



# FLAIL SIDE SPREADER

# CE

## Maintenance Operating Instructions and Spare Parts Lists



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**ABBEY SIDE SPREADER PDI CHART**

This dealer pre-delivery inspection chart is to be completed and signed by the dealer or their representative before the machine is supplied to the customer.

Complete the topper PDI chart.

Model \_\_\_\_\_ Date \_\_\_\_\_ Serial No. \_\_\_\_\_

*Tick box below after item is checked*

***Caution! Keep Clear of rotating parts***

- Check all hydraulic connections.
- Check opening and closing of the door.
- Check hydraulic brakes where supplied
- Check the rotor chains/flails are securely bolted to rotor and hang freely on rotor.
- Check wheel studs and axle bolts are torqued correctly, and hand brake operates.
- Check play on the wheel bearings by rocking the wheels and tyre pressures.
- Check bolt on hitch bolts where fitted (2060 models upwards).
- Check all safety guarding and devices are fitted, and in good working order.
- Check all lighting is working correctly(optional).
- Check and ensure the right PTO shaft is cut to the correct length.
- Check tension on the driveline.
- Check machine running.
- Check all lubrication points and grease if required.
- Check the machine overall visually and that a copy of the instruction manual is being supplied to the customer with the machine.

Sign below after working through the above checklist, and return accompanying card to Abbey Machinery, Well Road Nenagh, Co. Tipperary.

Signatures .....



## INSTRUCTION MANUAL CONTENTS

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### IMPORTANT NOTE

The drawings in this manual are not to scale.

While every care is taken to ensure all information in this manual is correct, the manufacturer cannot be held responsible for any errors and omissions therein.

When ordering parts, ensure that you have the correct reference number and serial no of the tank.



## THE RANGE OF ABBEY SIDESPREADERS INCLUDES

2040,2060,2060MH,2070,2090,2100,2150 & 2250

### 1.0 THE FUNCTION OF THE GEAR DRIVEN MACHINE

The Abbey Side Spreader is a trailed machine which is used to transport farm yard manure from its storage area to the field where it is then spread. The Side Spreader was designed solely for agricultural slurries and farm yard manures. However in certain circumstances the Abbey spreader could be used to land spread other types of slurry. It must be noted that the standard Abbey Side Spreader has not been designed to travel at speeds of over 40 km/hr.

The principle of the Abbey Side Spreader is to move and land spread large quantities of farm yard manure. The Abbey Side Spreader does this with the use of a central rotor that has a number of chains and flails fitted to it. In order to fill the machine a door on the upper side of the machine hinges back. The Side Spreader is normally filled with a front loader (i.e. a tractor fitted with a loader or a loading shovel). It should be noted that the Side spreader is designed to operate within the limits stated in the instruction manual. However it should also be used within the legal limits of your country.

### SIDE SPREADER NOISE LEVELS

Continuous A-weighted sound level at workstations noise levels exceed 70 db(a).

Peak C-weighted instantaneous sound pressure exceeds 63 pa.

**CAUTION:** The necessary protective devices should be worn when operating the machine.

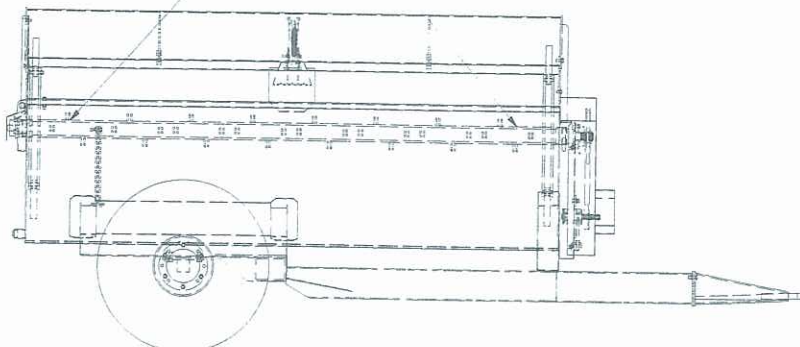
### IMPORTANT

**Read instructions carefully before operating this machine.**

**\*This entire manual and any accompanying manuals must be read and understood before operating this machine. If there is confusion about the safe operation of any part of the machine, contact your dealer before operating it.**

**SAFETY WARNING**  
Lifting chains to be attached at both ends of the side spreader rotor as shown below for lifting machine.

Chains at 90 deg. to each other





## 2.0 ABBEY SIDE SPREADER

### SAFETY WARNING

1. Stop the tractor, apply the parking brake and disengage the PTO before maintaining or adjusting the machine.
2. PTO shafts should be kept well lubricated, refer to the accompanying leaflet for maintenance instructions on the shaft.
3. Tractor drivers and helpers should not wear loose or flapping clothing when working near PTO driven machinery. Dangling chains and torn clothing could get caught up in moving parts. Keep long hair tucked under a cap or tied back.
4. Hydraulically PTO drives are particularly treacherous as they can slip or stop at low engine speed and suddenly start up again without warning.
5. **Warning:** The max. speed to be applied at the PTO is 540rpm, and always disengage the PTO when turning.
6. PTO guards/covers should be in place at all times and the guards are not to be used as a step
7. Do not distract people who are using machines.
8. The PTO shaft is left on the stand provide when the machine is not in use to prevent the shaft guard from being damaged
9. **Warning:** Do not stand in the spreading area or attempt to maintain the machine while the PTO shaft of the machine is connected to the tractor.
10. Before operating any power driven equipment, ensure that you have read the operating and safety instructions provided by the manufacturer. If you have any doubt about any aspect of operating the machine or safety precautions, contact your dealer immediately.
11. **Warning:** The operator must ensure that during the operation of the machine, no person is standing in the spreading area. Flying debris or chains could cause serious injury.
12. Always adopt the procedure suggested in this manual for lifting the side spreader. Other lifting methods could create unforeseen risk. See drawing page 4.
13. Take care to match tractor to side spreader on soft or sloping ground to prevent dangerous or uncontrollable situations from occurring.
14. Always stand clear of the machine door when it is being operated.
15. Damaged or worn hydraulic hoses should be replaced.
16. Inexperienced operators should not be allowed to work or maintain the machine without supervision.
17. **Warning:** If entering the machine, disconnect the PTO shaft from the tractor and extreme care should be taken to prevent slipping in the machine.
18. Check maintenance instructions before operating the machine.
19. Do not operate the side spreader with an excessively worn hitch eye – replace it. The hitch eye should be checked regularly, particularly on the side spreaders used for long periods during the season
20. If you have any doubt as to the safe operation side spreader advice should be sought from your local dealer or direct from the manufacturer.



### 3.0 OPERATING THE ABBEY SIDE SPREADER

#### 3.0 SETTING UP FOR USE

Prior to operating the machine the following setup should be made.

1. Connect Side Spreader to tractor on pick-up hitch or drawbar. Measure P.T.O. shaft leaving minimum 3" of closure to allow turning circle and shaft closing. If connected to the tractor drawbar the optional necessary hitch eye reducer bush must be used.
2. Ensure all guards are in place before operating the machine.
3. Connect hydraulic hoses to the tractor. Check that both the hydraulic brakes and the door are working correctly (if fitted). Check side spreader lights are working correctly if fitted.
4. Check that the wheel nuts are tight and hubs are greased.

#### Check Tyre Pressures

Tyre	Pressure
11.5 X 15 n	51 P.S.I.
13 X 16	60 P.S.I.
400R 22.5	58 P.S.I.
550/60 X 22.5	36 P.S.I.
16.5 X 22.5	43 P.S.I.
1300 X 530/533	51 P.S.I.
22/70 X 20	28 P.S.I.

5. Check that the chains in the machine are swinging freely.

### 4.0 OPERATING THE ABBEY SIDE SPREADER

Before operating the Abbey Side Spreader make sure you and all the operators are familiar with the safety warnings in this manual.

1. Before filling the Abbey Sidespreader open the machine door to the locked vertical position by hydraulic or manual control. Stand clear of the door while it is open.
2. When the side spreader is full close the door.
3. Warning: Before starting the spreader ensure all persons are standing completely clear of the machine. No person should be standing in the spreading area when the machine is working.
4. Engage PTO and turn very slowly to wrap flail chains around rotor. This action reduces the HP required when starting. Operate the machine at low ground speed gradually building up the speed as required.
5. The application rate is governed by the PTO speed and forward ground speed. These can be varied depending on the conditions in which the machine works.

## 5.0 ABBEY SIDE SPREADER CARE AND MAINTENANCE

Before carrying out any maintenance work on the side spreader, it is important that you familiarise yourself with the safety warning in this manual.

1. The machine should be stationary and in a stable position with the PTO shaft disconnected to prevent the machine starting up while maintenance is carried out.
2. The rotor chains and flails should be inspected at regular intervals and replaced if excessively worn or missing, to prevent unnecessary vibration or damage occurring.
3. Grease should be applied to all grease points at regular intervals during the working season of the machine.
4. Daily check all wheel nuts are tight for the first week and once a week there after.
5. CAUTION: Special care should be taken to check hydraulic hoses for damage and replace if necessary.
6. Check PTO shaft guards and replace if necessary, refer to the accompanying leaflet for maintenance instructions on the shaft.
7. Maintain Tyre pressure as recommended.
8. When chains increase in length they should be replaced.
9. CAUTION: Parts should be fitted to the side spreader in the correct manner so that they won t create any risk to the operator. If there is any confusion when refitting parts contact your local dealer before completing the operation.
10. Consult your dealer before non-standard parts are fitted to your side-spreader.
11. The machine may be cleaned by filling with water and then engaging the PTO. Remove drain plug and drain out remaining water
12. Only a qualified person should carry out repairs.

### MAINTENANCE INTERVALS

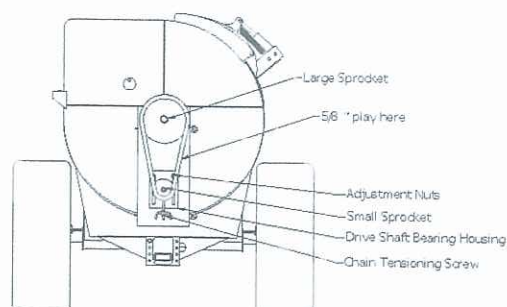
#### DAILY

- (a) Grease Bearings on each end of flail tube.
- (b) Grease universal joints on each end of PTO shaft.

#### WEEKLY

- (a) Remove front cover, grease chain, drive shaft bearing and both sprockets
- (b) Check drive chain tension and adjust the bearing housing bolts until there is 5/8" play at Centres. (see drawing Page 7)
- (c) CAUTION: Always replace the front cover after maintenance.
- (d) Oil the hinges on the door and its operating mechanism.
- (e) Check tyre pressure, tighten wheel nuts and grease wheel hubs.
- (f) Examine rotor for loose bolts or missing flails and tighten or replace if required.

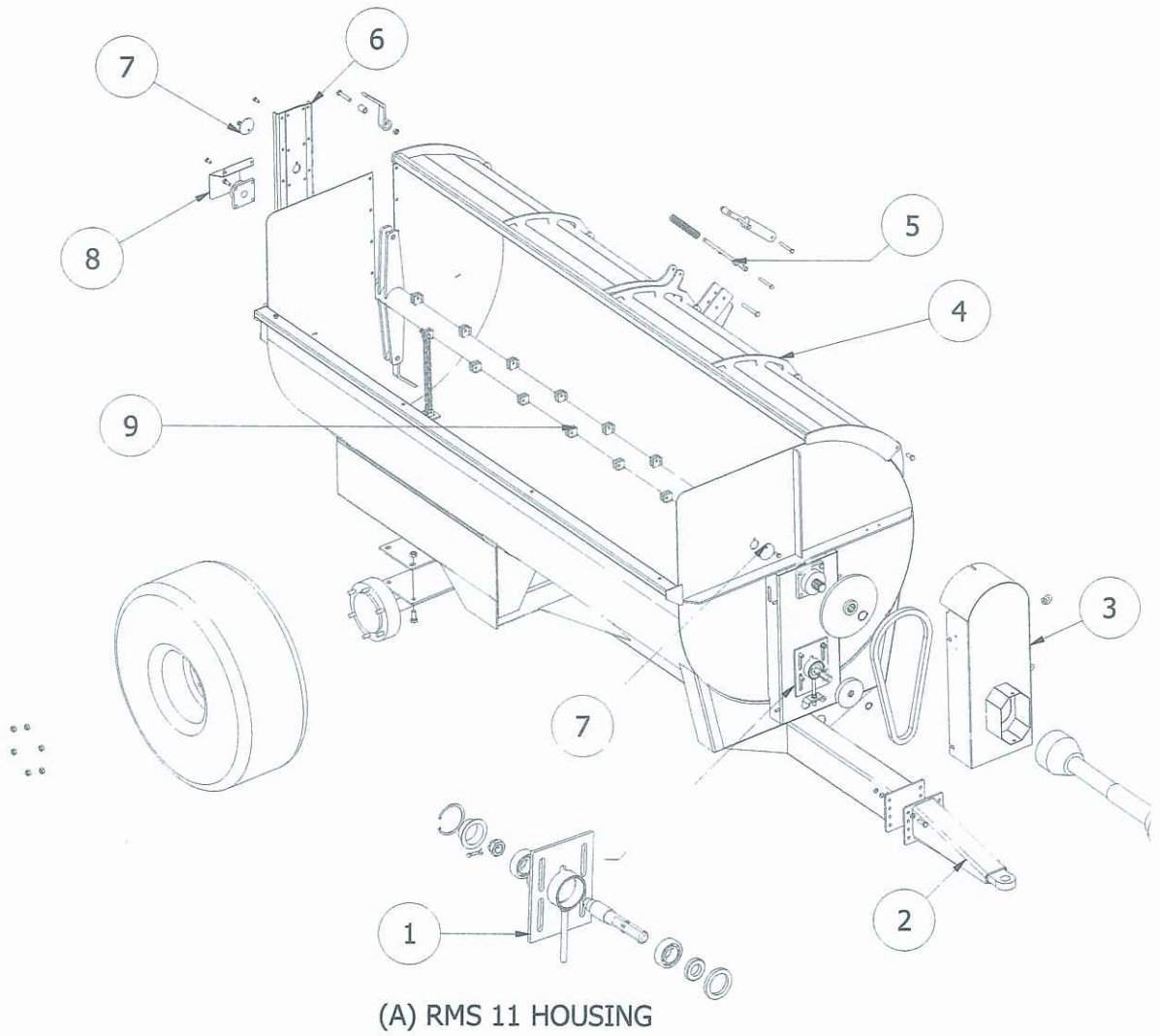
MAINTENANCE LAYOUT



**6.0 SIDE SPREADER REPLACEMENT PARTS (CONT.)**

**SIDE SPREADER AF PARTS LIST**

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**6.0 SIDE SPREADER REPLACEMENT PARTS (CONT.)**

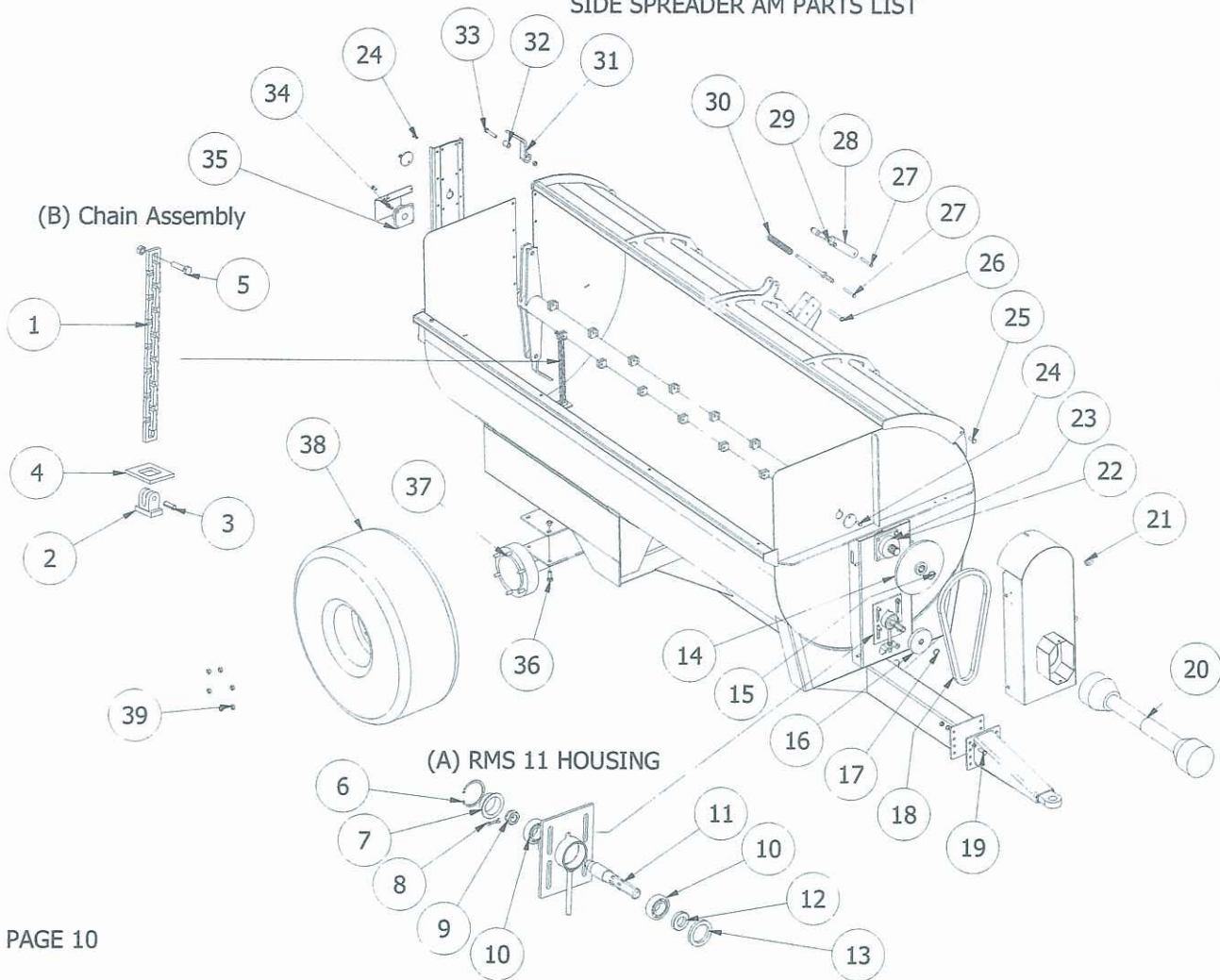
**SIDE SPREADER AF PARTS LIST**

<b>No.</b>	<b>Part No.</b>	<b>Description</b>	<b>QTY</b>
1	ABY3050 E	RMS 11 Housing only	1
2a	ABY	Bolt-on Hitch 2060/70	1
2b	ABY	Bolt-on Hitch 2090/2100	2
2c	ABY	Bolt-on Hitch 2150/2250	1
3a	ABY	Cover 2040	1
3b	ABY	Cover 2060/70	1
3c	ABY	Cover 2090/2100	1
3d	ABY	Cover 2150	1
3e	ABY	Cover 2250	1
4a	ABY	Door 2040	2
4b	ABY	Door 2060	2
4c	ABY	Door 2070	1
4d	ABY	Door 2090	1
4e	ABY	Door 2100	1
4f	ABY	Door 2150/2250	1
5	ABY	Door Ram Pin Spring Guide	1
6a	ABY	Back Channel 2040	1
6b	ABY	Back Channel 2060/2070	1
6c	ABY	Back Channel 2090/2100	1
6d	ABY	Back Channel 2150	1
6e	ABY	Back Channel 2250	1
7	ABY	Flail Bolt Cap	2
8	ABY	Back Bearing Cover	1
9a	ABY	Rotor 2040	1
9b	ABY	Rotor 2060	1
9c	ABY	Rotor 2070	1
9d	ABY	Rotor 2090	1
9e	ABY	Rotor 2100	1
9f	ABY	Rotor 2150	1
9g	ABY	Rotor 2250	1

**6.0 SIDE SPREADER REPLACEMENT PARTS (CONT.)**

**SIDE SPREADER AM PARTS LIST**

SIDE SPREADER AM PARTS LIST





## 6.0 SIDE SPREADER REPLACEMENT PARTS (CONT.)

### SIDE SPREADER AM PARTS LIST

No.	Part No.	Description	QTY
<i>Chain Assemblies</i>			
1A	ABY3060	13 Link x 3/8" Chain only	As per Rotor
1A complete	ABY3061	13 Link x 3/8" Chain with Head	As per Rotor
1B	ABY3062	15 Link x 3/8" Chain only	As per Rotor
1B complete	ABY3063	15 Link x 3/8" Chain with Head	As per Rotor
1C	ABY3066	13 Link x 1/2" Chain only	As per Rotor
1C complete	ABY3067	13 Link x 1/2" Chain with Head	As per Rotor
1D	ABY3068	15 Link x 1/2" Chain only	As per Rotor
1D complete	ABY3069	15 Link x 1/2" Chain with Head	As per Rotor
1E	ABY3099	13 Link x 5/8" Chain only	As per Rotor
1E complete	ABY3101	13 Link x 5/8" Chain with Head	As per Rotor
2A	ABY3065	Standard Plate	As per Rotor
2B	ABY3071	Heavy Duty Plate	As per Rotor
3A	ABY3064	Standard Head 2040	As per Rotor
3B	ABY3070	Heavy Duty Head 2060/70/90/2100	As per Rotor
3C	ABY3080	5/8 " Head 2150/2250	As per Rotor
4	ABY3072	Roll Pins	As per Rotor
5	DIN931-M12X50	Chain Bolts	As per Rotor
6	CLP90MM-I	Circlip Internal 90MM	1
7	ABY3038	Dust Cap	1
8	PIN5X50S	Split Pin	1
9	ABY3037	Castle Nut	1
10	ABY3039	RMS 11 Bearing	2
11	ABY3035	Pto Shaft	1
12	ABY3036	Oil Seal Shim	1
13	ABY3040	Oil Seal	1
14A	ABY3002	27T Top Sprocket 2040	1
14B	ABY3000	33T Top Sprocket	1
15A	CLP1.75MM-E	Top Sprocket Circlip 1 3/4"	1
15B	CLP50MM-E	Top Sprocket Circlip 50MM	1
16A	ABY3007	14T Bottom Sprocket 2040	1
16B	ABY3005	14T Bottom Sprocket 2060/70	1
16C	ABY3005H	14T Bottom Sprocket 2090/2100	1
17	CLP1.37MM-E	Bottom Sprocket Circlip 1 3/8"	1
18A	ABY3051	Drive Chain 2040	1
18B	ABY3054	Drive Chain	1

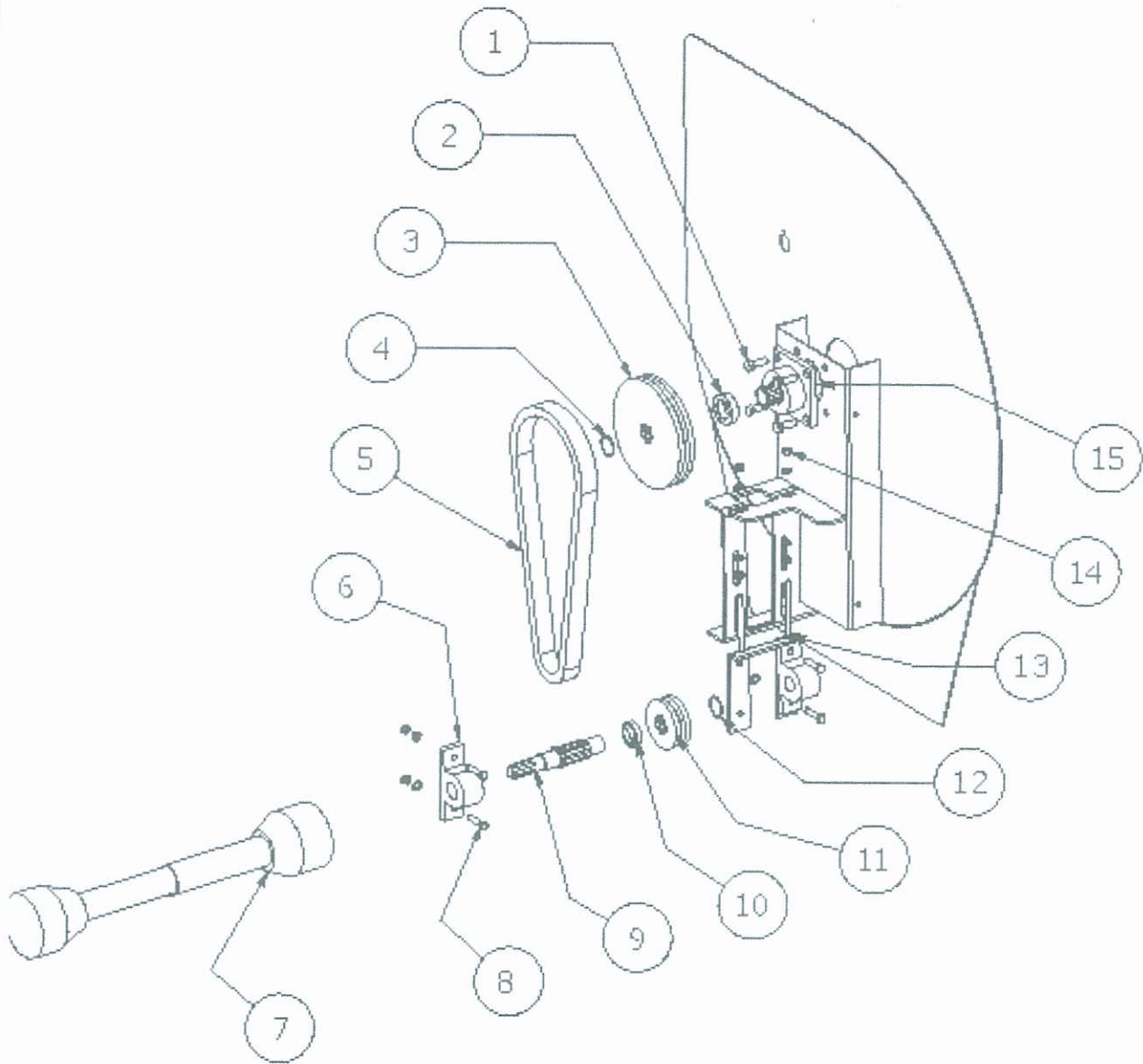


**6.0 SIDE SPREADER REPLACEMENT PARTS (CONT.)**

**SIDE SPREADER AM PARTS LIST**

<b>No.</b>	<b>Part No.</b>	<b>Description</b>	<b>QTY</b>
19	Din931-M16X50	Bolts, Washers and Locknuts	8
20A	COM0742319310	PTO Shaft 2040	1
20B	COM0752310110	PTO Shaft 2060/70	1
20C	COM0762331310	PTO Shaft 2090/2100	1
21	DIN582-M12	M12 Ring Nut	4
22A	ABY3030	Bearing 2040	1
22B	ABY3028	Bearing	1
23	DIN933-M16X50	Bolt and Locknut	4
24	DIN933-M12X35	Bolt , Washer & Locknut	2
25	DIN933-M16X40	Bolt & Locknuts Door Hinge	4
26	DIN931-M16X120	Bolt & Locknuts Centre Door Hinge	1
27	DIN931-M12X100	Bolt & Locknut	2
28	ABY4902	Door Ram	1
29	DIN931-M12X90	Bolt & Locknut	2
30	ABY4944	Door Ram Return Spring	1
31A	ABY3021	Rotor Flail 2040	4
31B	ABY3020	Rotor Flail	4
32	ABY3022	Rotor Flail Centre Bush	4
33	DIN931-5/8 X 3 1/2"	Bolt & Locknut	4
34A	ABY3029	Bearing 2040	1
34B	ABY3027	Bearing	1
35	DIN933-M14X40	Bolt & Locknut	4
36	DIN933-	Bolt,Washer & Locknut	8
37A	ABY3824	Axle 2040	1
37B	ABY3828	Axle 2060	1
37C	ABY3832	Axle 2070/2090/2100	1
37D	ABY3858-1	Axle 2150	1
37E	ABY3858-2	Axle 2250	1
38A	ABY4305	Wheels 2040/2060	2
38B	ABY4305	Wheels 2060 MH	2
38C	ABY4315	Wheels 2070/2090/2100	2
38D	ABY4356	Wheels 2150/2250	2
39	As per Axle	Wheels Studs	6

SIDE SPREADER REPLACEMENT PARTS (CONT.)





## 6.0 SIDE SPREADER REPLACEMENT PARTS (CONT.)

### SIDE SPREADER 2150-2250 DRIVE LINE PARTS LIST

No.	Part No.	Description	QTY
1	DIN933-M20X60	Bolts & Nuts	4
2	ABY3112	Main Shaft Spacer	1
3	ABY3107	Top Sprocket	1
4	CLP60MM-E	Circlip	1
5A	ABY3114	Drive Chain 2150	1
5B	ABY3114L	Drive Chain 2250	1
6	BRNUCPX10-32	Pillar Block Bearing	2
7	ABY3102	PTO Shaft	1
8	DIN933-M16X50	Bolts & Nuts	4
9	COMT801110CEC12114	PTO Shaft	1
10	ABY3111	PTO Shaft Shim	1
11A	ABY3106	Bottom Sprocket 2150	1
11B	ABY3106-12	Bottom Sprocket 2250	1
12	CLP60MM-E	Circlip	1
13	ABY	Tensioning Plate	1
14	DIN985-M16	Nuts & Washers	4
15	BRNUCFX14E-H	Bearing	1



### 7.0 WARRANTY

The following warranty terms relate to parts only.

Abbey Machinery Ltd. Will not accept claims for labour or mileage.

1. This Sidespreader is covered by the manufacturer's warranty for twelve months or one season.
2. Toppers used by agricultural contractors are covered by manufacturers warranty for six months from date of purchase.
3. Toppers hired out to and operated by third parties are not covered by manufacturer's warranty.
4. Manufacturer's warranty does not cover wearing parts.
5. Under no circumstances will warranty claims be accepted for any damage caused by failing to adhere to the operating. Instructions or maintenance requirements as outlined in this manual.
6. Warranties Claims will only be assessed when all alleged faulty parts have been returned to the warranty consideration are chargeable, pending decision on claim.
7. For general warranty considerations please see terms and conditions of sale as set out over leaf.

### EC DECLARATION OF CONFORMITY

We,

**Abbey Machinery Ltd**  
Well Road, Nenagh, Co. Tipperary, Ireland.

Declare that the Abbey Side Spreader Model \_\_\_\_\_ from serial No. 14000 onwards conforms to the essential safety requirements of ECC directive 89/392, as amended by 91/368, 93/44 and 93/68.

To effect the correct application of the safety requirements stated in the EEC Directives, the following standards and or technical specification have been applied.

EN 292 parts 1&2

Name and Job function of the authorised person

Signature: \_\_\_\_\_

Paul Callen  
Operations Manager