Marshall Multispread

Service and Technical Support

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850T

Operators Manual

Vee Belt Sizes:	
Location	Belt Size
PTO Drive	
Spinner Drive	

Serial No:

Status	Released	Author	KR
Revision	1.0	Date	12/9/13
Doc No:	800-REF-OPM-006	App by	MKR

DISCLAIMER

IMPORTANT, READ THIS BEFORE USING THE MARSHALL MULTISPREAD

The Marshall Multispread is to be used in the Agricultural and Horticultural industries to apply granulated and non-granulated fertilisers. It is very important that you follow the Calibration procedures and Operating instructions before using the Marshall Multispread. Calibration and operation of the Marshall Multispread must be in accordance with these instructions. Use of the Marshall Multispread is subject to the following disclaimer;

1. So far as is legally permissible Roesner, or its distributors, shall not be liable, whatever the cause, for any increased costs, loss of profits, business, contracts, income, or anticipated savings or for any special, indirect or inconsequential damage.
2. The capabilities and functions of the Marshall Multispread are limited as set out in the specifications in this manual.
3. Without prejudice to the above it is hereby acknowledged that the Marshall Multispread is not designed nor intended to achieve application rates and spread widths outside the parameters published in this manual.

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1. Overview

This Manual

This manual explains the everyday use of the machine to the operator, including Spinner Setup and Application Rate Charts.

Application

The Marshall Multispread 850T Fertiliser Spreader will spread a wide range of granular and non-granular fertilisers, from lime, gypsum and manures through to granulated materials like superphosphate, urea and various seeds.

The machine is fitted with a Ground Driven Feed System. The feed of fertiliser from the hopper to the spinners, is driven by the small drive wheel which runs on the trailer tyre. This tyre also acts as the feed clutch and is activated by the hydraulic cylinder, which is controlled from the tractor cab.

2. Caution - For Your Safety

READ BEFORE USING THE SPREADER

Turn off the tractor engine (and the Spreader engine if fitted) when making adjustments to the v-belts, drive sprockets and feed door or when carrying out normal maintenance.

When servicing the gearbox, final drive sprockets and drive belts ensure that the plastic guards are re-fitted to the spreader.

Do not stand or work near the spinners while they are rotating. Do not operate the spreader within 50m of stock, property or personnel. Failure to do so can result in damage and injury.

Disconnecting the machine from the tractor drawbar when the hopper is partially empty will cause the machine to overbalance and damage the spinners.

Please take notice of following information. Each of the stickers are located on your machine.

Forward speed is not to exceed 40km/h when machine unloaded and 25km/h when loaded with product. Excess speed will increase the chances of rollovers and also effect the accuracy of the spread pattern due to a slipstream effect.

It is not recommended to operate on inclines greater than 20 degrees, as the chances of rollover are greatly increased.

Do not ride on Spreader under any circumstances.

Stay well clear of the hydraulic hoses and pipes that run the spinner and feed belt systems.

The machine is fitted with safety stickers, do not remove under any circumstances.

3. Operating Instructions

3.1 Attaching To Tractor

Attach the spreader to the tractor drawbar securely using a high tensile pin, see Fig 1. The pin slips between the spreader drawbar hole and the drawbar tongue of the tractor. Plug the hydraulic lines into the tractor hydraulic remotes, ensuring that the hydraulic lines cannot be damaged when the machine is turning, see Fig 2.

On standard machines there is one set of hoses to activate the hydraulic cylinder that engages the wheel drive. There is an additional set of hoses if optional hydraulic spinner or feedbelt drives are fitted.

Ensure oil flow from tractor is minimised when activating the hydraulic cylinder. Excess oil flow and pressure will result in damage to the cylinder seals.

Fig 1

Fig 2

Fig 3

Fig 4

3.2 PTO Drive Machines

Attach the PTO shaft to the tractor as shown in Fig 3 and 4. Ensure that the female spline on the PTO shaft is firmly fitted to the tractor PTO and the locking pin is engaged.

The PTO is fitted with a safety chain, ensure the chain is fastened to the poly guard retaining lugs as shown in the photo above.

Machines are supplied with 540 or 1000 RPM PTO drives or optional dual speed PTO. The table below details the correct gearing and RPM for each drive setup.

PTO Config.	Pulley - PTO	Pulley - Side Shaft	PTO Spline Size	Spinner RPM
540 RPM	12 x 2B	7 x 2B	6 spline	900 RPM
1000 RPM	7 x 2B	7 x 2B	20 or 21 spline	900 RPM
Dual - 540 RPM	12 x 1C	8 x 1C	6, 20 or 21 spline	900 RPM
Dual - 1000 RPM	10 x 1C	10 x 1C	6, 20 or 21 spline	900 RPM

Ensure correct PTO gearing and PTO RPM before starting work.

3.3 Hydraulic Spinner Drive (Optional)

Machines that are fitted with an optional hydraulic spinner drive require an oil flow from the tractor of 45 litres/min.

To set the correct spinner speed follow this procedure:

1. Connect the two hoses to the tractor couplings - the pressure hose is the one marked IN on the spreader flow control valve.
2. Run the tractor until the oil has reached operating temperature and then increase the tractor engine to full throttle and adjust the spreader flow valve so that the spinners are running at 900RPM see Fig 5 below. (To check the spinner RPM you will need a rev counter.)
3. When the spinners are running at 900RPM with the tractor at full throttle, the tractor engine speed should be lowered to where the spinners drop below 700RPM. At this point make note of this lower tractor engine speed, as you can work from this engine speed up to full throttle without altering the spinners RPM. See Fig 5 below.

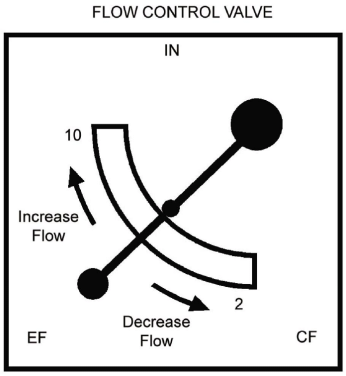


Fig 5

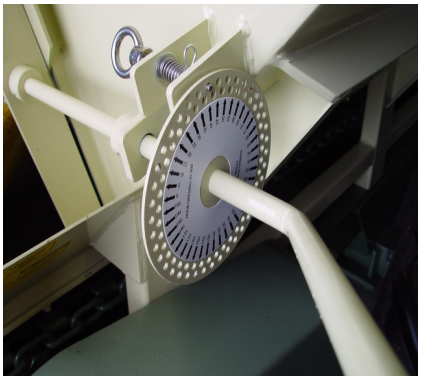


Fig 6

3.4 Application Rates

Application Rates are altered by changing the speed of the feed belt and feed door opening. The feed belt speed is altered by using different drive sprocket combinations located on the wheel drive arm and final drive. (see Section 6 of this manual)

The feed door opening is adjusted by the feed door shaft located at the rear of the machine and is held in place by the feed door adjuster disc and spring loaded pin. (See Figure 6)

Refer to the charts in Section 8 of this manual for correct drive sprocket and feed door settings for different fertiliser types.

The outer holes on the disc equate to 5mm of feed door movement. The inner set of holes are used for fine adjustment in application rate and equate to 2.5mm of feed door movement.

3. Operating Instructions

3.5 Width of Pass

The Width of Pass is the distance between the centres of each run or pass in the paddock. Some initial testing is required to determine the correct width of pass for a particular material being spread. You should allow for wind conditions and fertiliser consistency.

There are two different spinner vane configurations fitted to Marshall Multispread 800 Series machines. The spinner vane design determines the width and accuracy of the machines spread pattern. Refer to Section 5 of this manual for details on the vane configuration.

It is strongly advised, for all granulated and non-granulated products, that a trial run or test is done to determine the best and most even spread width between passes, as wind conditions and product consistency may vary.

!! CHECK SPINNER VANE CONFIRGURATION BEFORE STARTING WORK !!

3.6 Starting and Stopping Work

To start work in the paddock :

1. Ensure that the spreader is at least 50m from stock, personnel and property.

2. Engage the Wheel drive arm using the hydraulic cylinder. (NB : the wheel drive should not be engaged at speed greater than 5 km/h. Engaging at faster speeds will result in damage to the spreader feed mechanism.)

3. Turn on the Spinner Drive using the PTO or Hydraulic control switches in the tractor.

4. Begin Work.

To finish work in the paddock :

1. Turn the spinners off using the PTO or Hydraulic control switches in the tractor.

2. Slow down below 5km/h

3. Disengage the Wheel drive arm using the hydraulic cylinder.

(NB : In all circumstances when the spreader is not in work ensure that the wheel drive arm is lifted off the spreader tyre.)

4. Maintenance

4.1 Bearings

The machine is fitted with sealed self aligning bearings, however due to the abrasive nature of fertilisers, grease must be applied regularly. There are a series of yellow stickers fixed to the machine that indicate the location of grease points and greasing intervals. The top and bottom spinner bearings must be greased once every four hours of operation.

4.2 Drive Chains

The Machine is fitted with roller chain drives on the wheel drive arm and feedbelt final drive. The specifications of these chains are :

Location	Type	Qty
Wheel Drive	60-H Roller Chain - 3/4” pitch	5 ft
Final Drive	80-H Roller Chain - 1’’ pitch	5 ft

4.3 Cleaning and Storage

After using the spreader all fertiliser should be removed from the hopper and spinner areas, then wash down the machine with a high pressure water hose.

DO NOT USE OIL OR DIESEL NEAR THE 2 PLY FEED BELT.

Always store the machine under cover and in a dry place. The 2 Ply feed belt should not be exposed to prolonged periods on sunlight.

4.4 Gearbox Maintenance

The gearbox oil used on all 20:1 ratio gearboxes is : 85W140. The gearbox capacity is located at the rear of the machine. Please check oil regularly, the chart below indicates filling capacity :

Please Note : All Gearboxes are labelled and have ID Plates.

Gearbox	Capacity	Output Shaft Size
Leroy Somer	1000 mL	28mm / 8mm Key
Fenner “D”	1500 mL	25mm / 8mm Key
Fenner “C”	1000 mL	22mm / 6mm Key
Rossi	1000 mL	24mm / 8mm Key

4.5 Recommended Tyre Pressures

CHECK TYRE PRESSURE REGULARLY

The table below details recommended spreader tyre pressures. Pressures can be adjusted to suit ground conditions, the values in the table below are a guide only.

It is important that the ground drive wheel is inflated to the correct pressure as incorrect inflation can cause issues with the feed belt mechanism.

Tyre Size	Pressure (psi)	Pressure (kpa)
Wheel Drive Tyres		
145x10 (800 Series)	22	1.5
185/70x13 (900 Series)	22	1.5
Spreader Tyres		
900x16	36	2.4
1100x16	36	2.4
400/60-15.5	22	1.5
14.9x24	26	1.8
16.9x28	28	1.9
18.4x28	32	2.2
23.1x26	32	2.2
500/60-22.5	22	1.5
550/60-22.5	23	1.6
600/55-26.5	25	1.7
600/60-30.5	26	1.7
650/65-30.5	24	1.6
750/60-30.5	22	1.5

4.6 CC180 Spinner Drive Belt

CHECK FOR CORRECT V-BELT ALIGNMENT AND TENSION

The V-Belt should clear the left hand spinner pulley by approx 3 to 4mm (Fig 7) - adjust this by moving the side shaft pulley on the side shaft.

The tension pulley should just clear the V-Belt by about 2mm near the right hand spinner pulley (Fig 8) - adjust the angle at the tension pulley mount (Fig 9).

For the correct V-Belt tension see figure (10), once tension has been taken up there should be approximately 40mm from the top of the V-Belt to the top of the side shaft as shown. (Fig 10). To adjust tension loosen off the tension pulley shaft nut (Fig 6) then tension the adjuster (Fig 11).

Important Note: ENGAGING TRACTOR PTO DRIVE.
Before engaging the tractor PTO drive, the tractor engine should be idling at the lowest possible engine speed. Engage the PTO and then bring the tractor engine up to normal working RPM.

Important Note: 540/1000 RPM PTO GEARING
The correct spinner speed is between 700 and 900 RPM. If the machine is set up with 540 RPM PTO speed, the spinners will over-rev and the spinner V-Belt may be dislodged from the rear pulleys. see Section 3.2 of this book for more info.

Fig 6 & 7

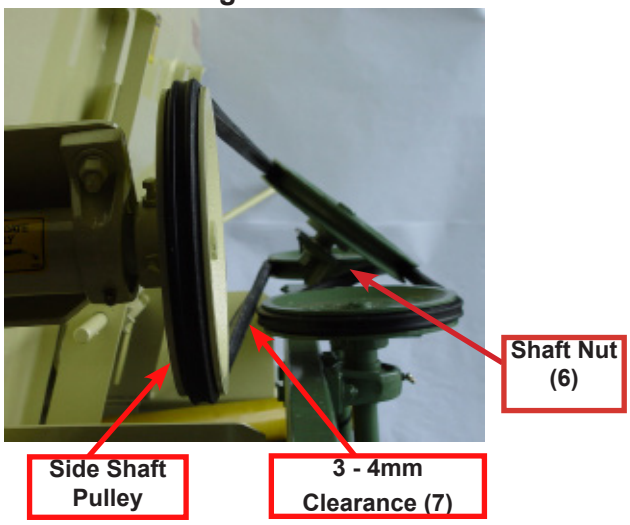


Fig 8 and 9

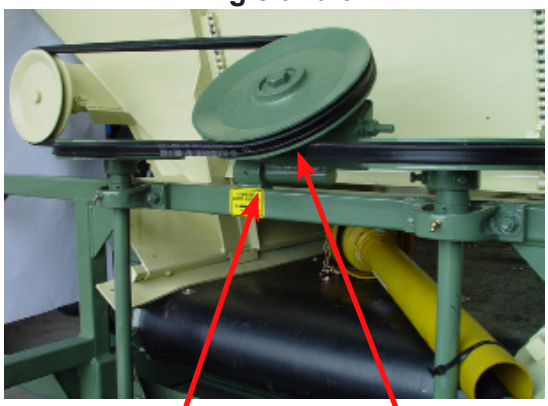


Fig 10

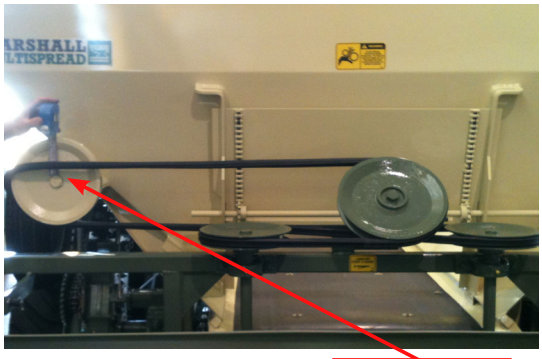
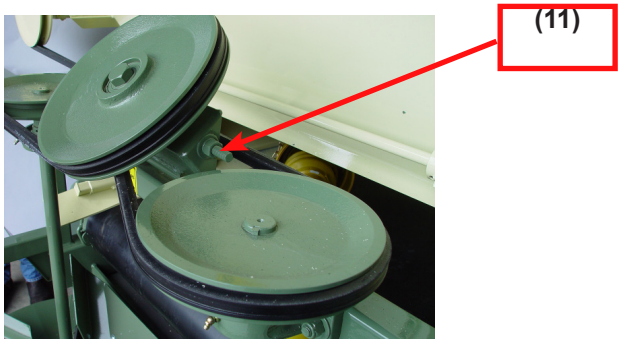


Fig 11



4.7 Feed Chain Adjustment

Fertiliser is delivered to the spinners by a feedbelt attached to a high grade chain assembly located at the bottom of the hopper. The feed chain is supported by top and bottom nylon runners. It is important that the feed chain is kept under correct tension at all times as incorrect tension will lead to premature wear and damage to mechanical components that make up the drive system.

The images below detail the correct chain tension. Fig (13) detail a cross section of the chain, the detail Fig(14) shows a close up of the bottom feed chain runner. The chain should be lifting of the front the bottom runner by 5mm at all times.

Adjust tension on the feed chain by adjusting the front bearing slide. Fig(15)

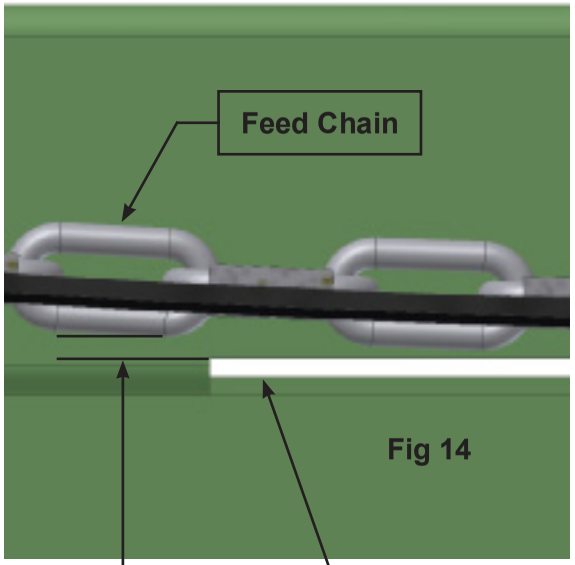


Fig 14

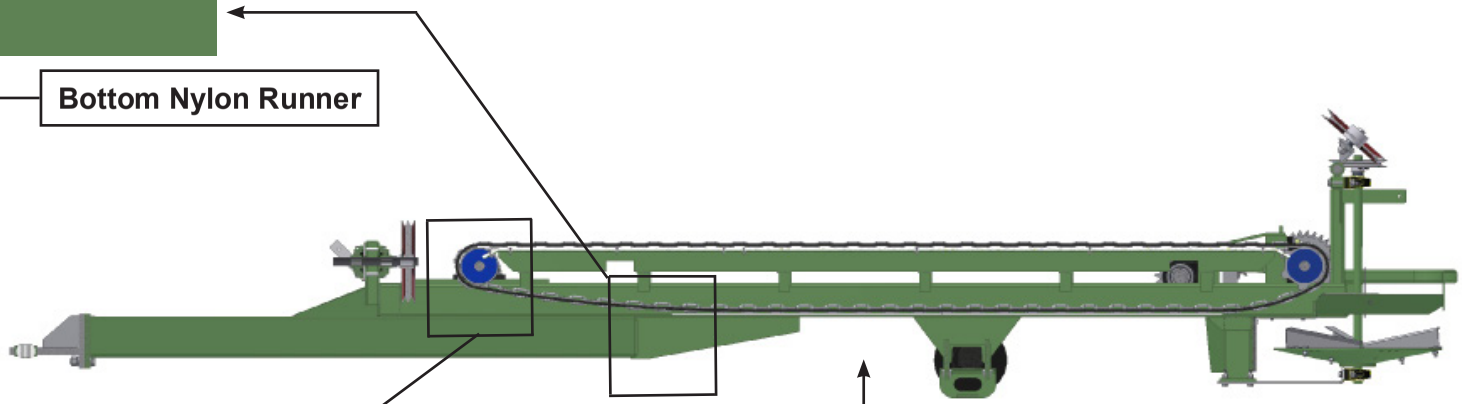


Fig 13

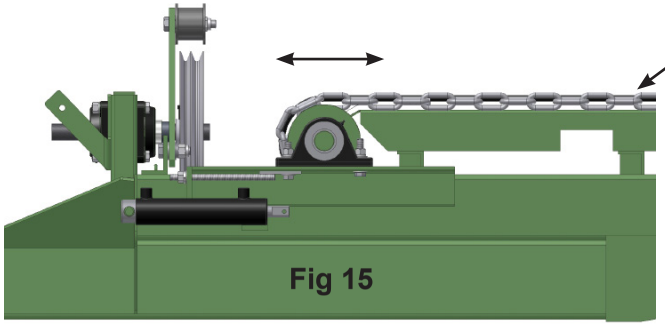


Fig 15

5. Spinner Vane Setup

5.1 Multispread Spreading Performance

There are many variables that affect the spreading performance of the Marshall Multispread. These variables include;

1. **Wind Speed and Direction.** Winds above 10 km/h influence the evenness of the spread pattern. In windy conditions it is recommended that the tractor/spreader is driven into the wind.
2. **Ground Speed.** In all cases ground speed should not exceed 25 km/h.
3. **Ground Contour.** The particles being spread up the slope will land at narrower widths and the width of pass should be reduced to compensate for this affect.
4. **In Crop Applications / Spreading in Stubble.** When spreading in standing crop or stubble the plants will dampen the flight and deflect the fertiliser to ground, narrowing the spread width.
5. **Component Wear.** Fertilisers can be abrasive which leads to component wear. It is recommended that the spinner discs and vanes are regularly checked for wear and replaced if necessary.
6. **Fertiliser Consistency.** Factors such as bulk density and particle size distribution influence the aerodynamic characteristics of the fertiliser particles. For example when spreading **Urea** it is recommended that the average particle size is greater than 3mm in diameter.

Before spreading it is recommended that a trial run is conducted on bare ground to visually inspect the evenness of the spread pattern.

For further information on spreader setup contact Roesner Pty Ltd support or your local Marshall Multispread dealer for more information.

5.2 Type A Vanes and Fertiliser Deflector

Older model Multispread were fitted with 6 mild steel angle spinner vanes on each spinner disc. These vanes can be used to spread granulated fertilisers up to 24 metres and non-granulated products up to 10 metres.

The spinner vanes can be adjusted to spread light applications of granulated fertilisers and seeds as well as heavy rates of non granulated materials such as lime, gypsum and manures.

Each vane is attached to the spinner disc by two bolts - an inner and an outer. The outer bolt can be varied to alter the angle of the spinner vanes. see fig 16 and 17 below.

For non granulated materials the fertiliser deflector chute should be removed to prevent clogging around the spinners.

Material	Outer Bolt Position	Fertilser Deflector Chute Fitted
Granulated Fertilisers, Grain and Seeds	A	YES
Light to Medium Applications of Non-Granulated Product - Lime/Gypsum/Manures	A	NO
Heavy Applications of Non-Granulated Product - Lime/Gypsum/Manures	B	NO

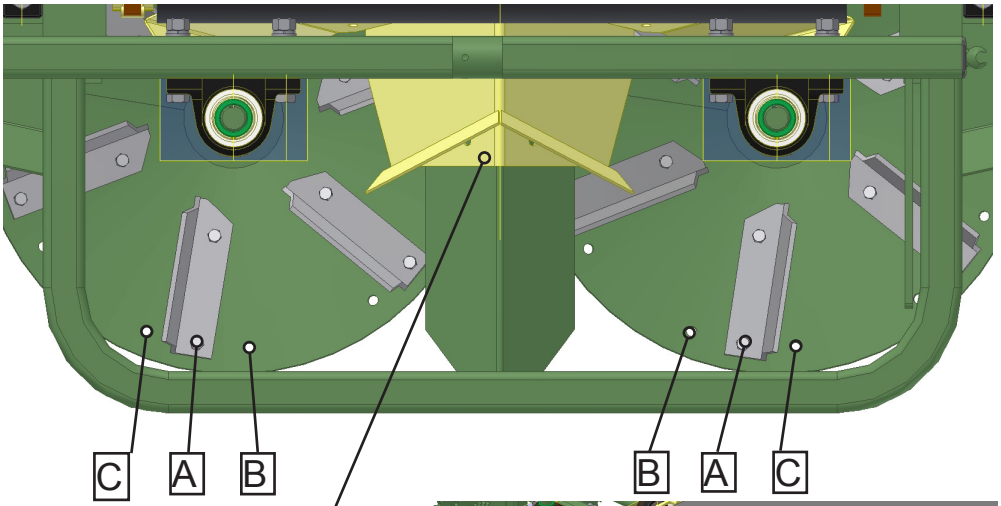


Fig 16

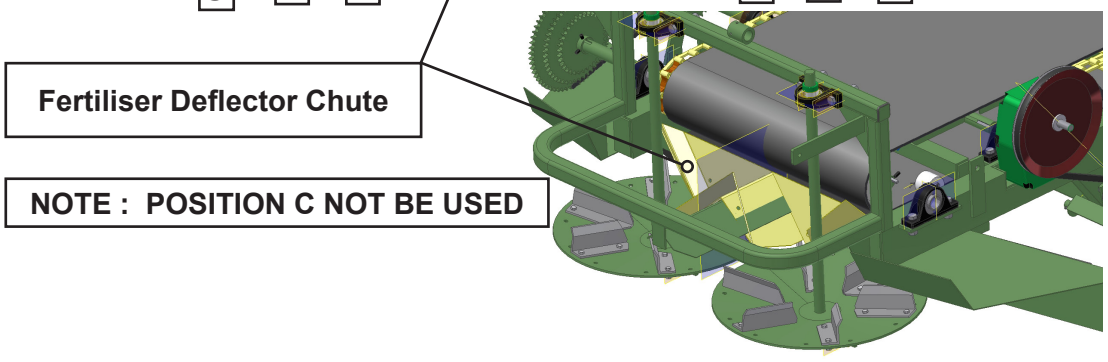


Fig 17

5.3 Type B Vanes and Fertiliser Deflector

800 Series Multispreads from 2006 production are fitted with 3 spinner vanes, pressed in a “C” channel and manufactured from 5mm Mild Steel. A simplified fertiliser deflector is also fitted.

The pressed “C” channel vanes can be used to spread granulated fertiliser up to 28 metres and non granulated products up to 14m.

The pitch or angle of each spinner vane can be altered to suit different types of fertiliser application rates. However a general setting to suit granulated fertilisers and non-granulated products is to have 3 vanes on each spinner on three different angles. This is done by setting each vane on different outer holes on the spinner disc - see Fig 18 below.

The Fertiliser Deflector should be fitted for both granulated and non-granulated products.

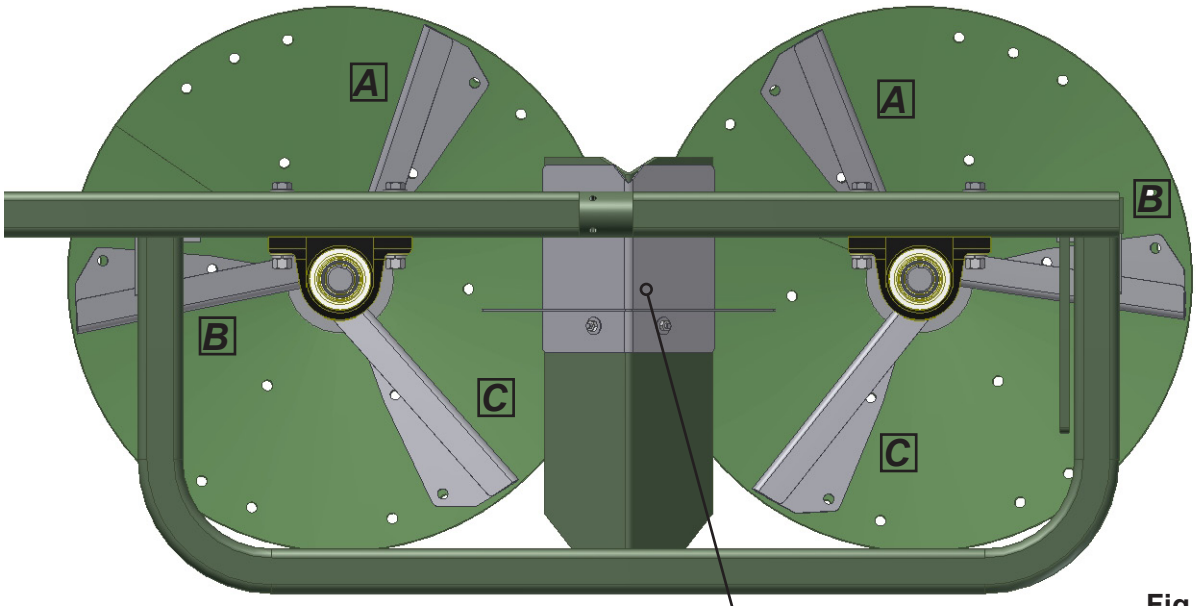


Fig 18

Vane Position	Outer Bolt Position
Position A	Centre Hole
Position B	Clockwise Hole
Position C	Counter Clockwise Hole

6. *Drive Sprocket Settings*

The machine is fitted with four sets of feedbelt drive sprockets, two on each side of the machine, see fig 19 and 20 below. These sprockets are used to alter the feedbelt gearing to suit the different rates and types of fertilisers. A common drive chain runs between the sprocket sets. Release the spring loaded jockey to move the chain position.

Fig 19

SIDE A - WHEEL DRIVE

Possible Combinations

14 tooth driving 30 tooth (outside set)

30 tooth driving 14 tooth (inside set)

Fig 20

SIDE B - FINAL DRIVE

Possible Combinations

15 tooth driving 30 tooth (outside set)

20 tooth driving 28 tooth (inside set)

!! REPLACE FINAL DRIVE GUARD AFTER ALTERING FINAL DRIVE RATIO !!

7. Application Rate Calculations

Application rates contained in this book are to be used as a guide only. The following can be used if you wish to check the application rate of the particular material that you are spreading.

1. Check the width of pass for the most even spread of material you will be using.
   Spreading Width Guide:
   Urea 16 - 28m
   Superphosphate 16 - 30m
   Lime and Gypsum 6 - 14m
2. Obtain the circumference of the wheel drive tyre.
   Circumference = diameter x 3.141
   example: jockey tyre diameter = 0.47m
   Circumference = 0.47 x 3.141
   = 1.476m
3. Put a small quantity of the material to be spread in the hopper and ensure that the material is packed evenly around the feed door opening.
4. Rotate the wheel drive tyre until the material is falling evenly off the feedbelt.
   Note: The material must be falling evenly off the feedbelt to give an accurate reading.
5. Place a cardboard box or tarpaulin under the spinners to catch the material off the feedbelt.
6. Rotate the wheel drive wheel 10 times and then weigh the material caught off the feedbelt.
7. Multiply the distance travelled in the 10 turns of the wheel drive tyre by the width of pass.
   example: 1.476 x 10 = 14.76 metres.
   Width of pass = 16m
   Then multiply 16 x 14.76 = 236.128m2
8. Divide the weight of the material collected by the square metres of spread over 10 turns of the wheel drive.
   example : 2.5kg of material divided by 236.128 = 0.0106
   0.0106 x 10000 to convert to kg/ha.
   = 106 kg/ha.

To vary spread rates make adjustments to the drive sprocket settings and the opening of the feed door.

8. Application Rate Charts

8.1 Type Of Material - Lime, Gypsum and Manure - 1000kg/m3

Due to the variation of weight per cubic metre between the different types of materials the chart below is intended as a guide only.

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

All values are measured in kg/ha. To convert to lb/acre deduct 10% from each value.

DRIVE SPROCKET SETTINGS	DOOR OPENING (mm)	WIDTH OF PASS 6	8	10	12	14
SIDE A 14 TOOTH DRIVING	65	380	225	180	150	129
30 TOOTH	130	680	450	360	300	257
SIDE B 15 TOOTH DRIVING	195	900	675	540	450	386
30 TOOTH	260	1200	900	720	600	514
SIDE A 14 TOOTH DRIVING	65	450	338	270	225	193
30 TOOTH	130	900	675	540	450	386
SIDE B 20 TOOTH DRIVING	195	1350	1013	810	675	579
28 TOOTH	260	1800	1350	1080	900	771
SIDE A 30 TOOTH DRIVING	65	1350	1013	810	675	579
14 TOOTH	130	2700	2025	1620	1350	1157
SIDE B 15 TOOTH DRIVING	196	4050	3038	2430	2025	1736
30 TOOTH	260	5400	4050	3240	2700	2314
SIDE A 30 TOOTH DRIVING	65	2100	1575	1181	886	664
14 TOOTH	130	4200	3150	2363	1772	1329
SIDE B 20 TOOTH DRIVING	195	6300	4725	3544	2658	1993
28 TOOTH	260	8400	6300	4725	3544	2658

8. Application Rate Charts

8.2 Type Of Material - Granular Fertiliser - 1000kg/m3

Due to the variation of weight per cubic metre between the different types of materials the chart below is intended as a guide only.

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

All values are measured in kg/ha. To convert to lb/acre deduct 10% from each value

DRIVE SPROCKET SETTINGS	DOOR OPENING (mm)	WIDTH OF PASS (M)					
		18	20	22	24	26	28
SIDE A 14 TOOTH DRIVING 30 TOOTH	20	25	23	20	19	17	16
	25	31	28	25	23	21	20
	30	41	37	34	31	28	26
	35	50	45	41	38	35	32
	40	57	51	47	43	39	37
	45	66	59	54	50	46	42
SIDE B 15 TOOTH DRIVING 30 TOOTH	50	74	67	61	56	51	48
	55	81	73	66	61	56	52
	60	89	80	73	67	62	57
	65	97	87	79	73	67	62
	70	107	96	88	80	74	69
	75	117	105	96	88	81	75
SIDE A 14 TOOTH DRIVING 30 TOOTH	25	52	47	43	39	36	33
	30	62	56	51	47	43	40
	35	72	65	59	54	50	46
	40	82	74	67	62	57	53
	45	93	84	76	70	64	60
	50	104	94	85	78	72	67
SIDE B 20 TOOTH DRIVING 28 TOOTH	55	114	103	93	86	79	73
	60	127	114	104	95	88	82
	65	140	126	115	105	97	90
	70	154	139	126	116	107	99
	75	168	151	137	126	116	108
SIDE A 30 TOOTH DRIVING 14 TOOTH	20	116	104	95	87	80	75
	25	145	131	119	109	100	93
	30	174	157	142	131	120	112
	35	203	183	166	152	141	131
	40	232	209	190	174	161	149
	45	261	235	214	196	181	168
SIDE B 15 TOOTH DRIVING 30 TOOTH	50	290	261	237	218	201	186
	55	320	288	262	240	222	206
	60	349	314	286	262	242	224
	65	378	340	309	284	262	243
	70	407	366	333	305	282	262
	75	436	392	357	327	302	280

8. Application Rate Charts

8.3 Type Of Material - Granular Superphosphate - 1150 kg/m3

Due to the variation of weight per cubic metre between the different types of materials the chart below is intended as a guide only.

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

All values are measured in kg/ha. To convert to lb/acre deduct 10% from each value.

DRIVE SPROCKET SETTINGS	DOOR OPENING (mm)	WIDTH OF PASS 20	22	24	26	28	30
SIDE A 14 TOOTH DRIVING 30 TOOTH	20	27	25	23	21	19	18
	25	34	31	29	26	24	23
	30	41	38	35	32	30	28
	35	48	43	40	37	34	32
	40	55	50	46	42	39	37
	45	61	56	51	47	44	41
SIDE B 15 TOOTH DRIVING 30 TOOTH	50	68	62	57	53	49	46
	55	76	69	63	58	54	50
	60	82	74	68	63	59	55
	65	89	81	74	69	64	59
	70	95	87	80	73	68	64
	75	105	96	88	81	75	70
SIDE A 14 TOOTH DRIVING 30 TOOTH	25	56	51	47	43	40	37
	30	67	61	56	51	48	44
	35	78	71	65	60	56	52
	40	89	81	74	69	64	59
	45	101	92	84	78	72	67
	50	108	98	90	83	77	72
SIDE B 20 TOOTH DRIVING 28 TOOTH	55	118	107	98	91	84	78
	60	129	117	107	99	92	86
	65	140	127	116	107	100	93
	70	150	137	125	116	107	100
	75	164	149	137	126	117	109
SIDE A 30 TOOTH DRIVING 14 TOOTH	25	149	135	124	114	106	99
	30	178	162	149	137	127	119
	35	208	189	173	160	149	139
	40	238	216	198	183	170	158
	45	267	243	223	206	191	178
	50	320	291	267	246	229	214
SIDE B 15 TOOTH DRIVING 30 TOOTH	55	353	321	294	271	252	235
	60	384	349	320	296	275	256
	65	417	379	347	321	298	278
	70	448	407	374	345	320	299
	75	491	447	410	378	351	328

8. Application Rate Charts

8.4 Type Of Material - Granular Urea - 750 kg/m3

Due to the variation of weight per cubic metre between the different types of materials the chart below is intended as a guide only.

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

All values are measured in kg/ha. To convert to lb/acre deduct 10% from each value.

DRIVE SPROCKET SETTINGS	DOOR OPENING (mm)	WIDTH OF PASS (M)					
		18	20	22	24	26	28
	20	20	18	16	15	14	13
SIDE A	25	25	23	20	19	17	16
14 TOOTH	30	30	27	25	23	21	19
DRIVING	35	36	32	29	27	25	23
30 TOOTH	40	41	37	34	31	28	26
	45	48	43	39	36	33	31
SIDE B	50	53	48	43	40	37	34
15 TOOTH	55	58	52	47	44	40	37
DRIVING	60	65	59	53	49	45	42
30 TOOTH	65	70	63	57	53	48	45
	70	80	72	65	60	55	51
	75	86	77	70	65	60	55
	20	31	28	25	23	21	19
SIDE A	25	39	35	32	29	27	25
14 TOOTH	30	46	41	38	35	32	30
DRIVING	35	52	47	43	39	38	33
30 TOOTH	40	59	53	48	44	41	38
	45	68	61	56	51	47	44
SIDE B	50	76	68	62	57	53	49
20 TOOTH	55	84	76	69	63	58	54
DRIVING	60	95	86	78	71	66	61
28 TOOTH	65	106	95	87	80	73	68
	70	117	105	96	88	81	75
	75	128	115	105	96	88	82
	20	87	78	71	65	59	53
SIDE A	25	109	98	89	82	75	70
30 TOOTH	30	131	117	107	98	90	84
DRIVING	35	152	137	125	114	105	98
14 TOOTH	40	174	157	142	131	120	112
	45	196	176	160	147	136	126
SIDE B	50	218	196	178	163	151	140
15 TOOTH	55	239	215	196	179	166	154
DRIVING	60	261	235	214	196	181	168
30 TOOTH	65	283	254	231	212	196	182
	70	305	274	249	228	211	196
	75	326	294	267	245	226	210

ROESNER PTY LTD/MARSHALL MULTISPREAD
STANDARD WARRANTY

Model No_____

1. WARRANTOR

Roesner Pty Ltd – Turnbull Street, HARVEY WA 6220

Serial No._____

2. WARRANTY

Purchase Date_____

Roesner Pty Ltd undertakes to repair or replace, at its option, any new Marshall Multispread branded product which fails due to a defect in materials or workmanship during the applicable warranty period specified in Section 3 below, subject to the terms and conditions set out in this Warranty. Any repair work under this Warranty must be performed by an authorised Roesner/Marshall Multispread dealer.

3. WARRANTY PERIOD

The Warranty periods applicable to new Roesner/Marshall Multispread products are as follows :-

1. Farming Use (excluding farm contracting applications)	12 months
2. Commercial/Contract use (including use in farm contracting, forestry and industrial applications)	6 months
3. Government (where product is used by Government agencies and departments)	3 months
4. Hire and Rental (where product is hired for farm or commercial use)	3 months
5. Engines and tyres on Marshall Multispread products (e.g. Kohler/Dunlop)	As specified by the engine and tyre manufacturer.

Warranty coverage commences from the date of completion by the purchaser of the Warranty registration Card provided with all new Roesner/Marshall Multispread products or from the date of sale, whichever is the earlier.

4. WARRANTY EXCLUSIONS AND LIMITATIONS

1. This warranty applies only to new Roesner/Marshall Multispread products purchased from authorised Roesner/Marshall Multispread dealers.
2. This warranty is non-transferable and restricted to the original purchaser named on the Warranty registration Card.
3. This warranty does not apply to or in any way cover :-
   (a) Normal wear and tear;
   (b) Failure arising from the improper use of a Roesner/Marshall Multispread product;
   (c) Failure arising from use of a Roesner/Marshall Multispread product in a manner contrary to law;
   (d) Failure of, or caused by, parts or components which are not manufactured by Roesner/Marshall Multispread or supplied by a Roesner/Marshall Multispread approved supplier;
   (e) Failure arising from accident, abused, acts of God, fire, sabotage, vandalism, contaminated fluids or neglect or failure to operate, store and/or maintain a Roesner/ Marshall Multispread product in accordance with instructions provided in the owner's manual supplied with a Roesner/Marshall Multispread product;
   (f) Parts or service required for the normal and regular maintenance of a Roesner/Marshall Multispread product e.g. lubricants, engine tune ups etc;
   (g) Normal adjustments which are explained in the owner's manual supplied with a Roesner/Marshall Multispread product;
   (h) Repairs made necessary due to a Roesner/Marshall Multispread product coming into contact with or being exposed to dirt, abrasives, moisture, rust, corrosion or other similar conditions.
   (i) Failure arising from any negligent act or omission of any person other than Roesner/Marshall Multispread or any of its employees; or
   (j) Failure arising from any unauthorised assembly, repair or modification of a Roesner/Marshall Multispread product by any person;

Delivery Address:
PO Box 185
HARVEY WA 6220

Roesner Pty Limited
Reply Paid185
HARVEY WA 6220

5. PURCHASER'S OBLIGATION

In order to obtain the benefit of this warranty, the purchaser must comply with the following provisions :-

1. The purchaser must complete and return the Warranty registration Card provided within 14 days to the address specified on the Reply Paid card.
2. If there occurs a failure of a Roesner/Marshall Multispread product to which this warranty applies or may apply, the purchaser must :-
   (a) As its sole expense, deliver that Roesner/Marshall Multispread product to the authorised Roesner/Marshall Multispread dealer from which it was purchased or to any other authorised Roesner/Marshall Multispread dealer;
   (b) Produce to the authorised Roesner/Marshall Multispread dealer the purchaser's copy of the Warranty Registration Card relating to the Roesner/Marshall Multispread product; and
   (c) If that Roesner/Marshall Multispread product is sent to an authorised Roesner/Marshall Multispread dealer other than the Roesner/Marshall Multispread dealer from which it was purchased, provide to the authorised Roesner/Marshall Multispread dealer proof of the purchaser's ownership of that Roesner/Marshall Multispread product and of the date of purchase.

6. ROESNER'S/MARSHALL MULTISPREAD OBLIGATIONS

If a claim made under this warranty is accepted, Roesner/Marshall Multispread will meet its obligations under section 2 above free of charge to the purchaser. Repairs will be scheduled and performed in accordance with the normal work flow of the authorised Roesner/Marshall Multispread dealer to which the Roesner/Marshall Multispread product is delivered. The timing of any repair may depend upon the availability of replacement parts and components.

7. LIMITATION ON ROESNER'S/MARSHALL MULTISPREAD OBLIGATIONS

1. Except to the extent that Roesner/Marshall Multispread may not lawfully exclude liability, Roesner/Marshall Multispread will not be liable to any purchaser (or any other person or corporation) for any loss or damage (including consequential, exemplary, punitive or incidental loss or damage) however caused including negligence, which may be suffered or incurred or which may arise directly or indirectly from or in connection with any Roesner/Marshall Multispread product and/or any failure of or fault in any Roesner/Marshall Multispread product.
2. Except as expressly set out in this warranty, all terms, conditions, warranties, undertakings, inducements or representations whether express, implied, statutory or otherwise, relating to Roesner/Marshall Multispread products are, to the maximum extent permitted by law, excluded.
3. If any act, whether State or Commonwealth or otherwise, implies into this warranty or any other agreement between Roesner/Marshall Multispread and a purchaser relating to a Roesner/Marshall Multispread product any term, condition or warranty and that acts avoids or prohibits provisions excluding or modifying the application or exercise of or liability under that term, condition or warranty, that term, condition or warranty shall be deemed to be included in this warranty. However, the liability of Roesner/Marshall Multispread for any breach of that term, condition or warranty (other than a warranty implied by Section 69 of the Trade Practices Act or any corresponding provision of any Act of a State or Territory) is limited at the option of Roesner/Marshall Multispread, to any one or more of the following :-
   (a) If the breach related to goods then :-
      (i) the replacement of the goods or the supply of equivalent goods;
      (ii) the repair of goods;
      (iii) the payment of the cost of replacing the goods or of acquiring equivalent goods; or
      (iv) the payment of the cost of having the goods repaired; and
   (b) If the breach relates to services :-
      (i) the supplying of the services again; or
      (ii) the payment of the cost of having the services supplied again.

8. ROESNER'S/MARSHALL MULTISPREAD RIGHT OF DETERMINATION

Roesner/Marshall Multispread alone has the exclusive right to determine whether or not this warranty extends to a claim made by a purchaser.

CLIENT TO RETAIN ABOVE SECTION

Please return this within 14 days of purchase to register your warranty. Please print clearly.

1. BUYER DETAILS

Name:_____

_____

Address:_____

_____

State:_____ Postcode: _____

_____

Sign here to acknowledge receipt of Warranty Form and Operators Manual

2. SELLING DEALER DETAILS

Trading Name:_____

_____

Address:_____

_____

State:_____ Postcode:_____

3. PRODUCT DETAILS

Model:_____

Serial Number:_____

Date of Purchase:_____

Main Use: ☐ please mark with cross

- ☐ Farming
- ☐ Commercial/Contract
- ☐ Hire & Rental
- ☐ Government

Warranty Claim Form

Dealers Name : _____

Client Name : _____ Date : _____

Model No : _____ Serial No : _____

Description of Warranty Claim :

Parts required from Roesner Pty Ltd :

Estimated additional costs (travel, labour etc.)

Signed : _____

Name : _____

Phone : _____

PLEASE FAX COMPLETED FORM TO (08) 9729 2256
OR MAIL TO : PO BOX 185, HARVEY, WA, 6220

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