



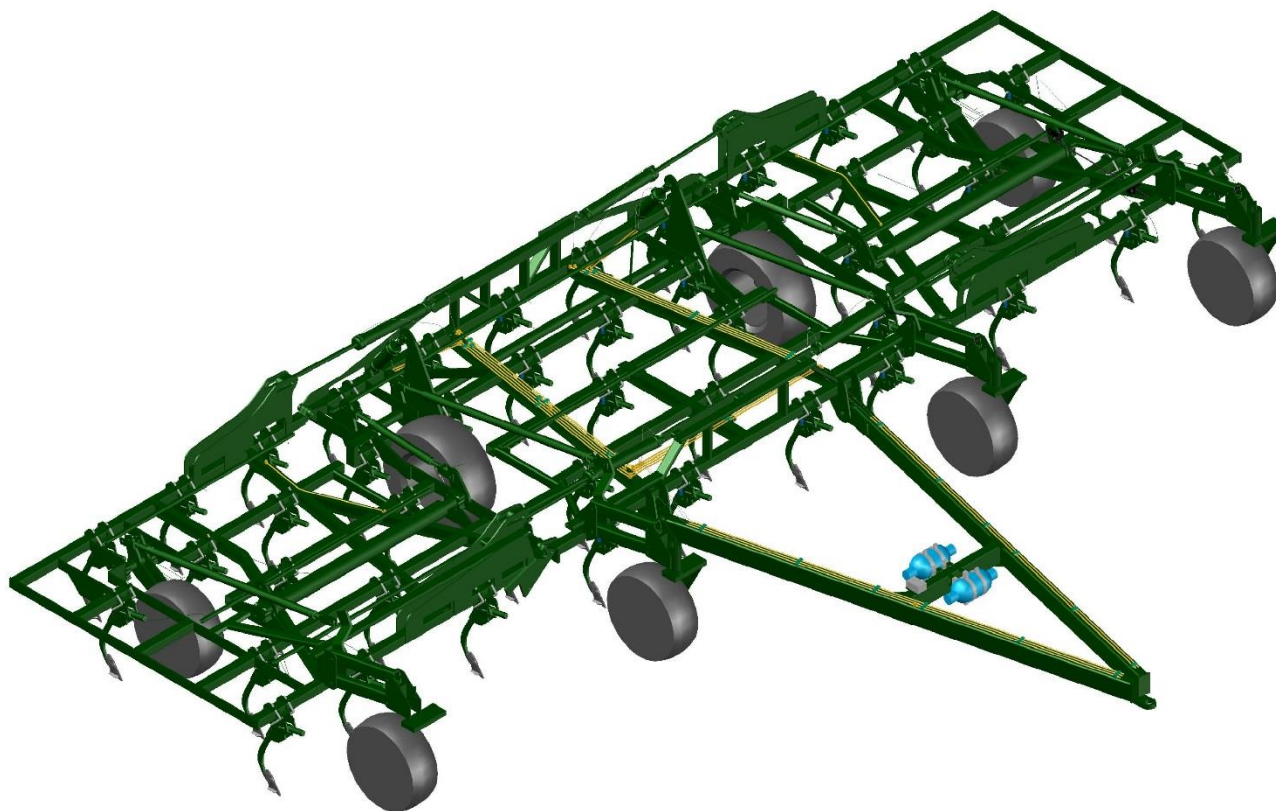
FINEST IN THE FIELD

JOHN SHEARER

Mk3 Universal Cultivator

5 Row Model

**Operators
Manual
139J1**



SAFETY

SAFETY FIRST

DO NOT ALLOW ANY PERSON TO STAND UNDER THE PATH OF THE WINGS WHEN THEY ARE FOLDED, OR DURING FOLDING / UNFOLDING IN CASE THE WINGS ACCIDENTALLY FALL.

ENSURE AREA ABOVE AND AROUND THE MACHINE IS CLEAR PRIOR TO FOLDING OR UNFOLDING WINGS.

ENSURE SAFETY PINS ARE FITTED FOR TRANSPORT.

WHEN TOWING WITH THE WINGS IN THE FOLDED POSITION, ENSURE THE AREA AHEAD IS CLEAR OF OVERHEAD OBSTRUCTIONS SUCH AS TREES AND POWER LINES.

PRIOR TO WORKING UNDERNEATH THE IMPLEMENT (E.G. CHANGING POINTS ETC.) ALWAYS CHECK THAT THE IMPLEMENT IS ADEQUATELY SUPPORTED ON CYLINDER SAFETY STOPS OR UNDERFRAME STANDS.



JOHN SHEARER LIMITED
CUSTOMER'S WARRANTY REGISTRATION CARD
(Please retain for your records)

IMPLEMENT TYPE: SERIAL No.

SELLING DEALER: DATE PURCHASED:

PLEASE READ OPERATOR'S MANUAL TO ENSURE CORRECT APPLICATION, OPERATION AND MAINTENANCE FOR THIS MACHINE.

THANK YOU FOR BUYING JOHN SHEARER



WARRANTY REGISTRATION CARD

DEALER COPY

DEALER NAME: DEALER TOWN:

IMPLEMENT MODEL: SIZE:

PRODUCT No. (as per price book) SERIAL No.

DEALER'S PRE DELIVERY IMPLEMENT CHECK WHEN DONE SIGNATURE

PURCHASERS NAME (Full)

ADDRESS (Full)

DATE OF PURCHASE: IMP. RECEIVED IN GOOD ORDER & CONDITION

PURCHASER ACKNOWLEDGES THAT THE PURCHASERS ATTENTION HAS BEEN DRAWN TO THE TERMS AND CONDITIONS OF THE JOHN SHEARER LIMITED WARRANTY POLICY ENDORSED HERE-ON.

PURCHASERS SIGNATURE.....



WARRANTY REGISTRATION CARD

IMPORTANT:- TO ENSURE YOUR CLIENTS ARE COVERED UNDER WARRANTY YOU MUST FILL OUT THIS PORTION OF THE CARD AND RETURN WITHIN 7 DAYS TO JOHN SHEARER LIMITED
P.O. BOX 32, WELLAND, S.A. 5007

JOHN SHEARER LIMITED AREA MANAGER:

DEALER'S NAME: DEALER TOWN:

DEALER A/C No.:

IMPLEMENT MODEL: SIZE:

PRODUCT No. (as per price book) SERIAL No.

DEALER'S PRE DELIVERY IMPLEMENT CHECK WHEN DONE SIGNATURE

PURCHASERS NAME (Full)

ADDRESS (Full)

DATE OF PURCHASE: IMP. RECEIVED IN GOOD ORDER & CONDITION

PURCHASER ACKNOWLEDGES THAT THE PURCHASERS ATTENTION HAS BEEN DRAWN TO THE TERMS AND CONDITIONS OF THE JOHN SHEARER LIMITED WARRANTY POLICY ENDORSED HERE-ON.

PURCHASERS SIGNATURE.....



CUSTOMER'S MACHINERY REGISTER

We ask for your assistance in registering your holdings of equipment. This information can assist us greatly in after sales service, development of new products and customer awareness of Shearer products.

- Name:.....
Address:.....
State:.....Postcode:.....
- Type of purchaser (please tick) ☐ Owner / Manager ☐ Share Farmer ☐ Contractor
- Major activities (please number in order of importance)
☐ Sheep and cereal grain ☐ Vegetables ☐ Sugar
☐ Sheep only ☐ Poultry ☐ Tobacco
☐ Cereal Grain Only ☐ Pigs ☐ Oilseeds
☐ Meat Cattle ☐ Vineyards ☐ Others (please list)
☐ Milk Cattle ☐ Fruit ☐
- What is the size of your holding (hectares)?
What is the total area of your crop (hectares)?
What is your area under cereal crop (hectares)?
- In what town is your associated Shearer dealer? (i.e. either the dealer with whom you normally trade or the one who is closest)
- What John Shearer machines do you currently have on your property?

Serial No.	Implement type	Size	Date Delivered	Comments
...../...../.....				
...../...../.....				
...../...../.....				
...../...../.....				
...../...../.....				
...../...../.....				

Thank you for your assistance; please feel free to use the back of this form to make any comments you wish.

PRE-DELIVERY CHECK

1. On delivery of Mk3 UNIVERSAL CULTIVATOR ensure there are no shortages.
2. Check Implement equipment, to ensure as ordered.
3. Check for trans-shipping damage.
4. Refer to lubrication section, page 9, for greasing and routine check points.
5. Check and tighten bolts and nuts, (including wheel nuts).
6. Check tyne spacing.
7. Ensure that implement is fully assembled and operating correctly.
8. Demonstrate and explain operation to the client.
9. Explain terms and conditions of Warranty to client



Congratulations on the purchase of your new JOHN SHEARER LIMITED implement. You have just joined the growing number of John Shearer customers and we trust that your implement will give you many years of satisfaction. The following information contained in this manual is provided with regards to your implement's operation, maintenance and warranty; however, should you require further assistance, contact your registered John Shearer Dealer.

WARRANTY POLICY

JOHN SHEARER LIMITED (JSL) warrants to purchaser that in normal use if any part of goods manufactured by JSL is proved to be defective material such part will be replaced or repaired by JSL if returned to Dealer at cost of customer within 12 months of delivery of goods, but such warranty shall to the extent permissible by law cease to apply forthwith if goods are misused or used contrary to recommendations of JSL and/or Dealer or if any unauthorised alterations, modifications or substitution of any part of goods is made or there is any breach by customer of the terms and conditions.

Customer agrees that JSL shall not be liable for any claim for damages due to loss of time in use of goods or loss of profits due to defective goods or for any other consequential damages whatsoever except to the extent that such exclusion of liability is prohibited by law.

All failures must be reported immediately by the purchaser to the Dealer (or in the event of the Dealer ceasing to hold the JSL franchise, then to the Dealer nominated by John Shearer Limited).

The only parts which would be replaced or repaired under warranty are those which are proven to be of defective materials by persons in authority in the JSL Field Service Department.

It is the policy of JSL to continually strive to improve their products whenever possible. Therefore, JSL reserves the right at all times to modify its products or parts without notification and undertakes no liability to modify products sold, to conform with any such modifications.

Travelling and kilometre charges are not accepted by JSL as JSL has no control where equipment is sold.

Nothing in this warranty policy and instructions shall purport to exclude or limit any liability the exclusion or limitation of which is prohibited or rendered void by the Trade Practices Act 1974 as amended or any other Federal or applicable State Legislation.

All pre-delivery checks must be done by the Dealer and signed when completed on the Warranty Registration Card.

FREIGHT: The JSL policy does not extend to cover freight charges.

SERVICE & MAINTENANCE: It is the responsibility of the owner to read the Operator's Manual and to maintain and operate the implement in a safe and correct manner within the manufacturer's specified capacity and operating limitations. Using the implement for purposes other than those for which it is designed voids all warranty.

Regular service to your implement can save costly repairs and save valuable time lost because of breakdown.

Resultant damage or failures originating from neglect of machine is not covered under warranty. For your spare part requirements contact your John Shearer Dealer.



JOHN SHEARER LIMITED

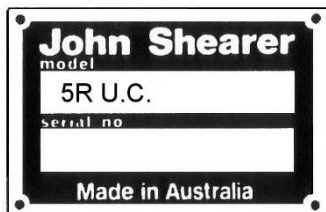
ESTABLISHED 1877
INCORPORATED IN SOUTH AUSTRALIA

HEAD OFFICE & FACTORY
P.O. BOX 32 WELLAND
SOUTH AUSTRALIA 5007

TELEPHONE +61 8 8268 9555
STREET LOCATION SHARE STREET, KILKENNY
FAX No. +61 8 8268 1103 (SPARE PARTS)
Website: www.johnshearer.com.au
Spare parts email: spares@johnshearer.com.au

WHEN ORDERING SPARE PARTS PLEASE STATE:

1. **MODEL, SERIAL NUMBER & SIZE (OF THE MACH. / IMP.)**
2. **PART NUMBER AND DESCRIPTION (OF THE SPARE PART).**
3. **NUMBER OF PARTS REQUIRED.**
4. **FORWARDING INSTRUCTIONS.**
5. **CORRECT NAME & ADDRESS OF DESTINATION.**



MODEL & SERIAL NUMBER PLATE
IS PLACED ON THE LEFT HAND FRONT OF THE
MAIN FRAME.

MADE & PRINTED IN AUSTRALIA BY JOHN SHEARER LIMITED.

M139J1 DEC 2013

CONTENTS

PAGES	DESCRIPTION
4-5	SPECIFICATION
6-12	SETTING UP / OPERATING INSTRUCTIONS
9	LUBRICATION
10	ACCUMULATOR
11	TYRE PRESSURES
12-13	LINKAGE SETUP
14	HYDRAULIC CYLINDER COMPONENTS

PARTS SECTION

16-17	CENTRE FRAME
18-19	WING FRAME
20-21	CENTRE – WING CONNECTION
22	CENTRE WHEELS, HUBS ETC.
23	WING WHEELS, HUBS ETC.
24-29	HYDRAULIC LAYOUTS
30-31	HYDRAULIC TYNE ASSEMBLY
33	POINTS AND FITTINGS
34-35	CASTOR ASSEMBLIES
36-37	HITCH & ACCUMULATOR CONTROL
38-39	TRANSFERS

OPTIONS SECTION

42-43	HYDRAULIC DEPTH STOP KIT
44-45	HEIGHT ADJUSTABLE HYD. TYNE ASSEMBLY
46-47	SPRING RELEASE TYNE ASSEMBLY

SPECIFICATIONS

MODEL SIZE (No. of Tynes at 230mm/9" spacing)		SINGLE FOLD STANDARD CENTRE			SINGLE FOLD NARROW CENTRE		
		39	47	55	35	43	51
WING SIZE (S=SMALL, M=MEDIUM, L=LARGE)		S	M	L	S	M	L
WIDTH OF CUT	(m)	9.0	10.8	12.7	8.1	9.9	11.7
	(ft)	29'3"	35'3"	41'3"	26'3"	32'3"	38'3"
TRANSPORT WIDTH	(m)	6.9	6.9	6.9	6.0	6.0	6.0
	(ft)	22'8"	22'8"	22'8"	19'6"	19'6"	19'6"
TRANSPORT HEIGHT	(m)	3.8	4.7	5.6	3.8	4.7	5.6
	(ft)	12'6"	15'5"	18'5"	12'6"	15'5"	18'5"
OVERALL LENGTH		8.3m (27'1")					
		5.3m (17'5")					
- Hitch		3.3m (10'11")					
- Frame							
No. OF ROWS		5					
TYNE SPACING	- Along Rows	Min 540mm (1'9")					
	- Overall	Variable 180mm (7") and above					
	- Between the Rows	1-2: 560mm, 2-3: 670mm, 3-4: 600mm, 4-5: 785mm					
UNDERFRAME CLEARANCE		800mm (31.5")					
FRAME		Tyne Mounts: 100 x 100mm RHS					
MAX WORKING DEPTH		175mm (7")					

SPECIFICATIONS CONTINUED

TYNE ASSEMBLIES

EDGE ON TYNE, 50mm x 25mm (2"x1") section. Heat-treated Silicon Manganese High Carbon Steel. Hydraulic or Spring Release

JUMPER CIRCUIT (HYDRAULIC MODELS)

Combination of 1-3/4" Spring Accumulator & 10L gas accumulator (Additional 10L accumulator optional) - see page 32 & 33

TYNE LOADING ADJUSTMENT	Circuit Pres.	KPa	0	3400	690	10300	13800
		psi	0	500	1000	1500	2000
	Tyne Breakout	kg	0	50	100	150	200
		lb	0	110	220	330	440
TYNE JUMP HEIGHT	530mm (21")						
TYNE FOOT	(2) Bolt holes at 1¾" centres – takes ½" bolts						
DEPTH CONTROL – Centre	(2) 89mm x 305mm (4 x 12") hydraulic cylinders (all single fold models)						
WING FOLD UP	(2) 125mm x 762mm (5" x 30") hydraulic cylinders----Small & medium wing models						
	(4) 125mm x 762mm (5" x 30") hydraulic cylinders----Large wing models						
ROAD TRANSPORT CLEARANCE	275mm (11") under sweeps - all models						
WHEEL EQUIPMENT	- centre	(2) 16/70 x 20 x 14 ply (on rockshaft) (2) 12.5/80-15.3 x 14 ply (on castor wheels)					
	- wings	(2) 12.5/80-15.3 x 14 ply (on crank axle) (2) 12.5/80-15.3 x 14 ply (on castor wheels)					
	Optional Lug Tyres (replacing above tyres):						
	- centre	(2) 11.5/80-15.3 (on castor wheels)					
	- wings	(2) 11.5/80-15.3 (on crank axle) (2) 11.5/80-15.3 (on castor wheels)					
	Optional Rib tyres (replacing above tyres):						
	- centre	(2) 16/70 x 20 x 14 ply (on rockshaft)					

Due to our policy of continuing research, these specifications are subject to change without prior notification.

Congratulations on the purchase of your new UNIVERSAL CULTIVATOR.

This manual has been prepared to assist with the proper set up, operation and trouble free service.

After reading this manual, keep it in the carrier provided on the implement for quick and easy reference should any question arise concerning operation or service.

Your UNIVERSAL CULTIVATOR is designed to give maximum service life, but a routine lubrication and maintenance schedule must be followed as shown on the lubrication chart (see page 9)

The following steps should be taken to achieve satisfactory operation of this implement.

ASSEMBLY INSTRUCTIONS

1. CENTRE WHEEL INSTALLATION: Bolt the two 16/70 x 20 wheels to the cross axle on the centre section.
2. FRAME PRE-ASSEMBLY: Mount castor arm assemblies to positions on front corner of each frame.



CAUTION: Do not place hands between top and bottom links of the castor assembly as this action could result in serious injury.

3. WING ASSEMBLY: To connect wings to centre section, firstly place the centre frame on 1000mm stands (i.e. Under-frame clearance must be at least 1000mm). Rotate the cross axle assembly until the axle arms are almost vertical. Position wings and insert hinge pins.

The thrust washers should be placed in the front position on the hinge and the bush should be inserted from the rear at both the front and rear hinges of the implement.

4. WING WHEELS: With wing still supported, fit 12.5/80-15.3 wheels to wings and all castor assemblies.
5. HYDRAULICS:



CAUTION:- WING FOLD CYLINDERS MUST BE PRIMED WITH OIL PRIOR TO FITTING ONTO WINGS – OTHERWISE WINGS MAY DROP OUT OF CONTROL. ENSURE THE ELBOW RESTRICTOR IS FITTED TO THE ROD END OF RAMS.

Remove manifold plugs and connect centre manifolds to wing manifolds on hydraulic jumper circuit.

Remove plugs from jumper rams and fit hose assemblies. Use Loctite hydraulic sealant at this connection. Next, remove plugs from manifold and assemble hose to manifold.



WARNING: DO NOT APPLY LOAD ON UNSUPPORTED HYDRAULIC PIPES.

Hydraulic hoses that are used to connect the implement to the tractor have colour-coded bands to help the operator to correctly identify the various hydraulic circuits. If there is no coloured band this indicates the tyne circuit. Wing lift hoses are identified with red (down) and green (up) and wheel lift is identified with yellow (up) and blue (down). It is the responsibility of the person who connects the implement to the tractor to ensure it is done correctly.

The operation of all hydraulic functions must be checked in a safe and controlled situation to confirm everything is correct before using the machine for the first time.

For more details refer to pages 24-29.

6. **LINKAGES:** Initially set the adjustable linkages to the following lengths: (see pages 12 and 13)

Wing R/H and L/H castor linkages (WL): 2464mm

Centre frame R/H and L/H castor linkages (CL): 2336mm

Layshaft R/H and L/H linkages (LL): 1498mm

WARNING: DO NOT EXCEED THE INDICATED MEASUREMENTS, OTHERWISE MACHINE MAY DROP OUT OF CONTROL.

7. **LEVELLING:** to level the implement, follow these steps:
- (1) Set first tyne bar of the centre frame to the under-frame measurement of 810mm (i.e. tyne just above ground level)
 - (2) Adjust the R/H and L/H centre frame castor linkages (CL) to level the centre frame.
 - (3) Adjust the layshaft linkages (LL) and then the R/H and L/H wing castor linkages (WL) to level the wings.
 - (4) Check to ensure that there is weight acting on each of the front castor wheel assemblies.
 - (5) It may be necessary to repeat steps 2 to 4 to satisfactorily level the whole implement.

Note: To allow for cultivating loads, it is recommended that the frame be raised slightly at the front of the machine (approx. 20mm).

8. **HITCH:** Connect hitch assembly to main frame. Fit pivot pins and secure with locking screws.
Lower screw jack assembly on hitch for support

9. **FASTENERS:** Ensure all nuts and bolts are tight

10. **TYRE:** Check all pressures. (See table page 11)

Every care has been taken in the manufacture, and dispatch of this implement to ensure that all components arrive 'clean'.

It is essential that this care be continued at the point of implement use. Implements must not be connected to 'old' tractors, without effective filters, and from which the oil supplied to the implement cannot be guaranteed clean.

Breakaway couplings at the tractor connection must always be effectively cleaned prior to recoupling the implement.

TRANSPORT

Ensure that area is clear of overhead obstructions. Use hydraulics to fold wings up to full height.



CAUTION

ONLY LIFT WINGS UP WHEN MACHINE IS IN ITS MAXIMUM TRANSPORT POSITION (I.E. FRAME IS AT MAXIMUM HEIGHT FROM GROUND)

UNDER NO CIRCUMSTANCES SHOULD THE FRAME BE LOWER THAN THE UNDERFRAME CLEARANCE (800MM) WITH THE WINGS IN THE UP POSITION.

TRANSPORT PINS ARE TO BE USED FOR ALL ROAD TRANSPORT.

MAXIMUM SPEED IS 25KM/HR, HOWEVER THIS MUST BE REDUCED WHEN SURFACE CONDITIONS REQUIRE IT.

CYLINDER SAFETY STOPS

Should be used when doing ANY work under the machine (such as fitting new points) to ensure the machine does not unexpectedly drop in the case of a hydraulics failure. They may also be used during transport to reduce the likelihood of road damage but use caution as a significant bump at speed may damage the stops – always drive to the conditions.

To use the stops, extend the wheel cylinders fully and insert the stop between the barrel and the clevis on each. Always use in pairs. Secure the stops over the rod with the pin. Inspect the stop for damage before each use. If you notice any damage to the stop it must be replaced. Do NOT rely on a damaged stop, as it may have been weakened.

After fitting the cylinder safety stops, the machine may be lowered slightly onto them, however do NOT apply hydraulic pressure to the stops.

OPERATION

1. SPRING TYNE – (spring release models only).

Springs on tynes are pre-set in factory for normal cultivating conditions. Use only as much tension as is necessary. Ensure that all tynes on each rank are equally tensioned, with the front rank tynes requiring more tension than subsequent ranks.

With increased tyne tension grease tynes more frequently

2. HYDRAULIC TYNE – (hydraulic models only)

Care should be taken not to overload the tyne hydraulic system, otherwise damage could occur.

In all conditions, but particularly in rough conditions, use as little loading pressure as possible.

- a) Pressurise the system up to '2' on the scale.
- b) Lower the implement (whilst slowly moving forward) until the required working depth is reached
- c) Build up speed to that required, and at the same time increase the pressure on the tynes.

The ideal situation is to have the tynes that work in the tractor wheel tracks, just moving.

- d) Ensure that the pressure limit, as specified, is not being exceeded. (i.e. ensure that spring accumulator does not move into the red zone).

NOTE:- When cultivating in hard conditions, it is advantageous to use a low circuit pressure, so that the points attack the ground at a greater angle, to assist initial penetration.

- e) To avoid damage to implement, do not turn, reverse or fold implement with points in soil.

3. MECHANICAL DEPTH STOPS: Mechanical depth stops are fitted to the main wheel rams. Care should be taken that both depth-adjusting collars operate simultaneously, otherwise

damage to the rockshaft may occur. Use split collars to extend the range of adjustment.

A depth indicator is provided on the R/H side of the centre section for visual checking.

4. (OPTIONAL) HYDRAULIC DEPTH STOP

The hydraulic depth stop is used to assist the operator in achieving a consistent working depth. Adjusting the position of a plate on a long rod sets the depth. When this plate comes into contact with a valve the wheel lift hydraulics are locked.

To set your desired working depth, start with the plate at the end of the rod and carefully lower the machine to the appropriate depth. Once the machine is stationary and in the correct position, slide the plate until it activates the plunger on the valve. Raise the machine to transport height and lower again to check that the machine stops in the correct position. You may want to fine-tune this adjustment if a particularly accurate depth is required. Once you are happy with the depth, you may want to mark the position of the plate on the rod, either with a marker pen or a shallow hacksaw cut on the rod. This will allow you to change between a number of different depth settings easily (by marking each position on the rod).

The hydraulic depth stop kit is shown on page 42 & 43.

UNFOLDING

Remove transport pins from wing rests, and store in the locations provided.



CAUTION:- ENSURE THAT THE AREA SURROUNDING WHERE THE WINGS WILL BE LOWERED IS COMPLETELY CLEAR BEFORE LOWERING THE WINGS.

Extend wing fold cylinders to lower wings to working position. Rate of lowering is controlled by restrictors in cylinder ports. Ensure that cylinders are extended to their full travel to allow full frame articulation.

STORAGE HINTS (HYDRAULIC MODELS)

Check for leaky seals on tyne assemblies and if necessary replace. Leave some pressure in the system, this will keep the seals from warping during long storage periods.

LUBRICATION AND MAINTENANCE

Remember, oil and grease are the cheapest components you will buy.

After 20 hours of operation go over your UNIVERSAL CULTIVATOR and tighten ALL nuts and bolts (especially wheel nuts and bolts and including the nuts and bolts attaching tynes to the frame)

ITEM	INSTRUCTIONS
TYNE ASSEMBLIES	Grease daily for the first week and in adverse conditions – less frequently according to actual operating conditions. (Grease at least weekly.)
AXLE BEARING	Grease every 50 hours, with wheels raised clear of ground
WING HINGES	Grease every 50 hours
WHEEL BEARINGS	Grease once every 200 hours
GREASE NIPPLES	All grease nipples should be lubricated prior to storage of the implement at end of each working period.
TYRES	Check and adjust all tyre pressures on a routine basis (refer page 11)

ACCUMULATOR OPERATION

CONNECTION

See diagram on page 36

SETUP

Set the main (relief) valve to the desired system pressure. Any further pressure will be diverted back to the tractor.

The needle valve can be adjusted to control the flow of oil to the tractor when the dump valve is pulled. (Either to dump quickly or more slowly).

OPERATION

Use The pull valve to dump pressure from the system before disconnecting or working on the hydraulic tyne circuit.

TYRE PRESSURES

TYRE PRESSURES ARE IMPORTANT						
<p><u>OVER INFLATION</u> will impair flotation - Increasing sowing depth variations as ground conditions vary.</p> <p><u>UNDER INFLATION</u> can result in tyre failures.</p>						

TYRE SIZE	16/70 x 20 x 14 Ply			12.5/80-15.3		
	39T	47T	55T	39T	47T	55T
TYRE PRESSURE kPa	190	230	250	230	230	230
psi	28	33	36	34	34	34

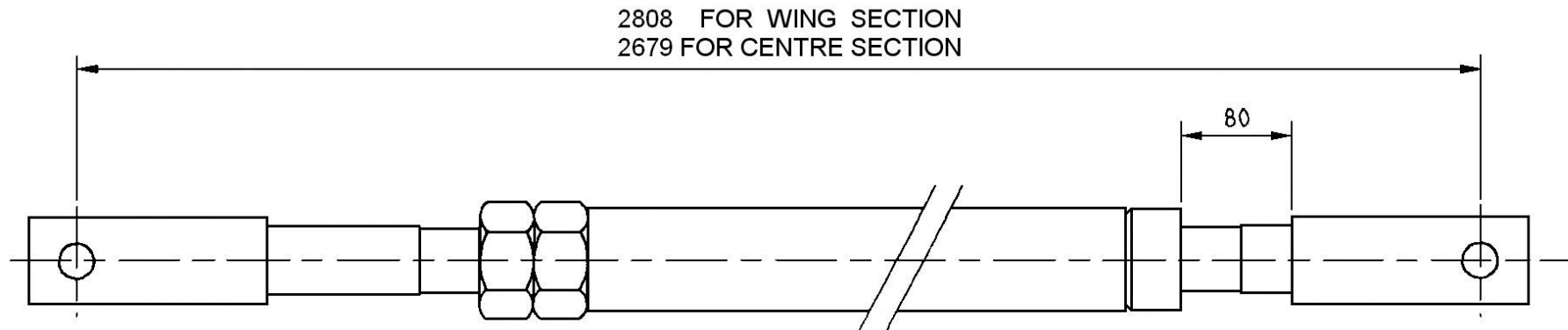
SPEED LIMIT 25 km/h (10 km/h SOWING)

CASTOR LINKAGES

PLEASE NOTE:

CASTOR ASSEMBLIES WITH LARGER OFFSET ARMS ARE TO BE FITTED TO CENTRE SECTION AND THOSE WITH SMALLER OFFSET ARMS TO THE WINGS. THE OFFSET GOES TO THE OUTSIDE OF THE MACHINE.

INITIAL SETUP (GUIDE ONLY)

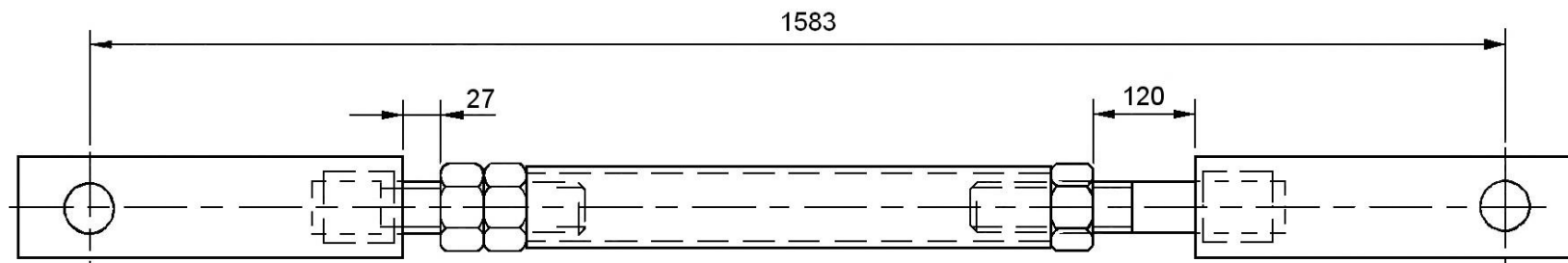


WARNING: DO NOT EXCEED THE INDICATED DIMENSIONS

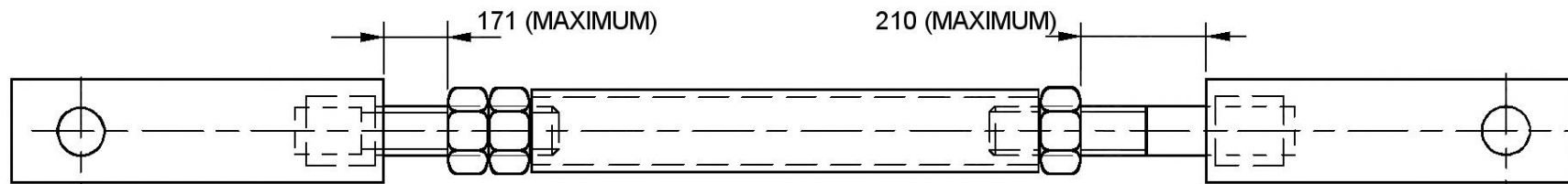


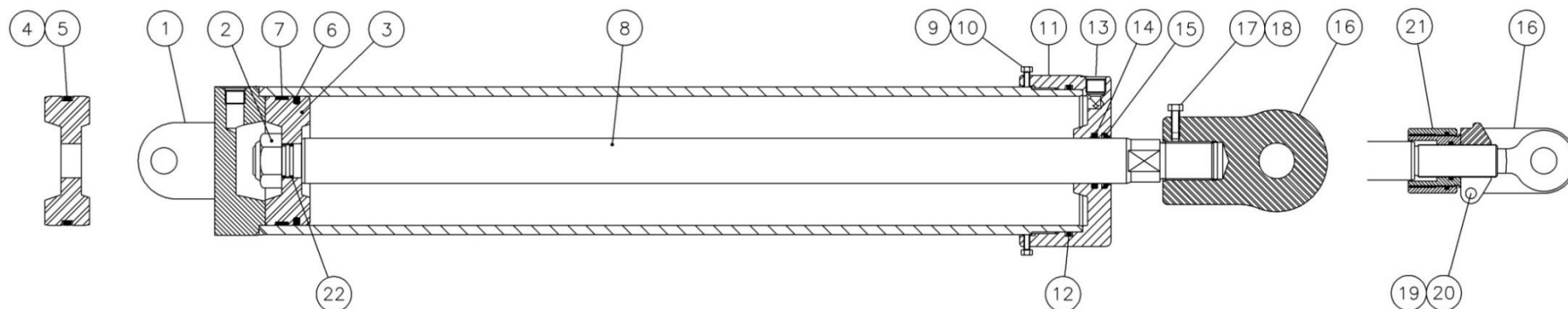
INNER LAYSHAFT LINK

INITIAL SETUP (GUIDE ONLY)



WARNING: DO NOT EXCEED THE INDICATED DIMENSIONS





ITEM	43769 4 x 30" Non-Phasing	35132 4 x 12" Non-Phasing	DESCRIPTION
1	27066	32674	BASE/BARREL
2	15444J1	15444J1	NUT
3	27069	32956	PISTON
4	27037*	27037*	'O' RING Piston
5	27067*	2 x 27067*	WASHER Back up
6	27081		SEAL Piston
7	43779*		WEAR RING Piston
8	39995	32676	ROD Piston
9	28665*	28665*	BOLT Hex M8 x 25 nylon
10			BOLT Hex M6 x 15 nylon
11	27071	27369	GLAND
12	27070*	27070*	'O' RING Gland
13	27083	27083	PLUG, PLASTIC 3/4" UN – not supplied if attached to machine
14	27058*	27363*	SEAL Gland
15	27059*	27364*	WIPER Rod
16	39996 (not part of assy.)	27023	CLEVIS
17	19151		BOLT Hex M8 x 25
18	15206J1		INSERT Nylon
19		17777J1	NUT Hex - M10
20		26443	SCREW Soc. hd. cap - M10 x 45
21		27019	DEPTH STOP ASSEMBLY
22	27054*	27054*	'O' RING Piston rod
		27370	SEAL KIT * DENOTES SEAL KIT PARTS



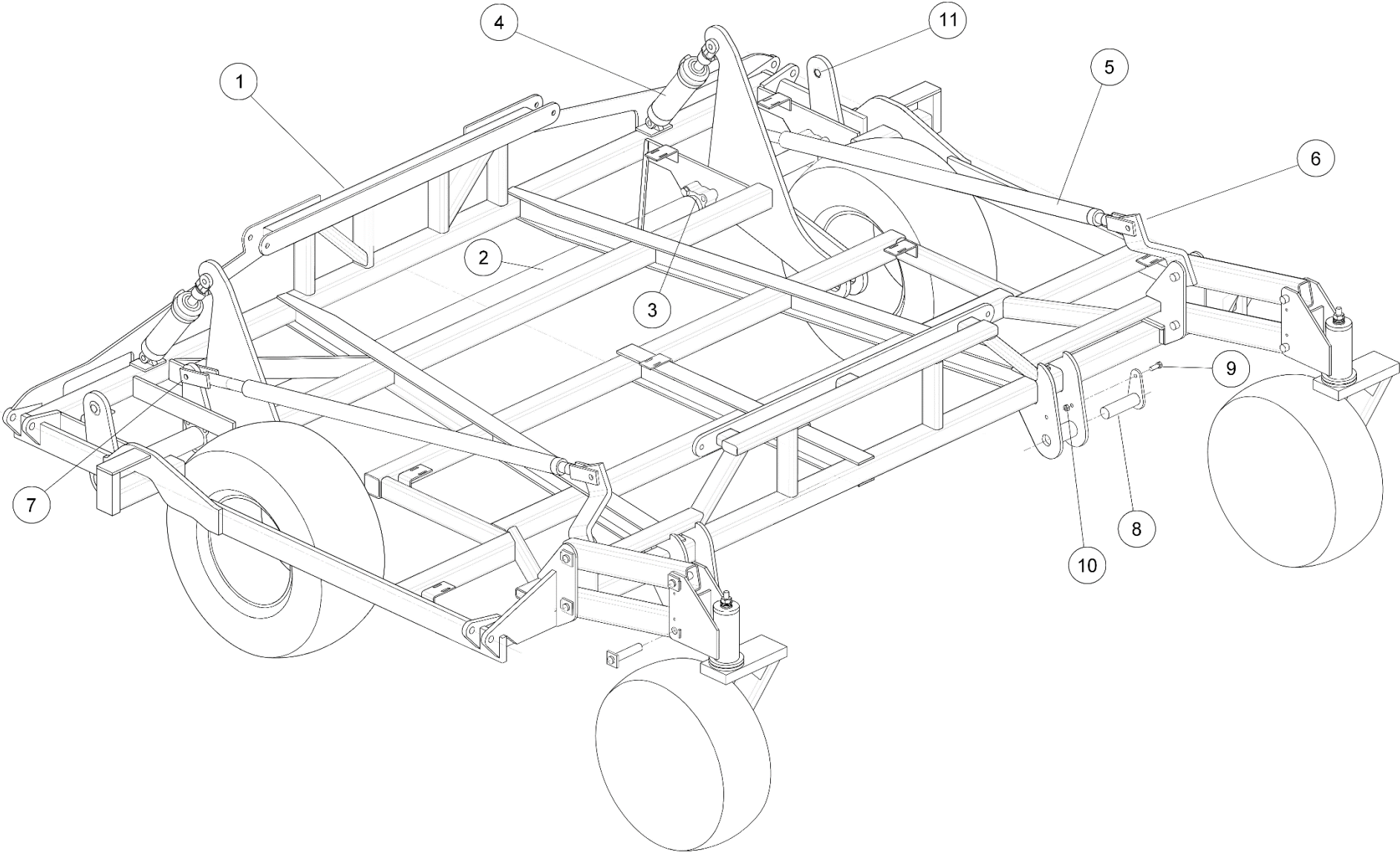
FINEST IN THE FIELD

JOHN SHEARER

UNIVERSAL CULTIVATOR

PARTS SECTION

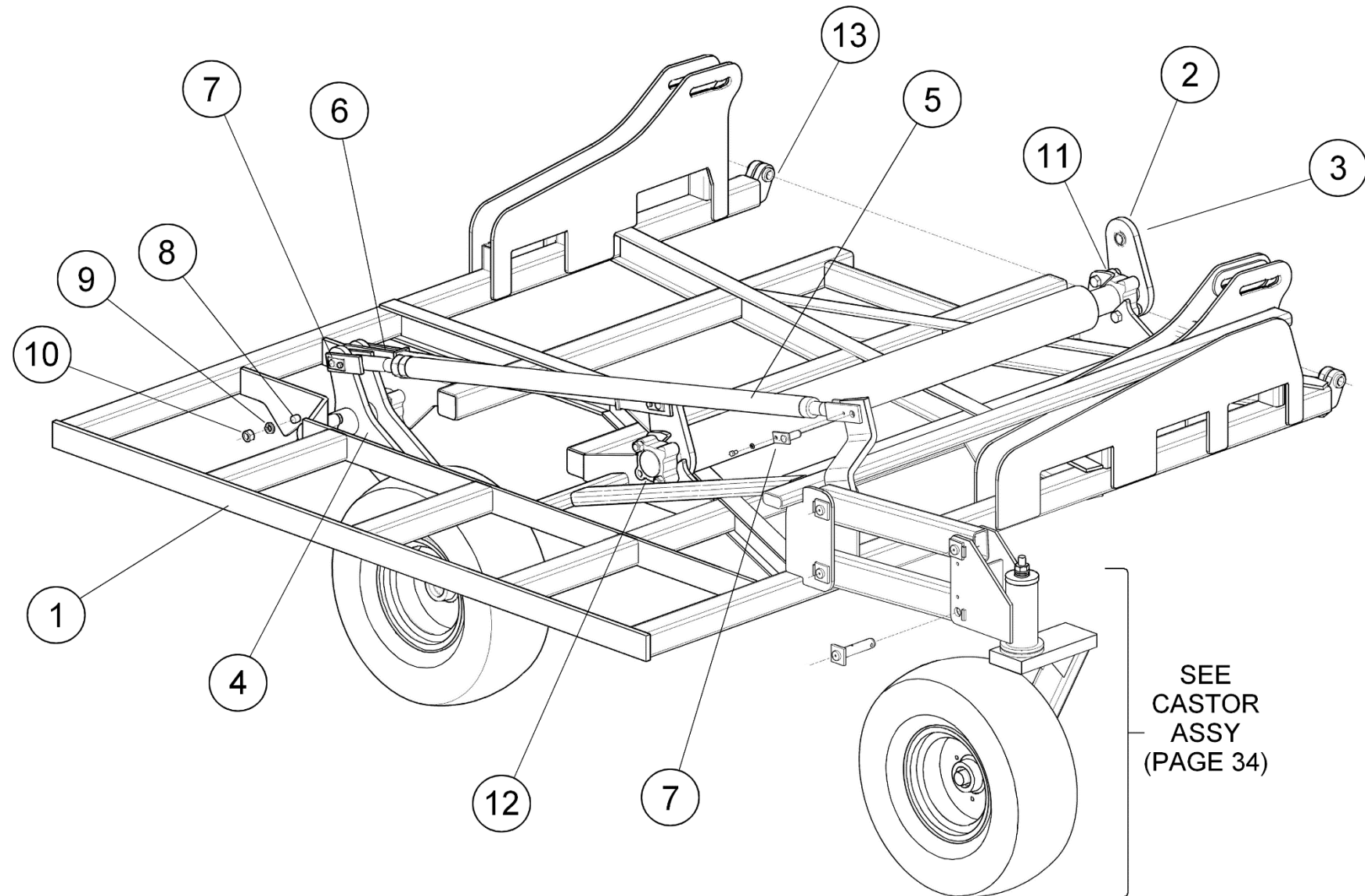
CENTRE FRAME



CENTRE FRAME

ITEM	PART No	DESCRIPTION	QTY	ITEM	PART No	DESCRIPTION	QTY
1	43732	FRAME ASSY – CENTRE					
2	43827	CROSS AXLE					
3	39481	BEARING					
4	35132	RAM					
5	43851	LINK					
6	39044	PIN			42264	KIT, RAM LOCK	1
	18613	BOLT M10 x 20					
	17776J1	WASHER					
7	39044	PIN			EACH RAM LOCK KIT (42264) INCLUDES THE FOLLOWING:		
	18613	BOLT M10 x 20			42165	CYLINDER SAFETY STOP ASSEMBLY	2
	17776J1	WASHER			42240	MOUNT ASSY FOR STOPS	1
8	43872	PIN, HITCH			42262	PIN, ALUMINIUM	2
9	17885J1	BOLT M16 x 40			H135-57	HAIRPIN (NOT SHOWN)	4
10	28912	NUT, NYLOC M16					
11	38999	BEARING, AXLE					
<p>THE CYLINDER SAFETY STOPS MAY BE STORED ON THE MOUNT ASSEMBLY WHEN NOT IN USE. THE MOUNT ASSEMBLY MAY BE POSITIONED IN ALMOST ANY LOCATION ON THE 100mm RHS.</p>							

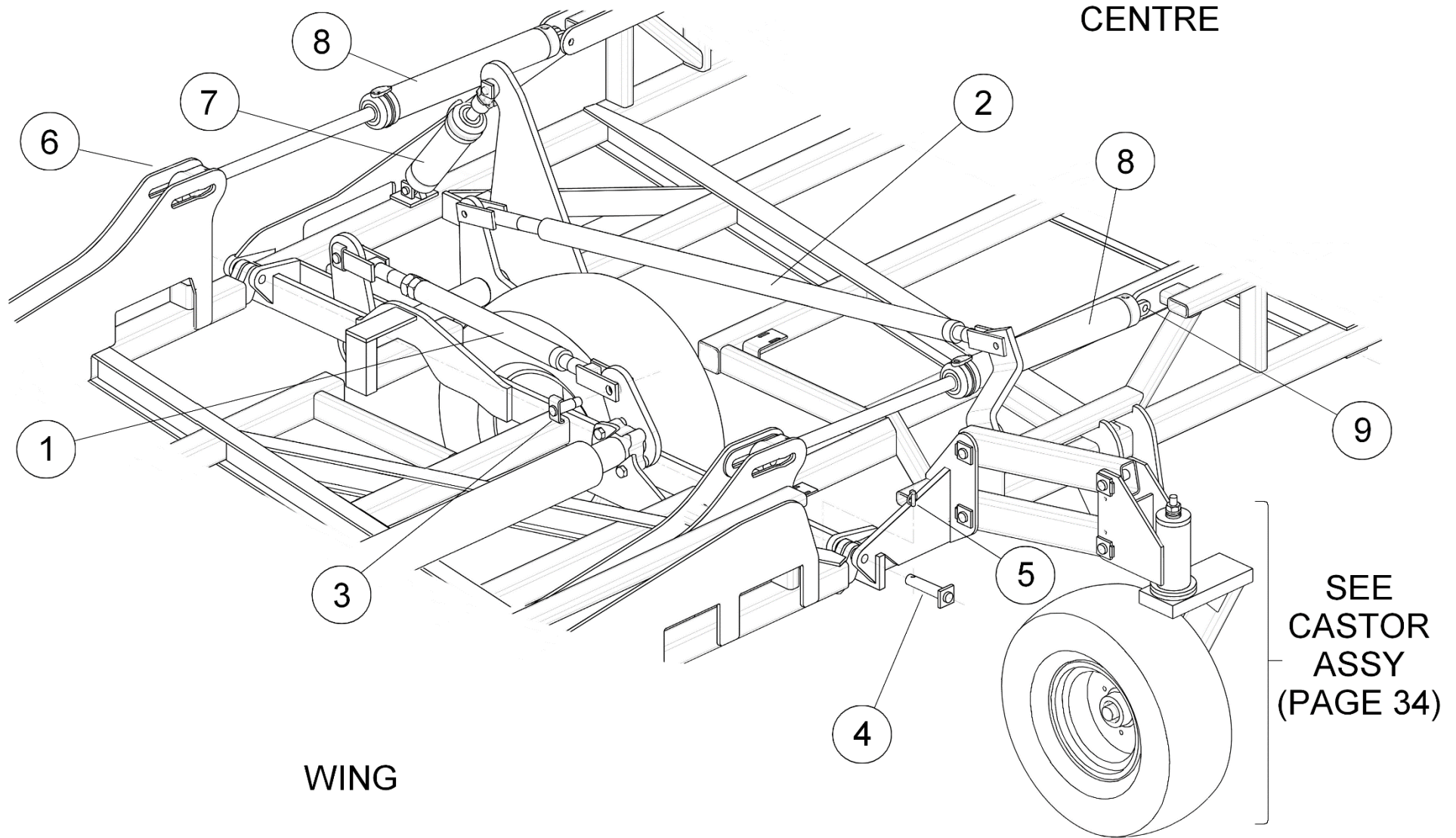
WING FRAME



WING FRAME

ITEM	PART No	DESCRIPTION	QTY	ITEM	PART No	DESCRIPTION	QTY
1	43734	FRAME, WING - R/H (AS SHOWN)					
	43733	FRAME, WING - L/H (OPPOSITE)					
2	43844	LAYSHAFT ASSY					
3	38999	BEARING, AXLE					
4	43846	ARM ASSY - R/H (AS SHOWN)					
	43847	ARM ASSY - L/H (OPPOSITE)					
5	43853	LINK, CASTOR					
6	43852	LINK, LAYSHAFT					
7	39044	PIN					
	18613	BOLT M10 x 20					
	17776J1	WASHER, SPRING - 10mm					
8	21468	BOLT M24 x 110					
9	18935	WASHER, SPRING - 24mm					
10	18042	NUT M24					
11	39481	BEARING ASSY, SPLIT					
12	39482	BEARING COMPLETE					
13	20269	BUSH					

CENTRE – WING CONNECTION

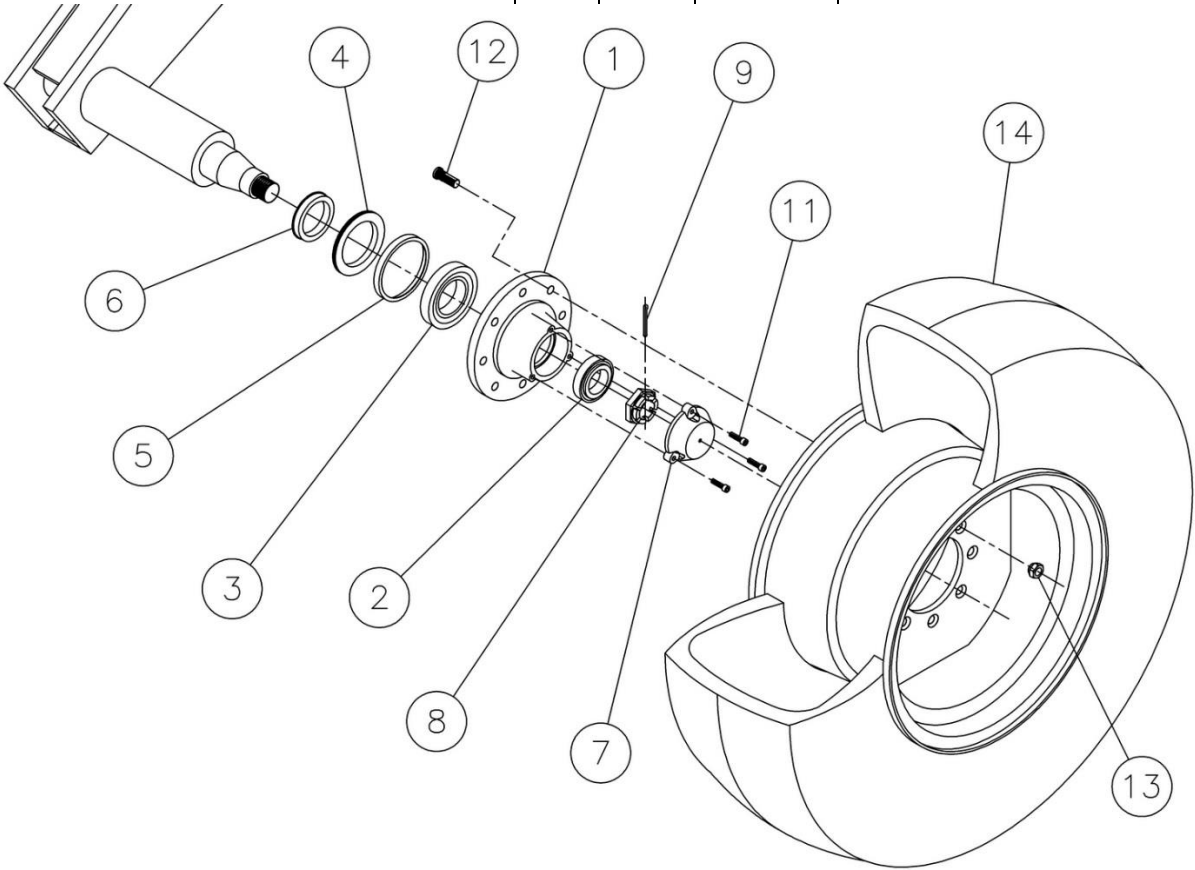


CENTRE - WING CONNECTION

ITEM	PART No	DESCRIPTION	QTY	ITEM	PART No	DESCRIPTION	QTY
1	43850	LINK, LAYSHAFT – CENTRE	2				
2	43851	LINK, CASTOR – CENTRE (also shown on centre)					
3	39562	PIN	4				
	17261J1	NUT M30 THIN	4				
	31358	COLLAR	8				
4	43859	PIN, HINGE	4				
5	31940	PIN, LYNCH	4				
6	43860	PIN	4				
7	35132	RAM 4 x 12" (also shown on centre)					
8	43769	RAM 4 x 30"	4				
9	39034	PIN	4				

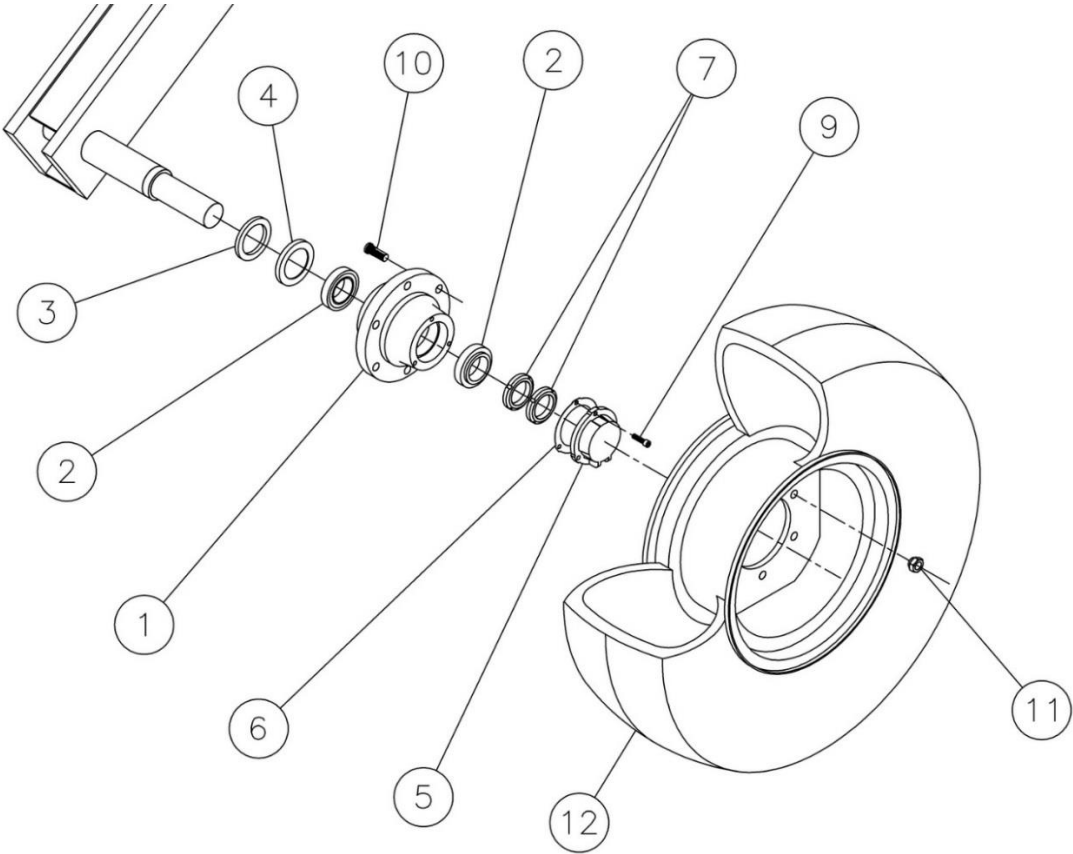
CENTRE SECTION MAIN WHEELS, HUBS ETC.

ITEM	PART No	DESCRIPTION	QTY	ITEM	PART No	DESCRIPTION	QTY
1	39642	HUB	1	10	39652	GREASE NIPPLE (NOT SHOWN)	1
2	39644	BEARING, OUTER	1	11	39653	SET SCREW, SOCKET HEAD CAP - M8 x 30	3
3	39645	BEARING, INNER	1	12	39654	STUD, WHEEL - M16	8
4	39646	SEAL	1	13	39655	NUT, WHEEL - M16	8
5	39647	SEAL WEAR RING	1	14	38472	WHEEL ASSEMBLY (MAIN WHEEL)	1
6	39648	SEAL RING	1				
7	39649	CAP, DUST	1			WHEEL ASSEMBLY CONSISTS OF:	
8	39650	NUT, SLOTTED	1		39952	TYRE 16/70-20 x 14 Ply	1
9	16944J1	PIN, SPLIT	1		38468	RIM ASSY	1

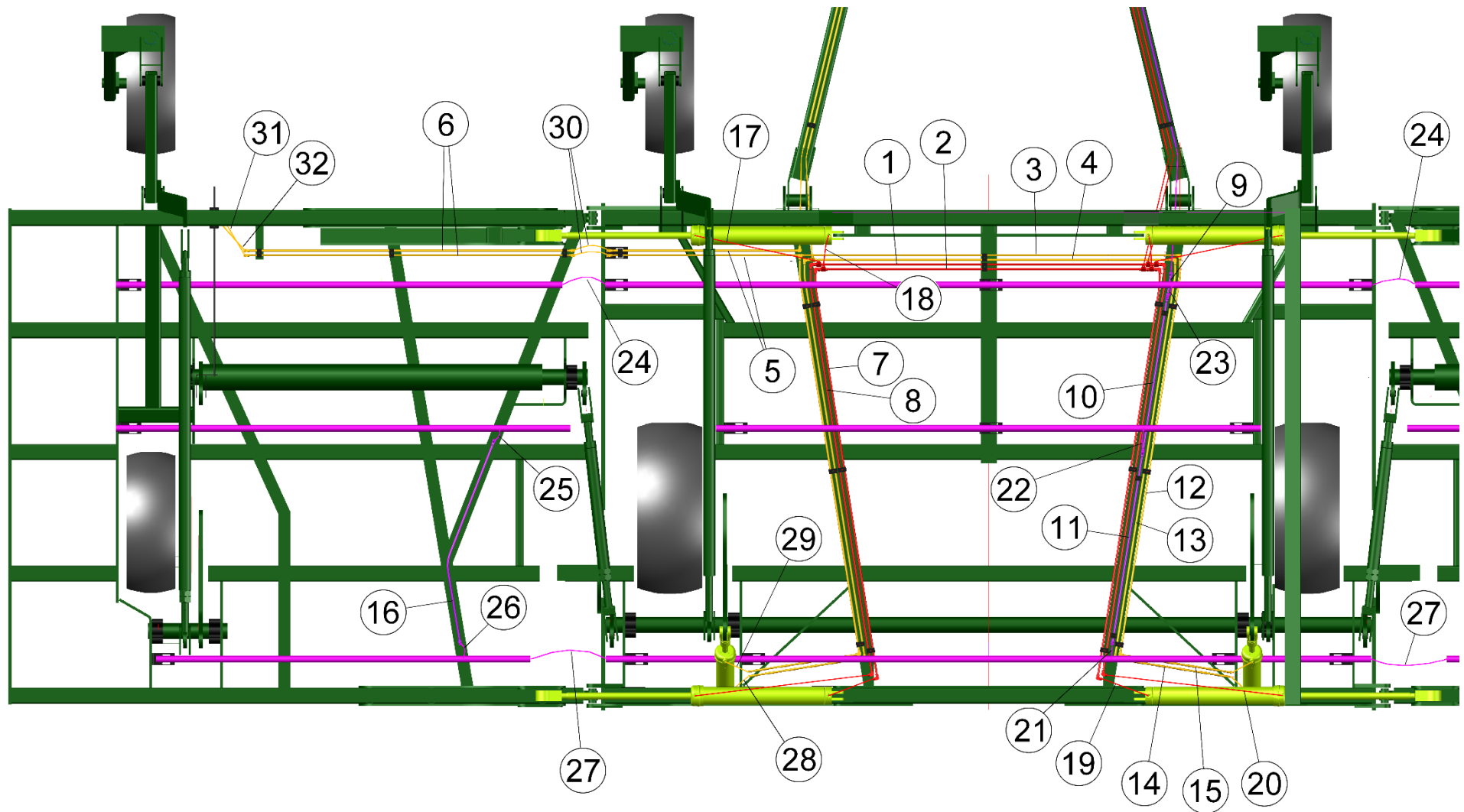


WING WHEELS, HUBS ETC.

ITEM	PART No	DESCRIPTION	QTY	ITEM	PART No	DESCRIPTION	QTY
1	18325	HUB	1	10	16199J1	BOLT & NUT, 2 1/4" x 5/8" UNF	6
2	15203J1	BEARING, CUP & CONE	2	11	17606J1	WASHER, SPRING Ø16	6
3	12395	SEAL, TRIPLE LIPPED	1	12	42571	WHEEL ASSEMBLY (WING WHEEL)	1
4	12396	WEAR RING	1				
5	15305J1	CAP, HUB	1			WHEEL ASSEMBLY CONSISTS OF:	
6	30195	GASKET	1		42570	TYRE 12.5/80-15.3 x 14 Ply	1
7	15205J1	NUT, SPINDLE 50mm	2		39979	RIM ASSY	1
8	18596	GREASE NIPPLE (NOT SHOWN)	1				
9	SD2097	SET SCREW	3		(39978	OPTIONAL LUG TYRE 11.5/80-15.3 x 12 Ply)	
	SPW2	WASHER, SPRING 5/16x3/32x1/16	3				



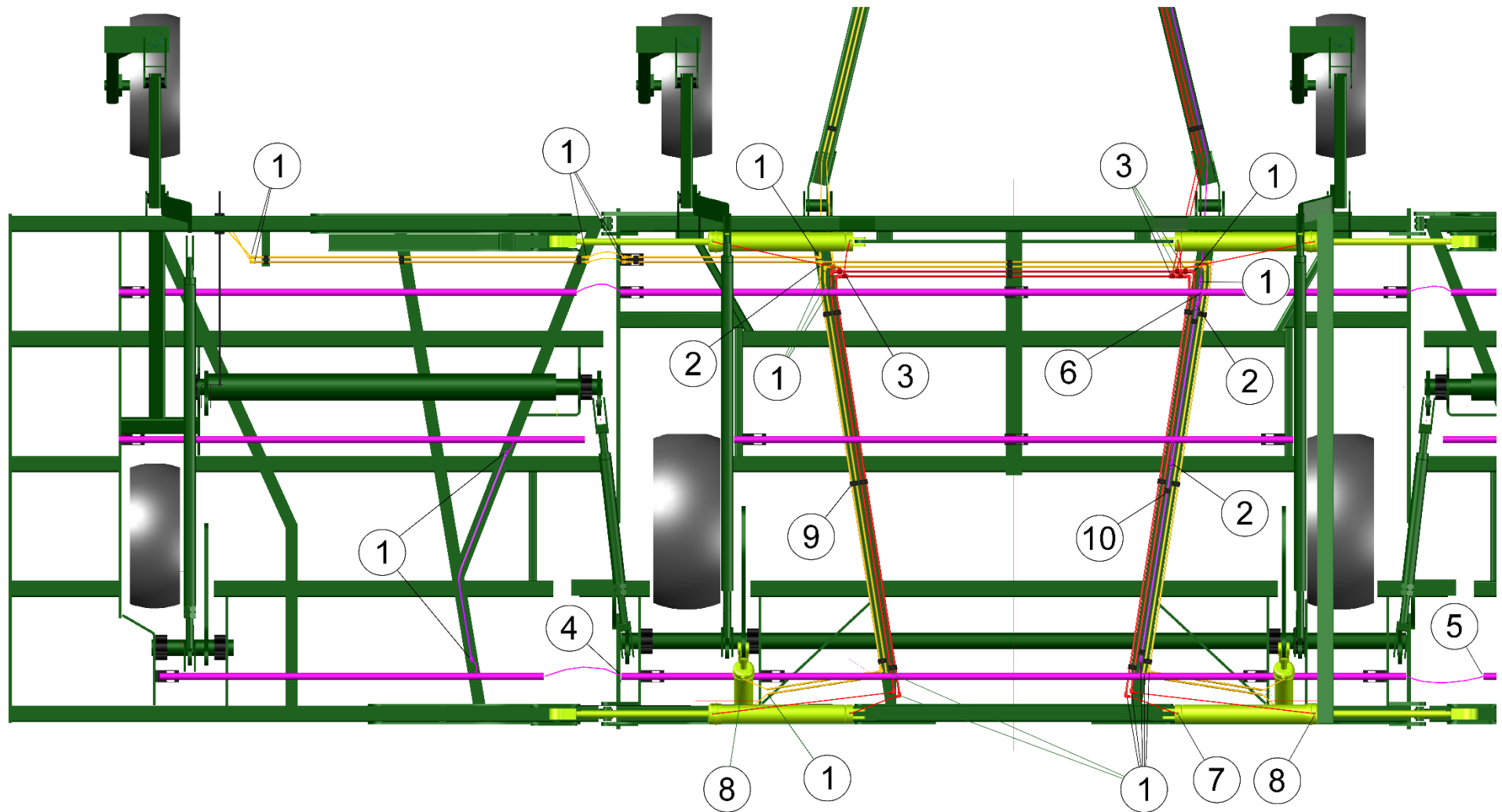
UNIVERSAL CULTIVATOR HYDRAULIC LAYOUT PIPES AND HOSES



HYDRAULIC HOSE AND PIPE LAYOUT – SMALL AND MEDIUM WINGS (STANDARD REAR FOLDING SYSTEM)

ITEM	PART No	DESCRIPTION	QTY
1	43902	TUBE ASSY, HYD. 3/4" JIC (F) L= 2011mm	1
2	43903	TUBE ASSY, HYD. 3/4" JIC (F) L= 1953mm	1
3	43904	TUBE ASSY, HYD. 3/4" JIC (F) L= 2330mm	1
4	43905	TUBE ASSY, HYD. 3/4" JIC (F) L= 2221mm	1
5	43906	TUBE ASSY, HYD. 3/4" JIC (F) L= 1146mm	2
6	43907	TUBE ASSY, HYD. 3/4" JIC (F) L= 2000mm	2
7	43908	TUBE ASSY, HYD. 3/4" JIC (F) L= 2544mm	2
8	43909	TUBE ASSY, HYD. 3/4" JIC (F) L= 2548mm	2
9	43910	TUBE ASSY, HYD. 3/4" JIC (F) L= 95mm	1
10	43911	TUBE ASSY, HYD. 3/4" JIC (F) L= 931mm	1
11	43912	TUBE ASSY, HYD. 3/4" JIC (F) L= 1160mm	1
12	43913	TUBE ASSY, HYD. 3/4" JIC (F) L= 2483mm	2
13	43914	TUBE ASSY, HYD. 3/4" JIC (F) L= 2478mm	2
14	43915	TUBE ASSY, HYD. 3/4" JIC (F) L= 715mm	2
15	43916	TUBE ASSY, HYD. 3/4" JIC (F) L= 686mm	2
16	43917	TUBE ASSY, HYD. 3/4" JIC (F) L= 1276mm	2
17	42044	HOSE ASSY, 3/8" x 3/4" JIC (F) ES, L= 1455	2
18	42043	HOSE ASSY, 3/8" x 3/4" JIC (F) ES, L= 1130	2
19	42043	HOSE ASSY, 3/8" x 3/4" JIC (F) ES, L= 1130	2
20	42044	HOSE ASSY, 3/8" x 3/4" JIC (F) ES, L= 1455	2
21	39372	HOSE ASSY, 3/8" x 3/4" JIC (F) SS, L= 400	2
22	39372	HOSE ASSY, 3/8" x 3/4" JIC (F) SS, L= 400	2
23	39372	HOSE ASSY, 3/8" x 3/4" JIC (F) SS, L= 400	2
24	42032	HOSE ASSY, 3/8" x 3/4" JIC (F) EE, L= 760	2
25	39372	HOSE ASSY, 3/8" x 3/4" JIC (F) SS, L= 400	1
26	39372	HOSE ASSY, 3/8" x 3/4" JIC (F) SS, L= 400	1
27	42043	HOSE ASSY, 3/8" x 3/4" JIC (F) ES, L= 1130	2
28	39378	HOSE ASSY, 3/8" x 3/4" JIC (F) ES, L= 700	2
29	39380	HOSE ASSY, 3/8" x 3/4" JIC (F) ES, L= 800	2
30	18284	HOSE ASSY, 3/8" x 3/4" JIC (F) ES, L= 1300	2
31	42307	HOSE ASSY, 3/8" x 3/4" JIC (F) ES, L= 400	1
32	42308	HOSE ASSY, 3/8" x 3/4" JIC (F) ES, L= 500	1

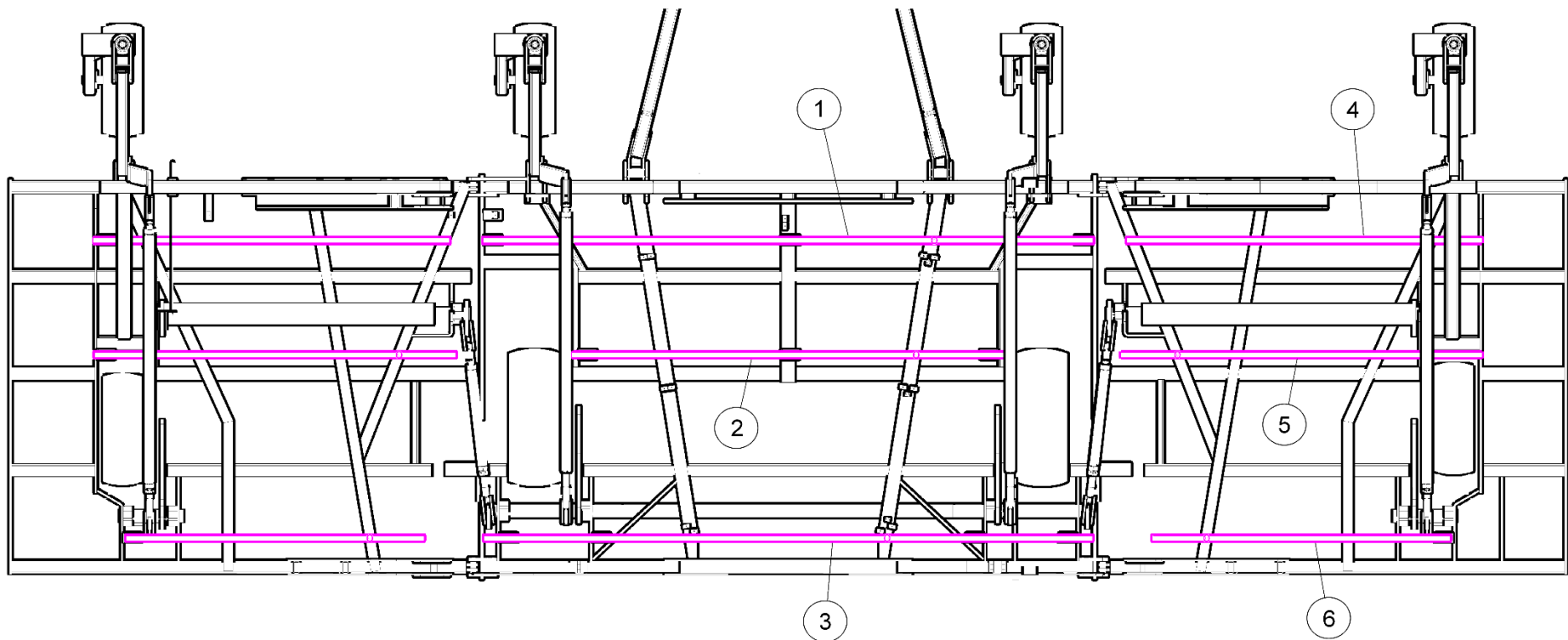
UNIVERSAL CULTIVATOR HYDRAULIC LAYOUT FITTINGS



HYDRAULIC FITTING LAYOUT – SMALL/MEDIUM WINGS (STANDARD REAR FOLDING SYSTEM)

ITEM	PART No	DESCRIPTION	QTY	ITEM	PART No	DESCRIPTION	QTY
1	39359	ELBOW 3/4" JIC M/M					
2	18291	TEE 3/4" JIC M/M/M					
3	23389	TEE 3/4" JIC F/M/M					
4	15244J1	ELBOW 3/8" BSPT x 3/4" JIC M/M					
5	42031	ELBOW 3/8" BSPT x 1/2" BSPT M/M					
	42026	VALVE RESTRICTOR (1.5mm ORIFICE)					
6	15525J1	NIPPLE 3/8" BSPT x 1/2" BSPT M/M					
	42026	VALVE RESTRICTOR (1.5mm ORIFICE)					
7	27371	ELBOW RESTRICTOR ASSY 3/4" UN x 3/4" JIC M/M					
8	15248J1	ELBOW, 3/4" UN x 3/4" JIC M/M					
9	39391	CLAMP, DOUBLE					
10	39392	CLAMP, SINGLE					

HYDRAULIC MANIFOLD LAYOUT

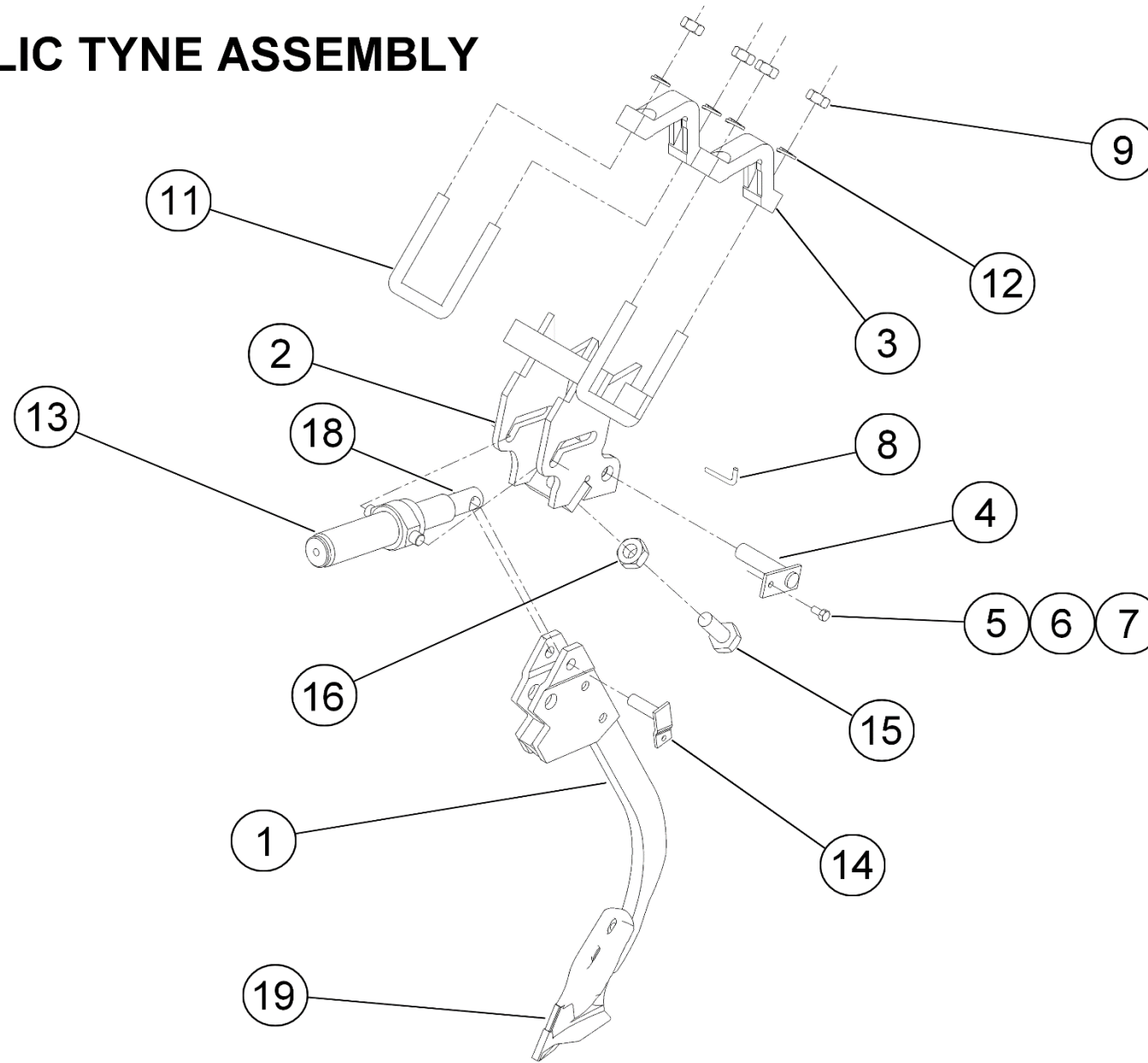


NOTE: TYNE HOSES ARE NOT SHOWN AS THEY VARY DEPENDING ON TYNE LAYOUT

HYDRAULIC MANIFOLD LAYOUT

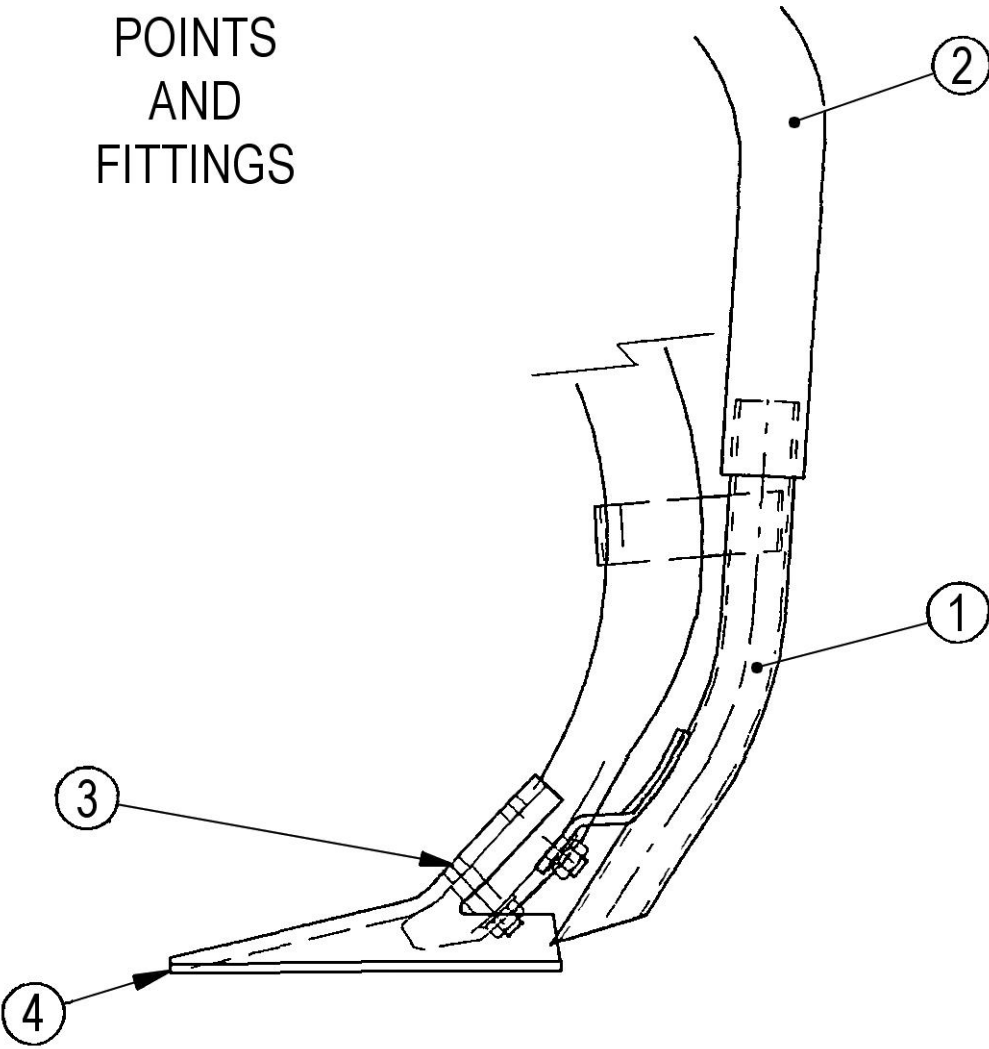
ITEM	PART No	DESCRIPTION	QTY	
1	43921	MANIFOLD ASSEMBLY – CENTRE / FRONT	1	
2	43922	MANIFOLD ASSEMBLY – CENTRE / MID	1	
3	43923	MANIFOLD ASSEMBLY – CENTRE / REAR	1	
4	43924	MANIFOLD ASSEMBLY – WING / FRONT	2	
5	43925	MANIFOLD ASSEMBLY – WING / MID	2	
6	43926	MANIFOLD ASSEMBLY – WING / REAR	2	
		FITTINGS		
7	17685J1	NIPPLE, 1/4" BSPT X 6/16" JIC		
8	24495	TEE, 9/16" X 9/16" JIC X 1/4" BSPT M/M/M		
9	17687J1	PLUG, 1/4" BSPT		
10	17068J1	ELBOW, 1/4" BSPT X 9/16" JIC M/M		
		HOSES (ALSO SEE HYD. TYNE PAGE)		
11	39388	HOSE ASSY 1/4", 9/16" JIC SS L = 900mm		
12	21214	HOSE ASSY 1/4", 9/16" JIC SS L = 1200mm		
13	42004	HOSE ASSY 1/4", 9/16" JIC SS L = 650mm		
14	17685J1	NIPPLE, 1/4" BSPT X 9/16" JIC (TO CONNECT TO 1/4" BSPT PORT ON TYNE CYLINDER – SEE HYD. TYNE PAGE FOR LOCATION INFORMATION)		
		NOTE: THE QUANTITY OF EACH FITTING AND HOSE WILL VARY DEPENDING ON THE TYNE LAYOUT OF EACH MACHINE.		

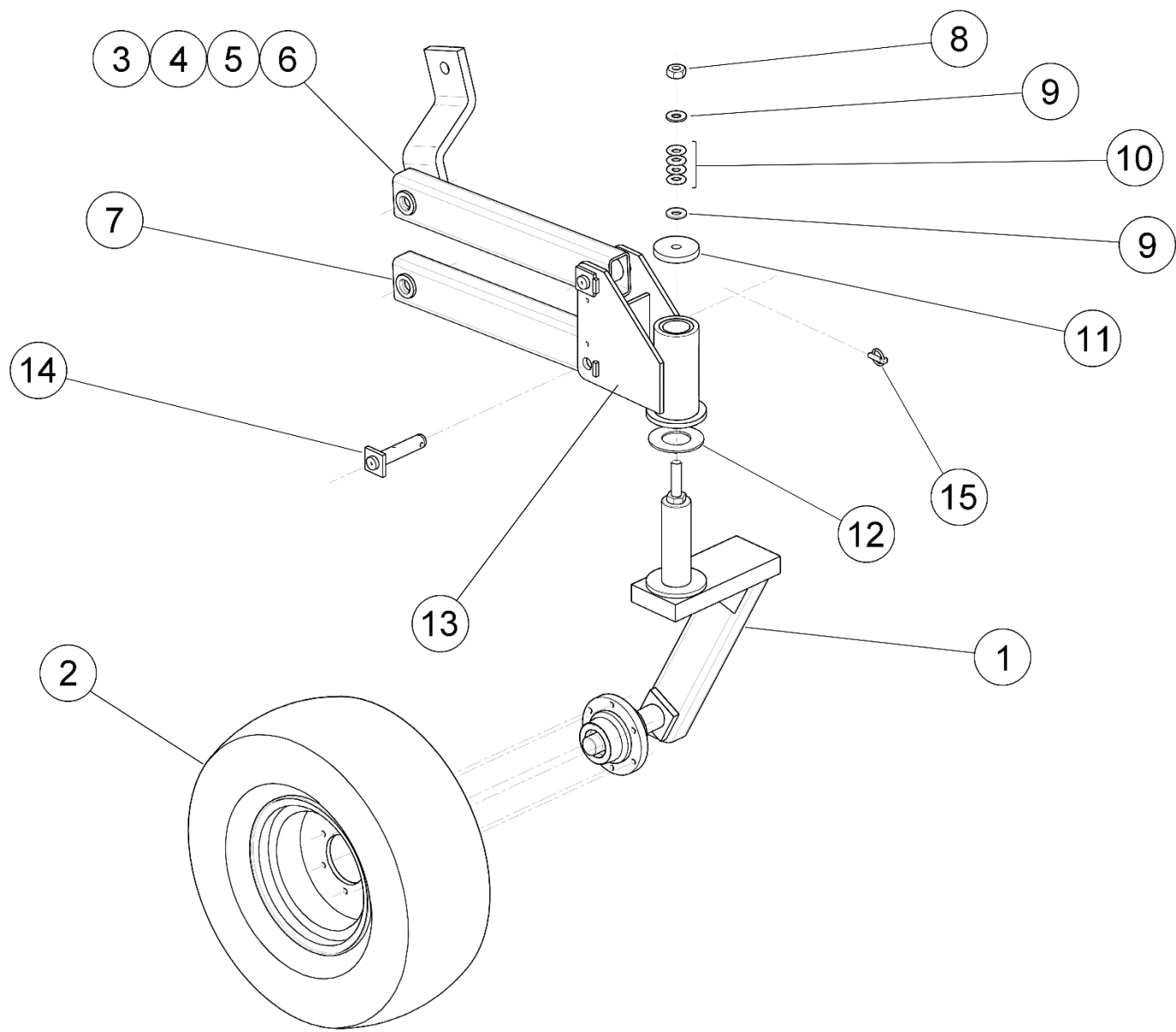
HYDRAULIC TYNE ASSEMBLY



HYDRAULIC TYNE ASSEMBLY

ITEM	PART No	DESCRIPTION	QTY	ITEM	PART No	DESCRIPTION	QTY
1	42904	TYNE ASSEMBLY	1	NOTE: A REPLACEMENT BUSH IS AVAILABLE FOR END OF RAM (ITEM 14)			
2	39614	CARRIER ASSEMBLY	1	18	37428	BUSH, TYNE	
3	19635	CLAMP, UPRIGHT CAST	2				
4	37125	PIN, PIVOT ASSEMBLY	1				
5	22434	BOLT, M10 x 30 Gr 8.8 PLATED	1				
6	17776J1	WASHER, SPRING 10mm DIAMETER	1				
7	17777J1	NUT, HEX M10 PLATED	1	19		POINT (OPTIONAL) – CONTACT YOUR DEALER FOR OPTIONS	
8	31786	PIN, TRANSPORT	1				
	H135-57	PIN, HAIR	1				
9	18022	NUT, HEX M20 PLATED	4				
10	H135-57	PIN, HAIR	1				
11	39623	“U” BOLT M20	2		42904 37112	42905 CONSISTS OF: TYNE ASSEMBLY BUSH, TYNE PIVOT	1 2
12	18023	WASHER, SPRING 20mm DIAMETER	4				
13	39613	RAM ASSEMBLY Ø1¾” COMPLETE	1				
14	39620	PIN, PIVOT ASSEMBLY	1				
15	17617J1	SETSCREW, HEX M24 x 55 Gr8.8 PLATED	1				
16	18042	NUT, HEX M24 PLATED	1				
17	18596	NIPPLE GREASE	1	THE FOLLOWING ARE USED TO CONNECT EACH TYNE TO THE MANIFOLDS:			
				22	39388 21214 42004	HOSE ASSY ¼”, 9/16” JIC SS L = 900mm HOSE ASSY ¼”, 9/16” JIC SS L = 1200mm HOSE ASSY ¼”, 9/16” JIC SS L = 650mm	
	39619	TYNE ASSEMBLY, COMPLETE – HYDRAULIC (ITEMS 1-17)		(THE LENGTH OF HOSE USED FOR EACH TYNE DEPENDS ON ITS LOCATION ON THE FRAME, THE HOSES ABOVE ARE THE AVAILABLE LENGTHS)			
		RAM ASSEMBLY, 1¾” COMPLETE (39613) CONSISTS OF:		23	17685J1 17068J1	NIPPLE, ¼” BSPT x 9/16” JIC ELBOW, ¼” BSPT x 9/16” JIC	
	43897	BARREL ASSEMBLY, Ø1¾”	1				
	19642	CAP, DUST (KELVINDALE 4CP)	1				
	19639	SEAL, L301	1				
	19638	SCRAPER, 62-175	1				
	37120	ROD, BARREL Ø1¾”	1				
	37428	BUSH, TYNE	1				
NOTE: QUANTITIES ARE FOR A SINGLE TYNE ASSEMBLY.							

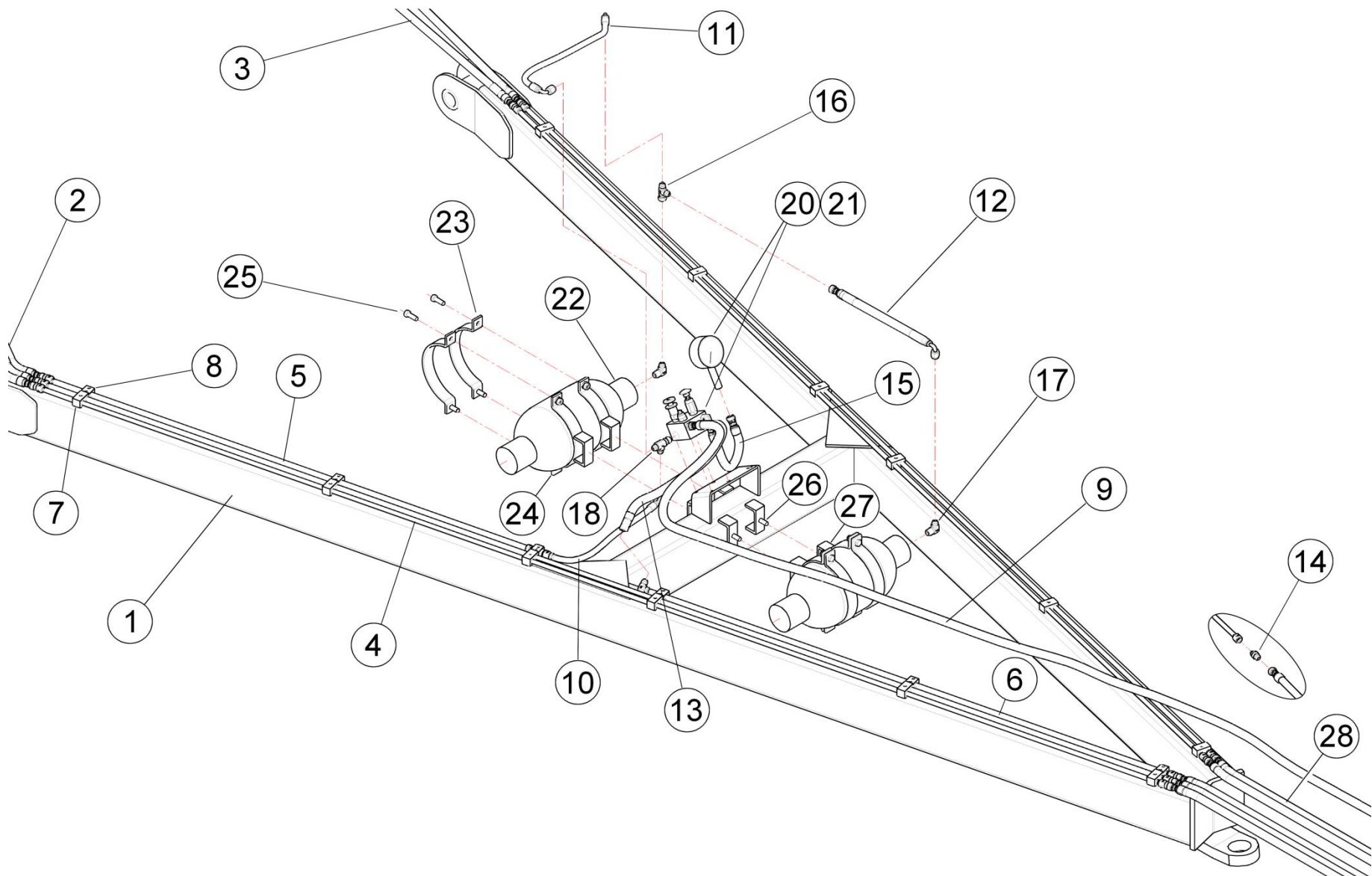
ITEM	PART No	DESCRIPTION	QTY	
1	37200	BOOT ASSY, SINGLE		<p>POINTS AND FITTINGS</p> 
2	19450	HOSE, BARFLO – 35 I.D.		
3	37012	PLOW BOLT/NUT, CSK 1¾" x ½"		
4	37008	SWEEP 202T, 250mm x 8mm		



CASTOR ASSEMBLIES

ITEM	PART No	DESCRIPTION	QTY	ITEM	PART No	DESCRIPTION	QTY
1	37347	HUB / AXLE CASTOR ASSEMBLY	4				
2	42571	WHEEL ASSY (See page 23)	4				
3	43771	ARM ASSEMBLY, COMPLETE TOP (CENTRE LH)	1				
4	43774	ARM ASSEMBLY, COMPLETE TOP (WING LH)	1				
5	43772	ARM ASSEMBLY, COMPLETE TOP (CENTRE RH)	1				
6	43775	ARM ASSEMBLY, COMPLETE TOP (WING RH)	1				
7	39032	ARM ASSEMBLY, COMPLETE BOTTOM	4				
8	18042	NUT, HEX M24	4				
9	FBW11	WASHER, FLAT 1"	8				
10	37810	DISC, SPRING	16				
11	37298	PLATE, CASTOR	4				
12	37341	PAD, BRAKE - CASTOR	4				
13	37244	CASTOR, WELDED ASSEMBLY	4				
14	43858	PIN ASSEMBLY, CASTOR	16				
	18596	NIPPLE, GREASE	16				
15	31940	LYNCHPIN	16				
16	17626J1	TRANSFER, SCALE	1				
17	39242	POINTER ASSEMBLY, INDICATOR	1				
<p>Note: Items 16 and 17 are only fitted to the right-hand wing castor assembly (item 11 on the front of the castor as shown and item 12 against the left side castor plate)</p>							

ACCUMULATOR & CONTROL ASSEMBLY



ACCUMULATOR & CONTROL ASSEMBLY

ITEM	PART No	DESCRIPTION	QTY	ITEM	PART No	DESCRIPTION	QTY
1	43735	HITCH ASSEMBLY	1				
2	42097	HOSE ASSY, 3/8" x 3/4" JIC ES L = 1450	3				
3	42001	HOSE ASSY, 3/8" x 3/4" JIC ES L = 1200	2				
4	39381	HYD. TUBE ASSY	4				
5	43918	HYD. TUBE ASSY L=2106	1				
6	43919	HYD. TUBE ASSY L=1986	1				
7	39391	CLAMP, TUBE- DOUBLE	12				
8	39392	CLAMP, TUBE - SINGLE	6				
9	39992	HOSE ASSY, 3/8" x 3/4" JIC ES L =3740	1				
10	42004	HOSE ASSY, 3/8" x 3/4" JIC SS L = 650	1				
11	42032	HOSE ASSY, 3/8" x 3/4" JIC EE L = 760	1				
12	39385	HOSE ASSY, 3/8" x 3/4" JIC ES L = 510	1				
13	42004	HOSE ASSY, 3/8" x 3/4" JIC SS L = 650	1				
14	18851	NIPPLE 3/4" JIC M/M	10				
15	39372	HOSE ASSY, 3/8" x 3/4" JIC SS L= 400	1				
16	23389	TEE 3/4" JIC F/M/M	1				
17	15494J1	ELBOW 12" BSPT x 3/4" JIC M/M	2				
18	37885	TEE 3/4" JIC M/M/F	1				
19	14598J1	NIPPLE 3/4" JIC x 1/2" BSPT	3				
20	44074	STD ACCUMULATOR CONTROL VALVE KIT	1				
21	18659	SCREW, M6 x 25	4				
22	37823	ACCUMULATOR, 10L	2				
23	37820	CLAMP (Suit 10 L Accumulator) - Pair	2				
24	37822	CLAMP (Suit 10 L Accumulator)	4				
25	18726	BOLT, HEX M12 x 40	8				
	18414	NUT, HEX M12	8				
	17616J1	WASHER, SPRING 12mm	8				
26	17606J1	BOLT M16 x 25	4				
27	18021	NUT M16	4				
	17606J1	WASHER, SPRING 16mm	4				
28	42000	HOSE ASSY, 3/8" x 3/4" JIC ES L =1650	5				
29	36556	JACK (NOT SHOWN)	1				

TRANSFERS



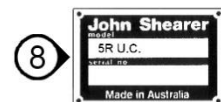
JOHN SHEARER



JOHN SHEARER

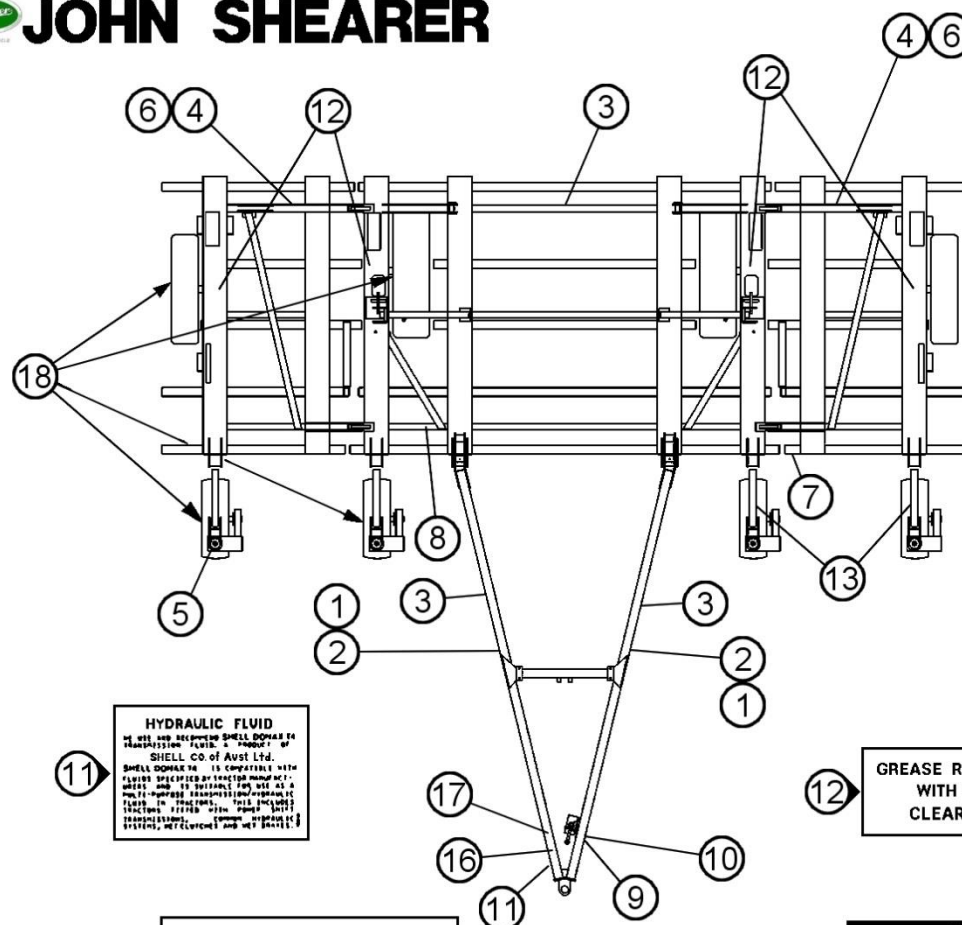


7 sling here



9 **WARNING**
MAXIMUM TOWING
SPEED
25 km/h

10 **WARNING**
IMPROPER SYSTEMS INVOLVE OIL
CLEAN OIL
ENSURE THAT YOUR TRACTOR HAS
A CLEAN OIL AND
OIL FILTERING OIL FILTER.
PLEASE DO NOT OIL THIS IMPLEMENT



11 **HYDRAULIC FLUID**
WE USE AND RECOMMEND SHELL DOLMAR 10
TRANSMISSION FLUID. A PRODUCT OF
SHELL CO. OF AUST LTD.
SHELL DOLMAR 10 IS COMPATIBLE WITH
FLUIDS SPECIFIED BY TRACTOR MANUFACTURERS
AND IS SUITABLE FOR USE AS A
MULTI-PURPOSE TRANSMISSION/HYDRAULIC
FLUID IN TRACTORS. THIS INCLUDES
TRACTORS FITTED WITH POWER
STEERING, COMMON ROPS/ROPS
SYSTEMS, RETARDERS AND RETARDERS.

14 **IMPORTANT**
This tube contains a :—
PARTS & INSTRUCTION MANUAL
—Read it prior to using implement.

Universal Cultivator

3 **DANGER**
KEEP AREA BELOW WINGS CLEAR AT ALL TIMES!
FIT LOCKING PIN TO FOLDED WINGS.

6 **CAUTION**
DO NOT FOLD, OR UNFOLD
IMPLEMENT WHEN IT IS
DISCONNECTED FROM THE TRACTOR

16 **DANGER**
DO NOT RIDE ON THIS IMPLEMENT!



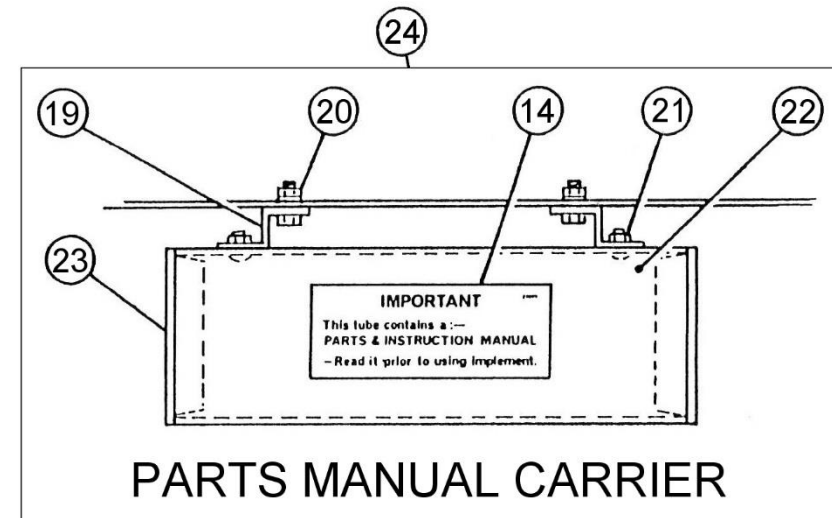
12 **GREASE ROCKSHAFT BEARINGS
WITH WHEELS RAISED
CLEAR OF THE GROUND**

13 **CAUTION**
KEEP HANDS
CLEAR



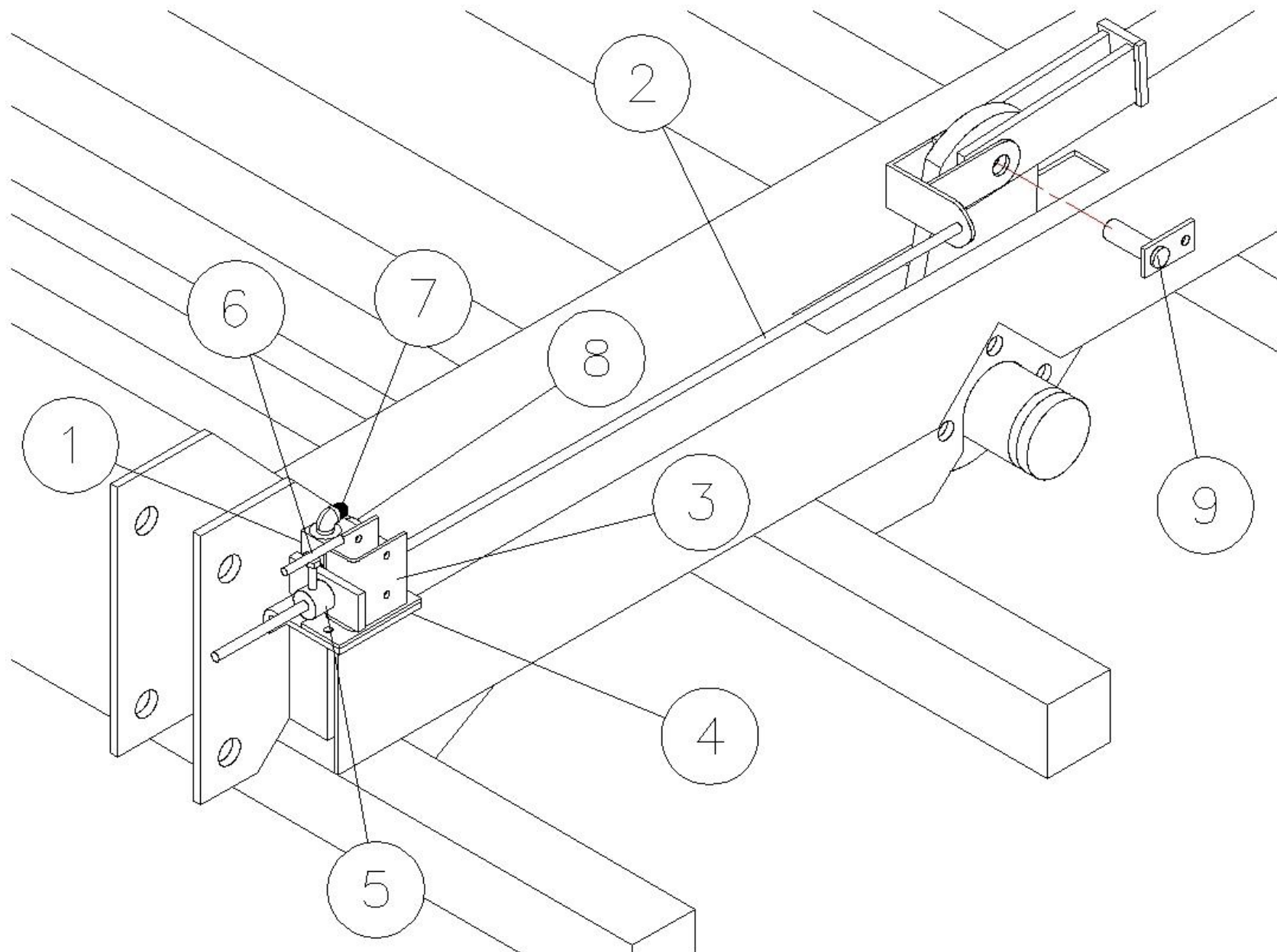
TRANSFERS

ITEM	PART No	DESCRIPTION	QTY
1	36242	TRANSFER, JOHN SHEARER LOGO	2
2	15875J2	TRANSFER, JOHN SHEARER (LARGE)	2
3	37140	TRANSFER, UNIVERSAL CULTIVATOR	3
4	15873J2	TRANSFER, JOHN SHEARER (SMALL)	2
5	17626J1	TRANSFER, SCALE	1
6	18970	TRANSFER, DANGER	2
7	15854J1	TRANSFER, SLING HERE (EACH CORNER)	12
8	15968J1	PLATE, MODEL & SERIAL NUMBER	1
	16161J1	SCREW, DRIVE 5/16"	4
9	18949	TRANSFER, WARNING MAX TOWING SPEED	1
10	15982J1	TRANSFER, CLEAN OIL	1
11	19618	TRANSFER, HYDRAULIC FLUID	1
12	30473	TRANSFER, GREASE ROCKSHAFT	4
13	37337	TRANSFER, CAUTION KEEP HANDS CLEAR	4
14	20809	TRANSFER, PARTS MANUAL	1
15	19172	TRANSFER, SCALE	1
16	23798	TRANSFER, DO NOT FOLD/UNFOLD	1
17	22699	TRANSFER, DO NOT RIDE	1
18	27409	TRANSFER, GREASE 200 HRS	8
19	20810	SUPPORT, TUBE CARRIER	2
20	18658	SCREW, 1/4" x 20 x 3/4" SELF TAP	2
21	GB4	BOLT/NUT, GUTTER 1/2" x 1/4" BSW	2
22	20814	TUBE, CARRIER	1
23	20813	PLUG, TUBE CARRIER	2
24	21531	KIT, CARRIER PARTS MANUAL	1



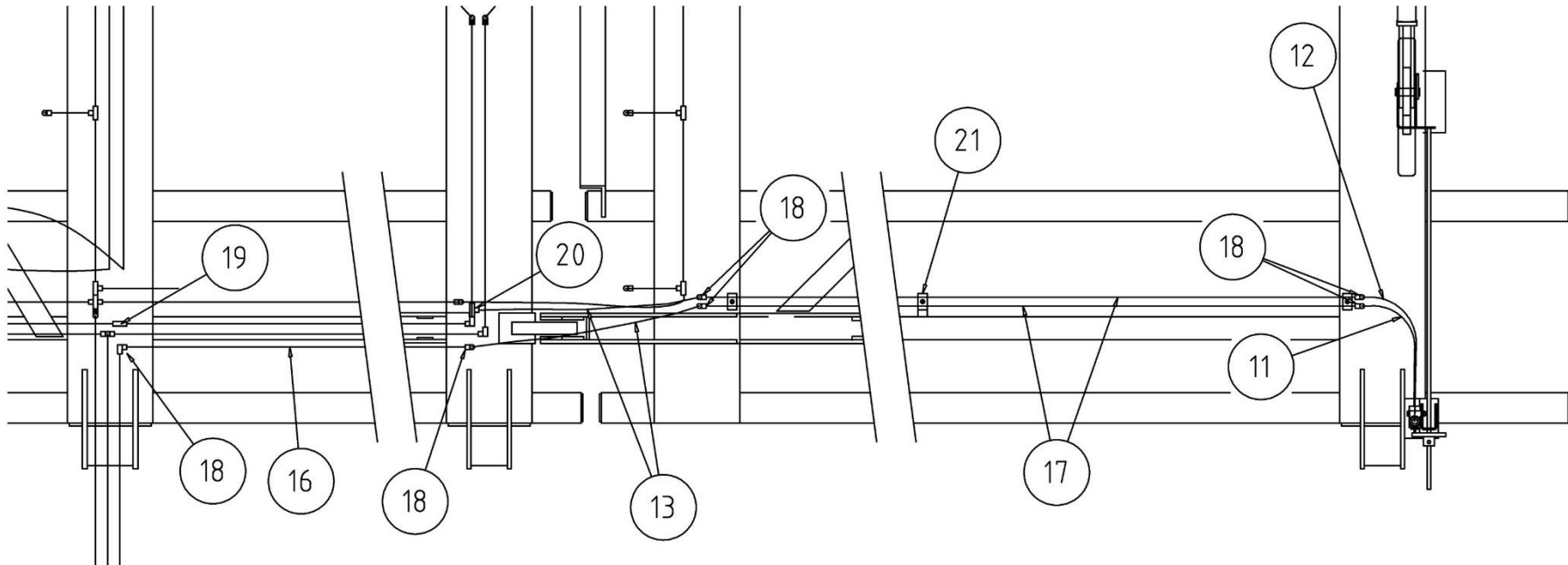
OPTIONAL ACCESSORIES

PART NUMBER	ITEM	PAGE.
42568	HYDRAULIC DEPTH STOP – MEDIUM WING	42-43
42280	HEIGHT ADJUSTABLE TYNES	44-45
36973	SPRING RELEASE TYNE ASSEMBLIES	46-47
	RIB 16/70X20 CENTRE TYRES (IN LIEU OF SURE GRIP TYRES)	
39978	LUG 11.5/80-15.3 X 12 PLY TYRES FOR CASTOR & WING WHEELS (IN LIEU OF RIB TYRES)	
39979	15.3 x 9" RIM ASSY (To suit 11.5/80-15.3 or 12.5/80-15.3 tyres)	
42132	RECOIL CONTROL KIT (STANDARD ON MACHINES BUILT AFTER APPROXIMATELY 1/12/04)	
VARIOUS	AIRSEEDER KITS – CONTACT JOHN SHEARER SALES	
39846	2 TYNE EXTENSION KIT	
VARIOUS	SPRING TOOTH HARROWS	

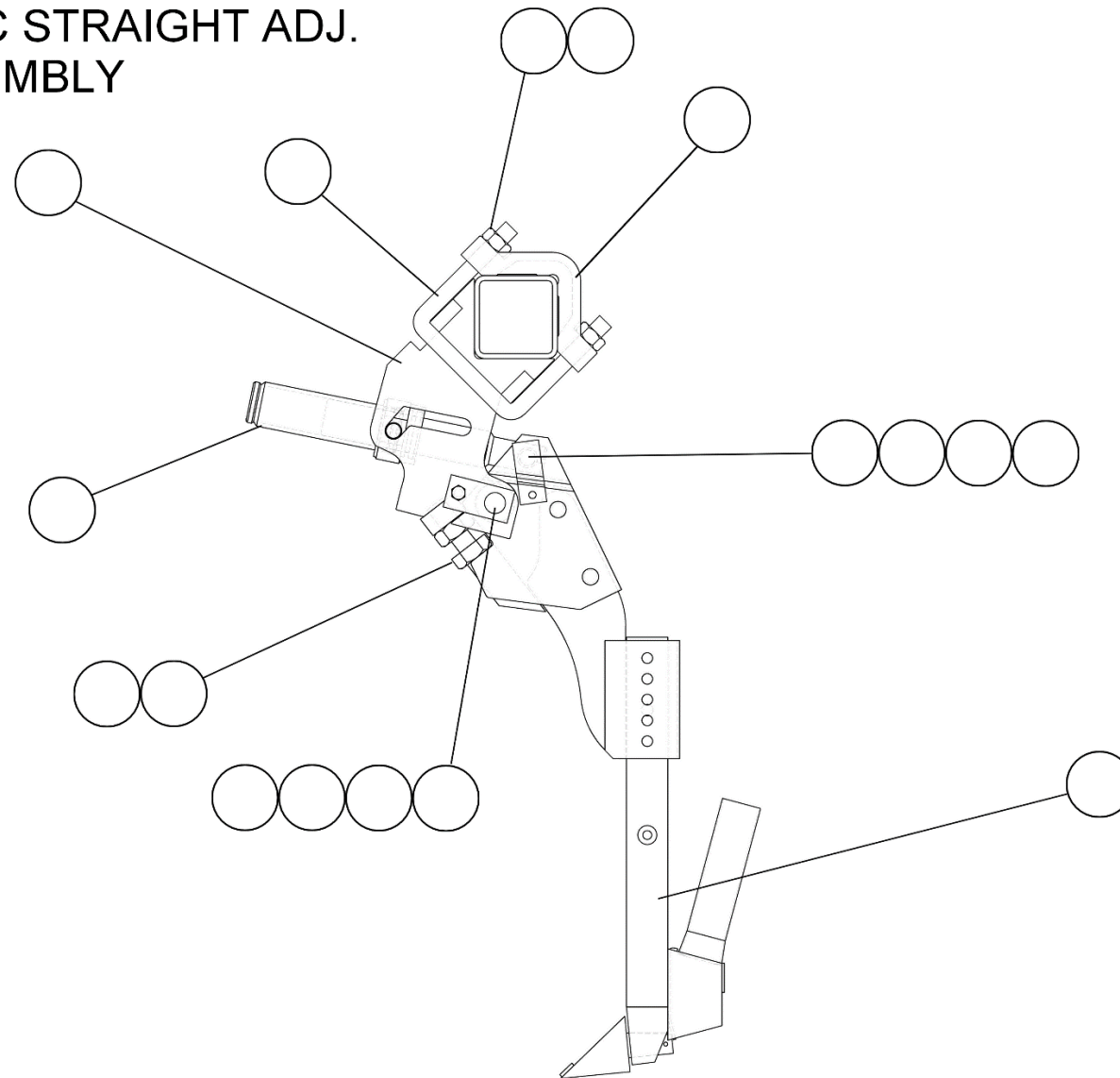


HYDRAULIC DEPTH STOP KIT (OPTIONAL)

ITEM	PART No	DESCRIPTION	QTY	ITEM	PART No	DESCRIPTION	QTY
1	42501	HYDRAULIC DEPTH STOP KIT – LARGE WING		8	18850	NIPPLE ¾" UNO x ¾" JIC M/M	1
	42568	HYDRAULIC DEPTH STOP KIT – MEDIUM WING		9	39044	PIN (EXISTING)	
	42566	HYDRAULIC DEPTH STOP KIT – SMALL WING		10	17088J1	PLUG ¾" UNO (AT BOTTOM OF VALVE - NOT SHOWN)	1
	42314	VALVE DCV ¾" UNO	1	11	42307	HOSE ¾" JIC ES L=400mm	1
	22997	BOLT M8 x 70	2	12	42308	HOSE ¾" JIC ES L=500mm	1
	18464	NUT M8	2	13	18284	HOSE ¾" JIC SS L=1300mm	2
	18465	WASHER Ø8	2	14	39391	CLAMP, DOUBLE	3
2	42302	ROD ASSEMBLY	1	15	39392	CLAMP, SINGLE	3
3	42303	MOUNT ASSEMBLY	1	16	39362	HYD. PIPE ½" L=3222mm	1
	22434	BOLT M10 x 30	2	17	42516	HYD. PIPE ½" L=2890mm (LARGE WING)	2
	17777J1	NUT M10	2		42569	HYD. PIPE ½" L=1970mm (MEDIUM WING)	2
	17776J1	WASHER Ø10	2		42567	HYD. PIPE ½" L=1050mm (SMALL WING)	2
4	42304	BRACKET, MOUNTING (WELDED TO FRAME)	1	18	39359	ELBOW ¾" JIC M/M	6
5	42305	PLATE, STOP - ADJUSTABLE	1	19	18851	NIPPLE ¾" JIC M/M	1
6	42306	"T" HANDLE	1	20	23389	TEE ¾" JIC F/M/M	1
7	15248J1	ELBOW ¾" UNO x ¾" JIC M/M	1	21	42517	BRACKET, ANGLE – CLAMP SUPPORT	1



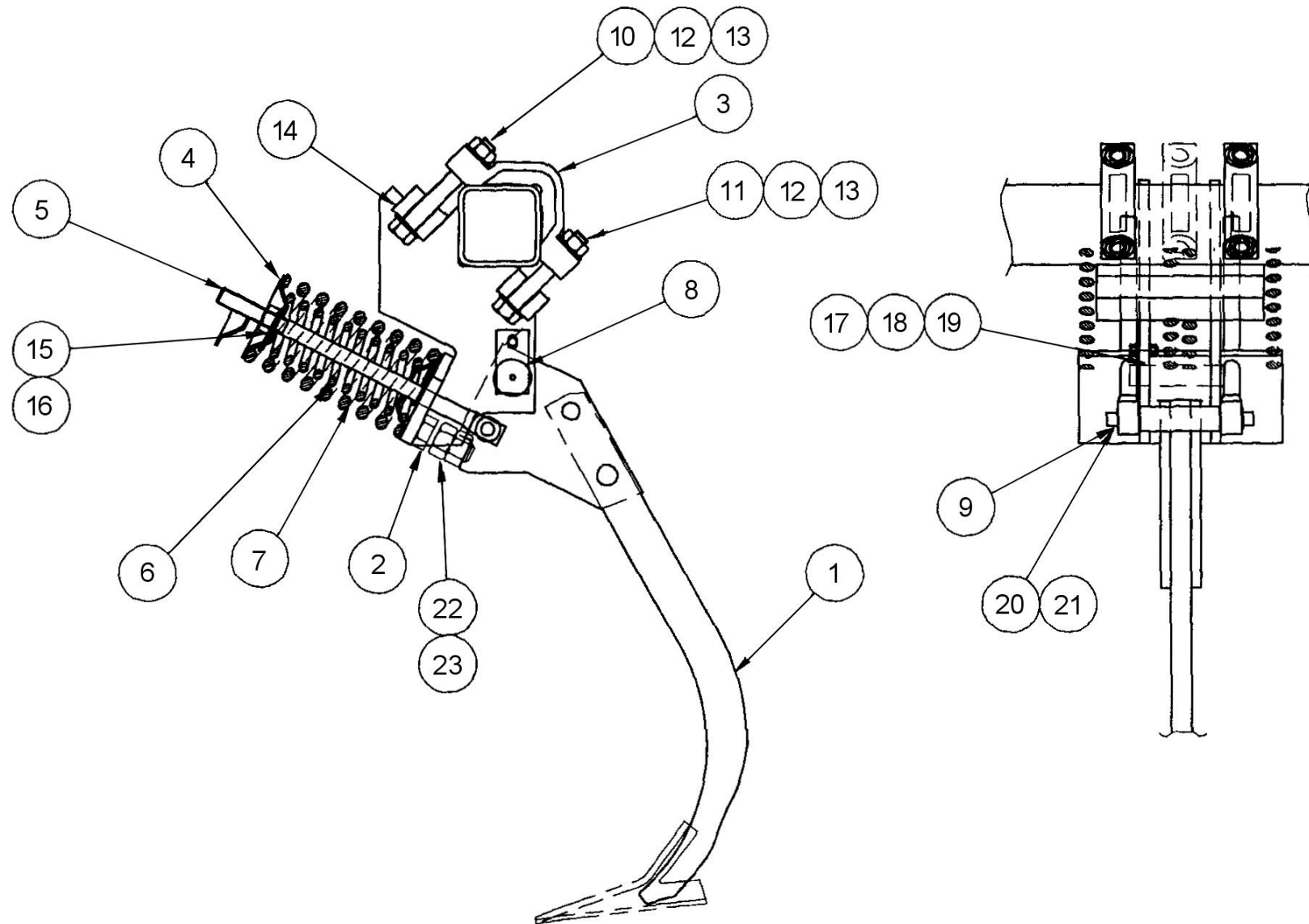
HYDRAULIC STRAIGHT ADJ. TYNE ASSEMBLY



HEIGHT ADJUSTABLE HYDRAULIC TYNE ASSEMBLY (OPTIONAL)

ITEM	PART No	DESCRIPTION	QTY	ITEM	PART No	DESCRIPTION	QTY
1	42279	TYNE ASSEMBLY – U/C	1				
2	39049	CARRIER ASSEMBLY	1			ITEM 1 CONSISTS OF:	
3	19635	CLAMP, UPRIGHT CAST	2		42252	TYNE/BOOT ASSY – U/C	
4	37125	PIN, PIVOT ASSEMBLY	1		42247	ADAPTOR ASSY – U/C	
5	22434	BOLT, M10 x 30 Gr 8.8 PLATED	1		H160-105	PIN LOCKING	
6	17776J1	WASHER, SPRING 10mm DIAMETER	1		H160-106	HAIRCLIP	
7	17777J1	NUT, HEX M10 PLATED	1		37112	BUSH, TYNE	
8	37818	PIN, TRANSPORT	1		37109	BOSS	
9	23176	PIN, RAM YOKE	1		39001	PLATE, TYNE R/H	
10	18022	NUT, HEX M20 PLATED	4		39002	PLATE, TYNE L/H	
11	H135-57	PIN, HAIR	1		16884J1	NUT, M24 Gr8 PLTD	
12	19047	BOLT, HEX M20 x 150 Gr 8.8 PLATED	2		37394	RIVET Ø16 x 73MM	
13	18023	WASHER, SPRING 20mm DIAMETER	4				
14	37119	RAM ASSEMBLY Ø1¼" COMPLETE	1			*CONVERSION KIT FOR STANDARD HYDRAULIC	
15	37344	PIN, PIVOT ASSEMBLY	1			TYNE IS 42279 (FOR EACH TYNE)	
16	17586J1	PIN, COTTER – SPLIT 5 x 32	2				
17	22928	WASHER, STRUCTURAL M20	4				
18	18806	PIN, SELLOCK 3 x 30mm	1				
19	23421	BOLT, HEX M20 x 130 Gr 8.8 PLATED	2				
20	17617J1	SETSCREW, HEX M24 x 55 Gr8.8 PLATED	1				
21	18042	NUT, HEX M24 PLATED	1				
22	18596	NIPPLE GREASE	1				
	42280	TYNE ASSEMBLY, COMPLETE – HYDRAULIC (ITEMS 1-22)					
		RAM ASSEMBLY, 1¼" COMPLETE CONSISTS OF:				Note: This tyne uses Keech spear points such as DDP30T (42182)	
	37121	BARREL ASSEMBLY, Ø1¼"	1				
	19642	CAP, DUST (KELVINDALE 4CP)	1				
	19639	SEAL, LUD. L301	1				
	19638	SCRAPER, J.WALKER 62-175	1				
	37120	ROD, BARREL Ø1¼"	1				
	37428	BUSH, TYNE	1				

SPRING RELEASE TYNE ASSEMBLY



SPRING TYNE ASSEMBLY (OPTIONAL)

ITEM	PART No	DESCRIPTION	QTY	ITEM	PART No	DESCRIPTION	QTY
1	37392	TYNE ASSEMBLY	1				
2	37389	CARRIER ASSEMBLY	1				
3	19635	CLAMP, UPRIGHT CAST	2				
4	22926	CUP, SPRING	2				
5	37380	ROD, SPRING	2				
6	37384	SPRING, TYNE 12mm	2				
7	37385	SPRING, TYNE 17mm	2				
8	37125	PIN, PIVOT ASSEMBLY	1				
9	37383	SHAFT	1				
10	19057	BOLT, HEX M20 x 150 Gr 8.8	2				
11	23421	BOLT, HEX M20 x 130 Gr 8.8	2				
12	18023	WASHER, SPRING 20mm DIAMETER	4				
13	18022	NUT, HEX M20 PLATED	4				
14	22928	WASHER, STRUCTURAL 20mm DIAMETER	4				
15	18312	WASHER, FLAT 20mm DIAMETER	2				
16	22026	NUT, NYLOC M20	2				
17	17776J1	WASHER, SPRING 10mm DIAMETER	1				
18	17777J1	NUT, HEX M10 PLATED	1				
19	18824	BOLT, HEX M10 x 30 PLATED	1				
20	21475	WASHER, FLAT 16mm DIAMETER	2				
21	18479	PIN, COTTER – SPLIT 4 x 25	2				
22	17617J1	BOLT, HEX M24 x 55 Gr 8.8	1				
23	18042	NUT, HEX M24	1				
	36973	TYNE ASSEMBLY, COMPLETE – SPRING (ITEMS 1-23)					