

AITCHISON SEEDMATIC

Air-Pro

ASP-8132

TINE SEED DRILL



REESE ENGINEERING LTD

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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	ASP-8132
Overall Width – Transport	2.7m
Overall Width – Seeding	4.9m
Sowing Width	4.8m
Working Speed	6-15 km/h
Tractor HP (min)	120
Weight Empty	3600kg
Seed Hopper Capacity	1000lts
Fertiliser Hopper Capacity	1500lts
No. Tines	32
Row Spacing	150mm
Opener Stagger	400mm

Optional Extras:

Extra wide transport wheels

#A2249-23A

QUICK SYSTEM CHECK

1. Fan Hydraulics: has the drill been set to match your tractors hydraulic system? (Open/Closed centre system) -----see page 20.
2. Fan Hydraulics: does your tractor have a **PRESSURE FREE** return dump port? -----see page 20.
3. Drawbar Lift Hydraulic: when seeding ensure that your tractors hydraulic bank connected the Drawbar Lift Rams is kept in FLOAT -----see page 18.
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

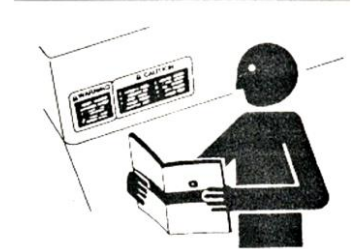
1. Run Fans Before Operating drill: by running the fans before seeding helps dry out the seed delivery tubes.
2. Run Fans After Seeding: this will help to clean out any seed/fertilizer that may still be in the air system.
3. Check Locks & Stops: check that the transport locks work & the carrier bolts are adjusted so they are carrying the weight of the machine in transit.
4. Transit Speed: always keep your transport speeds below 40km/h .
5. Turning: when seeding do not 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.

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

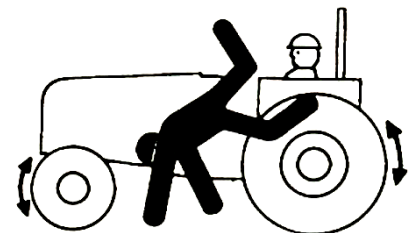
Be careful when operating machine to avoid injury.

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.

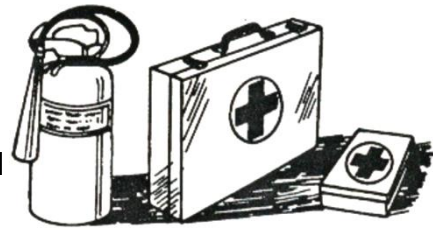


Operating equipment safely requires the full attention of the operator. Do not wear radio headphones while operating machine.

BE SAFE WITH CHEMICALS

Direct exposure to agricultural and hazardous chemicals can cause serious injury. Potentially hazardous chemicals used with Aitchison equipment includes 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.

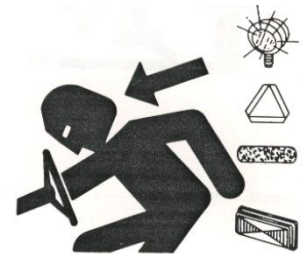
Keep a fire extinguisher and first aid kit handy



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.

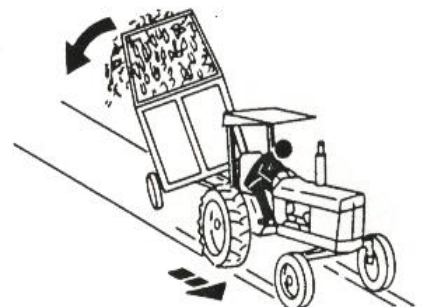
Reduce speed over rough ground

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 ASP-8132

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 can have crop failures on the first occasion, but as their skills and understanding of the technique improves, so do their crop results.

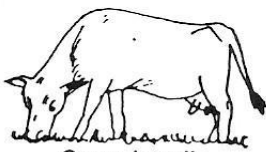
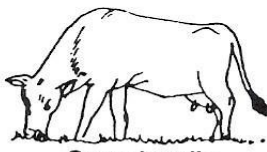
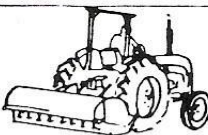



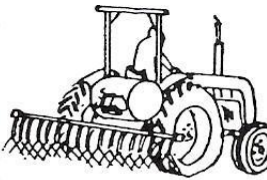
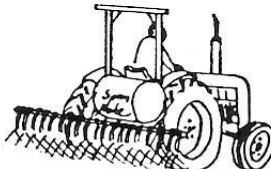
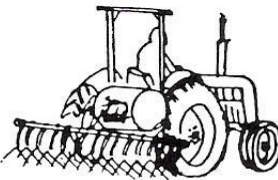



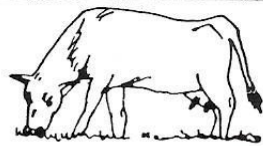
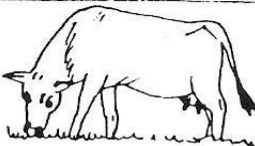
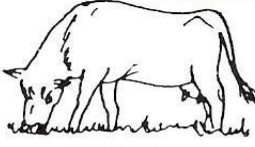
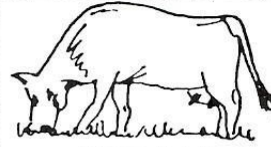
TECHNIQUES AND TIMING FOR PASTURE RENOVATION

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 the correct chemical 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 for 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 Air-Pro.

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 AIR-PRO ASP-8132.

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 can be 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.

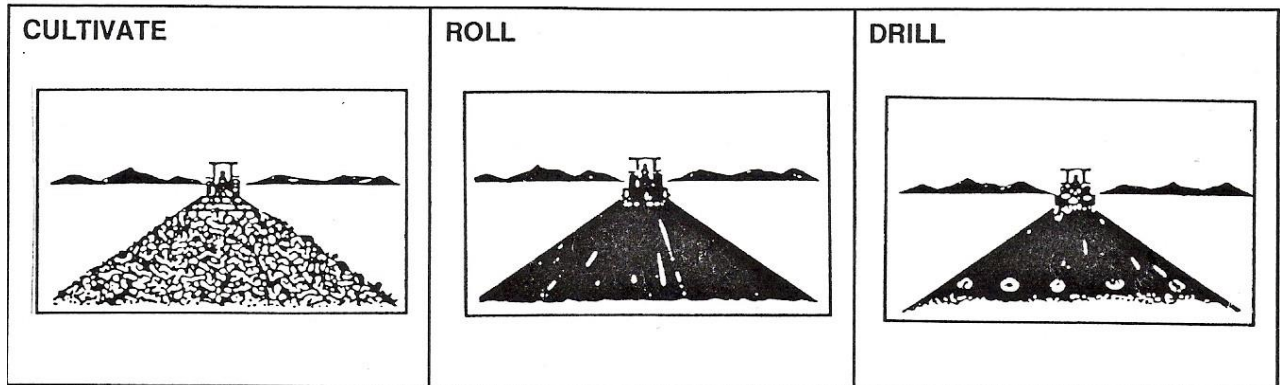
Wheat and Barley – Direct seeding in early spring or autumn depending on variety. Spray out pasture with approved herbicide (may not be necessary after brassica). Always sow with fertiliser.

Lucerne, Alfalfa – Sow in early spring after spraying out entire area with Roundup. It is always a good idea to do a soil test to ensure that the solid 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

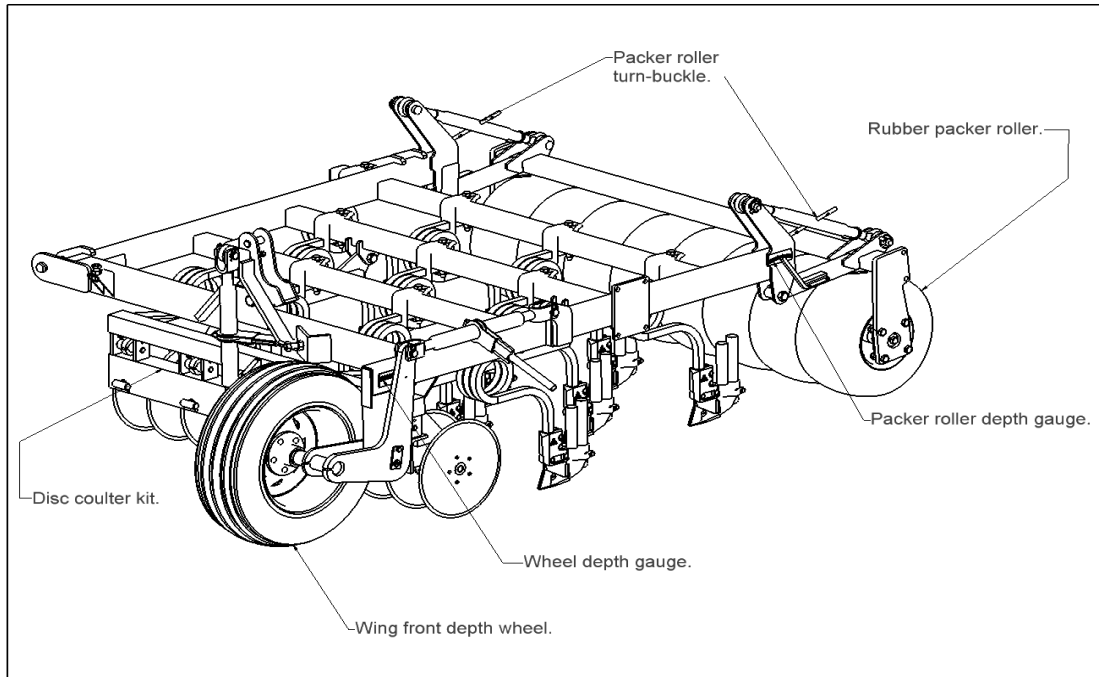
As this is a tined implement with a direct drill type opener, it is important to treat all seed beds as you would a pasture. With a conventional drill one works up the soil into a fine seedbed so that a broad boot type coulter will pass through leaving the seed behind, in the soil tilth. Cultivate the 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 ASP-8132 is controlled by the front row of depth / transport wheels and by the rear packer rollers.

LH WING SHOWN.



FRONT DEPTH WHEELS

Each wing RH/LH has 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.

The transport wheels are also depth wheels, these wheels also need to be set at the same height as the wing depth wheels.

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: they help to cover the seed slots and control the seeding depth.

These Packer Rollers should be set so 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 tab on the turnbuckles, adjust both turn-buckle in small increments until desired depth is achieved. **Ensure that the turn-buckle handle (Pin) is pointing straight down**, re-tighten lock tab. **Damage** or changing depth may occur if lock tabs are **not** re-tightened.

NOTE:

When setting the seeding depth have the disc coulters kits clear of ground.

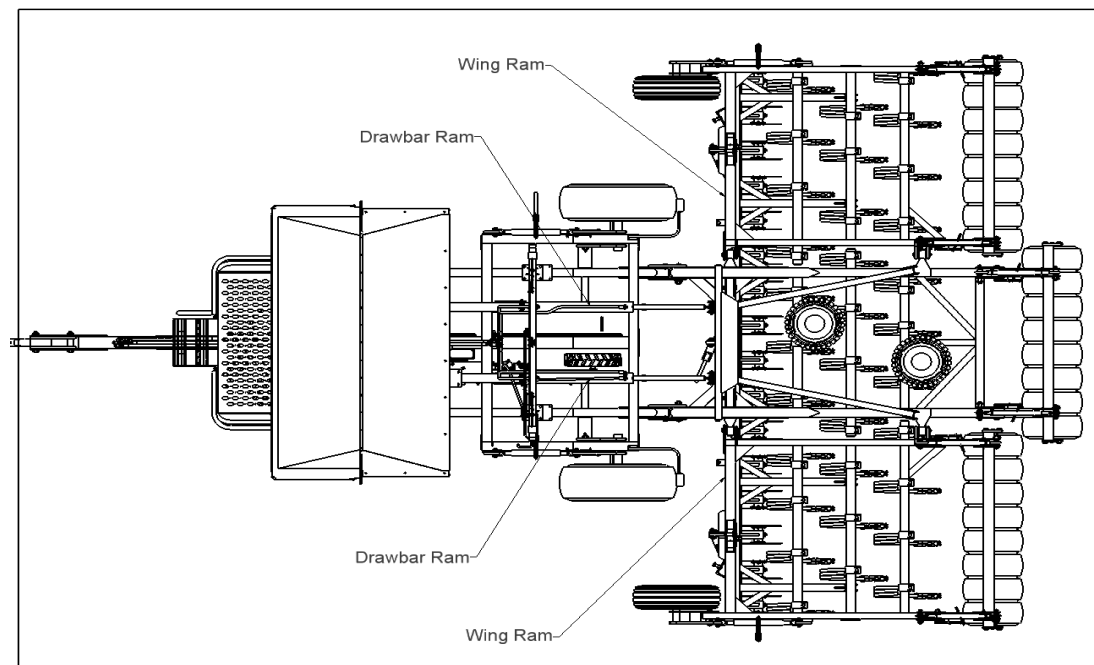
The disc coulters can sometimes interfere with the seeding depth.

FOLDING HYDRAULIC SYSTEM

The ASP-8132 is fitted with two separate folding hydraulic systems. One is the “Drawbar Rams” and the other is the “Wing Rams”.

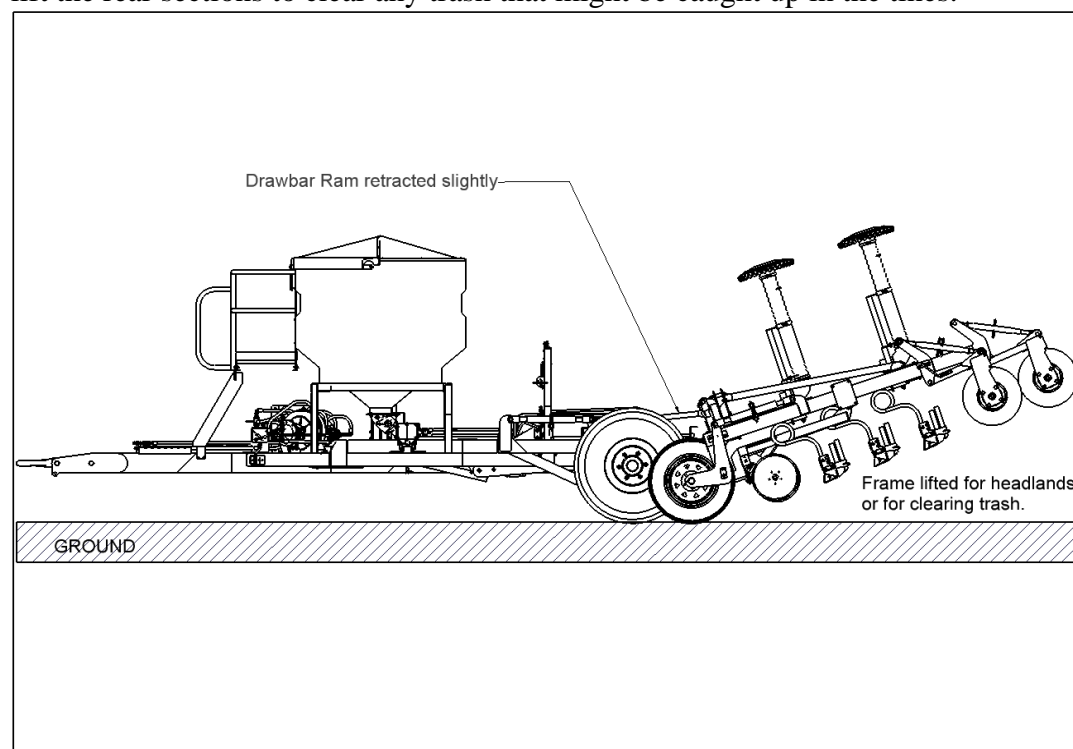
NOTE: Ensure that the ASP-8132 is connected to the tractors drawbar before folding/unfolding to prevent damage or injury.

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.

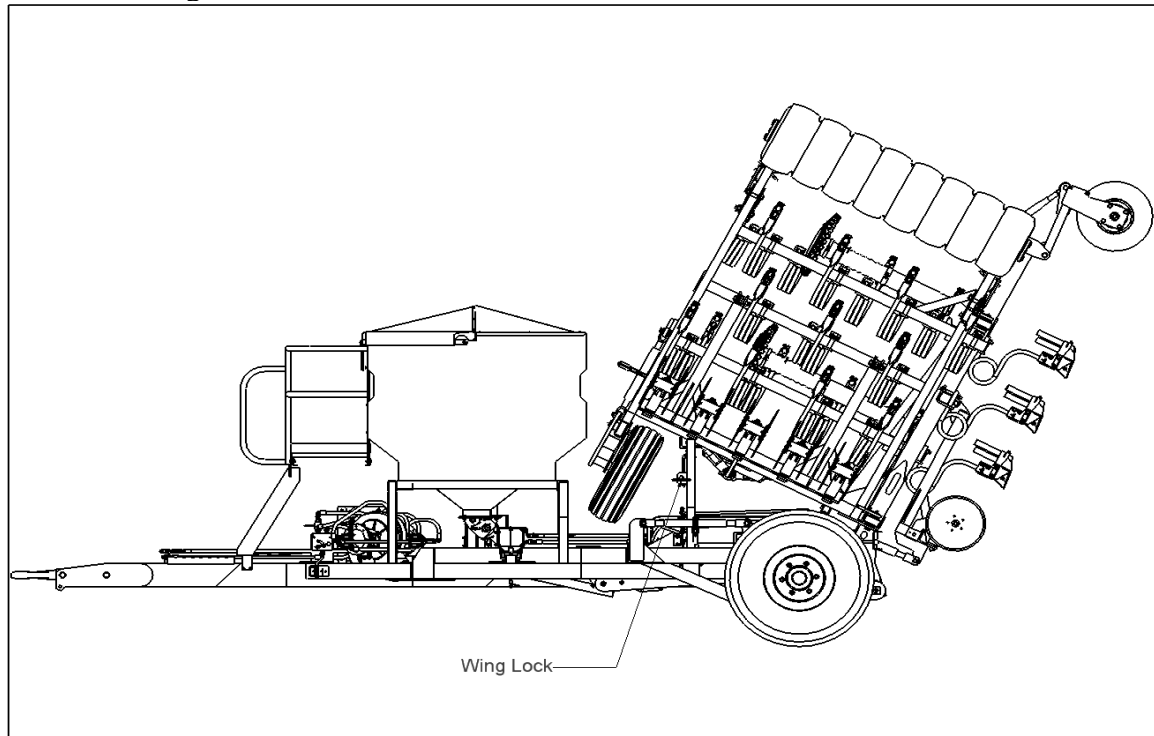
FOLDING & UNFOLDING

When you are about to unfold the ASP-8132 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 ASP-8132 is connected to the tractors drawbar before folding/unfolding to prevent damage or injury.

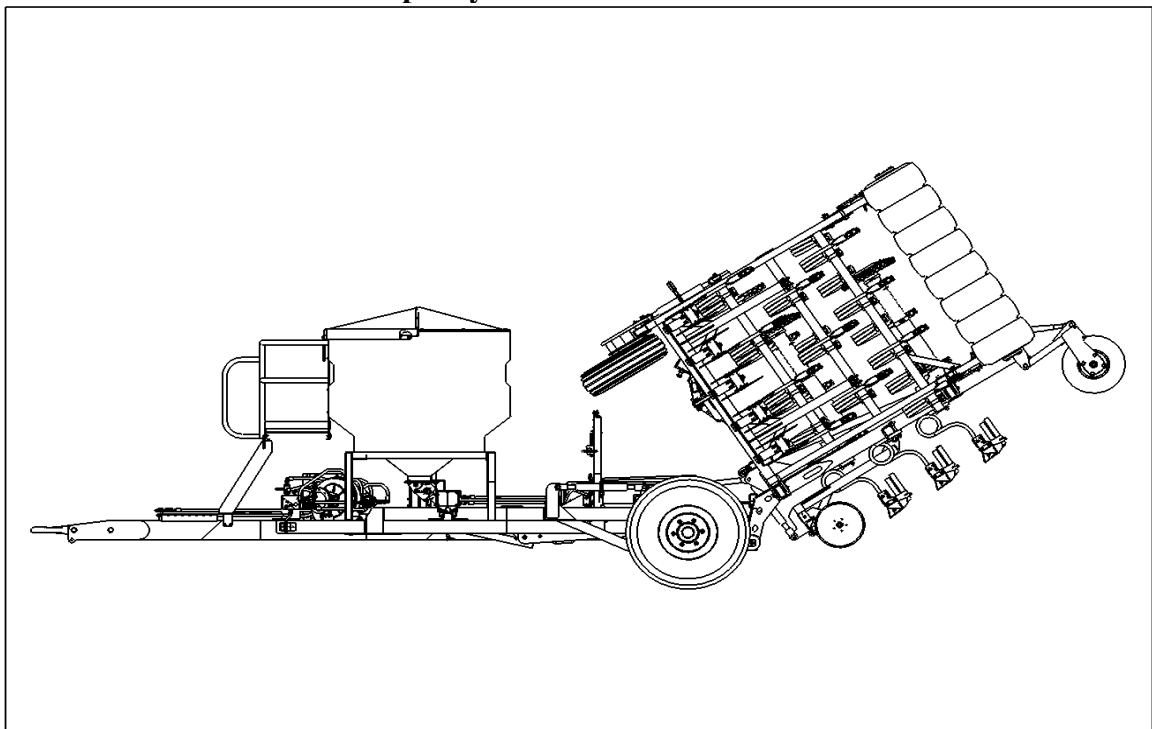
STEP 1. UNLOCK

Lock-out Wing Lock mechanism.



STEP 2. LOWER BACKWARDS

The Drawbar Rams can now be **partly extended**.



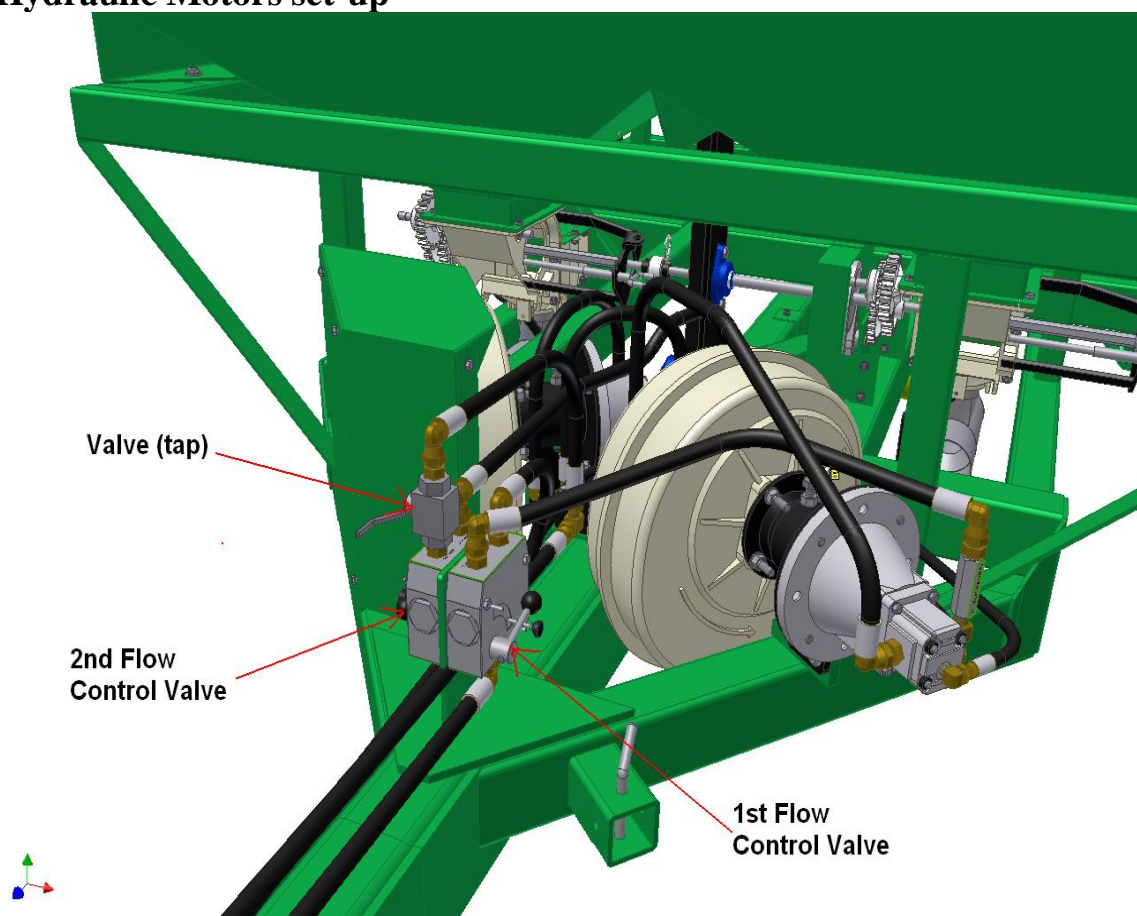
HYDRAULIC FAN DRIVE

The ASP-8132 has 1 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 20 l/m to run and should turn at about 2000 to 4000rpm. 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 FERTILIZER 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 past the main seals in both hydraulic motors. This CASE DRAIN hose needs to be connected to the tractor oil tank **without any restriction**.

AITCHISON

SEEDMATIC

Electric Drive Head Unit

		AITCHISON					
Job Info: Reese Engineering LTD. Aitchison							
Run		0	km/h	0	ha/h	1.473	ha
		Running		SEED			
-	50	+	0	kg/ha	0	Shaft	
kg/ha			Rate		0		
0	0	1.77		ha	Fan		
Rate1		Rate2		Enter		↩	
0.597 to 9.553 km/h				Area			
		Stopped		FERT			
-	50	+	0	kg/ha	0	Shaft	
kg/ha			Rate				
0	0	0.716		ha	Enter		
Rate1		Rate2		↩			
0.596 to 9.543 km/h				Area			
Job Manager							

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](#).

The screenshot shows the Aitchison dashboard interface. At the top, there's a header with the Aitchison logo and a settings gear icon. Below the header, there's a 'Job Info' section displaying 'Reese Engineering LTD.' and 'Aitchison'. The main area is divided into two sections: 'SEED' and 'FERT'. Each section has a status indicator (Hold, Paused, Running, Stopped), a rate display (50 kg/ha), a rate input (0 kg/ha), a rate display (0 kg/ha), a rate input (0 kg/ha), a rate display (1.77 ha), a rate input (0 ha), a rate display (0.597 to 9.553 km/h), a rate input (0.596 to 9.543 km/h), and a rate display (0.716 ha). There are also buttons for 'Enter', 'Fan', and 'Shaft'. At the bottom, there's a 'Job Manager' button.

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](#).

The screenshot shows the Aitchison Settings menu. It's a dark-themed overlay with a close button (X) in the top right corner. The menu items are: UNITS, CALIBRATE, ADVANCED, USER MANUAL, EMPTY HOPPERS, and REFRESH. The background shows the Aitchison dashboard interface with the 'Run' status and 'SEED' section visible.

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.



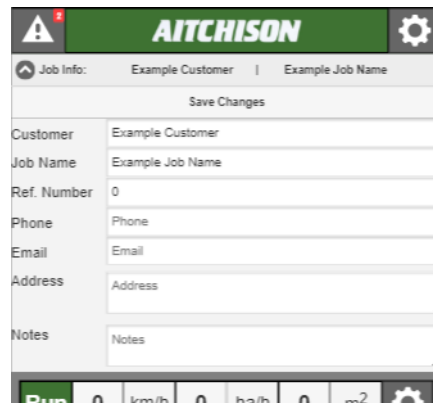
Job Info:

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.

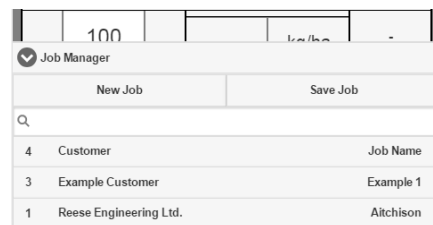
See: [Keyboard](#).



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].

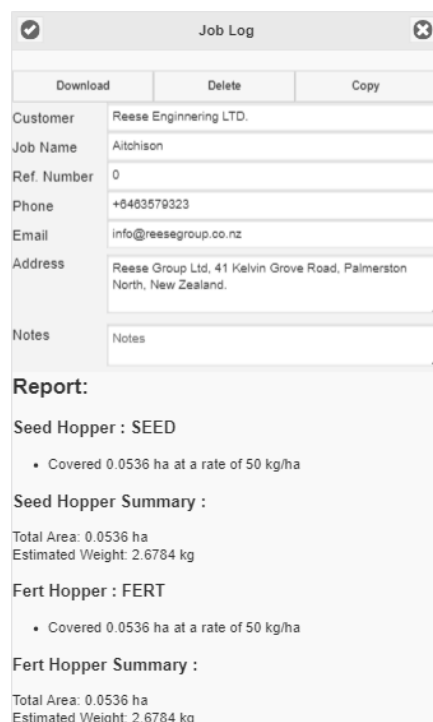
The **Download** button saves the job information and report to a connected USB flash drive under: “:\aitchison\reports”. If the device is not available, plug it back in and wait 10s.

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.



Download	Delete	Copy
Customer	Reese Engineering LTD.	
Job Name	Aitchison	
Ref. Number	0	
Phone	+6463579323	
Email	info@reeseigroup.co.nz	
Address	Reese Group Ltd, 41 Kelvin Grove Road, Palmerston North, New Zealand.	
Notes	Notes	

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.

Run	7.74	km/h	2.572	ha/h	0.098	ha	⚙️
🔌	Running	SEED		⚙️			
-	50	+	50	kg/ha	17.24	Shaft	
kg/ha		Rate		0		Fan	
0	0	0.098		ha	Enter ↩️		
Rate1	Rate2	Area					
0.597 to 9.553 km/h							
🔌	Running	FERT		⚙️			
-	50	+	50	kg/ha	17.3	Shaft	
kg/ha		Rate		0		Fan	
0	0	0.098		ha	Enter ↩️		
Rate1	Rate2	Area					
0.596 to 9.543 km/h							

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.

Hold	0	km/h	0	ha/h	1.473	ha	⚙️
------	---	------	---	------	-------	----	----

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.

🔌	Running	SEED		⚙️			
-	50	+	50	kg/ha	17.24	Shaft	
kg/ha		Rate		0		Fan	
0	0	0.098		ha	Enter ↩️		
Rate1	Rate2	Area					
0.597 to 9.553 km/h							

- **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 motor's 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.

25	kg/ha
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](#)).

0
Shaft

- **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 cluster's settings menu.

0
Fan

- **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.

0	ha
Area	

- **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.

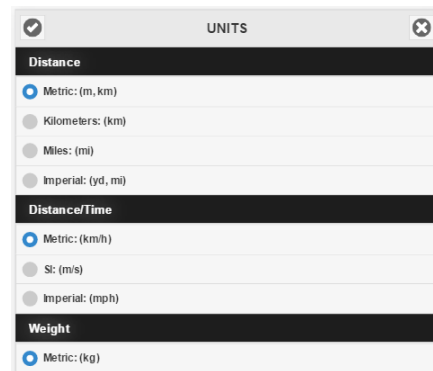
-	50	+
kg/ha		
100	75	
Rate1	Rate2	
0.597 to 9.553 km/h		
Enter		

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.

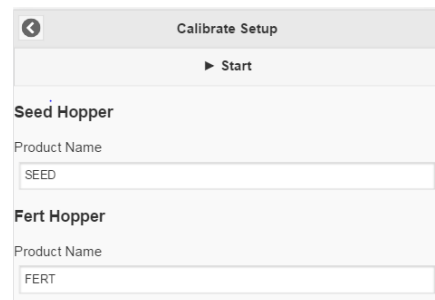
- **Load the Product:** Load the product over the catchment outlets for calibration.
- **Prime Hoppers:** Press and hold the desired prime button until the product flows freely. Forgetting to prime the hoppers before calibration will result in a false application rate.
- **Product Catchment:** Place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

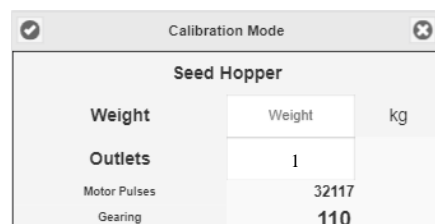
2. **Start Calibration:** To start/pause calibration, press the products prime button on the machine. The calibration will stop itself automatically when complete and the interface will buzz for 1s. The interface will update, showing a weight and outlets input field for the calibrated hopper. The second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

Machine Span
4.8 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.

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

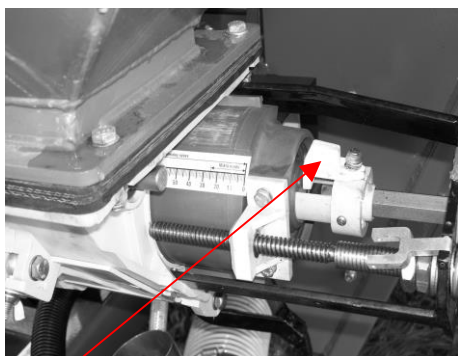
FINE SEEDS.

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

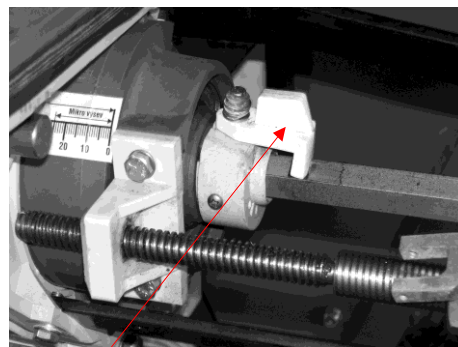
FINE SEED SETTING

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.



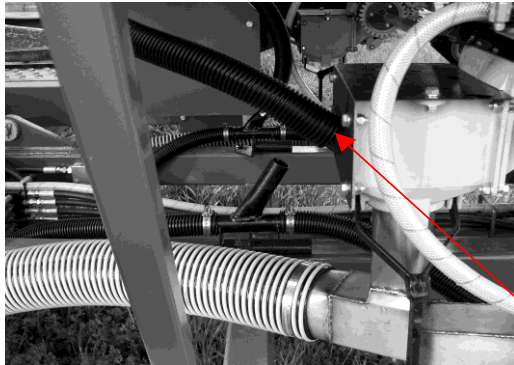
Fine seeds lever locked (scale “Z”).
0 < 25 only.
Adjustments over 25 with lever lock
will result in **damage**.

SMALL SEEDS BOX

Seedmatic Professional 8132'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.

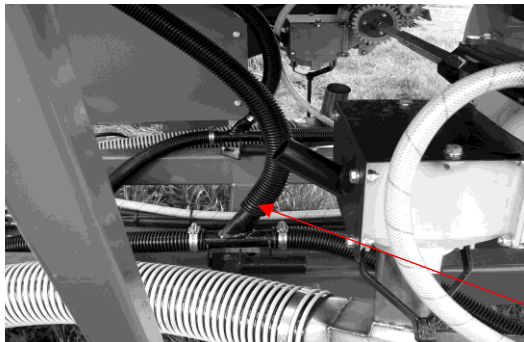
This small seeds box has a variable speed E-Drive to control its metering rates. Product metered from this box can be placed down the main airstream or broadcast at the rear of the seed drill.

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:

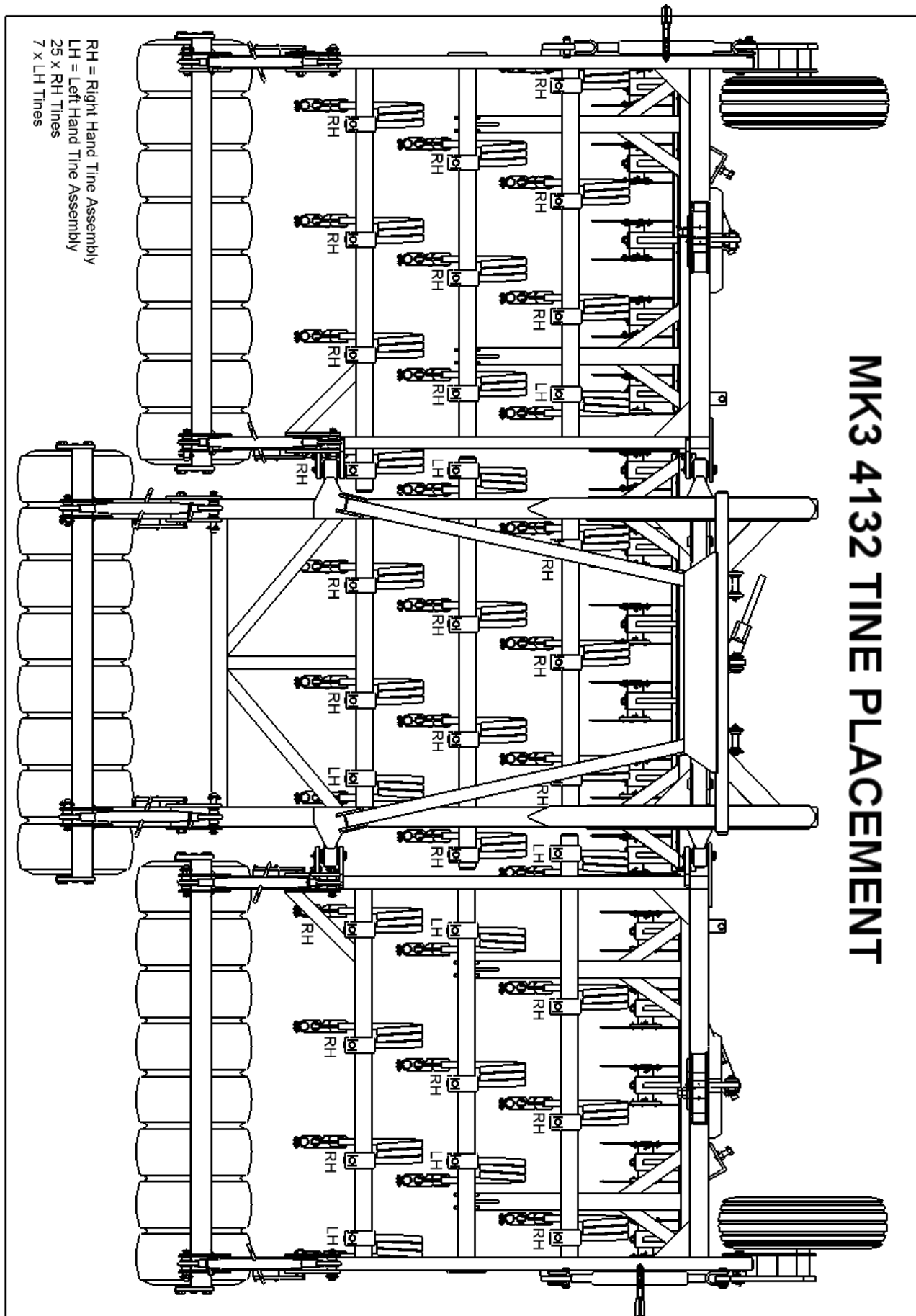
- 1 per Disc Coulter Pod assembly.
- Depth Leg assembly
- Main Pivot Pins
- Drawbar & Wings
- 2 per Ratchet Links
- 2 per Rear Roller Axels



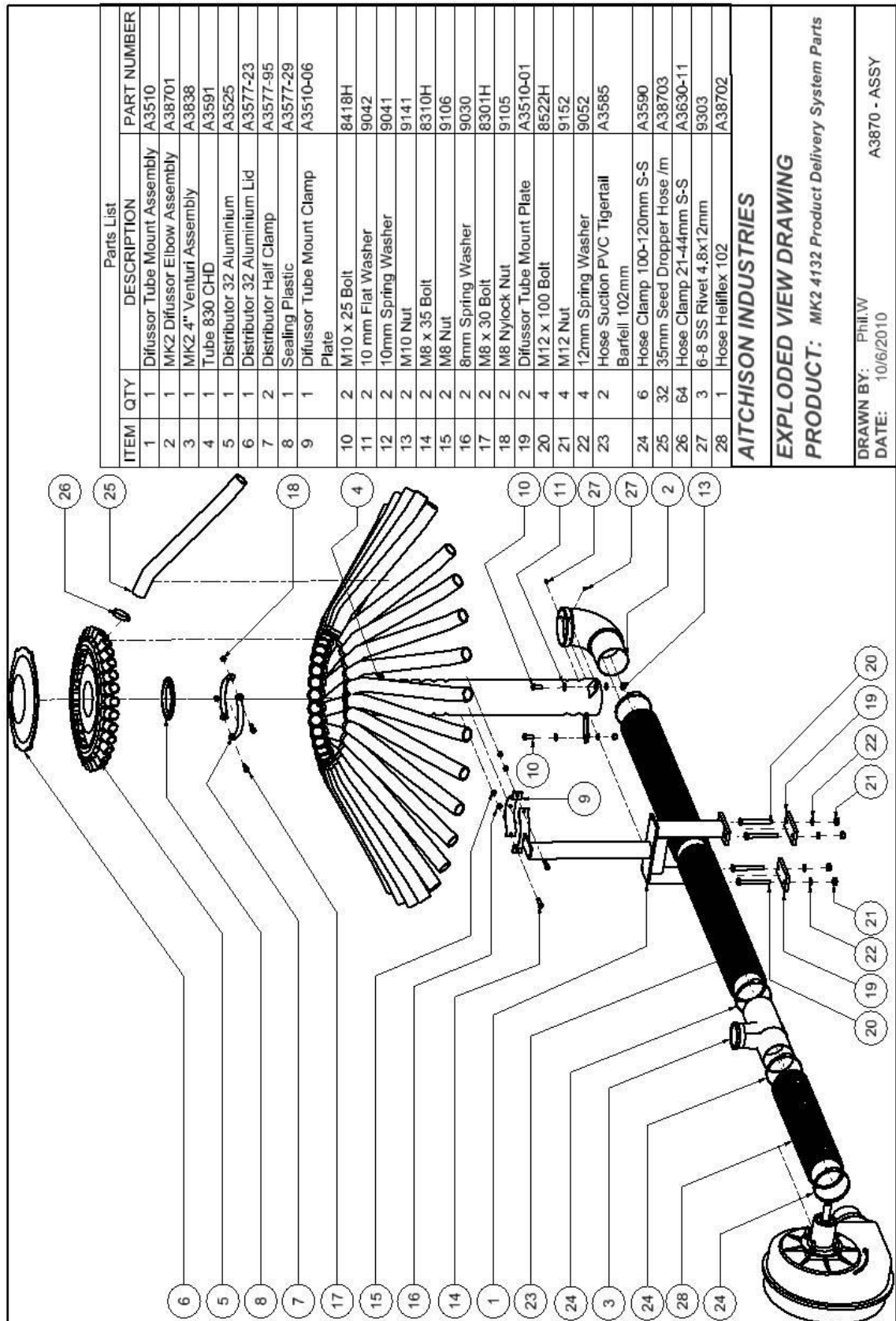
Greasing location points are labelled on the drill with the “Grease” sticker (shown above).

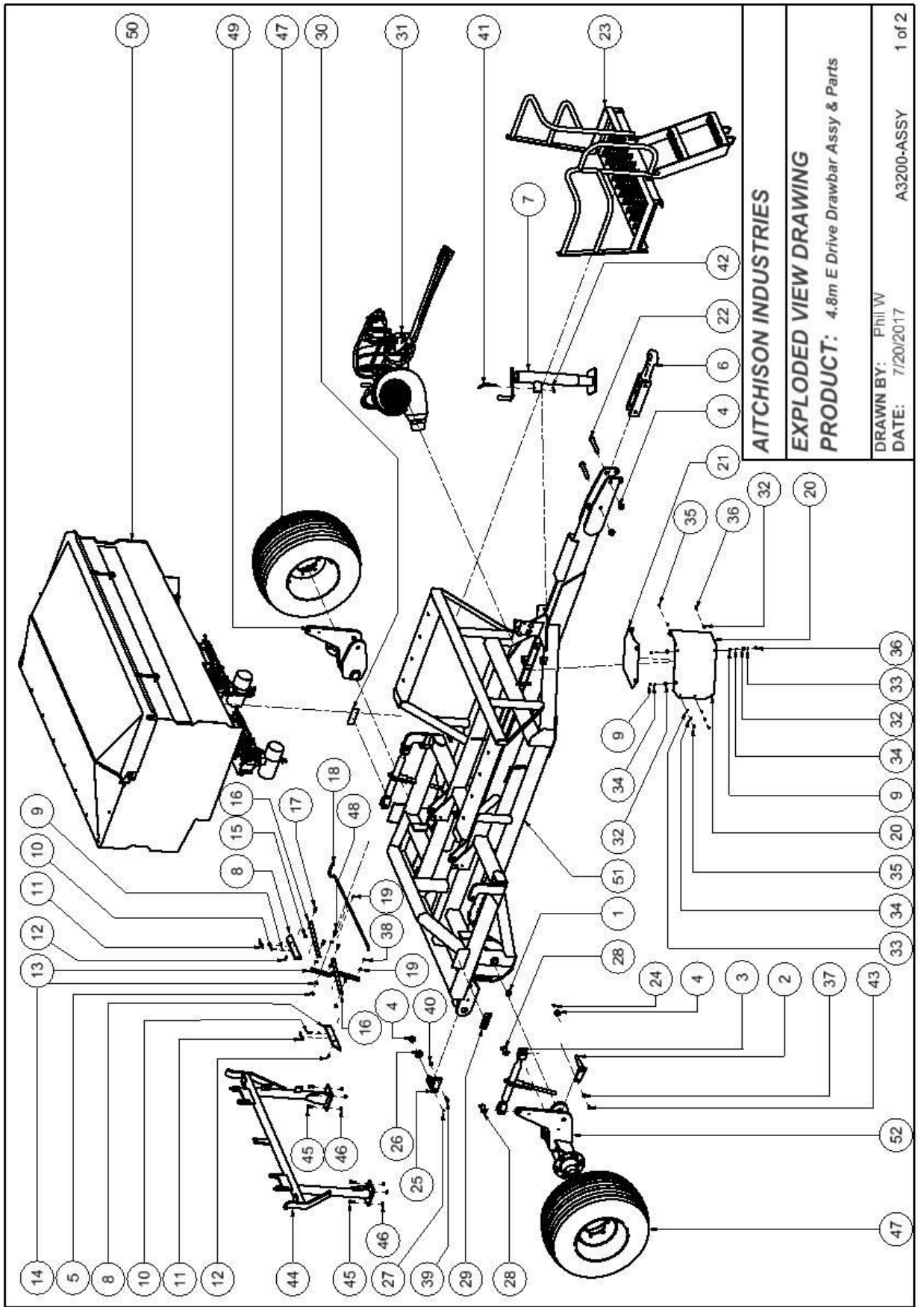
ASP-8132 TINE PLACEMENT

MK3 4132 TINE PLACEMENT

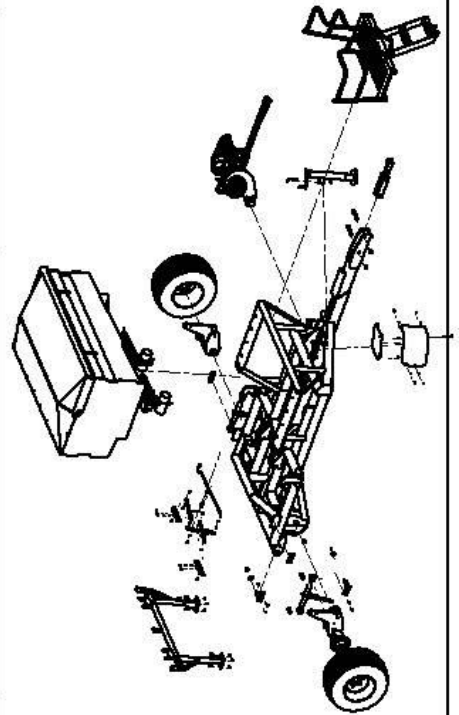


RH = Right Hand Tine Assembly
 LH = Left Hand Tine Assembly
 25 x RH Tines
 7 x LH Tines



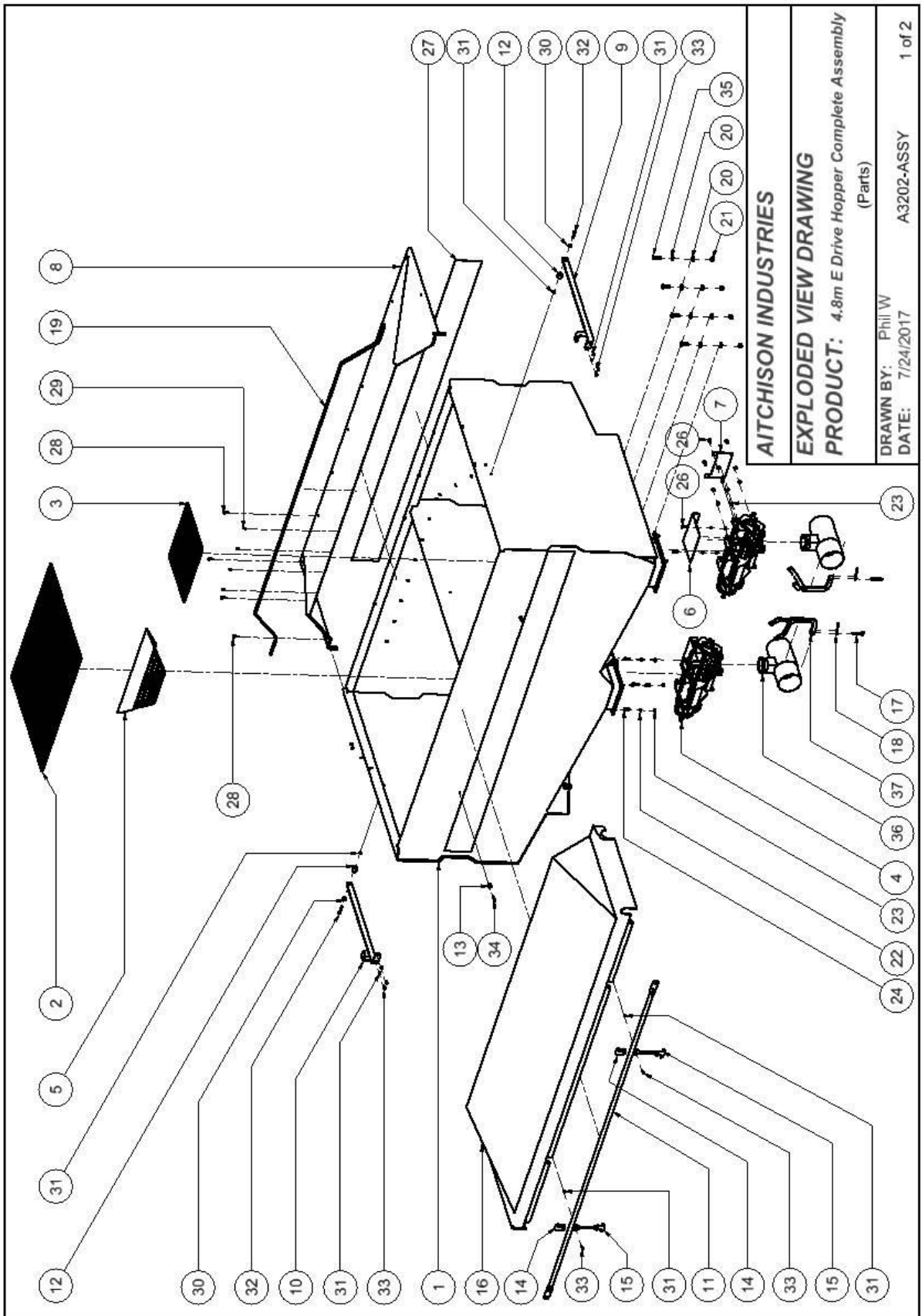


Parts List				Parts List			
ITEM	QTY	DESCRIPTION	PART NUMBER	ITEM	QTY	DESCRIPTION	PART NUMBER
1	4	FMB 3026DU	A3720-40	27	2	M6 Stright Grease Nipple	9323
2	2	MK2 Drawbar Depth Leg Pin Assembly	A3803	28	4	Ratchet Link Pin & Clips	A2646 & A2647
3	2	Ratchet Link	A23127	29	1	Decal - Depth Gauge RH	D3503
4	6	M24 Nylock Nut	9198	30	1	Decal - Depth Gauge LH	D3502
5	1	M12 Nut	9152	31	1	MK3 Big Fan Hydraulic System	A3810/ASSY
6	1	Tow Eye Assembly	A3516	32	5	6mm Fender Washer	9022
7	1	5000kg Adjustable Stand.	A3500-10	33	7	6mm Flat Washer	9023
8	2	MK2 Drawbar Wing Lock Slide	A3816	34	7	6mm Spring Washer	9021
9	7	M6 Nut	9121	35	5	M6 x 16 Bolt	8208H
10	2	M6x30 Bolt	8212H	36	2	M6x20 Bolt	8205H
11	2	Gearbox Spring	A23104	37	2	12mm Spring Washer	9052
12	2	6 x 30 Roll Pin	9250	38	1	10 mm Flat Washer	9042
13	1	MK2 Drawbar Lock Pivot Arm	A3817	39	2	M12 x 40 Bolt	8503H
14	2	12mm Flat Washer	9051	40	2	M12 Nyloc Nut	9151
15	4	M10 Nut	9141	41	1	Roller Lock Pin	A3560-01
16	2	MK2 Drawbar Lock Pivot Link	A3818	42	1	R Clip	9280
17	4	M10 x 30 Bolt	8415H	43	2	M12 x 25 Bolt	8527H
18	1	MK2 Drawbar Wing Lock Handle	A3819	44	1	MK2 Drawbar Wing Rest Frame Assembly	A38010
19	2	3 x 20 Roll Pin	9267	45	8	M10 x 35 Bolt	8402H
20	1	MK3 Big Fan Cover Face	A3823	46	8	M10 Nyloc Nut	9142
21	1	MK2 Fan Cover Top	A3824	47	2	400/60x15.5AW Wheel Assembly	A2249-23
22	2	Drawbar Tow Eye Bolt	A3700-53	48	1	M12 x 35 Bolt	8510H
23	1	MK2 Front Treadboard Assembly	A3808/ASSY	49	1	MK3 Drawbar Depth Leg Assembly LH	A3904L
24	2	M6 Grease Nipple 90 Degree	9325	50	1	4.8m E Drive Hopper Complete Assembly	A3202-ASSY
25	2	MK2 Drawbar Main Pivot Pin Assembly	A3809	51	1	6m Drawbar Assembly	A3601-ASSY
26	2	MK2 Drawbar Main Pivot Washer	A3825	52	1	6m Drawbar Depth Leg Assembly RH	A3603R

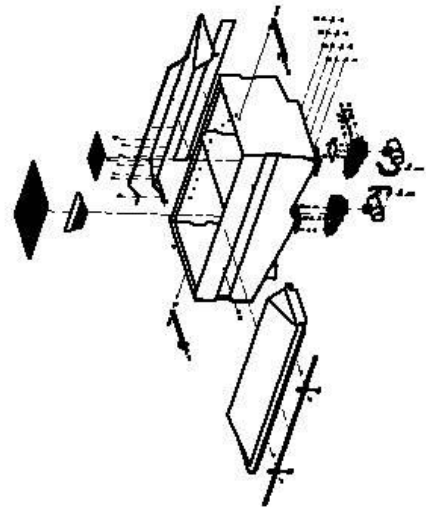

AITCHISON INDUSTRIES
EXPLODED VIEW DRAWING
PRODUCT: 4.8m E Drive Drawbar Assy & Part Numbers
DRAWN BY: Phil W
DATE: 7/20/2017

A3200-ASSY

2 of 2



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	Diffusor Locking Bolt	A3577-89	36	2	MK2 4" Venturi Assembly	A3838
18	2	Diffusor Locking Nut	A3577-90	37	2	MK2 4" Venturi Keeper Assembly	A3839
19	1	MK2 Hopper Soft Top Keeper	A3845	38	1	Air Pro 8132	D3200



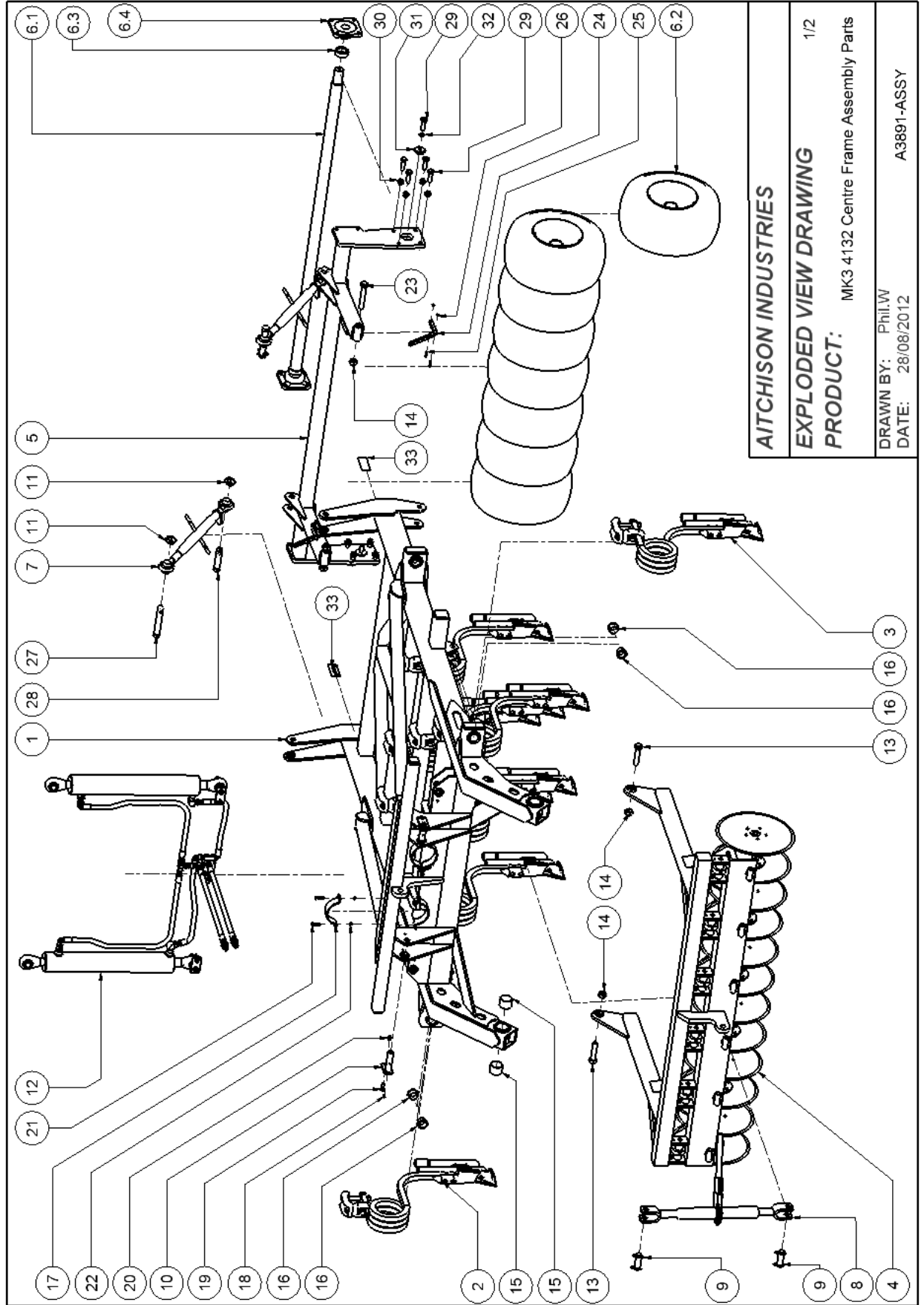
AITCHISON INDUSTRIES

EXPLODED VIEW DRAWING

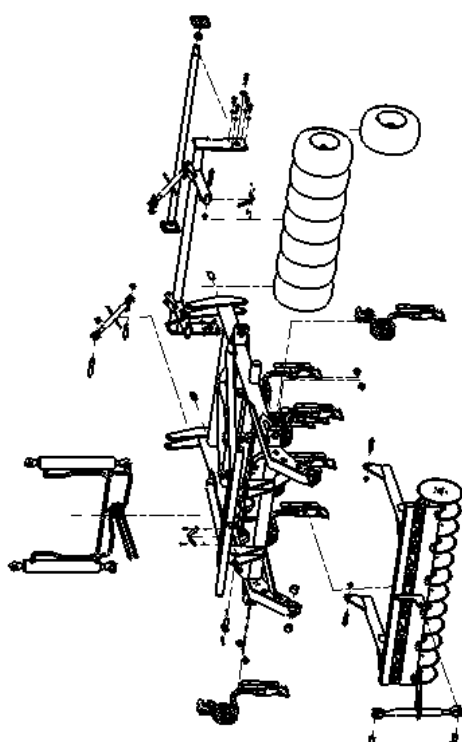
PRODUCT: 4.8m E Drive Hopper Complete Assembly
(Numbers)

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

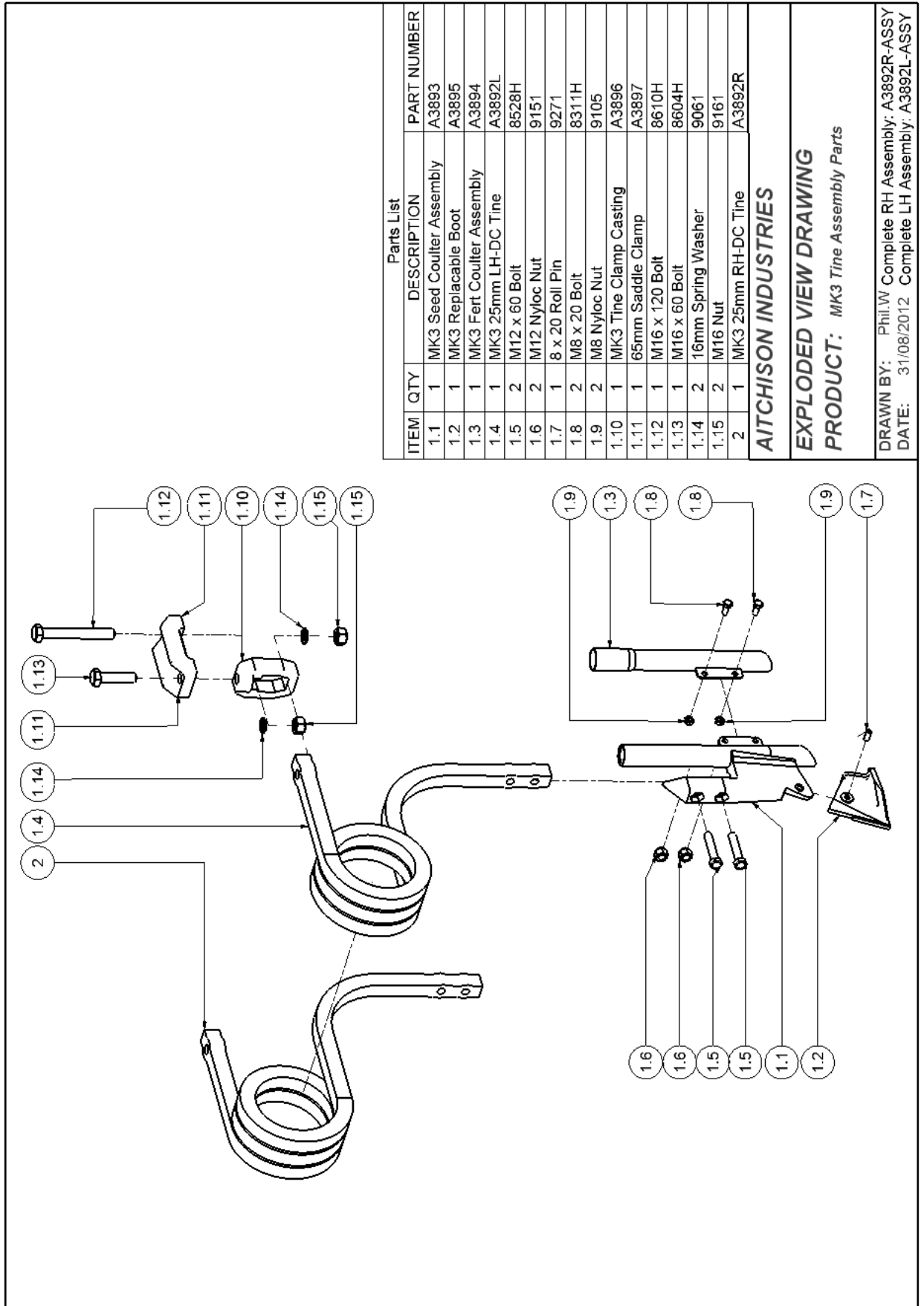
A3202-ASSY 2 of 2

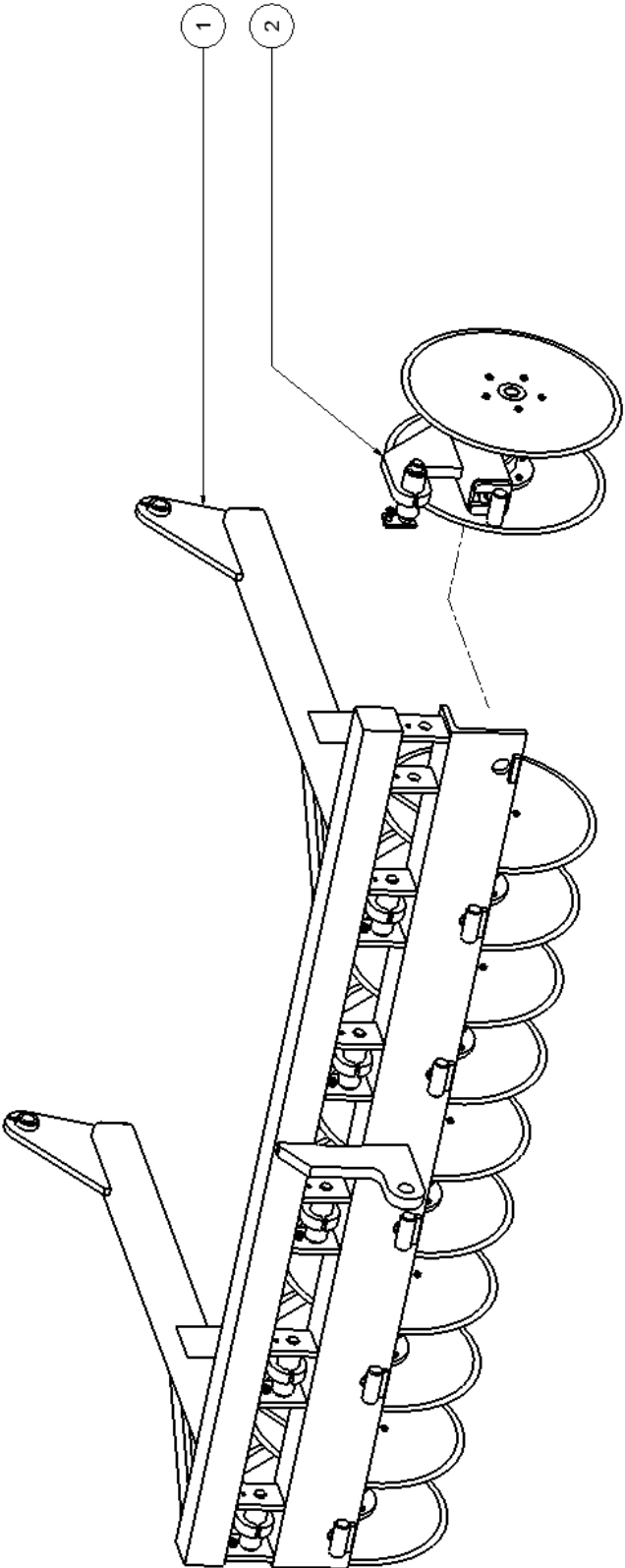


Parts List				Parts List			
ITEM	QTY	DESCRIPTION	PART NUMBER	ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	MK3 Centre Frame Assembly	A3891	16	8	FMB 3526DU	A3710-53
2	8	MK3 25mm RH Tine Assy (Seed & Fert)	A3892R-ASSY	17	2	Main Hose Clamp Plate	A3592-01
3	2	MK3 25mm LH Tine Assy (Seed & Fert)	A3892L-ASSY	18	2	M6 Grease Nipple Straight	9323
4	1	MK3 Centre Disc Coupler Assembly	A3898-ASSY	19	2	M10 x 30 Bolt	8415H
5	1	MK2 Centre Roller Frame Assembly	A3853	20	2	M10 Nyloc Nut	9142
6	1	Wing Roller	See Below	21	4	M8 x 35 Bolt	8310H
6.1	1	MK2 Wing Roller Axle	A38521	22	4	M8 Nyloc Nut	9105
6.2	8	18.5 x 8.50 x 8 Wheel (50.5mm) Bore	A38522	23	2	M20 x 120 Bolt	8704H
6.3	2	MK2 Roller Axle Spacer	A38523	24	2	MK2 Roller Depth Gauge Pointer	A3857
6.4	2	UCF 208 Bearing / Housing	92242 / 92241	25	4	M6 x 25 Bolt	8213H
7	2	Turnbuckle	A23189-01	26	4	M6 Nyloc Nut	9109
8	1	Ratchet Link	A23127	27	2	Top Link Pin B81	AQH-1009
9	2	Ratchet Link Pin / Clip	A2646 / A2647	28	2	Top Link Pin B1200	A3858
10	2	MK2 Main Ram Pin Assembly	A38120	29	10	M16 x 50 Bolt	8616H
11	4	11mm Linch Pin	9288	30	8	M16 Nylo Nut	16A
12	1	Wing Lift Hydraulic System	A3854/ASSY	31	2	MK2 Roller Wheel Retainer Washer	A3856
13	2	M20 x 90 Bolt	8710H	32	2	16mm Spring Washer	9061
14	4	M20 Nyloc Nut	9172	33	2	MK2 Roller Depth Decal	D3509
15	4	MB 5040DU	A3855				

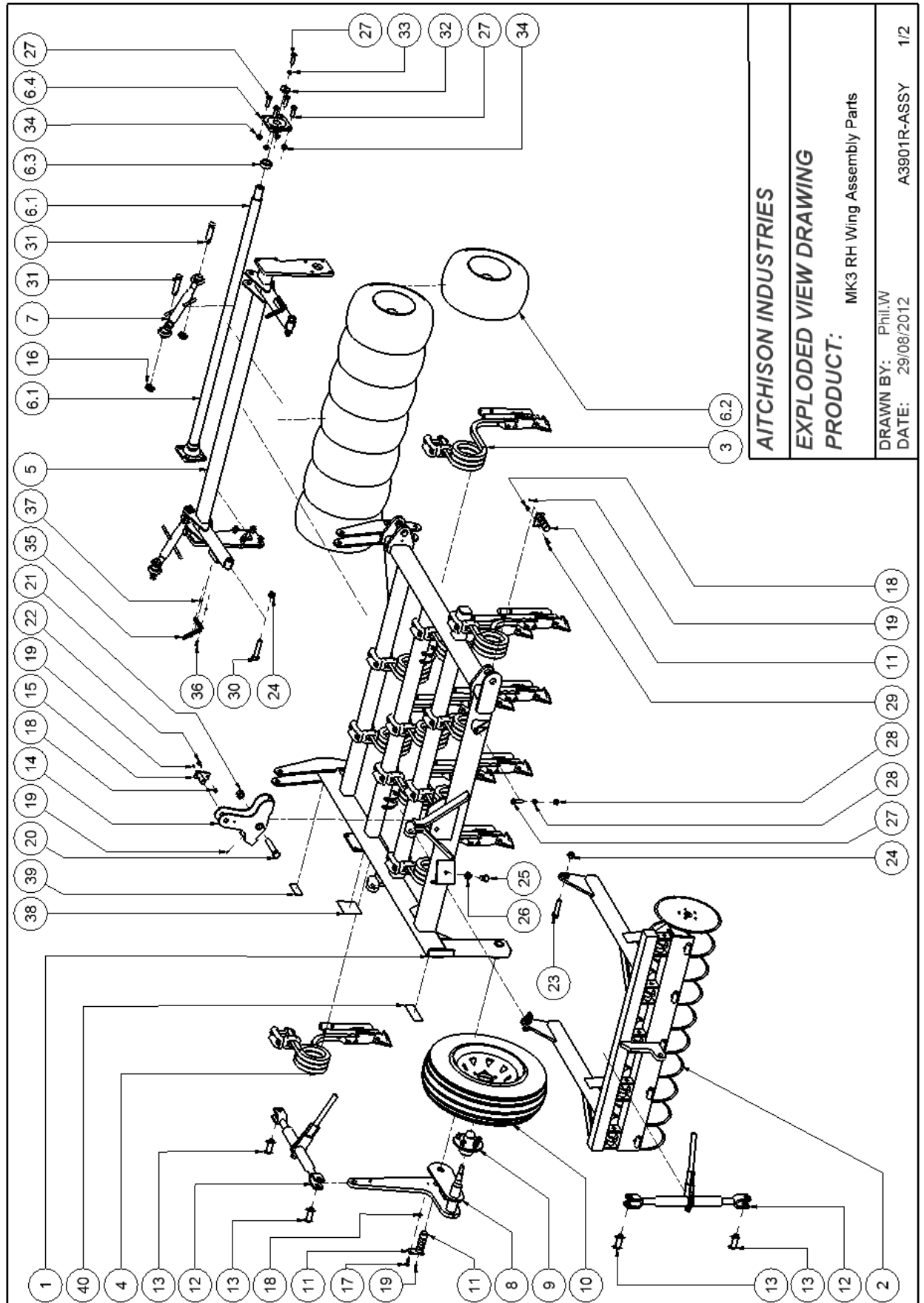


AITCHISON INDUSTRIES
EXPLODED VIEW DRAWING
PRODUCT: MK3 Centre Frame Assembly Part Numbers
 DRAWN BY: Phil.W
 DATE: 28/08/2012
 A3891-ASSY

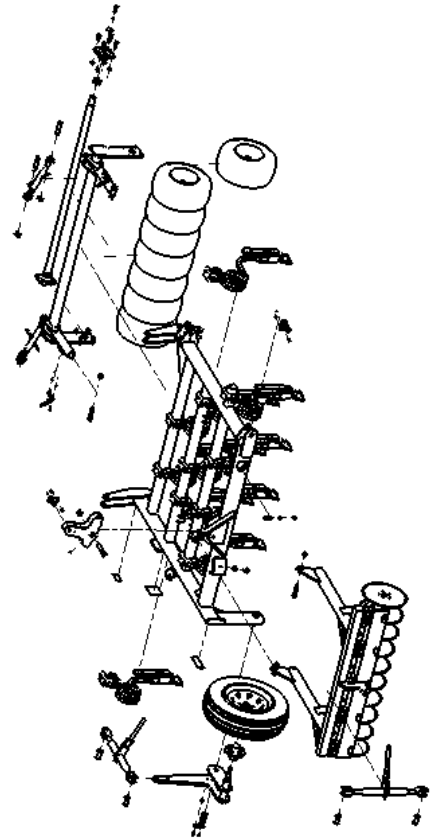




Parts List			
ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	MK3 Centre Disc Coupler Beam	A3898
		Assy	
2	6	150mm 14" Disc Pod Assembly	A28081
AITCHISON INDUSTRIES			
EXPLODED VIEW DRAWING			
PRODUCT: MK3 Centre Disc Coupler Assembly			
DRAWN BY: Phil.W		A3898-ASSY	
DATE: 31/08/2012			



Parts List			Parts List		
ITEM	QTY	DESCRIPTION	PART NUMBER	ITEM	QTY
1	1	MK3 RH Wing Frame Assembly	A3901R	19	5
2	1	MK3 Wing Disc Coupler Assembly	A3902-ASSY		
3	7	MK3 25mm RH Tine Assy (Seed & Fert)	A3892R-ASSY	20	1
4	4	MK3 25mm LH Tine Assy (Seed & Fert)	A3892L-ASSY	21	1
5	1	MK2 Wing Roller Frame Assembly	A3863	22	1
6	1	Wing Roller	See Below	23	2
6.1	1	MK2 Wing Roller Axle	A38521	24	4
6.2	8	18.5 x 8.50 x 8 Wheel (50.5mm) Bore	A38522	25	1
6.3	2	MK2 Roller Axle Spacer	A38523	26	1
6.4	2	UCF 208 Bearing / Housing	92242 / 92241	27	11
7	2	Turnbuckle	A23189-01	28	2
8	1	MK3 RH Depth Leg Assembly	A3903R	29	2
9	1	Trojan 5 Stud Hub	TRO82030	30	2
10	1	14" Wheel Assembly	A23184	31	4
11	3	MK2 Wing Pivot Pin Assembly	A3862	32	2
12	2	Ratchet Link	A23127	33	2
13	4	Ratchet Link Pin / Clip	A2646 / A2647	34	8
14	1	MK2 Wing Float Plate Assembly	A3865	35	2
15	1	MK2 Wing Float Plate Pin Assembly	A3864	36	4
16	4	11mm Linch Pin	9288	37	4
17	1	M10 x 40 Bolt	8416H	38	1
18	4	M10 Nyloc Nut	9142	39	2
				40	1


AITCHISON INDUSTRIES
EXPLODED VIEW DRAWING
PRODUCT:

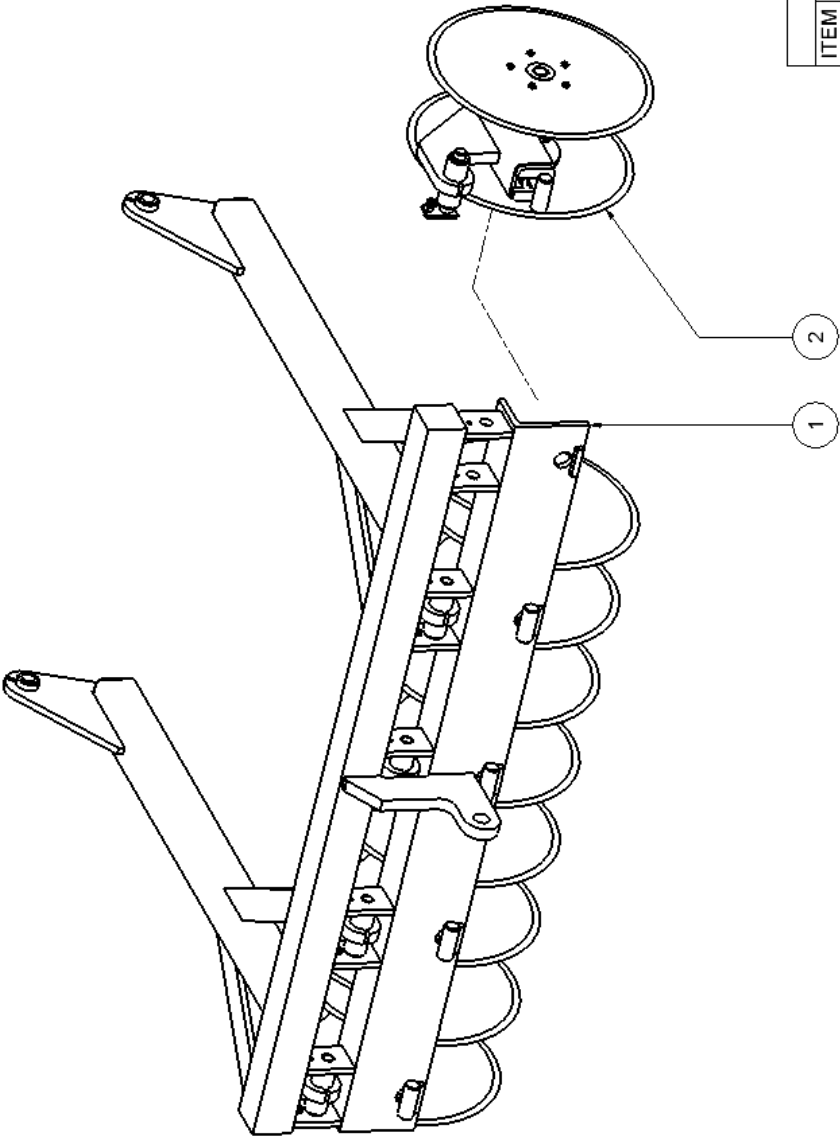
MK3 RH Wing Assembly Part Numbers

DRAWN BY: Phil.W

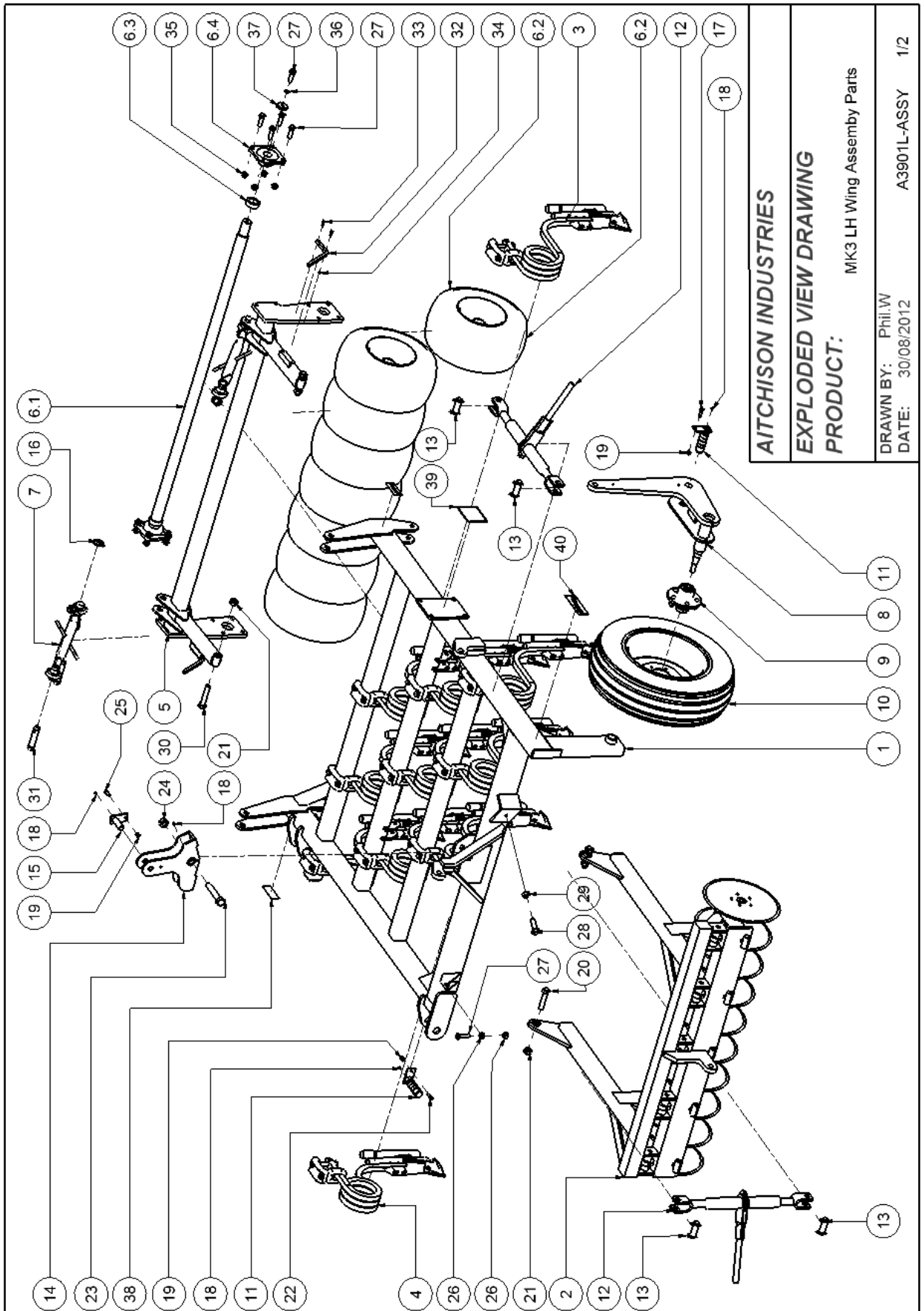
DATE: 29/08/2012

A3901R-ASSY

2/2



Parts List			
ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	MK3 Wing Disc Coulter Beam Assembly	A3902
2	5	150mm Disc Pod Assembly	A28081
AITCHISON INDUSTRIES			
EXPLODED VIEW DRAWING			
PRODUCT: MK3 Wing Disc Coulter Assembly			
DRAWN BY: Phil.W			
DATE: 4/09/2012			
			A3902-ASSY



AITCHISON INDUSTRIES

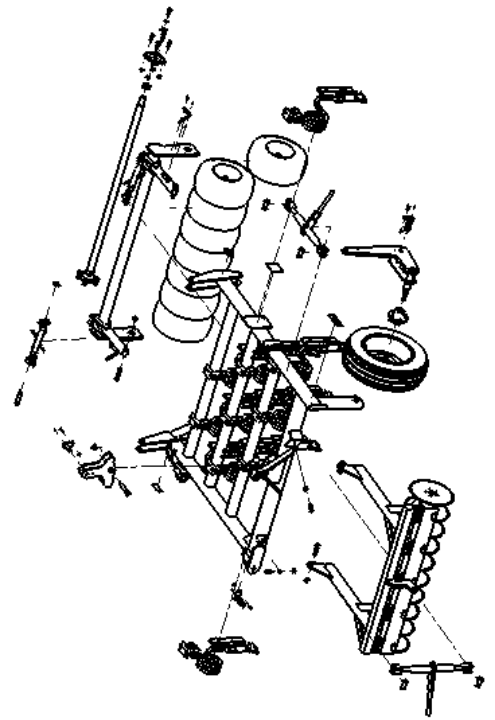
EXPLODED VIEW DRAWING

PRODUCT: MK3 LH Wing Assembly Parts

DRAWN BY: Phil.W
DATE: 30/08/2012

A3901L-ASSY 1/2

Parts List			Parts List		
ITEM	QTY	DESCRIPTION	PART NUMBER	ITEM	QTY
1	1	MK3 LH Wing Frame Assembly	A3901L	19	4
2	1	MK3 Wing Disc Coultter Assembly	A3902-ASSY		
3	10	MK3 25mm RH Tine Assy (Seed & Fert)	A3892R-ASSY	20	2
4	1	MK3 25mm LH Tine Assy (Seed & Fert)	A3892L-ASSY	21	4
5	1	MK2 Wing Roller Frame Assembly	A3863	22	2
6	1	Wing Roller	See Below	23	1
6.1	1	MK2 Wing Roller Axle	A38521	24	1
6.2	8	18.5 x 8.50 x 8 Wheel (50.5mm) Bore	A38522	25	1
6.3	2	MK2 Roller Axle Spacer	A38523	26	2
6.4	2	UCF 208 Bearing / Housing	92242 / 92241	27	11
7	2	Turnbuckle	A23189-01	28	1
8	1	MK3 LH Depth Leg Assembly	A3903L	29	1
9	1	Trojan 5 Stud Hub	TRO82030	30	2
10	1	14" Wheel Assembly	A23184	31	4
11	3	MK2 Wing Pivot Pin Assembly	A3862	32	2
12	2	Ratchet Link	A23127	33	4
13	4	Ratchet Link Pin / Clip	A2646 / A2647	34	4
14	1	MK2 Wing Float Plate Assembly	A3865	35	8
15	1	MK2 Wing Float Plate Pin Assembly	A3864	36	2
16	4	11mm Linch Pin	9288	37	2
17	1	M10 x 40 Bolt	8416H	38	2
18	5	M6 Grease Nipple Straight	9323	39	1
				40	1


AITCHISON INDUSTRIES
EXPLODED VIEW DRAWING
PRODUCT:

MK3 LH Wing Assembly Part Numbers

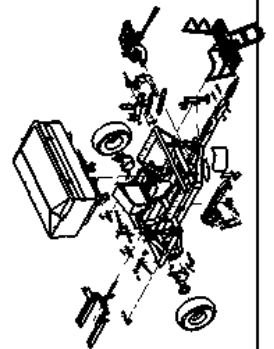
DRAWN BY: Phil W

DATE: 30/08/2012

A3901L-ASSY

2/2

Parts List			Parts List			Parts List		
ITE	QT	DESCRIPTION	PART NUMBE	ITE	QT	DESCRIPTION	PART NUMBE	PART NUMBE
1	1	MK2 Drawbar Assembly	A3801	33	2	M6x30 Bolt	8212H	D3502
2	1	MK3 Drawbar Depth Leg Assembly LH	A3904L	34	2	Gearbox Spring	A23104	9022
3	1	MK3 Drawbar Depth Leg Assembly RH	A3904R	35	3	6 x 30 Roll Pin	9250	9023
4	2	MK2 Drawbar Depth Leg Pin Assembly	A3803	36	1	MK2 Drawbar Lock Pivot Arm	A3817	9021
5	2	Ratchet Link	A23127	37	5	12mm Flat Washer	9051	8208H
6	1	Complete Drive Leg Assembly	A3828	38	5	M10 Nut	9141	8205H
7	1	GF Drive Leg Mount Assembly	A28067	39	2	MK2 Drawbar Lock Pivot Link	A3818	9053
8	1	MK2 Drive Leg Lift Bracket Assembly	A3804	40	4	M12 x 30 Bolt	8415H	8502H
9	1	MK2 4132 Hopper Complete Assembly	A3830-ASSY	41	1	M12 x 35 Bolt	8510H	9052
10	1	Tow Eye Assembly	A3516	42	1	MK2 Drawbar Wing Lock Handle	A3819	9262
11	1	5000kg Adjustable Stand	A3500-10	43	2	3 x 20 Roll Pin	9267	9219
12	2	P204 Bearing & Housing	9221/9228	44	1	11T Sprocket Half Inch Pitch	A28012	A3826
13	1	MK2 DL to LS Cover Assembly	A3805	45	1	15T Sprocket Half Inch Pitch	A28010	9042
14	1	MK2 LS to MU Cover Assembly	A3806	46	1	27T Sprocket Half Inch Pitch	A2322-01	9040
15	1	MK2 LS to MU Front Cover Assembly	A3807	47	1	MK2 Drive Lower Lay Shaft	A3820	8404H
16	1	MK2 Front Treadboard Assembly	A3808-ASSY	48	1	17T Plate Sprocket Tensioner	A2350-01	8311H
17	2	MK2 Drawbar Main Pivot Pin Assembly	A3809	49	1	MK2 Drive Chain DL to LS @ 1590mm	A3801CH-01	9030
18	4	Ratchet Link Pin & Clips	A2646/A2647	50	1	MK2 Drive Chain LS to MU @ 710mm	A3801CH-02	9106
19	1	Fan Hydraulic System	A3810-ASSY	51	1	MK2 DL to LS Cover Bottom	A3821	8503H
20	1	11mm Lynch Pin	9288	52	1	MK2 DL to LS Cover Top	A3822	9151
21	1	Main Lift Hydraulic System	A3812-ASSY	53	1	MK2 Fan Cover Face	A3823	9031
22	4	FMB 3026DU	A3720-40	54	1	MK2 Fan Cover Top	A3824	A23211-01
23	6	M24 Nylock Nut	9198	55	2	Drawbar Tow Eye Bolt	A3700-53	9070
24	2	12.5 - 80 - 15.3 AW Wheel	A3813	56	2	Main Hose Clamp Plate	A3592-01	9289
25	1	MK2 Drive Leg Push Rod	A3814	57	4	M8 x 35 Bolt	8310H	9063
26	1	3000 Dragarm Spring	A23210	58	4	M8 Nylock Nut	9105	8320H
27	1	MK2 Drive Leg Spring Retainer	A3815	59	1	10mm Spring Washer	9041	A3560-01
28	2	6 x 40 Roll Pin	9251	60	2	M6 Grease Nipple 90 Degree	9325	9280
29	6	M12 Nut	9152	61	2	MK2 Drawbar Main Pivot Washer	A3825	8512H
30	2	MK2 Drawbar Wing Lock Slide	A3816	62	2	M6 Stright Grease Nipple	9323	8527H
31	2	MK2 Drawbar Wing Lock Slide	A3816	63	2	M6 Stright Grease Nipple	9323	8527H
32	7	M6 Nut	9121	64	1	Decal - Depth Gauge RH	D3503	A3827

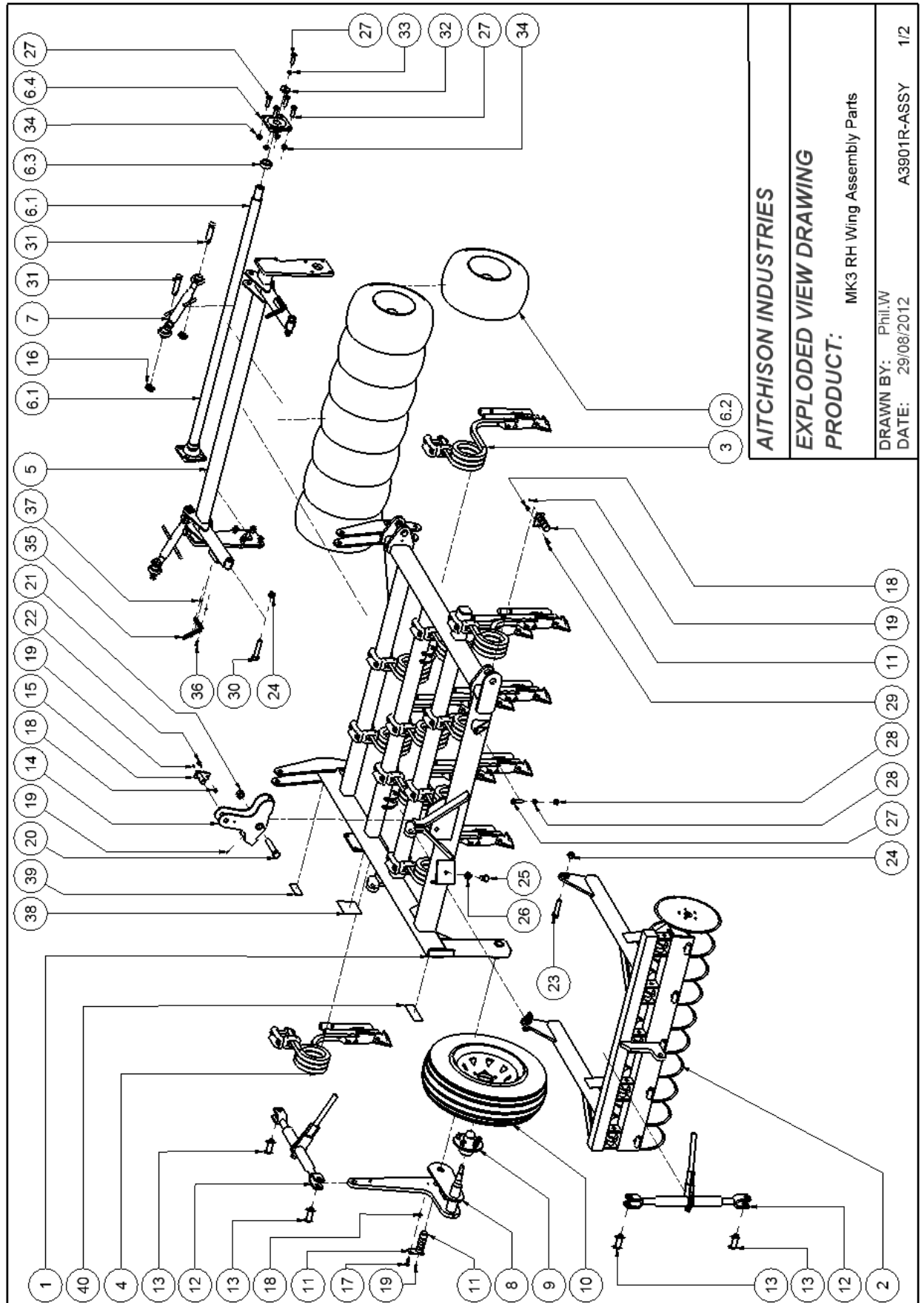


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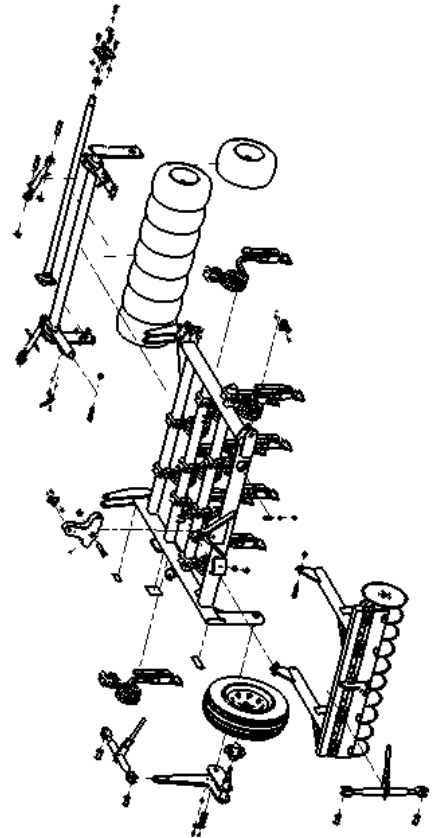
EXPLODED VIEW DRAWING

PRODUCT: MK3 4132 Drawbar Part Numbers

DRAWN BY: Phil.W
DATE: 7/09/2010
A3801-ASSY



Parts List			Parts List		
ITEM	QTY	DESCRIPTION	PART NUMBER	ITEM	QTY
1	1	MK3 RH Wing Frame Assembly	A3901R	19	5
2	1	MK3 Wing Disc Coupler Assembly	A3902-ASSY		
3	7	MK3 25mm RH Tine Assy (Seed & Fert)	A3892R-ASSY	20	1
4	4	MK3 25mm LH Tine Assy (Seed & Fert)	A3892L-ASSY	21	1
5	1	MK2 Wing Roller Frame Assembly	A3863	22	1
6	1	Wing Roller	See Below	23	2
6.1	1	MK2 Wing Roller Axle	A38521	24	4
6.2	8	18.5 x 8.50 x 8 Wheel (50.5mm) Bore	A38522	25	1
6.3	2	MK2 Roller Axle Spacer	A38523	26	1
6.4	2	UCF 208 Bearing / Housing	92242 / 92241	27	11
7	2	Turnbuckle	A23189-01	28	2
8	1	MK3 RH Depth Leg Assembly	A3903R	29	2
9	1	Trojan 5 Stud Hub	TRO82030	30	2
10	1	14" Wheel Assembly	A23184	31	4
11	3	MK2 Wing Pivot Pin Assembly	A3862	32	2
12	2	Ratchet Link	A23127	33	2
13	4	Ratchet Link Pin / Clip	A2646 / A2647	34	8
14	1	MK2 Wing Float Plate Assembly	A3865	35	2
15	1	MK2 Wing Float Plate Pin Assembly	A3864	36	4
16	4	11mm Linch Pin	9288	37	4
17	1	M10 x 40 Bolt	8416H	38	1
18	4	M10 Nyloc Nut	9142	39	2
				40	1


AITCHISON INDUSTRIES
EXPLODED VIEW DRAWING
PRODUCT:

MK3 RH Wing Assembly Part Numbers

DRAWN BY: Phil.W

DATE: 29/08/2012

A3901R-ASSY

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