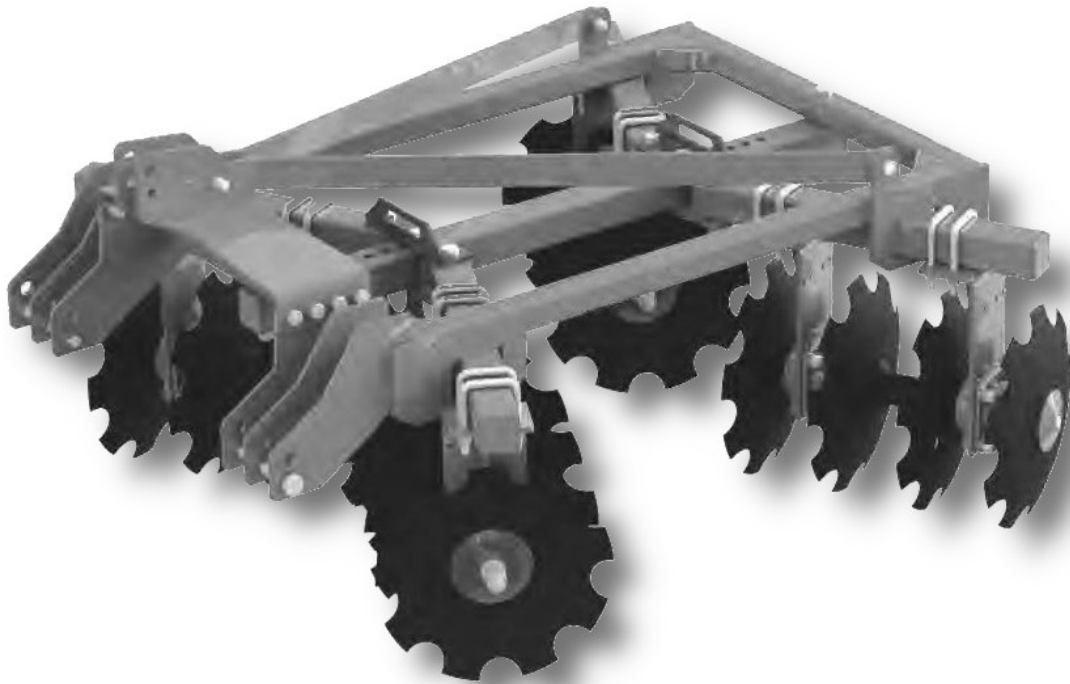




Disc Harrow

DHS Series



Operator's Manual

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TO THE DEALER:

Assembly and proper installation of this product is the responsibility of the Tar River dealer. Read manual instructions and safety rules. Make sure all items on the Dealer's Pre-Delivery and Delivery Check Lists in the Owner's/Operator's Manual are completed before releasing equipment to the owner.

TO THE OWNER:

Read this manual before operating your Tar River equipment. The information presented will prepare you to do a better and safer job. Keep this manual handy for ready reference. Require all operators to read this manual carefully and become acquainted with all the adjustment and operating procedures before attempting to operate. Replacement manuals can be obtained from your selling dealer. The equipment you have purchased has been carefully engineered and manufactured to provide dependable and satisfactory use. Like all mechanical products, it will require cleaning and upkeep. Lubricate the unit as specified. Observe all safety information in this manual and safety decals on the equipment. For service, your authorized Tar River dealer has trained mechanics, genuine Tar River service parts, and the necessary tools and equipment to handle all your needs. Use only genuine Tar River service parts. Substitute parts will void the warranty and may not meet standards required for safe and satisfactory operation.

Record your implement model and serial number in the space provide below. Your dealer will need this information to give you prompt, efficient service.

Model Number: _____

Serial Number: _____

Date Purchased: _____

TO THE DEALER: Part 1 of 2

Assembly and proper installation of this product is the responsibility of the Belco Resources Dealer. Read manual instructions and safety rules. Make sure all items on the Dealer's Pre-Delivery List and Owners Check List in the Owner's/Operator's Manual are completed before releasing equipment to the owner.



NOTE: The machine must be inspected thoroughly by the dealer prior to delivery of machine to owner. Place a check mark in the box beside each item checked. Contact Belco Recourses Equipment of any damages, issues or shortages to the machine.

Pre-Delivery Checklist - Dealer

- ☐ Gearbox oil level
- ☐ Check all fluids, hydraulic, gear oil, etc.
- ☐ Grease fittings properly lubricated
- ☐ Guards, shields, attachments securely fastened
- ☐ All hardware tightened
- ☐ Condition and tension of V-belts (if applicable)
- ☐ Blades properly installed, blade hardware tightened to proper torque specifications
- ☐ PTO attached to the machine (if applicable)
- ☐ All decals are clean, legible and in proper location
- ☐ Operator's Manual on machine

Model #: _____ Serial #: _____

Inspected by (Initials): _____ Date: _____

TO THE DEALER: Part 2 of 2

Dealer is to review the following items to the owner. Place a check mark in the box beside each item reviewed.

Checklist - Owner

- ☐ Correct attachment of machine to tractor
- ☐ Safe operation of the machine
- ☐ Importance of regular lubrication, maintenance and inspection
- ☐ Troubleshooting
- ☐ Replacing broken or worn parts (importance of using only OEM parts)
- ☐ Servicing the machine
- ☐ Storage
- ☐ Warranty
- ☐ Encourage owner to read and understand the Operator's Manual before operating the machine
- ☐ Encourage owner to fill out the "Warranty Registration", online warranty@br-equipment.com

Purchase Date: _____	Delivery Date: _____
Model #: _____	Serial #: _____
Dealer Signature _____	Date: _____
Customer Signature _____	Date: _____

TO THE OWNER:

Read this manual before operating your Belco Resources equipment. The information presented will prepare you to do a better and safer job. Keep this manual handy for ready reference. Require all operators to read this manual carefully and become acquainted with all the adjustment and operating procedures before attempting to operate. Replacement manuals can be obtained from your selling dealer. The equipment you have purchased has been carefully engineered and manufactured to provide dependable and satisfactory use. Like all mechanical products, it will require cleaning and upkeep. Lubricate the machine as specified. Observe all safety information in this manual and safety decals on the equipment. For service, your authorized Belco Resources dealer has trained mechanics, genuine Belco Resources service parts, and the necessary tools and equipment to handle all your needs. Use only genuine Belco Resources service parts. Substitute parts will void the warranty and may not meet standards required for safe and satisfactory operation.

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Introduction

Thank you for purchasing your Tar River Disc Harrow. The Tar River Disc Harrow is available in four popular sizes. The DHS series are designed for 25-60 HP tractors. All units have adjustable gang angles and are Cat. 1 & 2, quick hitch compatible. 18" notched blades are standard with each unit. The main frame is constructed of heavy duty 2-3/8" square tubing. The gangs have a 1" square high strength axle with greaseable flange bearings.

Technical Specifications

Model:	DHS-4818	DHS-6018	DHS-7418	DHS-9020
Cutting width	4'	5'	6' 2"	7' 6"
Spacing	7-1/2"	7-1/2"	7-1/2"	9"
Blade Size	18"	18"	18"	18"
# of Blades	12	16	20	20
Req. HP	25-35	35-45	45-50	50-60
Weight	630 lbs.	818 lbs.	904 lbs.	970 lbs.
Cat. hitch	1 & 2	1 & 2	1 & 2	1 & 2

Important Safety Information

Safety

It is important that you read the entire manual and to become familiar with this product before you begin using it. This product is designed for certain applications only. The manufacturer cannot be responsible for issues arising from modification. We strongly recommend this product not be modified and /or used for any application other than that for which it is designed. If you have any questions relative to a particular application, DO NOT use the product until you have first contacted us to determine if it can or should be performed on the product.

Read and understand this manual and all safety signs before operating and maintaining . Review the safety instructions and precautions annually.

Safety Signal Words

TAKE NOTE! This safety alert symbol found though out this manual is used to call you attention to instructions involving you personal safety and the safety of others. Failure to follow these instructions can result in injury or death.



**This symbol means:
Attention!
Become alert!
Your safety is involved!**

Note the use of the signal words, DANGER, WARNING and CAUTION with the safety messages. The appropriate signal word for each has been selected using the following guidelines:



DANGER: Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations typically for machine components which, for functional purposes, cannot be guarded.



WARNING: Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.



CAUTION: Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

Important Safety Information

General Safety Guidelines

Safety of the operator is one of the main concerns in designing and developing a new piece of equipment. Designers and manufacturers build in as many safety features as possible. However, every year many accidents occur which could have been avoided by a few seconds of thought and a more careful approach to handling equipment. You, the operator, can avoid many accidents by observing the following precautions in this section. To avoid personal injury, study the following precautions and insist those working with you, or for you, follow them.

Replace any DANGER, WARNING, CAUTION or instruction safety decal that is not readable or is missing. Location of such decals are indicated in this manual. Do not attempt to operate this equipment under the influence of drugs or alcohol.

Review the safety instructions with all users annually.

This equipment is dangerous to children and persons unfamiliar with its operation. The operator should be a responsible adult familiar with farm machinery and trained in this equipment's operations. **Do not allow persons to operate or assemble this unit until they have read this manual and have developed a thorough understanding of the safety precautions and of how it works.**

To prevent injury or death, use a tractor equipped with a Roll Over Protection System (ROPS). Do not paint over, remove or deface any signs or warning decals on your equipment. Observe all safety signs and practice the instructions on them.

Never exceed the limits of a piece of machinery. If its ability to do a job, or to do so safely, is in question - **Don't try it!**



Safety Decal Care

- Keep safety signs clean and legible at all times.
- Replace safety signs that are missing or have become illegible.
- Replaced parts that displayed a safety sign should also display the current safety sign
- Safety signs are available from your Distributor or Dealer Parts Department or the factory.

Important Safety Information

How to install Safety Signs:

- Be sure that the installation area is clean and dry.
- Decide on the exact position before you remove the backing paper.
- Remove the smallest portion of the split backing paper.
- Align the decal over the specified area and carefully press the small portion with the exposed sticky backing in place.
- Slowly peel back the remaining paper and carefully smooth the remaining portion of the decal in place.
- Small air pockets can be pierced with a pin and smoothed out using the piece of decal backing paper.



Before Operation

- Carefully study and understand this manual.
- Do not wear loose-fitting clothing, which may catch in moving parts.
- Always wear protective clothing and substantial shoes.
- Assure that all tires are inflated evenly.
- Give the unit a visual inspection for any loose bolts, worn parts or cracked welds, and make necessary repairs. Follow the maintenance safety instructions included with this manual.
- Be sure that there are no tools lying on or in the equipment.
- Do not use the unit until you are sure that the area is clear, especially of children and animals.
- Don't hurry the learning process or take the unit for granted. Ease into it and become familiar with your new equipment.
- Practice operation of your equipment and its attachments. Completely familiarize yourself and other operators with its operation before using.
- Use a tractor equipped with a Roll Over Protection System (ROPS) and fasten your seat belt prior to starting engine.
- The manufacturer does not recommend usage of tractor with ROPS removed.
- Move tractor wheels to the widest recommended settings to increase stability.
- Securely attach to towing unit. Use a high strength, appropriately sized hitch pin with a mechanical retainer and attach safety chain.
- Do not allow anyone to stand between the tongue or hitch and the towing vehicle when backing up to the equipment.
- Do not use the unit until you are sure that the area is clear, especially of children and animals.

Important Safety Information



During Operation

- Children should not be allowed on the product.
- Clear the area of small children and bystanders before moving the implement.
- If using a towing unit, securely attach implement by using a hardened 3/4" pin, a metal retainer, and safety chains if required. Shift towing unit to a lower gear before going down steep downgrades, thus using the engine as a retarding force. Keep towing vehicle in gear at all times. Slow down for corners and rough terrain.
- Make sure you are in compliance with all local and state regulations regarding transporting equipment on public roads and highways. Lights and slow moving signs must be clean and visible by overtaking or oncoming traffic when implement is transported.
- Beware of bystanders, **particularly children!** Always look around to make sure that it is safe to start the engine of the towing vehicle or move the unit. This is particularly important with higher noise levels and quiet cabs, as you may not hear people shouting.
- **NO PASSENGERS ALLOWED!** Do not carry passengers anywhere on, or in, the tractor or equipment, except as required for operation.
- Keep hands and clothing clear of moving parts.
- Do not clean, lubricate or adjust your equipment while it is moving.
- When halting operation, even periodically, set the tractor or towing vehicle brakes, disengage the PTO, shut off the engine and **remove the ignition key.**
- Be especially observant of the operating area and terrain. Watch for holes, rocks or hidden hazards. Always inspect the area prior to operation.
- **DO NOT** operate near the edge of drop-offs or banks.
- **DO NOT** operate on steep slopes as overturns may result.
- Operate up and down (not across) intermediate slopes. Avoid sudden starts and stops.

Important Safety Information



Highway and Transport Operations

- Adopt safe driving practices.
- Keep the brake pedals latched together at all times. **Never use independent braking with machine in tow as loss of control and/or upset of unit can result.**
- Always drive at a safe speed relative to local conditions and ensure that your speed is low enough for an emergency stop to be safe and secure. Keep speed at a minimum.
- Reduce speed prior to turns to avoid the risk of overturning.
- Avoid sudden uphill turns on steep slopes.
- Always keep the tractor or towing vehicle in gear to provide engine braking when going downhill. Do not coast.
- Do not drink and drive!
- Comply with state and local laws governing highway safety and movement of farm machinery on public roads.
- Use approved accessory lighting flags and necessary warning devices to protect operators of other vehicles on the highway during daylight and nighttime transport. Various safety lights and devices are available from your dealer.
- The use of flashing amber lights is acceptable in most localities. However, some localities prohibit their use. Local laws should be checked for all highway and marking requirements.
- When driving the tractor and equipment on the road or highway under 40 kph (20 mph) at night or during the day, use the amber warning lights and a slow moving vehicle (SMV) identification emblem.
- Plan your route to avoid heavy traffic.
- Be a safe and courteous driver. Always yield to oncoming traffic in all situations, including narrow bridges, intersections, etc.
- Be observant of bridge loading ratings. Do not cross bridges rated at lower than the gross weight at which you are operating.
- Watch for obstructions overhead and to the side while transporting.
- Always operate in a position to provide maximum visibility at all times. Make allowances for increased length and weight of the equipment when making turns, stopping the unit, etc.
- Pick the most level route when transporting across fields. Avoid the edges of ditches or gullies and steep hillsides.
- Be extra careful when working in inclines.

Important Safety Information



Highway and Transport Operations

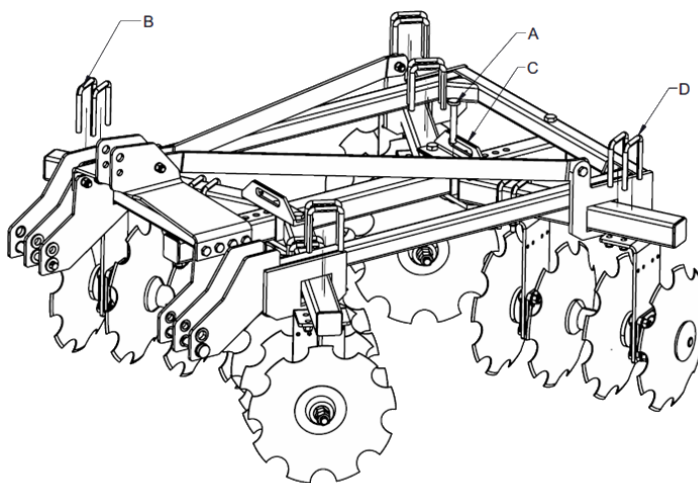
- Maneuver the tractor or towing vehicle at safe speeds.
 - Avoid overhead wires or other obstacles. Contact with overhead lines could cause serious injury or death.
 - Avoid loose fill, rocks and holes, they can be dangerous for equipment operation or movement.
 - Allow for unit length when making turns,
 - Operate the towing vehicle from the operator's seat only.
 - Never stand alongside of unit with engine running or attempt to start engine and/or operate machine while standing alongside of unit.
 - Never leave running equipment attachments unattended.
 - As a precaution, always recheck the hardware on equipment following every 100 hours of operation.
- Correct all problems. Follow the maintenance safety procedures.

Operating Instructions

USAGE INSTRUCTIONS

BEFORE USE & ADJUSTMENTS

1. Before mounting of disc harrow make sure that all nuts & bolts are properly secured.
2. Also determine soil and trash conditions of the field and make the preliminary adjustments.
 - Disc gang angle & gang angle lateral adjustment
 - Disc Angling



NOTE: The more angle you have on the disc, the more aggressive the cut will be and the more horsepower will be required to pull your harrow and for a better ground finish, the rear gang angle should be lesser than the front gangs.

- The disc harrow is design with handles (C) to make disc gang angle adjustment easy. Adjust disc gang as follow:
- Remove pin (A) and hair lynch pin (F). Slide handle (C) to desired position and replace pin.

Disc gang lateral adjustment:-

Gang angle (Angle between two gangs) ranges between 00 to 66°. The angle can be increased for better penetration in dry soil while it should be reduced to avoid clogging in wet soil.

NOTE: The rear discs should be centered between the front discs for optimum performance.

Operating Instructions

Disc harrow leveling

The truest way to level your disc from front to rear is to observe behind the center of disc harrow. In most soil conditions, a slight ridge in the center is actually a level operation. More air pockets will form where soil is thrown against each other, causing a small ridge to form that will disappear after a soaking rain.

- If harrow is leaving a significant ridge in the center, raise disc rear gangs by shortening the center 3-point link.
- If harrow is leaving a furrow (valley) in the center, lower rear disc gang by lengthening the center 3-point link.
- See also troubleshooting chart for helpful solutions to leveling the disc harrow.

Scraper adjustment

The scraper can be adjusted by loosening the bolts.

Disc harrow penetration

Factors affecting disc harrow penetration are:-

- Angle of the gang
- Weight of the harrow
- Disc diameter
- Disc sharpness
- Blunt disc increases the draft considerably, check the disc sharpness
- Angle of hitch

ATTACHING THE HARROW TO THE TRACTOR

1. Place the harrow duly leveled on the flat piece of land.
2. Reverse the tractor to the harrow.
3. Attach the 3 point linkage to the harrow.

WARNING FOR THE DRIVER

1. Before harrowing check all nuts & bolts of the disc harrow.
2. Be vigilant about the tree roots and stones. Don't harrow on stony soil.
3. Tractor should be in first high or fourth low gear.
4. Don't allow anyone to come across the harrow.

Maintenance & Lubrication

Maintenance Instructions:

- Operating the disc harrow on stony land will increase the frequency of maintenance.
- Check the condition of the grease fittings. Soil can become work its way into the grease fitting. If this is the case, replace the grease fitting.
- If the disc harrow is new, after the first two hours of operation, tighten all nuts & bolts. Refer to page 18 for the “Proper Torque Specifications”.
- Every fifty hours apply grease to all grease fittings using a grease gun and tighten all nuts & bolts.
- After fifty hours, open the Bearing hub/Bearing spool of tandem disc harrow & cleanse with diesel oil & pump in new grease.

Storage of Machine after work:

- Wash the tandem disc harrow after operating.
- Replace the worn out nuts & bolts.
- If tandem disc harrow has to remain unused for long time then clean it & apply a layer of used oil for rust prevention.

These steps will enhance the life of your disc harrow.

3.3 Lubrication:

- Please take care that the high quality grease is used in the greasing points.
- Please take care that the hydraulic oil quality grease is used in the greasing points.

Caution: Take precautions to prevent spilling oil or grease. Properly dispose of oil or grease.

Look for the information to recycle or re-use them.

Maintenance & Lubrication

Maintenance Instructions:

Instructions for operator

- In case of scrapper touching the discs, loosen the scrapper bolt and readjusts the scrapper.
- Never reverse the tractor when the harrow is engaged in the soil.
- Never turn the tractor to the right or left when the harrow is engaged in the soil.
- Properly fit the three point linkage as mentioned above & lock with lynch pin.
- To get good results from the harrow, disc should be replaced when its diameter is reduced by 5" from its original size.
- When Tandem Disc Harrow is ready for use don't stand between harrow & the tractor.

Operational Guidelines for Harrow

Adding of wheel weights/water ballasting or combination of both is recommended when excessive rear wheel slippage is experienced.

- Always set hydraulic levers correctly for draft and position control operation.
- Lift the harrow on turning for effective independent breaking of soil.

Long-Term Storage

Store implement only after following steps are completed:

- Clean off any dirt and grease from the implement. If the dirt is compacted, scraping may be necessary.
- Inspect for bare metal. Clean, prime and paint any arears with metal exposes.
- Inspect the implement of any damage. Replace any damaged parts with OEM parts only. Using non-OEM parts will void your warranty.
- Check all hardware for proper torque specifications.
- Inspect bearings for wear and replace if necessary.
- Replace damaged or un-readable decals.
- Store implement inside

Trouble Shooting

Problem	Cause	Solution
Disc harrow makes a high center ridge.	Disc blades are moving too much soil to the center	Tilt disc harrow up at the rear by shortening the center 3-point link.
		Decrease tractor speed.
		Increase spacing between disc gangs by moving all gang hangers on both sides away from the center equal amounts.
Disc harrow cuts a furrow (valley) in the center.	Disc blades are not moving enough soil to the center.	Tilt disc harrow down at the rear by lengthening the center 3-point link.
		Increase tractor speed.
		Reduce spacing between rear disc gangs by moving all gang hangers on both sides toward the center by equal amounts.
Disc harrow makes ridges on the outside cuts and furrows just inside the ridges.	Too much soil is thrown out by the front disc gangs.	Check front to rear disc leveling. Raise front disc gangs by lengthening the center 3-point link.
		Reduce front disc gang angle by one position.
Disc harrow makes a furrow on the outside cuts and a ridge just inside the furrow.	Rear disc gangs are set too wide and picks up soil beyond where the front gangs throw it out.	Reduce spacing between rear disc gangs by moving all rear gang handgers in toward the center by equal amounts.
		Raise front disc gangs by lengthening the center 3-point link.
Disc harrow does not pull straight and/or shifts from side to side.	Front disc gangs run deeper than the rear disc gangs.	Tilt disc harrow down at the rear by lengthening the center 3-point link.
	Disc gangs are not centered on the frame.	Center disc gangs on the disc harrow.
	Front disc gangs are not at the same angle.	Set front disc gangs at the same angle.
	Rear disc gangs are not at the same angle.	Set rear disc gangs at the same angle.
Disc harrow leaves a depression in the worked soil behind tractor wheels.	Tire slippage, heavy tractor, soft soil conditions.	Add duals, increase tractor speed, increase gang angle and/or increase cutting depth.
		Tilt disc harrow down at the rear by lengthening the center 3-point link.
Disc harrow won't settle down and operate smoothly.	Disc gang angles are set too high.	Set disc gang angles at the smallest angle required to do the job. Make sure front disc gangs are set 3 degrees higher than the rear disc gang angles.
Disc harrow does not penetrate soil properly.	Disc gang angles are not set enough angle.	Increase disc gang angles. Make sure the front disc gangs are set 3 degrees more than the rear disc gangs.

Trouble Shooting

Problem	Cause	Solution
Disc harrow makes a furrow on the outside cuts and a ridge just inside the furrow.	Making sharp turns and crossing ditches with disc harrow in the ground.	Raise disc harrow out of the ground when making sharp turns and crossing ditches. Do not cross deep ditches.
	Gang axles become loose.	Keep disc gang axle nut tight.
Bearing problem	Bent gang axle causing bearing to wobble.	Replace gang axle and damaged bearing.
	Foreign objects and/or dirt caught between spacer and disc blades causing bearing to wobble.	Completely disassemble disc gang components and clean thoroughly before reassembly. Replace damaged bearings.
	Abrasive material such as wire rubbing against the bearing and destroying its seals.	Remove abrasive material right away. Replace damaged bearings.
	Contaminated bearings caused by not cleaning the grease zerks before adding grease to the bearings.	Always clean grease zerks before pumping grease into the bearings. Replace the damaged bearings.
	Pumping grease into the bearing too fast in cold weather will pop off bearing seals.	Pump grease into the bearings slowly, especially in cold weather. Replace all damaged bearings.

Torque Specifications

Torque Specifications for Common Bolt Sizes															
Inches		Bolt Head Identification						Metric		Bolt Head Identification					
															
		Grade 2		Grade 5		Grade 8				Class 5.8		Class 8.8		Class 10.9	
Bolt size (inches)	Thread pitch	N.m	ft-lb	N.m	ft-lb	N.m	ft-lb	Bolt size (metric)	Thread pitch	N.m	ft-lb	N.m	ft-lb	N.m	ft-lb
1/4"	20	7	5	11	8	16	12	M5	0.08	4	3	6	4	9	7
1/4"	28	8	6	13	10	19	14	M6	1	6	4	10	7	15	11
5/16"	18	15	11	24	17	33	25	M8	1.25	16	12	25	18	36	27
5/16"	24	17	13	26	19	37	27	M8	1	17	13	26	19	38	28
3/8"	16	27	20	42	31	59	44	M10	1.5	31	23	48	35	71	52
3/8"	24	31	23	47	35	67	49	M10	1.25	33	24	51	38	75	55
7/16"	14	43	32	67	49	95	70	M10	1	35	26	53	39	78	58
7/16"	20	48	36	75	55	106	78	M12	1.75	54	40	84	62	123	91
1/2"	13	66	48	102	75	144	106	M12	1.5	56	41	87	64	128	94
1/2"	20	75	55	115	85	163	120	M12	1.25	59	44	90	66	133	98
9/16"	12	95	70	147	109	208	154	M14	2	84	62	133	98	195	144
9/16"	18	106	79	164	121	232	171	M14	1.5	94	69	142	105	209	154
5/8"	11	132	97	203	150	287	212	M16	2	131	97	206	152	302	223
5/8"	18	149	110	230	170	325	240	M16	1.5	141	104	218	161	320	236
3/4"	10	233	172	361	266	509	376	M18	2.5	181	133	295	218	421	310
3/4"	16	261	192	403	297	569	420	M18	2	196	145	311	229	443	327
7/8"	9	226	167	582	430	822	606	M18	1.5	203	150	327	241	465	343
7/8"	14	249	184	642	473	906	668	M20	2.5	256	189	415	306	592	437
1"	8	339	250	873	644	1232	909	M20	1.5	288	212	454	335	646	476
1"	12	371	273	955	704	1348	995	M22	2.5	344	254	567	418	807	595
1-1/8"	7	480	354	1077	794	1746	1288	M22	1.5	381	281	613	452	873	644
1-1/8"	12	539	397	1208	891	1958	1445	M24	3	444	327	714	526	1017	750
1-1/4"	7	677	500	1519	1120	2463	1817	M24	2	488	360	769	567	1095	808
1-1/4"	12	750	553	1682	1241	2728	2012	M27	3	656	484	1050	774	1496	1103
1-3/8"	6	888	655	1992	1469	3230	2382	M27	2	719	530	1119	825	1594	1176
1-3/8"	12	1011	746	2268	1673	3677	2712	M30	3.5	906	668	1420	1047	2033	1499
1-1/2"	6	1179	869	2643	1949	4286	3161	M30	2	1000	738	1600	1180	2250	1659
1-1/2"	12	1326	978	2974	2194	4823	3557	M36	4	1534	1131	2482	1830	3535	2607

Notes:

This chart is an approximate estimate of torque values.

Always tighten hardware to these values unless a different torque value or tightening procedure is listed for a specific application.

Fasteners must always be replaced with the same grade as specified in the manual.

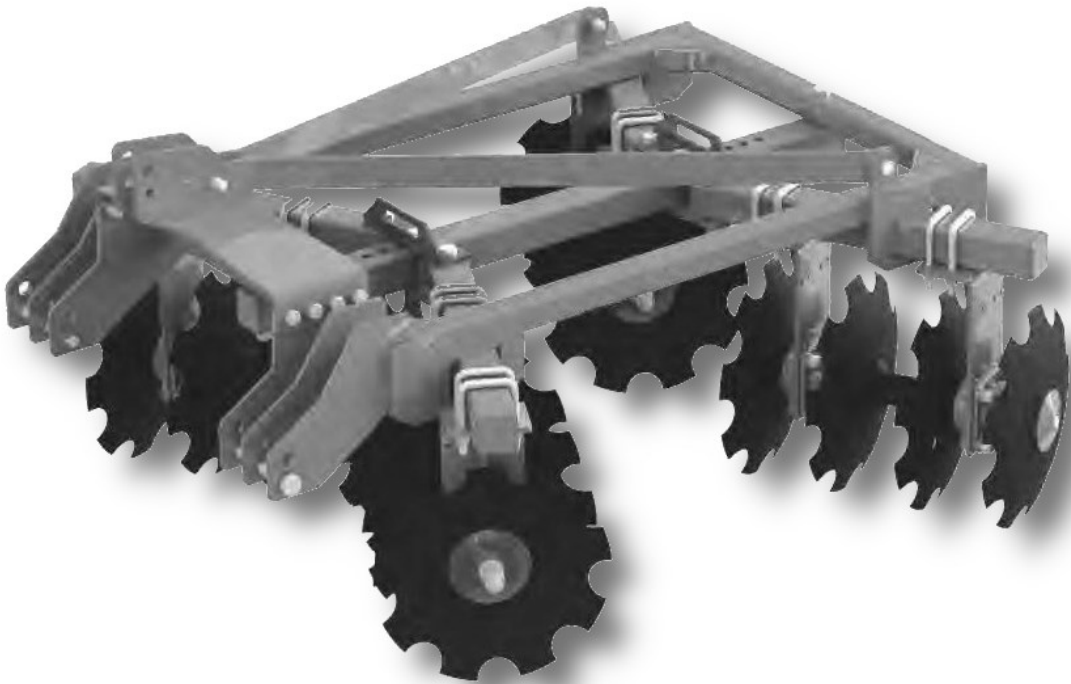
Always use the proper tool for tightening hardware: SAE for SAE hardware and Metric for Metric hardware.

Make sure that fastener threads are clean and that you properly start thread engagement.



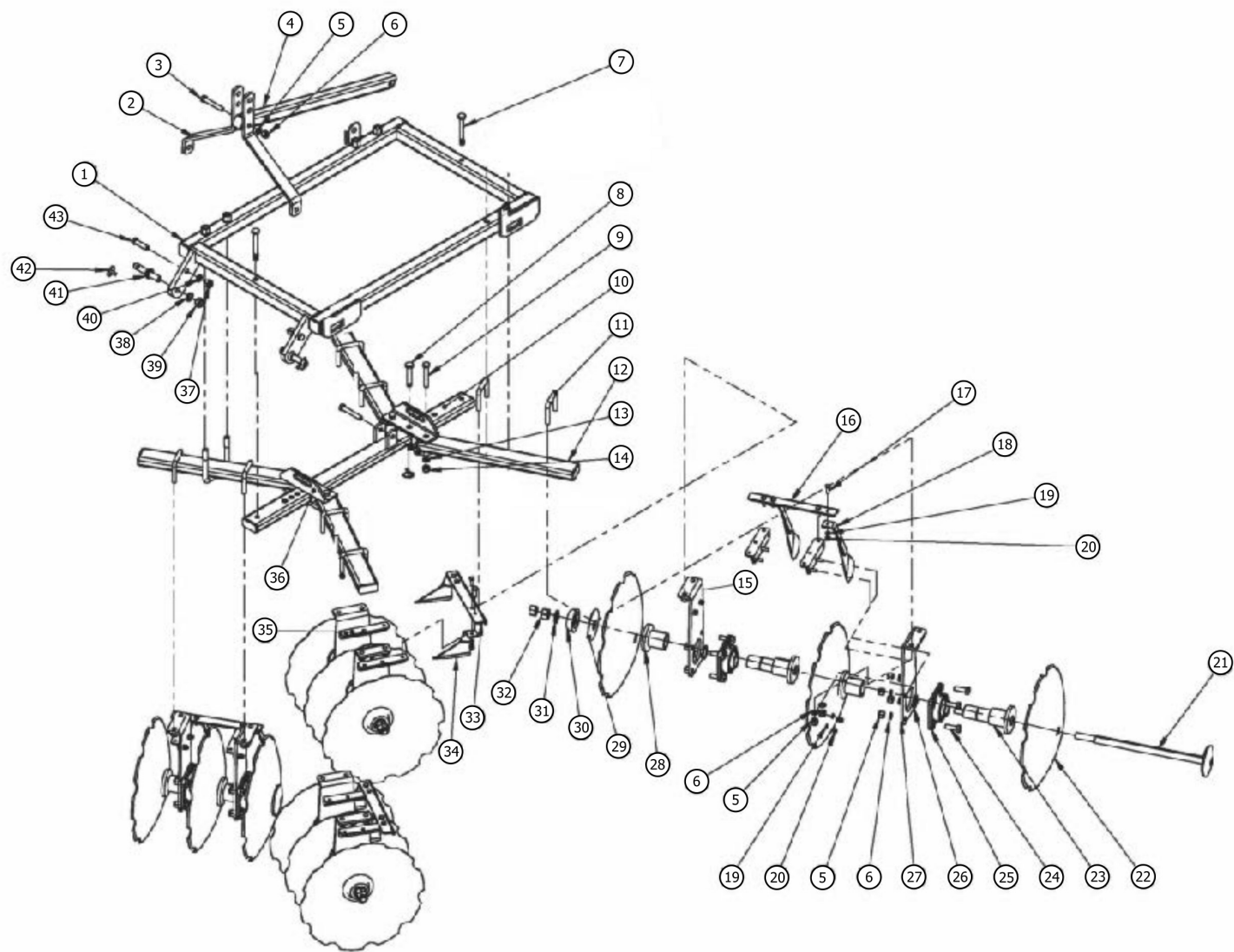
Disc Harrow

DHS Series



Parts Manual

Disc Harrow Assembly
DHS-4818 (12 disc)

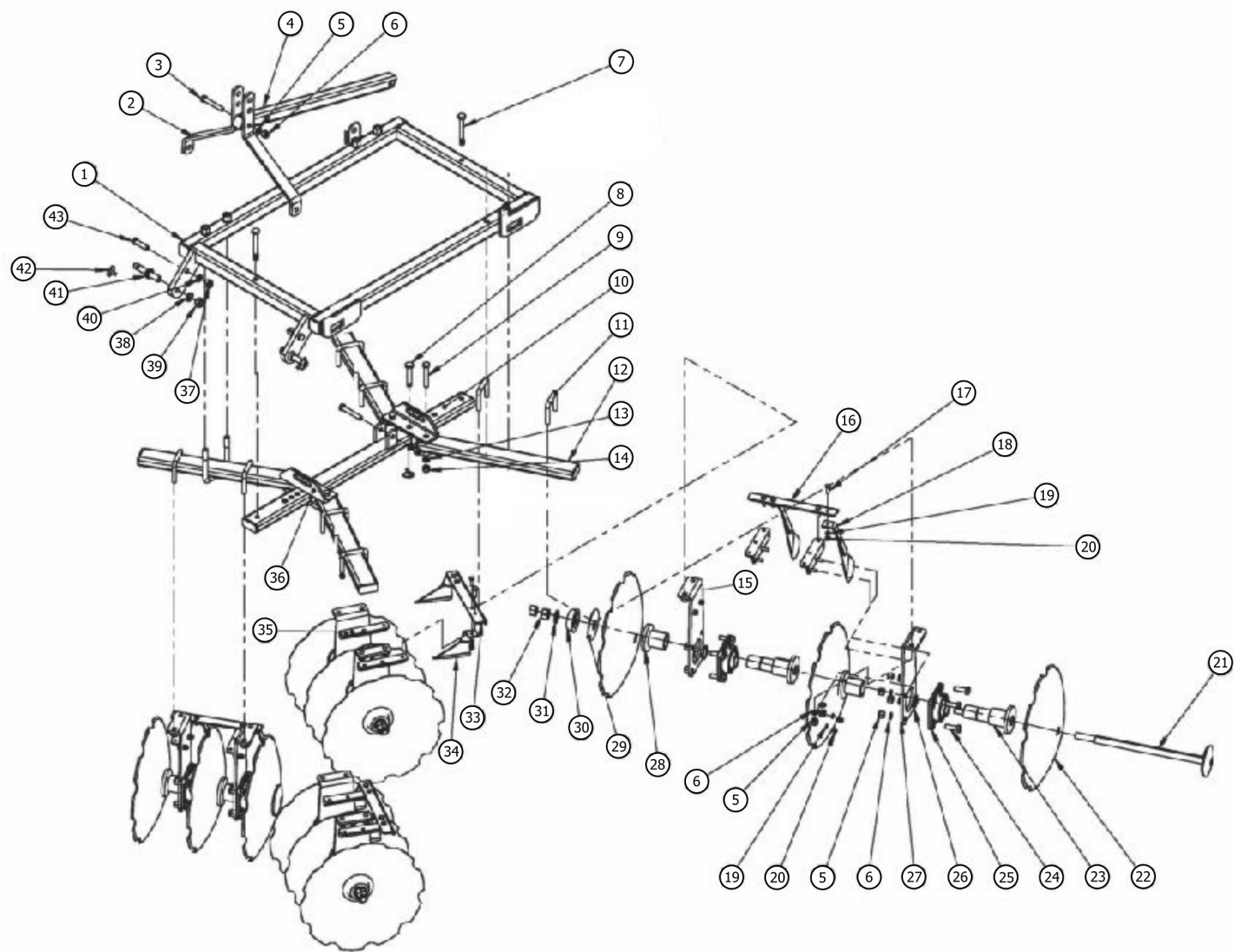


Disc Harrow Assembly

DHS-4818 (12 disc)

Item	Part #	Description	Qty.
1	DHS10000	Main frame assembly - DHS-4818	1
2	DHS10001	Lever flat	2
3	BM1620105	Bolt HH M16-2.0x105	1
4	DHS10002	Lever pipe assembly	1
5	LW16	Washer lock M16	56
6	LN1620	Nut elastic stop M16-2.0	56
7	BM2025130	Bolt HH M20-2.5x130	2
8	DHS10003	Pin M19x95	2
9	BM2025110	Bolt HH M20-2.5x110	4
10	DHS10004	Center support assembly	1
11	DHS10005	U clamp M16x82x12	8
12	DHS10006	Gang pipe assembly	4
13	LW20	Washer lock M20 Galv.	6
14	LN20	Nut elastic stop M20-2.5	6
15	DHS10007	Leg assembly	8
16	DHS10008	Scraper holding flat left	2
17	DHS10009	Hex head bolt M10x45x1.25P	16
18	DHS10010	Scraper assembly left	4
19	BM162050	Spring washer 10mm	24
20	BUCF210	Nylock nut M10x1.5P	24
21	DHS10012	Axle rod assembly (3-disc)	4
22	DHS10013	Notched disc 18"	12
23	DHS10014	Bearing spool	8
24	DHS10015	Hex head bolt M16-2.0x50	32
25	DHS10016	UC bearing F210	8
26	FW25	External circlip dia. 50A	8
27	DHS10017	Leg assembly	8
28	DHS10018	Bearing spool cap	8
29	LN1825	Disc washer	4
30	LW18	Small chappen	4
31	DHS10019	Plain washer 25mm	4
32	LYNPN10	Plain nut M24-3.00	8
33	BM182565	Scraper holding flat right	2
34	DHS10028	Scraper assembly right	6
35	DHS10064	Scraper holding angle	8
36	DHS10018	Gang joint angle assembly	2
37	LN1815	Nylock nut M18-1.5	2
38	LW18	Spring washer M18	2

Disc Harrow Assembly
DHS-4818 (12 disc)



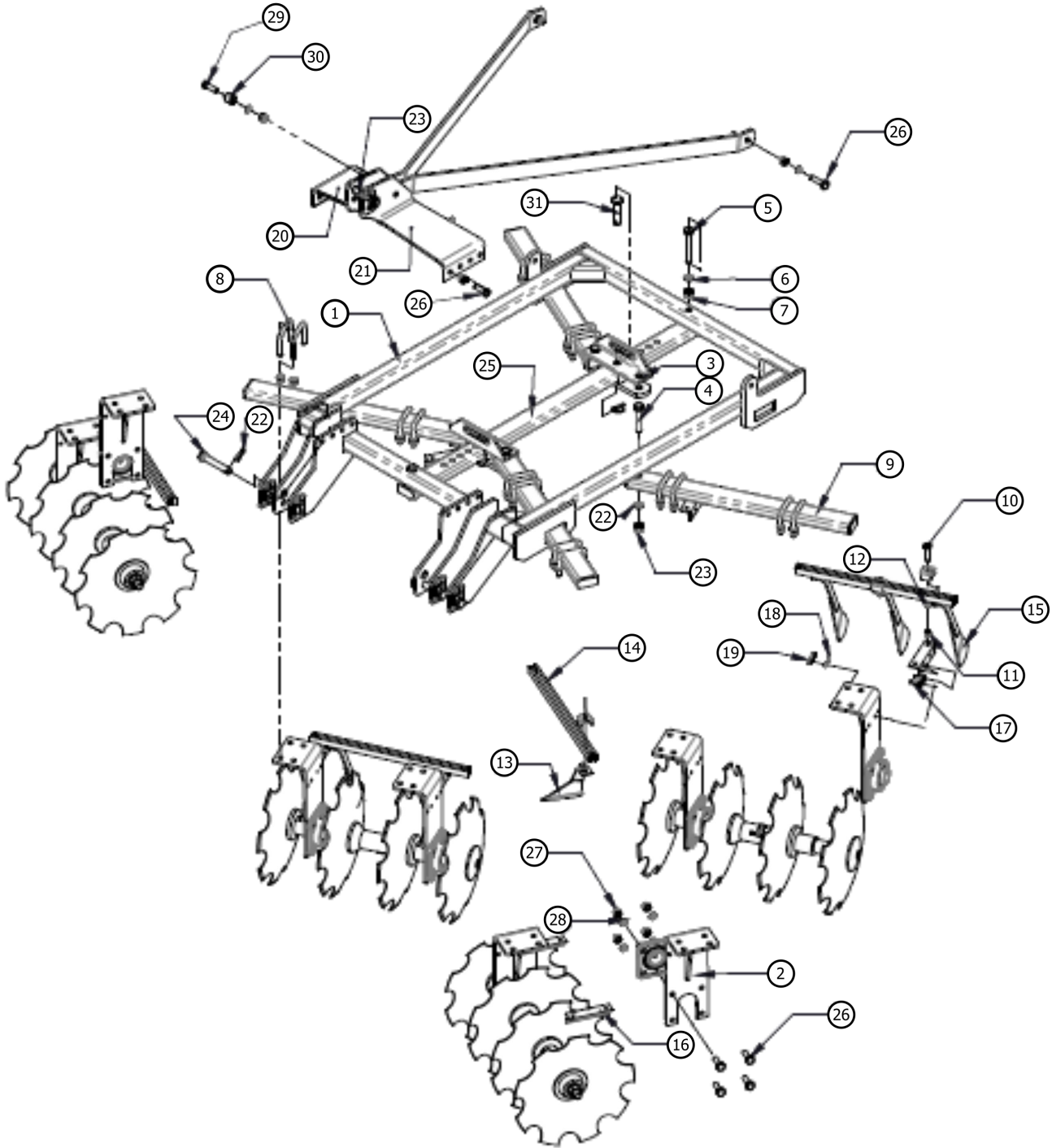
Disc Harrow Assembly

DHS-4818 (12 disc)

Item	Part #	Description	Qty.
39	DHS10065	Plain nut 7/8-14 UNF	2
40	DHS10066	Plain washer M23	2
41	DHS10019	Hitch pin M22	2
42	LYNPN10	Lynch pin M10	4
43	BM182565	Hex head bolt M18-2.5x65	2

Disc Harrow Assembly

DHS-6018 (16 disc), DHS-7418 (20 disc)

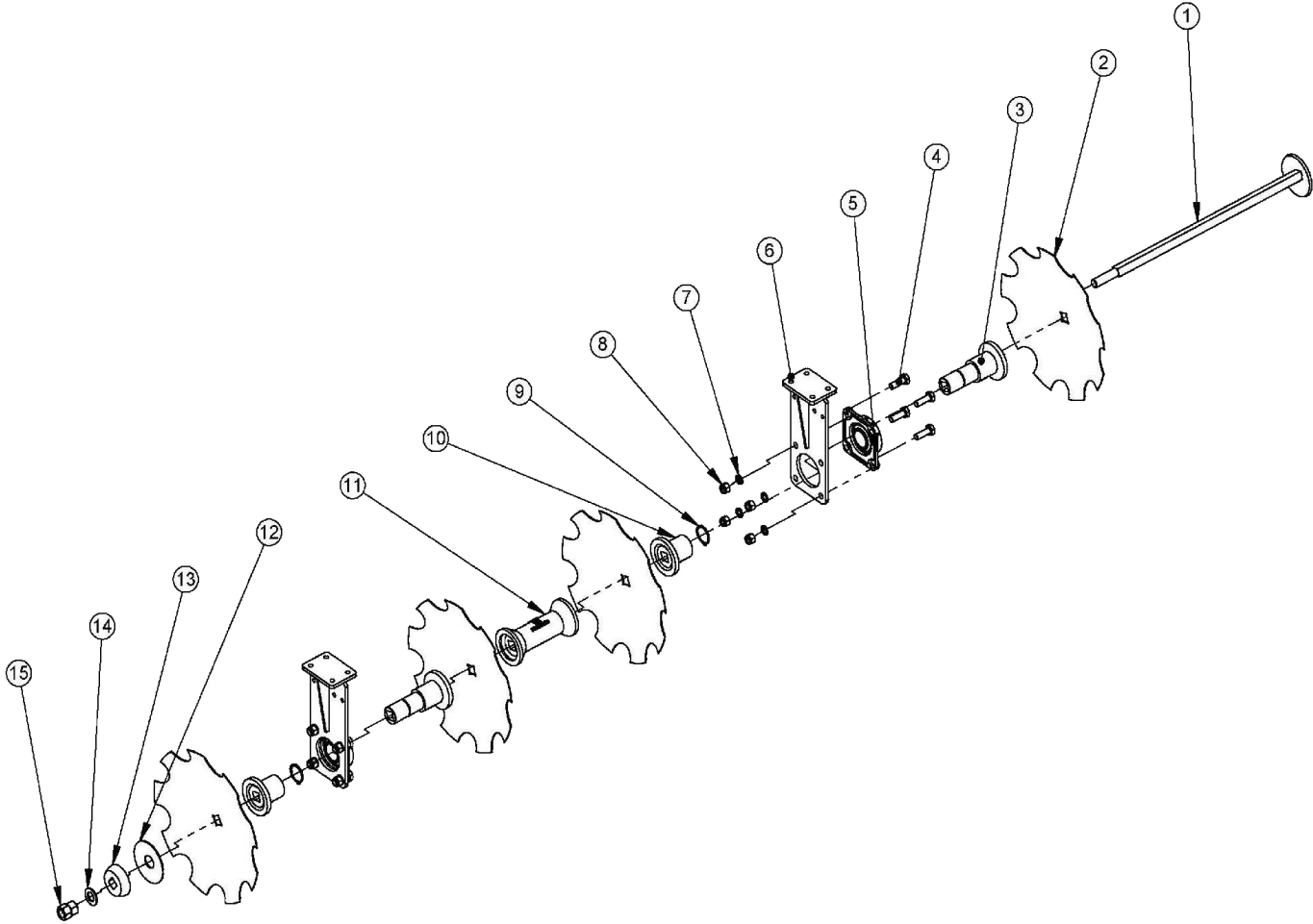


Disc Harrow Assembly

DHS-6018 (16 disc), DHS-7418 (20 disc)

Item	Part #	Description	Qty.
1	DHS10020	Main frame assembly DHS-6018, DHS-7418	1
2	DHS10021	Leg assembly	8
3	DHS10022	Gang joint angle assembly	2
4	BM2025110	Bolt HH M20-2.5x110	4
5	BM2025130	Bolt HH M20-2.5x130	2
6	LW20	Washer lock M20	6
7	LNM20	Nut elastic stop M20-2.5	6
8	DHS10005	U clamp M16x82x12	16
9	DHS10023	Gang pipe assembly - DHS-6018	4
	DHS10024	Gang pipe assembly - DHS-7418	4
10	BM121560	Bolt HH M12-1.75x60 - DHS-6018	20
	BM121560	Bolt HH M12-1.75x60 - DHS-7418	24
11	LNM12175	Nut elastic stop M12-1.75 - DHS-6018	20
	LNM12175	Nut elastic stop M12-1.75 - DHS-7418	24
12	FW12	Washer lock M12 - DHS-6018	10
	FW12	Washer lock M12 - DHS-7418	12
13	DHS10025	Scraper assembly LH - DHS-6018	12
	DHS10025	Scraper assembly LH - DHS-7418	16
14	DHS10026	Scraper holding flat assembly - DHS-6018	4
	DHS10027	Scraper holding flat assembly - DHS-7418	4
15	DHS10028	Scraper assembly RH - DHS-6018	12
	DHS10028	Scraper assembly RH - DHS-7418	16
16	DHS10029	Scraper holding angle	8
17	BM101535	Bolt HH M10-1.5x35	16
18	LW10	Washer lock M10	16
19	LNM1015	Nut elastic stop M10-1.5	16
20	DHS10030	Lever sheet LH	1
21	DHS10031	Lever sheet RH	1
22	LYNPN10	Lynch pin M10	5
23	DHS10032	Pin M19x125	1
24	DHS10033	Pin M22x200	2
25	DHS10034	Center support assembly	1
26	BM162050	Bolt HH M16-2.0x50	42
27	LNM1620	Nut elastic stop M16-2.0	43
28	LW16	Washer lock M16	43
29	BM1620105	Bolt HH M16-2.0x105	1
30	DHS10035	Bushing M17x32x29	1
31	DHS10003	Pin M19x95	2

Gang Axle Assembly
DHS-6018 (16 disc), DHS-7418 (20 disc)

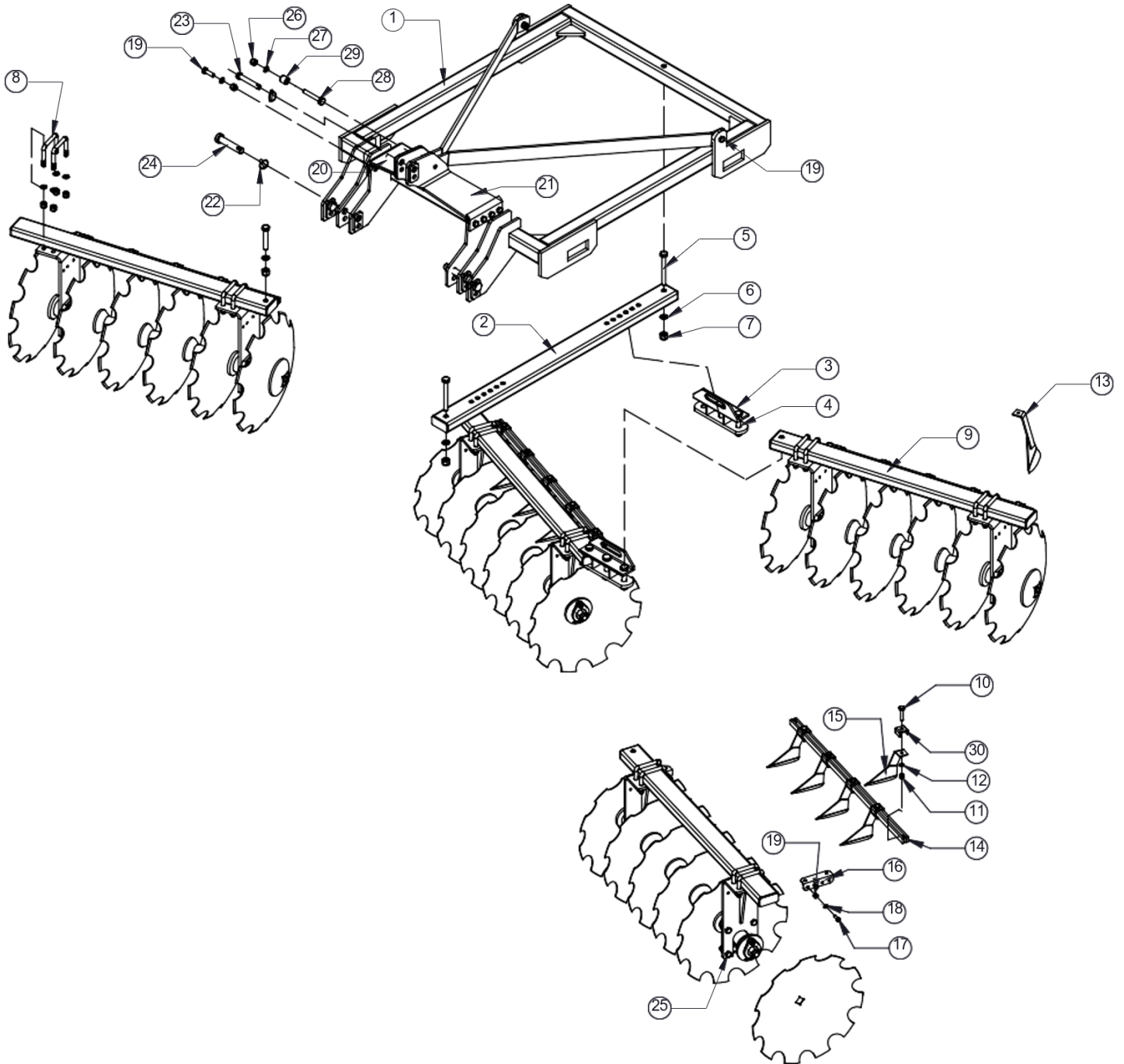


Gang Axle Assembly

DHS-6018 (16 disc), DHS-7418 (20 disc)

Item	Part #	Description	Qty.
1	DHS10036	Axle rod assembly DHS-6018	1
	DHS10037	Axle rod assembly DHS-7418	1
2	DHS10009	Notched disc 18"	4
	DHS10009	Notched disc 18"	5
3	DHS10010	Bearing spool	2
4	BM162050	Bolt HH M16-2.0x50	8
5	BUCF210	UCF Bearing 210	2
6	DHS10021	Leg assembly	2
7	LW16	Washer lock M16	8
8	LNM1620	Nut elastic stop M16-2.0	8
9	DHS10012	External circlip 50A	2
10	DHS10014	Bearing spool cap	2
11	DHS10017	Plain spool - DHS-6018	1
	DHS10017	Plain spool - DHS-7418	2
12	DHS10015	Disc washer	1
13	DHS10016	Small chappen	1
14	FW25	Washer flat M25	1
15	NM2530	Nut HH M24-3.0	2

Disc Harrow Assembly DHS-9020 (20 disc)

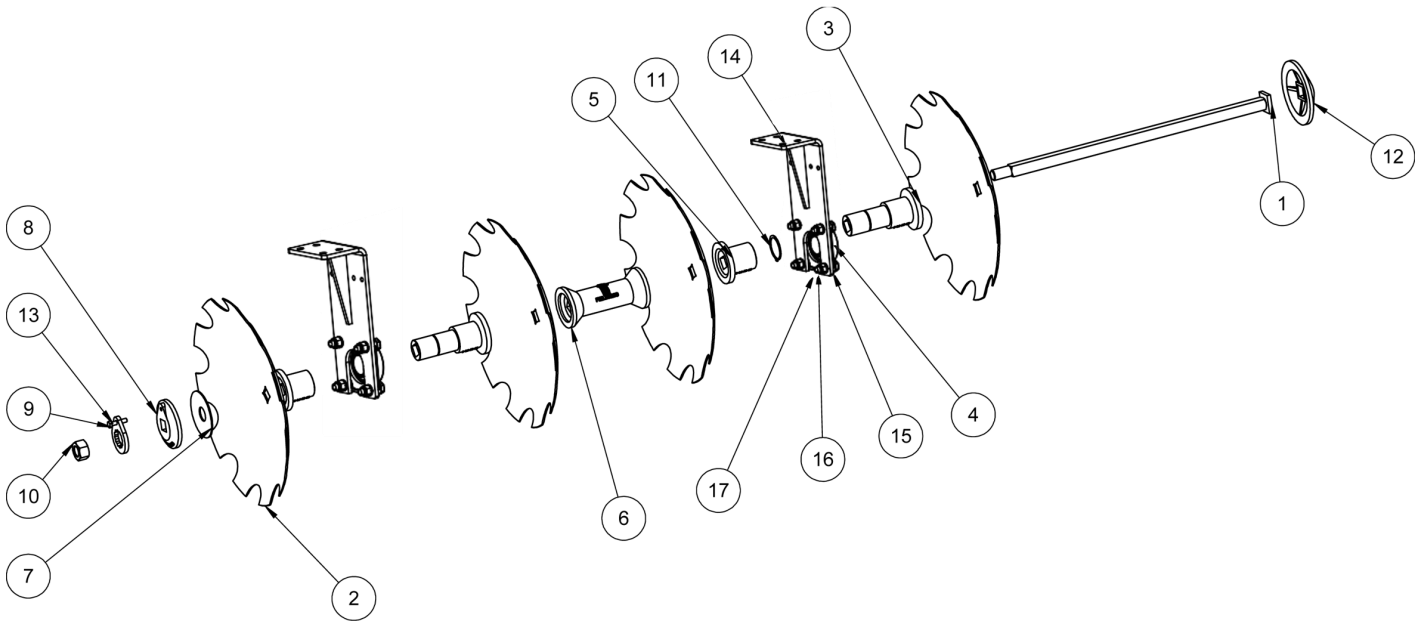


Disc Harrow Assembly

DHS-9020 (20 disc)

Item	Part #	Description	Qty.
1	DHS10039	Main frame assembly DHS-9020	1
2	DHS10040	Center support assembly	1
3	DHS10041	Gang joint assembly	2
4	BM2025110	Hex head bolt M20-2.5x110	4
5	BM1025150	Hex head bolt M20-2.5x150	2
6	LW20	Spring washer M20	6
7	LN2025	Nylock nut M20-2.5	6
8	DHS10042	U clamp set	16
9	DHS10043	Gang pipe assembly	4
10	BM121560	Hex head bolt M12-1.5x60	24
11	LN1215	Nylock nut M12-1.5	24
12	LW12	Spring washer M12	24
13	DHS10044	Scraper assembly left	16
14	DHS10045	Scraper holding flat assembly	4
15	DHS10046	Scraper assembly	16
16	DHS10047	Scraper holding angle	8
17	BM101535	Hex head bolt M10-1.5x35	16
18	LW10	Spring washer M10	16
19	LN10	Nylock nut M10-1.5	16
20	DHS10048	Lever sheet LH	1
21	DHS10049	Lever sheet RH	1
22	LYNPN10	Lynch pin M10	5
23	DHS10003	Pin ØM19x95	2
24	DHS10033	Pin ØM22x200	2
25	BM1620	Hex head bolt M16-2	32
26	LN1620	Nylock nut M16-2.0	33
27	LW16	Spring washer M16	33
28	BM1620105	Hex head bolt M16-2.0x105	1
29	DHS10050	Bushing M17x32x30	1
30	DHS10051	U-clamp	24

**Gang Axle Assembly
DHS-9020 (20 disc)**



Gang Axle Assembly

DHS-9020 (20 disc)

Item	Part #	Description	Qty.
1	DHS10052	Axle rod assembly	1
2	DHS10053	Notched disc 18"	4
3	DHS10054	Bearing spool	2
4	DHS10055	UC bearing F211	2
5	DHS10056	Bearing spool cap	2
6	DHS10057	Plain spool	1
7	DHS10058	Disc washer	1
8	DHS10059	Chappen	1
9	BM101545	Hex bolt M10-1.5x45	1
10	DHS10060	Hex nut M28	1
11	SRI60	External circlip A60, 2mm thick	2
12	DHS10061	Big chappen	1
13	DHS10062	Gang lock plate	1
14	DHS10063	Leg assembly	2
15	BM182560	Hex head bolt M18-2.5x60	8
16	LNM1825	Nylock nut M18-2.5	8
17	FW18	Spring washer M18	8

Warranty

LIMITED WARRANTY

Belco Resources Equipment warrants to the original purchaser of any new piece of machinery from Belco Resources Equipment, purchased from an authorized Belco Resources Equipment dealer, that the equipment be free from defects in material and workmanship for a period of one (1) year for non-commercial, state, and municipalities' use, ninety (90) days for commercial use from date of retail sale. Warranty for rental purposes is thirty (30) days. The obligation of Belco Resources Equipment to the purchaser under this warranty is limited to the repair or replacement of defective parts.

Replacement or repair parts installed in the equipment covered by this limited warranty are warranted for ninety (90) days from the date of purchase of such part or to the expiration of the applicable new equipment warranty period, whichever occurs later. Warranted parts shall be provided at no cost to the user at an authorized Belco Resources Equipment dealer during regular working hours. Belco Resources Equipment reserves the right to inspect any equipment or parts, which are claimed to have been defective in material or workmanship.

This limited warranty does not apply to and excludes wear items such as shear pins, tires, tubes knives, blades or other wear items. Oil or grease is not covered by this warranty.

All obligations of Belco Resources Equipment under this limited warranty shall be terminated if:

- Proper service is not performed on the machine.

- The machine is modified or altered in any way.

- The machine is being used or has been used for purposes other than those for which the machine was intended.

DISCLAIMER OF IMPLIED WARRANTIES & CONSEQUENTIAL DAMAGES

Belco Resources Equipment obligation under this limited warranty, to the extent allowed by law, is in lieu of all warranties, implied or expressed, including implied warranties of merchantability and fitness for a particular purpose and any liability for incidental and consequential damages with respect to the sale or use of the items warranted. Such incidental and consequential damages shall include but not be limited to: transportation charges other than normal freight charges; cost of installation other than cost approved by Belco Resources Equipment; duty; taxes; charges for normal service or adjustment; loss of crops or any other loss of income; rental of substitute equipment, expenses due to loss, damage, detention or delay in the delivery.

REGISTRATION

The online Warranty Registration must be completed in order to qualify for coverage on this Limited Warranty. Visit br-equipment.com, click on "Warranty Registration" and completely fill out the form to register the new piece of equipment.

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