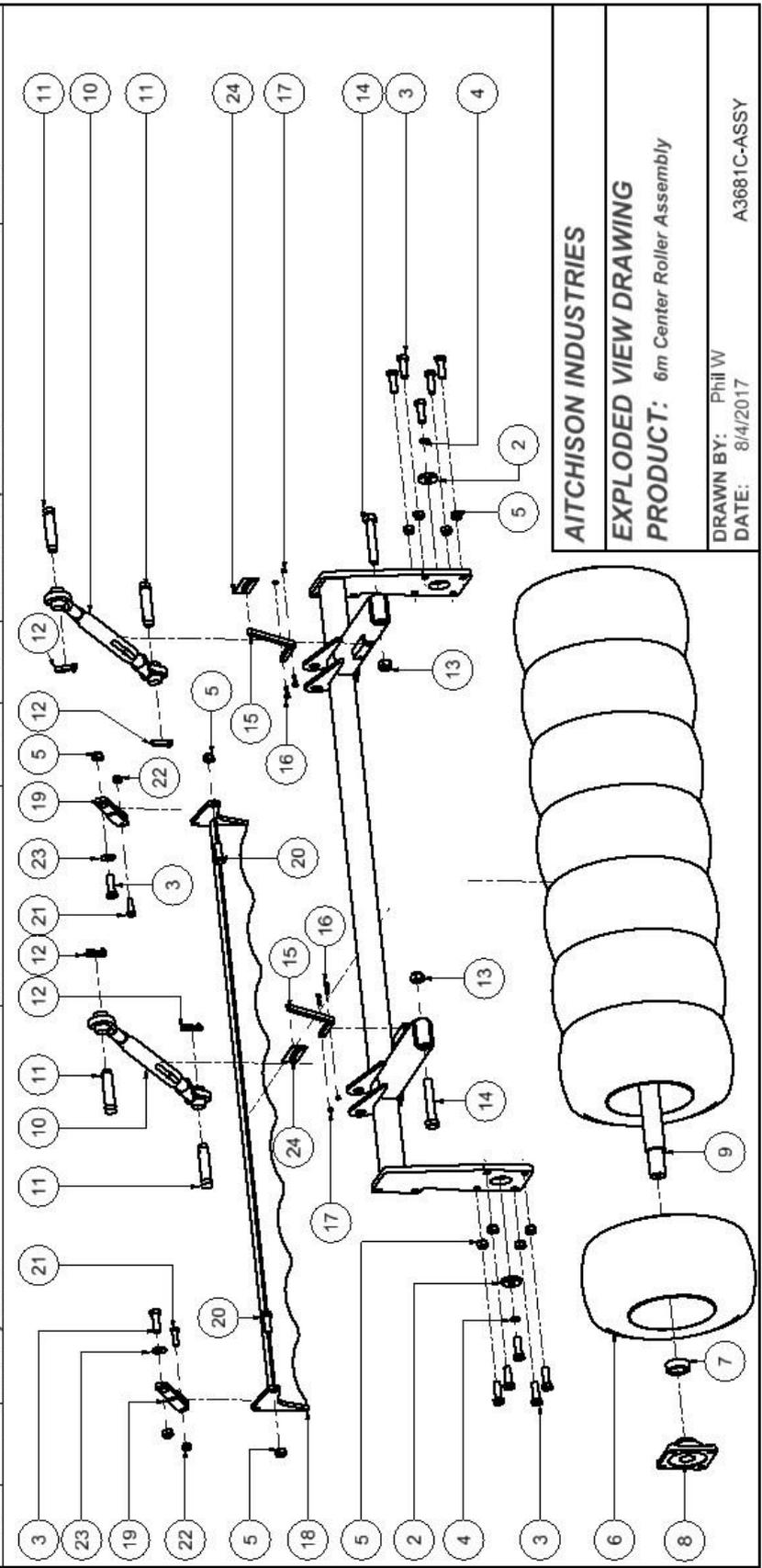
EXPLODED VIEW DRAWING

PRODUCT: 150mm 14" Disc Pod Assy (Non Clipped)

DRAWN BY: Phil.W
DATE: 22/10/2009

A28081

Parts List				Parts List			
ITEM	QTY	DESCRIPTION	PART NUMBER	ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	MK2 Centre Roller Frame Assembly	A3853	13	2	M20 Nyloc Nut	9172
2	2	MK2 Roller Wheel Retainer Washer	A3856	14	2	M20 x 120 Bolt	8704H
3	12	M16 x 50 Bolt	8616H	15	2	MK2 Roller Depth Gauge Pointer	A3857
4	2	16mm Spring Washer	9061	16	4	M6 x 25 Bolt	8213H
5	12	M16 Nyloc Nut	16A	17	4	M6 Nyloc Nut	9109
6	8	Press Roller Wheel	A38522	18	1	MK2 Roller Profiled Scraper Bar Assembly	A3877
7	2	MK2 Roller Axle Spacer	A38523	19	2	MK2 Roller Scraper Adjustable Mount	A3878
8	2	UFC 208 Bearing / Housing	92242 / 92241	20	2	M16 x 45 Bolt	8619H
9	1	MK2 Wing Roller Axle	A38521	21	2	M12 x 40 Bolt	8503H
10	2	Cat 2 Turnbuckle	A23189-01	22	2	M12 Nyloc Nut	9151
11	4	Top Link Pin B1200	A3858	23	2	16mm Thick Flat Washer	9062
12	4	11mm Lynch Pin	9288	24	2	MK2 Roller Depth Decal	D3509



AITCHISON INDUSTRIES

EXPLODED VIEW DRAWING

PRODUCT: 6m Center Roller Assembly

DRAWN BY: Phil W

DATE: 8/4/2017

A3681C-ASSY

Parts List			Parts List				
ITEM	QTY	DESCRIPTION	PART NUMBER	ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	6m LH Wing Roller Frame Assembly	A3682L	13	4	Top Link Pin B1200	A3658
2	11	Press Roller Wheel	A38522	14	4	11mm Lynch Pin	9288
3	2	MK2 Roller Axle Spacer	A38523	15	2	MK2 Roller Depth Gauge Pointer	A3857
4	2	UFC 208 Bearing / Housing	92241 / 92241	16	4	M6 x 25 Bolt	8213H
5	1	6m Wing Roller Axle	A3683	17	4	M6 Nyloc Nut	9109
6	2	MK2 Roller Wheel Retainer Washer	A3856	18	1	6m Wing Roller Profiled Scraper Bar Assembly	A3684
7	12	M16 x 50 Bolt	8616H	19	2	M16 x 45 Bolt	8619H
8	2	16mm Spring Washer	9061	20	2	M12 x 40 Bolt	8503H
9	12	M16 Nyloc Nut	16A	21	2	M12 Nyloc Nut	9151
10	2	M20 Nyloc Nut	9172	22	2	16mm Thick Flat Washer	9062
11	2	M20 x 100 Bolt	8709H	23	2	MK2 Roller Scraper Adjustable Mount	A3878
12	2	Cat 2 Turnbuckle	A23189-01	24	2	MK2 Roller Depth Decal	D3509

AITCHISON INDUSTRIES

EXPLODED VIEW DRAWING

PRODUCT: 6m LH Wing Roller Assembly

DRAWN BY: Phil W
DATE: 8/3/2017

A3681LH-ASSY

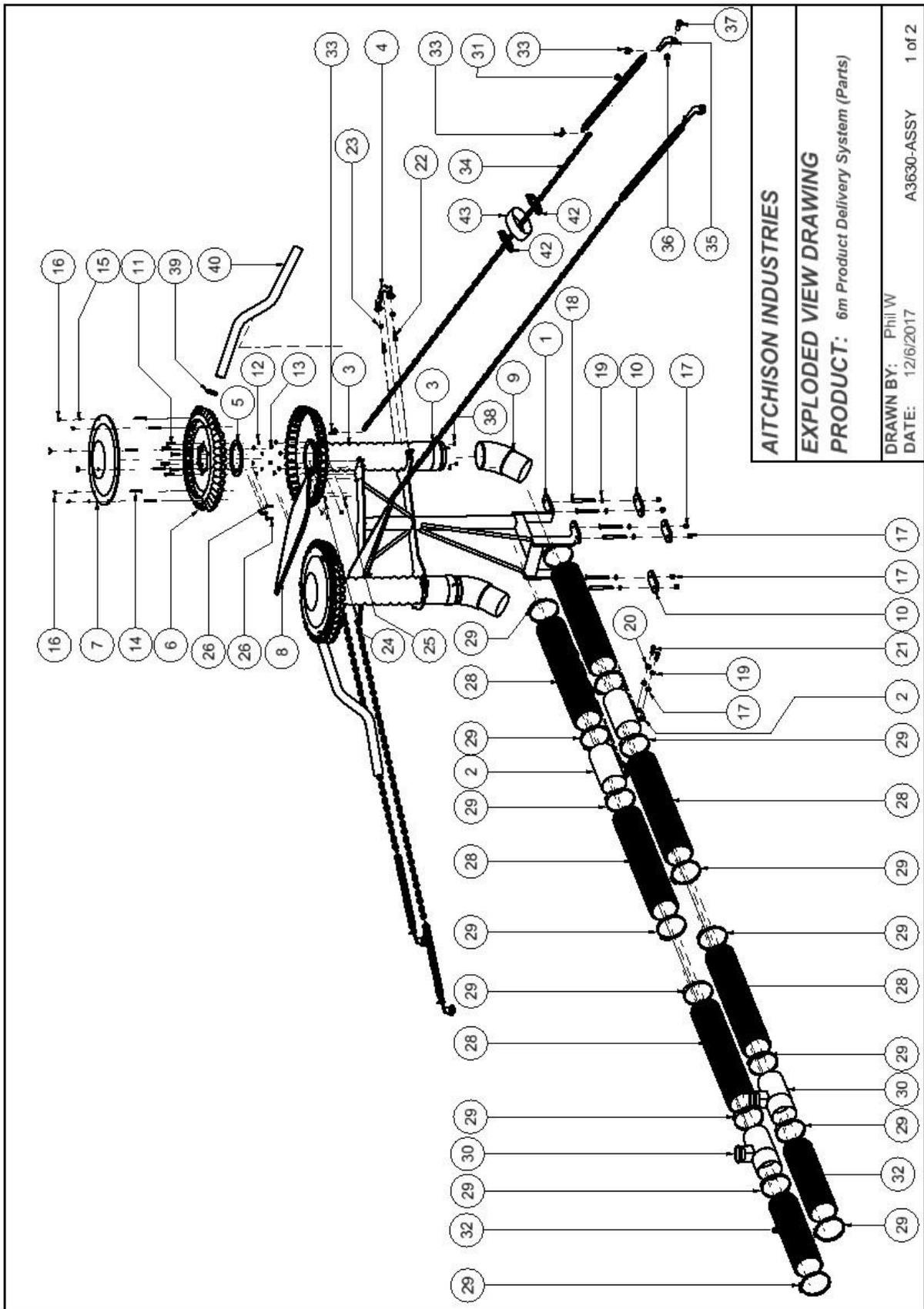
Parts List				Parts List			
ITEM	QTY	DESCRIPTION	PART NUMBER	ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	6m RH Wing Roller Frame Assembly	A3882R	13	2	M20 x 100 Bolt	8709H
2	11	Press Roller Wheel	A38522	14	2	M20 Nyloc Nut	9172
3	2	MK2 Roller Axle Spacer	A38523	15	2	MK2 Roller Depth Gauge Pointer	A3857
4	2	UFC 208 Bearing / Housing	92242 / 92241	16	4	M6 x 25 Bolt	8213H
5	1	6m Wing Roller Axle	A3883	17	4	M6 Nyloc Nut	9109
6	2	MK2 Roller Wheel Retainer Washer	A3856	18	2	MK2 Roller Scraper Adjustable Mount	A3878
7	12	M16 x 50 Bolt	8616H	19	1	6m Wing Roller Profiled Scraper Bar Assembly	A3684
8	2	16mm Spring Washer	9061	20	2	M16 x 45 Bolt	8619H
9	12	M16 Nyloc Nut	16A	21	2	M12 x 40 Bolt	8503H
10	2	Cat 2 Turnbuckle	A23189-01	22	2	M12 Nyloc Nut	9151
11	4	Top Link Pin B1200	A3858	23	2	16mm Thick Flat Washer	9062
12	4	11mm Lynch Pin	9288	24	2	MK2 Roller Depth Decal	D3509

AITCHISON INDUSTRIES

EXPLODED VIEW DRAWING

PRODUCT: 6m RH Wing Roller Assembly

DRAWN BY: Phil W
DATE: 8/2/2017
A3681RH-ASSY



AITCHISON INDUSTRIES

EXPLODED VIEW DRAWING

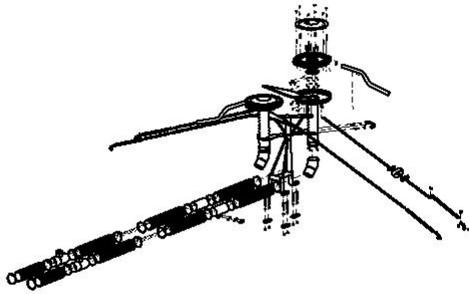
PRODUCT: 6m Product Delivery System (Parts)

DRAWN BY: Phil W
DATE: 12/6/2017

A3630-ASSY

1 of 2

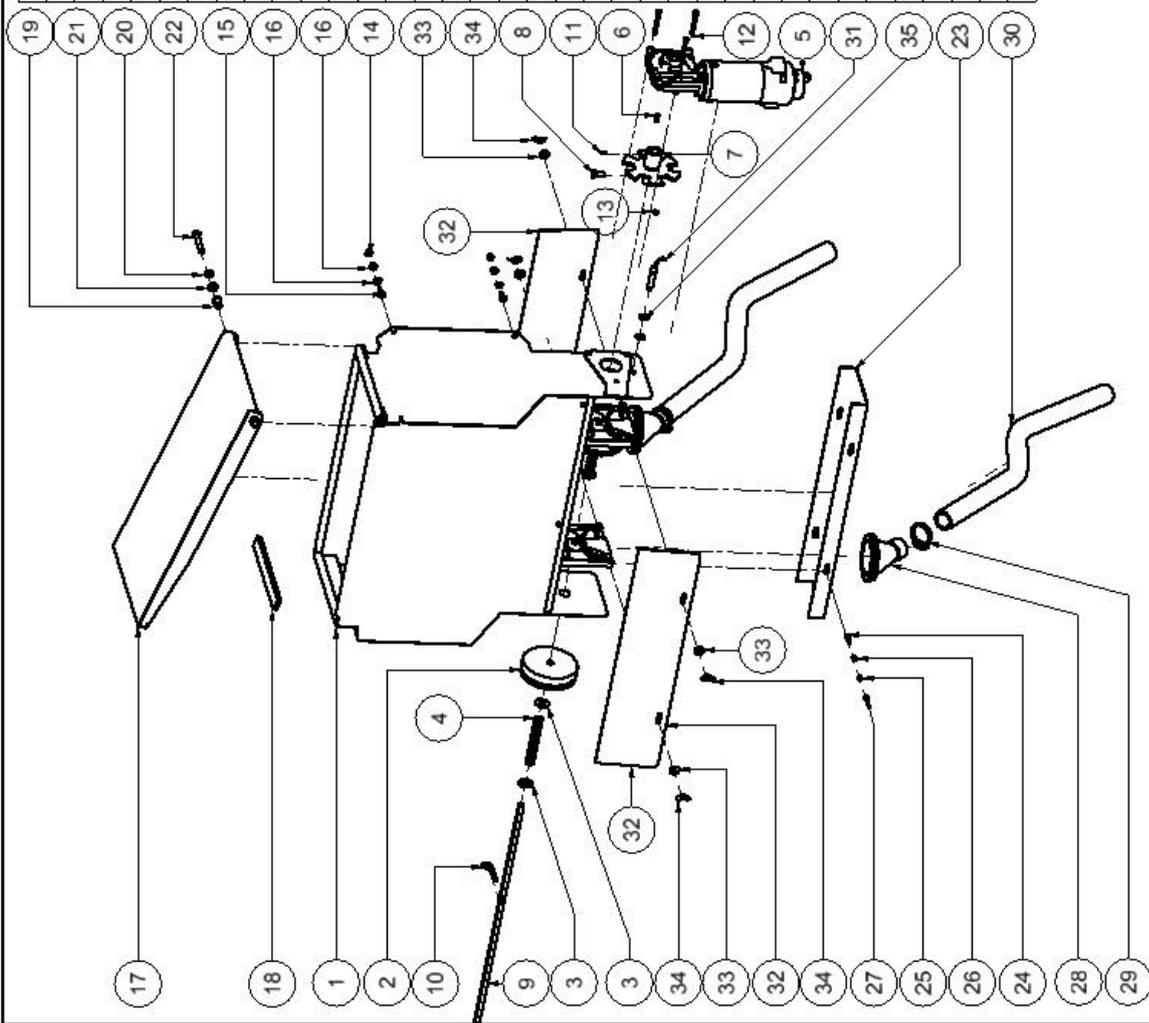
Parts List				Parts List			
ITEM	QTY	DESCRIPTION	PART NUMBER	ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	Turbulence Tube Mount Assembly	A3631	22	4	M10 x 40 Bolt	8416H
2	2	127mm Hose Pivot Assembly	A3632	23	4	M10 Nyloc Nut	9142
3	2	40 Run Turbulence Tube	A3630-01	24	4	8mm Flat Washer	9031
4	2	Turbulence Tube Lower Clamp Assembly	A3633	25	8	M8 Nyloc Nut	9105
5	2	40Run Distributor Base Seal	A3630-02	26	6	M8 x 25 Bolt	8305H
6	2	40Run Distributor Body	A3630-03	28	6	Hose 127mm HD Ducting (Blue)	A3630-06
7	2	40Run Distributor Lid	A3630-04	29	16	Hose Clamp 125-160mm S-S	A3630-07
8	2	Turbulence Tube Hose Support Assembly	A3634	30	2	5" Venturi Assembly	A3610
9	2	45degree Trubulence Elbow	A3635	31	4	Spring - Tension - 500mm	A3630-08
10	3	Turbulence Tube Base Clamp Plate	A3630-05	32	2	Hose 127mm STD Ducting (Green)	A3630-09
11	12	M8 x 35 C/S S/S Bolt	8320S	33	10	M6 MS D Shackel	9285
12	12	8mm S/S Flat Washer	9031S	34	304	M6 Link Chain	ZCH6
13	12	M8 S/S Nylock Nut	9105S	35	4	6m Wing Hose Chain Mount	A3630-10
14	12	M5 x 55 Bolt	8204S	36	4	M16 Nyloc Nut	16A
15	12	5mm Flat Washer	9018	37	4	M16 x 40 Bolt	8602H
16	12	M5 Wing Nut	9113	38	8	6-16 SS Pop Rivet	9303
17	10	M12 Nyloc Nut	9151	39	160	Hose Clamp 21-44mm S-S	A3630-11
18	6	M12 x 110 Bolt	8515H	40	2	Seed Hose 32mm / Meter	A3584
19	8	12mm Flat Washer	9051	41	2	M8 x 30 Bolt	8301H
20	2	12mm HD Flat Washer	9052	42	20	Cable Tie 580x12mm	A2247-04
21	4	M12 x 40 Bolt	8503H	43	6m	50mm Velcro Wrap, per meter	9661



AITCHISON INDUSTRIES
EXPLODED VIEW DRAWING
PRODUCT: 6m Product Delivery System (Numbers)

DRAWN BY: Phil W
DATE: 12/6/2017 A3630-ASSY 2 of 2

ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	6m Airpro Small Seed Box Assembly	A3691
2	2	Sponge Pad & Disc	A2364
3	4	9/16 x 1 1/4 16G ZP Washer	9044
4	2	Seed Pad Spring	A23105
5	1	320W 12VDC Motor with Encoder	A2529E
6	1	320W 12VDC Motor Drive Key	A2530E-02
7	1	Airpro Small Seed Box Drive Boss Assy	A3692
8	1	M10 x 20 Bolt	8419H
9	1	Airpro Small Seed Box Seeder Shaft	A3690-01
10	1	3mm R Clip	9280
11	1	M6 x 8 Grub Screw	8204
12	3	M6 x 60 Bolt	8202H
13	3	M6 Nyloc Nut	9109
14	4	M8 S/S Nylock Nut	9105S
15	4	M8 x 20 S/S Bolt	8311S
16	8	8mm S/S Flat Washer	9031S
17	1	Small Seed Box Lid Assembly	A3573
18	1	Buffer Pad	A2375
19	2	S 206M Flanged Bush	A2355
20	2	10mm Spring Washer	9041
21	2	10 mm Flat Washer	9042
22	2	M10 x 65 Bolt	8417H
23	1	Airpro Small Seed Box Cup Tray	A3690-02
24	4	M6 x 25 Bolt	8213H
25	4	6mm Spring Washer	9021
26	4	6mm Flat Washer	9023
27	4	M6 Nut	9121
28	2	Round Seed Cup Angled	A2369
29	2	35mm Cray Clip	A2370
30	2	35mm Seed Dropper Hose / Meter	A2384-01
31	1	12mm NPN NC Proximity Sensor	A2579E-03
32	2	Airpro Small Seed Box Inspection Panel	A3690-03
33	4	6mm Fender Washer	9022
34	4	M6 Wingnut	9108
35	2	12mm NPN NC Proximity Sensor Nut	A2579E-03

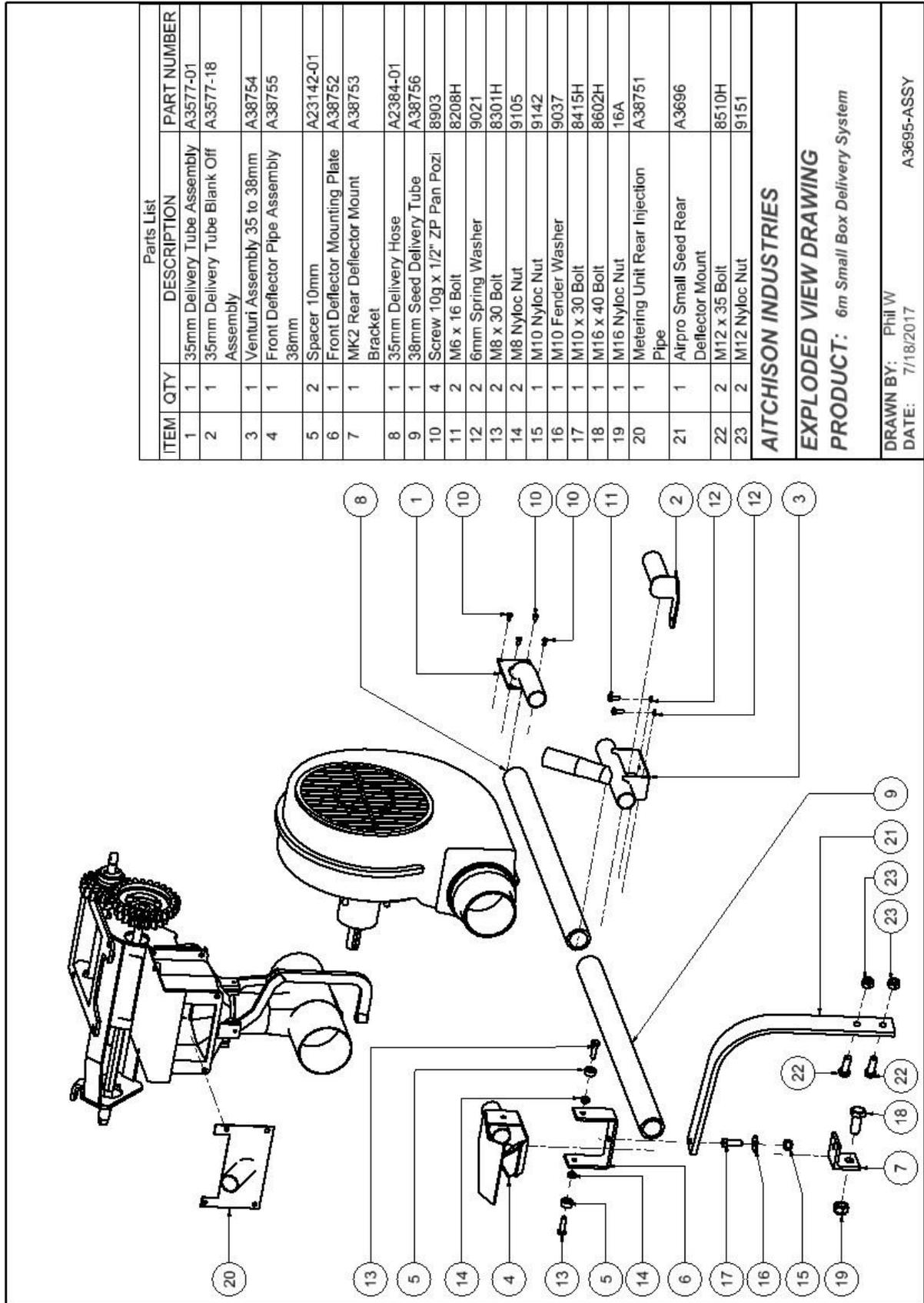


AITCHISON INDUSTRIES

EXPLODED VIEW DRAWING

PRODUCT: 6m Airpro Small Seed Box & Parts

DRAWN BY: Phil W
DATE: 7/14/2017
A3690-ASSY



Parts List			
ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	35mm Delivery Tube Assembly	A3577-01
2	1	35mm Delivery Tube Blank Off Assembly	A3577-18
3	1	Venturi Assembly 35 to 38mm	A38754
4	1	Front Deflector Pipe Assembly 38mm	A38755
5	2	Spacer 10mm	A23142-01
6	1	Front Deflector Mounting Plate	A38752
7	1	MK2 Rear Deflector Mount Bracket	A38753
8	1	35mm Delivery Hose	A2384-01
9	1	38mm Seed Delivery Tube	A38756
10	4	Screw 10g x 1/2" ZP Pan Pozi	8903
11	2	M6 x 16 Bolt	8208H
12	2	6mm Spring Washer	9021
13	2	M8 x 30 Bolt	8301H
14	2	M8 Nyloc Nut	9105
15	1	M10 Nyloc Nut	9142
16	1	M10 Fender Washer	9037
17	1	M10 x 30 Bolt	8415H
18	1	M16 x 40 Bolt	8602H
19	1	M16 Nyloc Nut	16A
20	1	Metering Unit Rear Injection Pipe	A38751
21	1	Airpro Small Seed Rear Deflector Mount	A3696
22	2	M12 x 35 Bolt	8510H
23	2	M12 Nyloc Nut	9151

AITCHISON INDUSTRIES

EXPLODED VIEW DRAWING

PRODUCT: 6m Small Box Delivery System

DRAWN BY: Phil W
DATE: 7/18/2017

A3695-ASSY