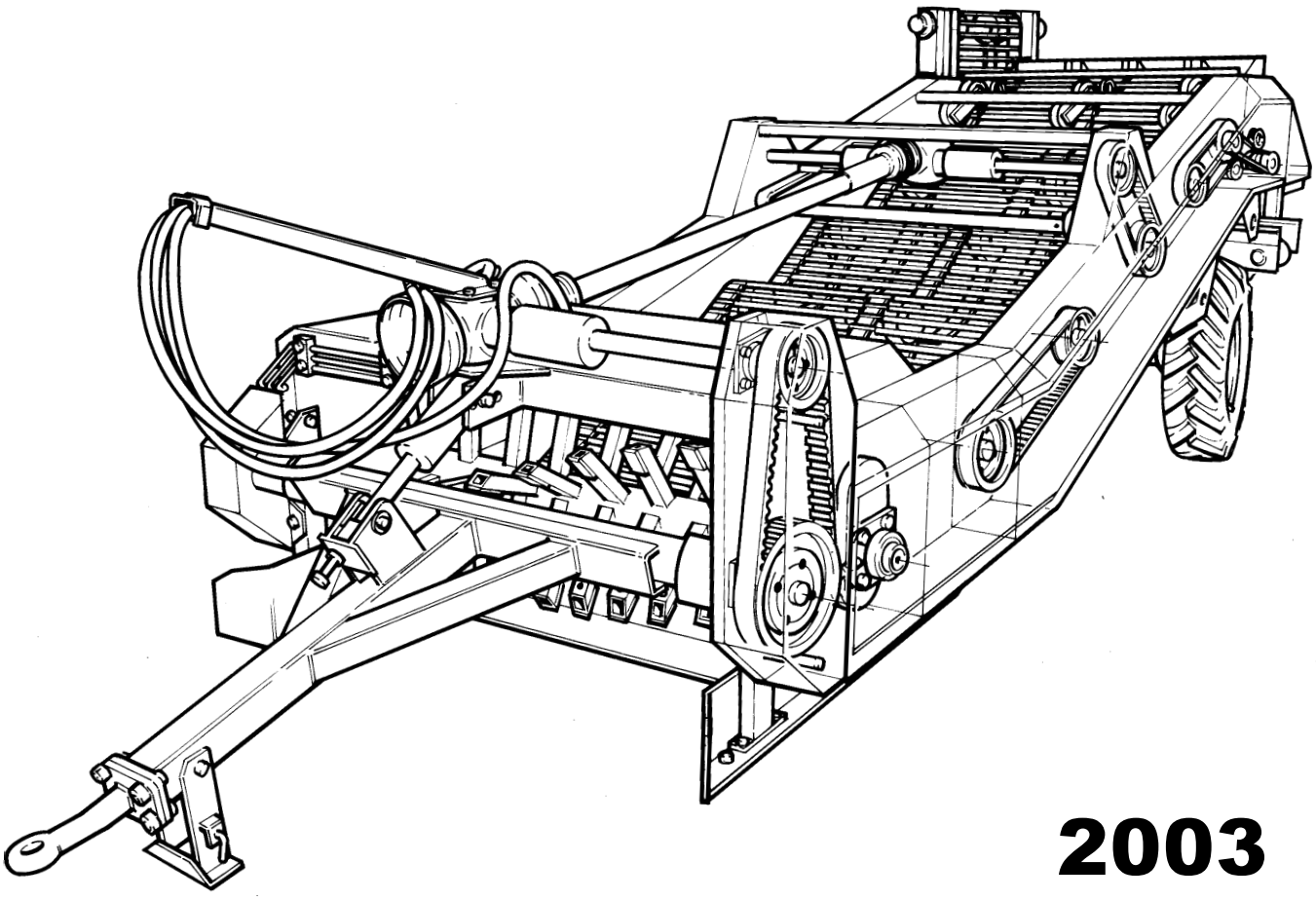
Reekie

Operator's Instruction Manual

Reliance

Stone & Clod Separators

Multiweb Models: 4153 • 5154 • 5173 • 5174
Speedstar Models: 5154 • 5174



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INTRODUCTION

The Reliance separator is the latest addition to the highly successful and innovative Netagco Reekie potato system.
These new Multi-web and SpeedStar stone and clod separators are designed to give accurate separation in all soil conditions and to create ideal beds for growing potatoes and other root crops resulting in faster mechanical harvesting with minimal tuber damage.
The revolutionary design incorporates a modular integrated chassis system with complete containment of all drive lines, hydraulic and electrical services.
The Reliance is available in 1500mm wide and 1700mm wide versions.

This manual is intended to guide the owner / operator in getting the best from his machine. It also contains important information on Safety procedures as well as information on machine operation and maintenance. Following these instructions helps to avoid danger, keeps repair costs and downtime to a minimum, increases reliability and generally prolongs the life of the machine.

Machine operators should also acquaint themselves with the relevant national regulations for accident prevention and the recognised codes of practice for safe and proper working pertaining to the country in which the Separator is to be operated.

NOTE:

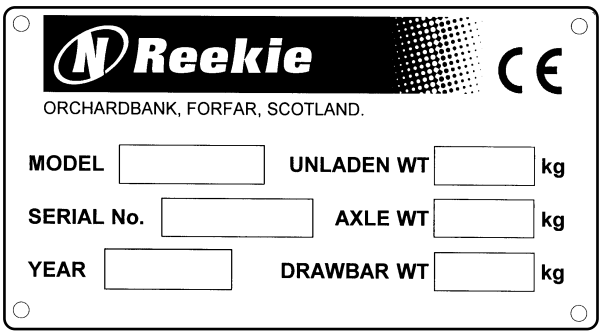
On any new machine or any machine which has been repaired, some parts may tend to work loose in the first few days of operations. It is essential to check regularly during this "bedding - in" period for the possibility of loose nuts and bolts.

All steel rod and rubber belt conveyors are referred to throughout the manual as “webs”.

As a general rule the gap between separator web rods should always be less than that on the harvester to be used for lifting the crop.

All references to right and left are taken from a position behind the machine and facing in the direction of travel when working unless otherwise stated.

The machine serial number is located on the main frame near the front right hand corner of the chassis. Owners should log the serial number in the space provided below and should quote this number in any future correspondence.



Note: The Operating Efficiency of Land Working Machines is dependent on the suitability of the working conditions. If the land is too wet and/or the inclines too steep the efficiency of the machine could be affected.

IMPORTANT NOTICE

There are different rules, regulations and standards applied in relation to product safety and liability throughout the European Community and indeed further afield.
Whilst Netagco Reekie products are manufactured to the highest possible specification in the UK and whilst we take care to ensure that any products supplied outwith the UK comply with all the national rules and regulations, it may well be the case that this product purchased by you will not meet the relevant requirements of a neighbouring jurisdiction.
Accordingly should you use or re-sell the product to which this manual relates it is your absolute responsibility to ensure that the product complies with the relevant safety and liability legislation of whatever kind in the territory in which the product is used or re-sold.

Netagco Reekie *reserve the right to alter specifications as and when necessary.*

CONTENTS

SECTION 1 SAFE USE OF SEPARATOR

IGNORING THESE INSTRUCTIONS MAY RESULT IN SERIOUS INJURY

WARNING AND SYMBOL

This symbol is used throughout the book to indicate areas where particular care is required to ensure safe operation and maintenance of machine.

DESIGNATED USE

This machine is designed solely for the separation and removal of stone and clod from beds previously formed by deep ridging and bedmaking techniques. Use in any other way is considered contrary to the intended use unless approved by the manufacturer. The manufacturer/supplier cannot be held responsible for any damage resulting from non-approved usage of machine or from unauthorised modification of machine.

Compliance with and strict adherence to the conditions of operation, service and repair as specified by the manufacturer, also constitute essential elements of the intended use.

The machine has been manufactured to the highest possible standards using carefully selected materials and components and in accordance with recognised safety regulations. Nevertheless, its use may constitute a risk to life and limb of the user or of third parties, or cause damage to the machine and to other material property.

The machine must only be used in perfect working condition, in accordance with its designated use and with the instructions set out in the operator's manual. Any functional disorders, especially those affecting the safety of the machine should be rectified immediately.
Only competent persons who have been fully trained in the use of the separator and separator safety procedures and who are aware of the risks involved should be allowed to use the machine.

MACHINE MANAGEMENT & SAFE PRACTICE

This operator's manual must always accompany the machine and be available for immediate use. It should be protected with waterproof covering and stored whenever possible in a dry environment. Suppliers of both new and second hand machines are advised to retain documentary evidence that this manual was provided with the machine.

Operators are advised to read and observe all other generally applicable legal and other mandatory regulations relevant to accident prevention and environmental protection. These compulsory rules and regulations may also deal with the handling of substances hazardous to health, issuing and wearing of personal protective equipment, or traffic regulations.

Make use of manufacturers/dealers training courses. They will help to ensure the safe and efficient use of the stone and clod separator.

Before commencement of work - make sure everyone working on the machine has read and understood the instruction book and in particular the chapter on safety. Reading the instructions after work has begun is too late.
This also applies to persons working occasionally on machine, e.g. during setting-up, maintenance or cleaning of machine.

Consult the tractor manufacturers manual for instructions on mounting implements and safe working methods.

Always inspect field for hazards prior to operation of machine. e.g. Large boulders, overhead power lines, posts, poles, uneven ground etc. Take due care to avoid obstacles and whilst working on unstable ground/soil conditions.

Before starting work check that all services are working properly and that all guards are in good condition and securely fitted.

Ensure that all warning and safety decals are in good condition and legible.
Replace immediately any decals that become detached or difficult to read either through wear or weathering.

Mount the control box in a position in the tractor cab where it is at hand to the operator but where it cannot be operated accidentally. Disconnect main electrical cable to disable controls before travelling on public roads.

Ensure that all persons are well clear of machine when it is to be run or hydraulic functions are to be operated.

Always disengage PTO drive, stop tractor engine and remove ignition keys before reaching in, adjusting, maintaining, cleaning or repairing machine or when working at the rear, inside or underneath it. This is especially relevant if a blockage occurs.

Always remember that the separator has combined mechanical and hydraulic drives, and putting the PTO out of gear will not cut the power from hydraulically driven components.

Do not modify, add to or convert any part of the machine which could affect safety without the supplier's or manufacturer's approval. This also applies to welding work on load bearing members and to installation and adjustment of safety devices and valves.

Inspect machine regularly during operational periods for signs of wear or damage.

Adhere to recommended maintenance intervals as specified in this manual.

Never park or carry out maintenance on machine when under or near overhead power lines.

When carrying out maintenance under raised parts of machine always use mechanical locking devices to support raised parts and to prevent sudden lowering.

Replace components such as filters and hydraulic hoses etc. at intervals as specified in manual even though defects or signs of wear are not apparent.

Use personal protective equipment whenever required to meet circumstances or the requirements of law. e.g. ear plugs.
Use face masks when operating conditions produce above acceptable dust levels.

During operation of machine, personnel are advised to maintain sufficient security distance from moving parts such as P.T.O. shafts, conveyors and webs etc. which cannot be completely guarded because of their functions.

Never touch rollers or other machinery whilst in motion and ensure no loose clothing is worn which could become entangled in moving parts.

Do not allow children to play in the vicinity of the machine or on headlands during operations.

Do not allow personnel to walk alongside the separator especially when the elevator is in work.

Do not stand, or allow others to stand in the space between tractor and machine.

Never leave the driving position of a moving or running tractor.

Never run machine with guards raised or removed.

As a rule, do not work across the face of slopes – The separator could topple over on side sloping ground with an angle of inclination above 18°. If a loading elevator is fitted to the machine, this angle could be significantly reduced.
Be extra vigilant when turning especially with elevator in working position or on uneven ground.

When machine is stationary secure against rolling by applying tractor braking mechanisms or wedges under wheels.

Take particular care when reversing. Always make sure you can see what is behind you.

Observe all warning and safety decals attached to the machine.

Always use genuine Netagco - Reekie spare parts.

SELECTION OF EMPLOYEES

Take care to select only competent reliable persons to work on and with the machine.

Observe all statutory laws regarding minimum age limits.

Make sure all employees, relief drivers or contractors are properly trained in the safe use of the separator, and are familiar with all controls and their functions before starting to operate the machine.

When repair or maintenance work is required to the machine's electrical system, use only suitably qualified electricians or skilled persons under the supervision of a qualified electrician and according to all relevant electrical standards and codes of practice.

Similarly, when servicing or repair work is required to hydraulic system, use only personnel with special knowledge and experience of hydraulic equipment.

Work to main frame, chassis and steering systems should be undertaken by persons specially trained to carry out such work.

SAFE MAINTENANCE & SERVICING

Observe all service & maintenance schedules set out in this manual including important information on part replacement.

Always follow correct procedures for start up and shut down of machine as indicated elsewhere in the safety notes and in the information on maintenance and servicing work.

Ensure maintenance area is restricted to authorised personnel only.

Make sure all persons involved with servicing & maintenance are properly briefed in the work to be undertaken and are supervised at all times by an experienced person trained for such duties.

If machine is to be serviced in a confined space, ensure that adequate provision is made for extraction of exhaust fumes, paint fumes and other gases in line with statutory rules and regulations.

Likewise, ensure that lighting is adequate for the purpose of servicing and repairing machine.

Always position machine on level, stable ground and secure against rolling by placing wedges either side of wheels and/or applying tractor handbrake.

Always remove tractor ignition key to prevent inadvertent starting of machine.

When lifting large assemblies for replacement purposes make sure crane/lifting tackle, slings and suspension systems have the necessary lifting capacity and are properly attached. Ensure also that the crane operator is suitably experienced and has unrestricted view of lifting operation.
Do not stand under suspended loads.

Make use of work platforms, safety ladders etc. when carrying out overhead service or assembly work. Do not use machine parts as a climbing aid.

Before attempting maintenance to machine – clean thoroughly.
If using high pressure water jet or steam cleaning appliances, take care to avoid ingress of water to electrical circuits, switchgear or other areas prone to water damage.

After machine has been cleaned, inspect for leaks in hydraulic fluid lines, loose connections and operational damage. Repair without delay.

On completion of servicing, always tighten nuts and bolts loosened during repair. Re-fit all guards and/or other safety devices and stow away all tools ensuring the machine is free of all foreign bodies before putting back in service.

Dispose of used filters, hydraulic fluids, contaminated rags and other consumables safely and properly with due consideration to the environment.

Working on hydraulic system

Ensure personnel working on the hydraulic system have specialist knowledge and experience of hydraulic systems.

Never work on the hydraulic system when it is pressurised. Always ensure the system has been completely de-pressurised before starting maintenance work.

Check all hydraulic lines regularly for signs of leaking. Do not tighten a leaking fitting whilst system is pressurised.

Check hoses are torsion free and clear of moving parts.

Replace hoses when damaged or at intervals recommended in maintenance schedule (see service and maintenance section of book). Always use the correct quality of hoses and fittings.

Keep workplace as clean as possible. Remove spilt oil immediately to avoid risk of contamination or risk of fire.

Read safety notes regarding Control of substances hazardous to health elsewhere in this manual.

Be aware of hot components especially if the machine has been running for some time.
Always allow time for hydraulic oil to cool before maintenance.

Working on electrical system

Use only suitably qualified electricians or personnel under the supervision of a qualified electrician to carry out maintenance and servicing to the electrical system.

Inspect electrical equipment regularly for loose connections and/or scorched cables. Rectify defects immediately.

If replacing fuses, take care to ensure only the correct fuse ratings are used.

Always switch off the machine if trouble occurs with an electrical component.

Welding work

If welding, flame cutting or grinding in an indoor environment, always ensure premises are adequately ventilated.

Keep surrounding areas clean and free from dust and oil.

Tyres

Check tyres regularly for signs of damage.

Ensure machine is secured against rolling by applying tractor handbrake and placing blocks under wheels before working on tyres. Always use correct fitting tools.

Check tyre pressures regularly. Inflate according to specified pressures only.

Check wheel nut torque settings regularly.

SAFE USE OF POWER TAKE OFF SHAFT

Use only correct P.T.O. shaft supplied with machine.

Check that P.T.O. shaft is not “bottoming” or that angulation of shaft is not occurring due to very short overlap on lemon drive tubes. The minimum overlap should be 300mm.

Ensure that all persons are well clear of P.T.O. area before starting up machine or whilst P.T.O. is running.

Before starting up machine check that all P.T.O. safety guards are properly fitted, in good condition and that anti-rotation chains are fitted.
Check also that the selected speed and rotation of shaft agree with the permissible speed and direction of rotation of the separator.

Approach the P.T.O. shaft only when it has come to a complete standstill, with drive disengaged, tractor engine switched off and key removed from ignition.
Always follow this rule when attaching or removing, cleaning, lubricating, inspecting or maintaining P.T.O.

Do not run the machine with damaged P.T.O. shaft. Rectify immediately.

Never engage the P.T.O. with engine switched off.

ROAD TRANSPORTATION

Prepare carefully before taking the machine on public roads!

Read and adhere to all instructions in this section of the manual.

The machine must be prepared according to the checklist below before it can be taken on public roads.

- Make sure machine is free from earth, stones, clods and vegetable trash.
- Always ensure that the cross conveyor discharge control switch is in the control “stop” position before folding up cross conveyor for transport. Ensure that the cross conveyor is secured in the transport position with latching bar in place.
- Raise share to transport position.
- Operate steering controls to retract wheels to straight ahead position.
- Check tractor tyre pressures and set for full load.
- Check separator tyre pressures are as recommended for road transportation.
- Check all road light and indicator functions.
- Disconnect and completely remove tractor to separator P.T.O. shaft.
- Switch off electrical supply to control box.
- Disconnect hydraulic oil - feed and return hoses. (see preparation for work notes).
- Conduct a visual check of machine to ensure no tools or items of loose equipment remain on machine.

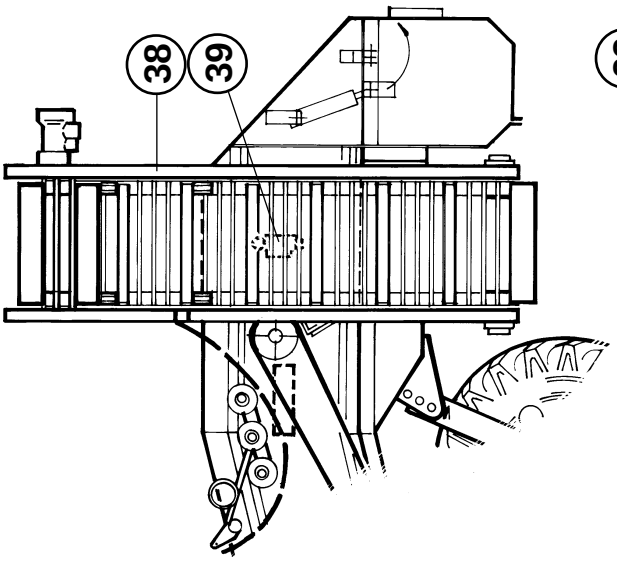
Operators should fully acquaint themselves with the highway code for the country in which the machine is to be operated and observe the rules and regulations therein.

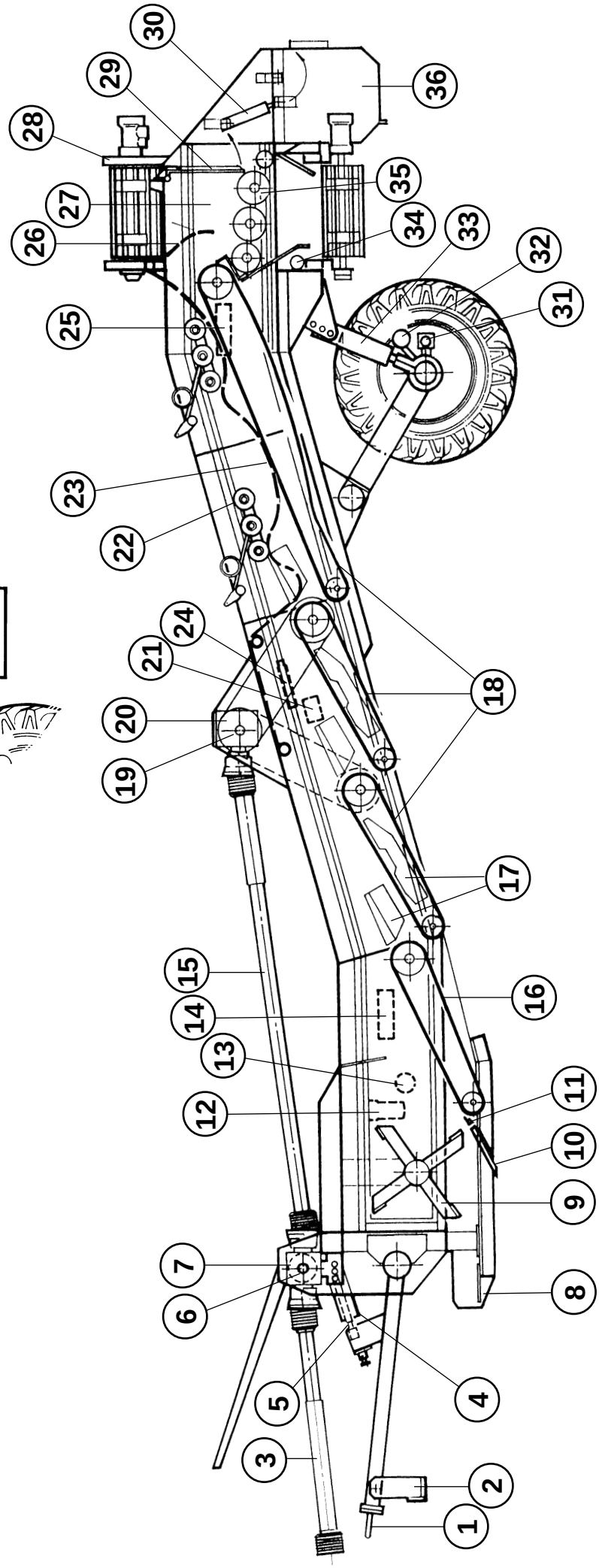
The following practices should also be adopted:-

- Always check route maps before starting journey. Avoid roads which have low bridges or other obstacles especially if the machine is fitted with a loading elevator.
- Always observe maximum road speed of 30 Km/h. / 19 m.p.h.
- Always change gear before coming to a slope.
- Always adapt road speeds according to the conditions. Avoid sudden turns on uphill and downhill slopes and on cross runs to the slope.
- When turning or at bends in the road - always take the width and load of the implement into consideration.
- Always ensure there is sufficient clearance before entering tunnels or underpasses or crossing bridges and before passing under overhead power lines.
- Always remember the driving behaviour of the tractor, particularly steering and braking capabilities will be influenced by the attached machine.
- Apply brakes well in advance.
- When stopped - always secure the machine against rolling and unauthorised use.

MACHINE OVERVIEW

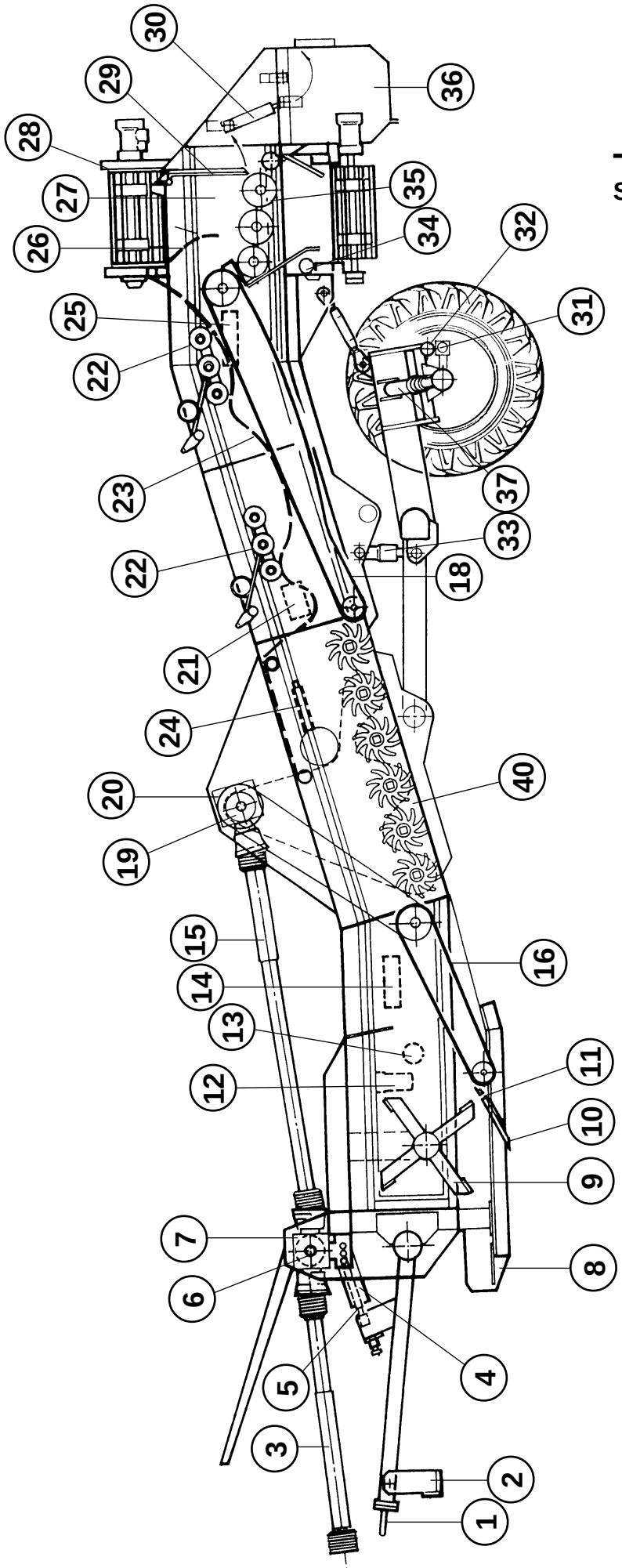
MULTI-WEB MACHINE





1. Drawbar
2. Drawbar Stand
3. P.T.O. Shaft (Tractor / Separator)
4. Front Lift Ram
5. Share Depth Sensor
6. Slip Clutch (3 Row)
7. Input Gearbox
8. Wear Plates
9. Rotor
10. Share
11. Stone Trap Fingers
12. Pressure Line Filter
13. Motorised Priority Valve
14. Front Manifold
15. P.T.O. Shaft (Gearbox / Gearbox)
16. Digger Web
17. Soil Deflectors
18. Webs
19. Slip Clutch (4 Row)
20. Web Drive Gearbox

SPEEDSTAR MACHINE

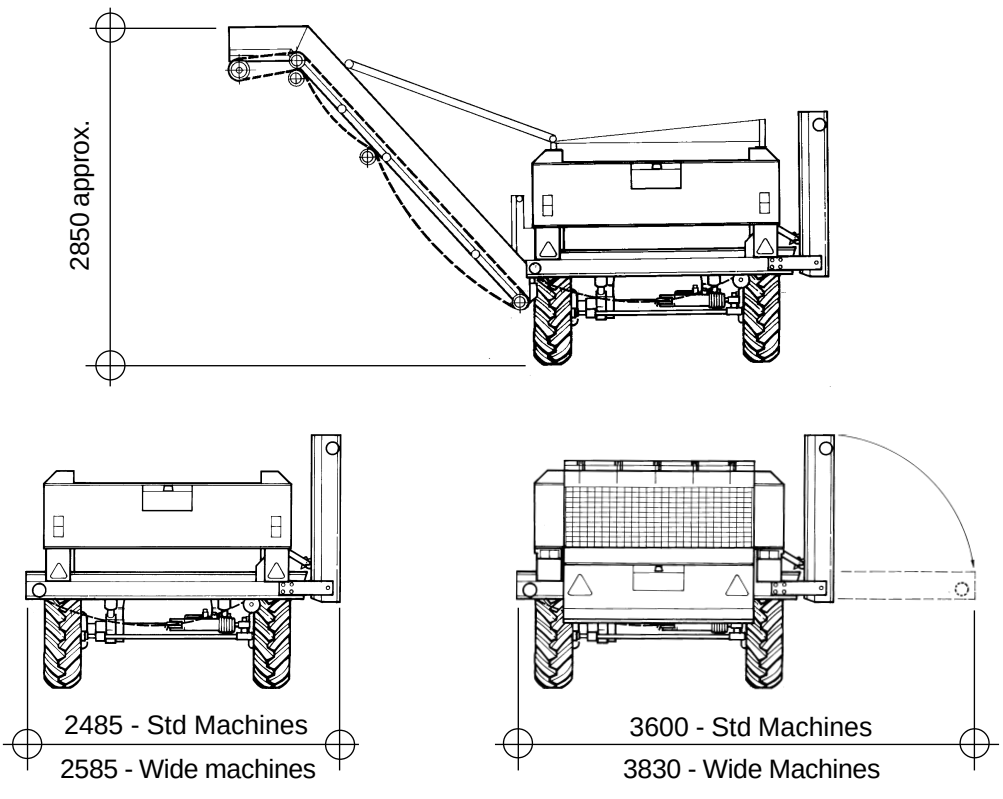


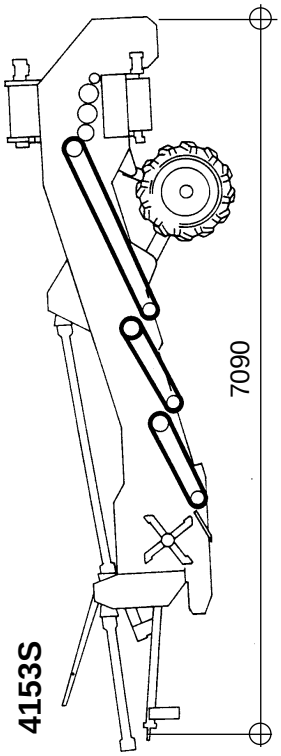
21. Main Electrical Box
22. Pressure Rollers
23. Scrubber Web
24. Pressure Roller Ram
25. Rear Manifold
26. Scrubber Web Extension
27. Large Stone Separation Unit
28. Cross Conveyor
29. Flaps
30. Hopper Lift Rams
31. Track Rod
32. Steering Ram
33. Rear Lift Ram
34. Cross Conveyor Ram
35. Spool Shafts
36. Stone Collection Hopper
37. Levelling Ram
38. Loading Elevator
39. Elevator Changeover Valve
40. Star Module

SECTION 2 TECHNICAL SPECIFICATIONS

Machine Specifications	Multi-web 4000 series	Multi-web 5000 series	SpeedStar
Minimum Power Requirement	60 KW / 80 HP	75 KW / 100 HP	
Electrical Supply	12 V DC Negative Earth		
P.T.O. Speed	540 r.p.m maximum		
Tractor Hydraulic oil flow Required	30 L/min (6.6 gal/min) minimum to 45 L/min (10 gal/min) max. at a pressure between 152 bar/ 2200 psi and 207 bar/ 3000 psi		
Machine Weight (Basic Machines)	3000 - 3500 Kgs*	3500 - 4000 Kgs*	3880 - 4300 Kgs*
Road Speed (max)	30 Kph / 19 Mph**		
Standard Wheel Equipment (All Standard Machines)	11.5 / 80 - 15.3 Track Grip	12.5 / 80 - 18 Track Grip	
Tyre Pressure	2.5 bar / 36 psi		
Optional Wheel Equipment (All Standard Machines)	15.0 / 55 - 17 Track Grip	Michelin Radial 335 / 80 Track Grip	
Tyre Pressure	2 bar / 29 psi	2.5 bar / 36 psi	
Standard Wheel Equipment (All Wide Machines)		Michelin Radial 335 / 80 Track Grip	
Tyre Pressure		2.5 bar / 36 psi	
Wheel Stud Torque Setting	271 NM / 200 Lb ft.		

* Add 440 kgs for machines with LSS unit
**Exceeding this speed could result in tyre damage.

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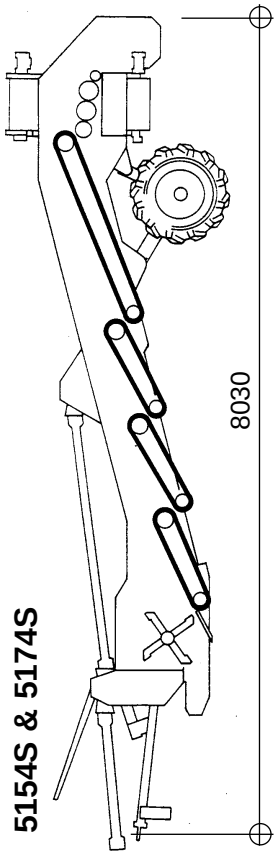
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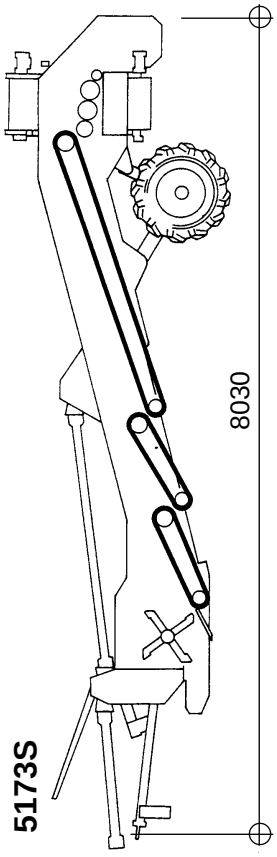
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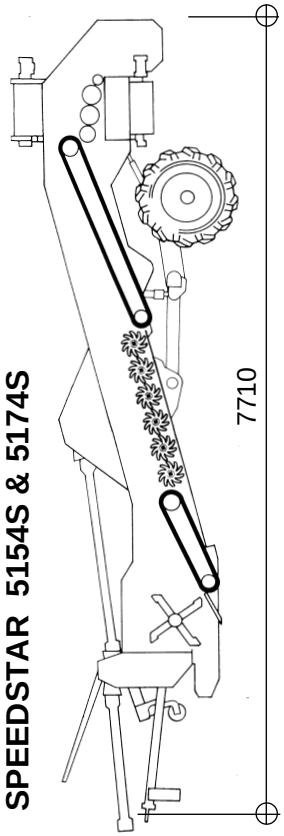
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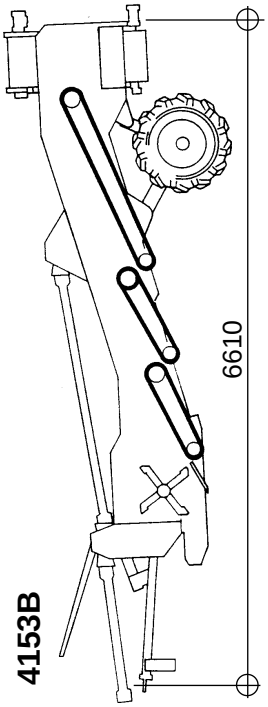
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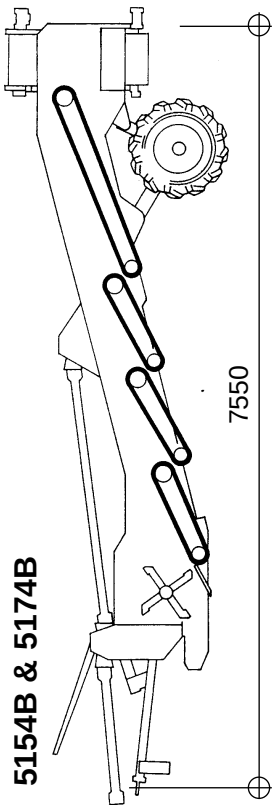
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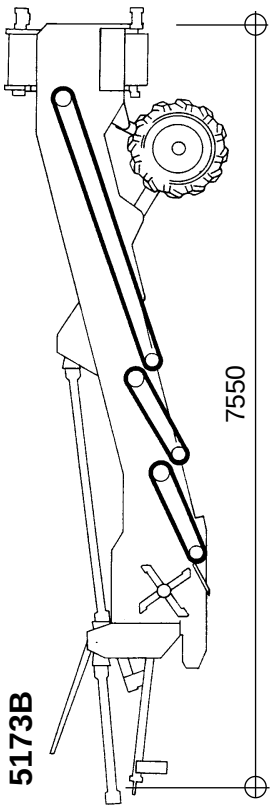
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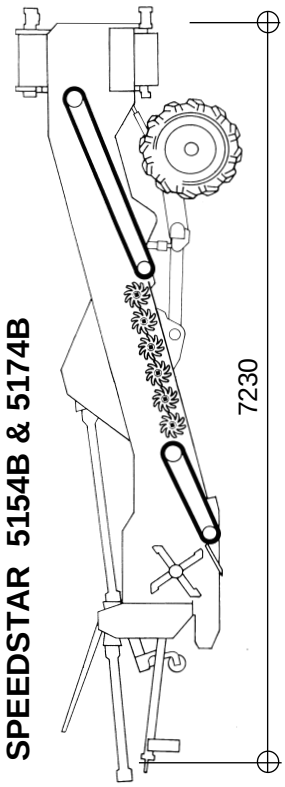
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SECTION 3 ATTACHING TO TRACTOR (and PREPARING FOR WORK)

Drawbar

The height of the drawbar is adjustable from 228mm (9") to 457mm (18") above the ground.
Depending on the height of the tractor drawbar, the machine drawbar can be adjusted by selecting one of the three holes **A** in the front lift ram anchor bracket, *Fig 1*, (outermost anchor hole for low drawbars, innermost anchor hole for higher drawbars). Then by adjusting the depth control screw **B** on the front lift ram bracket, *Fig 1*, the machine drawbar can be lifted to the height of the tractor drawbar.

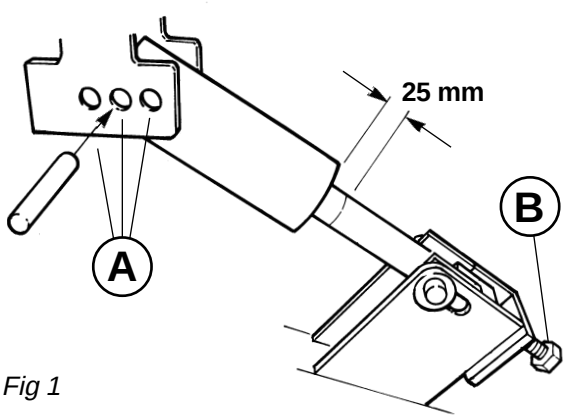


Fig 1

Optional Sliding Drawbar

An optional hydraulically operated sliding drawbar is available, if required, for use in conditions where the share tends to snag under very large stones or rock shelves. The cushioning effect of the sliding drawbar helps to protect the machine and lessens the chance of impact damage.

Accumulator / Pressure Adjustment
The accumulator and buffer ram are pressurised by the use of the tractor hydraulic system to a pre-setting sufficient to operate the sliding drawbar.

To Adjust

1. Connect the pressurising hose to the tractor hydraulic outlet.
2. Open the lock valve, *Fig 2.**A**.*
3. Pressurise the accumulator/hydraulic ram system by operating the tractor hydraulic system to obtain a working pressure of 170 bar (2500 psi), *Fig 2.**B**.*
4. Close the lock valve.
5. Disconnect the pressurising hose from the tractor outlet.

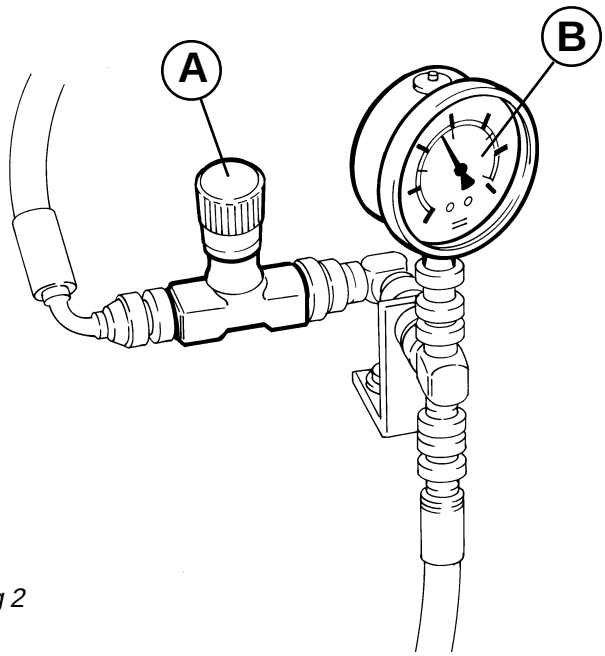


Fig 2

⚠ Never attempt to de-pressurise the system by opening the lock valve, unless the pressurising hose is connected to the tractor hydraulic outlet.

Accumulator Maintenance
Accumulators are factory pressurised with dry nitrogen to 162 bar (2380 psi), and do not require user maintenance. Should a malfunction occur, the owner should contact their local Netagco Reekie dealer.

Drawbar Stand

When unhitching Separator from tractor ensure all Hydraulic pressure is released from front and rear lift rams. The Separator share should rest on ground or blocks before unhitching tractor.

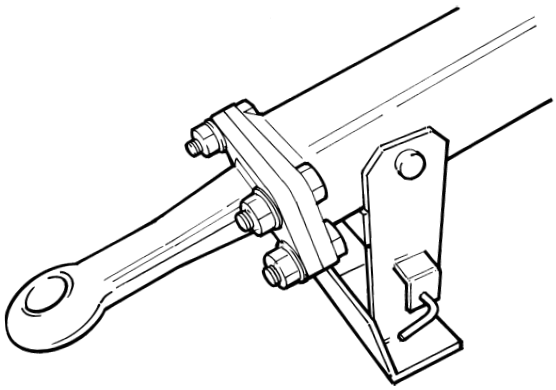


Fig 3

⚠ **ENSURE THAT DRAWBAR STAND SUPPORTS DRAWBAR ONLY AND NOT WEIGHT OF MACHINE,** *Fig 3.*

Wheel Adjustment

The wheels are adjustable from 1524mm (60") to 2032mm (80") centres on 1500mm wide machines.
On 1700mm wide machines the adjustment is between 1727mm (68") and 2032mm (80").
To adjust, remove track rod adjusting bolts **A** and stub axle retaining bolts **B**, *Fig 4.* The wheels are positioned by sliding the stub axles in or out to the required setting. (Always adjust wheels equally). Replace bolts **A** and **B** and tighten.

P.T.O. Shaft

The P.T.O. shaft is of a standard length which suits most tractors but as with any P.T.O. driven machine the shaft engagement length should be carefully checked.
Fit the shaft and carefully turn the tractor in both directions to ensure that shaft halves **Do Not "BOTTOM"**. If necessary the shaft can be shortened by cutting equal amounts from both sections of shaft and guard.

FAILURE TO CHECK THIS CLEARANCE COULD LEAD TO SERIOUS DAMAGE TO P.T.O.

Also, likewise ensure that engagement of the two halves of the lemon tube is adequate, at least 300mm (12") engagement (see *Fig 5*).
To avoid damage to the P.T.O. and guard, the tractor should be operated with lower links fully lowered as links in the raised position may foul P.T.O. when turning.

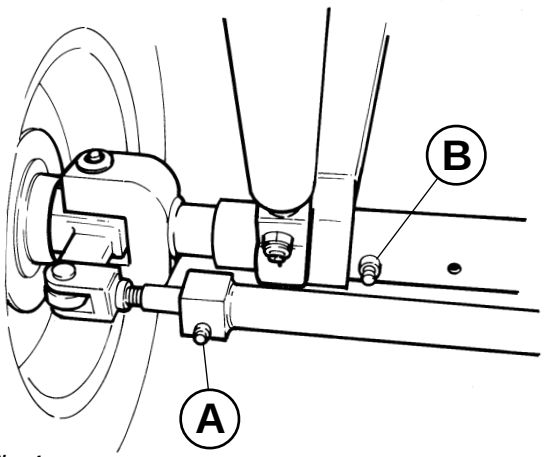


Fig 4

In some instances it may be necessary to remove the tractor lower links completely before operating Separator.-**CHECK!**

Hydraulic Supply

An oil flow of between 6.6 and 10 gallons per minute (30 to 45 litres per minute) is required to operate this machine with a pressure between 152 bar (2200 lbs/in²) and 207 bar (3000 lbs/in²).
NOTE:- On tractors with an oil flow of more than 10 gal / 45 Litres per minute oil flow should be adjusted to ensure a delivery of between 6.6 and 10 gallons as noted above. If a high flow is continually delivered to the machine this can result in high oil temperatures occuring.
IF IN DOUBT CONSULT NETAGCO REEKIE DEALER OR TRACTOR DEALERSHIP.

Connect the hydraulic hoses to the tractor as follows:-
Hose with **RED BAND** - Connect to **PRESSURE FROM TRACTOR.**
Hose with **BLUE BAND** - Connect to **RETURN TO TRACTOR.**

IMPORTANT!
Great care should be taken to ascertain correct connection to spool valve outlets on tractor, as described above, as connection of return (blue hose) to pressure outlet will cause damage to return line filter on Separator.

Recommended Tractor oil -
Super Tractor Oil Universal 15W/30 or equivalent.

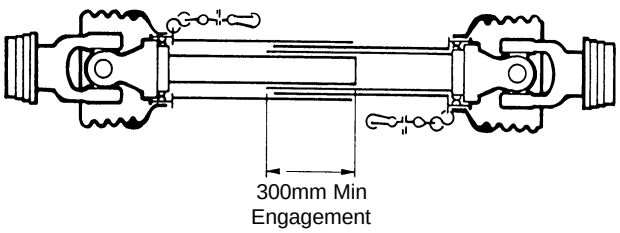


Fig 5

Open Centre Hydraulics

When the Separator is coupled to a tractor with open centre hydraulics make sure that the switch on the bracket located below the front manifold block is in the **"DOWN"** position. *Fig 6.*

Closed Centre Hydraulics

When the Separator is coupled to a tractor with closed centre hydraulics make sure that the switch is in the **"UP"** position. *Fig 6.*

Operators should consult tractor manual or tractor dealership if in any doubt as to whether tractor or auxiliary hydraulics are open or closed centre.

Load Sensing System

On Tractors with closed centre hydraulics which also have a **Load Sensing Pump** the switch above should be in the **"UP"** position and the Separator **Load Sensing Line** should be fitted to the Tractor Load Sensing Connector.

To fit the Load Sensing Line from the Separator, operators should obtain a Load Sensing kit (Power Beyond kit) from their tractor dealership together with instructions for installation.

It is important that there is no pressure drop in this system and larger quick release couplers (3/4") should be used for the feed and return connections.

Never fit Load Sensing Line to Tractor Pressure Line as severe damage could occur.

Use of the Load Sensing System is strongly advised as savings will be achieved in fuel consumption as a result of lower hydraulic working temperatures, which in turn will result in savings on maintenance to hoses and pump components etc.

Owners of Netagco Reekie Separators who experience difficulty in sourcing Load Sensing kits from their tractor dealer should contact their Netagco Reekie dealer or Reekie Manufacturing direct for further assistance.

Road Lights

All Reliance Separators are equipped with road lights and reflectors.

The 7 pin plug stored at the front of the machine, *Fig 7.**A*** should be connected to the tractor before transporting Separator on road.

Indicator, brake and side light functions and number plate light should be checked periodically and bulbs replaced when necessary.

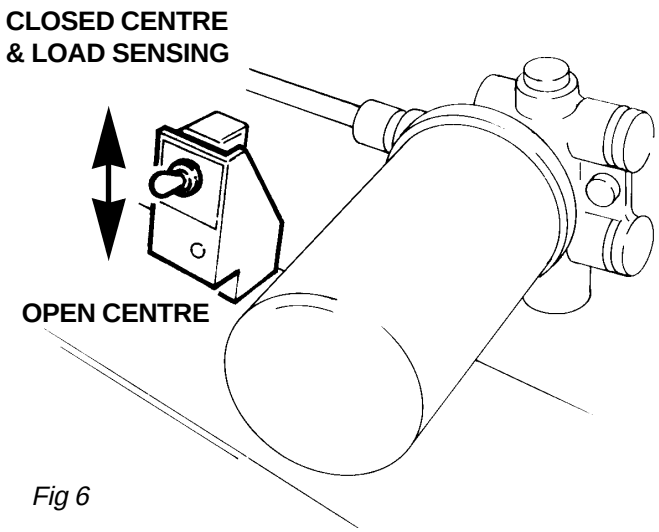


Fig 6

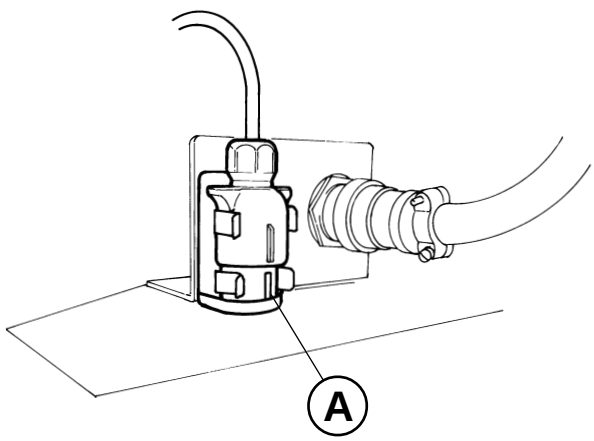


Fig 7

SECTION 4 OPERATING CONTROLS AND ADJUSTMENTS

Control Panel

The Electro-Hydraulic control box can be mounted by suction pads to any suitable flat metal or glass surface inside the tractor cab to suit the operator, but in a position where it **cannot be operated accidentally.**
NOTE: Make sure that the aforementioned surface is clean and free from grease and dirt in order to ensure a secure anchorage.
The twin core (red wire live and black wire neutral) cable is connected to a suitable 12V supply point, e.g. Battery or Starter Solenoid, and earth on the tractor. The control box is fitted with a live fuse (20 amp) to protect the circuit.
The Separator cable with the multi-pin plug attached can be passed into the rear of the tractor cab at any suitable point to be plugged into the control box.

The operating functions are clearly marked on the front of the control box and are as follows:-

Multi-Web Model

A- SHARE / REAR LIFT
HOLD- **UP** -To raise share.
DETENT to **DOWN** -To lower share.
HOLD to **RIGHT** -To lower rear of machine.
HOLD to **LEFT** -To raise rear of machine.
NOTE: Share depth is controlled by pre-setting the depth adjusting screw on the front lift ram and by adjustment of the auto depth control screw (see Share Depth Control, page 18).

B- STEERING
HOLD- **DOWN** -To activate self centred steering.
HOLD to **RIGHT** -To steer machine to right.
HOLD to **LEFT** -To steer machine to left.

NOTE: The hydraulic steering is used for manoeuvring on headlands and to keep the machine in line with the tractor on side sloping ground. The direction and amount of steer is shown on the steering indicator **E,** *Fig 8.* The pointer moves to the right when steering right and to the left when steering left.

C- PRESSURE ROLLERS / CONVEYOR
HOLD **UP** -To raise pressure rollers.
HOLD **DOWN** -To lower pressure rollers.
HOLD to **RIGHT** -To extend conveyor to right.
HOLD to **LEFT** -To extend conveyor to left.

D- AUTO DEPTH
PUSH BUTTON -To return share to pre-set working depth following turning on headland.

E- STEERING INDICATOR

F- CONVEYOR SPEED
HOLD **UP** -To increase conveyor speed.
HOLD **DOWN** -To decrease conveyor speed.

G- STONE HOPPER
HOLD **UP** -To open / empty hopper.
HOLD **DOWN** -To close hopper.

H- CONVEYOR ROTATION
SWITCH **UP** -To discharge stones to right.
SWITCH **DOWN** -To discharge stones to left.

J- FUSE (20 amp)

K- ON / OFF SWITCH
SWITCH **UP** -Power off.
SWITCH **DOWN** -Power on.

L- BLOCKED FILTER LED
Red light illuminates to indicate Filter is blocked.

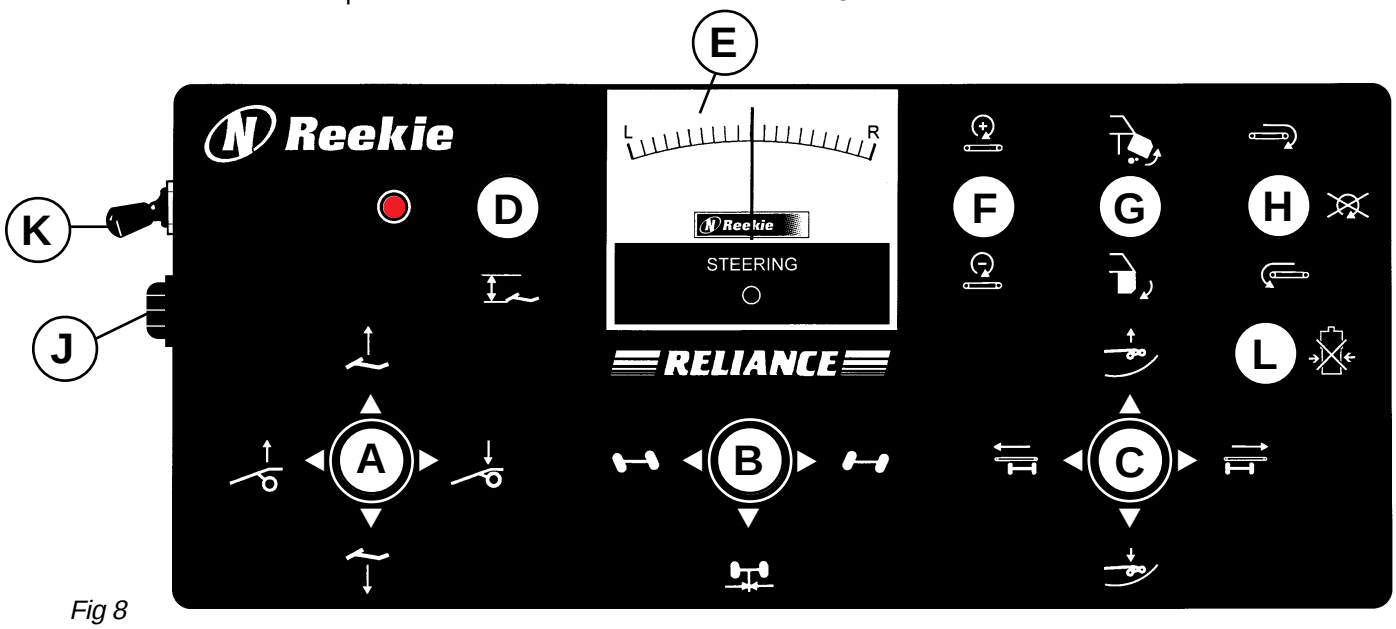


Fig 8

SECTION 4

Speedstar Model

A- SHARE / REAR LIFT
HOLD- **UP** -To raise share.
DETENT to **DOWN** -To lower share.
HOLD to **RIGHT** -To lower rear of machine.
HOLD to **LEFT** -To raise rear of machine.

NOTE: See also 'Share Depth Control' (page 17).

B- STEERING / MACHINE LEVELLING
HOLD- **UP** -To raise left hand side.
HOLD- **DOWN** -To raise right hand side.
HOLD to **RIGHT** -To steer machine to right.
HOLD to **LEFT** -To steer machine to left.

NOTE: The hydraulic steering is used for manoeuvring on headlands and to keep the machine in line with the tractor on side sloping ground. The direction and amount of steer is shown on the steering indicator **E,** *Fig 9.* The pointer moves to the right when steering right and to the left when steering left.

C- PRESSURE ROLLERS / CONVEYOR
HOLD **UP** -To raise pressure rollers.
HOLD **DOWN** -To lower pressure rollers.
HOLD to **RIGHT** -To extend conveyor to right.
HOLD to **LEFT** -To extend conveyor to left.

D- AUTO DEPTH
PUSH BUTTON -To return share to pre-set working depth following turning on headland.

E- STEERING INDICATOR

F- CONVEYOR SPEED
HOLD **UP** -To increase conveyor speed.
HOLD **DOWN** -To decrease conveyor speed.

G- STONE HOPPER
HOLD **UP** -To open / empty hopper.
HOLD **DOWN** -To close hopper.

H- CONVEYOR ROTATION
SWITCH **UP** -To discharge stones to right.
SWITCH **DOWN** -To discharge stones to left.

J- AUTO LEVELLING
PUSH BUTTON - To activate auto levelling
(Red light will come on)
PUSH SHARE JOYSTICK to **UP** POSITION and
RELEASE - To disengage auto levelling

K- SELF CENTRE STEERING
PUSH BUTTON - To straighten wheels automatically following manoeuvre.

L- SHARE DEPTH CONTROL (OPTIONAL)
MOVE TO MIN. - To decrease digging depth.
MOVE TO MAX. - To increase digging depth.

M- FUSE (20 amp)

N- ON / OFF SWITCH
SWITCH **UP** -Power off.
SWITCH **DOWN** -Power on.

O- BLOCKED FILTER LED
Red Light illuminates when filter is blocked.

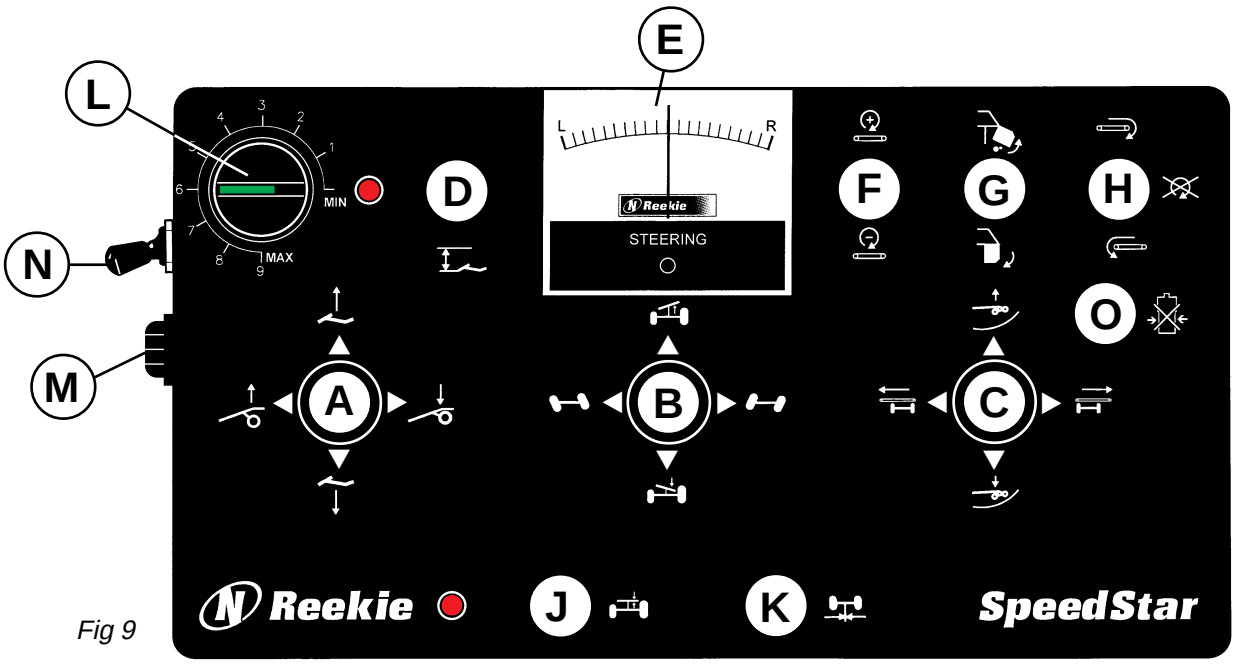


Fig 9

Share Depth Control

To set Share depth level, position the separator on level concrete and hitch up to tractor at proper drawbar height (see section 3: Drawbar). Select the appropriate hole in the ram anchor bracket and adjust the depth control screw to give approximately 25 mm showing on ram piston, *Fig 10.*

With the tractor engine running and hydraulics operational, press the Auto depth push button on the Separator control panel *Fig 8.***D,** *or Fig 9.***D**. The machine should lift off concrete. Loosen the set screw on the sensor tube assembly *Fig 10.***A** until share is raised approximately 30 mm off concrete.

This is a preliminary adjustment only, final adjustment should be made when the machine is in the field by further adjusting the sensor tube to achieve the desired working depth and by again setting the front lift ram to 25mm.

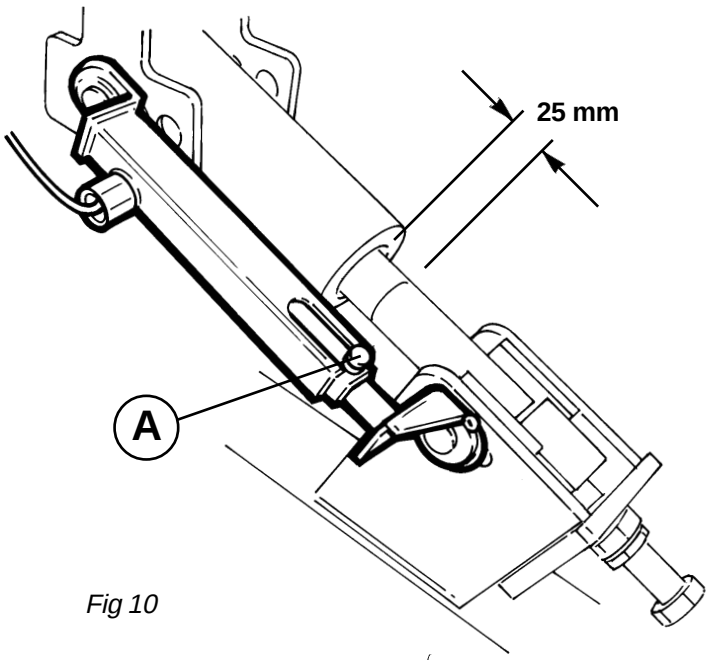


Fig 10

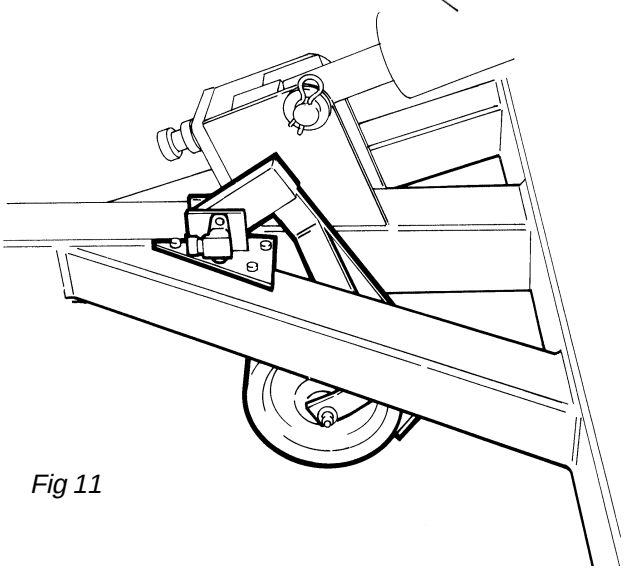


Fig 11

⚠ **CAUTION** Take care to ensure fingers do not become trapped when adjusting sensor assembly whilst machine hydraulics are in operation.

NOTE: On commencement of work and at the start of each row hold down share joystick *Fig 8.***A,** *or Fig 9.***A** for the first 4-5 metres of work then release and press Auto depth push button *Fig 8.***D,** *or Fig 9.***D** to raise share to preset working depth. This procedure ensures adequate de-stoning depth is maintained. Similarly, hold down share joystick for last 4-5 metres of each row before raising share out of ground to turn machine on headland.

If share has to be raised during working to avoid an obstacle, hold share joystick up then press auto depth to resume working at preset depth.

⚠ Working a machine with a badly worn share can increase the draught and also increase the danger of under-web damage.

Depth Wheel (Optional)

A depth sensing wheel is available, if required, which can be fitted to the drawbar assembly to control the digging depth of the share, *Fig 11.*

This sensor enables depth to be regulated automatically.

The system is controlled from the main control box in the tractor cab, by adjustment of the share depth control switch **L** (page 16).

To pre-set digging depth -

With machine in the field, switch on tractor engine and hydraulic system.

Press the auto depth push button **D**. The share will adjust automatically to the previous setting.

Turn switch **L** in clockwise or anti-clockwise direction to raise or lower share to a new position.

Auto depth is now set to work at this new setting.

NOTE: On commencement of work and at the start of each row press auto depth push button *Fig 9.***D** to set share to preset working depth. This procedure ensures adequate de-stoning depth is maintained. At the end of each row, hold share joystick **A** - UP to raise share out of ground before manoeuvring on headland.

If share has to be raised during working to avoid an obstacle, hold share joystick up then press auto depth to resume working at preset depth.

Share Extensions (Optional)

FOR SURFACE PLACEMENT ONLY

Extension shares / shedders **P** can be fitted to increase the effective width of the share for use in row widths from 762mm (30") to 915mm (36") wide on 1500mm wide machines, or 863mm (34") to 1016mm (40") on 1700mm wide machines and should be fitted to the front of the digger elevator frame channel section side members, *Fig 12.***P**.

The extensions can also be fitted with 50mm (2") depth -increasing spacers **Q**, *Fig 12*, for any use on any row width, to increase de-stoned depth in ridge bottoms where stones are to be deposited. This allows Planter ploughs to be operated to full stone separated depth in System **B** (see page 37) reducing the danger of stones being picked up from the ridge bottom and being deposited in the ridges.

NOTE: Share extensions cannot be used with the partial burial system.

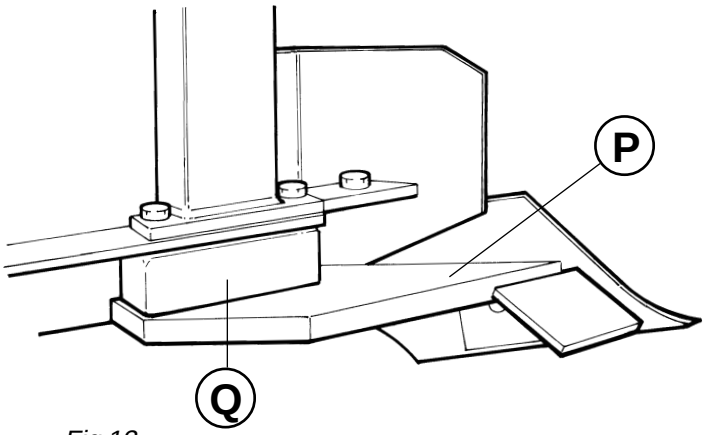


Fig 12

Rotor

The Rotor assists the soil over the share into the machine, at the same time breaking down clods and assisting cultivation and the consequent separation process.

Pivoting on arms at each side of the machine allows the rotor to float up and ride over any large stone passing between the rotor and the share.

The clearance between the rotor tips and the share can be altered by the adjusting screws **A** which support the Rotor arms *Fig 13.* A minimum Rotor to Share clearance of 76mm (3") can be obtained and this may be increased to suit different soil / operating conditions as necessary.

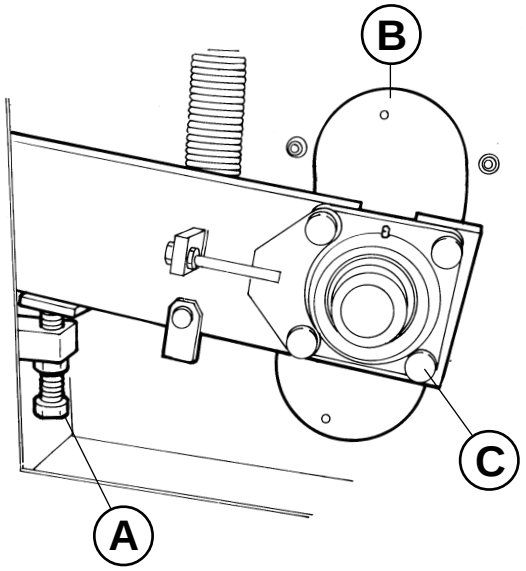


Fig 13

NOTE: In conditions where there are a lot of large stones it is advisable to increase the share / rotor clearance.

Rotor wear plates **B** *Fig 13,* are set in factory to clear sides of machine by 2 to 3 mm and should not require adjustment. If however excessive amounts of soil start to build up inside the machine the gap between wear plates and sides of machine can be closed slightly by loosening the nyloc nuts behind bearing bolts **C** *Fig 13*, and turning bolts anti-clockwise.

NOTE: Never close gap completely as this could impede lifting action of rotor.

Webs

Webs are available in pitches as shown opposite:-

NOTE: In very light land or sandy conditions, excessive separation can occur through the digger web (1st web), resulting in soil build up under the web, causing the drive clutch to slip.

Model	Web Location	19	28	32	36	42	45	50
Multi-web	Digger Web	✓	✓	✓	✓	✓	✓	✓
	Rear Webs	✓	✓	✓	✓	✓	✓	✓
	Cross Conveyor	✓	✓					
Speedstar	Digger Web			✓	✓			
	Rear Webs	✓	✓	✓	✓	✓	✓	✓
	Cross Conveyor	✓	✓					

In these conditions web covers should be fitted to every 2nd web bar (or if necessary every bar) on the digger web to reduce separation at that point.

⚠ On machines with Duraweb type main webs check joining rods frequently for signs of wear especially under joining clips.

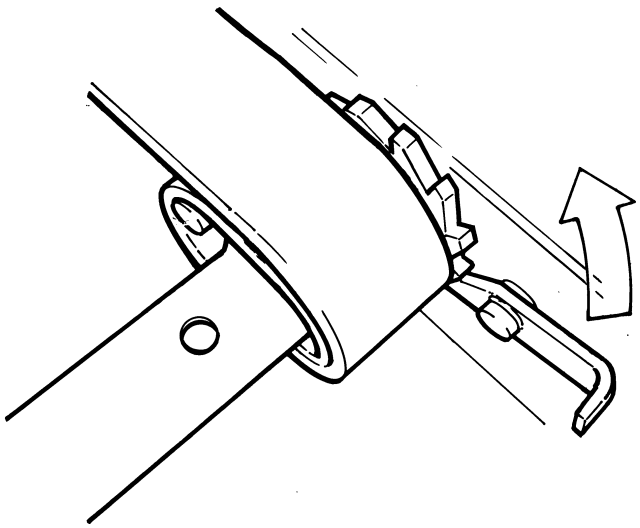


Fig 14

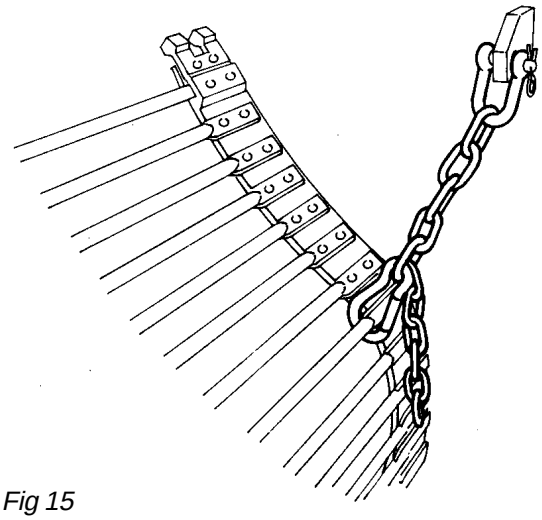


Fig 15

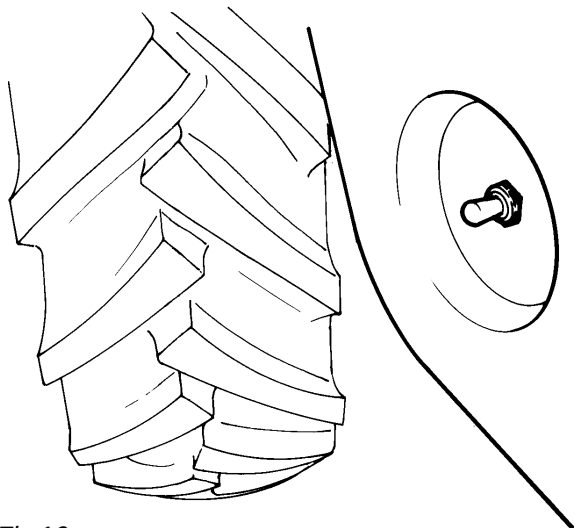


Fig 16

Scrubber / Clod Crusher Web

The scrubber web is fitted over the Separator web to crumble down clods and prevent roll-back of stones.
The Scrubber web can be lowered or raised to suit conditions by releasing the catch on the ratchet on the end of the front support shaft and rotating the shaft with a spanner to raise or lower the scrubber web as required, *Fig 14.* For heavy clod conditions the web should be fully lowered to give maximum effect. In light stony conditions with minimum clod, the scrubber web should be raised so that it makes only light contact with the Separator web.

Pressure Rollers

Two rows of spring loaded pressure rollers are fitted with hydraulic pressure adjustment to vary the scrubbing action to suit different soil conditions, (see Operating controls, pages 15 & 16).

Scrubber Web Extension

An extension web is fitted to the tail of the scrubber web and lies over the Separator-web discharge.
On machines fitted with stone separation units the extension web lies along the top of the spool rollers ensuring that only larger stones as intended pass into the stone collection hopper.
On basic machines (without large stone separation unit) the web extension is also suspended on two chains with quick release hooks, *Fig 15*, and these can be adjusted in both length and to different web rods to ensure that an even loading of stones / clods is achieved across the width of the cross conveyor.

Cross Conveyor

The cross conveyor has a folding section for transport.
When cross conveyor ram is activated by means of the control console by switching Conveyor switch to *left,* the upright section will automatically be lowered to the horizontal working position. Conveyor can then be rotated either for left or right hand discharge of stones depending on which working system is to be adopted.
By moving the conveyor through the machine either to *left* or *right* it is possible to work from one side of the field to the other without taking on lands, with the consequent advantage of consistency of ridge relationship at harvesting.
To fold cross conveyor in, activate conveyor ram using switch on side of machine, *Fig 16.* Hold latch down until contact is made with catches on conveyor, *Fig 17.* The conveyor will then fold to upright transport position.

⚠ When folding the cross conveyor into the transport position, the conveyor discharge switch **H** (pages 15 & 16) must be in the central stop position.
NOTE: When operating the machine ensure that the conveyor is not run too fast (depending on the tractor

oil flow available), as other services, front lift, etc., may be slow acting as a result. Always run the cross conveyor at as low a speed as possible without risking blockage as this also assists the placement of stones.

Loading Elevator (Optional)

During Transport or Storage the Elevator should be folded back over the rear of the machine. On Basic machines the Elevator is lowered into the working position by simple activation of Control Box switch **G**, *Fig 8* (Hold **UP** - to move Elevator out). On machines fitted with Stone Box however, switch **G** can be used either for Stone Box or Elevator operation. To change between these functions a Diverter Valve is fitted to direct Hydraulic Oil to the function required, *Fig 18.* Raise lever **A** to fully **UP** position for Elevator function. Lower lever to fully **DOWN** position for Stone Box function. With lever therefore fully raised, activation of Control Box switch **G** will move Elevator out to working position. The 2 triangular Stone Deflectors can now be fitted to the Elevator Pivot Brackets by means of the pins provided. Before operating Elevator ensure Conveyor Rotation switch **H** is set in correct position to discharge stones to left. Web Speed is controlled by Control Box switch **F** (Cross Conveyor).

NOTE: If at any time Stone Box operation is required, Diverter Valve lever should be lowered to **DOWN** position to re-direct Hydraulic Oil to Stone Box.

Soil Deflectors

These deflectors are fitted inside the webs to deflect separated soil toward the centre of the machine and prevent the Separator, Tractor and Planter wheels from running over separated soil.

In some instances the deflectors may have to be completely removed. e.g. when working on 72" and 80" beds (1500 wide machines only)

Under Web Guard

The under web guard is fitted to give protection to the digger web.

Large Stone Separation Unit

(OPTIONAL)

The LSS unit **A** *Fig 19*, fitted above the cross conveyor at the rear of the machine, is designed to remove large stones above 7"-7½" (178mm-190mm) preventing them from being passed to the cross conveyor, thus ensuring that only stones under this size are deposited in the furrow.

By using three rows of spool rollers the smaller stones are allowed to fall through whilst the larger stones are deposited in a stone collection hopper at the rear of the machine ready for disposal on the headland.

The Stone collection hopper **B** *Fig 19,* can be emptied by control from the tractor cab. (see Operating instructions pages 15 & 16).

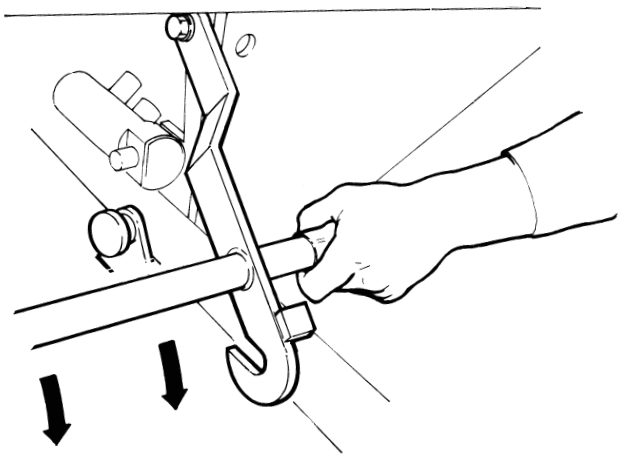


Fig 17

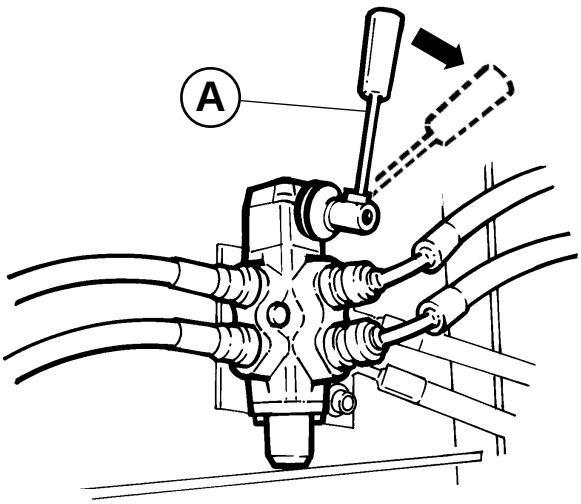


Fig 18

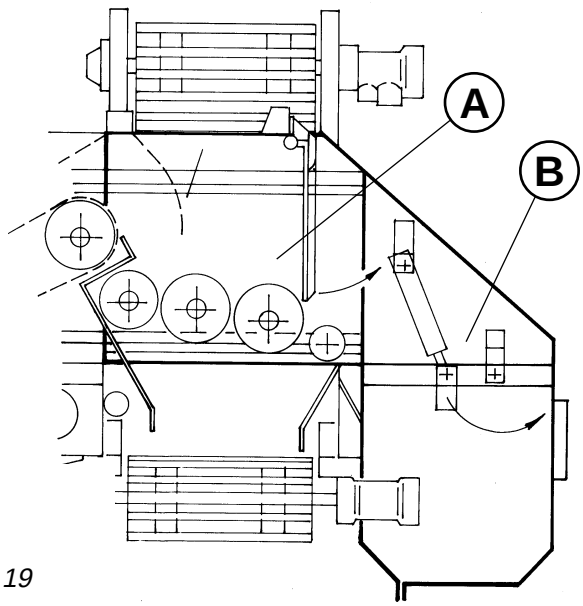


Fig 19

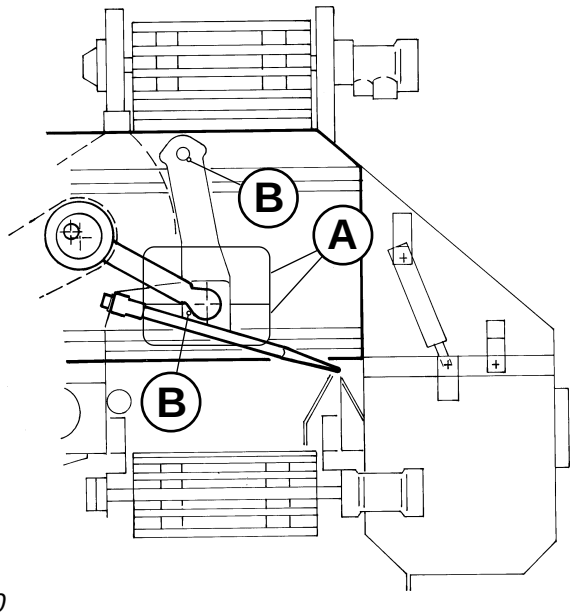


Fig 20

Always check you can see what is behind you and that no persons are standing near rear of machine before emptying hopper.

NOTE: When working on side sloping ground-stones tend to accumulate to one side of Stone Hopper, and if left unchecked can cause damage to web.
Check regularly and level out stones in Stone Box if necessary.

Stone Rake

(OPTIONAL)
The Stone Rake Unit, *Fig 20*, can be fitted in place of the LSS Unit in position above the Cross Conveyor. It has been designed to convey large stones into the Stone Hopper whilst allowing smaller stones to drop onto the Cross Conveyor for discharging into furrows. The unit is available with a choice of either 9 or 10 tines for the removal of stones above 5½" - 6½" (140mm - 165mm).

Check nylon sliders periodically for build up of dirt / soil which could result in rapid wear. *Fig 20.***A**.

Stone Rake Cranks and Hanger Bearings should be greased after every 40 hours of work, *Fig 20.***B**.

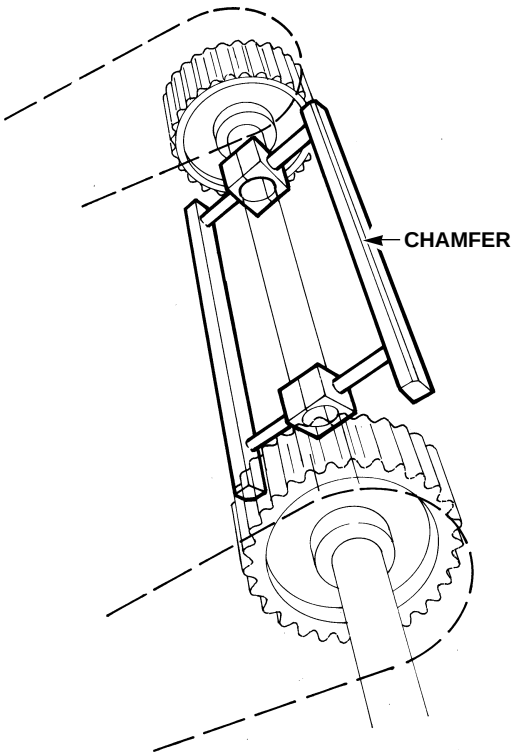
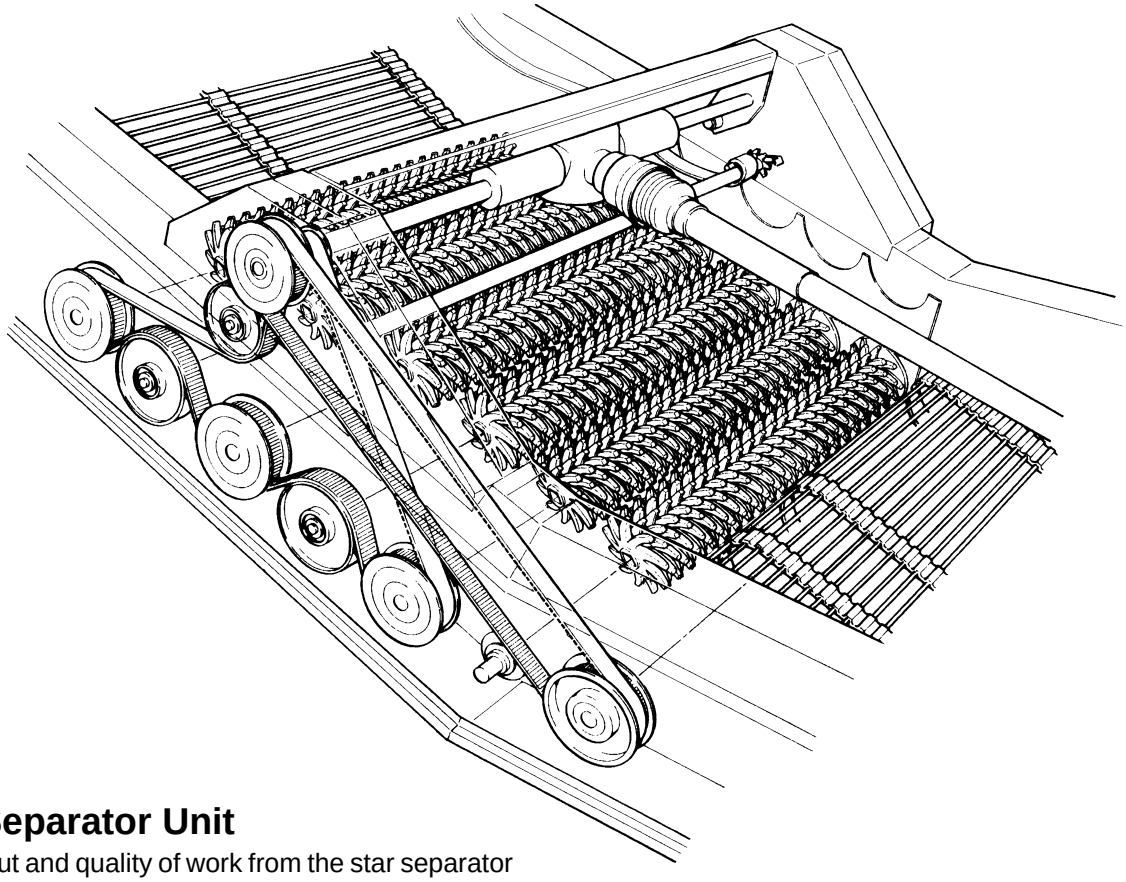


Fig 21

Web Cleaners

Web cleaners can be fitted to each web to prevent build up of soil between web bars and no adjustment should be required. When changing web pitch, it will also be necessary to change web cleaners to suit. Owners should state web pitch when ordering new web cleaners.
NOTE: When fitting web cleaners the chamfer on the cleaner bar should always face front of machine. *Fig 21.*

Web cleaners should only be used in wet weather conditions and should be removed in normal or dry conditions.



Star Separator Unit

The output and quality of work from the star separator module is dependant on a number of factors:

• FORWARD SPEED

This must be sufficient to maintain a flow of soil over the star unit and onto the rear web at all times.
Insufficient soil on the star unit will result in larger size particles (stones and clod) falling through onto the separated seedbed.

• INPUT P.T.O. SPEED

Normal operating range 400-500 RPM.

Low P.T.O. speeds result in greater soil separation on the star unit, but generally larger size particles falling through onto the seedbed.

High P.T.O speeds convey the material over the star unit faster with less separation and result in a generally finer particle size in the seedbed.

• ANGLE / INCLINATION OF THE MACHINE

Lifting the rear of the machine (hence inclining the star separator angle) can increase separation in heavier soils and aid clod breaking.

NOTE: In lighter soils lifting the rear of the machine may have the effect of increasing the power requirement without increasing output, (by loading the digger web and rotor excessively).

• STAR SPACING / PITCH

The distance between the stars (across the width of the machine) can be altered by the fitting of spacer rings between adjacent stars.
The spacing can be set at 40 (no spacers), 45 (1 spacer) or 50mm (2 spacers) - measured from centre to centre of star fingers, see pages 26 to 29.
The narrower spacings give a finer particle size in the separated bed, the wider (50mm for example) giving a coarser particle size.

• CONDITION OF THE STARS

The degree of wear to the fingers of the stars will affect the quality of work and hence the stars should be inspected and replaced where necessary.

Assessing the quality of work is best done by digging through the profile of the finished seedbed behind the separator and examining the particle size of stones and clods present.

Note: The pitch of the rear web and cross conveyor web will affect the particle size on the top of the seedbed.

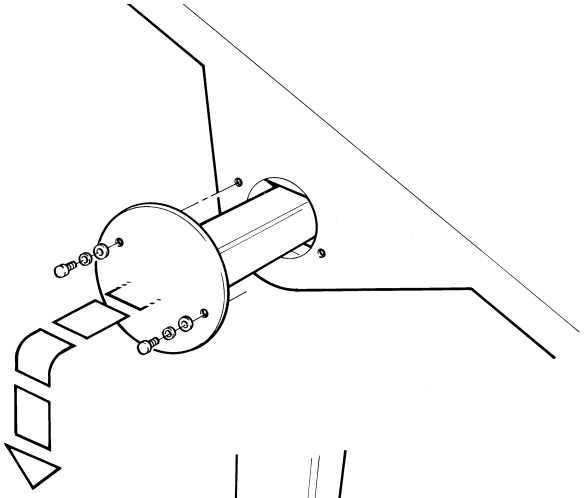


Fig 22

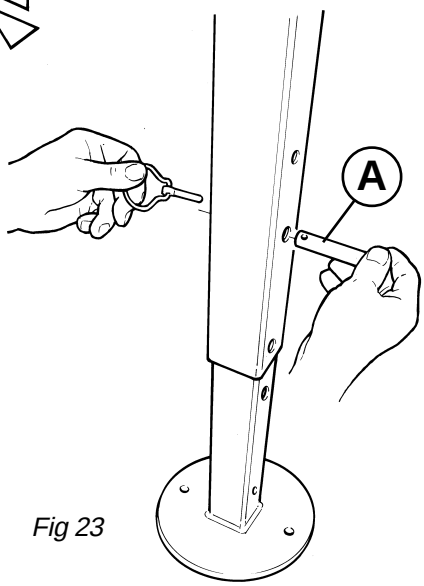


Fig 23

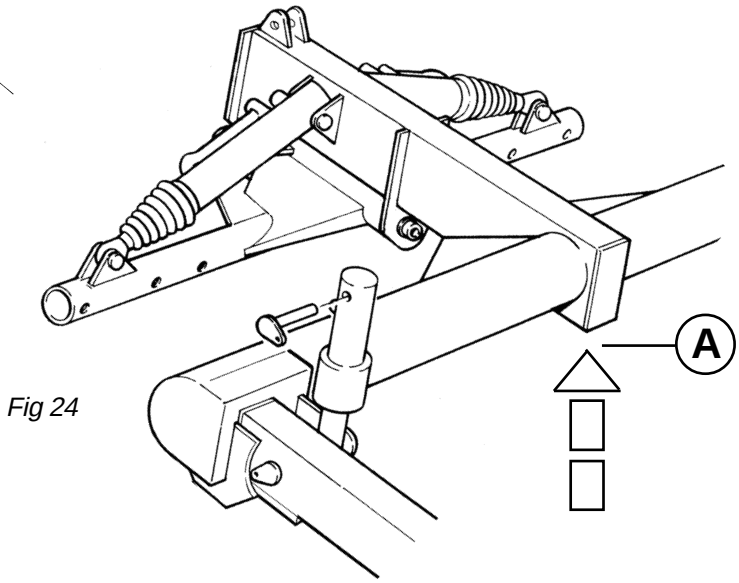


Fig 24

To remove star shafts from module:-

On machines fitted with levelling axles:-

- Position machine on level tarmac or concrete.
- Remove retaining bolts from stand endplates, and slide stands out from cross tube, both sides of machine, *Fig 22.*
  Note:- Allow stand to pivot to upright position.
- Remove pins *Fig 23.***A**, from telescopic legs and allow inner legs to drop to ground.
- Raise lift rams until holes in adjustable legs are aligned and re-locate pins in any of the 4 holes provided.
- Disable tractor hydraulics, dis-engage the P.T.O. drive, stop tractor engine and remove keys.
- Place trolley jack under frame in position indicated, *Fig 24.***A**.
- Remove 12 bolts on each side to free frame mounts from underside of modular chassis, *Fig 25.***A**.
- Remove lower ram pins as shown*, Fig 25.***B**.
- Release jack to lower outer arms until they are resting on ground.

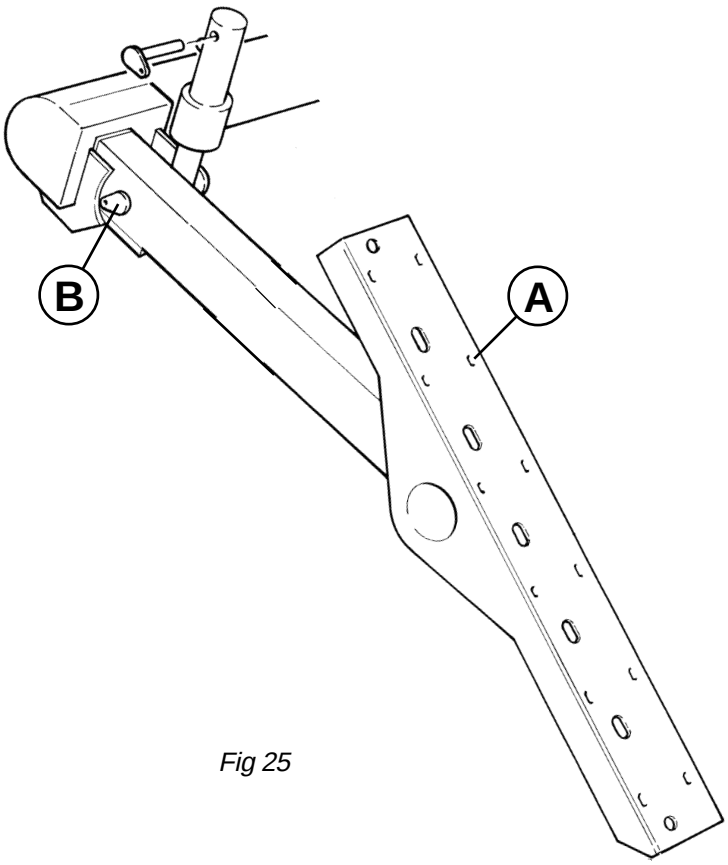


Fig 25

All machines:-
- Release all tension from star module drive belts by loosening nuts on tensioner roller adjuster screws (each side of machine), *Fig 26*.
- Remove drive belts.
- Remove taper lock bush, drive pulley and idler pulley from ends of shaft.
- Tie up, or place props under star shaft to be removed to prevent shaft assembly from dropping inadventently.
- Loosen and remove bolts from star shaft mounting plates (6 bolts each end), *Fig 27*, and lower shaft assembly out from underside of module.
- Remove bearings and mount plates from ends of shaft.
- Worn star components can now be replaced or spacers fitted.

Note: When re-fitting components onto shaft ensure outside face of end discs are flush with square section of shaft, *Fig 28*.

If spacers are to be fitted - follow the assembly details on pages 26 to 29.

•Shafts can be re-assembled and re-fitted to module, by reversing the above instructions.

Warning

Always replace bearing mount plates before road travel.
Failure to do so may compromise the strength of the chassis and could result in severe damage to the machine.

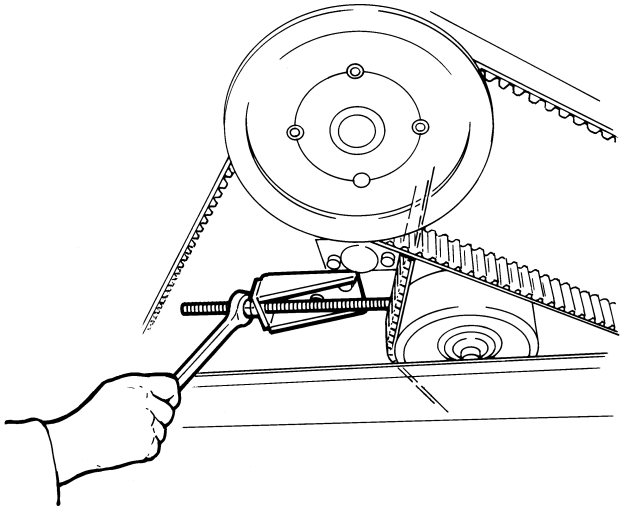


Fig 26

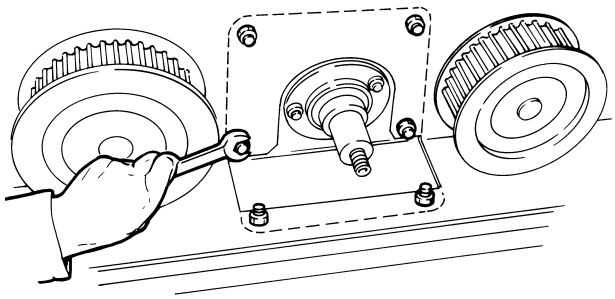


Fig 27

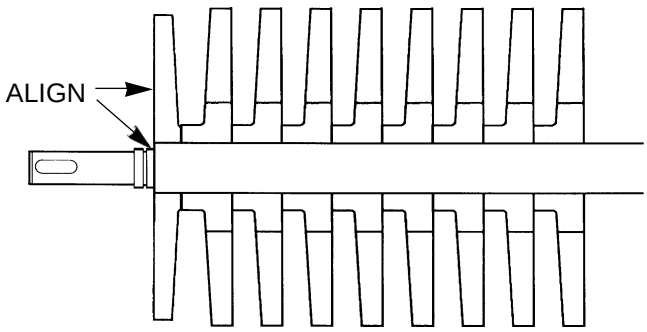
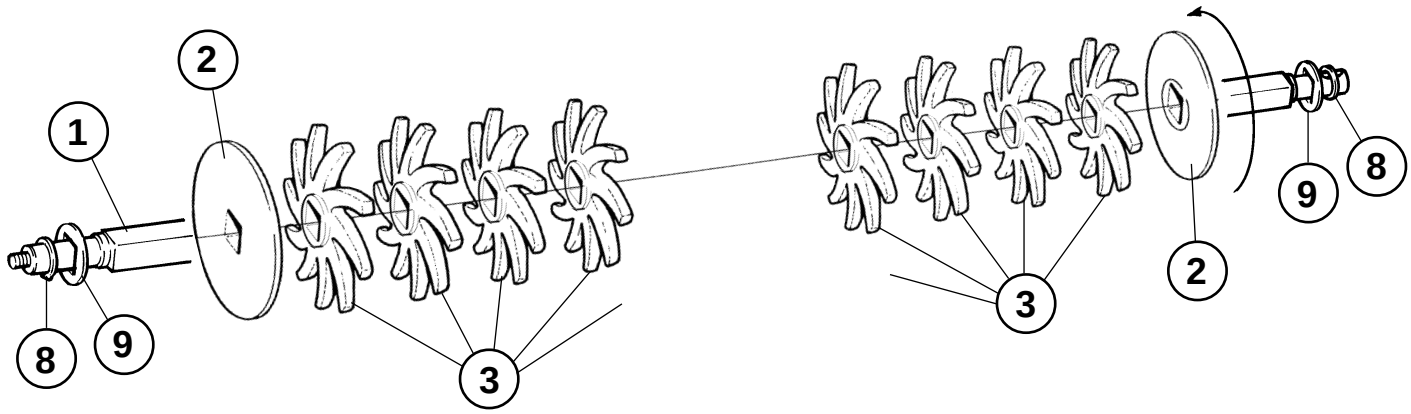


Fig 28

40 mm SPACINGS

1	Shaft	RNS150/15C	1	9	Spacer	RNS1742	2
2	End Disc	RNS1669	2				
3	40mm Star	RNS1667	37				
8	Circlip	RNS1735	2				

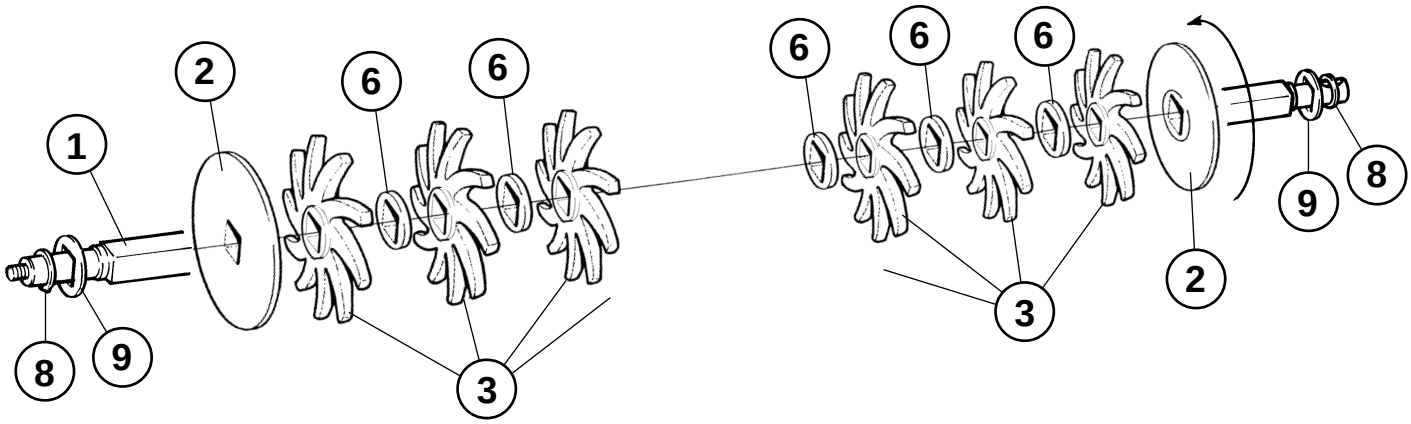
SHAFTS
1 • 3 • 5



45 mm SPACINGS

1	Shaft	RNS150/15C	1	8	Circlip	RNS1735	2
2	End Disc	RNS1669	2	9	Spacer	RNS1742	2
3	40mm Star	RNS1667	33				
6	5mm Spacer	RNS1671	32				

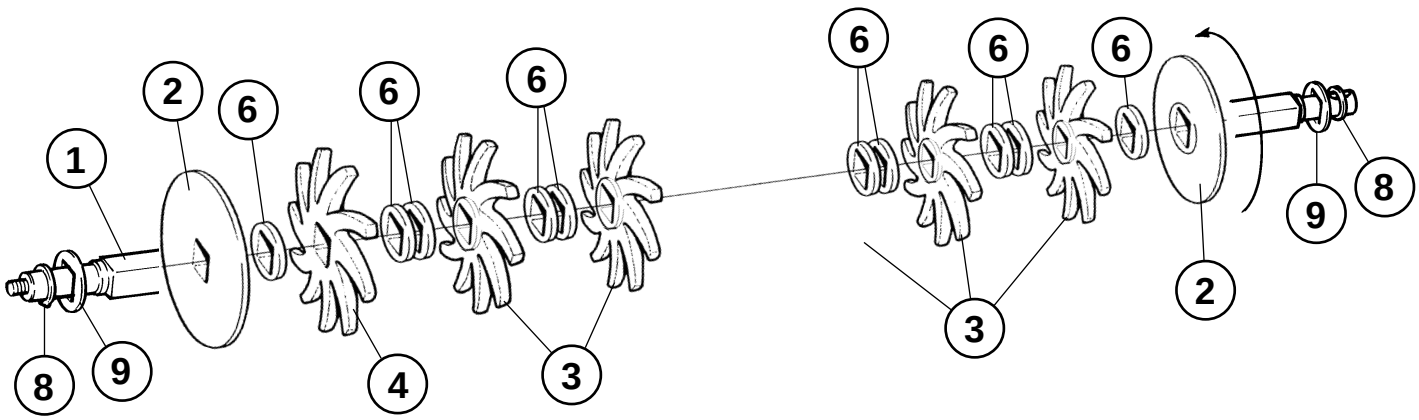
SHAFTS
1 • 3 • 5



50 mm SPACINGS

1	Shaft	RNS150/15C	1	6	5mm Spacer	RNS1671	60
2	End Disc	RNS1669	2	8	Circlip	RNS1735	2
3	40mm Star	RNS1667	29	9	Spacer	RNS1742	2
4	20mm Star	RNS1668	1				

SHAFTS
1 • 3 • 5

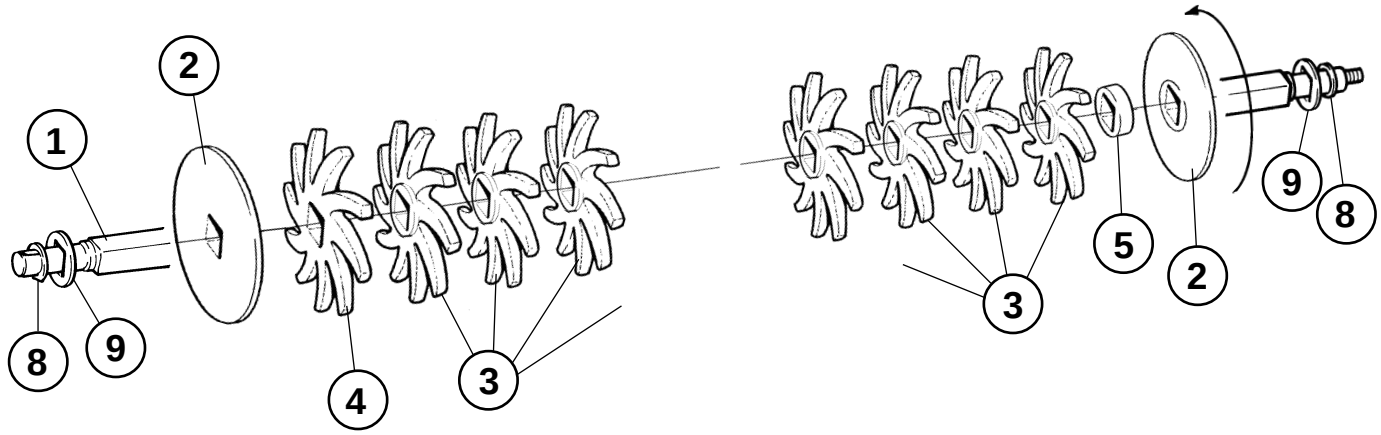


*Shafts are numbered from 1 to 6 starting at digger end of module, and are viewed from front of machine looking toward rear.

40 mm SPACINGS

1	Shaft	RNS150/15C	1	5	20mm Spacer	RNS1670	1
2	End Disc	RNS1669	2	8	Circlip	RNS1735	2
3	40mm Star	RNS1667	36	9	Spacer	RNS1742	2
4	20mm Star	RNS1668	1				

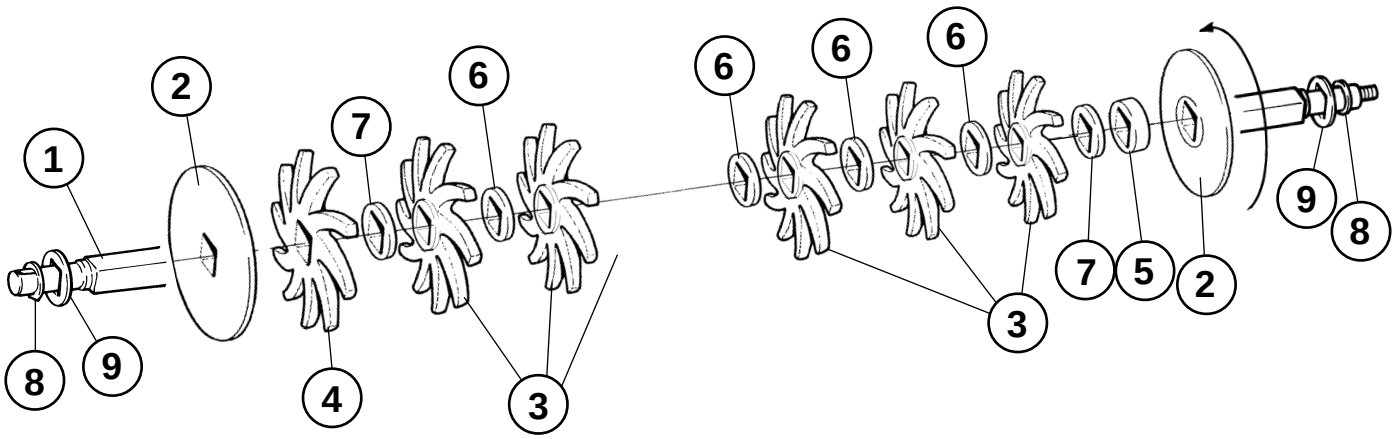
SHAFTS
2 • 4 • 6



45 mm SPACINGS

1	Shaft	RNS150/15C	1	6	5mm Spacer	RNS1671	31
2	End Disc	RNS1669	2	7	2.5mm Spacer	RNS1672	2
3	40mm Star	RNS1667	32	8	Circlip	RNS1735	2
4	20mm Star	RNS1668	1	9	Spacer	RNS1742	2
5	20mm Spacer	RNS1670	1				

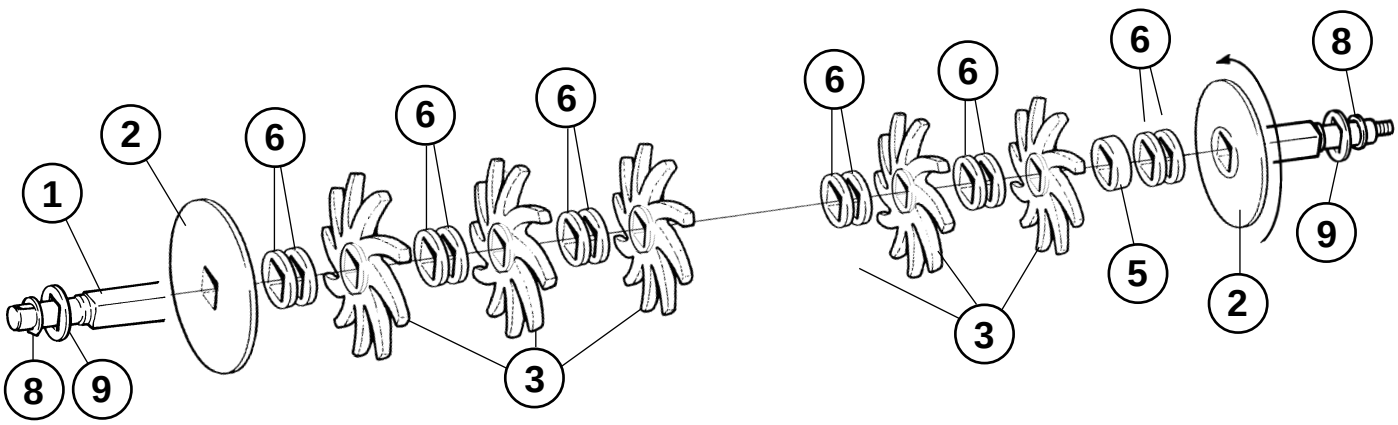
SHAFTS
2 • 4 • 6



50 mm SPACINGS

1	Shaft	RNS150/15C	1	6	5mm Spacer	RNS1671	60
2	End Disc	RNS1669	2	8	Circlip	RNS1735	2
3	40mm Star	RNS1667	29	9	Spacer	RNS1742	2
5	20mm Spacer	RNS1670	1				

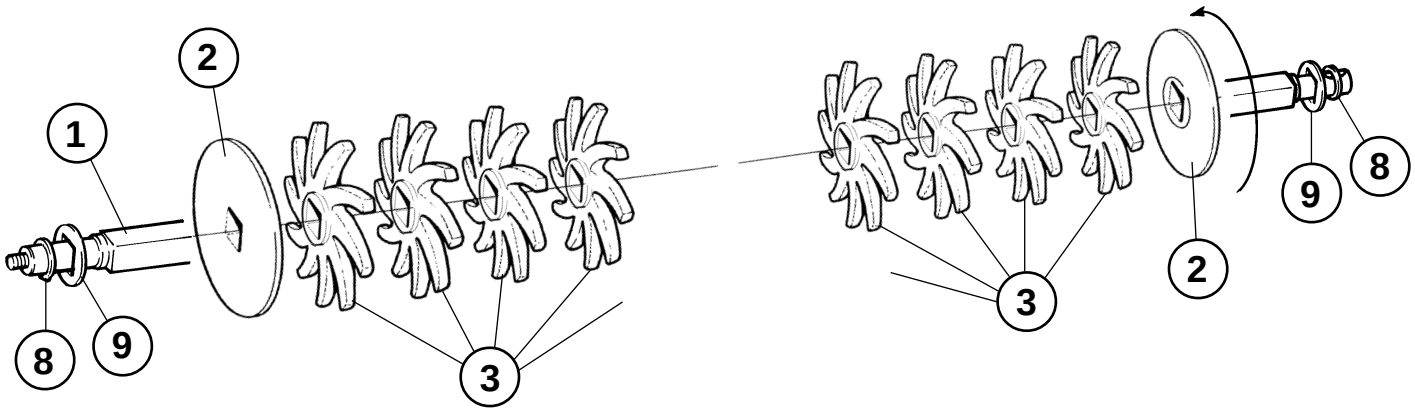
SHAFTS
2 • 4 • 6



40 mm SPACINGS

1	Shaft	RNS350/1	1	9	Spacer	RNS1742	2
2	End Disc	RNS1669	2				
3	40mm Star	RNS1667	42				
8	Circlip	RNS1735	2				

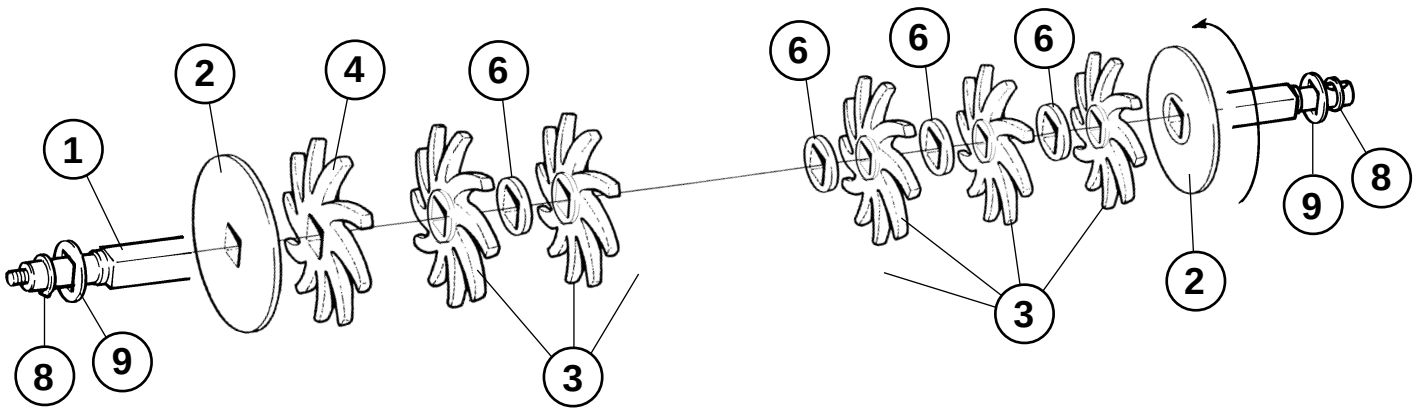
SHAFTS 1 • 3 • 5



45 mm SPACINGS

1	Shaft	RNS350/1	1	6	5mm Spacer	RNS1671	36
2	End Disc	RNS1669	2	8	Circlip	RNS1735	2
3	40mm Star	RNS1667	37	9	Spacer	RNS1742	2
4	20mm Star	RNS1668	1				

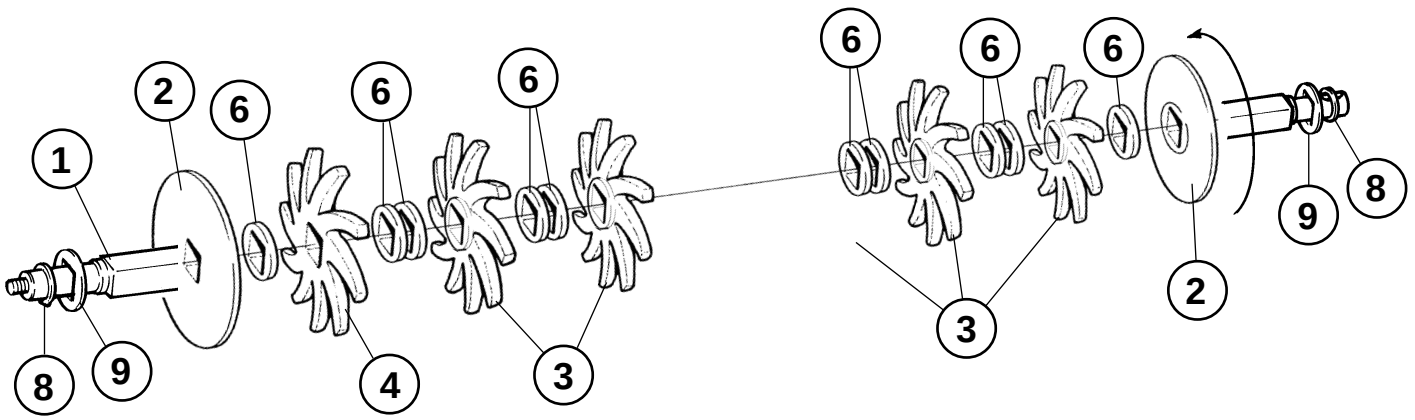
SHAFTS 1 • 3 • 5



50 mm SPACINGS

1	Shaft	RNS350/1	1	6	5mm Spacer	RNS1671	66
2	End Disc	RNS1669	2	8	Circlip	RNS1735	2
3	40mm Star	RNS1667	33	9	Spacer	RNS1742	2
4	20mm Star	RNS1668	1				

SHAFTS 1 • 3 • 5

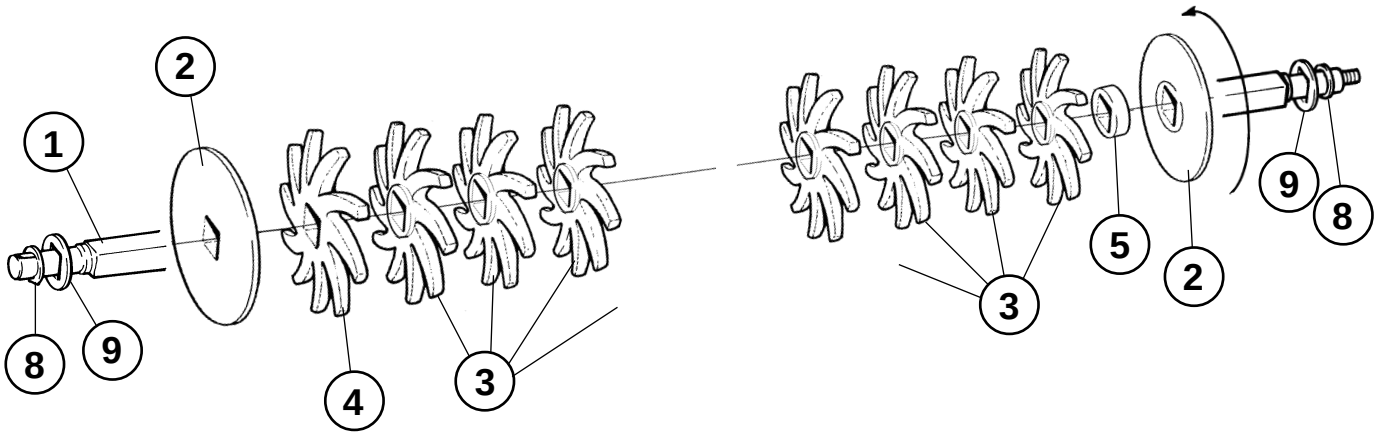


*Shafts are numbered from 1 to 6 starting at digger end of module, and are viewed from front of machine looking toward rear.

40 mm SPACINGS

1	Shaft	RNS350/1	1	5	20mm Spacer	RNS1670	1
2	End Disc	RNS1669	2	8	Circlip	RNS1735	2
3	40mm Star	RNS1667	41	9	Spacer	RNS1742	2
4	20mm Star	RNS1668	1				

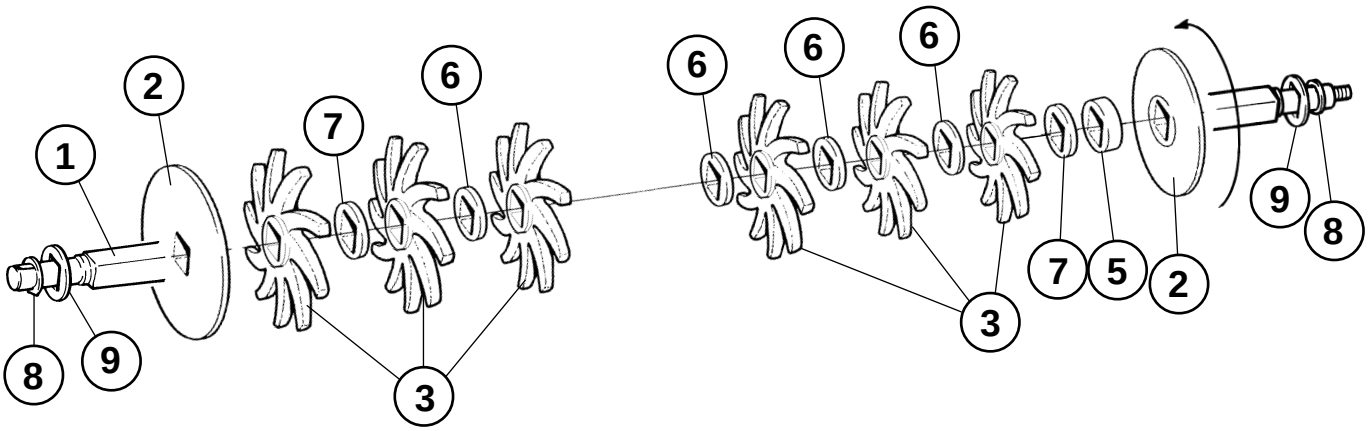
SHAFTS 2 • 4 • 6



45 mm SPACINGS

1	Shaft	RNS350/1	1	6	5mm Spacer	RNS1671	35
2	End Disc	RNS1669	2	7	2.5mm Spacer	RNS1672	2
3	40mm Star	RNS1667	37	8	Circlip	RNS1735	2
5	20mm Spacer	RNS1670	1	9	Spacer	RNS1742	2

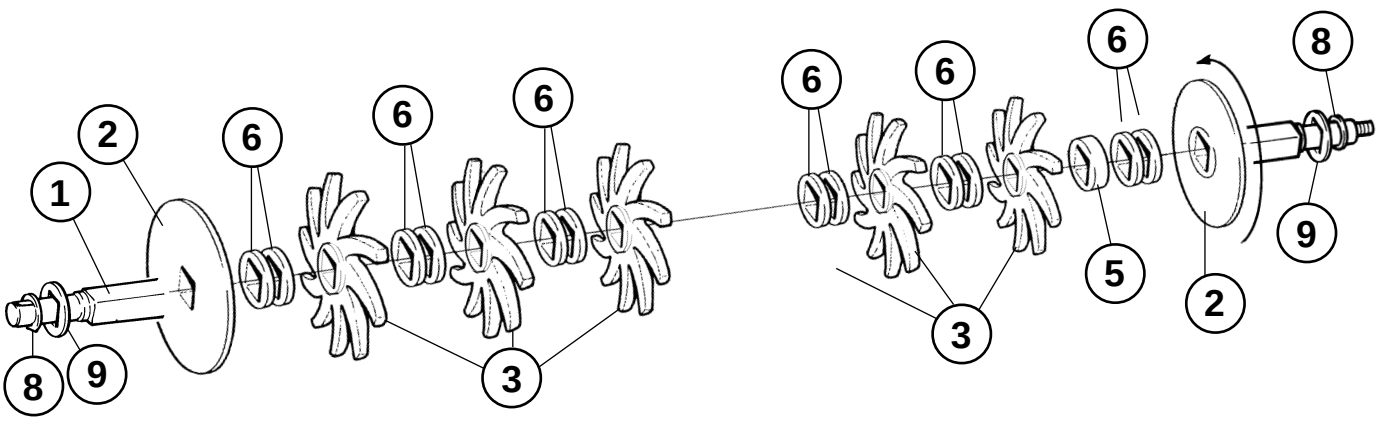
SHAFTS 2 • 4 • 6



50 mm SPACINGS

1	Shaft	RNS350/1	1	6	5mm Spacer	RNS1671	68
2	End Disc	RNS1669	2	8	Circlip	RNS1735	2
3	40mm Star	RNS1667	33	9	Spacer	RNS1742	2
5	20mm Spacer	RNS1670	1				

SHAFTS 2 • 4 • 6



SECTION 5 ROUTINE MAINTENANCE

Bedding In

On any new machine, or any machine which has been repaired, some parts may tend to work loose in the first few days of operations. It is essential to check regularly during this "bedding in" period for the possibility of loose nuts and bolts.

All belt pulleys on the machine are fitted with taper-lock bushes, which should also be checked to make certain they are secure. This should be done by alternately tapping the bush into the pulley (using a hammer and blunt punch) and then by tightening the socket screws with a socket wrench (Allen key).

Taper Lock Bushes

If taper lock bushes are to be replaced the following instructions should be followed:-

1. Remove the protective coating from the bore and outside of bush and bore of hub. After ensuring that the mating tapering surfaces are completely clean and free from oil or dirt, insert bush in hub so that holes line up.
2. Sparingly put loctite (nutlock 242) or tavlock (superloc 375) onto grub screws or thread. Place screws loosely in holes threaded in hub.
3. Clean shaft and fit hub and bush to shaft as one unit and locate in position desired, remembering that bush will nip shaft first and then hub will be slightly drawn onto the bush.
4. Using a socket wrench *Fig 29,* tighten the screws gradually and alternately until all are pulled up very tightly.
5. Hammer against large end of bush, using a blunt punch or sleeve to prevent damage. (this will ensure that the bush is seated squarely in the bore). Screws will now turn a little more. Repeat this alternate hammering and screw tightening once or twice until correct tightening torque is obtained.
6. Fill empty holes with grease to exclude dirt.

Filtration

The hydraulic system is protected by a filter mounted near the front manifold, *Fig 30.*

It is important that this filter is replaced each season to ensure protection of the hydraulic valves.

Should the filter be allowed to become blocked, unfiltered oil will by-pass and enter the hydraulic system with the possibility of causing faults and damage to the spool valves. A red warning light will illuminate on the control panel (*see Figs 8 & 9*) to indicate the filter has become blocked, and should be replaced at the first available opportunity.

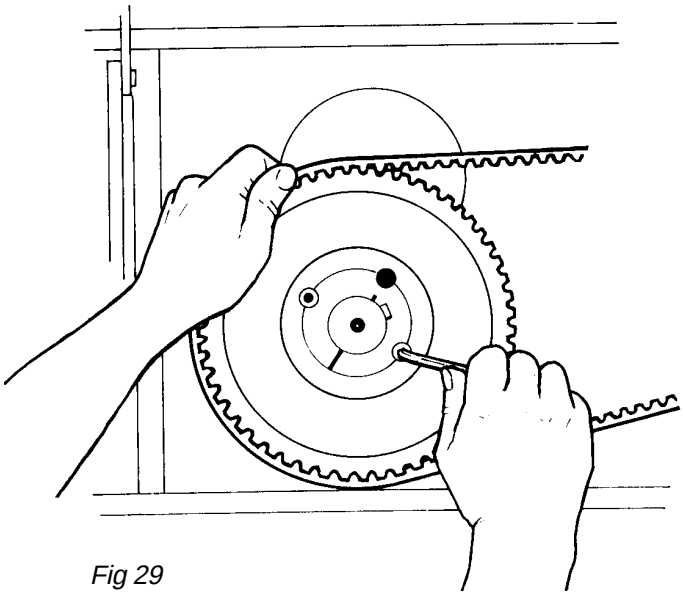


Fig 29

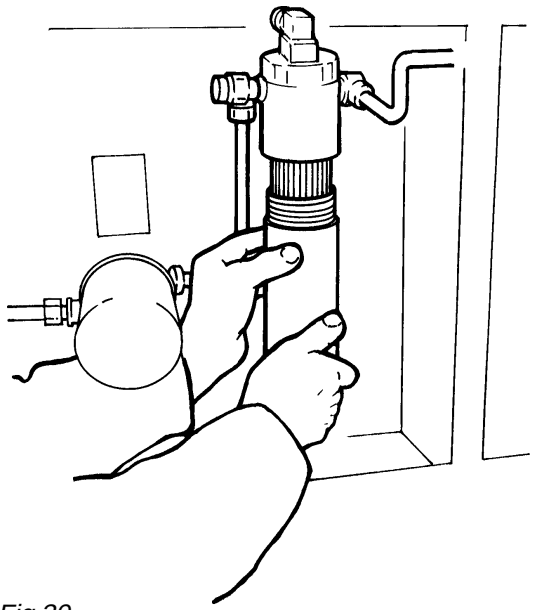


Fig 30

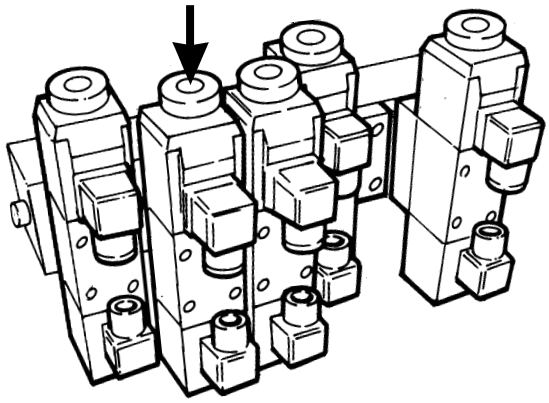


Fig 31

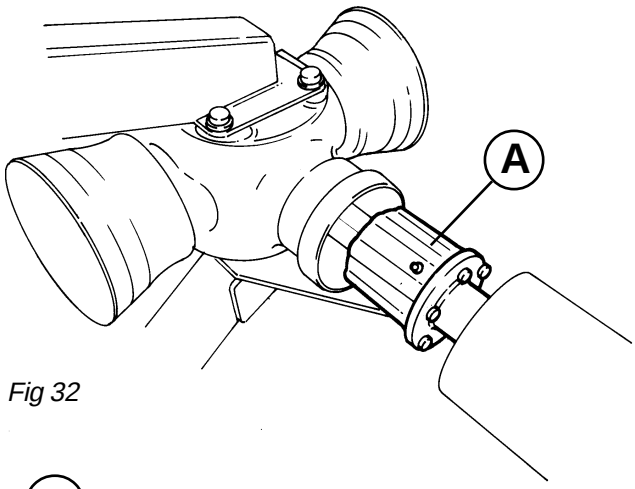


Fig 32

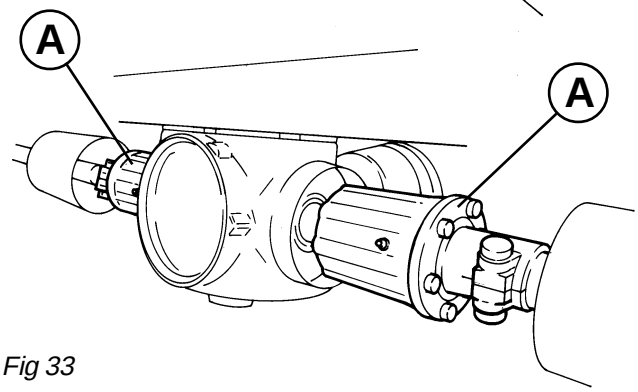


Fig 33

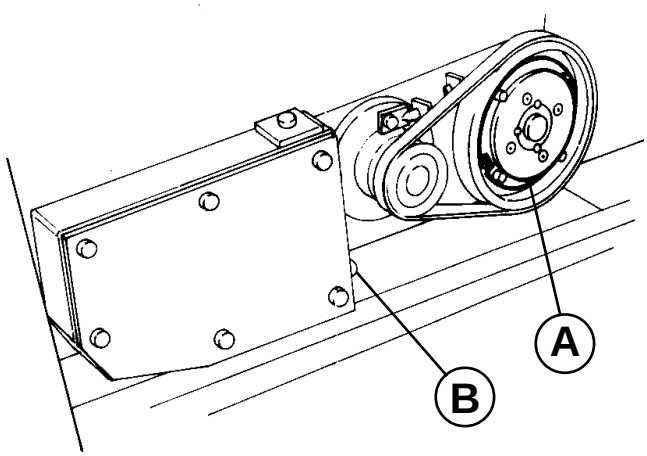


Fig 34

Fault Finding

ELECTRICAL CHECK

In the event of any of the hydraulic services not operating, the following procedures should be adopted to establish if the fault is electrical or hydraulic:

1. Refer to the hydraulic valve decals located near both manifold blocks to identify the faulty valve. On **Multi-web** machines - Pressure Pads, Dump Valve, Load Sensing and Front Lift are all located on **FRONT** manifold. Cross conveyor motor, Cross conveyor position, Rear Lift, Steering and Stone Box valves are all located on **REAR** manifold.

On **Speedstar** machines - Rear Lift, Pressure Pads, Dump Valve, Load Sensing and Front Lift are all located on **FRONT** manifold. Cross conveyor motor, Cross conveyor position, Axle Levelling, Steering and Stone Box valves are all located on **REAR** manifold.

2. Two people will be required in some instances to carry out the following system checks:-

Select relevant switch on control panel, *Figs 8 and 9,* and hold in the operative position not functioning correctly. At the same time, using a very small screwdriver, touch the inside of the black plastic nut where it abuts against the solenoid body and a slight magnetism should be felt (enough to hold a small screw or washer in position in corner between nut and body). On releasing switch, washer or screw should be released and drop off indicating that the solenoid in question is functioning properly.

3. Move switch to opposite position and check that opposite solenoid also becomes magnetised. If difficulty is found in ascertaining if magnetism is occurring, the black nut can be easily unscrewed by hand to allow magnetic check directly on circular magnetised area where screwed part protrudes from solenoid.

4. For the double acting services, i.e. cross conveyor and steering in both positions, front and rear “LIFT” positions only, the dump valve must also operate; and so should be checked simultaneously with the spool valve in question for magnetism.

If the electrical check on the valve in question proves the solenoid to be magnetised, then the electrics are in order which would indicate the problem is hydraulic, e.g. a sticking valve.

HYDRAULIC CHECK

If the above check indicates that the electrical system is in order, the following hydraulic check should be carried out.

With the tractor engine switched off and with the front and rear of the machine lowered, push on the pin in the centre of the end of the solenoid on the faulty valve, *Fig 31,* using a suitable punch or small screwdriver to operate the valve mechanically.

Push the pin in once or twice - this may free the valve if it has been sticking.

IMPORTANT
If the problem is in the lowering of either front or rear lifts:- Precautions should be taken to prevent anyone becoming trapped as the machine will automatically drop when the valve is operated by hand as described above. After operating the faulty valve by hand once or twice, the tractor should be started and the switch operated as normal to check that the fault has been cleared.

Webs

All webs on machine are of fixed lengths and no adjustment is required. The support rollers for carrying the webs should be checked **daily** to ensure they are running freely, as a seized roller will cause rapid wear of the roller and web belt.

Safety Clutches

There are 3 safety slip clutches on the machine. A 3-row clutch is fitted to the output drive shaft of the front gearbox to protect the Rotor, *Fig 32.***A**, and two 4-row clutches are fitted to the output drive shaft either side of the web drive gearbox, *Fig 33.***A.**
On machines fitted with large stone separation units there are 3 additional clutches fitted on the spool roller drive shafts, *Fig 34.***A** & *Fig 35.***A.** These clutches are pre-set and no adjustment is provided or necessary.
If slip occurs, check machine for blockage or jamming of a mechanical component causing overloading to the clutch.
If a clutch continues to slip but no obvious reason is apparent, e.g. soil overloading or mechanical jamming (stones), strip down the clutch and check condition of clutch pawls and springs (springs may be broken).
Note lubrication nipples on these clutches, *Figs 32, 33, 34 & 35.*

Drive Belt Adjustment

Drive Belts should be installed with a snug fit, neither taut or loose. They should be adjusted to the correct level of tension by measuring the force necessary to deflect the belt at mid span (Fig 36) by an amount equal to 1/100th of its span centres 'S' (± 10%). See Table 1 opposite.
Alternatively a Clavis meter can be used to check tensions.

⚠ Over tensioning of belts can result in damage to machine. If in doubt contact your local Netagco Reekie dealer.

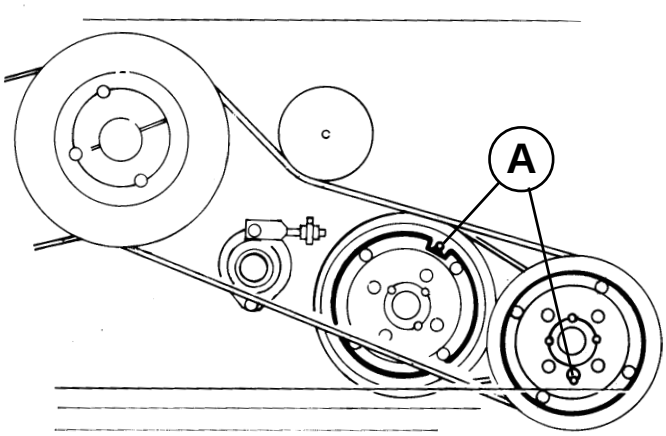


Fig 35

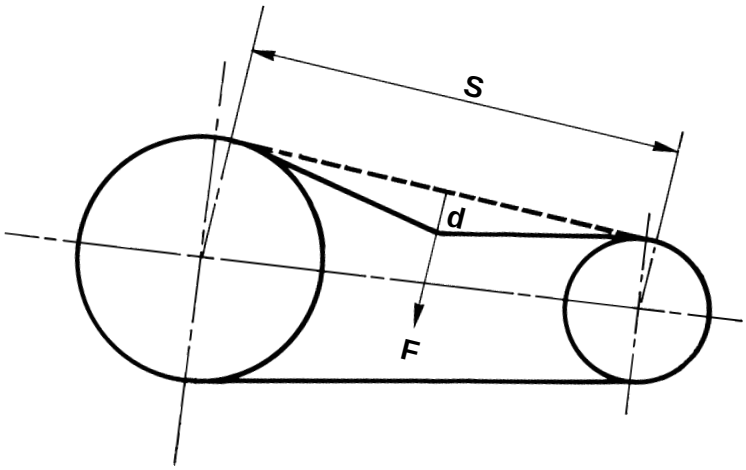


Fig 36

SPRING BALANCE		CLAVIS METER
BELT WIDTH (mm)	APPLIED FORCE (Kg)	FREQ (Hz)
21	2	210 - 220
37	5	40 - 45
47	7	30 - 33
55	8	35 - 40
74	11	60 - 65

Table 1

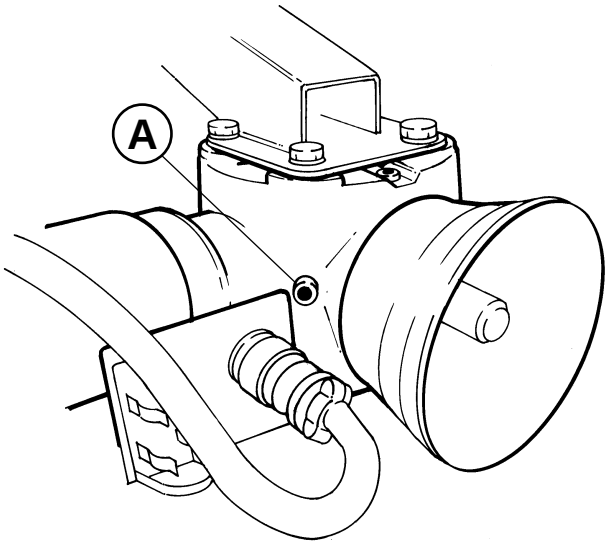


Fig 37

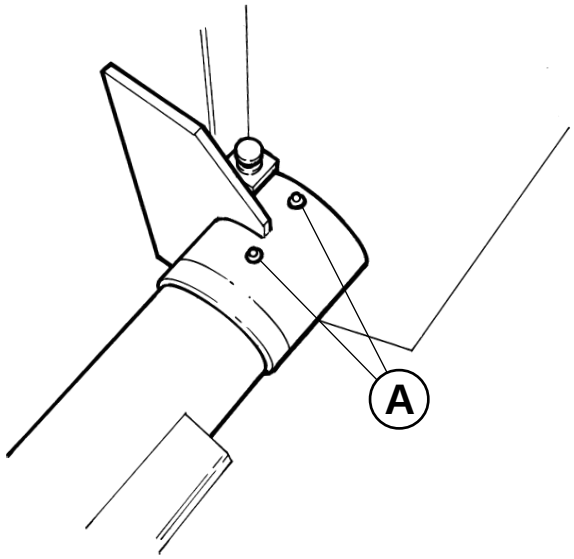


Fig 38

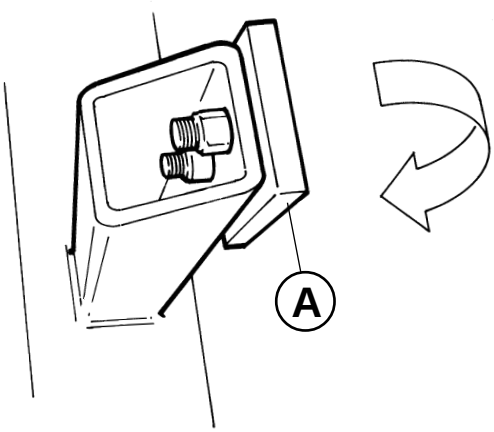


Fig 39

Gearboxes

The Rotor Drive, Web Drive and LSS Unit Gearboxes are fitted with level plugs, see *Fig 37.***A** *and Fig 34.***B**. Oil levels must be checked regularly and topped up if necessary.

Gearbox	Oil Type / capacity
Rotor Drive	EP 90 (1½ Ltr.)
Web Drive	EP 90 (1½ Ltr.)
LSS Unit	Texaco Marfak OO (1 Ltr.)

Drawbar Pivots

The drawbar pivot points are located at either side of the machine round the rotor drive cross shaft and are fitted with two grease nipples each side, *Fig 38.* Grease every 100 hours.

Share, Stone Trap and Rotor Tips

Clean and oil after work. If these are worn or damaged, they should be replaced.
NOTE: The Rotor tips are reversible to allow both wear-faces of the tips to be used as far as possible. *Fig 39.***A**.

Tyres

Keep the Tyres free from sharp stones, grease, oil, petrol, acids, etc.
Tyres should always be inflated to the correct pressure. (see machine specifications page 10).

Winter Storage

1. Clean machine thoroughly.
2. Make sure that all load has been removed from the hydraulic cylinders.
3. Grease all the exposed parts of the hydraulic cylinder piston rods.
4. Grease the share, and any other soil engaging parts polished by soil flow as this will greatly assist the initial operation of the machine the following season.
5. Adjust all drive belts and lubricate exposed threads on adjusters.
6. Separate, clean and grease the 2 parts of the P.T.O. shaft.
7. Check tyre pressure and / or place the machine on blocks.
8. Ensure that the hydraulic hoses are not kinked or trapped in any way and that they are stored clean and in a natural curve, away from the ground or floor.
9. Store control box in a safe dry place.

HAVE YOUR MACHINE PROPERLY CHECKED OVER AND REPAIRED WHERE NECESSARY DURING THE WINTER MONTHS.

Hydraulic Faults

FAULT	REMEDY
• Hydraulic rams on machine fail to operate at their normal speed or not at all.	• Check that cross conveyor is not being run too fast. • Check that the hydraulic oil *Feed* and *Return* hoses are connected correctly to the tractor and with as little restriction as possible make sure the tractor supplies oil at a rate of at least 30 litres/min (6.6 gal) at a pressure of between 152 bar (2200 lb/in²) and 207 bar (3000 lb/in²).
• One of the hydraulic services fails to function properly.	• Check for a faulty solenoid value and test whether the fault is caused by a failure in the electrical supply from the tractor.
• The hydraulic oil overheats.	• Check the tractor oil reservoir level, make sure the quick release couplings on both machine and tractor are compatible so that there are no restrictions to the oil flow. Clean the tractor oil cooler to prevent it becoming blocked by dust and chaff. • Check that Closed centre hydraulics switch is in the correct position for the tractor being used. (see note on page 14). • Check for high Tractor oil flow and reduce flow if possible.

Control of Substances Hazardous to Health - DATA

Oil and Grease products used in this machine are not considered to be especially hazardous to health, but nevertheless in common with all such products should be handled in accordance with good industrial hygiene and safety practices.

Inhalation of fumes:
If irritation, headache, nausea or drowsiness occurs, remove to fresh air.
Get medical attention if breathing becomes difficult or symptoms persist.

Skin contact:
Wash skin with plenty of soap and water for several minutes. Get medical attention if skin irritation develops or persists.

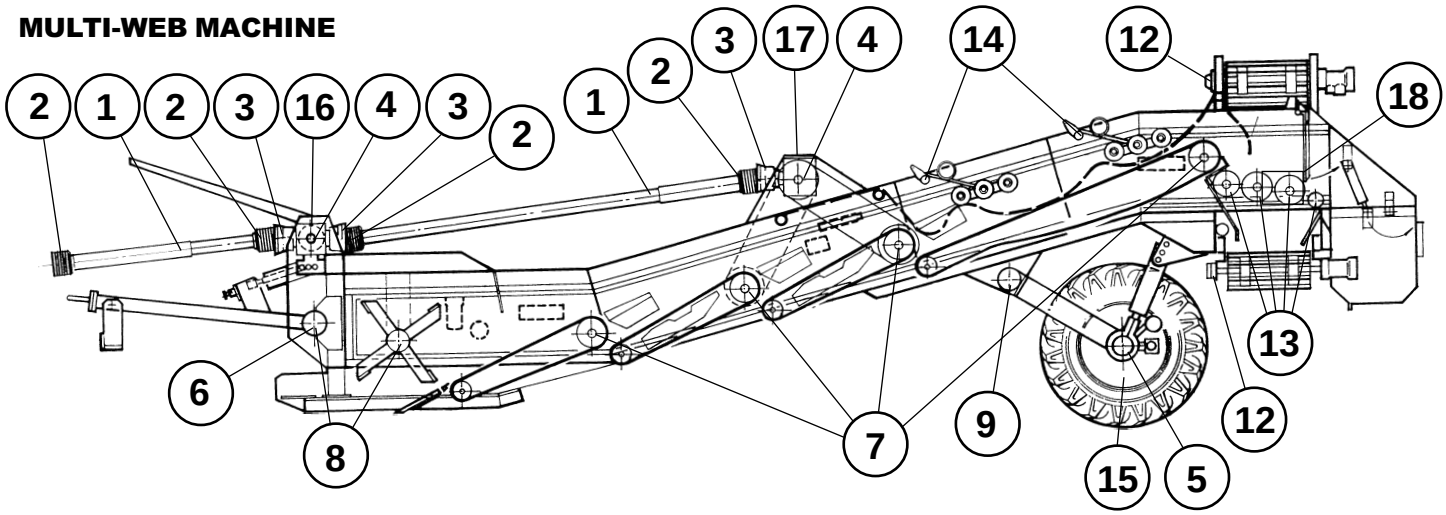
Contact with Eyes:
Flush eyes with plenty of water for several minutes. Get medical attention if eye irritation persists.

Ingestion:
Except as a deliberate act, the ingestion of large amounts of oil is unlikely, if more than several mouthfuls have been swallowed however, give two glasses of water (500ml). Get medical attention.

Other Recommendations:
High pressure injection of material into skin, if not properly treated, can cause severe injury. Most damage occurs during first few hours. Failure to debride the wound of all residual material can result in disfigurement, loss of function, or even require amputation of the affected area. The extent of the injury cannot be determined by examining the wound. X-ray may reveal the presence of gas in the tendon sheaths or soft tissue.

SECTION 5 LUBRICATION INSTRUCTIONS

MULTI-WEB MACHINE



- **Grease every 8 Hours of work:-**

1. P.T.O. Sliding Shafts
2. P.T.O. Universal Joints

- **Grease every 40 Hours of work:-**

3. P.T.O. Cone Guards
4. Output Drive Shaft Clutches

- **Grease every 100 Hours of work:-**

5. Wheel Hubs
6. Drawbar Pivot
7. Drive Shaft Bearings
8. Rotor Drive Stub and Countershaft Bearings
9. Support Tube (Multi-web)

Every 100 Hours (continued)

10. Idler / Tensioner Pulleys (Speedstar)
11. Star Shaft Bearings (Speedstar)
12. Cross Conveyor Drive Shaft Bearings
13. LSS Unit Clutches, Spool Shaft and Roller Bearings
14. Scrubber Web Mounting Bar Bearings

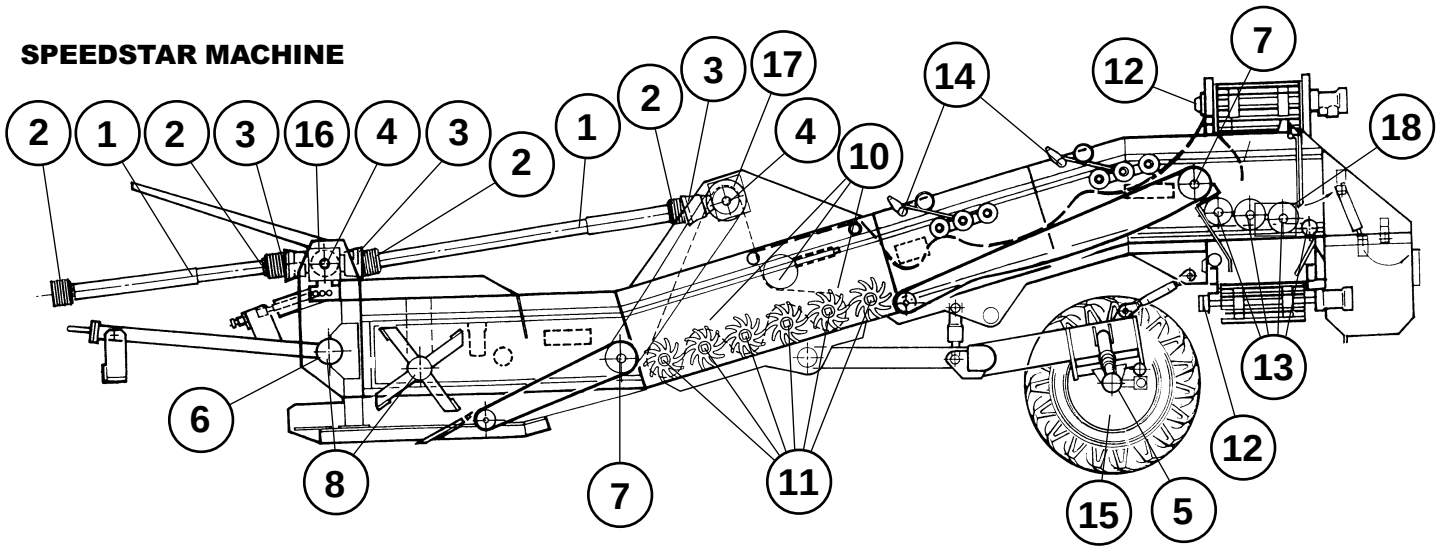
- **Check every 8 hours of work:-**

15. Wheel Nut Torque settings (271 Nm)

- **Check every 100 Hours of work:-**

16. Rotor Drive Gearbox Oil level
17. Web Drive Gearbox Oil level
18. LSS Gearbox Oil level

SPEEDSTAR MACHINE



Auto Lubrication

Auto-grease dispensers are available for fitting as an optional extra, and are designed to give continuous lubrication to machine bearings over a regulated time period.

Each dispenser has an adjuster which can be fixed for a period of between 1 to 12 months but should be set at **12 months** to ensure correct application of grease.

The dispensers are set by the dealer when commissioning the machine and should require no maintenance over their lifespan.

To replace - Unscrew empty dispenser from fitting.

Cut off tip of nozzle on new dispenser and screw into fitting. Set adjuster to 12 months.

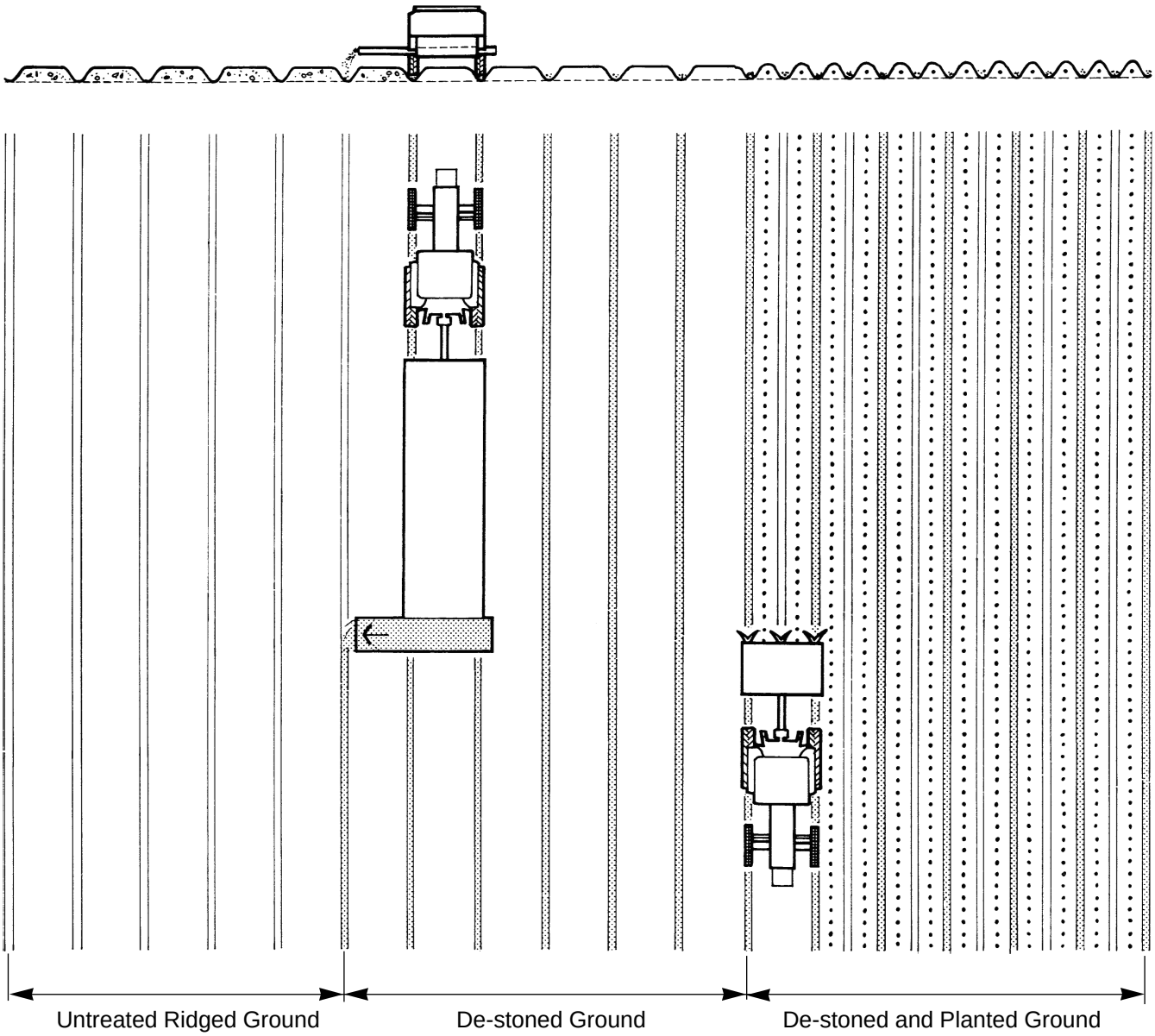
NOTE:- Always ensure Feeder Tubes are fully charged with grease prior to fitting Dispensers.

SECTION 6 METHODS OF USING SEPARATOR

SYSTEM A : DEEP-RIDGED / BURIAL SYSTEM

(STONE SEPARATION PRIOR TO PLANTING)

This is the most flexible and generally adopted system of stone and clod separation allowing the stone / clod separation operation to be carried out prior to planting, and if desired, allows the use of 2-row planters.
To carry out this system it is generally necessary to have a ploughed / cultivated depth of 10"-12" (254-305 mm), although the system could be used at lesser cultivated depth if there is only a limited amount of stones or clod to be disposed off.
This system is also very effective in soil where clod is the major problem, as the passage of tractor and Separator (two passes) is very effective in crushing and reducing the volume of clods in the ridge bottom.
To operate this system, pre-ridging is carried out using the Netagco Reekie Deep Ridger followed by the Separator, with the cross conveyor positioned to discharge stones / clods over two ridges and into the ridge bottom on the **untreated** land side.
Where there is insufficient cultivated depth of soil **System B** should be adopted.



SYSTEM B : SURFACE PLACEMENT / WINDROWING SYSTEM

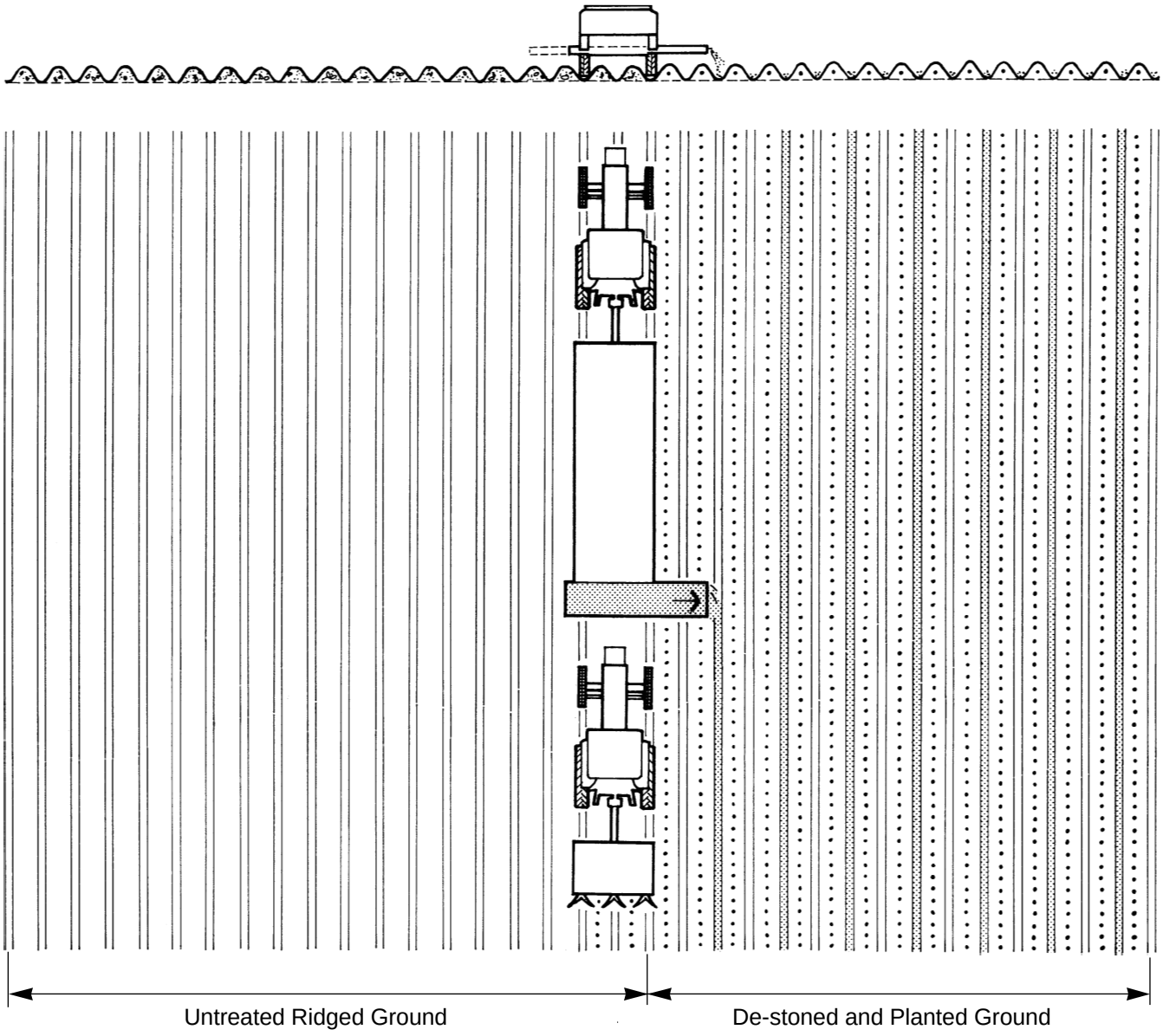
(STONE SEPARATION IN CONJUNCTION WITH PLANTING OPERATION)

This system should be adopted for potato land where available cultivated soil depth is insufficient to allow System A to be operated.

In this system the Separator operates in conjunction with the Planter which should be fitted with REEKIE stone placement ploughs. These ploughs can be fitted direct to “Howard”, “Setrite” and “Gruse” toolbars. For other Planters , i.e. “Ransomes”, “Faun”, “Hassia”, “Plantmasta”, etc., alterations to toolbars may be necessary to allow fitting of ploughs.

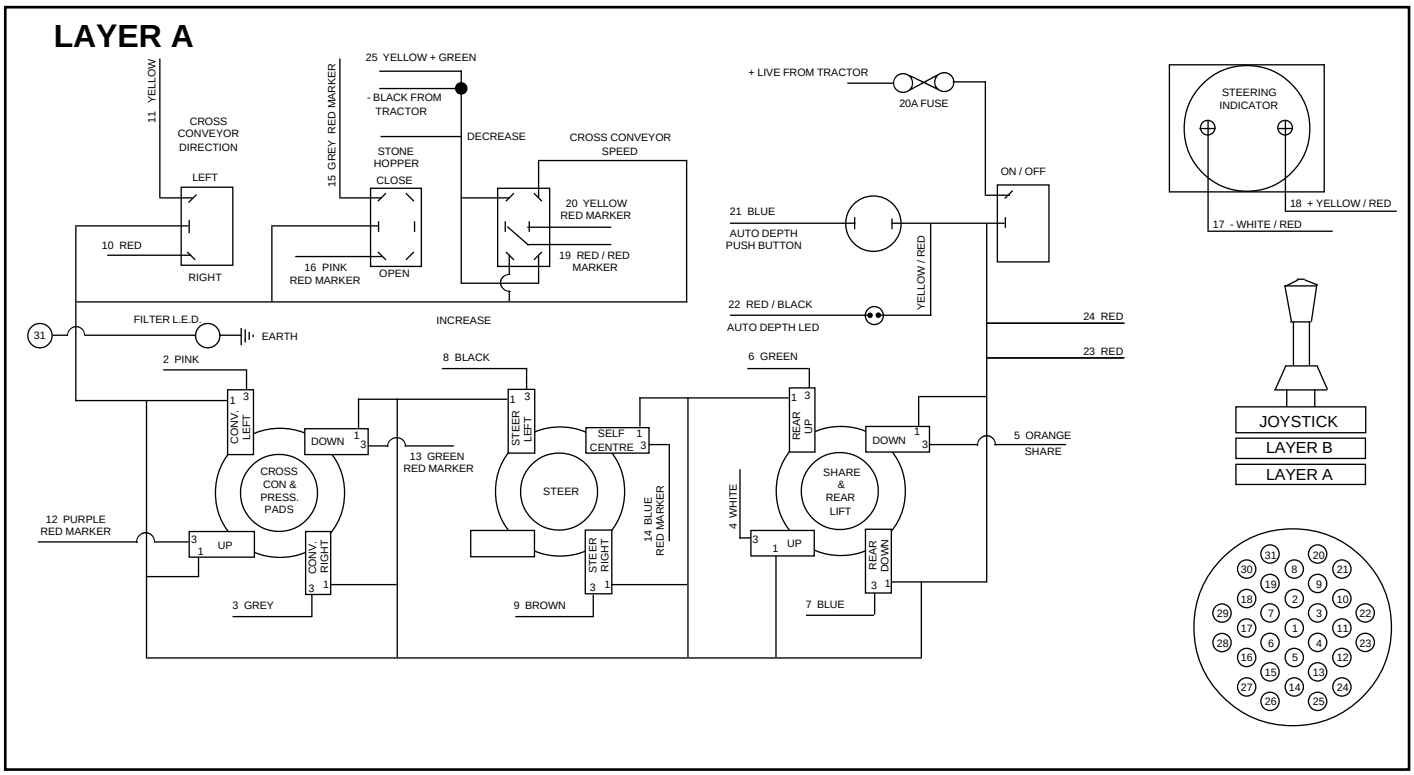
To operate this system, pre-ridging is carried out using the REEKIE 3 or 5 row Shearbolt or auto-reset type Ridger followed by the separator, with the cross conveyor positioned to discharge stones/clods over two ridges. The Planter follows immediately behind Separator.

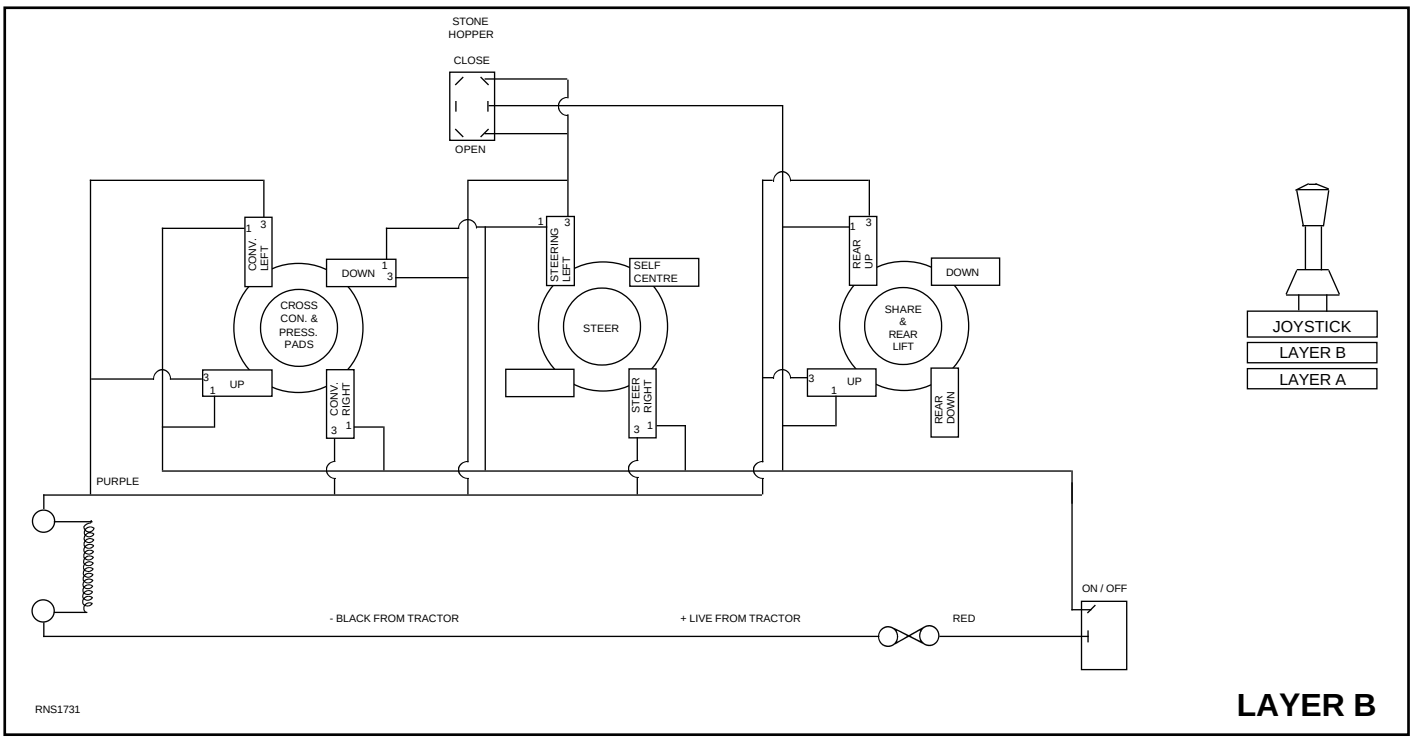
When carrying out surface placement it is advisable to use the optional Share extensions with 50 mm spacers to increase the de-stoned depth of the ridge bottoms, allowing the ploughs on planter to be operated to full de-stoned depth without danger of picking up stones from ridge bottoms.



SECTION 7 ELECTRICAL AND HYDRAULIC DIAGRAMS

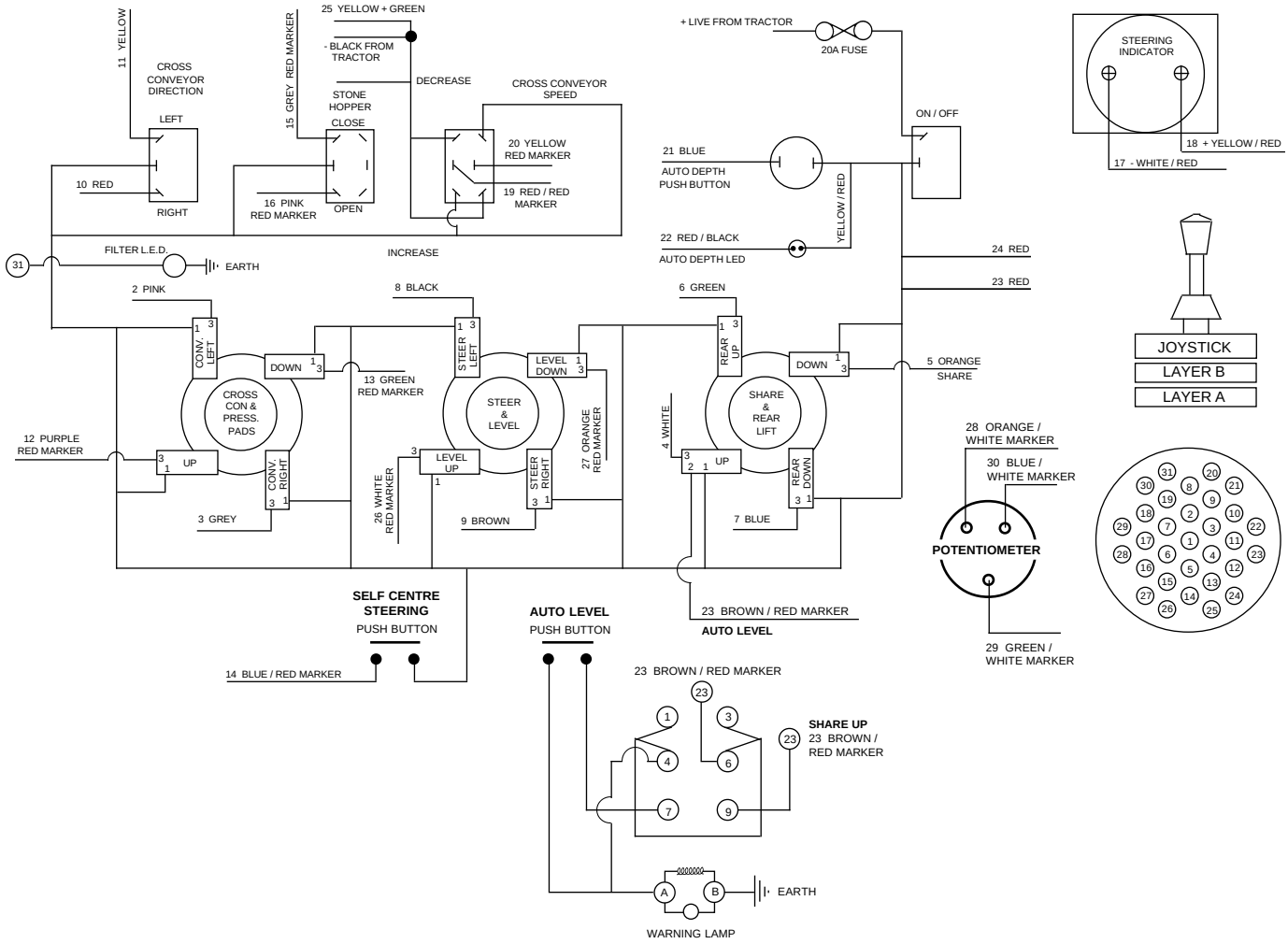
MULTI-WEB MACHINE ONLY

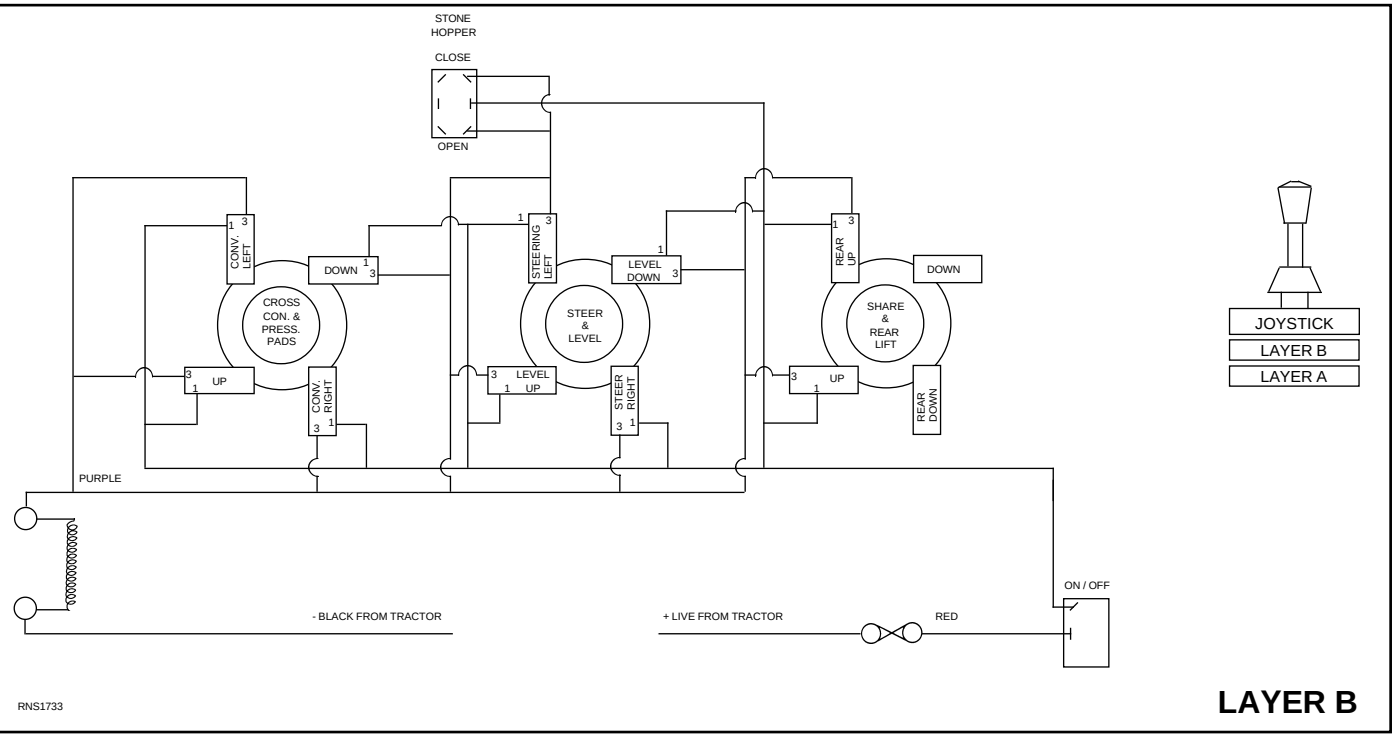




SPEEDSTAR MACHINE ONLY

LAYER A



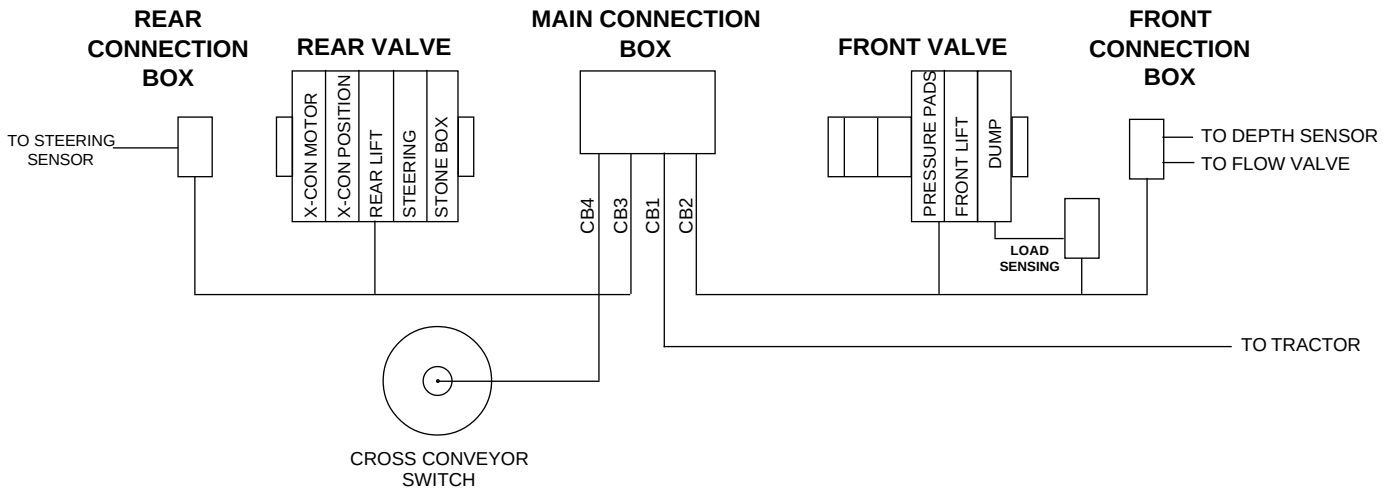


LAYER B

SECTION 7

MULTI-WEB MACHINE ONLY

MAIN WIRING DIAGRAM

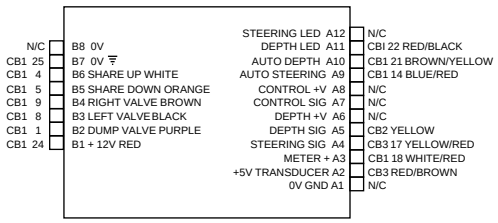


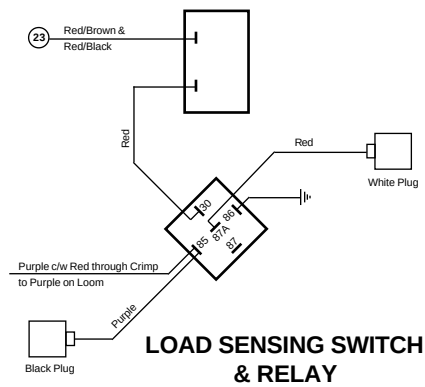
MAIN CONNECTION BOX WIRING DIAGRAM

4 CORE CABLE CB4	1	CB2 PCB	PURPLE - DUMP VALVE, CB4 BLUE
CROSS CONVEYOR	2	CB3	PINK - CONVEYOR LEFT, CB4 GRN/YEL
	3	CB3	GREY - CONVEYOR RIGHT, CB4 BLACK
	4	CB2 PCB	WHITE - SHARE UP
	5	CB2 PCB	ORANGE - SHARE DOWN
	6	CB3	AQUA - REAR UP
	7	CB3	BLUE - REAR DOWN
	8	CB3 PCB	BLACK - STEERING LEFT
18 CORE CABLE CB3	9	CB3 PCB	BROWN - STEERING RIGHT
REAR VALVE BLOCK	10	CB3	RED - CONVEYOR DISCHARGE RIGHT
	11	CB3	YELLOW - CONVEYOR DISCHARGE LEFT
	12	CB2	RED/BLUE - SCRUBBER WEB UP
	13	CB2	RED/GREEN SCRUBBER WEB DOWN
	14	PCB BLUE	A9 - STEER - SELF CENTRE (RED MARKER)
	⏚	PCB+CB2&CB3	GREEN/GREEN + 1 YELLOW & GREEN + B7
34 CORE CABLE CB1	15	CB3	WHITE - HOPPER CLOSE
MAIN FROM CONTROL BOX	16	CB3	ORANGE - HOPPER OPEN
	17	PCB	A4 - INDICATOR - YELLOW/RED
	18	PCB	A4 - INDICATOR + WHITE/RED
	19	CB2	BROWN - CONVEYOR DISCHARGE SLOW
	20	CB2	BLACK - CONVEYOR DISCHARGE FAST
	21	PCB BROWN	- AUTO DEPTH (YELLOW MARKER)
18 CORE CABLE CB2	22	PCB	AUTO DEPTH LED RED/BLACK
FRONT VALVE BLOCK	23	CB2	RED/BROWN RED/BLACK - LOAD SENSING SWITCH
	24	CB2,CB3,PCB	RED - +12V, CB4 BROWN
	26		SPARE
	27		SPARE
	28		SPARE
	29		SPARE
	30		SPARE
	31	CB2	AQUA - BLOCKED FILTER L.E.D.

RNS1732

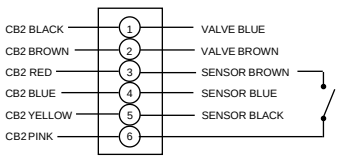
PCB CONNECTIONS



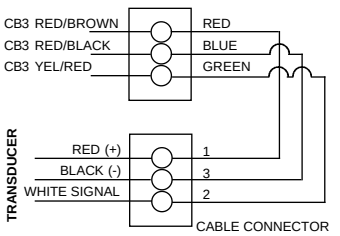


LOAD SENSING SWITCH & RELAY

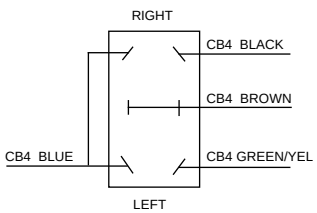
FRONT CONNECTION BOX



REAR CONNECTION BOX

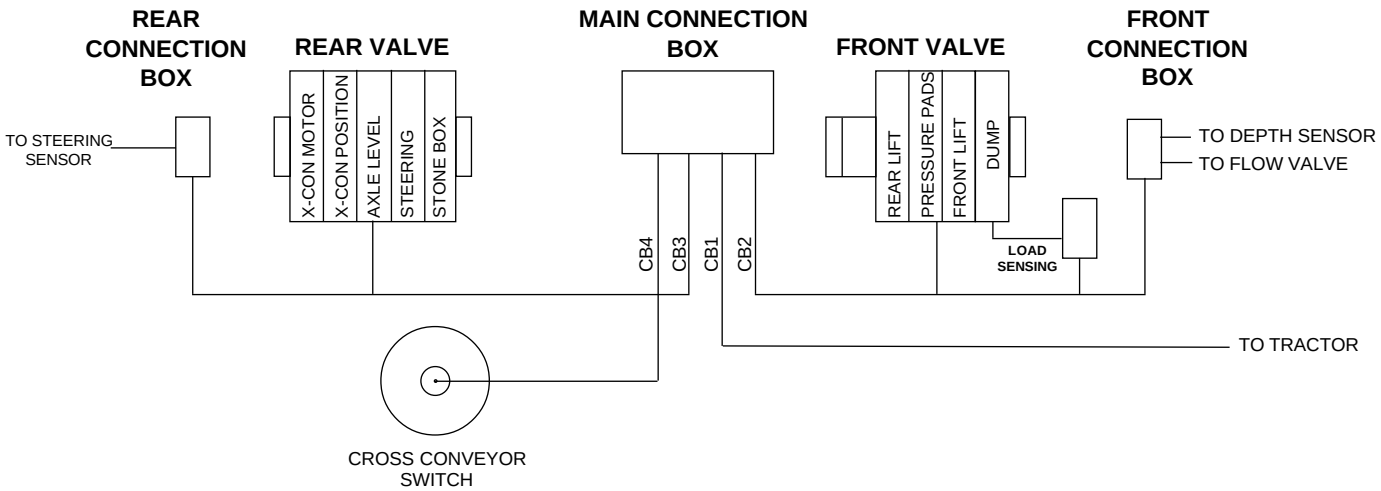


CROSS CONVEYOR SWITCH



SPEEDSTAR MACHINE ONLY

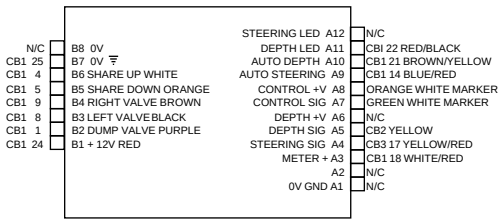
MAIN WIRING DIAGRAM



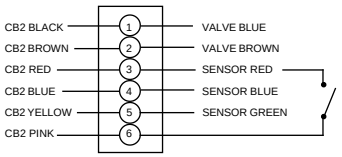
MAIN CONNECTION BOX WIRING DIAGRAM

4 CORE CABLE CB4 / CROSS CONVEYOR	1	CB2 PCB	PURPLE - DUMP VALVE, CB4 BLUE
	2	CB3	PINK - CONVEYOR LEFT, CB4 GRN/YEL
	3	CB3	GREY - CONVEYOR RIGHT, CB4 BLACK
	4	CB2 PCB	WHITE - SHARE UP
	5	CB2 PCB	ORANGE - SHARE DOWN
	6	CB2	PINK - REAR UP
	7	CB2	GREY - REAR DOWN
	8	CB3 PCB	BLACK - STEERING LEFT
	9	CB3 PCB	BROWN - STEERING RIGHT
	10	CB3	RED - CONVEYOR DISCHARGE RIGHT
	11	CB3	YELLOW - CONVEYOR DISCHARGE LEFT
18 CORE CABLE CB3 / REAR VALVE BLOCK	12	CB2	RED/BLUE - SCRUBBER WEB UP
	13	CB2	RED/GREEN SCRUBBER WEB DOWN
	14	PCB BLUE	A9 - STEER - SELF CENTRE (RED MARKER)
		PCB+CB2&CB3	GREEN/GREEN + 1 YELLOW & GREEN + B7
34 CORE CABLE CB1 / MAIN FROM CONTROL BOX	15	CB3	WHITE - HOPPER CLOSE
	16	CB3	ORANGE - HOPPER OPEN
	17	PCB	A4 - INDICATOR - YELLOW/RED
	18	PCB	A4 - INDICATOR + WHITE/RED
	19	CB2	BROWN - CONVEYOR DISCHARGE SLOW
	20	CB2	BLACK - CONVEYOR DISCHARGE FAST
	21	PCB BROWN	- AUTO DEPTH (YELLOW MARKER)
	22	PCB	AUTO DEPTH LED RED/BLACK
	23	CB2	RED/BROWN RED/BLACK - LOAD SENSING SWITCH
	24	CB2,CB3,PCB	RED - +12V, CB4 BROWN
18 CORE CABLE CB2 / FRONT VALVE BLOCK	26	CB3	AQUA - LEVEL UP
	27	CB2	BLUE - LEVEL DOWN
	28	PCB	ORANGE/WHITE MARKER
	29	PCB	GREEN/WHITE MARKER
	30	PCB	BLUE/WHITE MARKER
	31	CB2	AQUA - BLOCKED FILTER L.E.D.

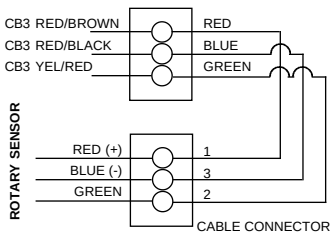
PCB CONNECTIONS



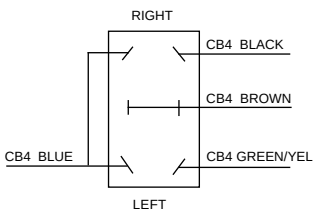
FRONT CONNECTION BOX

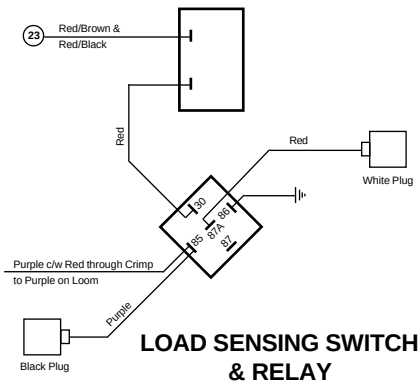


REAR CONNECTION BOX



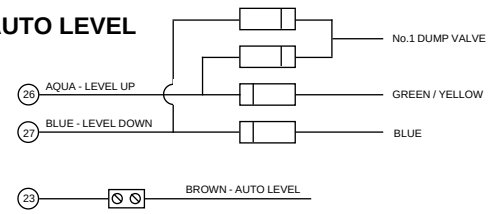
CROSS CONVEYOR SWITCH





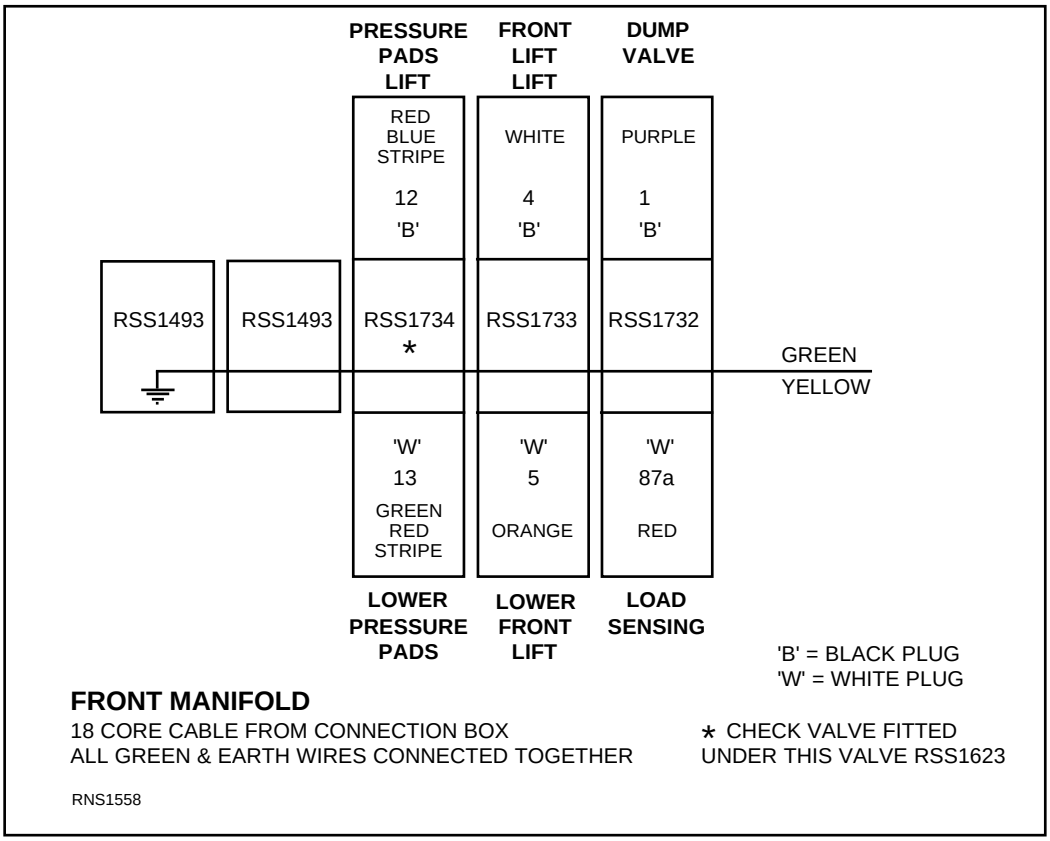
LOAD SENSING SWITCH & RELAY

AUTO LEVEL



RNS1734

MULTI-WEB MACHINE ONLY

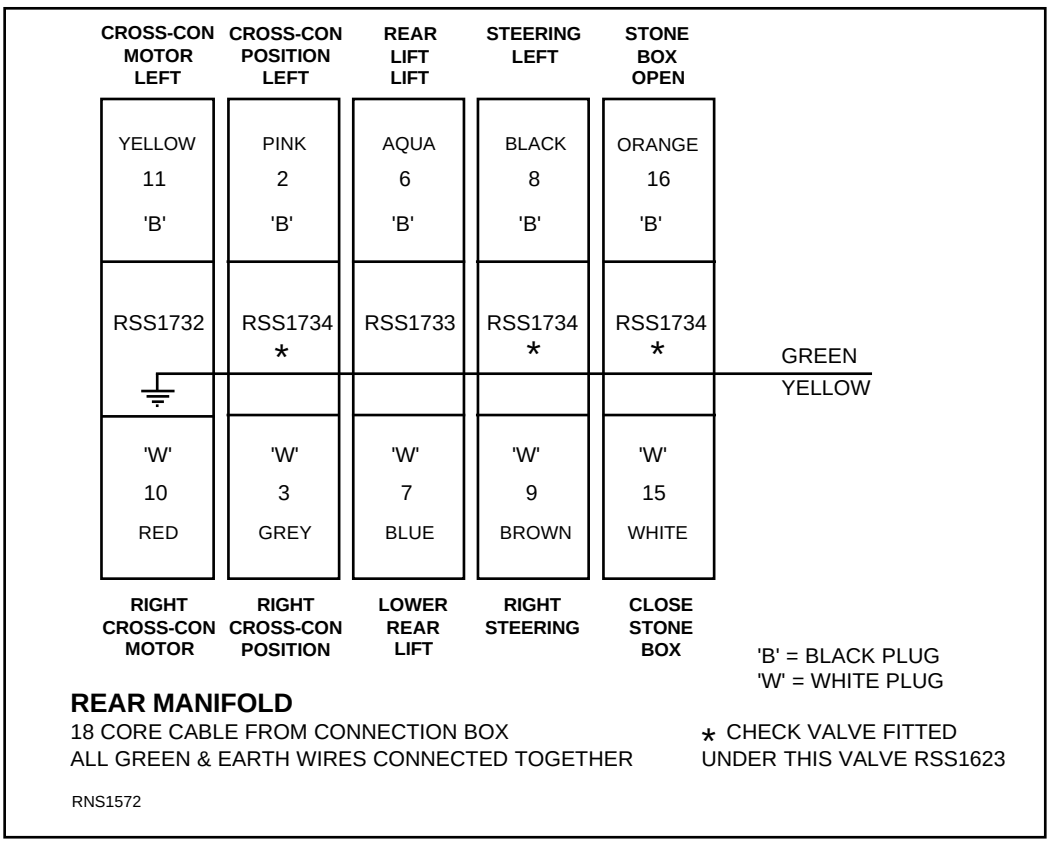


FRONT MANIFOLD

18 CORE CABLE FROM CONNECTION BOX
ALL GREEN & EARTH WIRES CONNECTED TOGETHER

* CHECK VALVE FITTED
UNDER THIS VALVE RSS1623

RNS1558



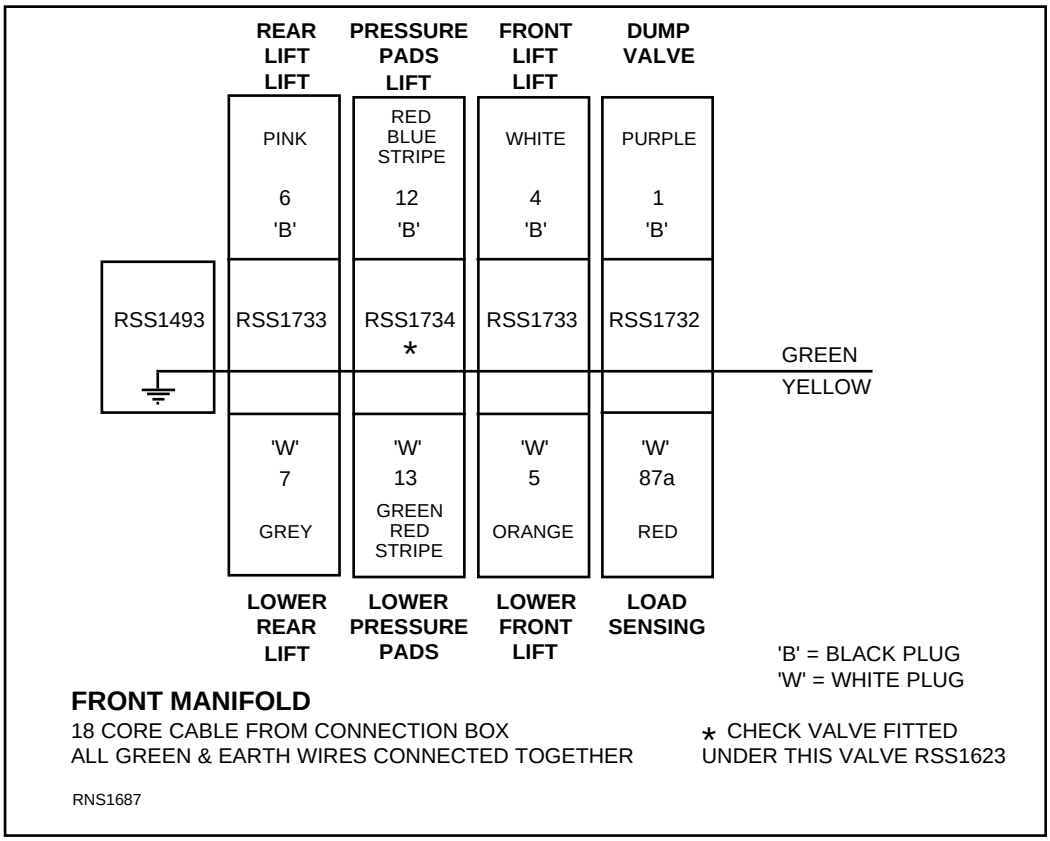
REAR MANIFOLD

18 CORE CABLE FROM CONNECTION BOX
ALL GREEN & EARTH WIRES CONNECTED TOGETHER

* CHECK VALVE FITTED
UNDER THIS VALVE RSS1623

RNS1572

SPEEDSTAR MACHINE ONLY

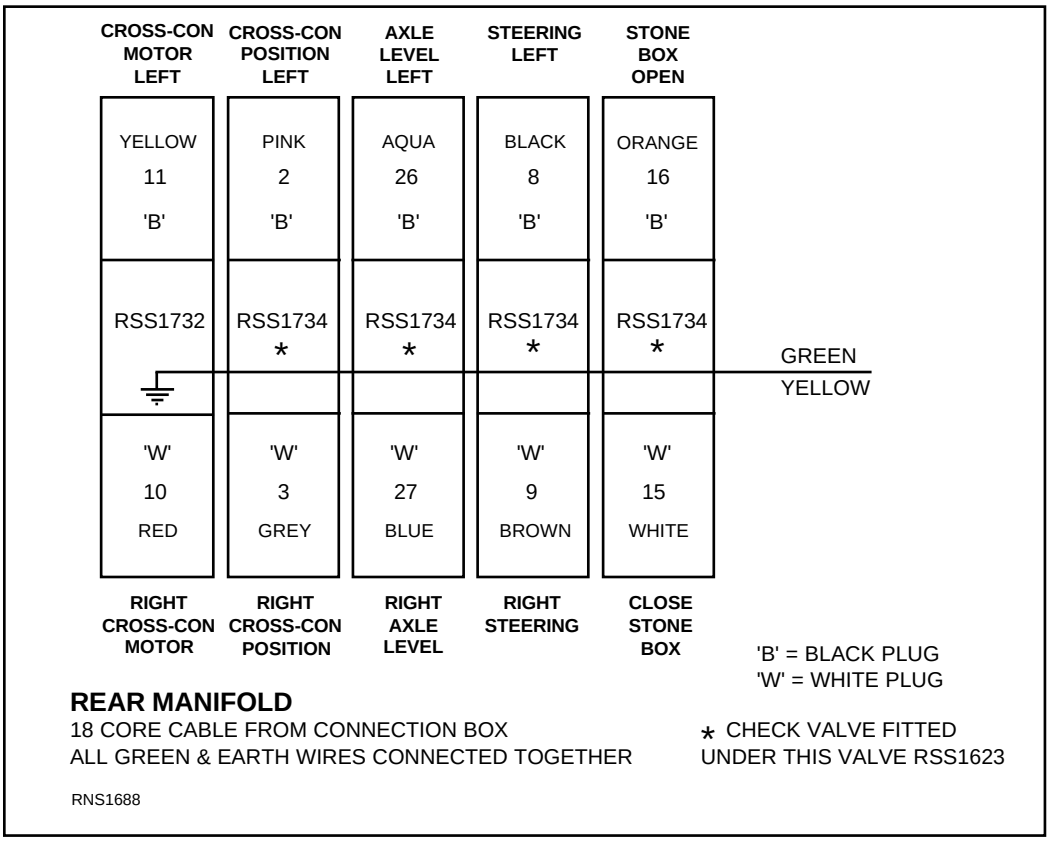


FRONT MANIFOLD

18 CORE CABLE FROM CONNECTION BOX
ALL GREEN & EARTH WIRES CONNECTED TOGETHER

* CHECK VALVE FITTED
UNDER THIS VALVE RSS1623

RNS1687



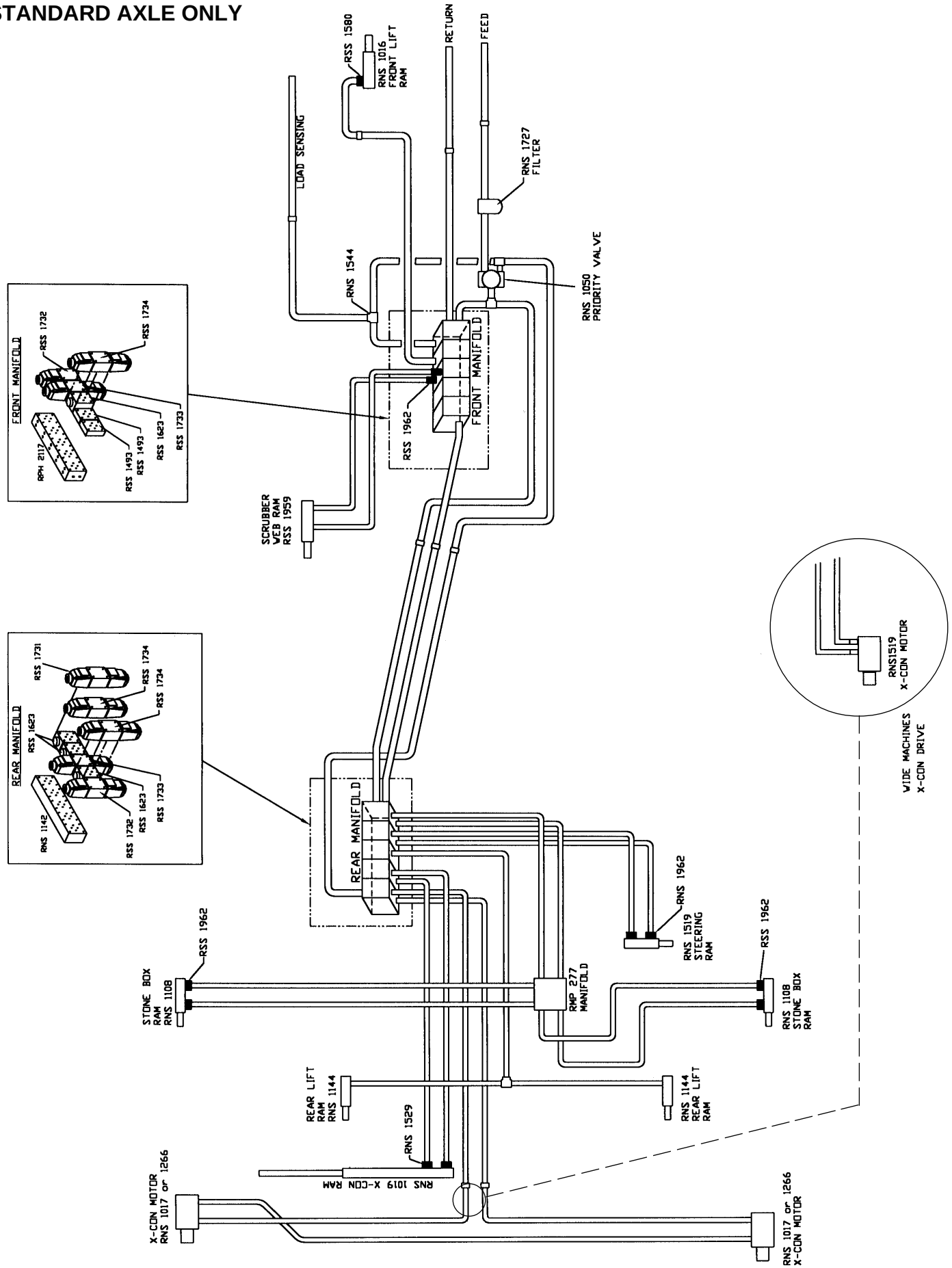
REAR MANIFOLD

18 CORE CABLE FROM CONNECTION BOX
ALL GREEN & EARTH WIRES CONNECTED TOGETHER

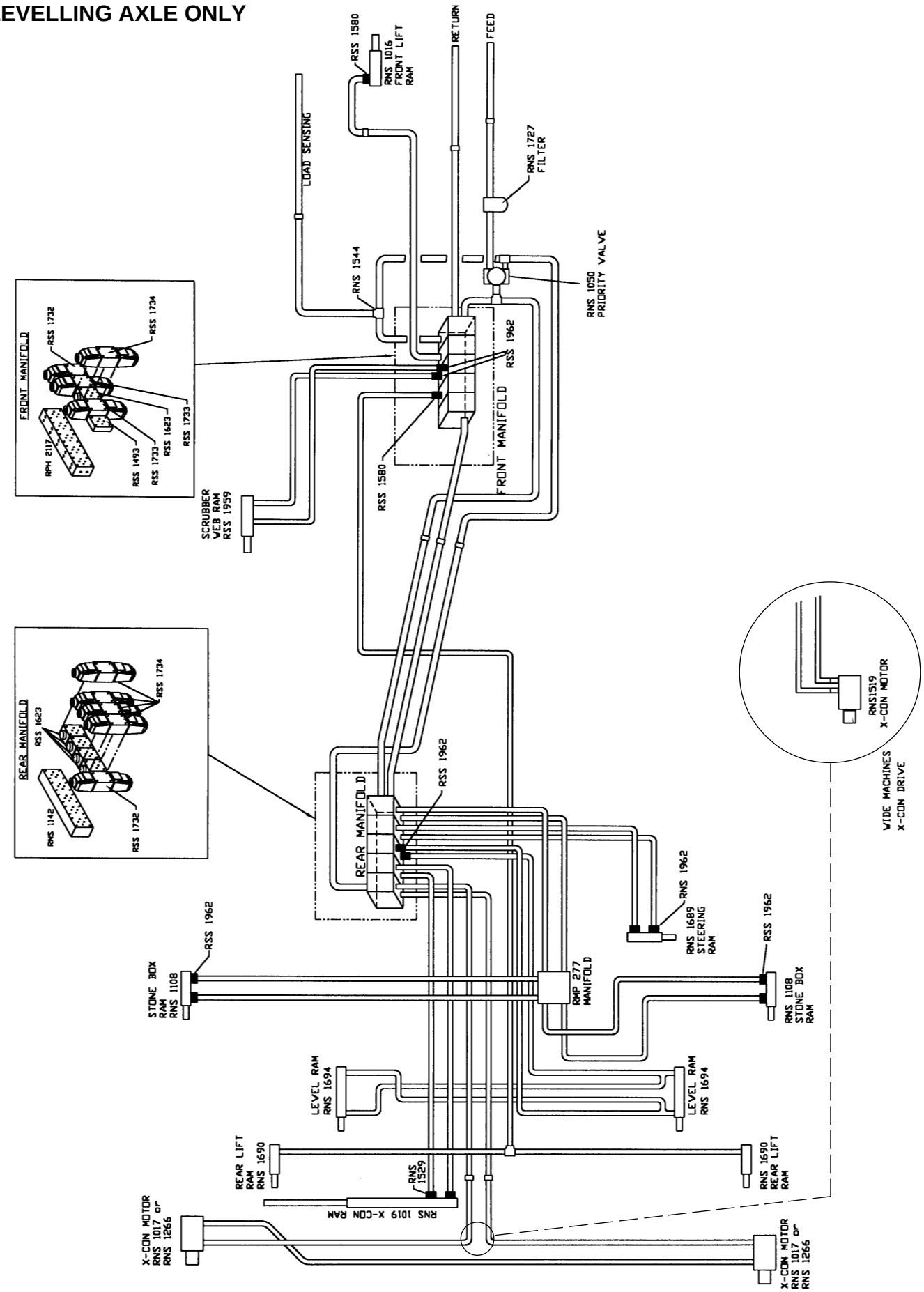
* CHECK VALVE FITTED
UNDER THIS VALVE RSS1623

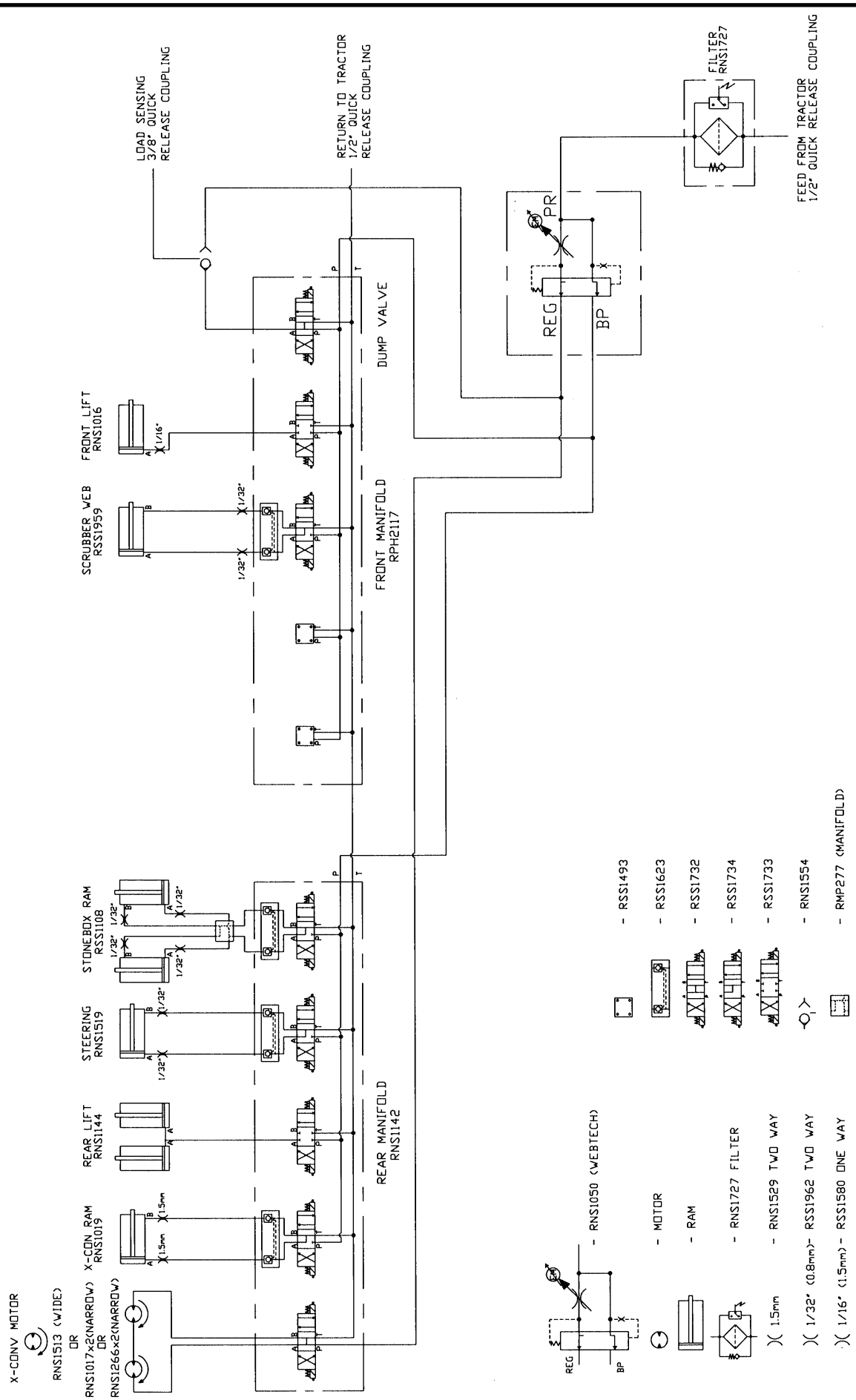
RNS1688

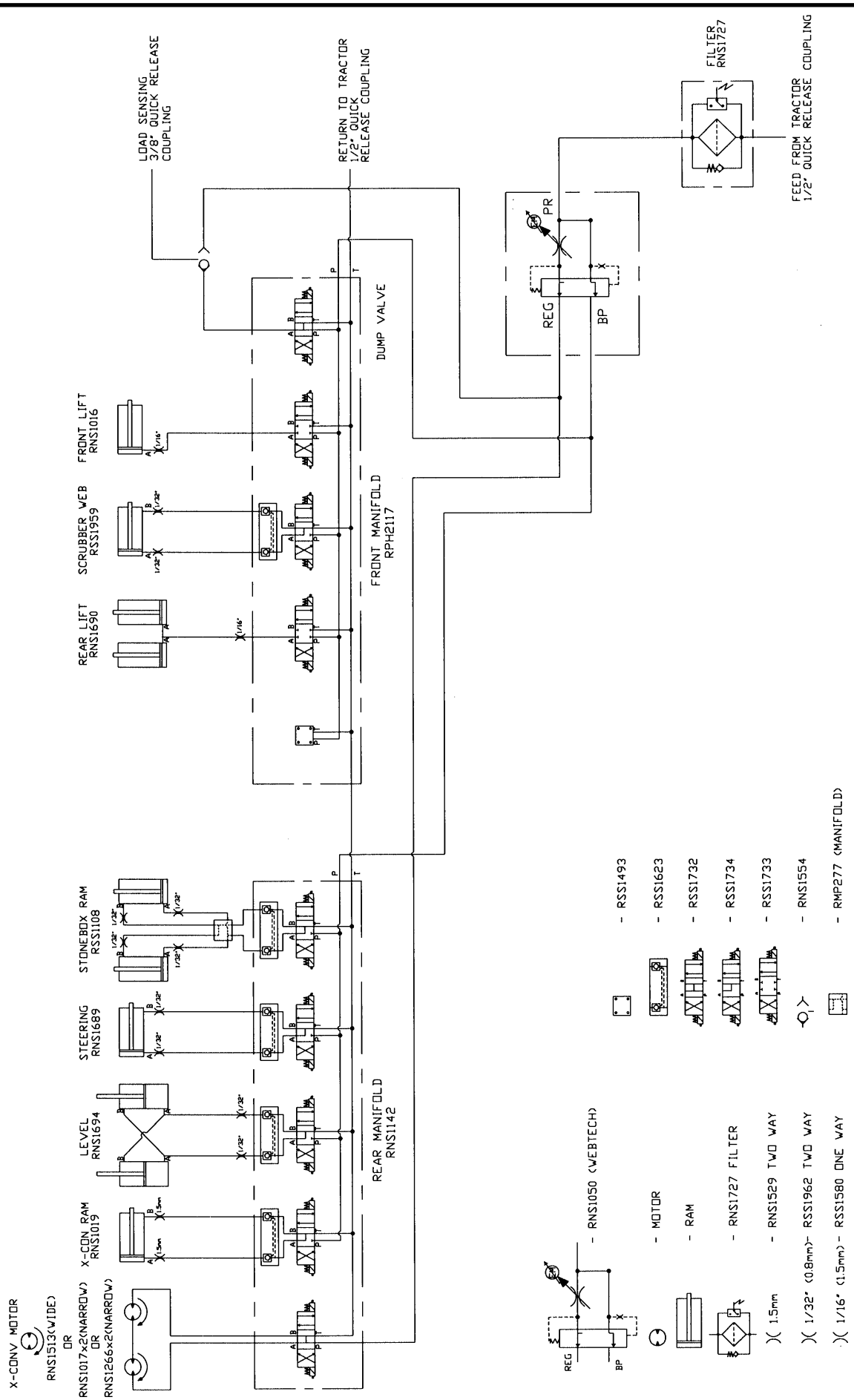
STANDARD AXLE ONLY

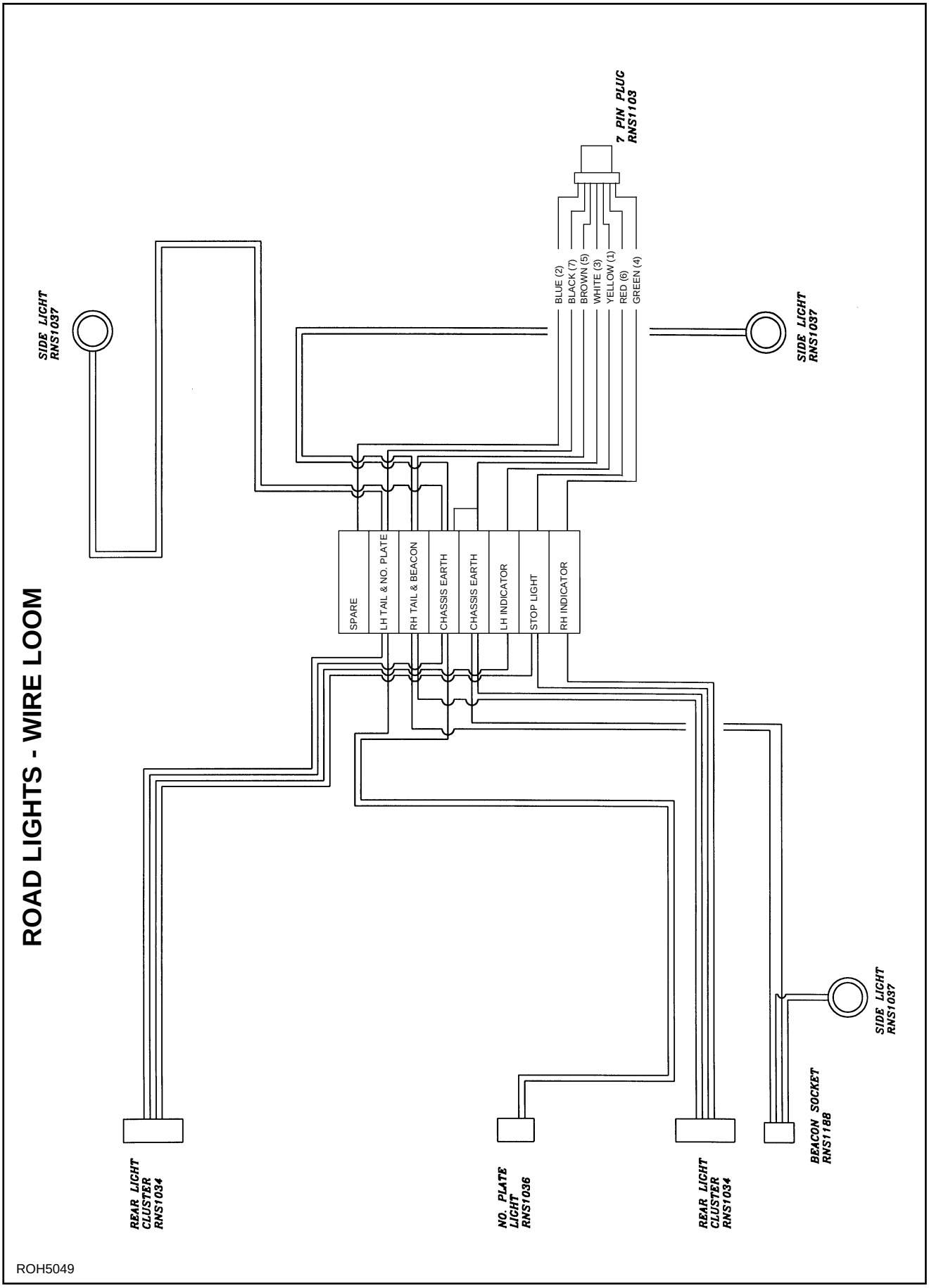


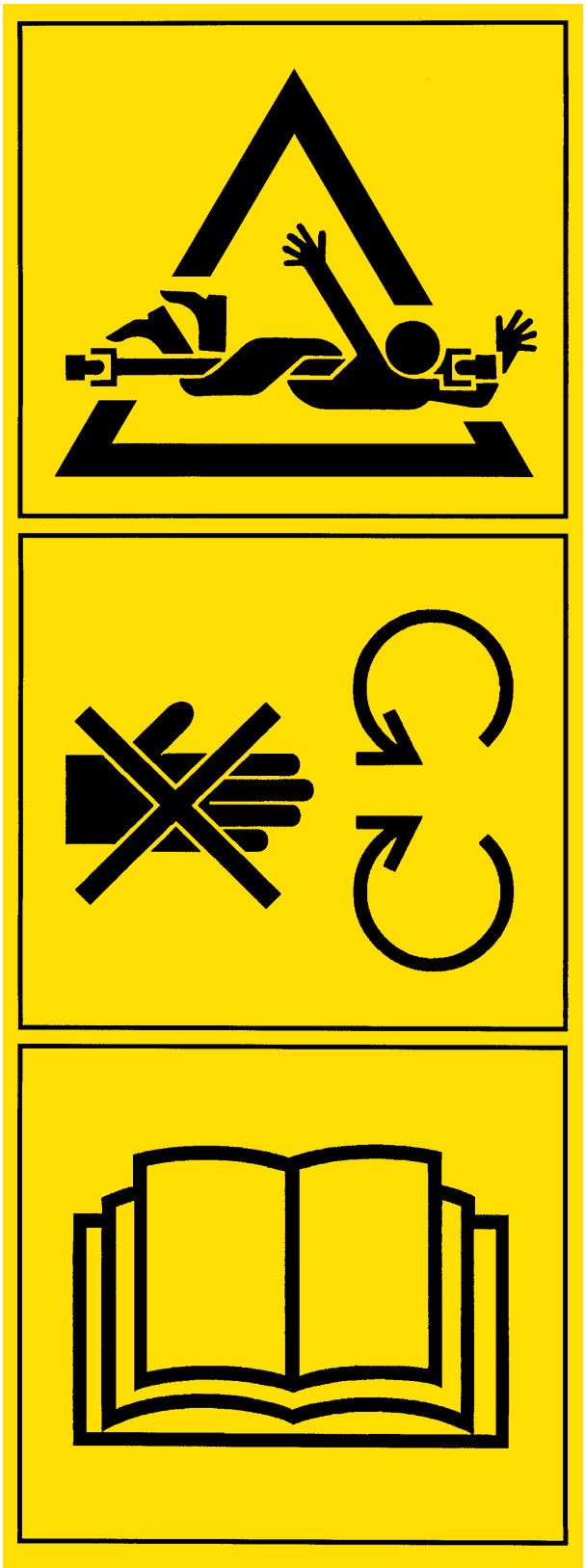
LEVELLING AXLE ONLY




X-CONV MOTOR
RNS1513 (WIDE)
OR
RNS1017x2(NARROW)
OR
RNS1266x2(NARROW)
X-CON RAM
RNS1019
REAR LIFT
RNS1144
STEERING
RNS1519
STONEBOX RAM
RSS1108
SCRUBBER WEB
RSS1959
FRONT LIFT
RNS1016
REAR MANIFOLD
RNS1142
FRONT MANIFOLD
RPH2117
DUMP VALVE
LOAD SENSING
3/8" QUICK
RELEASE COUPLING
RETURN TO TRACTOR
1/2" QUICK
RELEASE COUPLING
FEED FROM TRACTOR
1/2" QUICK RELEASE COUPLING
FILTER
RNS1727
PR
REG
BP
- RNS1050 (WEBTECH)
- MOTOR
- RAM
- RNS1727 FILTER
- RNS1529 TWO WAY
- RSS1962 TWO WAY
- RSS1580 ONE WAY
- RSS1493
- RSS1623
- RSS1732
- RSS1734
- RSS1733
- RNS1554
- RMP277 (MANIFOLD)
1.5mm
1/32" (0.8mm)
1/16" (1.5mm)


X-CONV MOTOR
RNS1513(WIDE)
OR
RNS1017x2(NARROW)
OR
RNS1266x2(NARROW)
X-CON RAM
RNS1019
LEVEL
RNS1694
STEERING
RNS1689
STONEBOX RAM
RSS1108
REAR LIFT
RNS1690
SCRUBBER WEB
RSS1959
FRONT LIFT
RNS1016
REAR MANIFOLD
RNS1142
FRONT MANIFOLD
RPH2117
DUMP VALVE
LOAD SENSING
3/8" QUICK RELEASE
COUPLING
RETURN TO TRACTOR
1/2" QUICK
RELEASE COUPLING
FEED FROM TRACTOR
1/2" QUICK RELEASE COUPLING
FILTER
RNS1727
PR
REG
BP
- RNS1050 (WEBTECH)
- MOTOR
- RAM
- RNS1727 FILTER
- RNS1529 TWO WAY
- RSS1493
- RSS1623
- RSS1732
- RSS1734
- RSS1733
- RNS1554
- RMP277 (MANIFOLD)
1.5mm
1/32" (0.8mm)- RSS1962 TWO WAY
1/16" (1.5mm)- RSS1580 ONE WAY


ROAD LIGHTS - WIRE LOOM
7 PIN PLUG
RNS1103
BLUE (2)
BLACK (7)
BROWN (5)
WHITE (3)
YELLOW (1)
RED (6)
GREEN (4)
SPARE
LH TAIL & NO. PLATE
RH TAIL & BEACON
CHASSIS EARTH
CHASSIS EARTH
LH INDICATOR
STOP LIGHT
RH INDICATOR
SIDE LIGHT
RNS1037
SIDE LIGHT
RNS1037
SIDE LIGHT
RNS1037
REAR LIGHT
CLUSTER
RNS1034
NO. PLATE
LIGHT
RNS1036
REAR LIGHT
CLUSTER
RNS1034
BEACON SOCKET
RNS1188
ROH5049



- Danger: Stay clear of P.T.O. Shafts, do not touch rotating parts. Do not stand in the area between the tractor and the Separator.

- Danger: Keep hands and fingers away from moving parts.

WARRANTY

Warranty is given subject to the following conditions:

- *that the machine is operated in the normal agricultural use for which it is designed.*
- *that the machine has not been altered or modified from its original Netagco Reekie specification other than by the fitment of approved Netagco Reekie options and accessories.*
- *that the machine is serviced by authorised Netagco Reekie dealers.*
- *that warranty rectification work is undertaken by authorised Netagco Reekie dealers.*

Whilst every precaution is taken in the selection of materials and components used in the manufacture of their equipment, Netagco Reekie cannot accept liability for damage to machines of their manufacture or third party through operational negligence.

Consumables and Wearing items
These items are those consumed during servicing and operation of the machine and those affected by external factors over which Netagco Reekie has no control. These are not automatically warrantable. Certain items may be considered on a discretionary basis during the first two years of operation.

Consumables and Wearing items are:
-Ground engaging parts
-Belts
-Webs and Web components (i.e. Joining Clips)
-Rubber Rollers
-Filter, Lubricating Oils and Hydraulic Oil
-Light bulbs

Operators should also note that the warranty does not cover consequential damage to the machine arising from failure to report a fault.

PERIOD OF WARRANTY - 2 YEARS

For further details and Conditions of Warranty - see Netagco Reekie Warranty Policy and Declaration 2002/ 2003. (under separate cover).

Pre-Delivery Inspection

Dealers are required to carry out certain activities when supplying a new machine. These consist of a full pre-delivery inspection to ensure machine supplied is ready for immediate use and full instruction in the basic principles of operation and maintenance. All persons who will be concerned with the operation and maintenance of the machine should be present for these instructions.

Training

Training courses are available on application which cover all aspects of machine safety, as well as full operation and maintenance procedures.

For further details contact the ***Service Manager*** at the address below.

Netagco® Reekie

Reekie Manufacturing Ltd.
Orchardbank, Forfar, Angus, Scotland DD8 1UQ
Tel. 0044 (0) 1307 464171
Fax. 0044 (0) 1307 463737
e-mail: info@reekie-mfg.co.uk

Reekie Manufacturing Ltd.
Orchardbank, Forfar, Angus, Scotland DD8 1UQ
Tel. 0044 (0) 1307 464171
Fax. 0044 (0) 1307 463737
Email: info@reekie-mfg.co.uk

FEBRUARY 2003

E.C. DECLARATION OF CONFORMITY

REEKIE RELIANCE STONE & CLOD SEPARATOR

Serial No. ……

Has been designed to conform to the relevant Health and Safety Requirements contained in directive 98/37/EC and has a C.E. mark accordingly.

To implement these Health and Safety Requirements, the following standards have been respected;

BS EN 292-1:	1991	Safety of Machinery - Basic concepts, general principles for design - Basic terminology, methodology.
BS EN 292-2:	1991	Safety of Machinery - Basic concepts, general principles for design - Technical principles & specifications.
BS EN 294:	1992	Safety distances to prevent danger zones being reached by upper limbs.
BS EN 349:	2000	Minimum gaps to avoid crushing of parts of the human body.
BS EN 1553:	2000	Agricultural machinery.....trailed machines - Common safety requirements.
BS EN 982:	1996	Safety requirements for fluid power systems and their components.

Signed ……

Ian Norcross
Managing Director
Netagco Reekie

M-03-2043

Date of Delivery

Dealership Stamp

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