



Operation
&
Parts Manual

for

30 Series Disk Harrow

DH300-60, 72, & 84

Operations and Parts Manual

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BECAUSE THE MANUFACTURER MAINTAINS AN ONGOING PROGRAM OF PRODUCT IMPROVEMENT, WE RESERVE THE RIGHT TO MAKE IMPROVEMENTS IN DESIGN OR CHANGES IN SPECIFICATIONS WITHOUT INCURRING ANY OBLIGATION TO INSTALL THEM ON UNITS PREVIOUSLY SOLD. BECAUSE OF THE POSSIBILITY THAT SOME PHOTOGRAPHS IN THIS MANUAL WERE TAKEN OF PROTOTYPE MODELS, PRODUCTION MODELS MAY VARY IN SOME DETAIL. IN ADDITION, SOME PHOTOGRAPHS MAY SHOW SHIELDS REMOVED FOR PURPOSES OF CLARITY. **NEVER OPERATE** THIS IMPLEMENT WITHOUT ALL SHIELDS IN PLACE.

RETAIL CUSTOMER'S WARRANTY RESPONSIBILITY

It is the Retail Customer and/or Operator's responsibility to read the Operator's Manual, to operate, lubricate, maintain and store the product in accordance with all instructions and safety procedures. Failure of the operator to read the Operator's Manual is a misuse of this equipment. It is the Retail Customer and/or Operator's responsibility to inspect the product and to have any part(s) repaired or replaced when continued operation would cause damage or excessive wear to other parts or cause a safety hazard. It is the Retail Customer's responsibility to deliver the product to the authorized manufacturer's dealer from whom he purchased it, for service or replacement of defective parts which are covered by warranty. Repairs to be submitted for warranty consideration must be made within thirty (30) days of failure. It is the Retail Customer's responsibility for any cost incurred by the Dealer for traveling to or hauling of the product for the purpose of performing a warranty obligation or inspection.

Manufacturer's Warranty

The manufacturer warrants each new implement to be free from defects in material and workmanship under normal use and service for a period of one (1) year from the date of original sale.

This warranty is expressly in lieu of all other warranties and representations, expressed or implied, and all other obligations or liabilities on the part of the Manufacturer.

Manufacturer's liability and obligation is limited to repair or replacement of the product or a refund of purchase price, at Manufacturer's option, provided the purchaser returns the claimed defective product to the Manufacturer, or authorized distributor, with transportation charges prepaid, and an examination by Manufacturer discloses the product is defective.

This warranty does not cover said product which has been repaired or altered outside of the factory of Manufacturer in any way as to, in the judgment of the Manufacturer affect the stability, reliability or performance of the product. This warranty does not cover damage or product failure caused by accident, misuse, negligence, tampering, improper attachment or improper maintenance.

This warranty is null and void unless "Warranty Registration Form and Inspection Report" is completed and returned to Manufacturer.

This warranty excludes any and all liability for consequential or incidental damages.

This warranty gives you specific legal rights providing said product is put to its proper designed use.

THIS CHECKLIST TO REMAIN IN OWNER'S MANUAL

Dealer Preparation Check List

- 1. Assembly Completed
- 2. All fasteners torqued to specifications given in Torque Chart
- 3. All decals in place and readable
- 4. All guards in place and in good operating order
- 5. Overall condition good (paint, welds)
- 6. Operator's Manual has been delivered to owner
- 7. Owner has been instructed on the safe and proper use of the implement

Dealer Signature: _____

It is the dealer's responsibility to complete the procedures listed above before delivery of this implement to the customer.

IMPORTANT SAFETY PRECAUTIONS

In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel in the operation, transport, maintenance and storage of equipment. Lack of attention to safety can result in accident, personal injury, reduction of efficiency and worst of all—loss of life. Watch for safety hazards and correct deficiencies promptly. Use the following safety precautions as a general guide to safe operations when using this machine. Additional safety precautions are used throughout this manual for specific operating and maintenance procedures. Read this manual and review the safety precautions often until you know the limitations.

1. Read the Operator's Manual. Failure to read the Operator's Manual is considered a misuse of this equipment.
2. Become familiar with all the machine's controls and all the caution, warning and danger decals affixed to the machine before attempting to start or operate.
3. Before starting or operating the machine, make a walk around inspection and check for obvious defects such as loose mounting bolts and damaged components. Correct any deficiency before starting.
4. Do not allow children to operate the implement. Do not allow adults to operate it without proper instruction.
5. Do not carry passengers.
6. Keep the area of operation clear of all persons, particularly small children and pets. The operator should cease operation whenever anyone comes within the area.
7. Lower implement to ground, stop tractor engine and apply parking brake before leaving the tractor.
8. Keep hands and feet away from implement.
9. Wear personal protective equipment such as, but not limited to, protection for eyes, ears, feet, hands and head when operating or repairing the equipment. Do not wear loose clothing or jewelry that may catch on equipment moving parts.
10. When performing adjustments or maintenance on the implement, first lower it to the ground or block it securely at a workable height.
11. Never stand between tractor and implement while tractor is being backed to the hitch.
12. Reduce speed when transporting implement to avoid bouncing and momentary loss of steering.
13. Use tractor flashing warning lights, day or night, when transporting implement on road or highways unless prohibited by law.
14. It is recommended that tractor be equipped with Rollover Protective System (ROPS) and seat belt be used in all implement operations.

IMPORTANT FEDERAL LAWS AND REGULATIONS* CONCERNING EMPLOYERS, EMPLOYEES AND OPERATIONS.

*(This section is intended to explain in broad terms the concept and effect of the following federal laws and regulations. It is not intended as a legal interpretation of the laws and should not be considered as such).

U.S. Public Law 91-596 (The Williams-Steiger Occupational and Health Act of 1970) OSHA

This Act Seeks:

“...to assure so far as possible every working man and woman in the nation safe and healthful working conditions and to preserve our human resources...”

DUTIES

Sec. 5 (a) Each employer—

- (1) shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees;
- (2) shall comply with occupational safety and health standards promulgated under this Act.
- (b) Each employee shall comply with occupational safety and health standards and all rules, regulations and orders issued pursuant to this Act which are applicable to his own actions and conduct.

OSHA Regulations

Current OSHA regulations state in part: “At the time of initial assignment and at least annually thereafter, the employer shall instruct every employee in the safe operation and servicing of all equipment with which the employee is, or will be involved.” These will include (but are not limited to) instructions to:

- Keep all guards in place when the machine is in operation;
- Permit no riders on equipment;
- Stop engine, disconnect the power source, and wait for all machine movement to stop before servicing, adjusting, cleaning or unclogging the equipment, except where the machine must be running to be properly serviced or maintained, in which case the employer shall instruct employees as to all steps and procedures which are necessary to safely service or maintain the equipment.
- Make sure everyone is clear of machinery before starting the engine, engaging power, or operating the machine.

Child Labor Under 16 Years Old

Some regulations specify that no one under the age of 16 may operate power machinery. It is your responsibility to know what these regulations are in your own area or situation. (Refer to U.S. Dept. of Labor, Employment Standard Administration, Wage & Home Division, Child Labor Bulletin #102.)

EMPLOYEE TRACTOR OPERATING INSTRUCTIONS:

1. Securely fasten your seat belt if the tractor has a ROPS.
2. Where possible, avoid operating the tractor near ditches, embankments, and holes.
3. Reduce speed when turning, crossing slopes, and on rough, slick, or muddy surfaces.
4. Stay off slopes too steep for safe operation.
5. Watch where you are going, especially at row ends, on roads, and around trees.
6. Do not permit others to ride.
7. Operate the tractor smoothly - no jerky turns, starts, or stops.
8. Hitch only to the drawbar and hitch points recommended by tractor manufacturers.
9. When tractor is stopped, set brakes securely and use park lock if available.

OPERATION

DURING ADJUSTMENT KEEP BODY, HANDS AND FEET CLEAR OF IMPLEMENT.

ATTACHMENT TO TRACTOR

- The implement should be placed on level ground. Place the tractor 3 point lift arm control in “position control” (non-floating) for attaching and detaching the disk harrow. “Draft control” or “position control” can be used while operating. Attach the top link to the top hitch mount and adjust so that the disk harrow frame will be level in the operating position.
- Back the tractor until the ends of the lift arms can be attached to the bottom clevis pins on the implement. Secure the lift arms to the clevis pins.
- Slowly move implement throughout the lift cycle of the tractor watching for interference between implement and tractor. Adjust top link, if necessary to provide additional clearance.

DETACHING FROM TRACTOR

- Lower the implement to the ground with 3 point lift arm control in position control. Remove top link from top hitch mount, disconnect hitch arms from bottom clevis pins and pull tractor away from blade.

OPERATION

LOWER THE IMPLEMENT AS MUCH AS POSSIBLE AND SECURELY SUPPORT BEFORE MAKING ANY ADJUSTMENT.

- Level the implement from side to side and front to rear using adjustments on the tractor’s 3-point lift.
- Care should be exercised during use of the implement to prevent hanging the ends on immovable objects or otherwise use the implement under conditions beyond its designed capacity.

TRANSPORTATION

WHEN EQUIPMENT IS TRANSPORTED, USE NECESSARY DEVICES REQUIRED BY LOCAL REGULATIONS FOR ADEQUATE WARNING TO OPERATORS OF OTHER VEHICLES.

MAINTENANCE

- Proper maintenance and service is the key to long life of any farm equipment. With regular inspection and lubrication of vital parts you can avoid many costly repairs and downtime.
- Inspect your implement periodically and replace any worn or broken parts in order to have it ready for use when needed.
- Store the implement out of the weather when it is not in use. This helps prevent rusting of the blades and other components.
- Tines and/or blades should be cleaned immediately after use for easier cleaning.

TORQUE SPECIFICATIONS

Proper torque for American fasteners used

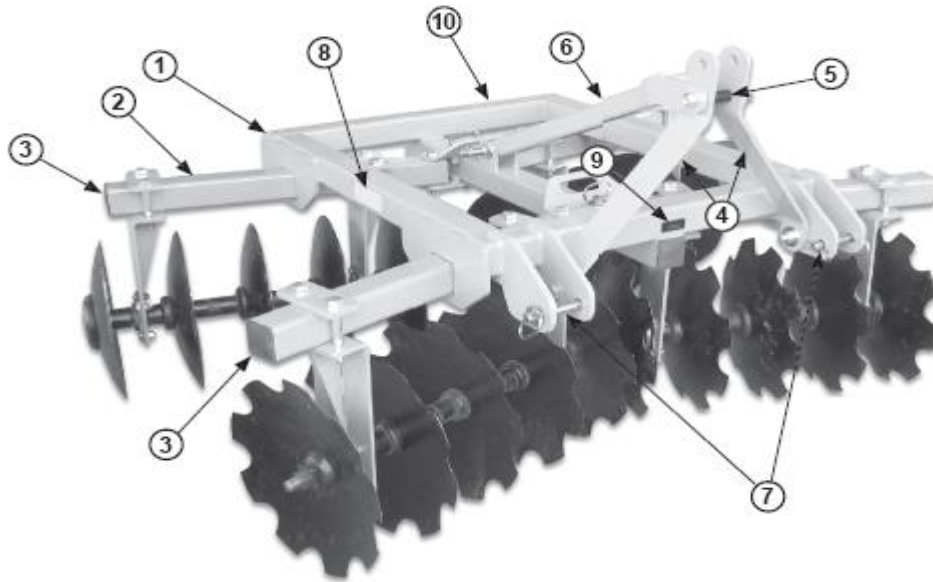
WRENCH SIZE	BOLT AND THREAD SIZE	SAE GRADE 2	SAE GRADE 5	SAE GRADE 8
7/16	1/4 - 20 UNC	6 (7)	8 (11)	12 (16)
7/16	1/4 - 28 UNF	6 (8)	10 (13)	14 (18)
1/2	5/16 - 18 UNC	11 (15)	17 (23)	25 (33)
1/2	5/16 - 24 UNF	13 (17)	19 (26)	27 (37)
9/16	3/8 - 16 UNC	20 (27)	31 (42)	44 (60)
9/16	3/8 - 24 UNF	23 (31)	35 (47)	49 (66)
5/8	7/16 - 14 UNC	32 (43)	49 (66)	70 (95)
5/8	7/16 - 20 UNF	36 (49)	55 (75)	78 (106)
3/4	1/2 - 13 UNC	49 (66)	76 (103)	106 (144)
3/4	1/2 - 20 UNF	55 (75)	85 (115)	120 (163)
7/8	9/16 - 12 UNC	70 (95)	109 (148)	153 (207)
7/8	9/16 - 18 UNF	79 (107)	122 (165)	172 (233)
15/16	5/8 - 11 UNC	97 (131)	150 (203)	212 (287)
15/16	5/8 - 18 UNF	110 (149)	170 (230)	240 (325)
1-1/8	3/4 - 10 UNC	144 (195)	266 (360)	376 (509)
1-1/8	3/4 - 16 UNF	192 (260)	297 (402)	420 (569)
1-5/16	7/8 - 9 UNC	166 (225)	430 (583)	606 (821)
1-5/16	7/8 - 14 UNF	184 (249)	474 (642)	668 (905)
1-1/2	1 - 8 UNC	250 (339)	644 (873)	909 (1232)
1-1/2	1 - 12 UNF	274 (371)	705 (955)	995 (1348)
1-1/2	1 - 14 UNF	280 (379)	721 (977)	1019 (1381)
1-11/16	1-1/8 - 7 UNC	354 (480)	795 (1077)	1288 (1745)
1-11/16	1-1/8 - 12 UNF	397 (538)	890 (1206)	1444 (1957)
1-7/8	1-1/4 - 7 UNC	500 (678)	1120 (1518)	1817 (2462)
1-7/8	1-1/4 - 12 UNF	553 (749)	1241 (1682)	2013 (2728)
2-1/16	1-3/8 - 6 UNC	655 (887)	1470 (1992)	2382 (3228)
2-1/16	1-3/8 - 12 UNF	746 (1011)	1672 (2266)	2712 (3675)
2-1/4	1-1/2 - 6 UNC	870 (1179)	1950 (2642)	3161 (4283)
2-1/4	1-1/2 - 12 UNF	979 (1327)	2194 (2973)	3557 (4820)

Recommended Torque in Foot Pounds (Newton Meters)

Use 75% of specified value for plated fasteners

Use 85% of specified value for lubricated fasteners

30 Series Disc Harrow

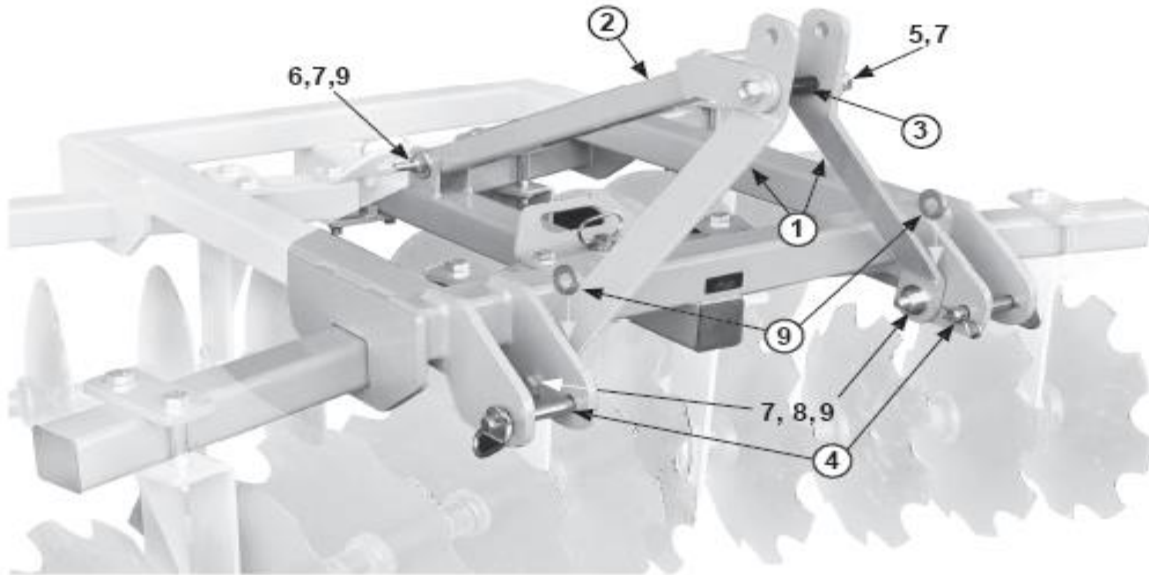


30 Series Disc Harrow

#	Qty.	Description	DH30-60	DH30-72	DH30-84
1	1	Frame*	200401	200401	200401
2	1	Gang Tube	200402	200403	200404
3	1	Cap 3 x 3" Black Plastic	100140	100140	100140
4	1	Top Link*	200426	200426	200426
5	1	Top Link Bushing*	200424	200424	200424
6	1	Top Link Brace*	200420	200420	200420
7	1	7/8 x 4 1/4" Pull Pin w/ Hair Pin	100139	100139	100139
8	2	Brand Label	100107	100107	100107
9	1	Serial Number Label	100109	100109	100109
10	1	Product Model Number	100557	100558	100559

Specify color on parts marked with*

30 Series Disc Harrow



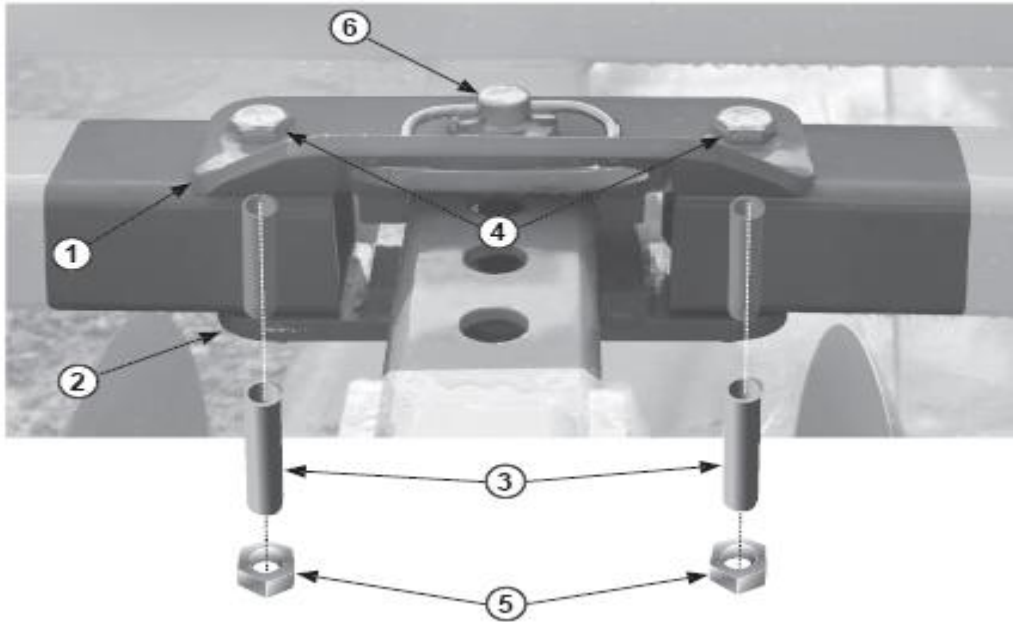
Disc Harrow Hitch Assembly

#	Qty.	Description	Part Number
1	1	Top Link*	200426
2	1	Top Link Brace*	200420
3	1	Top Link Bushing*	200424
4	1	7/8 x 4 1/4" Pull Pin w/ Hair Pin	100139
5	1	3/4-10 x 6" Hex Bolt Gr 5	100152
6	1	3/4-10 x 5" Hex Bolt Gr 5	100102
7	1	3/4 Lock Nut	100112
8	1	3/4-10 x 2.5" Hex Bolt Gr 5	100110
9	1	3/4 Flat Washer	100111

parts marked

with* Specify color on

30 Series Disc Harrow



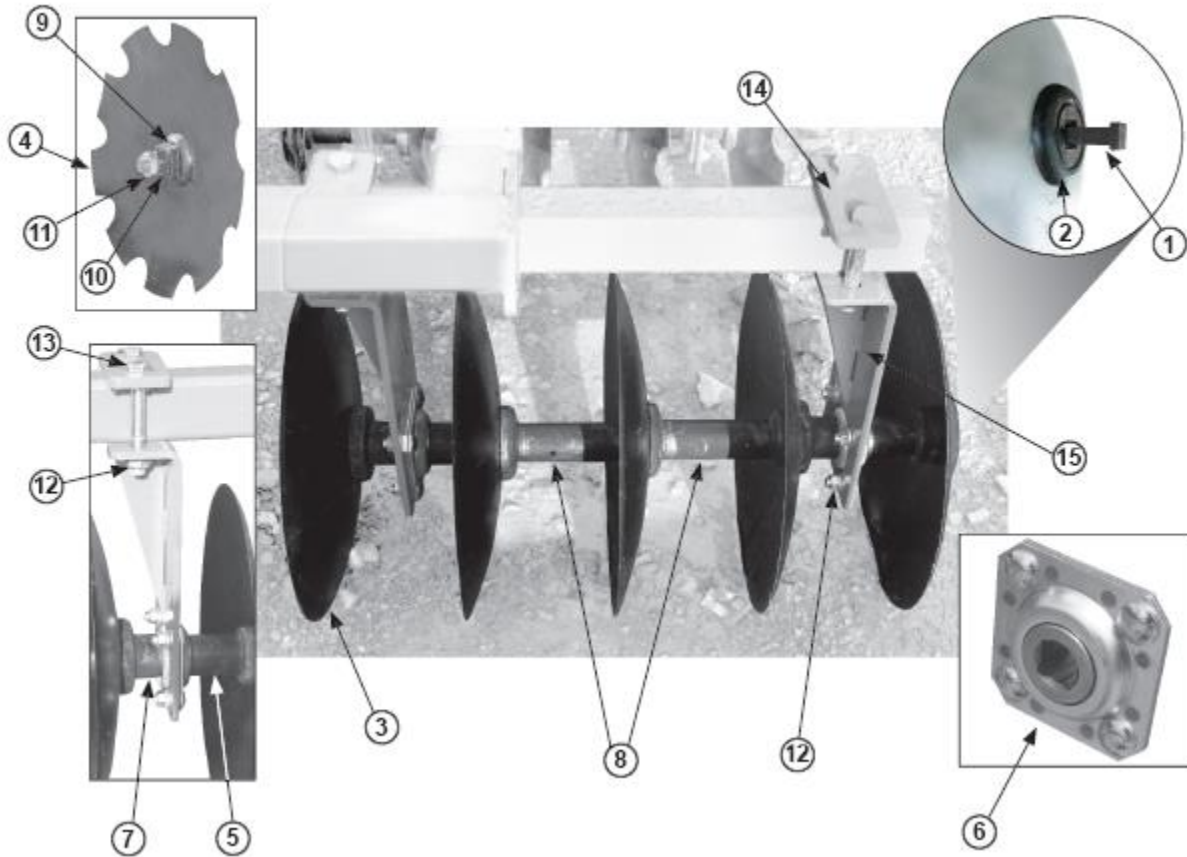
Disc Harrow Adjustment Bracket Assembly

#	Qty.	Description	Part Number
1	1	Top Adjustment Bracket*	200421
2	1	Bottom Adjustment Bracket*	200422
3	2	Bushing*	200425
4	1	5/8-11 x 5" Hex Bolt Gr 5	100182
5	1	5/8 Lock Nut	100119
6	1	7/8 x 4 1/4" Pull Pin w/ Hair Pin	100139

color on parts marked

Specify with*

30 Series Disc Harrow

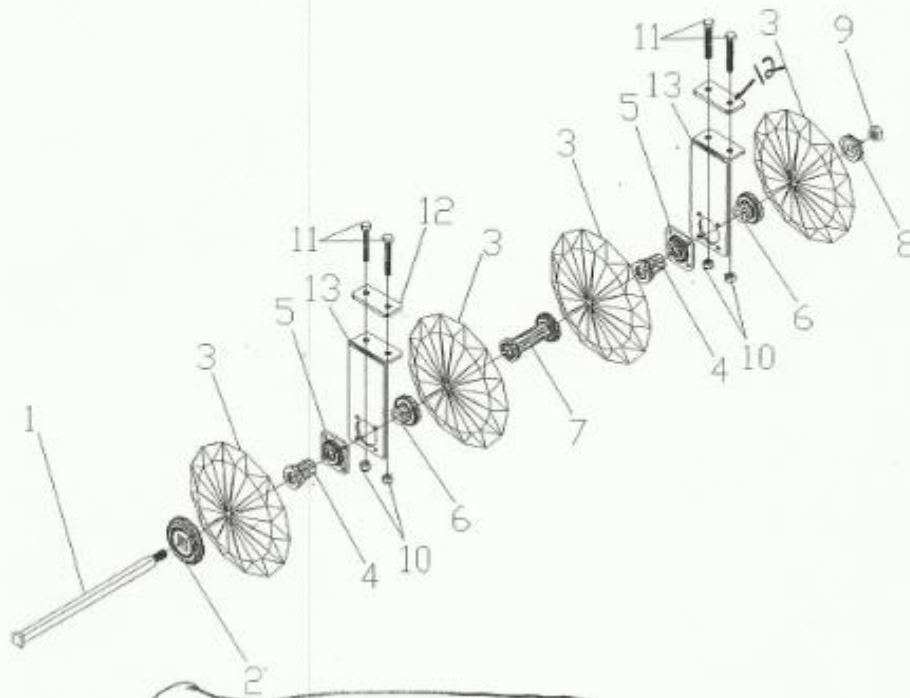


Disc Harrow Gang Assembly

#	Qty.	Description	DH30-60	DH30-72	DH30-84
1	1	Disc Axle 1" Diameter (26',34",& 41")	200405	200418	200419
2	1	Large End Cap	200406	200406	200406
3	1	18 inch Plain Disc Blade	200407	200407	200407
4	1	18 inch Notched Disc Blade	200408	200408	200408
5	1	3 5/8 inch Spacer	200411	200411	200411
6	1	Seal Bearing	200412	200412	200412
7	1	2 3/8 inch Spacer	200413	200413	200413
8	1	7 7/16 inch Plain Spool	200414	200414	200414
9	1	Small Washer	200415	200415	200415
10	1	Axle Nut	200423	200423	200423
11	1	Jam Lock Nut	200424	200424	200424
12	1	3/4 - 10 Lock Nut	100112	100112	100112
13	1	3/4 - 10 x 5" Hex Nut	100102	100102	100102
14	1	Bearing Top Plate*	200416	200416	200416
15	2	Disc Hanger Bracket*	200417	200417	200417

Specify color on parts marked with*

Disc Harrow Gang Assembly Model DH-30-60



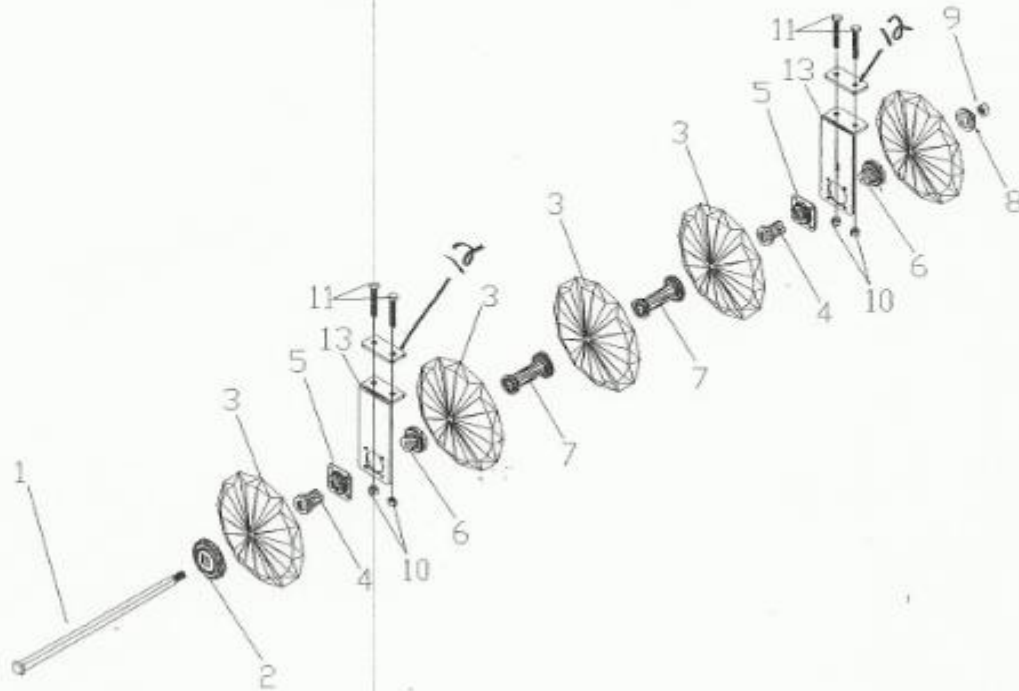
*Refers to Options on Disc Diameter

#	Description	Part #	Quantity
1	26" Axle	200405	4
2	Large End Cap	200406	4
3	*18" Plain Disc	200407	8
3	*18" Notched Disc	200408	8
3	*20" Plain Disc	200409	8
3	*20" Notched Disc	200410	8
4	3-5/8" Spacer	200411	8
5	Seal Bearing	200412	8
6	2-3/8" Spacer	200413	8
7	7-7/16" Plain Spool	200414	4
8	Small Washer	200415	4
9	Axle Nut		4
10	3/4-10 Lock Nut	100112	16
11	3/4-10 x 5 Hex Bolt	100102	16
12	Bearing Top Plate*	200416	8
13	Bearing Mount*	200417	8

ending

with* Specify color on parts

Disc Harrow Gang Assembly Model DH-30-72



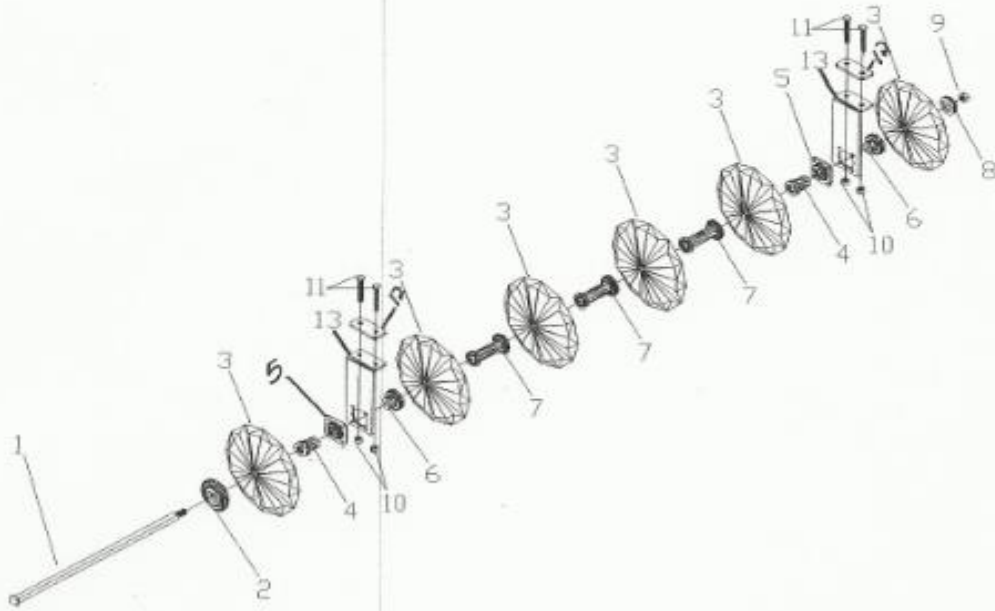
*Refers to Options on Disc Diameter

#	Description	Part #	Quantity
1	34" Axle	200418	4
2	Large End Cap	200406	4
3	*18" Plain Disc	200407	10
3	*18" Notched Disc	200408	10
3	*20" Plain Disc	200409	10
3	*20" Notched Disc	200410	10
4	3-5/8 Spacer	200411	8
5	Seal Bearing	200412	8
6	2-3/8 Spacer	200413	8
7	7-7/16" Plain Spool	200414	8
8	Small Washer	200415	4
9	Axle Nut		4
10	3/4-10 Lock Nut	100112	16
11	3/4-10 x 5 Hex Bolt	100102	16
12	Bearing Top Plate*	200416	8
13	Bearing Mount*	200417	8

ending

with* Specify color on parts

Disc Harrow Gang Assembly Model DH-30-84



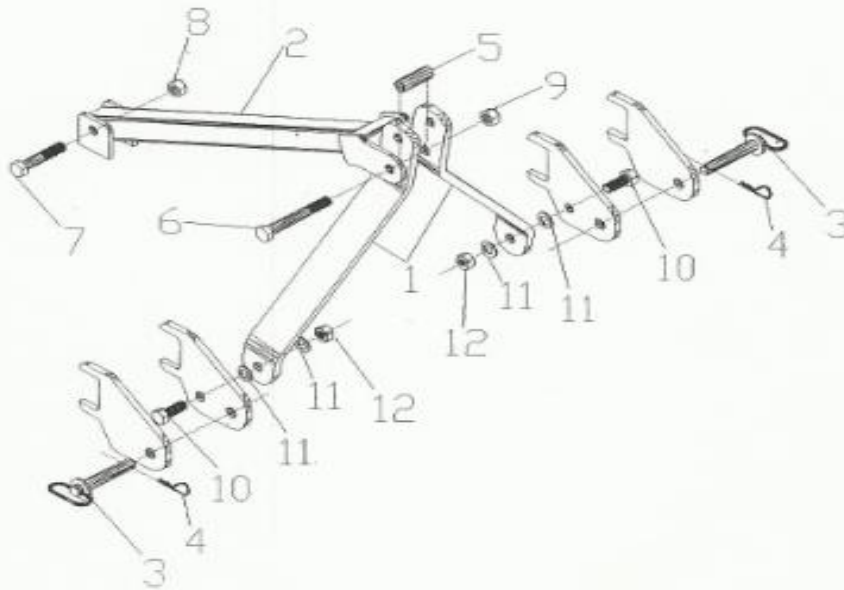
*Refers to Options on Disc Diameter

#	Description	Part #	Quantity
1	41" Axle	200419	4
2	Large End Cap	200406	4
3	*18" Plain Disc	200407	10
3	*18" Notched Disc	200408	10
3	*20" Plain Disc	200409	10
3	*20" Notched Disc	200410	10
4	3-5/8 Spacer	200411	8
5	Seal Bearing	200412	8
6	2-3/8 Spacer	200413	8
7	7-7/16" Plain Spool	200414	12
8	Small Washer	200415	4
9	Axle Nut		4
10	3/4-10 Lock Nut	100112	16
11	3/4-10 x 5 Hex Bolt	100102	16
12	Bearing Top Plate*	200416	8
13	Bearing Mount*	200417	8

ending

with* Specify color on parts

Disc Harrow Hitch Assembly



on parts marked with*

#	Description	Part#	Quantity
1	<i>Top Link*</i>		2
2	<i>Top Link Brace*</i>	<i>200420</i>	1
3	<i>7/8"x4-1/4 Pin</i>	<i>100139</i>	2
4	<i>Hair Pin</i>		2
5	<i>Bushing</i>	<i>100105</i>	1
6	<i>3/4-10x6" Hex Bolt</i>	<i>100152</i>	1
7	<i>3/4-10x5 Hex Bolt</i>	<i>100102</i>	1
8	<i>3/4-10 Lock Nut</i>	<i>100112</i>	1
9	<i>3/4-10 Lock Nut</i>	<i>100112</i>	1
10	<i>3/4-10x2.5 Hex bolt</i>	<i>100110</i>	2
11	<i>3/4" Flat Washer</i>	<i>100111</i>	4
12	<i>3/4-10 Lock Nut</i>	<i>100112</i>	2

Specify color