

# **SPINNER KIT FOR RINK TOPDRESSER 1005/1010 /1205/1210.**

## **1.0 GENERAL.**

The wide spread spinner kit for a Rink 1005/1010/1205/1210 fits to the standard machine. The unique item on our spinner kit is that we funnel the material inside the sand hopper, in stead of with standard funnels above the discs. This creates two major advantages:

- The discs can be positioned higher above the ground, enabling a wider uniform spread and less vulnerable for damages.
- Since the material is pushed through the funnel in stead off falling through by its own weight, we get less blockages of material, even when it is wet.

## **2.0 SAFETY ISSUES.**

- During assembly and disassembly **the machine should be locked on a levelled hard surface.**
- Be aware of **sharp edges.**
- Keep the **hydraulic circuit clean** all the time.
- ***WHEN IN USE, ASSURE THAT NOBODY STAYS ANY CLOSER TO THE MACHINE THAN 10 METRE / (30FT), BECAUSE OF THE MATERIAL SPREADED.***
- Use **clean topdressing material.** Stones can damage the machine and hurt by-standers.
- NEVER maintain, adjust or repair the unit, without **the tractor engine shut off** and the machine well secured.
- **Clean the machine after the job.** Do not leave material in the machine or around the spinners.
- Be aware that due to the extra weight of the spinner kit, **the machine can be instable and flip over on its disc** when disconnected from the tractor.

### 3.0 THE ASSEMBLY OF THE KIT.

First of all, **an additional box section 12 has to be mounted** between the top dresser assembly and the wheel frame at each side, as follows:

1. Connect ropes/ cables to the topdresser assembly and a hoist. (minimum lift capacity 500 Kg ( 1100 lbs)).
2. Un-screw bolt 17 and nut 11. Raise the topdresser assembly and put the box section 12 between the topdresser assembly and the wheel frame.
3. Use a new longer bolt 17 to connect the dresser body, box section 12 and wheel frame together. **NOTE: The hole 16 should be used.** The wheel frame should be as close as possible to the spinner kit, as the whole machine may become unstable.

On the attached drawing (fig. 1), all components are drawn. **We recommend using the standard dry sand seal plate.** The initially assembly starts as follows:

1. Clean the base machine and place it on a safe place, well secured.
2. Remove the rear brush 37 assembly by removing the nuts 14. Disconnect the hydraulic hoses 57 and 58. **NOTE: Store the brush on a safe place. Don't lay the brush on its bristles .If you want to use the brush later, it will fit the new supports 13.**
3. Assemble the dry sand seal plate 2 with bolts 2A and nuts 2B inside the machine. **NOTE:** If the capacity is not enough or wet sand is used, the spinner kit can also be used without the dry sand seal plate.

**Next we continue with the disc assembly:**

1. Assemble both disc protection plates 24 with bolts 19 and nuts 23 to the main beam 3. Do not tighten yet. **NOTE:** Both disc protection plates 24 ( left and right) are the same, but can be adjusted due to the slotted holes. As the protection plates determine the spreading angle, adjustments can be made to cover the right angle and overlap. This depends on the kind of material. Left and right should always be in the same mirrored position. Adjustments can be easily made during testing the spread pattern. Remove the bolts 19, loosen bolt 44, turn the disc protection plate 24 in the right position, tighten bolts 44 and assemble bolts 19 again.
2. Mount the seal strips (2 x # 7 and 1 x #10) with seal support strips 4, 9 to the main beam 3. Use the threaded rods 6 and normal nuts 5. The seal strips 7 and 10 should lay against the threaded rods, before the nuts 5 should be tightened. **NOTE.** The threaded rods reinforce the main beam, as the sand pushes against the seals. It is also possible to align the seals ( 2 x #7 and 1 x #10) to each other by adjusting the threaded rods 6 independently from each other. See also the enlarged picture "View from A " .
3. Mount both hydraulic motors to these plates, using bolts 44 and nuts 25. When the motor flange fits well into both plates, tighten all bolts and nuts.
4. Fit at both sides the angle supports 21 to the rear of main beam 3, using bolts 18 and nuts 22. Do not tighten yet.
5. Attach the assembled main beam 3 with angle supports 21 to both side supports 13, using bolts 15 and nuts 20. **NOTE:** Side supports 13 and angle supports 21 have slotted holes. With these holes the main deck assembly can be moved in or out. It should be moved in till the seals 7 and 10 touch the belt 8 ( see enlarged View from A). Tighten all bolts/ nuts when correctly set.
6. Mount both hubs 28 to the hydraulic motor shafts. Use key 43. The hub should be against the collar on the shaft. Lock the hubs with bolt 27.
7. Next the assembly of the discs:
  - a. As we have a left and right one, one disc assembly should be the mirrored version of the other.
  - b. In the enlarged picture a close view is given for the vane assembly for the disk on the right hand side of the machine ( see arrow at 29 and 42). For the one on the left side, the disc should be mirrored.
  - c. Assemble the top plate 31 and two vanes 33 with bolts 32 and nuts 35 to the main disc 30, exactly as drawn. **NOTE:** The rounding edge at the outside of the vane 33A) is at the "material flow" side.
  - d. Mount all 6 vane assemblies to the disc.
  - e. Assemble the other disc the same way, only in the mirrored way.
8. The disks can be mounted to the hubs 28, using 4 bolts 38 with nut 26 and one centre bolt 39 with spring washer 40. Plate 41 should be used as backup plate.
9. Mount the lower disk cover plate 56 on the disk cover plate 24 with 5 bolts 60 inside. Put on the nuts 19, but do not tighten them.  
Adjust the lower disk cover plate so that the disc can spin freely, then tighten the nuts 19.
10. Tighten all bolts and nuts. The mechanical disc assembly is complete.

**Finally we have to connect the hydraulics as follows:**

1. Screw 4 nipples 45 with copper washers 53 into the outlets of the hydraulic motors 49.
2. Attach a straight nipple 55 to both hoses 57 and 58, that were initially connected to the brush. Hose 57 is the supply hose that comes directly from the tractor and 58 is connected to the moving belt speed adjuster.
3. Connect hose 51 to the nipple mounted on hose 57 and the left motor inlet. When not clear in the picture, the left motor inlet is the top left port , standing behind the machine.
4. Connect hose 46 between the outlet of the left motor ( the other one left) and the inlet port of the right motor, which is the lower right port.
5. Hose 50 is the return hose, which is connected between the outlet of the right motor ( top left) and the nipple on hose 58.
6. Assemble two hose clamps 47 with cover plate 54, bolt 48 and nut 52 to the main deck 3. The hoses are correctly fitted now.

#### **4.0 SOME GENERAL MECHANICAL NOTES.**

- The top cover plate 31 should be mounted in the correct way. The overhang over the vanes should be at the “material flow” side.
- If the vanes are wearing, you can reverse them and use a second time.
- The vanes can be mounted upside down as well, which means a sharp corner edge in stead of the rounded one 33 A. This may effect the spreading uniformity as well. Again some may be set “sharp” some “rounded”.
- Standard the spinners should run from the centre to outer (see 29 and 42). This can be easily changed the other way, by interchanging both hoses 50 and 51 at the hoses 57 and 58.  
**NOTE.** When done, check the positions of the vanes on each disc. Basically both disc assemblies need to be exchanged from left to right and visa versa as well.
- The speed of the discs is directly related to the rev’s of the tractor engine. The speeds determines the uniformity and the overall spreading width.
- Maximum oil flow: 50 ltr/ min ( 15 gallon/ min) @ 170 bar (2300 psi).

#### **5.0 SOME USER NOTES.**

- If a thicker layers is required:
  - o Increase the moving belt speed.
  - o Reduce the forward speed of the tractor.
  - o Reduce the spinner rpm’s so the working width is reduced.
- For changing/ adjusting the spreading width/ uniformity, see the chapter above for more understanding of the position of the vanes.
- The spinner kit is developed for mainly sand. Be VERY careful with all other kinds of materials.
- The spreading width is about 8-12 mtr (25- 38 ft). This depends on:
  - o Top dress material
  - o Rpm’s of disks
  - o The adjusted thickness ( belt speed).

## **6.0 MAINTENANCE.**

The spinner kit doesn't need a lot of maintenance. The following issues should be taken care off:

- Clean the machine and spinner kit after the job is done. If material stays longer in the machine/ spinner kit, it can dry and give trouble next time.
- Check the bolts/ nuts on tightness ( special the ones from the disc assemblies) every 40 hours.
- Be sure your tractor hydraulics are working well and filtered correctly. If not, the hydraulic motors may wear quickly.

## **7.0 REMOVAL OF SPINNER KIT.**

In the event that the customer wants to use the brush again, handle as follows:

- Remove the hydraulic hoses 57 and 58 from the connected hoses, also remove the nipples 55.
- Remove the whole disc assembly by unscrewing bolts 15.
- Add the brush assembly 37 using the brackets 13.
- Connect the hoses 57 and 58 to the hydraulic motor. NOTE: If the brush turns the wrong way, interchange the hydraulic hoses on the hydraulic motor.

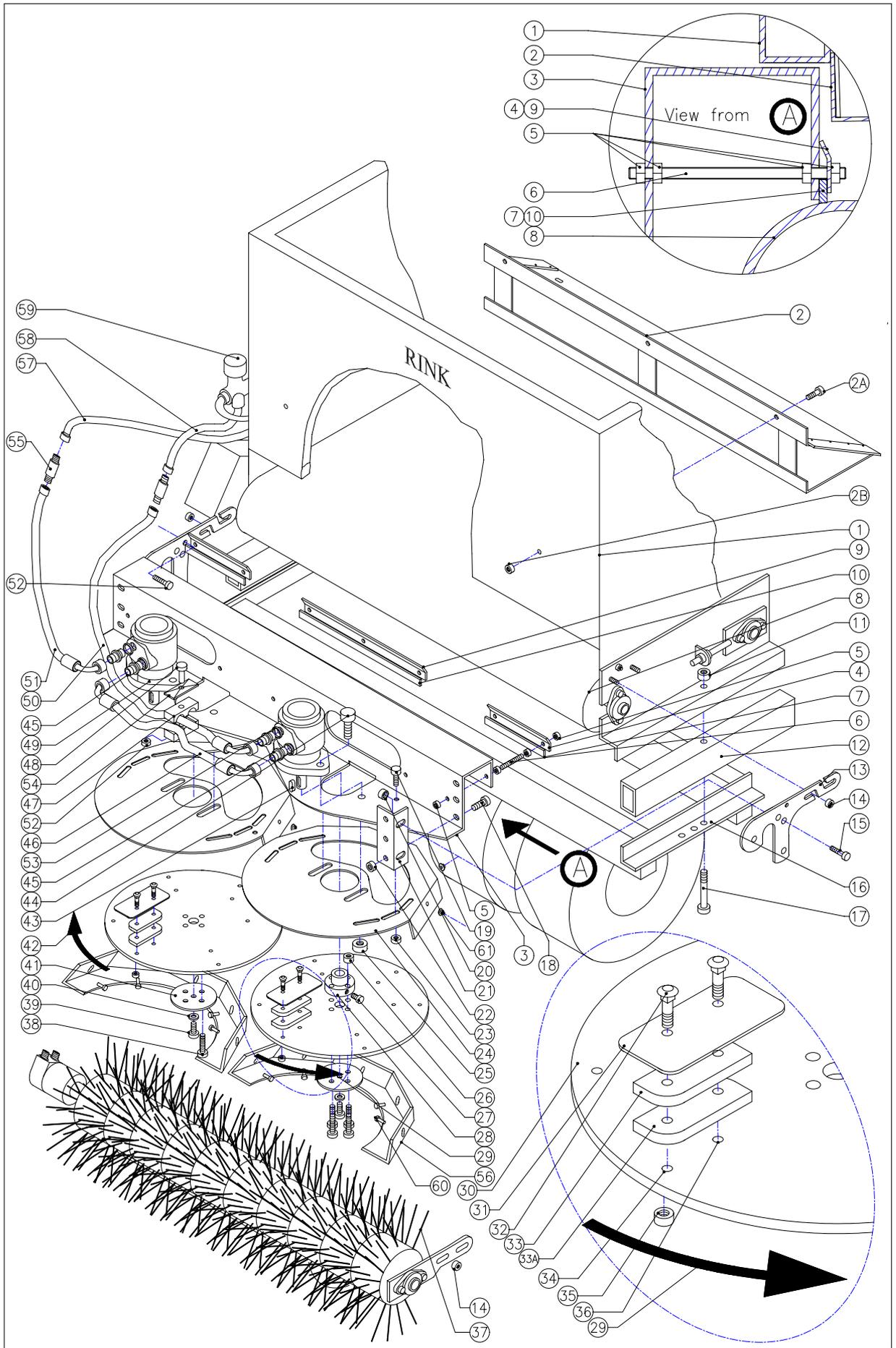


Fig. 1

## 8.0 PARTS LIST.

In the table underneath a full description is given of all separate parts that are included in the Spinner Kit of the 1005/1010/1210. See Fig. 1 for position item numbers.

	Part # 1005/1010	Part # 1210	Description	Remarks	Qua.
1			Standard machine hopper		
2	233.100.004	233.120.004	Dry sand seal plate, standard	May be removed	001
2a	820.080.400	Same	Mushroom head bolt M8x40		003
2b	830.080.080	Same	Self lock nut M8		003
3	468.049.148	468.049.178	Main beam	1010 and 1210 are different	001
4	464.032.150	464.032.900	Seal secure strip side	1010 and 1210 are different	002
5	826.060.060	Same	Normal nut M6		028
6	852.061.100	Same	Threaded rod M6 x 110		007
7	446.032.260	446.033.000	Rubber seal strip outer		002
8			Moving belt	Standard at machine	
9	464.034.480	464.035.990	Seal secure strip centre	1010 and 1210 are different	001
10	446.034.580	464.036.080	Rubber seal strip centre	1010 and 1210 are different	001
11			Self lock nut M12	Standard at machine	
12	476.405.900	476.409.150	Box section	1010 and 1210 are different	002
13	468.063.250	Same	Side support plate	Left and right are the same	002
14			Self lock nut M12	Standard at machine	
15	804.120.250	Same	Bolt M12 x 25		004
17	802.120.800	Same	Bolt M12 x 80		002
18	804.080.200	Same	Bolt M8 x 20		006
19	804.080.200	Same	Bolt M8 x 20		004
20	830.120.125	Same	Self lock nut M12		004
21	464.041.400	Same	Angle support	Left and right the same	002
22	830.080.085	Same	Self lock nut with washer M8		006
23	830.080.085	Same	Self lock nut with washer M8		004
24	468.036.220	Same	Disc protection plate		002
25	830.120.125	Same	Self lock nut with washer M12		004
26	830.080.080	Same	Self lock nut M8		008
27	804.080.200	Same	Bolt M8 x 20		002
28	472.340.600	Same	Hub for disc		002
30	444.104.900	Same	Disc		002
31	468.020.800	Same	Top plate vane		012
32	820.060.450	Same	Mushroom head bolt M6 x 45		024
33	444.100.700	Same	Vane		024
35	830.060.065	Same	Self lock nut with washer M 6		024
38	802.080.450	Same	Bolt M8 x 45		008
39	804.080.200	Same	Bolt M 8 x 20		002
40	866.080.020	Same	Spring washer M 8		002
41	468.041.000	Same	Back up plate disc		002
43	884.080.320	Same	Key 10 x 8 x 32		002
44	804.120.400	Same	Bolt M12 x 40		004
45	544.130.402	Same	Nipple		004
46	541.190.980	Same	Hose between motors		001
47	547.180.180	Same	Hose clamp set 2 x 18 mm		001
48	802.080.400	Same	Bolt M8 x 40		001
49	532.251.500	Same	Hydraulic motor OMP 50		002
50	541.191.605	Same	Return hose		001
51	541.190.670	Same	Supply hose		001
52	830.080.080	Same	Self lock nut M8		001
53	874.210.020	Same	Copper washer 1/2"		004
54	547.070.510	Same	Cover plate		001
55	544.121.122	Same	Straight nipple 12 mm without nut		002
56	468.036.460	Same	Disk lower cover plate		002
60	802.060.200	Same	Bolt M6x20		010
61	830.060.065	Same	Self lock nut with washer M6		010