

M U L T I S P R E A D H A N D B O O K

For Model
515T

The Marshall 515T 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 from the tractor of at least 5 gpm (22 litres/min). To set the correct spinner follow this procedure.

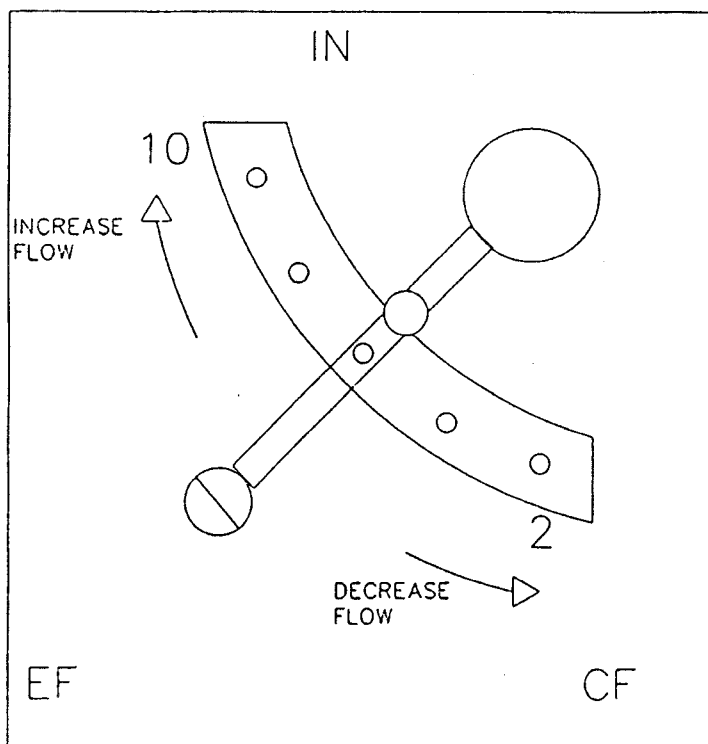
Connect the two hoses to the tractor couplings - the pressure hose is the one marked IN on the flow valve on the spreader. Run the tractor until the oil has reached operating temperature. Then run the tractor engine at full throttle and adjust the flow valve on the spreader so that the spinner is running at 700 RPM - to check the spinner RPM 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 from this engine speed up to full throttle without altering the spinner RPM.

HYDRAULIC SPINNER DRIVE (OPTIONAL)

Machines with optional hydraulic spinner drive require an oil flow from the tractor of at least 10 gpm (45 litres/min). To set the correct spinner speed 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 increase the tractor engine to full throttle and adjust the Flow Control Valve on the spreader so that the spinners are running at 900 RPM - to check the spinners RPM you will need a hand held rev counter. Once the spinners are running at 900 RPM with the tractor at full throttle, the tractor engine speed should be lowered to where the spinners drop below 700 RPM - at this point make a note of this lower tractor engine speed, as you can work from this engine speed up to full throttle without altering the spinners RPM.

FLOW CONTROL VALVE



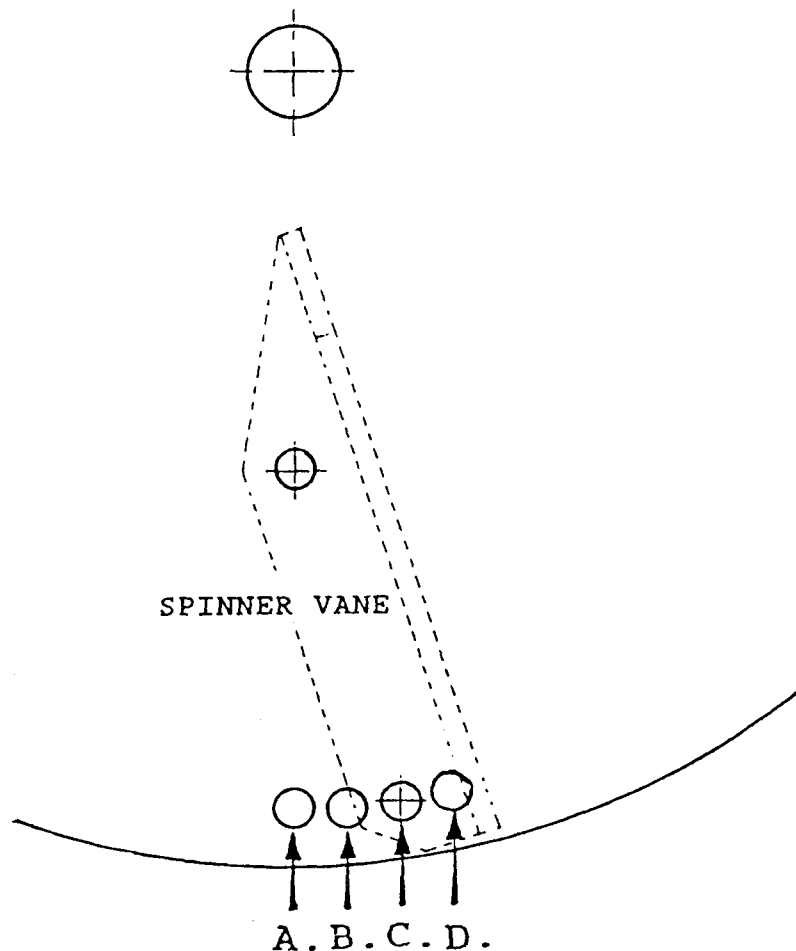
ADJUSTABLE SPINNER VANES

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 bolt positions are as follows...

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



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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 OIL OR DIESEL. Store the machine under cover and in a dry place - do not allow direct sunlight on the feed belt.

* * * * * C A U T I O N * * * * *

TURN OFF TRACTOR ENGINE (OR SPREADER ENGINE IF FITTED) WHEN MAKING ANY ADJUSTMENTS TO THE V-BELTS AND SPROCKETS ON THE MACHINE OR WHEN CARRYING OUT NORMAL MAINTENANCE. REPLACE ALL SAFETY GUARDS AFTER MAKING ADJUSTMENTS.

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

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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	50 mm to 100 mm	100 to 1000	4 metres to 8 metres
26 to 38 tooth	100 mm to 200 mm	1000 to 2000	4 metres to 8 metres
34 to 34 tooth	100 mm to 200 mm	2000 to 4000	4 metres to 8 metres

M U L T I S P R E A D

515T (900 X 13 & 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.

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	105
	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

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M U L T I S P R E A D
515T (900 X 13 & 11L X 15 TYRES)

SUPERPHOSPHATE RATES (Cont'd) ...

	45 mm	470	415	370	330
	50 mm	525	460	410	365
	55 mm	570	500	540	400
34 tooth	60 mm	630	555	490	445
	65 mm	660	580	525	475
to	70 mm	745	660	580	530
	75 mm	810	715	630	560
34 tooth	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

* to convert to lbs/Acre deduct 10%

M U L T I S P R E A D
515T (900 X 13 & 11L X 15 TYRES)

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

NOTE: These figures are only a guide as fertilizers will 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.

Sprocket Settings	Door Opening	WIDTH OF PASS (distance from your previous pass)			
		10 metre 33 feet	12 metre 39 feet	14 metre 46 feet	16 metre 52 feet
17 tooth to 48 tooth	15 mm	32	26	21	16
	20 mm	53	42	37	32
	25 mm	75	58	53	42
	30 mm	90	75	68	58
	35 mm	105	90	75	70
	40 mm	125	105	90	80
	45 mm	140	115	100	90
	50 mm	170	135	115	100
	55 mm	185	150	125	110
	60 mm	200	170	135	120
65 mm	215	180	150	130	
70 mm	230	190	160	140	
26 tooth to 30 tooth	35 mm	220	190	160	140
	40 mm	260	215	190	160
	45 mm	290	240	210	185
	50 mm	315	265	230	200

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M U L T I S P R E A D
515T (900 X 13 & 11L X 15 TYRES)

UREA RATES (Cont'd)...

26 tooth	55 mm	350	290	250	220
to	60 mm	380	315	275	240
30 tooth	65 mm	410	340	295	260
(Cont'd)	70 mm	440	370	315	285

* to convert to lbs/Acre deduct 10%

APPLICATION RATE CHART - Kilograms per Hectare

MULTISPREAD Model : 515T on 900 x 13 tyres &
11L x 15 tyres

Type of material : **ECOMIN** - 1600kg/cubic metre

The rates shown below are to be used as a guide only, as different makes and types of fertilizers will vary in consistency. The procedure to check the fertilizer you are using can be found under "Application Rate Calculations".

Drive Sprocket Settings	Feed Door Opening	Width of Pass		
		7 metre (23')	8 metre (26')	9 metre (29')
17 tooth to 48 tooth	20mm	160	150	130
	25mm	205	190	160
	30mm	265	240	210
	35mm	320	280	250
	40mm	390	350	295
	45mm	450	390	350
	50mm	490	450	420
	55mm	530	490	460
	60mm	575	530	505
	65mm	615	575	545
	70mm	660	615	590

APPLICATION RATE CHART - Kilograms per Hectare

MULTISPREAD Model : 515T on 900 x 13 or 11L x 15 Tyres

Type of material : DYNAMIC LIFTER - 650kg/cubic metre

The rates shown below are to be used as a guide only, as different makes and types of fertilizers will vary in consistency. The procedure to check the fertilizer you are using can be found under "Application Rate Calculations".

Drive Sprocket Settings	Feed Door Opening	Width of Pass		
		7 metre (23')	8 metre (26')	9 metre (29')
17 tooth to 48 tooth	20mm	70	65	55
	30mm	125	110	100
	40mm	155	140	120
	50mm	190	165	145
	60mm	250	215	195
	70mm	305	265	235
	80mm	365	320	280
	90mm	420	365	325
	100mm	460	405	360
	26 tooth to 38 tooth	20mm	120	105
30mm		210	185	165
40mm		305	265	235
50mm		410	360	320
60mm		525	460	410
70mm		585	515	455
80mm		720	630	560
90mm		835	730	650
100mm		945	825	735
34 tooth to 34 tooth		20mm	175	155
	30mm	310	270	240
	40mm	440	385	345
	50mm	595	520	460
	60mm	740	645	575
	70mm	890	780	690
	80mm	1060	930	825
	90mm	1260	1105	980
	100mm	1435	1255	1115