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## **CAUTION**

### **FOR YOUR SAFETY**

TURN OFF THE TRACTOR ENGINE (AND THE SPREADER ENGINE IF FITTED) WHEN MAKING ADJUSTMENTS TO THE VEE-BELTS, DRIVE SPROCKETS AND FEED DOOR OR WHEN CARRYING OUT NORMAL MAINTENANCE. REPLACE ALL SAFETY GUARDS WHEN FINISHED.

DO NOT STAND OR WORK NEAR THE SPINNERS WHILE THEY ARE ROTATING. DO NOT OPERATE THE SPREADER WHERE IT CAN CAUSE DAMAGE TO PROPERTY OR INJURY TO BYSTANDERS.

DO NOT DISCONNECT TRAILER MODELS FROM THE TRACTOR DRAWBAR WHEN THE HOPPER IS PARTIALLY EMPTY AS THE MACHINE MAY OVERBALANCE CAUSING DAMAGE TO THE SPINNERS AND REAR OF THE SPREADER.

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# ***OPERATING INSTRUCTIONS***

## ***MARSHALL MULTISPREAD MODEL : 520T***

The Marshall 520T MULTISPREAD will spread all types of granulated fertilizer as well as Lime, Gypsum, Cow and Fowl manures.

### ***Ground Drive Feed System***

Feed of fertilizer etc., from the hopper to the spinner is driven by a vee-belt which runs on the inside of the wheel hub. The jockey pulley which runs on the bottom side of the vee-belt is used as the feed clutch. When towing the spreader at highway speeds remove the vee- belt from the pulleys. NOTE: DO NOT REVERSE THE MACHINE WHILE THE VEE-BELT IS ENGAGED.

### ***Application Rates***

Application rates are altered by a combination of feed belt speed, which is controlled by the change sprockets on the left side of the machine and the hopper feed door opening. Spreading rate charts for fertilizers are included in this hand book. When spreading Lime, Gypsum, Cow and Fowl Manures some initial testing and adjustment will be necessary as the materials vary in consistency and the weight per cubic metre depending on moisture content.

### ***Spinner Speed***

The recommended spinner speed for spreading all types of material is 500 to 700 RPM.

### ***PTO Spinner Drive***

Machines are geared to operate on a tractor with 540 RPM PTO (1000 RPM is optional). To operate the spinner at 700 RPM the tractor PTO should be working at approximately 430 RPM.

### ***Hydraulic Spinner Drive (Optional)***

Machines require an oil flow front he tractor of a least 5 GPM (22 litres/min). To set the correct spinner follow this procedure.

Connect the two hoses to the tractor couplings - the pressure hose is the one marked IN on the flow valve on the spreader. Run the tractor until the oil has reached operating temperature. Then run the tractor engine at full throttle and adjust the flow valve on the spreader so that the spinner is running at 700 RPM to check the spinner is running RPM

# ***MAINTENANCE***

## *Greasing Bearings*

The machine is fitted with sealed self aligning bearings, however, due to the abrasive qualities of fertilizer etc., grease must be applied at least once daily in order to force out any particles of dust. Take care not to fracture the bearing seals by forcing in too much grease at a time.

## *Feed Belt Chains*

The feed belt roller chains should be kept well lubricated at all times, particularly before the machine is stored for any length of time. For best results use RENOLD CHAIN LUBRICANT.

## *Vee Belts*

Check for wear and tension.

## *Wheel Bearings*

Check regularly.

## *Wheel Nuts*

Check tension before using the machine and at regular intervals.

## *Cleaning And Storage*

After using the spreader all fertilizer etc., should be removed from the hopper and spinner areas - then wash down with water (high pressure if available), DO NOT USE OILE OR DIESEL. Store the machine under cover and in a dry place - do not allow direct sunlight on the feed belt.

## *Tyre Pressure*

Recommend Tyre Pressure 11L x 15 Tyres 35 PSI.  
you will need a hand held rev counter. Once the spinner is running at 700 RPM with the tractor at full throttle the tractor engine speed should be lowered to where the spinner drops below 700 RPM - at this point make a note of the tractor engine speed as you can work this engine speed up to full throttle without altering the spinner RPM.

### **ADJUSTABLE SPINNER VANES 520T**

This machine has adjustable spinner vanes which can be altered for an even spread of granulated fertilizers and seeds to non-granulated materials such as Lime, Gypsum and Manures.

Each vane is attached to the spinner disc by two bolts - an inner and outer bolt. The outer bolt has four positions which will alter the pitch of the vane.

The recommended outer bolts positions are as follows...

A. For non - granulated materials such as Lime, Gypsum & Manures

C. For all granulated fertilizers grains and seeds.

B and D. These positions should not be used unless fine adjustment is needed for any of the above.

## **520T MULTISPREAD**

### A GUIDE TO SPREADING RATES FOR LIME, GYPSUM AND MANURES

Due to the great variation of weight per cubic metre as well as moisture content the chart below is intended as a guide only.

Rate adjustments are made by the following...

1. Changing the drive sprocket settings.
2. Adjusting the feed door opening.
3. Varying the width of pass. (The closer the pass the heavier the application).

Sprocket Settings	Feed Door Opening	Kilograms per hectare	Width of Pass
17 to 48 tooth	50mm to 100mm	100 to 1000	4 metres to 8 metres
26 to 38 tooth	100mm to 200mm	1000 to 2000	4 metres to 8 metres
34 to 34 tooth	100mm to 200mm	2000 to 4000	4 metres to 8 metres

\* To convert to lb/acre deduct 10%

# **MULTISPREAD**

## **520T 11L X 15 TYRES**

SUPERPHOSPHATE RATES: Kilograms per Hectare \*

NOTE: These figures are only a guide as fertilizers vary in consistency and cubic weight. Variables such as wind strength and the speed at which the machine is operated at will need to be considered.

\* To convert to lb/acre deduct 10%

SPROCKET SETTINGS	DOOR OPENING	WIDTH OF PASS (distance from your previous pass)			
		14 Metre 46 Feet	16 Metre 52 Feet	18 Metre 59 Feet	20 Metre 65 Feet
		17 tooth to 48 tooth	20 mm 25 mm 30 mm 35 mm 40 mm 45 mm 50 mm 55 mm 60 mm 65 mm 70 mm	58 73 95 115 140 160 175 190 205 220 235	53 68 85 100 125 140 160 175 190 205 220
26 tooth to 38 tooth	40 mm 45 mm 50 mm 55 mm 60 mm 65 mm 70 mm	275 315 350 380 420 450 480	240 275 300 330 360 390 420	210 240 275 300 325 350 380	190 225 240 270 295 315 335
34 tooth to 34 tooth	45 mm 50 mm 55 mm 60 mm 65 mm 70 mm 75 mm 80 mm 85 mm 90 mm 95 mm 100 mm	470 525 570 630 660 745 810 890 950 1000 1060 1110	415 460 500 555 580 660 715 780 830 880 930 970	370 410 440 490 525 580 630 700 750 790 830 860	330 365 400 445 475 530 560 615 660 700 750 780

## **MULTISPREAD**

### **520T 11L X 15 TYRES**

UREA (and similar fertilizers) RATES: Kilograms per Hectare \*

NOTE: These figures are only a guide as fertilizers vary in consistency and cubic weight. Variables such as wind strength and the speed at which the machine is operated at will need to be considered. \* To convert to lb/acre deduct 10%

SPROCKET SETTINGS	DOOR OPENING	WIDTH OF PASS (distance from your previous pass)			
		14 Metre 46 Feet	16 Metre 52 Feet	18 Metre 59 Feet	20 Metre 65 Feet
17 tooth  to  48 tooth	20 mm	58	53	47	42
	25 mm	73	68	58	53
	30 mm	95	85	75	68
	35 mm	115	100	90	85
	40 mm	140	125	105	100
	45 mm	160	140	125	102
	50 mm	175	160	150	125
	55 mm	190	175	165	140
	60 mm	205	190	180	150
	65 mm	220	205	195	160
70 mm	235	220	210	170	
26 tooth  to  38 tooth	40 mm	275	240	210	190
	45 mm	315	275	240	225
	50 mm	350	300	275	240
	55 mm	380	330	300	270
	60 mm	420	360	325	295
	65 mm	450	390	350	315
	70 mm	480	420	380	335
34 tooth  to  34 tooth	45 mm	470	415	370	330
	50 mm	525	460	410	365
	55 mm	570	500	440	400
	60 mm	630	555	490	445
	65 mm	660	580	525	475
	70 mm	745	660	580	530
	75 mm	810	715	630	560
	80 mm	890	780	700	615
	85 mm	950	830	750	660
	90 mm	1000	880	790	700
	95 mm	1060	930	830	750
100 mm	1110	970	860	780	

