

Grizzly Eastcoaster Series



**Eastcoaster
Series**

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Important Information

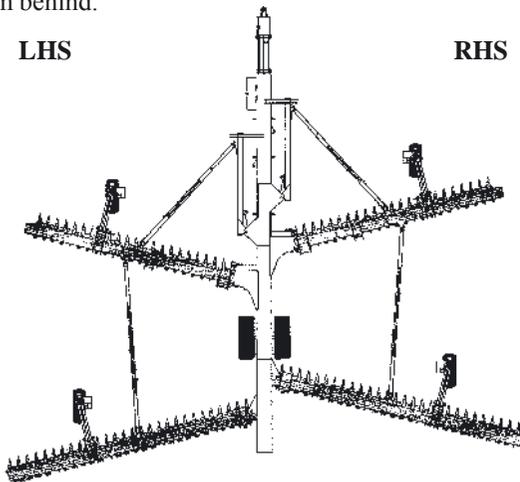
About This Manual

This manual includes safety, assembly, setting up and operating instructions, as well as lubrication, maintenance and problem solving instructions, disc warranty guidelines and assembly drawing and parts for the Grizzly East Coaster range of ploughs.

Some components explained in this manual may not be installed on your plough.

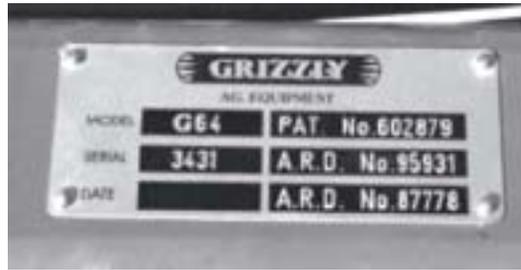
Please pass on this manual with the plough at the time of resale for usage by the new owner. Replacement manuals are obtainable from your Grizzly dealer.

The terms “left hand side” (LHS) and “right hand side” (RHS), when used in reference to the plough, mean viewed from behind.



Copyright

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Above: The serial number plate is located at the front of the plough main frame.

Product Identification

The plough's Serial Number Plate is located at the front of the main frame. If damage occurs to this Serial Number Plate, serial numbers are also stamped into the frame under the Serial Number Plate for identification.

This plate shows:

- The Grizzly name.
- The plough's model number.
- The plough's serial number.
- Date of manufacture.
- Patent numbers.

Precise product identification is important and must be used when seeking parts and service for the plough, namely:

- 1 The plough's **model number** and **serial number**.
- 2 The **part number** and **description**.
(Refer to the Parts section of this Manual).

For quick reference, we suggest writing your plough's model number and serial number in the space below:

Model No:

Serial No:

Safety & Damage Warnings

The terms **WARNING**, **CAUTION** and **NOTE** are used throughout this manual to stress the importance of personal safety, potential machinery damage and useful operating information.

The term description and usage is shown below.

! WARNING

The warning emphasises the strong possibility of severe personal injury and/or damage to machinery if instructions are not followed.

! CAUTION

The caution forewarns of hazards and unsafe or unwise actions which could cause personal injury, property damage, damage to your machinery or potential crop loss if instructions are not followed.

NOTE

The note refers to significant, practical information which should not be overlooked.

Welcome to Grizzly

Congratulations on your purchase of a **Grizzly East Coaster** tandem offset disc plough, proudly manufactured in Australia to the highest level of quality and performance.

Your Grizzly East Coaster has been designed to give you the best possible performance and serviceability over a wide range of conditions and applications.

This booklet is provided to help you obtain the best possible results from your plough.

The extent to which your plough performs to its potential will depend upon:

- 1 That it is the correct machine for the task.
- 2 That it is used in conjunction with a tractor of the correct specification.
- 3 That it is delivered in first class mechanical order, and is properly prepared for work.
- 4 That it is used correctly with an understanding of the various limitations and tolerances as explained by your Grizzly Dealer, and in this booklet.
- 5 That it is serviced and maintained regularly as outlined in this booklet.

If you are uncertain of any aspect of your machine's performance, please refer to the appropriate sections of this booklet, your Grizzly Dealer or, if necessary, to Grizzly Engineering Pty Ltd.

Company Profile

Australia's largest manufacturer and exporter of disc ploughs, Grizzly Engineering Pty Ltd is an Australian owned and operated manufacturing company based at Swan Hill in Victoria.

Like many other Australian icons of ingenuity, the Grizzly plough was founded on need. The Grizzly name was established in the early 1980's by country people with the will to construct a better offset disc plough.

In 1983, a unique three gang, tandem offset disc design was patented and released. This innovative Grizzly plough provided complete ploughing out (no unworked ridges), less working draught, elimination of side draught and longer disc life. Other new features, at that time, included self phasing wheel lift and improved disc scrapers.

Grizzly's broad range of versatile ploughs suits a wide variety of agricultural applications. Sizes vary from 1.4 metres to 15.6 metres working width.

Advantages of Grizzly technology include lower power requirements, significant fuel savings, better plough cut out, reduced stress on components, reduced maintenance costs, and greater operator control allowing effortless adjustments for better performance. The patented Grizzly Floppy "T" Bar scraper removes soil and trash from disc spools during plough operation in all types of conditions.

The Grizzly plough has earned a reputation of uncompromising strength, performance and reliability. Each model is designed with inbuilt durability, accuracy, efficiency and easy operation for sustainable farming practices.

Continued investment into research and development plays a key role in the success of the company's product range.

The company has a very successful and loyal dealer network throughout Australia. All dealers are backed by Grizzly training, technical support and rapid delivery parts replacement anywhere in Australia.



Head Office and Factory located at Ultima Road, Swan Hill.

Safety Instructions

Safety is the Operator's Responsibility

The East Coaster model is a tandem offset disc plough designed for both primary and secondary tillage operations on medium to large broadacre farms.

This machine presents an operator with hazards associated with on-road transport, off-road tillage applications and machine service. The East Coaster is capable of ploughing/cultivating under a wide variety of conditions and the operator must be aware of the hazards associated with the East Coaster's operation.

The dealer explains the capabilities, safe application, service requirements and restrictions of the East Coaster.

The dealer demonstrates the safe operation of the East Coaster according to Grizzly's instructions; which are also available to the operator. The dealer can also identify unsafe modifications or use of unapproved attachments.

The following publications provide information on the safe use and maintenance of the East Coaster and attachments:

- The **Operator's Manual** delivered with the East Coaster gives operating information as well as routine maintenance and service procedures. It is a part of the East Coaster and must stay with the machine when it is sold. Replacement Operator's Manuals can be ordered from your Grizzly dealer.
- The East Coaster has **machine signs** (decals) which instruct on safe operation and care. The signs and their locations are shown in the Operator's Manual. Replacement signs are available from your Grizzly dealer (see Decals page 84).

Safe Operation Needs a Qualified Operator

Qualified Operators Must Do the Following:

1 Understand the Written Instructions, Rules and Regulations

- The written instructions from Grizzly are included in the East Coaster Operation & Maintenance Manual and on machine decals.
- Check the rules and regulations for your location. These rules may include any Federal and State safety requirements.

2 Have Training with Actual Operation

- Operator training must consist of a demonstration and verbal instruction. This training is given by your dealer before or when the East Coaster is delivered.
- In signing the installation and warranty form when taking delivery of the East Coaster, the owner understands and undertakes responsibility for further training of any new operators of the East Coaster.
- New operators must start in an area without bystanders and use all the controls until they can operate the East Coaster safely under all conditions of the work area.

3 Know The Work Conditions

- Operators must know any prohibited uses or work areas. They need to know about excessive slopes and rough terrain.
- Operators must know the local road transport regulations, and understand the dangers and requirements of transporting wide and heavy equipment.
- Always wear protective clothing when maintaining or servicing the East Coaster.
- For operators to be qualified, they must not use drugs or alcoholic drinks which impair their alertness or coordination while working. Operators who are taking prescription drugs must get medical advice to determine if they can safely operate a machine.

Safety Instructions

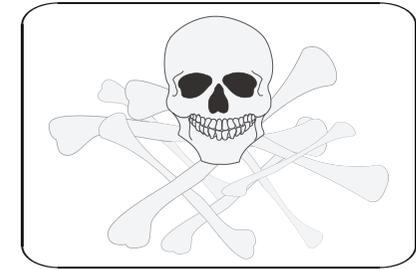
WARNING

READ THESE SAFETY INSTRUCTIONS CAREFULLY BEFORE ALLOWING ANY PERSON TO OPERATE THE MACHINE.

-  **Never leave the disc plough in a raised position** when not in use. Accidental release of control levers or hydraulic hose failure will cause implement to drop down. This can cause serious injury to someone near or under the machine.
-  **Do not transport machine without ensuring that all transport lockup systems are in place.** These include the lockup bar of the pull and travel bars fitted to all wheel lift cylinders. Failure to use the lockup mechanisms in transport may cause machine damage. It will also cause dangerous machine instability which can result in uncontrollable movement causing serious damage or injury.
-  **Do not transport without the tractor drawbar being in a locked position.** Transporting without drawbar locked will result in loss of implement control and serious damage or injury.
-  **Do not transport at speeds in excess of 30 kph.** Transporting at faster speeds may result in loss of implement control and serious damage or injury, and void all warranty.
-  **Do not transport with a vehicle with a gross mass less than that of the disc plough.** Transporting with a smaller lead vehicle will result in loss of implement control and serious damage or injury, and void all warranty.



-  **Do not pull implement from any point other than the tractor drawbar** or other designated pull points. Pulling from a point other than the designated tractor drawbar will result in tractor instability and cause serious damage or injury.
-  **Always make sure the tractor drawbar pin is securely located.** Failure to lock the drawbar pin into position will allow the drawbar pin to work its way out of position inadvertently releasing the implement. This may cause serious damage or injury.
-  **Do not operate or transport the implement with a loose wheel, rim or hub and be certain that tyres are inflated to specified pressures.** Loose studs and/or under inflated tyres cause machine instability which can cause serious damage or injury.
-  **Never allow anyone to ride on the implement in work or transport!** Dangers of riding on a disc implement are extreme and can cause serious injury and death.
-  **Do not make any adjustments to a machine until all people** who may be close to the machine are considered **safe from any potential danger** which may result from adjustment.



-  **Do not use your feet to clear disc gangs.** Discs can be very sharp and cause serious injury.
-  **Use safety pins in locating brackets to lock up wings on folding models.** Failure to use safety pins could allow wings to inadvertently fall down causing damage or injury.
-  **Use hazard warning lamps and signs** as required when transporting the disc plough on public roads.
-  **Do not remove** any safety decals, transport lockup pins, or folding wing retaining pins from the implement.
-  **Use due care** when adjusting or maintaining any aspect of the machine. Failure to do so may result in serious injury.
-  **When undertaking maintenance** on the plough, the operator must ensure that the tractor is turned off and hydraulics lowered.
-  **Before moving the machine,** the operator must make sure the area is well clear and sound the horn as a warning before moving.
-  **If operated incorrectly** the plough can cause serious injury or death.

Warranty Policy

Grizzly Engineering Pty Ltd (Grizzly) warrants to its Authorised Dealer, who in turn, warrants to the original purchaser (Owner) that each new Grizzly disc plough, part or accessory will be free from proven defects in material and workmanship for twelve (12) months after delivery and installation by an Authorised Grizzly Dealer, according to the conditions outlined.

This warranty does not cover damages resulting from abuse, accidents, alterations, normal wear or failure to maintain or use the Grizzly product with due care.

During the warranty period, the Authorised Grizzly Dealer shall repair or replace, at Grizzly's option, without charge for parts and labour any part of the Grizzly product which fails during normal use and operation because of defects in material or workmanship. The Owner must provide the Authorised Dealer with prompt written notice of the defect (within 14 days of its occurrence), and allow reasonable time for replacement or repair.

Grizzly (at its option) may request failed parts to be returned to the factory. Any travel time of a service technician and/or transportation of the Grizzly product to the Authorised Servicing Dealer for warranty work is the responsibility of the Owner.

This warranty is in lieu of all other warranties (except those of title), expressed or implied, and there are no warranties of merchantability or fitness for a particular purpose. In no event shall the Authorised selling Dealer or Grizzly be liable for downtime expenses, loss of machine use, loss of crops, loss of profits, injury or damage arising from accident, direct or indirect loss, or other incidental, consequential or special damages.

Conditions of Warranty

- 1 The warranty is **not transferable** to any third party or subsequent purchaser.
- 2 The Installation & Warranty Registration Form (see page 6) **must be filled in and returned to Grizzly** by the Dealer within seven (7) days of delivery and installation of the unit. By signing the Installation & Warranty Registration Form, the owner acknowledges full responsibility for the safe operation of the East Coaster, and undertakes to fully train any person that might operate the East Coaster.

Only when the Installation and Warranty Registration is **completed and returned**, can Grizzly fulfil all warranty obligations.

3 Components and conditions NOT COVERED by warranty include:

- **Abuse** Failure resulting from neglect, such as improper operation, lack of required maintenance or continued use of a machine after the discovery of a defect which results in greater damage to the unit.
- **Environmental Conditions and Application** Deteriorated or failed components such as hydraulic hoses, seals, valves or connections damaged by corrosive materials, dirt, sand, excessive heat or moisture.
Warranty determination for these types of failures will be made by Grizzly only after inspection of failed components.
- **Normal Wear** Normal wear and consumable items such as oils and lubricants, nuts, bolts, washers, grease caps, spanners, jacks, bearing housings, axles, poppet valves or seal kits for hydraulic cylinders, seals, discs, axles, tyres, machine adjustment and periodic service. These are considered to be normal wear items and are not warranted.
- **Maintenance** Component failure caused by non performance of scheduled maintenance such as correct lubrication and maintenance, tightening or replacement of bolts, nuts, fittings, shields and covers.

Conditions of Warranty (continued)

3 Components and conditions NOT COVERED by warranty include:

- **Damage** Damage or machine failure caused by carelessness or accidental damage, improper operation, inappropriate transportation or storage of the plough, parts or attachments.
- **Alterations** Any unauthorised alteration, modification, attachments or unauthorised repairs to the Grizzly Disc Plough, parts or attachments. Written approval must be obtained from Grizzly for any such items to maintain warranty.
- **Replacement Parts & Service Work** The labour or expenses involved in any of the following replacements or service tasks is the responsibility of the owner:
(1) Replacement of faulty discs. (2) Gang bearing replacement. (3) Wheel bearing replacement.
(4) Adjustments (refer to manual). (5) Spring adjustment or replacement. (6) Scraper adjustment or replacement.
(7) Periodic service work. Grizzly and its Dealers are not responsible or liable for any such expenses.
- **Clean-up Time** Grizzly does not pay for cleaning the plough, parts, accessories or work area before or after the warranty repair. Clean-up time is affected primarily by the application or conditions in which the unit is operated and maintained. Since clean-up time can be so variable, cleaning time should be considered a customer expense.
- **Transportation & Insurance Costs** Warranty does not cover transportation or insurance costs for ploughs or other equipment needing repair or replacement of warranted components. Nor does it cover any freight or insurance costs in obtaining new parts or returning old parts to Grizzly for inspection purposes.
- **Travel Time** Travel time required for warranty repairs is the responsibility of the Owner.
- **Diagnostic Time** Warranty does not cover time required to diagnose a warranty problem. Diagnostic time is affected greatly by the training and expertise of the technician employed to do the job. With proper training of service personnel, diagnostic time should be at a minimum. Grizzly expects that Dealers will assign a well trained and proficient technician to handle any warranty repairs.
- **Non-Genuine Parts** Use of parts other than Grizzly parts for repair of warranted parts will automatically negate any warranty. Warranted components must be replaced with genuine Grizzly repair parts.
- **Unauthorised Repairs** Repairs by an unauthorised agent will automatically forfeit any warranty. Warranty repairs must be carried out by an Authorised Grizzly Dealer only.

4 Special Warranty Considerations apply in respect to the following:

- a) **Tyres:** Tyres are covered by the tyre manufacturer's warranty. Claims for tyre faults must follow Grizzly's normal claim procedures.
- b) **Hydraulics:** Claims on hydraulic componentry must follow Grizzly's claim procedures. Such claims will be referred to the component manufacturer.
- c) **Discs:** Refer to disc manufacturer's warranty information in the back of the operator's manual and follow Grizzly's claim procedures.
- d) **Scrapers:** Wear on scraper leading edges is normal. Scrapers are only covered under warranty in the event of breakage.
- e) **Contractors:** Owners who undertake contract work with their Grizzly plough are **limited to a 90 day warranty period.**

Plough Description & Application

The **East Coaster** is a tandem offset disc plough designed for both primary and secondary tillage operations.

Its ability to be adjusted and used for both primary and secondary cultivation adds versatility, and extends the overall application of this machine.

Grizzly tandem offset disc ploughs can be adjusted to leave a level finish, and can handle large amounts of trash.

The East Coaster can be used to incorporate stubbles, weeds, regrowth and chemicals into soils. The benefits of stubble retention and incorporation for good soil management are well known.

As a general rule, the earlier the discing operation is performed after harvest and/or rain, the better the result of stubble incorporation with more complete bacterial breakdown at the time of sowing.

The ability to incorporate a wide variety of stubble and weed types in one pass means a saving of time and money.

The Grizzly tandem offset disc plough is a minimum tillage machine which will be of most value to your farm program when used with due consideration to soil condition, soil types and the task to be performed.

When working lighter soils, attention should be paid to the timing of workings, amount of trash cover and future program for the soil in question. Long fallows in light soils should be avoided.

We trust that your Grizzly East Coaster will play an important part in your farming program for many years to come.

Choosing the Correct Gang Angle for your Application

Gang angle adjustment ranges from 12 to 24 degrees, in two (2) degree increments. Adjustment is made by reversing the machine a couple of metres and resetting four pins (one on each gang adjustment arm).

The gang settings are marked from one to seven (1-7).

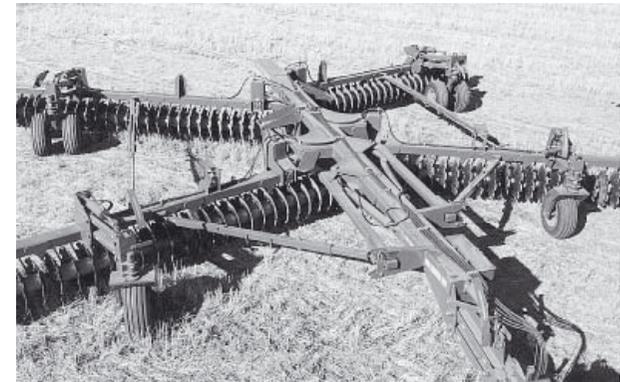
ALWAYS USE AS LITTLE SET AS POSSIBLE TO ACHIEVE YOUR REQUIRED PLOUGHING DEPTH.

The reasons for this are:

- 1 Less power (kW (hp)) is required to pull the plough. At minimum settings there is less soil carried on the face of each disc face. This means there is less soil movement and significantly less draught than at greater gang angle settings.
- 2 Minimum settings maximise your cutting width.
- 3 Discs tend to last longer.
- 4 If obstacles are encountered, discs have a better chance of rolling over them.
- 5 A greater percentage of straw is left on the soil surface to protect the soil from wind and water erosion.

⚠ CAUTION

All gangs must be set on the same setting, otherwise forces within the machine will be unbalanced. Failure to set gangs on the same setting will result in inferior ploughing performance.



Above: Front view of plough in work position

SETTING 1 (12 Degree Gang Angle)

Setting one (1) is the best setting to use in the following circumstances:

- 1 Initial working in root bound pasture,
- 2 Wet or sticky conditions,
- 3 Where it is desired to leave more trash on the surface,
- 4 Where faster working speeds are required,
- 5 Where there is a greater likelihood of encountering hidden objects; stumps, rocks, etc; and
- 6 Provides the lowest draft requirements.

On setting one (1) you must work **at least 100mm (4") deep** to achieve a full cut out in one pass.

⚠ CAUTION

Avoid using SETTING 1 in very abrasive soils for long periods of time. In very abrasive conditions, the discs may sharpen too much - thinning & weakening discs & reducing disc life.

Plough Description & Application



Above: Setting 5 on front wing linkage tube



Above: Setting 6 on rear wing linkage tube

SETTING 2 (14 Degree Gang Angle)

This setting is used for similar application as setting one (1). Setting two (2) is generally more suitable for secondary working.

SETTING 3 (16 Degree Gang Angle)

Setting three (3) is a general purpose setting which generally, ploughs more vigorously.

- 1 It is used in sticky, puggy or rubbery ground for better penetration. A better penetration is often achieved on this setting, rather than using setting four (4), five (5), six (6) or seven (7).
- 2 It is used to achieve a good cut out, but still maintains a fine tilth and level finish.

NOTE

SETTING 1 provides fluted discs with the best chance of successfully self-sharpening.

SETTING 4 (18 Degree Gang Angle)

Setting four (4) is used for general ploughing where the ground is harder and greater penetration is required.

SETTING 5 (20 Degree Gang Angle)

Setting five (5) is used where even, more vigorous cultivation is required to bury greater amounts of the surface cover.

SETTING 6 (22 Degree Gang Angle)

Setting six (6) is often used for:

- 1 Chipping weeds or increasing cut out at shallow depths.
- 2 Obtaining more depth in hard conditions.

SETTING 7 (24 Degree Gang Angle)

The most vigorous of all settings, it is used to obtain maximum depth in hard conditions.

Setting seven (7) has advantages in some hard conditions, however, the following considerations should be taken into account :

- 1 The setting is not suitable for working wet or sticky ground.
- 2 Trash handling ability is compromised.
- 3 If used for secondary working, it is more difficult to achieve a desired level finish. This is because soil is moved much further on this higher setting,
- 4 This setting will bring the ground up more cloddy.
- 5 Discs continually used on this setting will wear blunt.

Plough Specifications

EAST COASTER SERIES

Model (No. of Discs)		108	112	120	128	136
Approx Weight (kg)		14000	14500	15000	15200	15700
- Weight per disc (kg)		130	132	125	119	115
Width @ 20° (Setting 5) (m)		12.0	12.5	13.4	14.2	15.1
	(ft)	(39'5")	(40'9")	(43'8")	(46'7")	(49'7")
Work Output (Ha/hr @ 8 kph)		9.6	10.0	10.7	11.4	12.1
Approx Draught Required (kW)			260	260	260-300	300 300-335
	(hp)	(350)	(350)	(350-400)	(400)	(400-450)
Transport Width (m)		5.7 (18'7") - all models				
No. of Bearings		40	40	40	48	48
No. of Tyres		6	6	6	6	6
Stub Axle Size		H70 axles				
Tyre Sizes - Centre		(2) 16.5 x 22.5 super singles - all models				
- Front Wings		(2) 14.00 x 18 x 12 ply single castor wheels - all models				
- Rear Wings		(2) 14.00 x 18 x 12 ply single castor wheels - all models				
Hydraulic Wheel Lift		6 phasing cylinders (two 5" x 12" cylinders w- depth stops, two 4¾" x 12" cylinders & two 4½" x 12" cylinders				
Main Frame Size		400mm x 200mm x 12mm (16" x 8" x ½") Grade 350 RHS - all models				
Gang Frame Size		250mm x 150mm x 9.0mm (10" x 6" x ¼") Grade 350 RHS - all models				
Gang Axles and Gang Bolts		38mm (1.5") square Duraflex axles & 6 x 20mm grade 5 gang bolts - all models				
Gang Bearings		38mm x 100mm (1.5" x 3.9") self aligning, greaseable - all models				
Gang angles		12°, 14°, 16°, 18°, 20°, 22°, 24° (Settings 1, 2, 3, 4, 5, 6, 7) - all models				
Disc Spacing		237mm (9") - all models				
Spool Size		220mm seamless heavy wall pipe				
Disc Size		660mm x 6mm (26" x ¼") scalloped - all models				
Filler Discs		Two 3 notch 510mm x 6mm (20" x 3/16") - all models				
Scrapers		Grizzly Floppy 'T' Bar Scrapers (Pat No. 602879, Reg. Design No. 95931) - all models				
Pull		Boxed section with parallelogram height adjustment - all models				
Pull Tongue		70mm thick with 50mm hole, height adjustable - all models				
Pitch Control		Hydraulic pitch control with 4" x 12" cylinder on parallelogram - all models.				

Optional Equipment:

Discs Sizes

Fluted 660mm x 6mm (26" x ¼")

Fluted 660mm x 8mm (26" x 5/16")

Scalloped 660mm x 8mm (26" x 5/16")

Scalloped 710mm x 6mm (28" x ¼")

Fluted 710mm x 6mm (28" x ¼")

Scalloped 710mm x 8mm (28" x 5/16")

Fluted 710mm x 8mm (28" x 5/16").

Pull Tongues

Cushion hitch 70mm thick, 50mm hole

Cushion hitch 70mm thick, 67mm hole

Note: The cushion hitch option is required for track machines.

NOTE

Weight specification per disc may vary from 115 to 145 kg/disc depending on the size and options of the plough.

Shipping Information & Dealer Assembly Instructions

Shipping Information

The following shipping information applies at the time of printing but variations can occur without prior notification.

East Coaster Models

Model	Approx Weight (kg):
EC108	14000 kg
EC112	14500 kg
EC120	15000 kg
EC128	15200 kg
EC136	15700 kg

Right: A typical tool kit (shown left to right):
- Gang bolt spanner,
- Gang adjustment spanner,
- Gang holding tool,
- Wheel nut spanner.

Assembly Instructions

The East Coaster Disc Plough is delivered fully assembled, except for:

- 1 The front wing inner and outer tubes.
- 2 The front wing swivel wheel assemblies.

Assembly of the front inner and outer tubes and wing wheel assemblies requires a level site, the use of a crane and tools.

A 25 tonne crane is required to unload the unit from a semi-trailer.



To assemble the East Coaster, follow the steps outlined:

1 Unload unit from semi-trailer

Unload the unit from a semi-trailer using a 25 tonne crane onto a convenient place on the ground.

The plough comes with a tool kit which should be stored in the plough's tool box when not in use. A typical tool kit is shown below left. Note that not all models have the same components.

WARNING

Always use transport blocks when working on the plough.

Transport blocks must be in place and the machine properly supported when performing any maintenance work.

Failure to use transport blocks or support the machine properly may cause serious injury.

Assembly Instructions

2 Fit swivel wheel assemblies to the front wings

Using the crane, position the front gang swivel wheel assembly to the front wing and hold it upright.

Align and pin the parallelogram linkages.

3 Fit hydraulic cylinders to the front wheel assemblies

Align and pin the ends of the hydraulic lift rams on each front swivel wheel assembly.



Above: Connect all hydraulic hoses to a tractor

4 Connect all hydraulic hoses to a tractor

While the front hitch rests on the ground, connect all hydraulic hose using the coding information below.

Colour coding of hydraulic circuits is:

Blue - Pitch control circuit.

Red - Lift control circuit.

Green - Gang fold circuit.

Note the inline filter instructions below for PTE hydraulic cylinders.

⚠ CAUTION

Inline filter systems must be fitted on both the self-phasing hydraulic wheel lift and gang fold circuits of ploughs equipped with PTE hydraulic cylinders. Failure to use inline filters may lead to premature failure of cylinder valves which is not covered by warranty.

Assembly Instructions



Above: Raise the plough pull to attach to tractor hitch.

Connect the plough pull to the tractor hitch

Using the pitch control circuit, raise the plough pull and connect the plough to a tractor hitch.

6 Operate hydraulic circuits

The three hydraulic circuits of the East Coaster are fully plumbed and operational when assembled at the factory.

When the plough is connected to the tractor, operate all circuits to ensure everything is operating correctly:

- a) Fully extend lift control cylinders and allow cylinders to fully phase. Hold the hydraulic lever open for about one minute after all cylinders are fully extended, to ensure all cylinders are in phase and any air is bled from the circuit.
Note the instructions below for Lyco hydraulic cylinders.

- b) Operate pitch control cylinder. Ensure all air is removed from the circuit by passing the ram through full stroke several times.
- c) Fully extend gang fold cylinders. Hold the hydraulic lever open for about one minute after cylinders are fully extended, to ensure both cylinders are in phase and any air is bled from the circuit.

Leave the gang fold cylinders fully extended to assemble the front linkage tubes.

⚠ CAUTION

*If the plough is fitted with Lyco hydraulic self-phasing wheel lift cylinders, the lift rams **must be fully extended and contracted for 10 cycles** (after the first phasing) to ensure the cylinder seals are bedded in properly.*

Failure to do this during assembly may lead to the problem of leaking seals.

Assembly Instructions

7 Assemble and fit front linkage tubes

With the wing fold cylinders fully extended, fit the front wing inner tubes.

The outer tube attaches to the gang assembly, and the inner tube is connected to the front - on the hydraulic folding arm.

Fit bolts, lock nuts and gang setting pins.

As a starting point, try gang setting pins in a mid setting, such as hole 4 or 5 on the sliding tubes. Be sure to set all gangs the same.

Pin Setting: 1 2 3 4 5 6 7
Gang Angle: 12° 14° 16° 18° 20° 22° 24°

See pages 29-30 for information and illustration on gang angles and pin settings.

8 Unfold the East Coaster to work position

See unfolding and folding instructions on pages 21-27.

The unit is now ready for operation. Be sure to follow all operating, safety and maintenance instructions.

Operating Instructions



Raise the machine fully off the ground and make sure the centre frame is level

How to Fold the East Coaster for Transport

- 1 Raise the machine fully off the ground and make sure the centre frame is level.



Work lock-up released (Right hand side).

- 2 Remove pins and release the work lock-ups on the front folding arms of the machine.

Never place your fingers on the inner edges of the lock toggle.



Always use the tips of your fingers on the end of the lock toggle to lift and rotate the lock toggle.

- 3 Rotate all lock toggles to the horizontal position so that all gang locks-ups are in the trip position.

To rotate the lock toggles:

- a) Use the tips of your fingers at the end of the lock toggle to lift and rotate the lock toggle.

Never place your fingers on the inner edges of the lock toggle. Any finger that protrudes onto the inner edge is in danger of being rotated with the toggle & injured.

! WARNING

Remove Gang Support Chains before folding gangs for transport on selected models.

Remove Gang Support Chains before adjusting gang angles.

When refitting the Gang Support Chains, make sure chains are taut to offer maximum support for the Gang. Any excess chain loop back on itself using hooks fitted to avoid chains fouling the discs.



! WARNING

Never place your fingers on the inner edges of the lock toggle (SHOWN LEFT).

Any finger that protrudes onto the inner edge is in danger of being rotated with the toggle & injured.

Operating Instructions



With the tips of your fingers, flick the lock toggles upwards and over to the trip position.

- b) With the tips of your fingers on the ends of the toggle, flick the lock toggles upwards so that they rotate to the new position.

Never place your fingers around the lock toggle. Any finger that protrudes onto the inner edge is in danger of being rotated with the toggle & injured.

Never place your fingers on the inner edges of the lock toggle.



Gang lock-up with lock toggle in horizontal (trip) position.

- 4 After releasing the work lock ups and placing all lock toggles to the trip position the East Coaster is ready for folding.

To fold the East Coaster to transport position:

- Activate and extend gang-fold cylinders, while
- Moving slowly forwards
- until all gangs are fully closed.

The folding sequence is illustrated with the following photos - 4a, 4b, 4c, 4d, 4e & 4f.



4a



4b



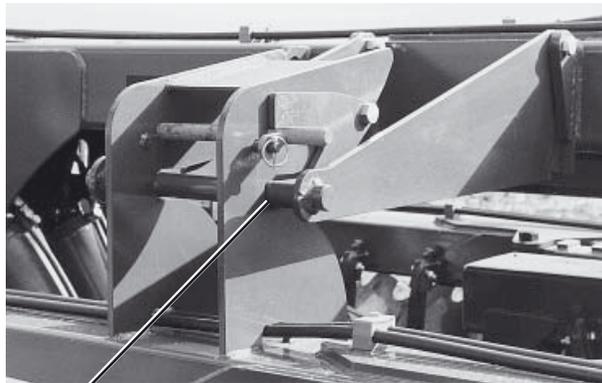
4c

! WARNING

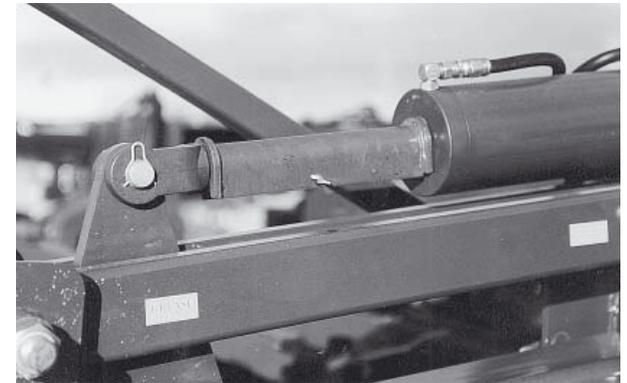
Never place your fingers on the inner edges of the lock toggle (SHOWN LEFT).

Any finger that protrudes onto the inner edge is in danger of being rotated with the toggle & injured.

Operating Instructions



Gang lock-up with lock toggle in locked position.



Fit travel bars to all wing wheel cylinders (4).



- 5 Check all gang locks-ups to see that lock toggles are in correct position - locking gangs into transport mode.

- 6 Place all travel bars (6) onto all fully extended wheel lift cylinders and lock each travel bar into position the bolts and wing nuts supplied.

! WARNING

Always make sure people are standing well clear while folding the plough. Failure to stand clear of the machine may cause serious injury.



! WARNING

Always ensure all travel bars (6) are properly fixed into position before transport. Failure to fit travel bars to all wheel cylinders can place excessive strain on hydraulic hoses and fittings, and will make the plough unstable & dangerous for transport & may cause damage or serious injury.



Operating Instructions



The plough folded for transport.

The plough is now ready for transport.

WARNING

Do not transport with a vehicle with a gross mass less than that of the plough. Transporting with a smaller lead vehicle will result in loss of machine control and serious damage or injury.

CAUTION

Use revolving amber lamps and signs as required when transporting a plough on public roads.

WARNING

*Before transporting on public roads check with local Police or Road Traffic Authority regarding legal requirements.
Restrictions may apply to the width, height, length and weight of your plough.*

WARNING

Do not exceed 30 km/hr when towing the plough. The maximum permissible speed is 30 km/hr. If this speed is exceeded, the tyre manufacturer will not warrant any damage to tyres.

CAUTION

*Whenever transporting the plough on roads, **check the wheel nuts regularly.** Failure to do this may result in wheel studs working loose and wheels coming adrift causing damage or injury.*

Operating Instructions

How to Unfold the East Coaster for Work

- 1 Choose a fairly level area of ground. It should be large enough to open the machine while moving slowly rearwards (approximately 30 metres).
- 2 Activate and extend the wheel lift cylinders and remove travel bars from each cylinder. Store travel bars in the toolbox.



Always use the tips of your fingers on the end of the lock toggle to lift and rotate the lock toggle.

- 3 Release all wing lock-ups by rotating all lock toggles so that they hang downwards and release the wing lock.

To rotate the lock toggles:

- a) **Use the tips of your fingers** at the end of the lock toggle to lift and rotate the lock toggle.

Never place your fingers on the inner edges of the lock toggle. Any finger that protrudes onto the inner edge is in danger of being rotated with the toggle & injured.

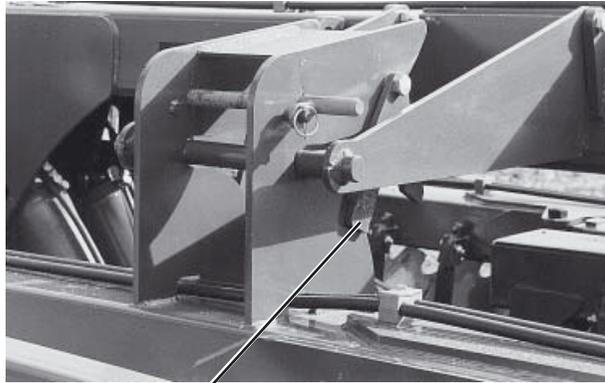
Never place your fingers on the inner edges of the lock toggle.



! WARNING

Never place your fingers on the inner edges of the lock toggle (SHOWN LEFT). Any finger that protrudes onto the inner edge is in danger of being rotated with the toggle & injured.

Operating Instructions



Gang lock-up toggle in release position.

- b) With the tips of your fingers on the ends of the toggle, flick the lock toggles over so that they hang downwards in the release position.

Never place your fingers around the lock toggle. Any finger that protrudes onto the inner edge is in danger of being rotated with the toggle & injured.

Check that all lock toggles are hanging downwards in the release position before attempting to unfold the machine.



- 4 Adjust the plough so that it is level, using the hydraulic pitch control adjustment.

- 5 After releasing all wing lock-ups, the East Coaster is ready for unfolding.

To unfold the East Coaster to the work position:

- Activate the gang-fold cylinders closing them, while
- Moving slowly rearwards,
- Until gangs are fully open, and
- The fold arms are pushed home into their lock brackets

The unfolding sequence is illustrated with the following photos - 5a, 5b, 5c, 5d & 5e.



5a



5b

! WARNING

Never place your fingers around the lock toggle (SHOWN LEFT). Any finger that protrudes onto the inner edge is in danger of being rotated with the toggle & injured.

Operating Instructions

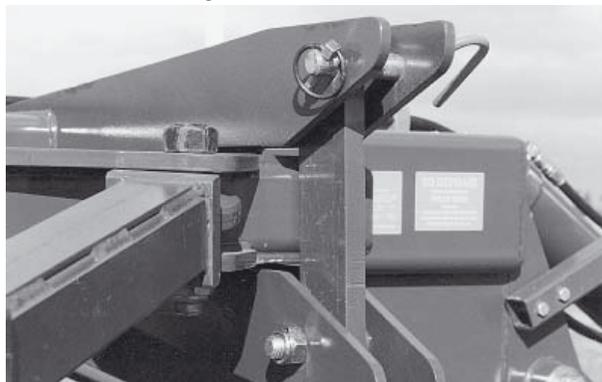


Remove pin and lift the arm lock levers up into position.

- 6 When the fold arms are firmly pushed home:
- Remove the locking pins,
 - Lift the arm lock levers up into position, and
 - Replace the locking pins.

The plough is now ready to set up for work.

The arm lock levers are secured with locking pins (right hand side shown).



Flick all lock toggles “up and over” so that they sit in the gang fold & toggle lock position.

At this point you may wish to flip all lock toggles over ready for gang fold and lock up.

With the tips of your fingers on the ends of the toggle, flick the lock toggles up and over so that they sit in the toggle lock position.

Never place your fingers around the lock toggle. Any finger that protrudes onto the inner edge is in danger of being injured if rotated with the toggle.

! WARNING

Always make sure people are standing well clear while folding the plough. Failure to stand clear of the machine may cause serious injury.

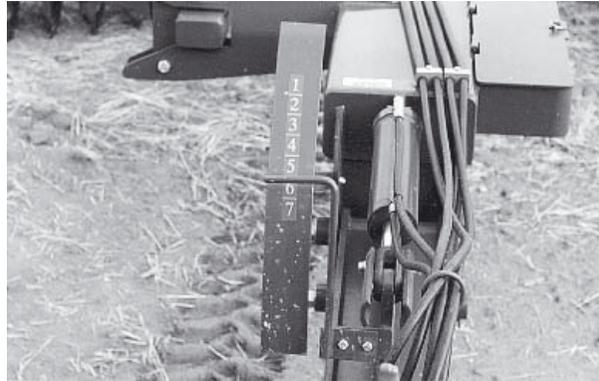
Operating Instructions

Setting Up the Plough for Operation

Before moving the machine for the first time ensure that the pre-delivery check has been done.

Wheel nuts should be checked and securely tightened, and again, rechecked after the plough has been moved.

Important: The initial setting up of your plough behind a tractor is critical to its correct performance.



Pitch setting indicator & pitch control cylinder.

Pitch Control Settings

The East Coast is fitted with a hydraulic pitch control which allows the operator to adjust the relative level of the front and rear gangs while working to maintain the best level finish possible.

To set the pitch control:

- 1 Lower the machine so that the discs just clear the ground.
- 2 Operate the pitch control cylinder to make the front and rear gangs level.
- 3 Work the machine for approximately 20 metres. Check the quality of the job.



A ridge in the centre of the worked soil, means the rear of the centre frame has to be raised slightly.

- 4 If there is a ridge in the centre of the ploughed work, it will be necessary to raise the rear of the centre frame, until the ridge is eliminated.
- 5 If there is a hollow in the centre of the ploughed work, lower the rear of the machine, until the hollow is eliminated.
- 6 The pitch setting indicator located at the front of the plough gives quick reference for accurate adjustment of pitch setting.

When the machine is set correctly, a depth stop on the pitch control ram can be set at the desired position.

NOTE

*When using the hydraulic pitch control cylinder to adjust the working finish, **the depth control wheels must be on the ground.***

If the wheels are lifted off the ground, the pitch control cylinder cannot effectively operate. It may also result in uneven wear of the discs.

Operating Instructions

How to Change Gang Angles

Gang angles on the plough can be altered to suit varying soil and working conditions. If possible, always carry out changes to gang angle settings on a relatively level area of ground.

Variations in gang angle adjustment range from 12 to 24 degrees, in two (2) degree increments.

Adjustment is made by reversing the machine a couple of metres and resetting the four pins (one on each gang adjustment arm).

To alter the gang angle:

- 1 In working position, lift the plough so that the discs just clear the ground.
- 2 Reverse the plough several metres to close the wing fold tubes and expose all pin settings.

Reversing the plough causes the telescoping tubes to close up, taking any pressure off the setting pins, and exposing holes hidden by the outer tubes.

- 3 Select the new pin setting and put the pins in place.

The gang positions are marked from one to seven (1-7).

Pin Setting:	1	2	3	4	5	6	7
Gang Angle:	12°	14°	16°	18°	20°	22°	24°

In most applications, all gangs should be set using the same setting.

See pages 14-15 for information and illustration on gang angles and pin settings.

Operating Instructions

- 4 When the pins are in place, move the plough forwards so that the tubes extend to the new pin settings.
- 5 The unit is now ready for ploughing at the new setting.

Disc Wear Adjustment

The East Coaster is equipped with an adjustment to correct the alignment of the disc face as gang discs wear. This enables operators to achieve complete cut out and a level seed bed even as discs wear down.

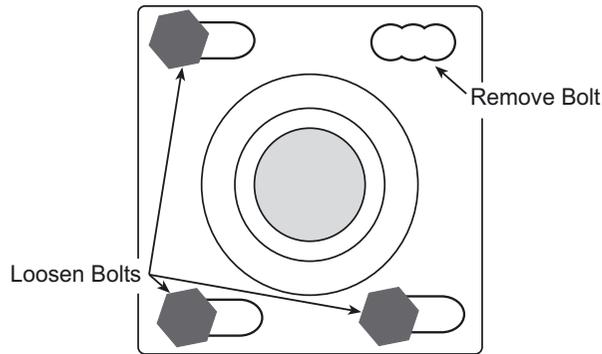
The adjustment facility is located on each gang swivel assembly and adjustment for worn discs should be made after disc diameters wear down by about 50mm (2") (eg, discs worn from 710mm to 660mm (28" to 26" diameter).

An adjustment indicator (rod welded to the swivel assembly) is used to assist the alignment of the disc face.

To adjust for disc wear on the East Coaster:

- 1 Position the plough with the discs resting on the soil surface.
- 2 Position the gang support tool under the gang and bolt it to the two lugs (one on each side of the gang swivel), to support the gang when the swivel pivot bush bolts are loosened.

Operating Instructions



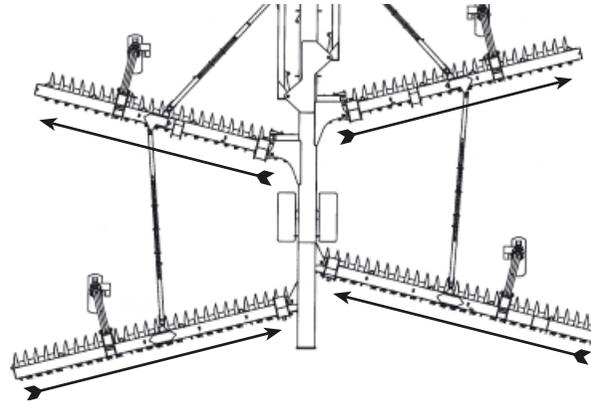
Above: Remove one bolt from the gang swivel pivot bush (from the groove with the locating holes) & loosen the remaining three bolts.

- 3 There are four bolts holding gang swivel pivot bush in place.
 - (a) Remove the bolt that passes through the slot with locating holes.
 - (b) Loosen the remaining three bolts (clear slots).
- 4 Now lift the machine slightly and slide the gang to its correct position (align the disc face with the indicator on gang swivel).

NOTE

Move front gangs outwards to take up disc wear.

Move rear gangs inwards to take up disc wear.



Above: Move front gangs outwards and rear gangs inwards when adjusting for disc wear.

- 5 Once aligned, replace the bolt removed from the pivot assembly, and tighten all four bolts, **using Loctite 680**.
- 6 Remove the gang support tool.
- 7 Repeat procedure on all gangs.
- 8 After four (4) hours of use, check that the gang swivel bush bolts are still tight. Check all gangs.

NOTE

The adjustment procedure should be repeated on all four gangs.

Below: Align the disc face with the indicator (rod) on gang swivel assembly.



Lug for attaching the gang support tool (one on each side of the gang).

Operating Instructions

Swivel Wheel Adjustment

The East Coaster swivel wheels need to be adjusted in the field to suit soil conditions.

Use the following procedure to make adjustments:

- 1 Set the machine to the desired gang angle and depth setting, and drive forward at 8kph for about 50 metres.
- 2 Check the ploughing depth in the centre of the machine and at each outside corner.

- 3 If ploughing depth is not even, level each gang by the adjustment lug on each lift cylinder of the swivel wheels.

Adjust up or down as required.

- 4 Tighten the cylinder adjustment lug nuts.
- 5 Retighten lug nuts, after four (4) hours use.

Ploughing Depth Adjustment

Depth adjustment is controlled from the tractor seat by actuating the wheel lift circuit.

Depth control stops are provided for accurate returning to depth settings when operating.

Depth gauges are provided on the front wing swivel wheel assemblies for easy reference to working depth.

⚠ CAUTION

Never adjust the swivel wheel legs to compensate for mud build-up on wheels. Such adjustments will lead to inferior ploughing performance.

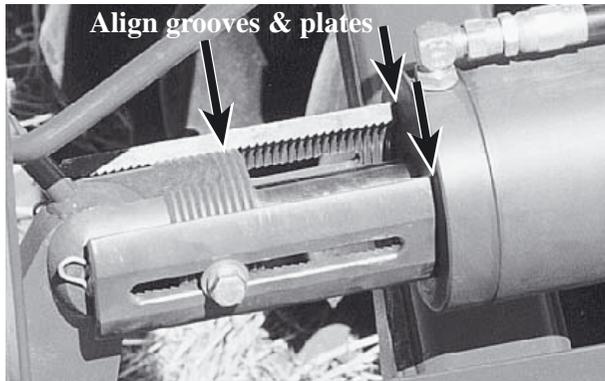
If mud build-up is a problem, construct and fit mud scrapers to the wheels or wait for more favourable conditions.

NOTE

The depth control wheels must be on the ground for depth control and pitch control (levelling) to operate effectively.

If the wheels are lifted off the ground, the depth and pitch control mechanisms cannot operate properly.

Operating Instructions



Above: When adjusting depth stops make sure groove and plates are clean and properly aligned.

Adjusting Depth Control Stops

Depth control stops are provided by the cylinder manufacturer for accurate returning to depth settings when operating. Proper care must be taken when altering depth stops otherwise damage to the depth stops can occur.

When adjusting depths stops:

- a) Make sure the plate grooves are clean and free of foreign matter. Foreign matter can cause improper meshing of grooves and damage to the depth stops and/or cylinders.
- b) Grooves must be properly aligned so that the both plates contact the cylinder end equally. Inaccurate alignment will cause damage to the depth stops and/or cylinders.

⚠ CAUTION

Depth control stops can be easily damaged if misaligned or improperly assembled. Never apply one plate only which will cause the clevis to bend. Damage caused by incorrect assembly is not covered by warranty.

Operating the Plough with Depth Control Stops

Care must be taken when lowering the plough so that the depth control stops come to a rest against the rod end of the cylinder with minimal force.

Always lower the plough gently onto depth control stops. Excessive force will cause damage to the depth stops which is not covered by warranty.

The depth stop holding bolts must be kept tight and should be checked for tightness on a regular basis when operating the plough.

⚠ CAUTION

Depth control stops can be easily damaged by applying excessive force. In the event of damage caused by excessive force, such damage is not covered by warranty.

Ploughing Techniques

1 Turning at Headlands

Important: The plough must **always be raised from the ground** when turning sharply.

When turning sharply, it is necessary to lift discs clear of the ground to avoid uneven working and ridging as well as damage to the plough.

Also when turning sharply make sure the plough pull does not contact rear tractor tyres, otherwise damage may occur.

⚠ WARNING

Always lift the plough out of work when turning sharply. Failure to lift the plough while turning will cause uneven working and ridging in the soil and may also cause excessive forces and damage to the plough. Also when turning sharply make sure the plough pull does not contact rear tractor tyres, otherwise damage may occur.

Operating Instructions

2 Operating Speed

The optimum speed for the machine will be determined by the conditions and the task being performed.

Operating speed is generally about 7-8kph (4-5mph).

Secondary working or working deeper in soft soils or peaty loam soils will require a reduction in speed and/or a reduction in gang angle.

NOTE

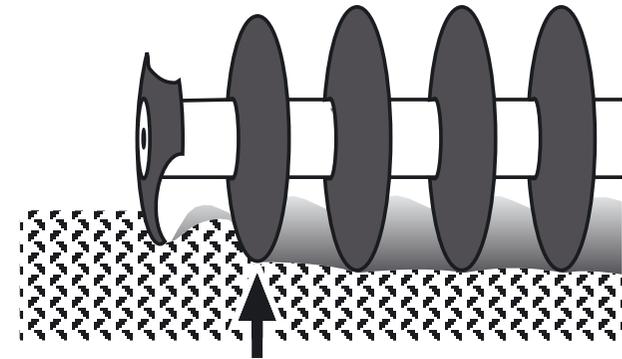
*If the lead disc overlaps too little (less than 9" [one disc]), then soil cut-out will not be complete.
If the lead disc overlaps too much (more than 9" [one disc]), then a line or gutter may be left in the ploughed ground.*

3 Ploughing Patterns

Your East Coaster is fitted with rear filler discs on each side at the rear of the machine. This allows for working in any direction, whether ploughing perimeters, headlands or diagonally.

NOTE

When working at excessive speed in dry conditions, premature disc wear may occur.



*Align the lead disc here
(9" inside the filler disc mark) for complete cut-out.*

4 Working Against Previously Worked Ground

Identify the mark left by the filler disc (three cornered disc) from a previous round which is a guide for placement of the leading disc (on either side).

The lead disc should be cutting 9" (one disc) in from the filler disc mark.

The filler disc mark must be ploughed out by the leading disc for cut-out to be complete.

! WARNING

If the plough is not lifted from the ground and obstacles such as rocks and stumps are encountered while working through a corner, disc & machine damage may result because of the very square angle at which the disc strikes an obstruction.

Damage caused by failure to lift the plough while turning will void any warranty claims.

Operating Instructions

5 Ploughing Soft Ground

Ploughing soft ground requires less set or gang angle, and reduced speed (especially when ploughing deeper than 100mm (4") deep.

6 Ploughing Hard Ground or Ground which Comes Up in Large Clods

Generally, most conditions will allow you to get full depth working on the first pass.

Sometimes full depth can be achieved in the first pass on Setting 3, but with the result of leaving large, hard to break clods and boulders.

Setting 5 is usually the most appropriate setting, and you need only attempt to gain half the desired depth on the first pass.

It may be necessary to work some country as much as three times to achieve the desired results.

⚠ CAUTION

*Always use less set on discs and lower speed when operating in stumps and/or rocks.
Damage caused by mis-use in rocks and/or stumps is not covered by warranty.*

7 Stumps and Rocks

A disc plough is primarily a rolling, chopping machine. This means that:

- a) The faster the disc is going, the less penetration is achieved.
- b) When stumps, rocks, etc are encountered, the disc which strikes the obstacle must either break it, cut it or be strong enough to lift the machine over it. The disc generally tends to push the object in and not root it out. Discs are not designed to remove stumps.
- c) The less set and less speed that can be used the better because:
 - i) The disc will have a better chance to cut the obstacle. More set creates a greater bulldozing and less cutting effect.
 - ii) The disc retains its strength because there are less twisting and tearing forces acting on the disc. This gives the disc a better chance to roll over obstacles and minimises the chance of disc damage.
 - iii) Using less speed and minimal gang settings also exerts less strain on the axle and frame components.

8 Working in Moist Conditions

Your Grizzly features revolutionary Floppy T Bar Scrapers (Patent No. 602879 & Registered Design No. 95931) which enable it to operate in conditions in which ploughs with conventional scrapers would fail.

However there are limitations to the performance of any disc plough. There are various adjustments which can be made to assist the performance of your plough in trying conditions (refer Gang Angle Selection on pages 14-15).

There may be times when even though adjusted to best effect, your plough will fail to work satisfactorily. In these situations, it will be necessary to wait until conditions are more suitable.

NOTE

*The depth control wheels must be on the ground for depth control and pitch control (levelling) to operate effectively.
If the wheels are lifted off the ground, the depth and pitch control mechanisms cannot operate properly.*

Lubrication and Maintenance

Running In Period

Your Grizzly East Coaster has a running in period, just as any tractor or car!

During this period, it is of the utmost importance, that the following servicing must be done by the operator:

Before Use

Before initial use of the plough:

- 1 Grease all nipples. Lift wheels off the ground to grease nipples on the upper axles of the wheel arms.

- 2 Ensure that wheel nuts are securely tightened and rechecked after the plough has been moved.
- 3 Securely tighten all nuts.
- 4 Check wheel hub grease cap.
- 5 Check all tyres for correct pressure.
Refer to recommended tyre pressures on page 87.

After 10 Hours Use

- 1 Tighten gang bolts to 270Nm (180ftlb).
- 2 Tighten wheel nuts 360Nm (270ftlb).
- 3 Check all other nuts and bolts and tighten as per chart as shown below.
- 4 Check wheel bearing adjustment. See Check Wheel Bearings on page 40.
- 5 Check scrapers are correctly adjusted.
- 6 Grease all nipples.
- 7 Check tyre pressure.
- 8 Tighten lift cylinder adjustment nuts on all swivel wheels.

WARNING

Whenever transporting the plough on roads, check the wheel nuts regularly.

Failure to do this may result in wheel studs working loose and wheels coming adrift causing damage or injury.

Such damage is not covered by warranty.

WARNING

Do not exceed 30 km/hr when towing the plough. The maximum permissible speed is 30 km/hr. If this speed is exceeded, the tyre manufacturer will not warrant any damage to tyres.

Lubrication and Maintenance

After 20 Hours Use

After twenty (20) hours of use, repeat steps 1 - 8 listed under “After 10 Hours Use” on page 36.

After 40 Hours Use

After forty (40) hours of use, repeat steps 1 - 8 listed under “After 10 Hours Use” on page 36.

Then, after every forty (40) hours of use, repeat these maintenance steps.

NOTE

Tighten gang bolts more often than recommended if working in very tight soils or stony/rocky ground.

Routine Service Procedures

Proper servicing and maintenance schedules must be carried out to gain the best performance and longest life of the plough and its components.

1 Tighten Gang Bolts

Check gang axle and gang bolts regularly.

After the assembly of the plough and setting up for operation, it is necessary to tighten gang bolts:

- at 4 hours
- at 10 hours
- at 20 hours
- at 40 hours of the initial ploughing.

⚠ CAUTION

It is necessary to tighten gang bolts at the hours specified when the plough is new because the disc and spool take time to “bed in”. If this is not done, gang bolts will become loose and can cause considerable damage to bolts, spools and discs. Such wear or damage is not covered by warranty.

⚠ CAUTION

After the running in period has been completed, periodically check that the gang bolts are tight. If the gang bolts are not kept tight, wear and damage to bolts, spools and discs will be excessive and very expensive. Such wear or damage is not covered by warranty.



Above: Tighten 6 bolt gangs bolts to 270 Nm (180 ft/lbs), using the gang holding tool & tension wrench.

Tighten 6 bolt systems to 270 Nm (180 ft/lbs).

After the first 40 hour work the gang bolts should be **tightened periodically** thereafter.

When working in stump or rocky conditions check more frequently - continual checking at least every 4 hours is recommended.

Lubrication and Maintenance



Grease wheel hubs every 24 hours:

2 Tighten Wheel Studs

When the plough is new the wheel hub and rim take time to “bed-in”. Therefore, after the plough assembly it is necessary to tighten wheel studs, as specified below:

Wheel studs must be checked at:

- 4 hours
- 10 hours
- 20 hours

If transporting on the road when the plough is new, **tighten wheel studs after the first 10 km** and thereafter, periodically check until the metal components are fully bedded-in..

WARNING

If wheel studs are not checked as specified, the studs can work loose and wheels can fall off. If this happens wear and damage to studs, hubs and rims can be excessive and very expensive. Such wear or damage is not covered by warranty.

3 Tighten Stub Axle Bolts

When the plough is new the wheel hub and rim take time to “bed in”. Therefore, after the plough assembly it is necessary to tighten stub axle bolts (see item 17, pages 66 - 72) as listed below:

- at 4 hours
- at 10 hours
- at 20 hours

If transporting on the road when the plough is new, **tighten stub axle bolts after the first 10 km.**

WARNING

If stub axle bolts are not checked as specified, the bolts may work loose and axles fall off. Such wear or damage is not covered by warranty.

4 Grease Machine Regularly

When the plough is first fully assembled it should be totally greased.

When operating the plough is recommended to grease the unit on a daily basis for the best wear life of components.

Recommended lubrication schedule:

- Wheel Hubs 24 hours
- Gang Pivots 24 hours
- Gang Swivels 24 hours
- Swivel Wheel Pivots 24 hours
- Swivel Wheel Links 24 hours
- Pull Pins 24 hours
- Fold Links 24 hours
- Centre Wheel Pivots 24 hours
- Gang Bearings 24 hours

These greasing points are illustrated next page.

At the end of the season, grease the unit fully before bearings cool down from the last working.

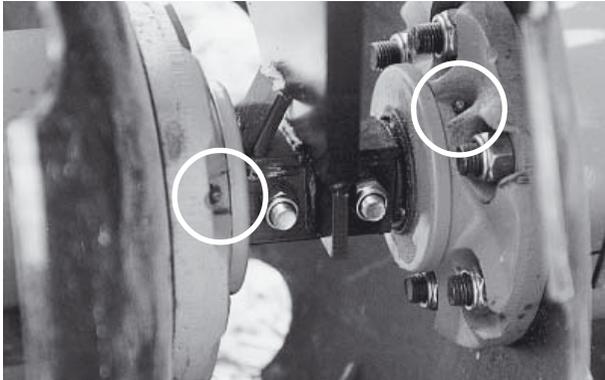
Lubrication and Maintenance



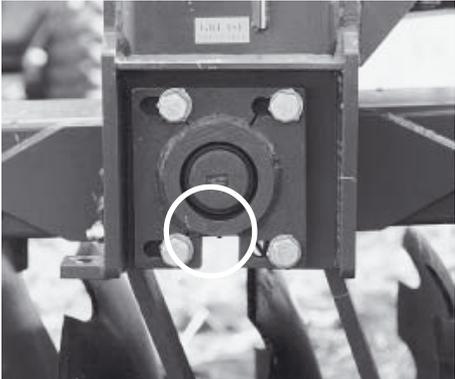
Above: Grease wheel hubs every 24 hours:



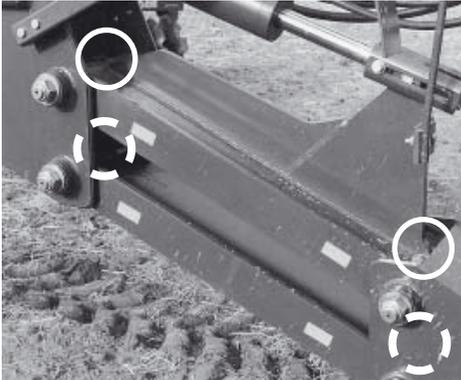
Above: Grease fold links every 24 hours



Above: Grease gang bearings every 24 hours



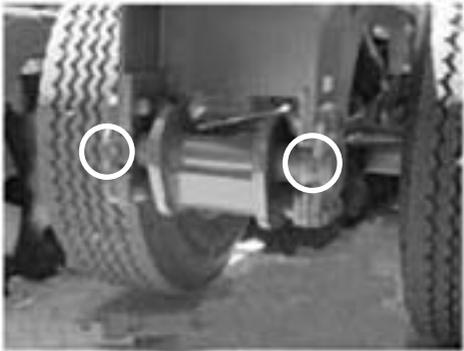
Grease gang pivots every 24 hours



Grease pull pins every 24 hours



Grease swivel wheel pivots every 24 hours



Grease centre wheel pivot every 24 hours



Grease swivel wheel links every 24 hours



Grease gang swivels every 24 hours

5 Check Disc Bearings Daily

Disc bearings should be checked daily when operating the plough. It is good practice to check for bearing malfunction when greasing the bearings each day.

With the plough lifted, spin each disc gang assembly and listen or feel for noisy or rough rolling bearings. Bearings that are tight, squeaky, rough or seized must be replaced immediately.

If a bearing fails during operation it will be noticeable because the disc gang will move up where the bearing has failed and disintegrated. Also when the plough is lifted up the disc gang end will drop down.

NOTE

One of the most important grease applications is at the close of season at the end of the last working - while the bearings are still warm. This minimises moisture condensation within the bearings and will prolong the life of the bearings.

Be sure to apply grease to bearings while the bearings are still warm.

6 Check Wheel Bearings

Check Wheel Bearings - Wheel bearings should have no end float, but wheels should spin freely.

Wheel bearings (roller bearings) periodically need adjustment. Test for side movement on the wheels when they are raised off the ground. Adjust the roller bearings when side movement is apparent.

⚠ CAUTION

It is the operator's responsibility to spot and replace worn or faulty disc bearings before damage occurs to other components. When a bearing fails, it will disintegrate and if not replaced quickly will cause damage to the bearing housing and gang axle which will not be covered by warranty.

7 Check Depth Control Stops

Regularly check the depth control stops when operating the plough:

- Check that the depth control stop holding bolts are properly tightened.
- Check that the depth control stop plates are aligned correctly.
- Check that the grooves of the depth control stop are aligned and correctly seated.

For more information, refer to page 30, "Adjusting Depth Control Stops".



Adjust the scraper pad so that it can move from touching the disc spool to 12mm away from the spool.

8 Scrapers

Periodically check the bolts holding the scrapers and the scraper adjustment bolts.

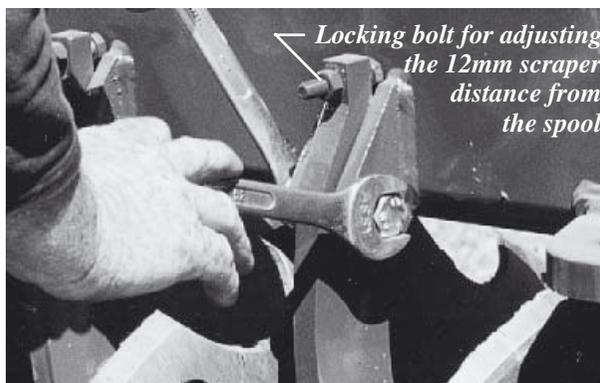
Check for side play in the scrapers, and if any exists, tighten the holding bolts to remove the side play.

If scrapers and bolts are left too loose, there will be unnecessary wear on the bolts and scraper holes.

Do not overtighten scraper bolts. The scraper must be free to move back and forth from the disc spool to clean away mud or debris.

Check that each scraper is correctly adjusted so that the scraper pad can move from touching the disc spool up to 12mm away from the spool.

When adjusted correctly and working, scrapers will move in towards the spool cleaning away any mud and debris.



Tighten scraper holding bolts to remove side play. Use the locking bolt above to obtain the 12mm scraper distance from the spool.

9 Tyre Pressures

Periodically check that tyre pressures are correct. Under inflated tyres will cause uneven depth control and poor ploughing results.

Refer to recommended tyre pressures on page 87.

10 Other

- All bolts must be checked periodically during the life of the machine.
- Check that all pins and clips are in place and not excessively worn.
- Check that wheel bearings have little or no play.
- Check that the bearing covers on gangs are in good condition. Replace if damaged (refer to item 7, page 76).

Lubrication and Maintenance

How to Replace Discs

When discs become worn or damaged it is necessary to remove individual disc gang assemblies from the plough and replace the worn or damaged discs. It is usually recommended to remove one gang at a time and replace in an ordered manner.

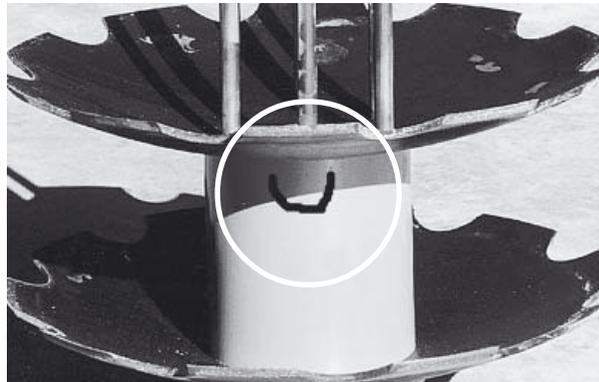
While discs are being replaced it is an excellent time to renew bearings, dust covers and gang axle bolts if required.

WARNING

Replacing discs involves moving and handling very heavy disc gangs and componentry. When moving, disassembling, reassembling and refitting discs & disc gangs, take all protective precautions necessary to avoid injury by sharp discs, heavy components, jamming or crushing. Never push against a disc with your foot or arm. This may lead to serious injury.

CAUTION

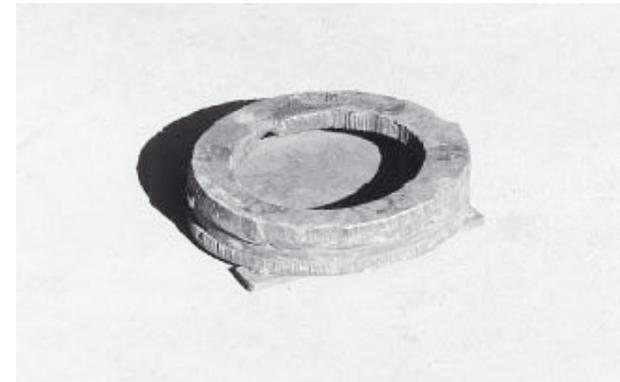
When reassembling disc gangs it is important to match the concave end of spools with the convex side of discs and the convex end of spools with the concave side of discs. Failure to do this will result in discs not bedding-in & damage to gang components.



Above: Mark each disc spool clearly so that the concave & convex ends can be identified for reassembly.

Follow the procedures below:

- 1 Remove the scrapers from the rear of the gang beam, making sure that each scraper can be put back into its original position.
- 2 With the discs resting on top of the ground, remove the two bolts holding each disc gang axle to the gang beam.
- 3 Lift the plough up which will separate the disc gang from the main frame. Roll the gang assembly out from under the plough.



Above: Use a base plate to support gang bolts during disassembly and reassembly of the disc gang.

- 4 In a clean area, disassemble the disc gang in the following manner:
 - a) Mark each disc spool clearly so that the concave and convex ends of each spool can be identified for reassembly (see photo above left).
 - b) Remove the dust covers and gang axle.
 - c) Remove the gang tie bolt nuts.
 - d) Dismantle the assembly of discs and spools.
- 5 Reassemble the disc gang replacing the required discs, making sure the concave end of each spool is fitted to the convex side of a disc, and the convex end of each spool fitted to the concave side of a disc.

Lubrication and Maintenance

- 6 Apply a small amount of grease to the threads of the gang bolts to minimise binding, attach the nuts to the gang bolts and fully tighten.

Evenly tighten the gang bolts in sequence 1, 2, 3, 4, 5 & 6 (*shown right*) so that the discs and spools bed together properly.

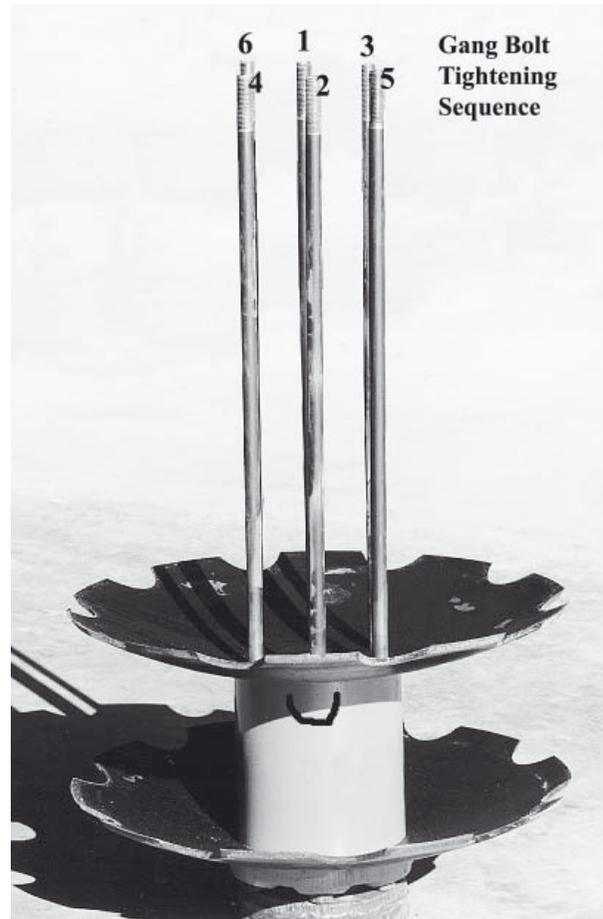
- Tighten 6 bolt systems to 270 Nm (180 ft/lbs).

- 7 Replace the gang axle and reassemble, using new dust covers if necessary. Be sure:
- To use a spacer washer in the thrust end, and
 - A spring in the lead end.
 - The dust cover hole is facing downwards allowing dirt to fall out.

- 8 Roll gang to its position under the plough making sure all safety precautions are taken to avoid injury.

NOTE

The disassembly and reassembly of disc gangs is best done on a vertical plane, with a base plate supporting the gang bolts, to ensure discs evenly bed into the spools.



Above: Re-assemble the disc gangs vertically with the gang bolts supported by a base plate, & tighten bolts in the sequence shown.

NOTE

*When reassembling scalloped discs make sure the scallops are **not in-line** along the disc gang - the scallops should form a spiral. Failure to do this will result in reduced disc penetration of the soil.*

⚠ WARNING

*Always use transport blocks when working on the plough.
Transport blocks must be in place and the machine properly supported when performing any maintenance work.
Failure to use transport blocks or support the machine properly may cause serious injury.*

- 9 Lower the plough to re-attach the gang axle making sure all safety precautions are taken to avoid injury.

It is important to secure the lead end of the gang axle first and fully compress the dust cover spring.

Check the spring tension. The spring should be compressed to a length of 10 - 12mm. Use spacer washers to minimise end play. Allow 12mm movement.

Replace the two axle bolts and tighten.

- 10 Replace the gang scrapers (each to its original position) and tighten all bolts.

- 11 Repeat steps 1-10 for each gang assembly.

⚠ CAUTION

*After disc replacement, follow the instructions given in point 1 "Tighten Gang Bolts" under Routine Service Procedures on page 37.
New discs take time to bed-in properly and gang bolts must be tightened as instructed. If this is not done, gang bolts will become loose and can cause considerable damage to bolts, spools and discs. Such wear or damage is not covered by warranty.*

Lubrication and Maintenance



Above: Place the end of the gang axle into the bearing to be removed.

How to Replace Disc Gang Bearings

When disc bearings are worn, faulty or seized it is necessary to remove the gang assembly and replace the bearing.

Follow the procedures below:

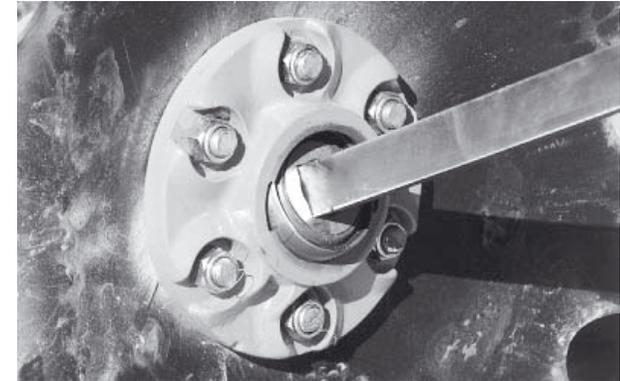
- 1 Remove the scrapers from the rear of the gang beam, making sure that each scraper can be put back into its original position.

WARNING

Replacing disc bearings involves moving and handling very heavy disc gangs and componentry. When moving, disassembling, reassembling and refitting discs & disc gangs, take all protective precautions necessary to avoid injury by sharp discs, heavy components, jamming or crushing. Never push against a disc with your foot or arm. This may lead to serious injury.

CAUTION

Failure to spot & replace worn/damaged bearings can cause damage to other plough components. Damage resulting from the failure to spot & replace bearings soon enough is not covered by warranty.



Above: Twist bearing with the axle, in the direction of the slots in the bearing housing.

- 2 With the discs resting on top of the ground, remove the two locator bolts holding each disc gang axle to the gang beam.
- 3 Lift the plough up which will separate the disc gang from the main frame. Roll the gang assembly out from under the plough.
- 4 In a clean area remove the dust covers and gang axle.
- 5 Place the end of the gang axle into the bearing to be removed and twist bearing in the direction of the slots in the bearing housing.

WARNING

Always use transport blocks when working on the plough. Transport blocks must be in place and the machine properly supported when performing any maintenance work. Failure to use transport blocks or support the machine properly may cause serious injury.

CAUTION

When inserting the new bearing, **make sure the grease hole of the outer bearing casing** (which is offset from centre) **will align with the grease groove in the bearing housing** when the bearing is fully fitted. If it is not aligned you will not be able to get grease into the bearing.

Lubrication and Maintenance



Above: Use a soft mallet and drift to knock the bearing into right angled position to remove it.

- 6 Using a soft bearing mallet, knock the bearing to a right angle position in the bearing housing and remove it through the slot.
- 7 Insert the new bearing into the bearing housing, making sure to **align the grease hole of the bearing and the grease groove of the bearing housing.**
- 8 Partially turn the bearing in the housing with the bearing mallet, and complete the alignment of the bearing in the housing, using the gang axle.

NOTE

Disc bearings can be changed without removing the bearing housing (as shown above). The bearing housing will only be separated (as shown above) when discs are being replaced.



Above: When inserting the new bearing, make sure the grease hole of the bearing & the grease groove of the bearing housing are aligned when fitted.

- 9 Replace the gang axle and reassemble using new dust covers. Be sure:
 - To use a spacer washer in the thrust end, and
 - A spring in the lead end.
 - The dust cover hole is facing downwards allowing dirt to fall out.
- 10 Roll gang to its position under the plough.
- 11 Lower the plough to re-attach the gang axle making sure all safety precautions are taken to avoid injury.

It is important to secure the lead end of the gang axle first and fully compress the dust cover spring.

Check the spring tension. The spring should be compressed to a length of 10 - 12mm. Use spacer washers to minimise end play. Allow 12mm movement.

Replace the two gang axle locator bolts and tighten.

- 12 Replace the gang scrapers (each to its original position) and tighten all bolts.
- 13 Repeat steps 1-12 for other bearing replacements.

Hydraulic Circuits

The East Coaster Series utilises separate hydraulic circuits for wheel lift, pitch control and wing fold. With proper care and maintenance these hydraulics will provide reliable and long life operations.

General Maintenance

The first and foremost consideration in maintaining hydraulics in good working condition is to be meticulous about keeping your hydraulic circuits clean and free from contaminants.

Avoid dirty oils and contaminants at all costs. They will damage hydraulic componentry and cause functional problems.

When transporting the plough, always use the travel bars (provided with the plough) on wheel lift cylinders. The travel bars are essential to prevent excessive loading on cylinder components when transporting.

Phasing Cylinders

When storing the plough overnight or for longer periods, make sure the phasing cylinders are left fully closed to protect shafts and avoid unnecessary seal damage,

OR

alternatively, coat the shafts with CRC or equivalent to protect them while the rams are extended.

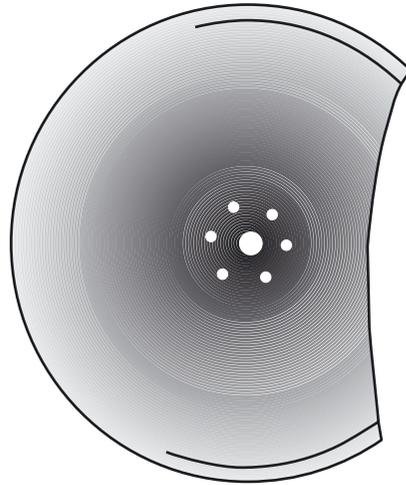
Problem Solving

PROBLEM	CAUSE	REMEDY
1 One side digging deeper than the other.	a) Rams need rephasing. b) Incorrect tyre pressure. c) Adjustable wing wheels not set correctly.	a) Hold tractor control lever in fully open position on the lift side for 30 seconds. b) Check tyre pressures are even. Inflate tyres to correct pressure. See page 87. c) Adjust wing wheel assembly.
2 Lack of penetration.	a) Hard ground. b) Not enough set. c) Depth control too shallow.	a) Increase set. Add liquid to gang frames. b) Increase set. c) Adjust depth control.
3 Machine predominantly hangs to one side.	a) Gangs not all on same setting. b) Uneven tyre pressure. c) Swivel wheels not set correctly. d) Ploughing with too much set (especially secondary working smaller machines) in free flowing soil. e) Ploughing on side of hill.	a) Check gang settings. b) Check and correct tyre pressures. See page 87. c) Adjust wing wheel assembly. d) Reduce set & reduce speed until seedbed is level. e) Reduce Set.
4 Machine bouncing.	a) Travelling too fast. b) Tyre pressure too great. c) Too much set for conditions.	a) Slow down. b) Check tyre pressure. c) Reduce set and/or slow down.

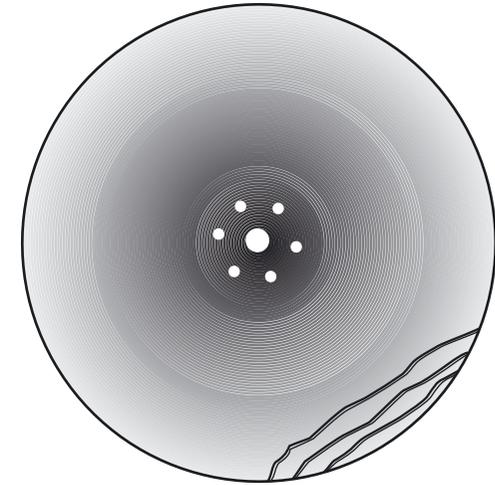
Problem Solving

PROBLEM	CAUSE	REMEDY
5 Rib of unploughed ground in the middle of the work area.	<ul style="list-style-type: none"> a) Disc faces out of adjustment (disc wear). b) Discs too worn. 	<ul style="list-style-type: none"> a) Adjust disc face. See page 30. b) Replace discs.
6 Wings ploughing deeper than centre.	<ul style="list-style-type: none"> a) Hydraulic lift cylinders out of phase. b) Working tight doughy country. c) Swivel wheels not set correctly. 	<ul style="list-style-type: none"> a) Hold tractor wheel lift lever in fully open position on the lift side for about one minute. b) Reduce set and speed. c) Adjust wing wheel assembly.
7 Gutter left in centre of work.	<ul style="list-style-type: none"> a) Rear discs not plough deep enough. b) Going too fast. 	<ul style="list-style-type: none"> a) Adjust pitch control to lower rear disc gangs. b) Slow down.
8 Ridge left in centre of work.	<ul style="list-style-type: none"> a) Rear discs bringing in too much soil. 	<ul style="list-style-type: none"> a) Adjust pitch control to raise rear disc gangs.
9 Trash wrapping around the edge of the disc.	<ul style="list-style-type: none"> a) Ground wet or soft. b) Too much set and disc is bulldozing material. Scallop disc (straw tends to wrap in the scallop of the disc because it has nothing to cut against). c) Working too slow or too shallow. 	<ul style="list-style-type: none"> a) Wait till condition more suitable. Can sometimes be helped by ploughing deeper. b) Reduce set, plough deeper. c) Increase speed and/or reduce set.
10 Incomplete cut out (weeds left standing).	<ul style="list-style-type: none"> a) Not ploughing deep enough. b) Not enough gang angle. c) Incorrect disc face adjustment (disc wear). 	<ul style="list-style-type: none"> a) Increase working depth. b) Increase gang angle. c) Adjust disc face. See page 30.

Disc Warranty Guidelines



Covered by Warranty



Covered by Warranty

Types of Disc Failure Most Often Encountered

The first two illustrations (1 & 2) show typical material failures where a credit may be allowable.

The illustrations (3 a, b, c & 4) show examples of disc damage through misuse - where credits will not be allowed.

1 Straight Line Breaks

A straight line break resulting from defective material.

2 Laminated or Split Discs

Laminating of material resulting in splits or layering of the discs is the result of defective material from the steel mill. This steel defect is often beyond the disc manufacturer's control because it is not possible to identify the problem before the failure occurs.

NOTE

All warranty claims must be submitted in accordance with the Grizzly Warranty Policy.

Credit for disc failure will be given only when the failure is the result of sub-standard or faulty materials. In many cases disc failure is the result of misuse and credit will not be given.

NOTE

If the dish shape is deformed, credit will not be allowed.

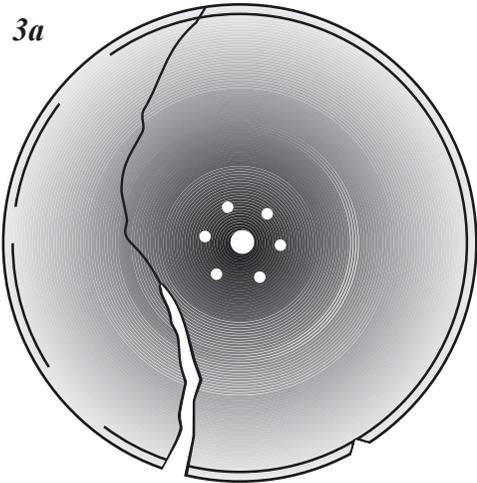
NOTE

Discs worn 50mm (2") below the original diameter will not be eligible for warranty claims.

Any instance where discs have been reworked, welded or reprocessed in any way since leaving the factory, will void all warranty.

Disc Warranty Guidelines

3a

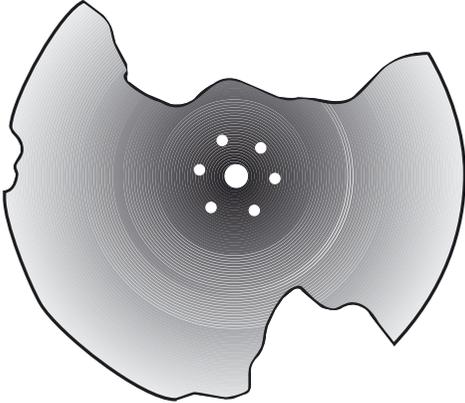


NOT Covered by Warranty

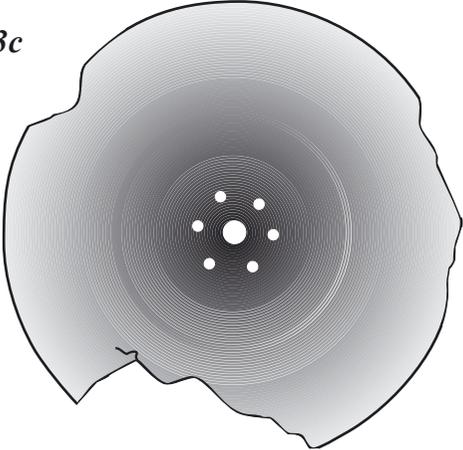
3 Irregular Breaks or Fractures

Irregular breaks or fractures (where the cracks are not in a straight line) resulting from use in abnormal conditions such as excessive or large stones, tree stumps, frozen ground, etc.

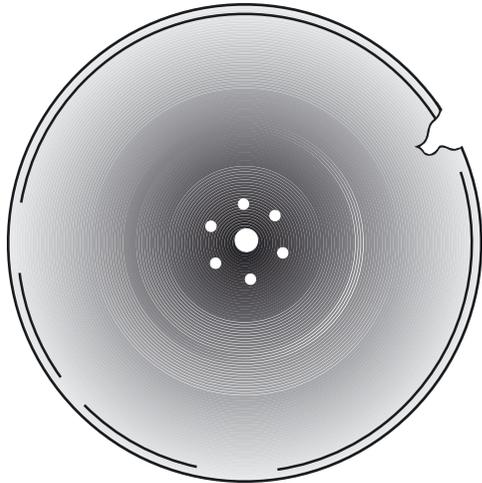
3b



3c



NOT Covered by Warranty



NOT Covered by Warranty

4 Chipped, Bent or Broken Edges

Chipped, bent or broken edges resulting from use in abnormal ground conditions.

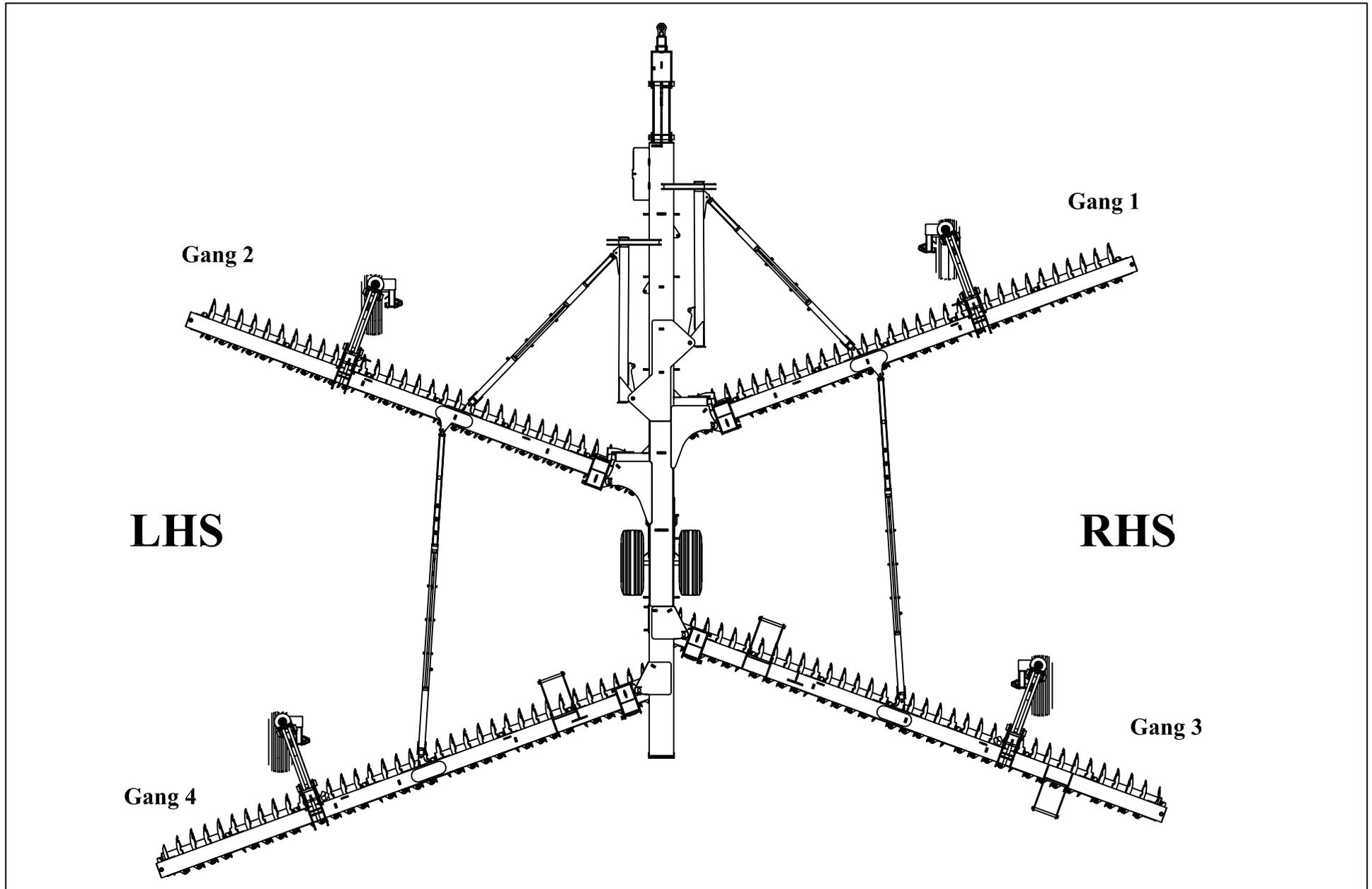


NOT Covered by Warranty



Parts Assembly Drawings & Parts Lists

Plough Assembly

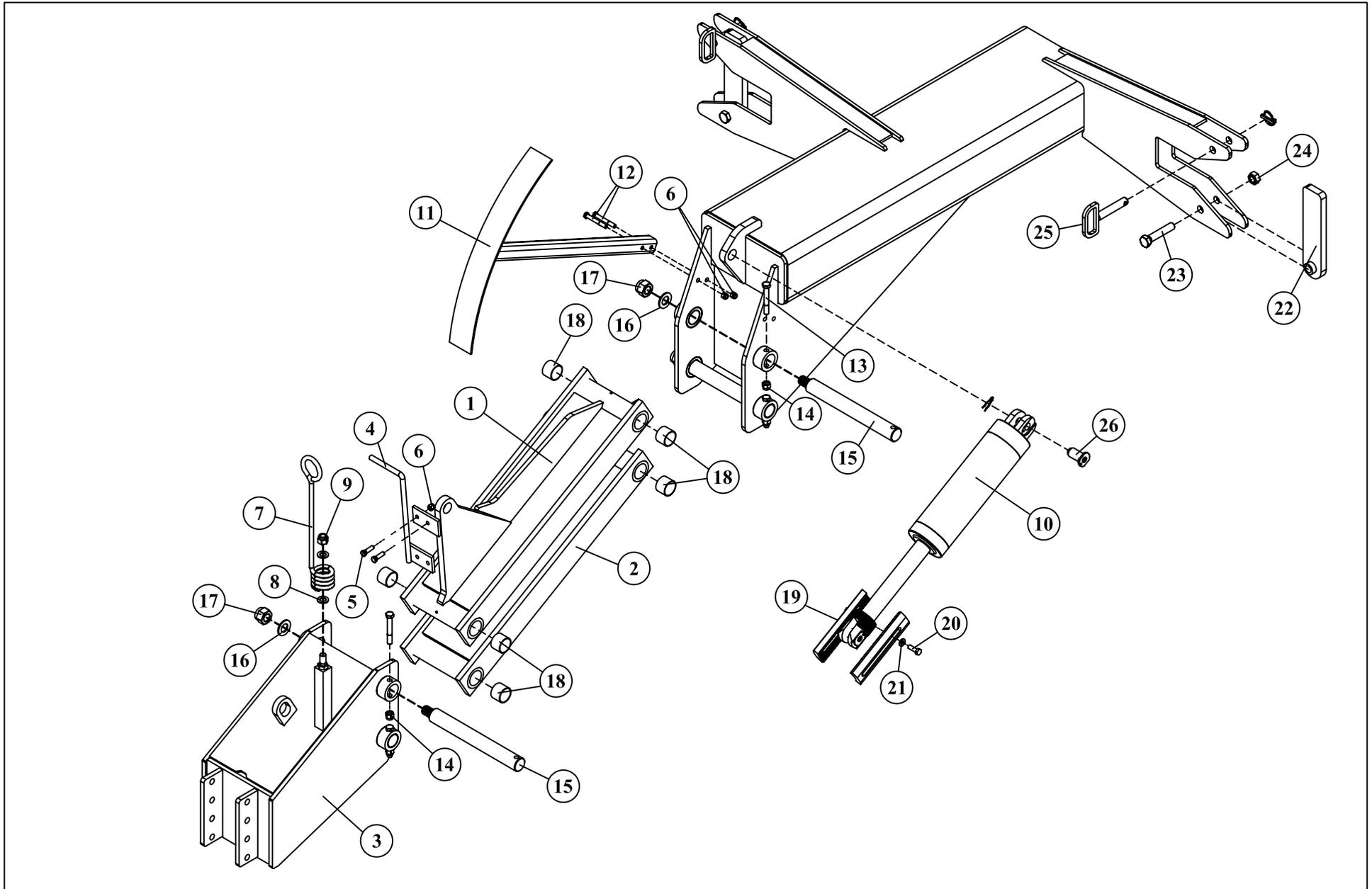


Plough Assembly

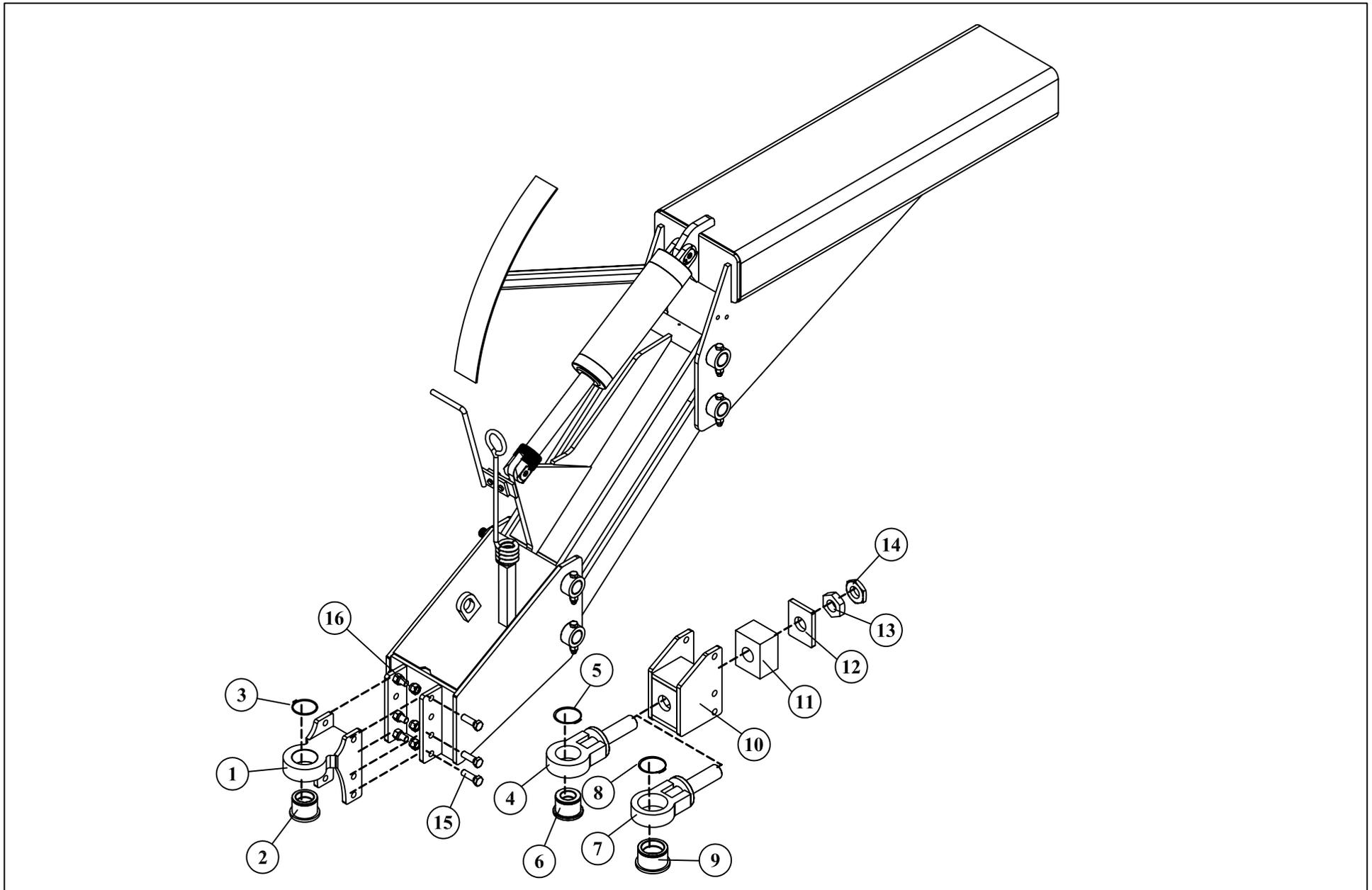
Ploughs are delivered fully assembled except for:

- 1 Wheel legs, and
- 2 Bolt on link tubes.

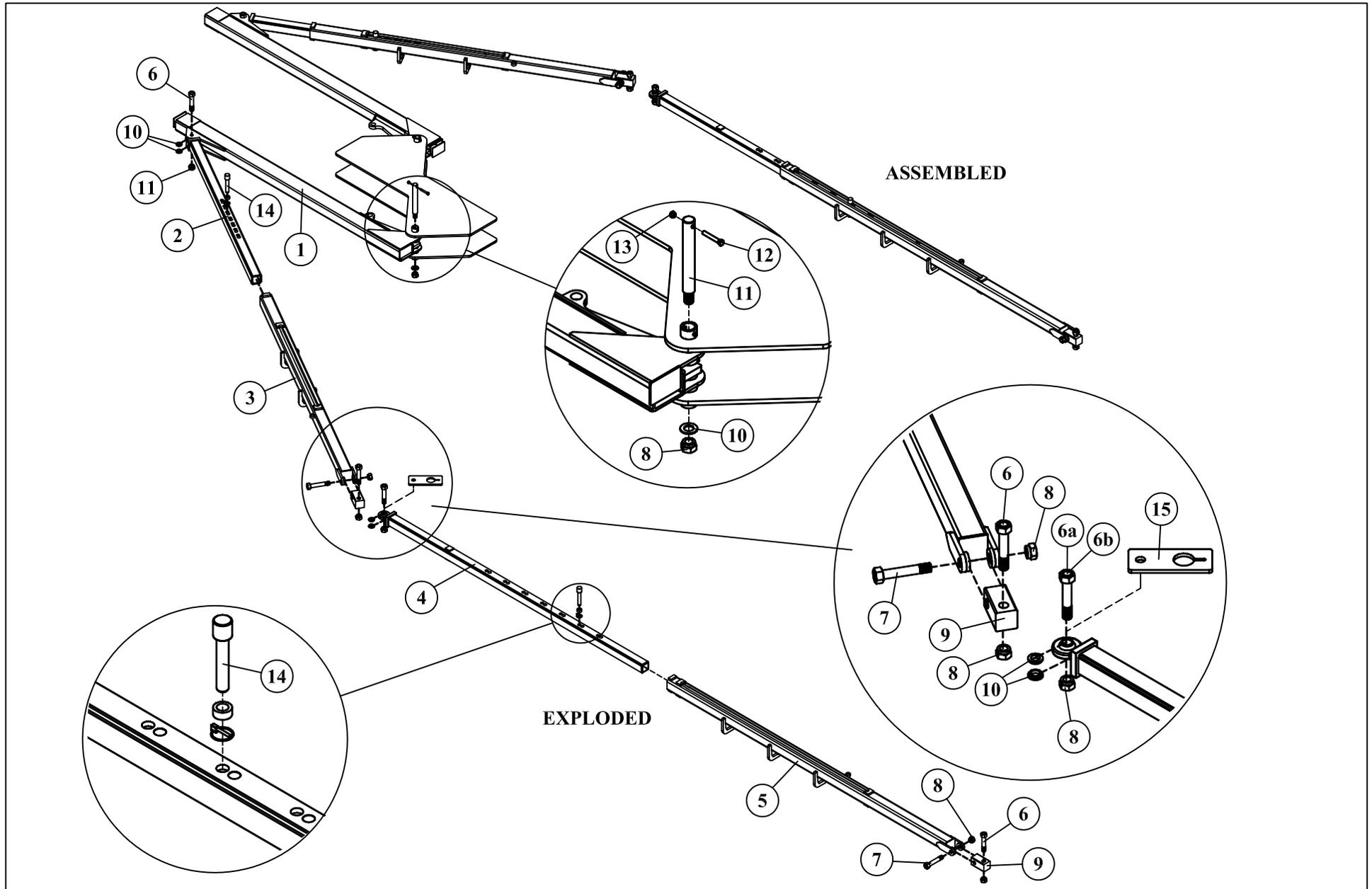
Pull Assembly



Pull Tongue Assembly



Gang Link & Fold Arm Assembly

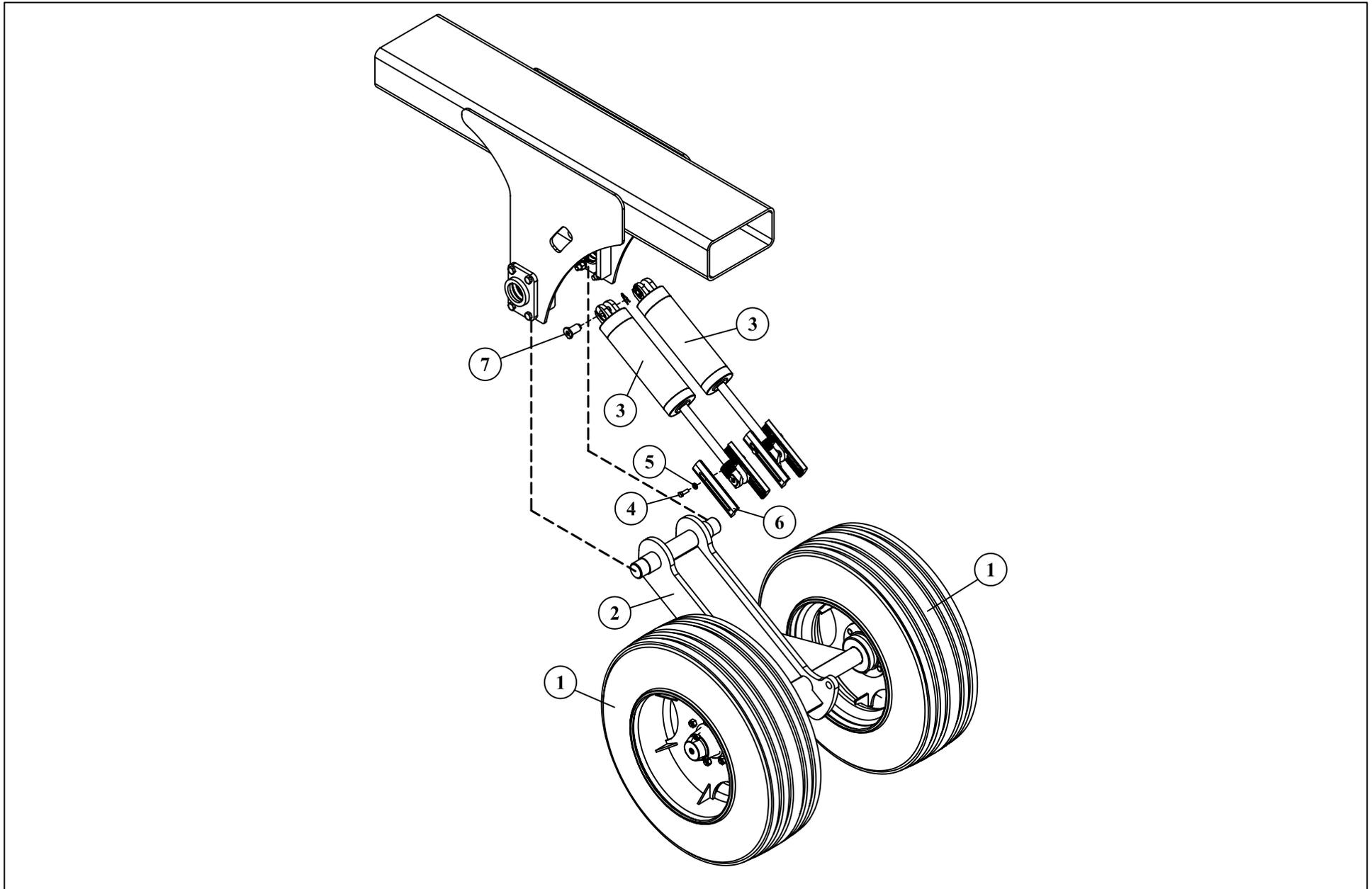


Gang Link & Fold Arm Assembly

Pos	Part No	Description	Qty
1	GNFXX000	Fold Arm Assembly	2
2	GNFGX000	92-140plt Front Slide Element	2
3	GNFGX002	92-140plt Front Link Tube	2
4	GNFGX001	92-140plt Rear Slide Element	2
	<i>GNFGX004</i>	<i>128-136plt Eastcoaster Rear Slide Element</i>	
5	GNFGX003	92-140plt Rear Link Tube	2
6	FACNA150	Bolt M30 x 150mm	6
6a	FACNA150	Bolt M30 x 150mm (92 – 120 plates)	2
6b	FACNA175	Bolt M30 x 165mm (128 – 136 plates)	2
7	FACNA175	Bolt M30 x 165mm	4
8	FFBNA000	Nyloc Nut M30	14
9	MJASA150B	Square 75mm (150mm) Link Block	4
10	MDDEA011	Round 50mm (11mm) Bush Link	8
11	MDGCA340	Round 42mm (340mm)	2
12	FABGA075	Bolt M12 x 75 GD 8.8	2
13	FFBGA000	Nyloc Nut M12	2
14	FGBKA137	Pin 1" x 137mm	8
15	CGAXG017	Chain Lug (for 128-136plt ONLY)	2

<p>NOTES: An underscore _ in a part number shows the manufacturer of the component can vary. Always supply the machine's Serial No for correct identification and supply of parts.</p>			

Centre Wheel Leg Assembly



Centre Wheel leg Assembly

Step 1: Fit seal #4 to seal ring #5 using Loctite 480, allow to dry before proceeding.

Step 2: Place bearing #1 in hub before installing seal ring #6

Step 3: Fit the seal and seal ring to axle, ensure this does not rotate on axle, use loctite 680 if required.

Step 4: Fit the hub to the axle.

Step 5: Tighten the nut while turning the hub. When there is a tight bind on the bearing, the parts are seated correctly, approx 150ft/lbs

Step 6: Back the nut off 1/6 to 1/4 of a turn or sufficiently to allow .005mm to .02mm end play.

Note: Failure to back off adjusting nut could cause bearing to run hot and fail.

Step 7: Insert the cotter pin as shown, trim the straight leg, bend the other over the axle end.

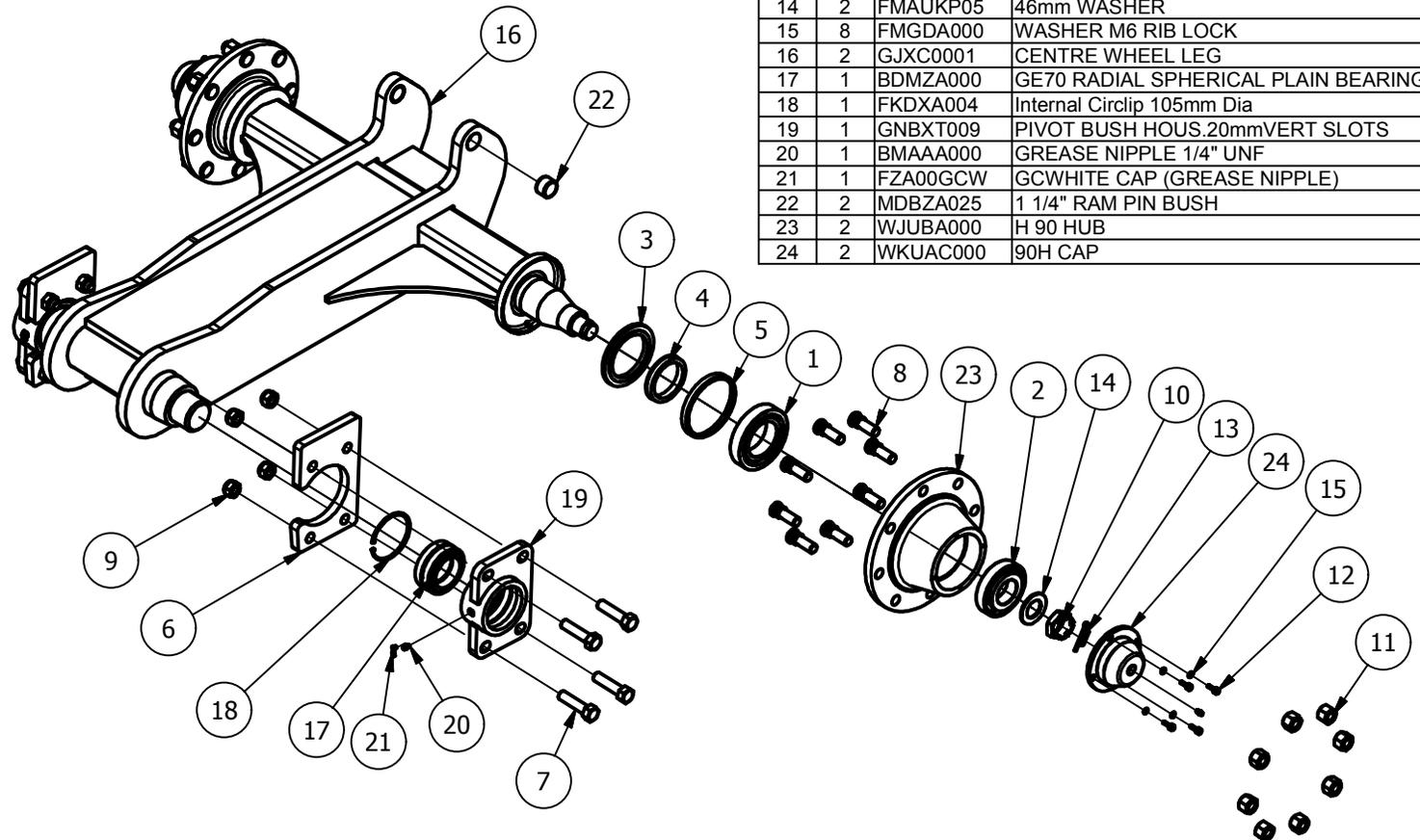
Step 8: Grease with a grease gun using CASTROL BTX or similar until grease is visible through rear seal

WARNING

Proper maintenance and handling procedures are critical. Always follow installation

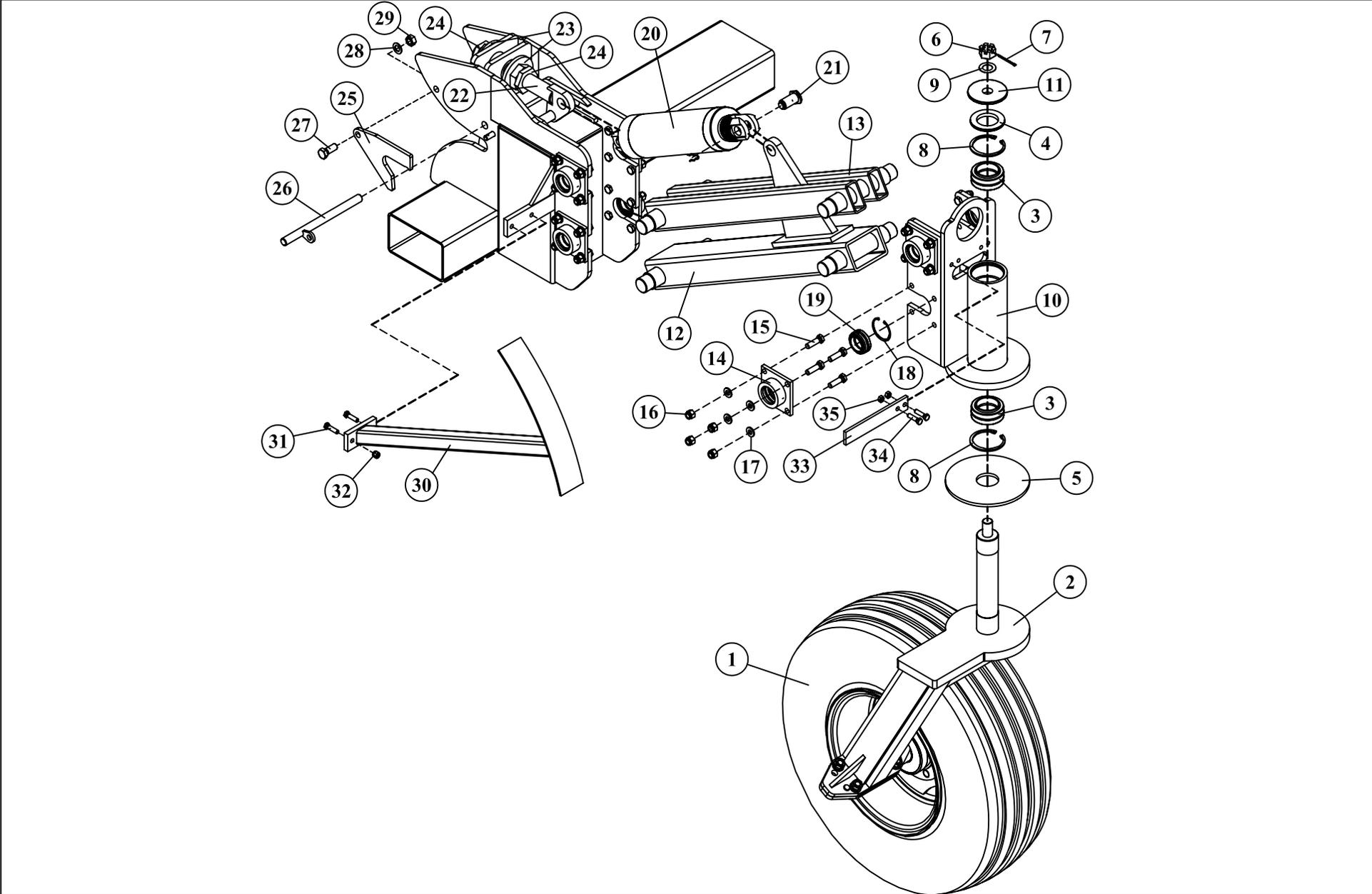
instructions and maintain proper lubrication.

Never spin a bearing with compressed air. The rollers may be forcefully expelled.



POS	QTY	PART NO	DESCRIPTION
1	2	BBSAA000	Tapered Roller Bearing 32216
2	2	BCSAA000	Tapered Roller Bearing 30311
3	2	BNRBA020	90H TRIPPLE LIP SEAL
4	2	BNRGA000	SEAL RING
5	2	BNRGA010	SEAL RING
6	2	CGEXJ001	20mm BACKING PLATE
7	8	FABJA080	BOLT M20 X 80 pc 8.8 COARSE
8	16	FDBMA067	WHEEL STUD 20 x 1.5 (67)
9	8	FFBJA000	NYLOC NUT M20 P TYPE 2.5
10	2	FFCXA000	45 X 2 CASTLE Nut
11	16	FFFKA000	20mm WHEEL NUT
12	8	FJADA020	6 X 20 SOCKET HEAD CAP SCREW
13	2	FKCGA080	SPLIT PIN 7 X 80
14	2	FMAUKP05	46mm WASHER
15	8	FMGDA000	WASHER M6 RIB LOCK
16	2	GJXC0001	CENTRE WHEEL LEG
17	1	BDMZA000	GE70 RADIAL SPHERICAL PLAIN BEARING
18	1	FKDXA004	Internal Circlip 105mm Dia
19	1	GNBXT009	PIVOT BUSH HOUS.20mm VERT SLOTS
20	1	BMAAA000	GREASE NIPPLE 1/4" UNF
21	1	FZA00GCW	GCWHITE CAP (GREASE NIPPLE)
22	2	MDBZA025	1 1/4" RAM PIN BUSH
23	2	WJUBA000	H 90 HUB
24	2	WKUAC000	90H CAP

Single Wheel Assemblies

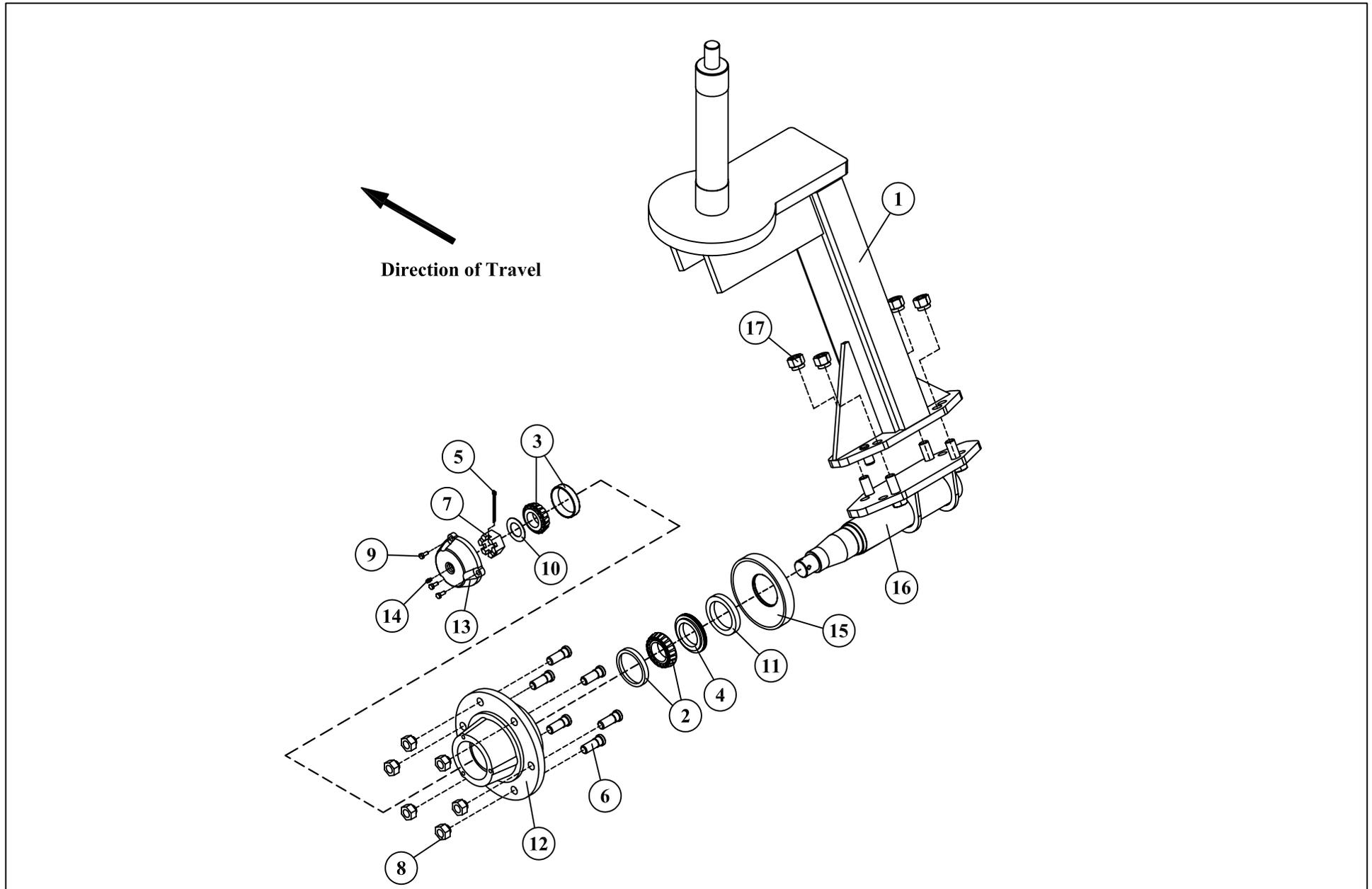


Single Wheel Assembly Parts

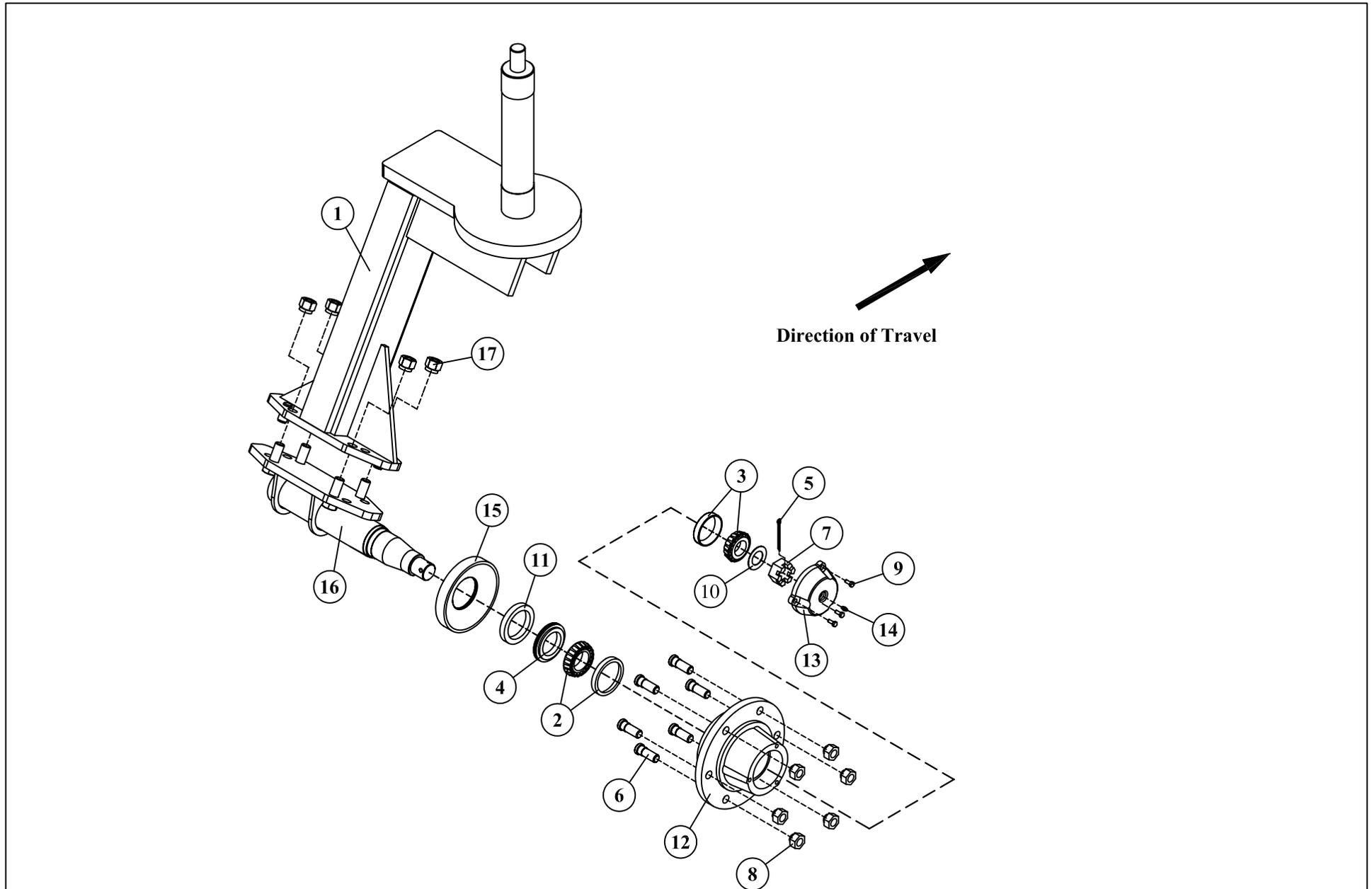
Pos	Part No	Description	Qty
1	WSJGCG00	Rim/Tyre Assy 14.0 x 18 12ply H70	1
2	GJXC003A	Left hand Mono Wheel Leg Assembly	1
	<i>GJXC003B</i>	<i>Right hand Mono Wheel Leg Assembly</i>	
3	BDMZA000	Ball Bushing	2
4	BNKBA012	Seal	1
5	BYZPA010	Poly-Penco Washer	1
6	FFCPA000	1 1/4" UNF Slotted Nut	1
7	FKCEA063	Cotter Pin	1
8	FKDXA004	Internal Circlip	2
9	FMASAK00	Flat Washer	1
10	GJXG0001	Wheel Assembly Swivel Housing	1
11	MDCUA016	Cap	1
12	GJXE008E	Wheel Assembly Bottom Link	1
13	GJXE009E	Wheel Assembly Top Link	1
14	GNHUX000	Ball Bush Housing	8
15	FABHA055	Bolt M16 x 55 GD 8.8	32
16	FFBHA000	Nyloc Nut M16	32
17	FMCHE000	Flat Washer	32
18	FKDWA003	Internal Circlip	8
19	BDGAA001	Ball Bushing Sealed	8
20		Refer to Hydraulic Kit Drawing	1
21	FGHPA072/_	Lockable, greasable 1 1/4" x 3" (includes FKBD A000 Hair Clip 1 1/4")	2
22	GJXEA000	Adjustable Ram Lug	1
23	FFHVA000	Nut for Adjustable Ram Lug	2
24	FFHVA001	Lock nut for Adjustable Ram Lug	2
25	CGHXG000	Gang Lock Toggle	2
26	FGBKA347	Lock Pin	1

Pos	Part No	Description	Qty
27	FABJA050	Bolt M20 x 50mm GD 8.8	2
28	FMCJG000	Washer	2
29	FFBJA000	Nyloc Nut M20	2
30	GNBEX003	Depth Gauge	1
31	FABGA045	Bolt M12 x 45 GD 8.8	2
32	FFBGA000	Nyloc Nut M12	2
33	MAEHA280	Depth Gauge Indicator	1
34	FABGA045	Bolt M12 x 45 GD 8.8	2
35	FFBGA000	Nyloc Nut M12	2
		NOTE: Items 27 – 32 are used on both gangs 1 & 2	
	GJXA000A	Left Hand Mono Wheel Leg Assembly	
	GJXA000B	Right Hand Mono Wheel Leg Assembly (Items 2 – 11 can all be ordered as spare Parts with the part numbers above)	
NOTES: An underscore _ in a part number shows the manufacturer of the component can vary. Always supply the machine's Serial No for correct identification and supply of parts.			

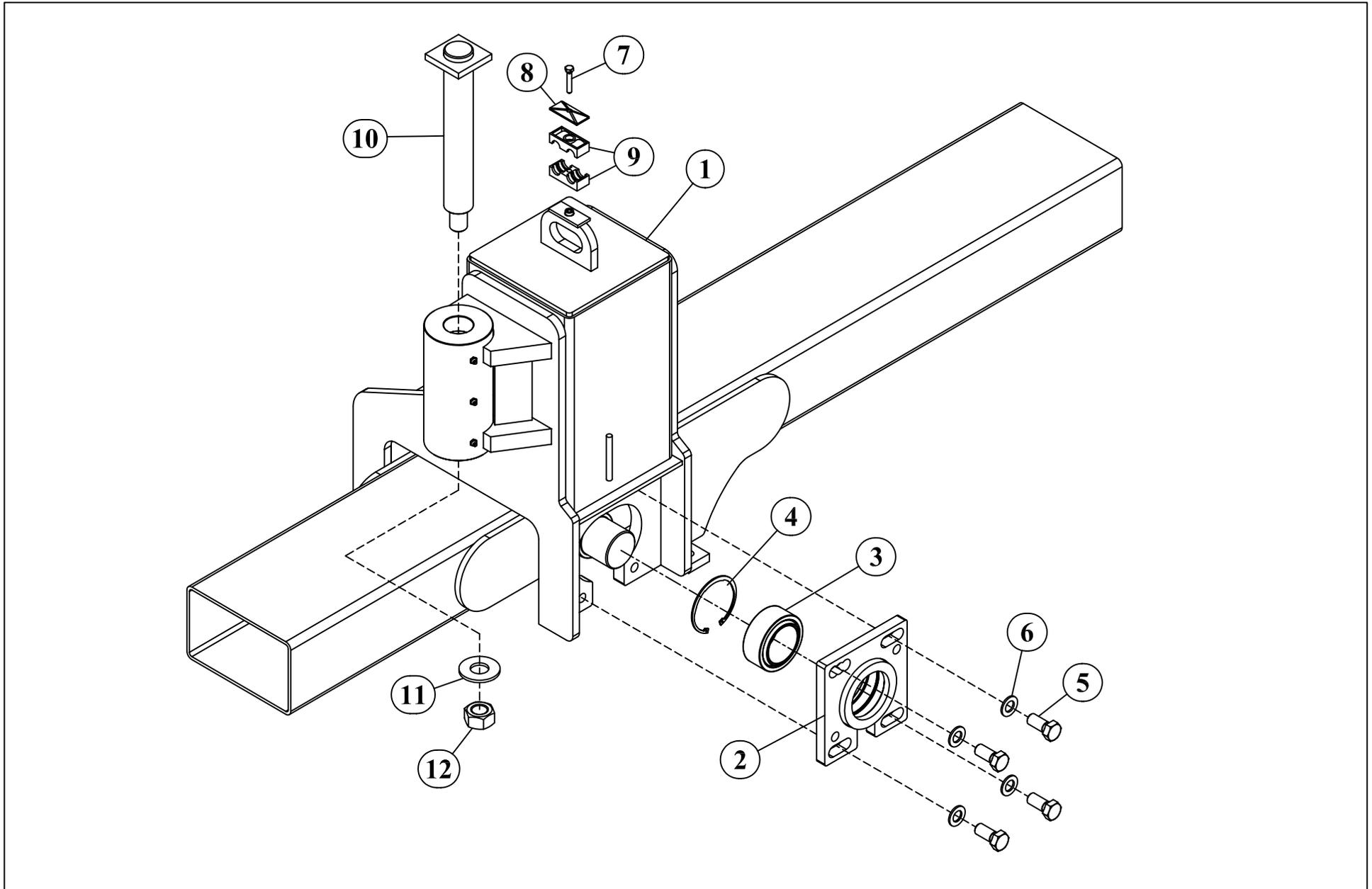
Single Wheel Leg Hub & Stub Assembly - Left Hand



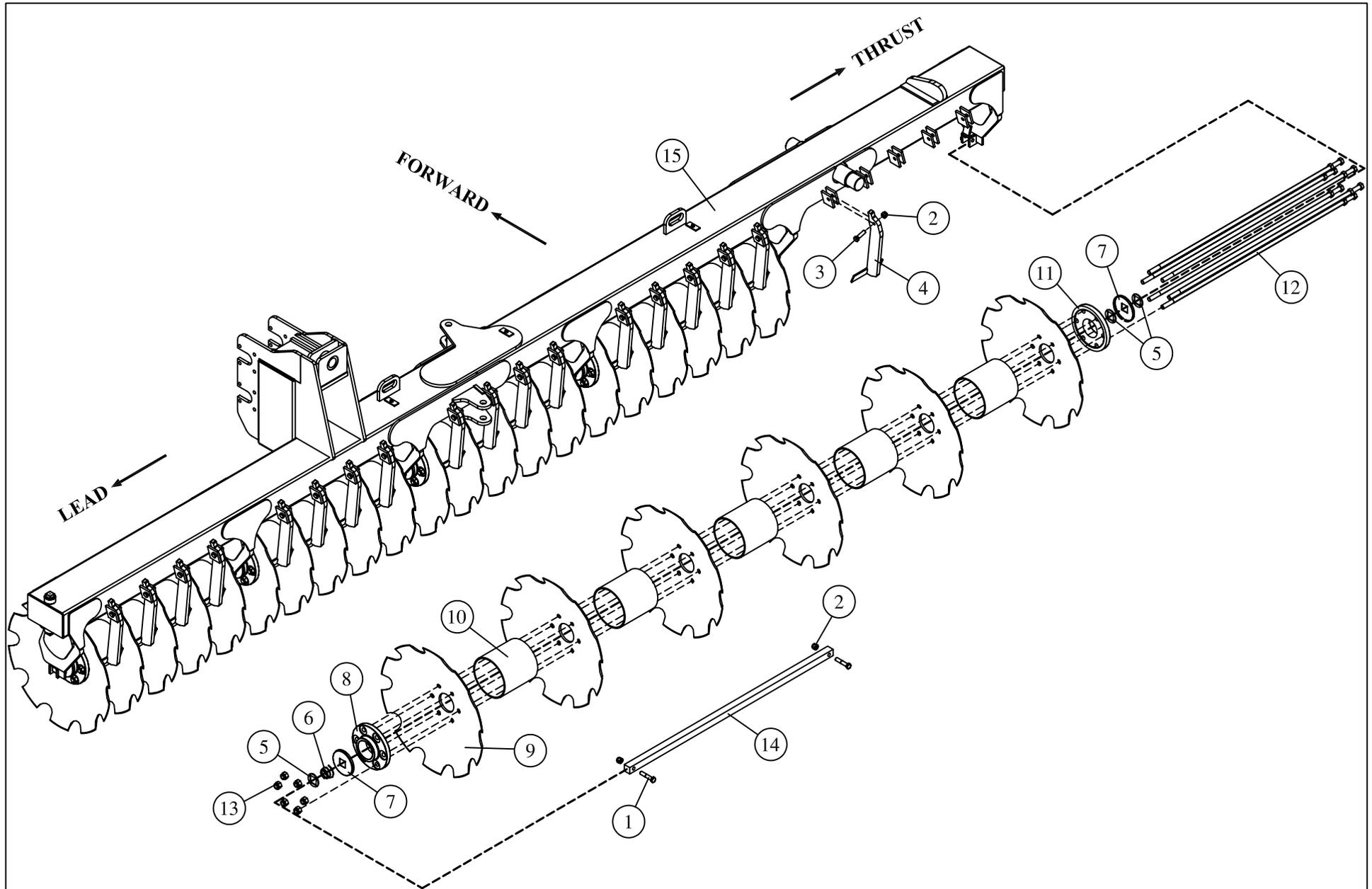
Single Wheel Leg Hub & Stub Assembly - Right Hand



Gang Pivot Box Assembly



Disc Gang Assembly



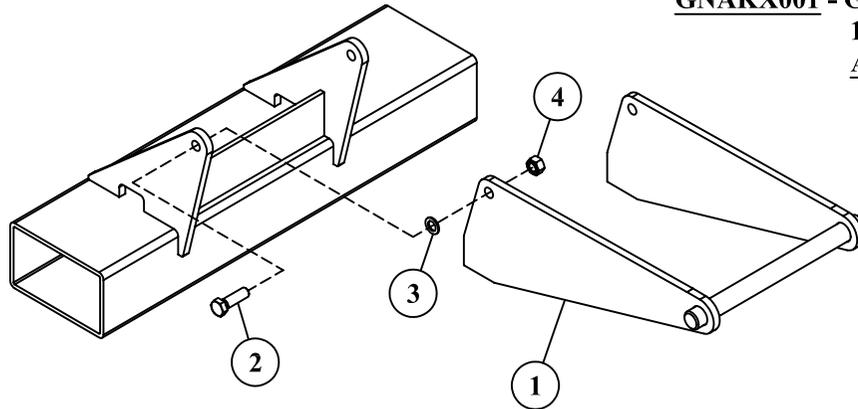
Disc Gang Assembly Parts

Pos	Part No	Description	Qty
(Bill of Materials below Represent 1 Disc Cluster Assembly. Quantities will vary from Gang to Gang due to the number of Disc Clusters and the amount of Disc's in the Clusters.)			
1	FABHA080	Bolt M16 x 80 GD 8.8	2
2	FFBHA000	Nyloc Nut M16	7
3	FABHA065	Bolt M16 x 65 GD 8.8	5
4	GFXBA200	Right Hand Scraper	5
	<i>GFXAA200</i>	<i>Left Hand Scraper</i>	
5	FMEUGP00	Axle Spacer Washer	3
6	FHDSA035	Conical Spring. 55id x 35mm Long	1
7	BNTAA000	Metal Cover	2
8	BGB100B1	Lead Greasable 6 Bolt Bearing Housing	1
9		Disc (Sizes also vary)	6
10	MEGRA228	Spool for 8mm Disc	5
	<i>MEGRA230</i>	<i>Spool for 6mm Disc</i>	
11	BHB100B1	Thrust Greasable 6 Bolt Bearing Housing	1
12	FAAJB260	Bolt M20 x 1260 GD 8.8 (6 Disc)	6
	<i>FAAJB490</i>	<i>Bolt M20 x 1490 GD 8.8 (7 Disc)</i>	
	<i>FAAJB020</i>	<i>Bolt M20 x 1020 GD 8.8 (5 Disc)</i>	
13	<i>FFBJA000</i>	<i>Nyloc Nut M20</i>	6
14	MJAMB418A	Square 1 1/2" (1418mm) (6 Disc Axle)	1
	<i>MJAMB655A</i>	<i>Square 1 1/2" (1655mm) (7 Disc Axle)</i>	
	<i>MJAMB181A</i>	<i>Square 1 1/2" (1181mm) (5 Disc Axle)</i>	
15		Gang Frame Assembly	1

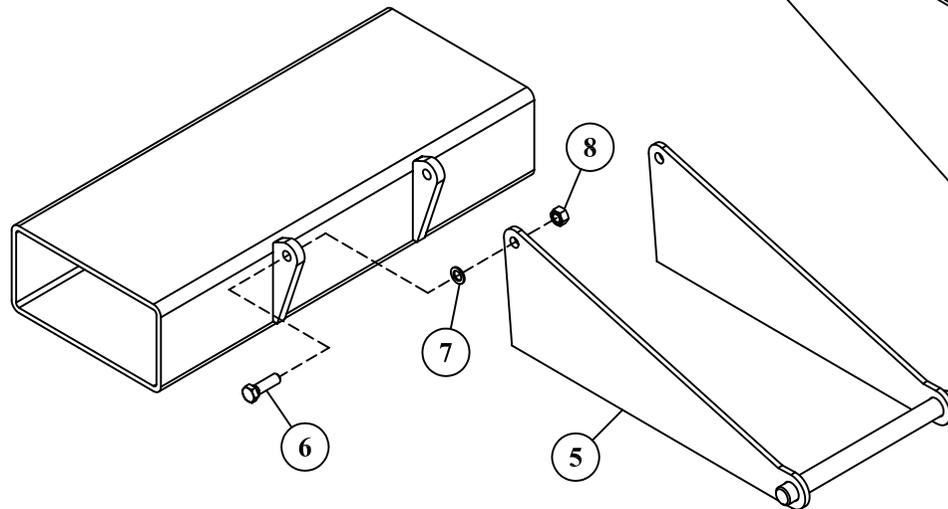
Pos	Part No	Description	Qty
		NOTE BHB100B1 and BGB100B1 Bearing Housings are supplied with the bearing fitted. To order the bearing without the housing use part No BPBBA002 1-1/2" x 100mm bearing	
NOTES: An underscore _ in a part number shows the manufacturer of the component can vary. Always supply the machine's Serial No for correct identification and supply of parts.			

Gang Lock Up Assemblies

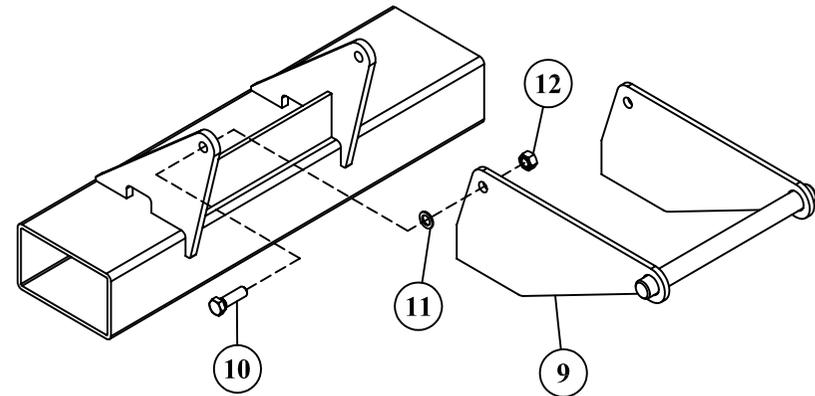
GNAKX001 - Gang Lock Assembly
112-136plt - 2 per machine.
Assembly on Gangs.



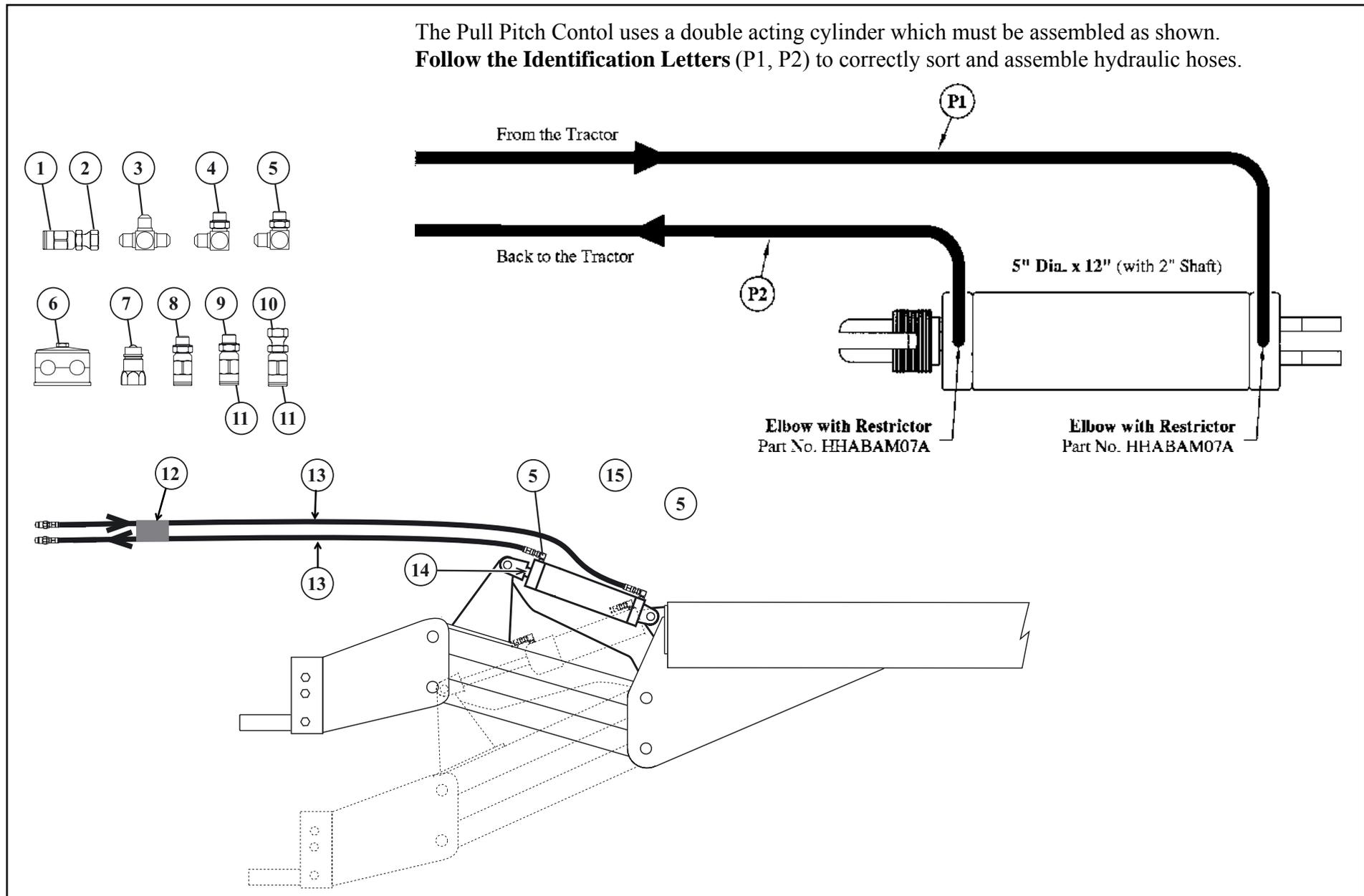
GNAKX002 - Gang Lock Assembly
92-108plt - 2 per machine.
Assembly on Main Frame.



GNAKX003 - Gang Lock Assembly
92-136plt - 1 per machine.
Assembly on Gangs.



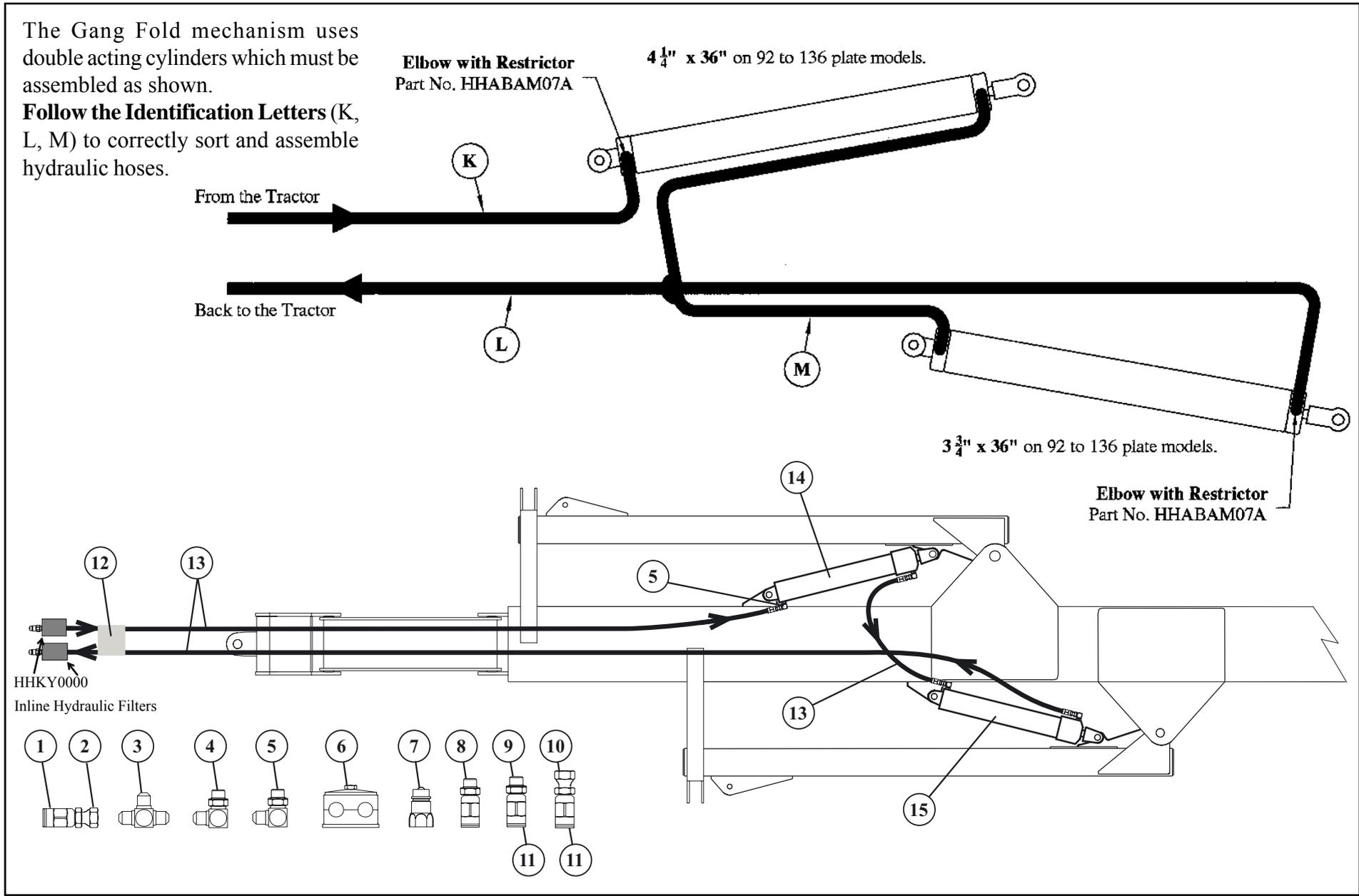
Hydraulic Pitch Control Plumbing Diagrams



Hydraulic Gang Fold Plumbing Diagram

The Gang Fold mechanism uses double acting cylinders which must be assembled as shown.

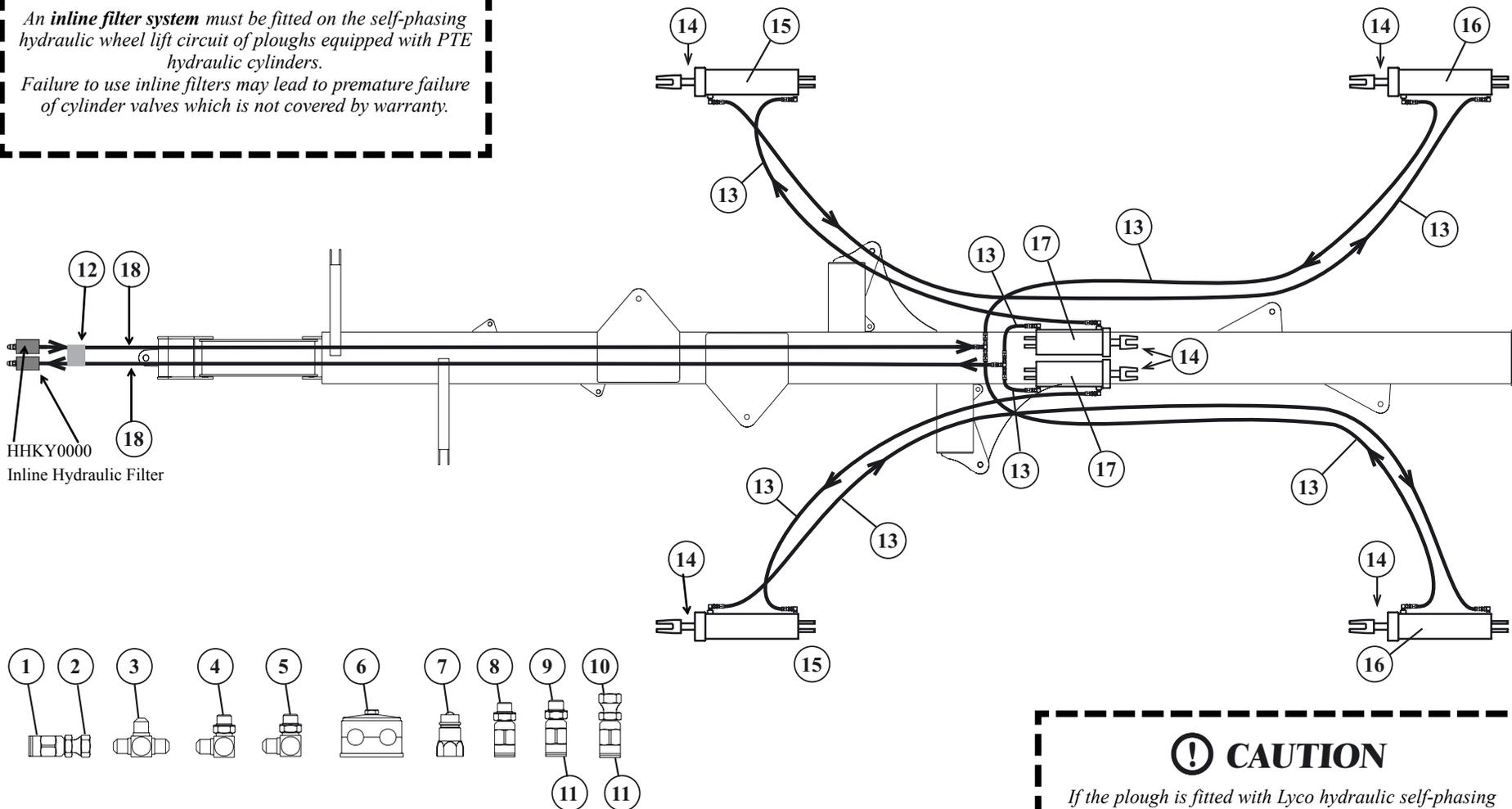
Follow the Identification Letters (K, L, M) to correctly sort and assemble hydraulic hoses.



Hydraulic Wheel Lift Plumbing Diagram

⚠ CAUTION

An **inline filter system** must be fitted on the self-phasing hydraulic wheel lift circuit of ploughs equipped with PTE hydraulic cylinders.
Failure to use inline filters may lead to premature failure of cylinder valves which is not covered by warranty.

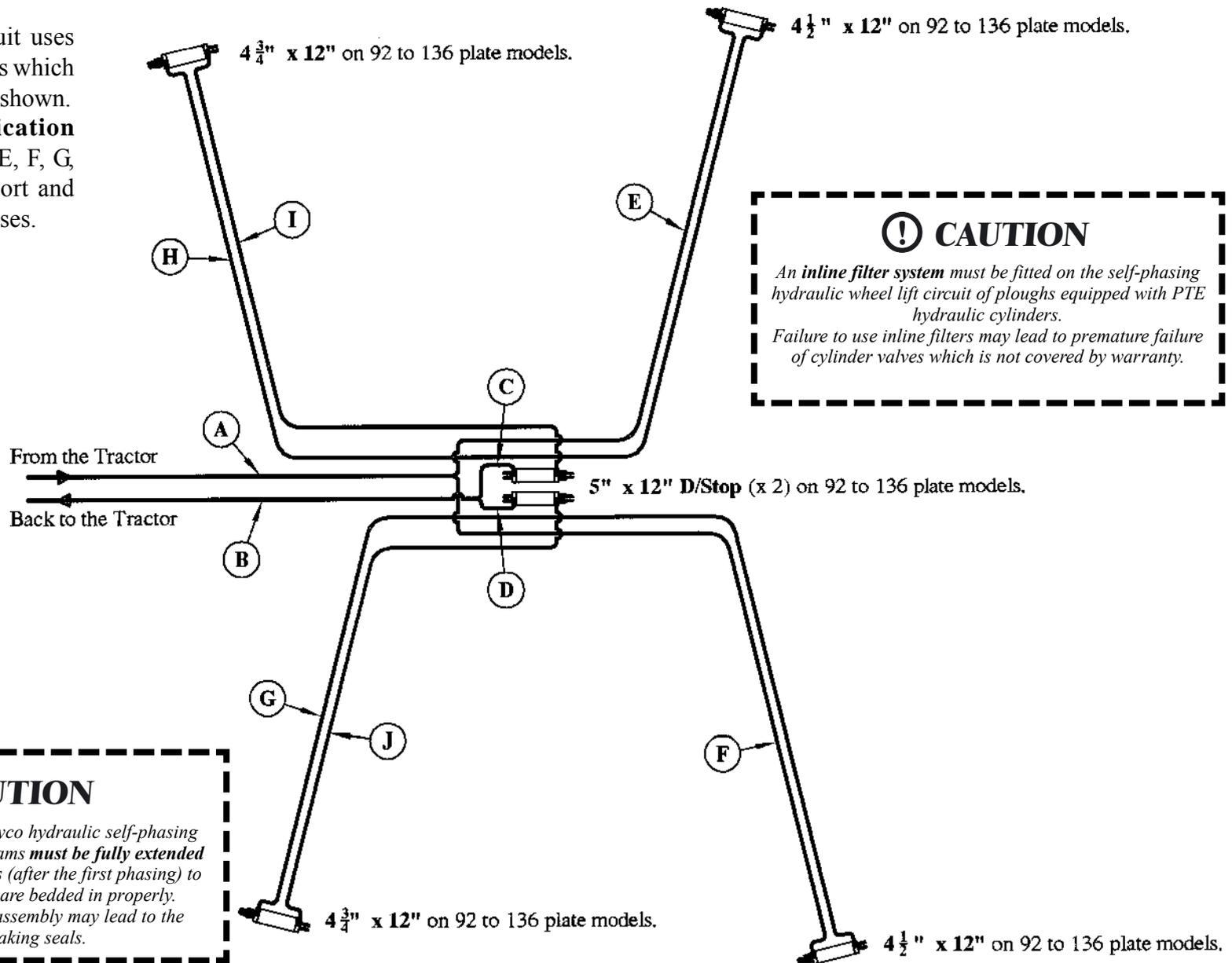


⚠ CAUTION

If the plough is fitted with Lyco hydraulic self-phasing wheel lift cylinders, the lift rams **must be fully extended and contracted for 10 cycles** (after the first phasing) to ensure the cylinder seals are bedded in properly. Failure to do this during assembly may lead to the problem of leaking seals.

Hydraulic Wheel Lift Plumbing Assembly Diagram

The Wheel Lift Circuit uses double acting cylinders which must be assembled as shown. **Follow the Identification Letters (A, B, C, D, E, F, G, H, I, J)** to correctly sort and assemble hydraulic hoses.



⚠ CAUTION
 An inline filter system must be fitted on the self-phasing hydraulic wheel lift circuit of ploughs equipped with PTE hydraulic cylinders.
 Failure to use inline filters may lead to premature failure of cylinder valves which is not covered by warranty.

⚠ CAUTION
 If the plough is fitted with Lyco hydraulic self-phasing wheel lift cylinders, the lift rams **must be fully extended and contracted for 10 cycles** (after the first phasing) to ensure the cylinder seals are bedded in properly.
 Failure to do this during assembly may lead to the problem of leaking seals.

Recommended Tyre Pressures

Tyre Size	Ply	Pressure	
		kPa	(psi)
9.5L x 15	8	205	(30)
7.50 x 16	8	325	(45)
9.00 x 16	10	350	(50)
11.00 x 16	8	300	(42)
11.00 x 16	12	400	(58)
12.00 x 16	12	400	(58)
14.00 x 18	12	350	(50)
340/65R x 18		520	(70)
385/65R x 22.5SS		620	(90)
12.5/80 x 18	16	490	(70)

Note:

To obtain optimum ploughing results, it may be necessary to adjust tyre pressures to suit the plough configuration and soil conditions.

Too much pressure in tyres may cause:

- a) Excessive soil build up on tyres.
- b) Plough wings to work too shallow and/or bounce.
- c) Bouncing in transport which may result in structural damage to tyres and/or plough.

Decals

**GREASE
REGULARLY** A

EAST COASTER B

TO REPHASE
HOLD CONTROL VALVE
FULLY OPEN H
TO ENSURE
PRESSURE IN THE FULLY EXTEND OR
FULLY RETRACTED (P.T.E. RAMS ONLY)
POSITION FOR AT LEAST 1 min.

OPERATING INSTRUCTIONS
For more information, refer to the appropriate instruction Manual.

- All gangs must be in the same set.
- Draw bar should be level when ploughing.
- Plough out mark made by filler disc next pass.
- Lift machine when turning at headlands.
- Ensure scrapers are adjusted as per instruction manual.

PITCH ADJUSTMENT

- With machine at working depth, centralise adjustment on front and rear pitch control springs.
- If a gutter in centre of work is present, increase tension on the **FRONT** spring, and decrease tension on the **REAR** spring by an equivalent amount.
- If a ridge in the centre of work is present, increase tension on the **REAR** spring, and decrease tension on the **FRONT** spring by an equivalent amount.

SETTING SELECTION

- For running over fallow, light soil, moist operations or plough where rock or stone is present.
- For a good finish in general ploughing conditions.
- For achieving more depth or clipping weeds at shallow workings.
- For the most vigorous ploughing.

C

WARNING
DO NOT EXCEED
15 KPH I
WHEN TRAVELLING

WARNING
D
STAND CLEAR OF FOLDED MACHINE

TIGHTEN GANG BOLTS
6 BOLT SYSTEM - 180ft/lbs. 270N/m
4 BOLT SYSTEM - 100ft/lbs. 150N/m
AT 4 HOURS...at 20 HOURS...at 40 HOURS J
CHECK PERIODICALLY THERE AFTER!
IN ROCKY CONDITIONS MORE FREQUENTLY
IN EASY GOING CONDITIONS LESS FREQUENTLY

G

GRIZZLY E

GRIZZLY F



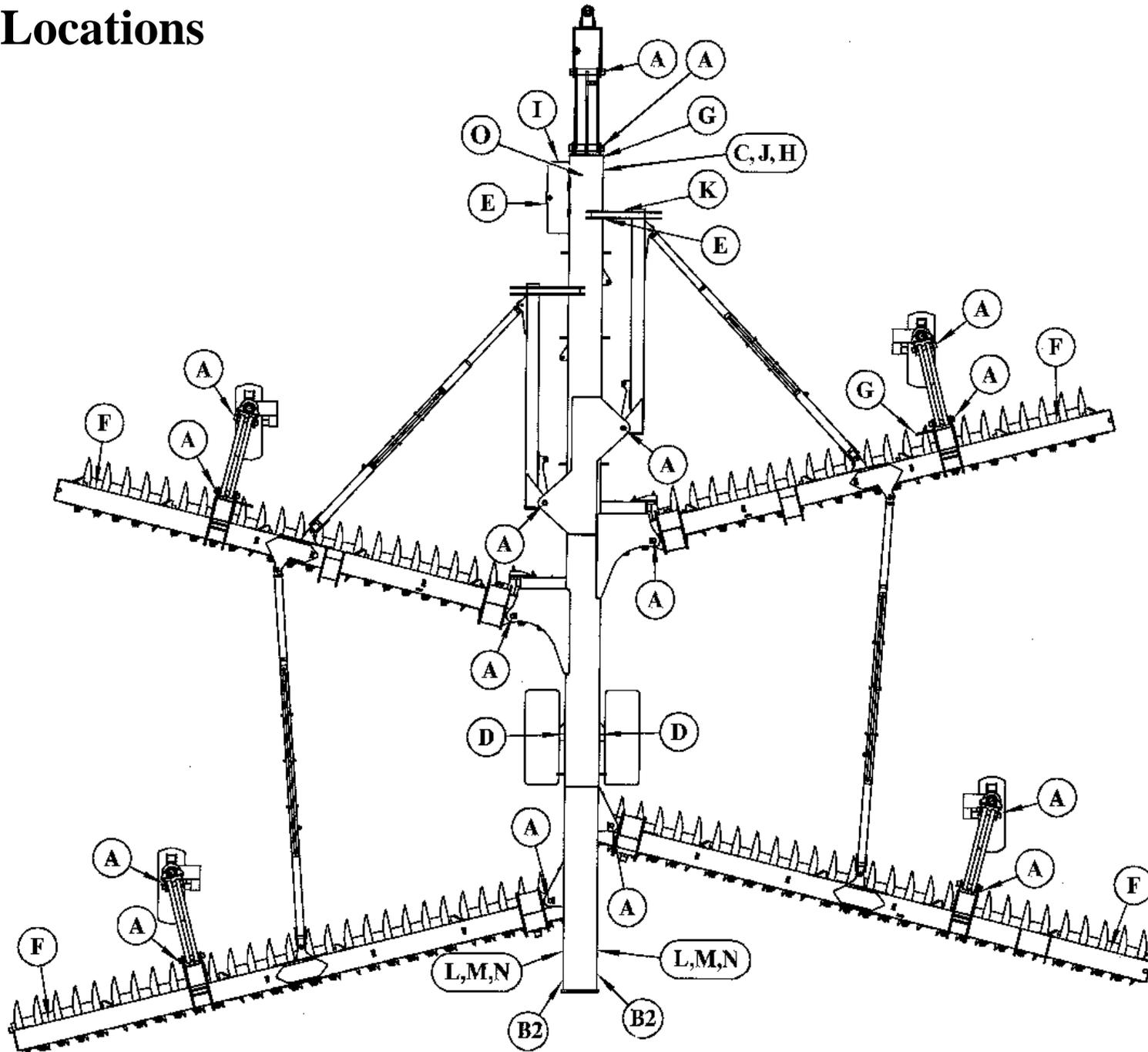
O



K

108 L, M, N

Decal Locations



Parts Index

Part Number	Page Number	Part Number	Page Number	Part Number	Page Number	Part Number	Page Number
B							
BAMAA001	62 66 68	FABKA120	54	GJXC003A	64 66	HHPVA01	76 78 80
BBMAA000	62 66 68	FABKA135A	54	GJXC003B	64 68	HJBCA000	70
BCMAA000	62 66 68	FACNA150	58	GJXE008E	64	HJBJA000	76 78 80
BDGAA001	64	FACNA175	58	GJXE009E	64	HMDEA00_	54 60
BDMZA000	64 70	FDBJA001	62 66 68	GJXEA000	64	HRDBA285	76 80
BGB100B1	72	FFAUA000A	56	GJXG0001	64	HXEAA100	80
BHB100B1	72	FFBGA000	54 58 64	GNAKX001	74	HXEBA100	78
BMAAA000	62 66 68	FFBHA000	54 64 72	GNAKX002	74	HXECA100	76
BNKBA012	64	FFBJA000	54 56 62 64 66 68	GNAKX003	74	HY_500/12D	54
BNMAA001	66 68		72 74	GNBEX001	54	HZ_375/36	78
BNRBA010	62 66 68	FFBKA000	54	GNBEX002	54	HZ_425/36	78
BNTAA000	72	FFBNA000	54 58 70	GNBEX003	64	HZ_450/12D	80
BVDGA040	54	FFCPA000	64	GNBSX008	70	HZ_475/12D	80
BXSVA085	56	FFCUA000	62 66 68	GNBSX009	70	HZ_500/12D	60 76 80
BYZPA010	64	FFFJA000	62 66 68	GNBSX010	70		
		FFHVA000	64	GNBSX011	70	M	
		FFHVA001	56 64	GNBXT009	62	MAEHA280	64
		FGBKA137	58	GNBXT010	62	MDCUA016	64
		FGBKA347	64	GNBXX000	70	MDDEA011	58
		FGHPA072/_	54 60 64	GNDMX000	56	MDDEA370	70
		FHDSA035	72	GNFGX000	58	MDDEA450	54
		FHKNA440	54	GNFGX001	58	MDDJA005	54 70
		FJBEA020	62 66 68	GNFGX002	58	MDDRA067A	56
		FKCEA063	64	GNFGX003	58	MDDTA068	56
		FKCFA080	62 66 68	GNFGX004	58	MDGCA340	58
		FKDWA003	64	GNFXX000	58	MEGRA228	72
		FKDXA004	64 70	GNHUX000	64	MEGRA230	72
		FKDYA000	56	GPBAA005	56	MFRNA015	62 66 68
		FKDZA003	56	GPEBC000	56	MJAMB181A	72
		FMAJE000	54	GPEEC000	56	MJAMB418A	72
		FMASAK00	64			MJAMB655A	72
		FMAUKP00	62 66 68	H			
		FMBGEB00	54 60	HFBFA000	70	MJASA150B	58
		FMCHE000	64	HGCZA100	76 78 80		
		FMCJG000	62 64 70 74	HGEZA100	80	W	
		FMEUGP00	72	HHAAAA77	76 78 80	WBMBA450	66 68
				HHABAA07	76 78 80	WJMAA000	62 66 68
		G		HHABAM07A	76 78 80	WKMBA000	62 66 68
		GFXAA200	72	HHAKBA07	76 78 80	WSMGMG00	64
		GFXBA200	72	HHAKBU07	76 78 80	WSMHFF00	60
		GHXA0000	54	HHAKMU07	76 78 80		
		GHXE0000	54	HHAMKV07	76 78 80		
		GHXE0001	54	HHCPUA07	76 78 80		
		GJXC0000	60 62	HHD MNW07	76 78 80		

GRIZZLY MACHINERY CAN MAKE YOUR WORK EASIER



DEEP DIGGER

The **Deep Digger** breaks up hardpan and compacted soils. By opening the subsoil, compacted ground can be rejuvenated, allowing better drainage, root growth and mineral osmosis.

The **Deep Digger** is available in both linkage and trailing designs.

Heavy Duty tines are set in a characteristic “V” formation for quick and easy penetration and draft reduction.

All tines can be removed to a non-working position if wide tine spacing or a narrower width is desirable.

The machine is available in sizes 1 up to 11 tines.

BANKER / CHANNELLER

The **Banker/Channeller** is designed specifically for water-tight bank and channel formation.

Applications include irrigation channels, flood irrigation, embankments, tree plantation rows, elevated seed bed preparation, salt reduction programs, contour farming, erosion control, levee banks, etc.

Banker/Channeller's linkage is compatible with quick hitch systems.

The machine is available in 10 up to 14 discs, with a wide or narrow frame.





VINI-DISC

Highly versatile medium linkage tandem offsets suitable for vineyard, orchard and small farm cultivation.

Renowned for ground breaking technology in large scale cultivation equipment, Grizzly brings the same engineering expertise to our medium duty linkage systems. Ideal for small acreage, where maneuverability is of prime importance.

Typical applications include viticulture, orchards, small farms, market gardens, and other specialized circumstances.

The machine is available in 12 up to 20 discs.

LINKAGE-HEAVY

The **Linkage Heavy** offset features a heavy frame construction. This model particularly suits conditions requiring extra strength and penetration such as fire break maintenance and deep working in hard soil types.

The machine is available in 16 up to 40 discs.





GRUMPY

Medium duty tandem offset for general farm use on small to medium sized farms. Narrow transport width (9' 6") allowing machine to pass through any gate and transport on public roads.

With extra strong frame and all features of Grizzly's heavier models, **The Grumpy** is effective for pasture renovation, seed bed preparation and general tillage applications.

The machine is available in sizes 28 up to 40 discs.

SANDGROPER

Light to medium duty, broad acre machine. Ideally suited to sandy soil conditions. Uses proven, reliable features of the heavy duty Grizzly range, **The Sandgroper** is the accurate and versatile solution for incorporating stubble, green-manure or killing weeds.

Advantages include depth consistency, lower horsepower requirements, significant fuel savings and minimized stress on components, resulting in less wear and reduced maintenance costs.

The Sandgroper is a folding wing design, engineered for ease of transport and the ability to follow undulating ground conditions.

Outside wing beams may be liquid filled for extra penetration in dry working conditions.

The machine is available in sizes 72 (8.7 metres) up to 108 (11.9 metres) discs.





FIELD BOSS FIXED FRAME

The Field Boss features heavy construction for long lasting strength and excellent penetration in tight and heavy soils.

By eliminating power-draining side draft, **The Field Boss** requires less horsepower, making it less punishing on tractors and very cost effective to operate.

The Field Boss is equipped with a great range of setting options and Grizzly patented features making it a flexible, accurate and easy to operate with an ideal finish every time.

The machine is available in sizes 24 up to 48 discs.

FIELD BOSS FOLDING WING

The Field Boss features heavy construction for long lasting strength and excellent penetration in tight and heavy soils.

By eliminating power-draining side draft, **The Field Boss** requires less horsepower, making it less punishing on tractors and very cost effective to operate.

The Field Boss is particularly effective for uneven and undulating ground due to the independent flotation of the centre frame and wings.

The machine is available in sizes 56 (6.2 metres) up to 108 (12 metres) discs.





SWINGER-ROWCROPPER

Swinger – the heavy duty, general purpose tandem offset plough. Versatile, strong and easy to transport, **The Swinger** features a heavily constructed fixed frame with swinging gangs. **The Swinger** combines the extra weight and durability of a heavy machine capability of relentless penetration in tough conditions, with the flexibility and efficiency of a medium size disc plough. Specially designed for easy movement between paddocks, **The Swinger** is ideal where bridges and gates usually restrict heavy machinery. Swinging gangs and lockups quickly convert to a narrow 3.9metre transport profile. And to top it off, the proven Grizzly “three gang” **Swinger-Rowcopper / Cottoncopper** versions feature 11” disc spacing and big 32” x 3/8” discs for maximum penetration and high trash clearance.

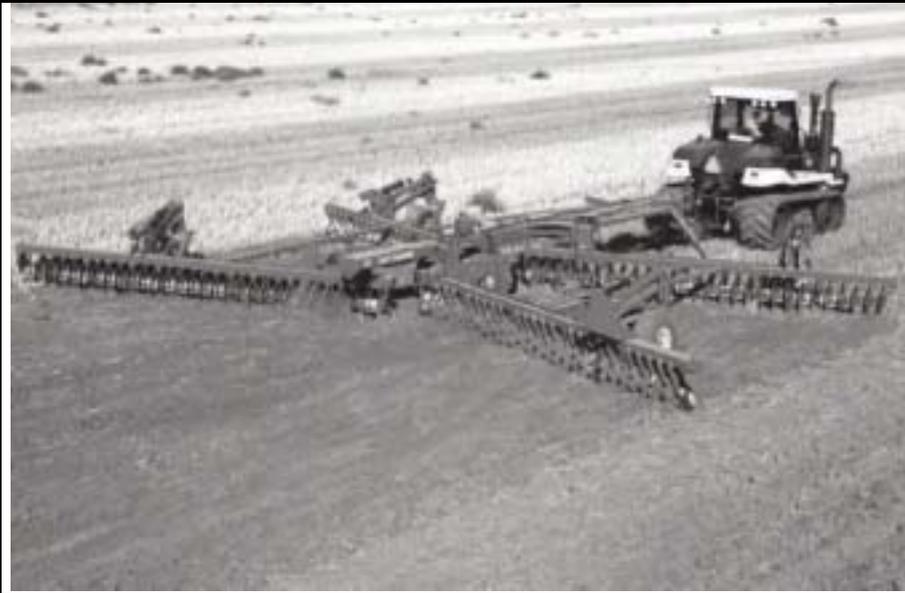
The Swinger is available in sizes 48 up to 64 discs. **The Swinger-Rowcopper / Cottoncopper** is available in sizes 36 up to 48 discs.

THE OFFSET

The Offset is Grizzly’s only 2-gang disc plough. Available in a medium duty machine, **The Offset** range features proven Grizzly features as well as the option of hydraulically adjustable gangs. **The Offset** comes with standard hydraulic pitch control that has the ability to control depth on the front and rear gangs. Adjustments can be made on the move and has the added benefit of helping to keep the machine tracking straight. By putting more or less force on the rear gangs, the pitch control keeps you on track.

The machine is available in sizes 24 up to 36 discs.





EASTCOASTER

Heavy duty fully floating gang design for large scale operations requiring ultimate efficiency. Advantages include depth consistency, lower horsepower requirement, significant fuel savings and minimized stress on components resulting in less wear and reduced maintenance costs.

The East Coaster's fully floating gang design, engineered to automatically conform to the natural contour of the ground. Gangs may be liquid filled for extra penetration. Operating adjustments are effortless requiring no tools or personal strain.

Quick, easy opening and closing between transport and working modes is hydraulically performed with minimal operator input.

The East Coaster is packed with advanced features and is available in sizes 108 (12 metres) up to 136 (15.1 metres) discs, with disc sizes available from 26" to 28".

WESTCOASTER

The West Coaster is the innovative, high performance broad acre disc plough. **The West Coaster** advantages include depth consistency, lower horsepower requirement, significant fuel savings and minimized stress on components resulting in less wear and reduced maintenance costs.

The West Coaster's fully floating gang design, engineered to automatically conform to the natural contour of the ground. Gangs may be liquid filled for extra penetration. Operating adjustments are effortless requiring no tools or personal strain.

Quick, easy opening and closing between transport and working modes is hydraulically performed with minimal operator input.

The West Coaster is packed with advanced features and is available in sizes 92 (10.6 metres) up to 136 (15.1 metres) discs, with disc sizes available from 26" to 28".

