

Redline



Implements

Tel: 0800 872 2767

www.jinma.co.za/implements.html

Model: DH-120 DH-150 DH-180



Disc Harrow

Model: FBR-150



Important:

Read these instructions before installing and using this implement.

Ballast Roller

CONTENTS

CONTENTS	1
PRODUCT SPECIFICATIONS	2
SAFETY INSTRUCTIONS	4
OPERATION	8
SERVICE AND MAINTENANCE	10
PARTS LIST – Flat Ballast Roller	12
PARTS LIST – Disc Harrow	13

PRODUCT SPECIFICATIONS

Product Models

Disc Harrow

DH-120	Adjustable offset configuration, 12 solid Scalloped and plain discs 3PL Cat 1
DH-150	Adjustable offset configuration, 16 solid Scalloped and plain discs 3PL Cat 1
DH-180	Adjustable offset configuration, 20 solid Scalloped and plain discs 3PL Cat 2

Flat Ballast Roller

FBR-150	Removable and adjustable aerator spikes ~ Water fill to increase ballast weight
---------	--

Implement Specifications

MODELS	DH-120	DH-150	DH-180
Tractor HP	15-30hp	25-35hp	40-55hp
3-Point Linkage	Cat-1	Cat-1	Cat-2
Length	1300mm	1700mm	1700mm
Width	1270mm	1570mm	1870mm
Height	1210mm	1210mm	1210mm
Working width	1100mm	1400mm	1700mm
Working depth	160mm	160mm	160mm
No of Discs	12	16	20
∅ of Discs	450mm	450mm	450mm
Weight	260kg	330kg	410kg

PRODUCT SPECIFICATIONS

DISC HARROW

The Disc Harrow has three different models. These are the offset-able and adjustable discs. These harrows are available from 4 to 6 foot tractors upto 55 hp.

Uses:

Primary cultivation ~ weed control ~ fire brakes ~ creating finer tilth ~ breakup soil for paddock leveling or cropping preparation

Features:

Adjustable offset configuration ~ solid construction ~ solid Scalloped and plain discs ~ Greasable bearing or ~ 3PL Cat 1/2

FLAT BALLAST ROLLER

The FBR-150 flat ballast roller has optional adjustable, removable aerator spikes, and optional water weighted for tractors up to 55hp.

Uses:

Dual purpose roller for soil compacting and aerating ~ add water to increase weight for spike penetration in hard soil ~ pasture renovation, aerate pasture and turf, incorporate lime and fertilizer improve germination ~ remove the spike kit to roll seeded areas improving soil seed contact ~ level ruts and humps after the wet season on sports fields and paddocks alike.

Features:

Removable and adjustable aerator spikes, ~ water fill to increase ballast weight

SAFETY INSTRUCTIONS

1. SAFETY FIRST



Before operating the implement, the operator must read the following safety instructions. Failure to comply with these warnings may result in serious injury or death.

CONGRATULATIONS! On the purchase of your new Redline Implement. This information is to assist you in preparing, operating and maintaining your Implement. Please read and understand the information completely before operating your Implement, paying special attention to all the safety details. Keep this manual handy for a ready reference.

1.1 Safety First

YOU are responsible for the SAFE operation and maintenance of your **Implement**. YOU must ensure that you and anyone else who is going to operate, maintain or work around the **Implement** is familiar with the operating and maintenance procedures and related SAFETY information contained in this manual. This manual will take you step-by-step through your working day and alert you to all good safety practices that should be adhered to while operating the **Implement**. Remember, YOU are the key to safety. Good safety practices not only protect you but also the people around you. Make these practices a working part of your safety program. Be certain that EVERYONE operating this equipment is familiar with the recommended operating and maintenance procedures and follows all the safety precautions. Most accidents can be prevented. Do not risk injury or death by ignoring good safety practices.

Implement owners must give operating instructions to operators or employees before allowing them to operate the machine.

The most important safety feature on this equipment is a SAFE operator. It is the operator's responsibility to read and understand ALL Safety and Operating instructions in the manual and to follow these. All accidents can be avoided.

A person who has not read and understood all operating and safety instructions is not qualified to operate the machine. An untrained operator will jeopardise himself and bystanders and could cause serious injury or death.

Do not modify the equipment in any way. Unauthorized modification May weaken the function and/or safety and could affect the life of the equipment.

Think SAFETY! Work SAFEETY!

SAFETY INSTRUCTIONS

1.2 General Safety

Read the operator's Manual and all safety signs carefully before operating, maintaining, adjusting or removing the Implement.

1. Do not allow passengers to ride on the Implement
2. Operate only at safe distance from bystanders. Clear the area of people, especially small children, before starting.
3. Keep feet and hands from under and the Implement at all times.
4. Do not stay between the tractor and the Implement.
5. Place all controls in neutral, stop tractor engine, set park brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, repairing, attaching or removing.
6. Review safety related items annually with all personnel who will operate or maintain the Implement.
7. Do not operate machine if you feel unwell or physically unfit, in which case you should stop working.
8. This machine was designed with safety very much in mind. However, there is no real substitute for caution and attention in preventing accidents. Once an accident has happened, it is too late to think about what you should have done.
9. Use a tractor equipped with a Roll Over Protective Structure (ROPS). Always wear your seat belt. Serious injury or even death could result from falling off the tractor – particularly during a turnover when the operator could be pinned under the ROPS or the tractor.
10. Never exceed the limits of a piece of machinery. If its ability to do a job, or do so safely, is in question – **DON'T TRY IT.**
11. Clear working area of stones, branches or hidden obstacles that might be hooked or snagged, causing injury or damage.

1.3 Operating Safety

1. Read and understand the Operator's Manual and all safety signs before operating, servicing, adjusting, or removing.
2. Do not allow riders.
3. Install and secure all guards and shields before starting or operating.
4. Keep hands, feet, hair and clothing away from moving parts.
5. Place all controls in neutral, stop tractor engine, set park brake, remove ignition key and wait for all moving parts to stop before servicing , adjusting, repairing, attaching or removing.
6. Place all tractor and machine controls in neutral before starting.
7. Never start or operate machine unless sitting on tractor seat.
8. Clear the area of bystanders, especially small children, before starting.
9. Stay away from PTO shaft and machine when engaging PTO. Keep others away.

SAFETY INSTRUCTIONS

10. Use hazard warning lights on tractor when transporting.
11. Do not put hands or feet under machine while tractor engine or machine is running.
12. Objects can be thrown out from under machine with sufficient force to severely injure people. Stay away from machine when it is running. Keep others away.
13. Review safety instructions with all operators annually.

1.4 Storage Safety

1. Store the machine in an area away from human activity.
2. Do not permit children to play on or around the stored machine.
3. Store machine in a dry, level area.
4. Clean grease and oil as required and protect it from the elements.

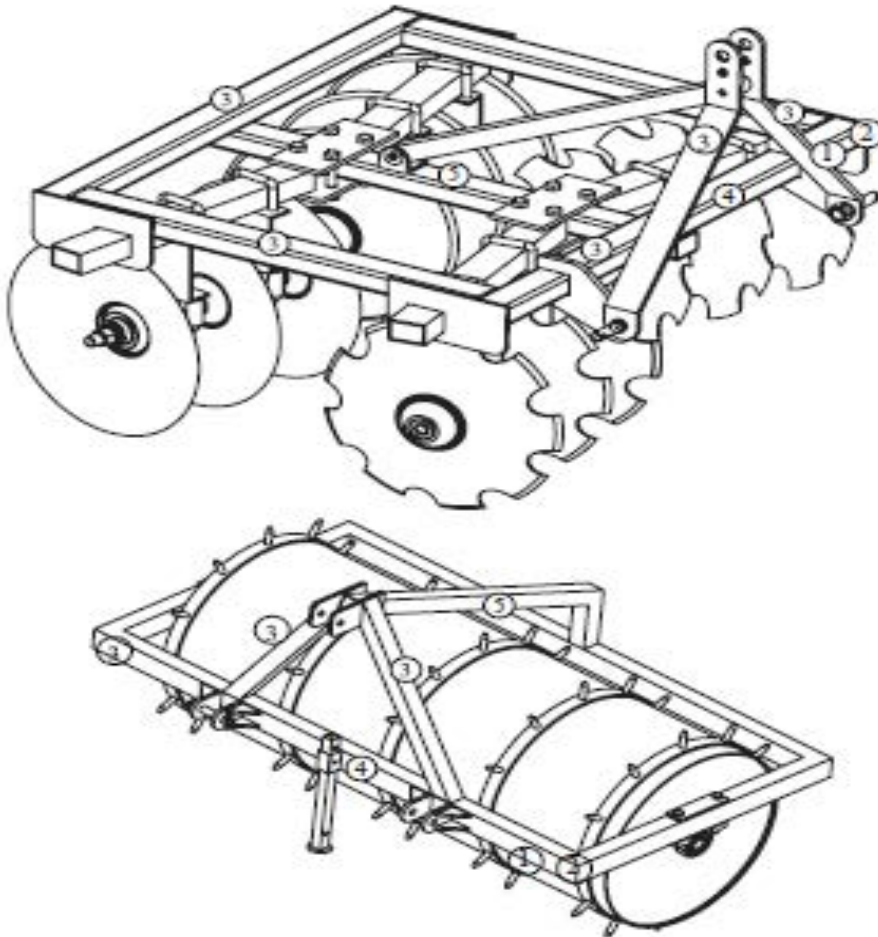
1.5 Maintenance Safety

1. Good maintenance is your responsibility. Poor maintenance is an invitation to trouble.
2. Follow good shop practices.
3. Keep service area clean and dry.
4. Be sure electrical outlets and tools are properly grounded.
5. Use adequate light for the job at hand.
6. Make sure there is plenty of ventilation. Never operate the engine in a closed building. The exhaust fumes may cause asphyxiation.
7. Before working on this machine, shut off the engine, set the brakes, and remove the ignition key.
8. Never work under equipment unless it is secured by a mechanical stand.
9. Use personal protection devices such as eye, hand and hearing protectors, when performing any service or maintenance work.
10. Only use genuine parts for service and maintenance.
11. A fire extinguisher and first aid kit should be kept readily accessible while performing maintenance.
12. Periodically tighten all bolts, nuts and screws and check that all pins are properly installed to ensure unit is in a safe condition.
13. When completing a maintenance or service function, make sure all safety shields and devices are installed before placing machine in service.

SAFETY NSTRUCTIONS

1.6 SAFETY DECAL

The position of safety decals are shown in the illustrations below. Good safety requires that you familiarize yourself with the various safety signs, and increase your **SAFETY AWARENESS**.



OPERATION

2.1 CHECKING BEFORE OPERATING

The Implement will fit most Category 1 tractors equipped with a standard 3-point hitch. The pins need to be installed to the inside of the 3-point frame for use with Category 1 tractors (DH-180 use category 2). This Implement for use on Category I/II tractors up to 55 horsepower in size.

1. Check the tractor's 3-point hydraulic lift system.
2. It should operate up and down smoothly and hold its position when set.
3. Refer to your tractor owner's manual or dealer for any adjustments necessary to put the 3-point hydraulic lift system in good working order.
4. Tractor should be equipped with stabilizer bars, adjustable sway chains, or sway blocks to keep the implement from swinging side to side.

Smaller size tractors may need front counter weights to counter-balance the weight of the implement.

2.2 ASSEMBLY AND MOUNTING

1. Lower the hydraulic linkage arms using the option control.
 - Note:
 - **It may be necessary to add the three points hitch lower the lift arms.**
2. Back the tractor at low speed towards the Implement and adjust the lower links to the proper level.
3. Stop tractor, set park brake, remove ignition key and wait for all moving parts to stop before dismounting.
4. Connect the tractor's lower links with implement's left and right lower suspension bracket and put pins in. Connect the chain top-link with implement's top-link bracket and put pins in.
5. Use the 3 points hitch to raise the machine from the ground before moving the machine.
6. Reverse the above procedure when removing the machine from the tractor.

2.3 GENERAL OPERATION

Before putting your Implement into service you must thoroughly review the Operator's Manual.

Removed any sizeable tree limbs, rocks or debris from this area.

Do not attempt to operate on wet or mucky soil and all areas should be well drained and capable of being walked on without having the soil stick to your shoes

Move the machine into the field align the machine with the working area.

OPERATION

Operating will commence as soon as implement is lowered on the ground, and tractor begins to move forward. Your travel speed forward will be determined by soil conditions and available tractor horsepower.

Never try to operate a Disc harrow in reverse and when you reach the end of a pass, raise the unit up into transport before turning. Trying to turn sharply with the unit in the ground will cause extreme side loading on the Implement and may cause damage.

2.4 Transporting

When transporting the machine, review and follow these instructions:

1. Be sure that the machine is securely attached to the tractor and all retainers or pins are installed.
2. Be sure you have installed extra weights on the front of the tractor.
3. Be sure you are in compliance with all applicable lighting and marking regulations when transporting.
4. Be sure your machine can be seen clearly by overtaking and oncoming traffic.
5. Do not allow riders.
6. Always use hazard flashers on the tractor when transporting.

SERVICE AND MAINTENANCE

3.1 Service

3.1.1 LUBRICANTION

1. Grease:
Use multi- purpose lithium based grease.
2. Starting Lubricants.
Your machine can operate at top efficiency only if clean lubricants are used. Use clean containers to handle all lubricants. Store them in an area protected from dust, moisture and other contaminants.

3.1.2 GREASING

- 1 Use a hand-held grease gun for all greasing.
- 2 Wipe grease nipple with a clean cloth before greasing, to avoid injecting dirt and girt.
- 3 Replace and repair broken nipples immediately.
- 4 If nipples will not take grease, remove and clean thoroughly. Also clean lubricant passageway. Replace nipple if necessary.

3.2 Maintenance

The recommended period is based on normal operating conditions. Severe or unusual conditions may require more frequent maintenance.

3.2.1 8 HOURS OR DAILY MAINTENANCE

1. Check and screw all nuts and bolts in connection parts.
2. Clean the implement; take away all grass and mud.

3.2.2 SEASON MAINTENANCE

1. Check the machine as above for daily maintenance.
2. Check the bearings of disc and roller mounts for wear and tear. If warn, disassemble, clean and replace them then if it is necessary, grease as required.

2.2.3 ANNUAL MAINTENANCE

1. Thoroughly clean the implement of mud and grass.
2. Check all clearance between bearings and gears If you have replaced them. Please run it without load for 3-5 minutes.
3. Check and clean disc and roller axles. Replace oil seals and grease them as necessary.
4. Check all discs, replace them if they are warn out or damaged.

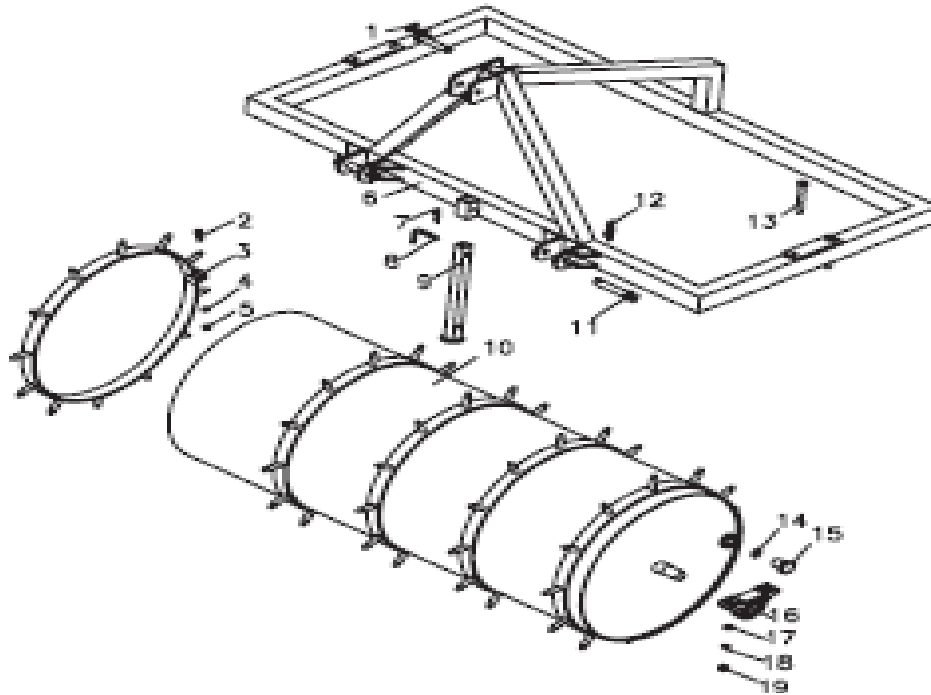
SERVICE AND MAINTENANCE

3.3 Storage

After the season's use, the machine should be thoroughly inspected and prepared for storage. Repair or replace any worn or damaged components to prevent any unnecessary down time at the start of next season. To insure a long, trouble free life, follow the procedure outlined below:

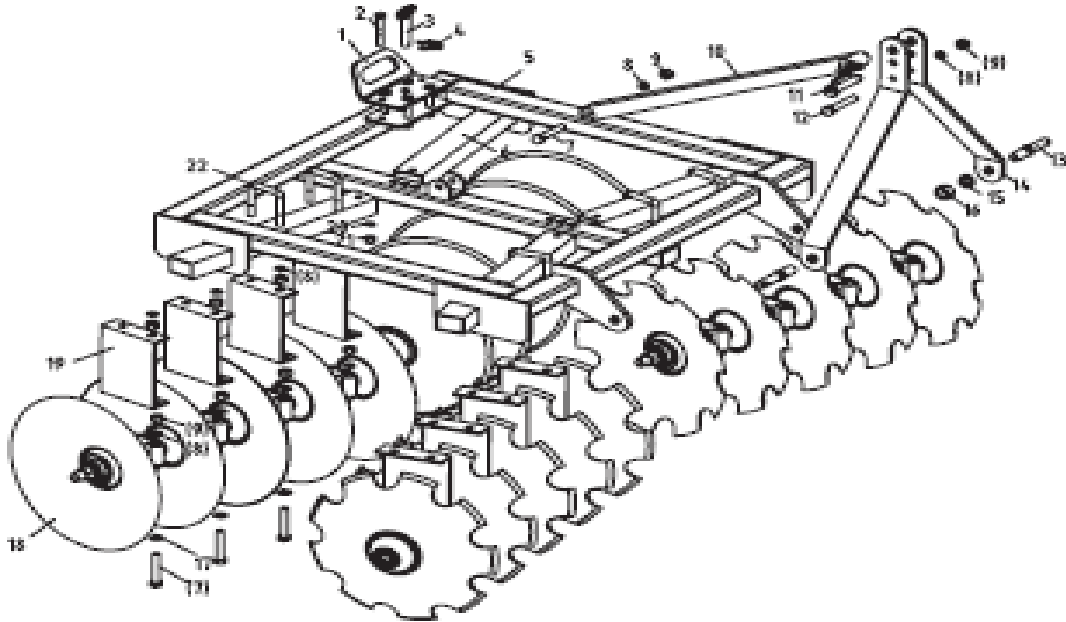
1. Thoroughly wash the machine using a pressure washer to remove all dirt, mud, debris and residue.
 2. Inspect the Discs and aerators for damage or entangled material. Repair or replace damaged parts. Remove all entangled material.
 3. Lubricate all bearings.
 4. Touch up all paint nicks and scratches to prevent rusting.
 5. Move to storage area.
 6. Select an area that is dry, level and free of debris.
 7. Unhook from tractor.
 8. If the machine cannot be placed inside, cover with a waterproof tarpaulin and tie securely in place.
- Store the machine in an area from human activity. Do not allow children to play on or around the stored machine.

PARTS LIST. Flat Ballast Roller



Ser No.	Part No.	Name & Specifications	Quantity
1	EF100.00.019	Pin shaft weldment	1
2	GB 5783-86	Bolt M10x40	5
3	FBR150.015	Gear ring	5
4	GB B97.1-85	Plain washer 10	5
5	GB 6184-86	Lock Nut M10	5
6	FBR150.012	Bracket for lift	1
7	ZL-25.104	R pin	1
8	ZL-25.103	Pin	1
9	FBR150.013	The brace weldment	1
10	FBR150.011	The roller weldment	1
11	RB-00.102	Lift pin shaft	2
12	200.56.011	Lock pin	2
13	GB 5783-86	Bolt M14x125	4
14	GB 3451.1-82	O ring 25x3.55	1
15	FBR150.105	Bolt	1
16	24PMF.02.139	Bearing Z207	2
17	GB 97.1-85	Plain washer 14	4
18	GB 93-87	Spring washer 14	4
19	GB 6170-86	Nut M14	4

PARTS LIST. Disc Harrow

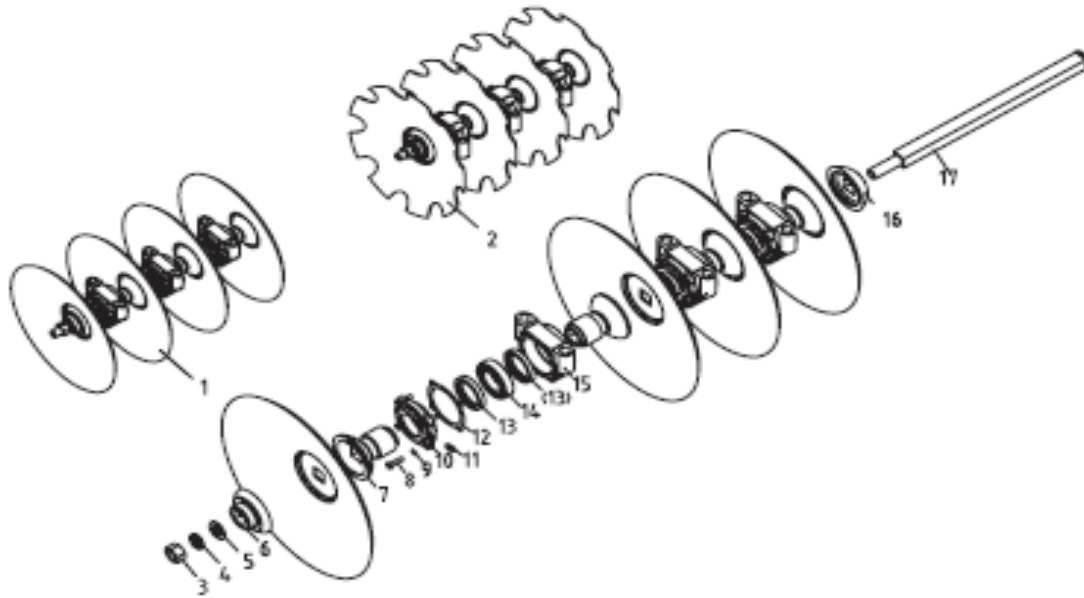


Ser No.	Part No.	Name & Specifications	Quantity	Remarks
1	DH-120.016	Adjusting plate	2	
2	GB 5783-86	Bolt M14x90	8	DH-120
			12	DH-150/180
3	FL200.04.013	Fixing pin	2	
4	FL200.02.018	Lock pin	2	
5	DH-120.013	Frame	1	DH-120/150
	DH-180.013	Frame	1	
6	DH-120.012	Suspension pin	4	DH-120/150
	DH-180.012		4	
7	GB 5780-86	Bolt M16x90	17	DH-120
	GB 5780-86		25	DH-150
	GB 5780-86		33	DH-180
8	GB 93-87	Spring washer 16	34	DH-120
	GB 93-87		50	DH-150
	GB 93-87		66	DH-180
9	GB 6170-86		34	DH-120
	GB 6170-86		50	DH-150
	GB 6170-86		66	DH-180
10	DH-120.014	Pulling pipe	1	
11	EF 100.00.019	Upper hanging pin	1	DH-120/150
	DH-180.018		1	DH-180
12	GB 5780-86	Bolt M16x100	1	

PARTS LIST. Disc Harrow

Ser No.	Part No.	Name & Specifications	Quantity	Remarks
13	SL140.00.109	Lift shaft	2	DH-120/150
	DH-180.146		2	DH-180
14	DH-120.102	Suspension plate	2	
15	GB 93-87	Spring washer 24	2	
16	GB 6170-86	Nut M24	2	
17	GB 97.1-85	Plain washer 16	16	DH-120
	GB 97.1-85		24	DH-150
	GB 97.1-85		64	DH-180
18	DH-120.011	Blade Axle	4	DH-120
	DH-150.011		4	DH-150
	DH-180.011		4	DH-180
19	DH-120.101	Connecting plate	8	DH-120
	DH-120.101		12	DH-150
	DH-180.101		16	DH-180
20	GB 93-87	Spring washer 14	8	DH-120
	GB 93-87		12	DH-150
	GB 93-87		16	DH-180
21	GB 6170-86	Nut M14	8	DH-120
	GB 6170-86		12	DH-150
	GB 6170-86		16	DH-180
22	DH-120.103	U bolt	8	DH-120
	DH-120.103		12	DH-150
	DH-180.103		16	DH-180

PARTS LIST. Discs



Ser No.	Part No.	Name & Specifications	Quantity	Remarks
1	DH-120.109	Blade-1	6	DH-120
			8	DH-150
			10	DH-180
2	DH-120.109-A	Blade-2	6	DH-120
			8	DH-150
			10	DH-180
3	GB 6170-86	Nut M24	1	
4	GB 93-87	Spring washer 24	1	
5	GB 97.1-85	Plain washer 24	1	
6	DH-120.110	Front cover	1	DH-120/150
			4	DH-180
7	DH-120.106	Sleeve	16	DH-120
			24	DH-150
			32	DH-180
8	GB 5783-86	Bolt M8x30	32	DH-120
			48	DH-150
			64	DH-180
9	GB 93-87	Spring washer 8	32	DH-120
			48	DH-150
			64	DH-180

PARTS LIST. Discs

Ser No.	Part No.	Name & Specifications	Quantity	Remarks
10	DH-120.108	Bearing cover	8	DH-120
			12	DH-150
			16	DH-180
11	GB 1152-89	Grease nipple M8x1	8	DH-120
			12	DH-150
			16	DH-180
12	DH-120.111	Paper washer	8	DH-120
			12	DH-150
			16	DH-180
13	HG4-692-67	Oil seal PD60x80x12	16	DH-120
			24	DH-150
			32	DH-180
14	GB/T 276-89	Bearing 6210	8	DH-120
			12	DH-150
			16	DH-180
15	DH-120.107	Bearing seat	8	DH-120
			12	DH-150
			16	DH-180
16	DH-120.105	Rear cover	4	
17	DH-120.015	Blade axle	4	DH-120/150
17	DH-180.015		4	DH-180