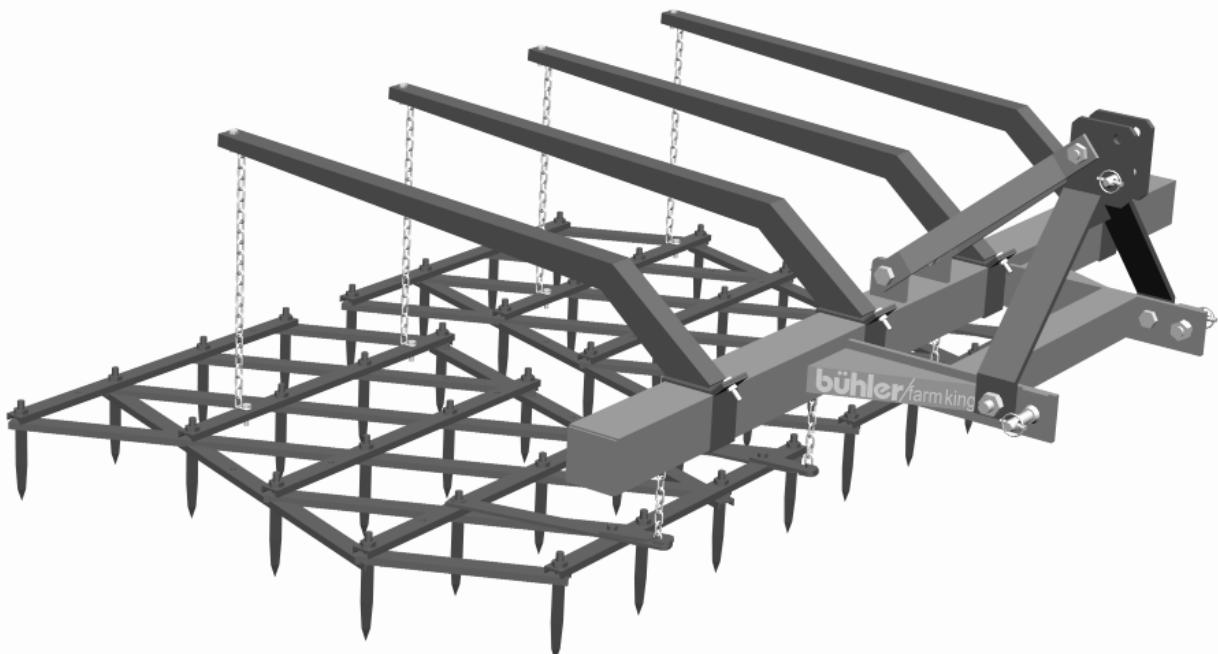


# bühler

## farm king



***80" & 100" Drag Harrow***

Operator's and Parts Manual  
FK353

2009



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## **WARRANTY POLICY**

Buhler Manufacturing products are warranted for a period of twelve (12) months (90 days for commercial application) from original date of purchase, by original purchaser, to be free from defects in material and workmanship under correct, normal agricultural use and proper applications.

Buhler Manufacturing's obligations under this warranty shall be limited to the repair or exchange, at Buhler Manufacturing's option, of any Buhler Manufacturing product or part which proves to be defective as provided. Buhler Manufacturing reserves the right to either inspect the product at the buyer's location or have it returned to the factory for inspection.

The above warranty does not extend to goods damaged or subject to accident, abuse or misuse after shipment from Buhler Manufacturing's factory, nor to goods altered or repaired by anyone other than an authorized Buhler Manufacturing representative.

Buhler Manufacturing makes no Express Warranties other than those, which are specifically described. Any description of goods, including any references and specifications in catalogues, circulars and other written material published, is for the sole purpose of identifying goods and shall conform to such descriptions. Any sample or model is for illustrative purposes only and does not create an Express Warranty that the goods conform to sample or model shown.

The purchaser is solely responsible for determining suitability of goods sold. This warranty is expressly in lieu of all other warranties expressed or implied. Buhler Manufacturing will in no event be liable for any incidental or consequential damages whatsoever. Nor for any sum in excess of the price received for the goods for which liability is claimed.

### **WARRANTY CLAIMS:**

Warranty requests must be prepared on Buhler Manufacturing Warranty Claim Forms with all requested information properly completed. Warranty Claims must be submitted within a thirty (30) day period from date of failure repair.

### **WARRANTY LABOR:**

Any labor subject to warranty **must** be authorized by Buhler Manufacturing. The labor rate for replacing defective parts, where applicable, will be credited at 100% of the dealer's posted shop rate. Defective parts will receive an extra 10% discount to assist with freight or other incidental costs.

### **GOVERNMENT LEGISLATION:**

Warranty terms and conditions are subject to Provincial or State legislation.

### **IMPORTANT FACTS:**

Buckets and Bucket Tines Carry No Warranty

Bent Spears Carry No Warranty

Snowblower Fan Shafts Carry No Warranty

Mower Blades Carry No Warranty

Portable Auger Parts Have Two (2) Year Warranty

Loader Parts Have Two (2) Year Warranty

**IMPORTANT NOTE: This warranty does not apply to rentals**

## INTRODUCTION

The Buhler Farm King Drag Harrow 3-point hitch harrow is ideal for freshening horse paddocks and pastures. It also helps to dry out your yard or driveway when conditions are wet. 80" and 100" bars accept any combination of 40" and 60" harrow sections, giving a maximum ground coverage of 10'. This product is Quick Hitch compatible.

Keep this manual handy for frequent reference. All new operators or owners must review the manual before using the equipment and at least annually thereafter. Contact your Buhler Dealer if you need assistance, information, or additional copies of the manual. Visit our website at [www.buhler.com](http://www.buhler.com) for a complete list of dealers in your area.

The directions left, right, front and rear, as mentioned throughout this manual, are as seen facing in the direction of travel of the implement.

## SAFETY

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.

The alert symbol is used throughout this manual. It indicates attention is required and identifies hazards. Follow the recommended precautions.

**⚠** The safety alert symbol means...  
ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

### **⚠ CAUTION**

The caution symbol 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.

### **⚠ WARNING**

The Warning Symbol 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.

### **⚠ DANGER**

The Danger Symbol 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 that, for functional purposes, cannot be guarded.

## **GENERAL SAFETY INSTRUCTIONS**

Have a first-aid kit available for use and know how to use it.

Have a fire extinguisher available, stored in a highly visible location, and know how to use it.

Wear appropriate protective gear. This list may include but is not limited to:

- hard hat
- protective shoes with slip resistant soles
- protective glasses or goggles
- heavy gloves
- wet weather gear
- hearing protection
- respirator or filter mask

Read and understand the Operator's Manual and all safety signs before operating, servicing, adjusting, repairing, or unplugging the equipment.

Do not attempt any unauthorized modifications to your Buhler product as this could affect function or safety, and could affect the life of the equipment.

Inspect and clean the working area before operating.

Keep hands, feet, clothing, and hair away from moving parts.

Ensure bystanders are clear of the area before operating.

## **START-UP SAFETY**

Do not let inexperienced operators or children run this equipment.

Operate only with ROPS and seatbelt equipped tractors.

## **OPERATION SAFETY**

Do not permit riders.

Do not wear loose fitting clothing during operation.

## **TRANSPORT SAFETY**

Review Transport Safety instructions in tractor manual before moving.

Check with local authorities regarding transport on public roads. Obey all applicable laws and regulations.

Make sure the SMV (Slow Moving Vehicle) emblem and all the lights and reflectors that are required by the local highway and transport authorities are in place, are clean, and can be seen clearly by all overtaking and oncoming traffic. Always travel at a safe speed.

## SERVICE AND MAINTENANCE SAFETY

Stop engine, set brake, remove ignition key, and wait for all moving parts to stop before servicing, adjusting, repairing, or unplugging.

Support the equipment with blocks or safety stands before working beneath it.

Follow good shop practices including:

- keep service area clean and dry
- be sure electrical outlets and tools are properly grounded
- use adequate light for the job

Use only tools, jacks, and hoists of sufficient capacity for the job.

Use heavy leather gloves to handle sharp objects.

## STORAGE SAFETY

Store the unit in an area away from human activity.

Do not permit children to play on or around the stored machine.

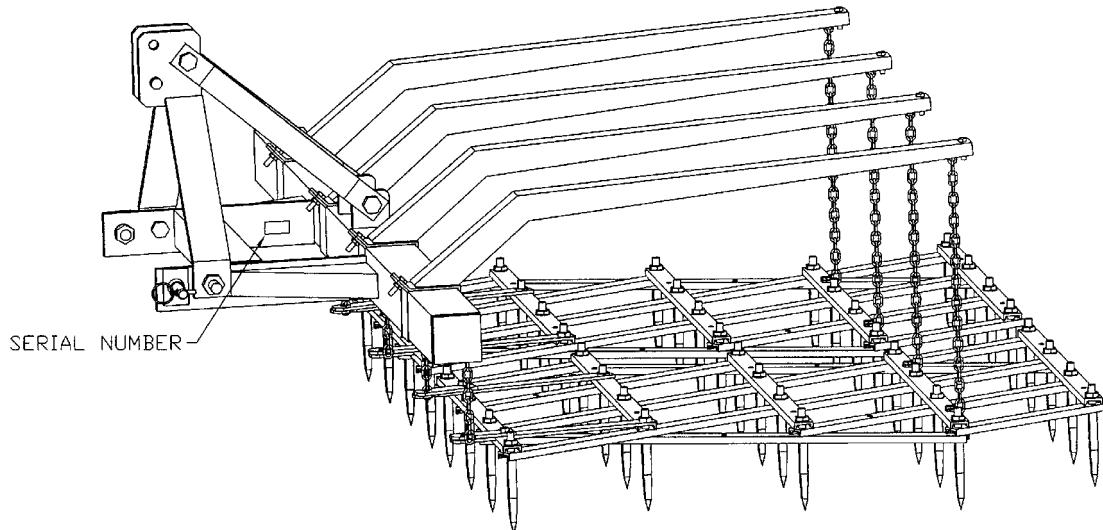
Support the frame on stands and blocks to provide a secure base.

## SAFETY SIGNS

The following illustration shows the approximate location and detail of safety signs. Keep all safety signs clean and legible and replace any that are damaged or missing. When original parts are replaced, any safety signs affixed to those parts should be replaced as well. Replacement safety signs are available from your local dealer.

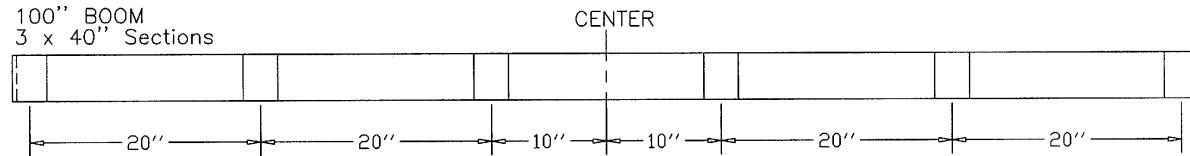
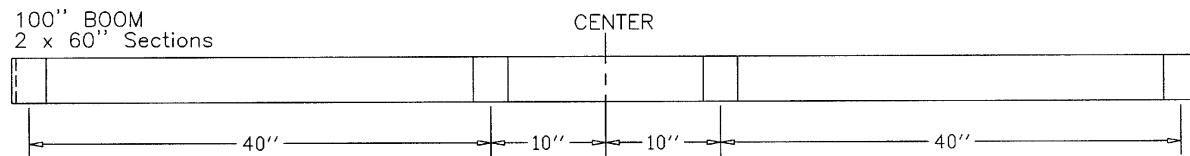
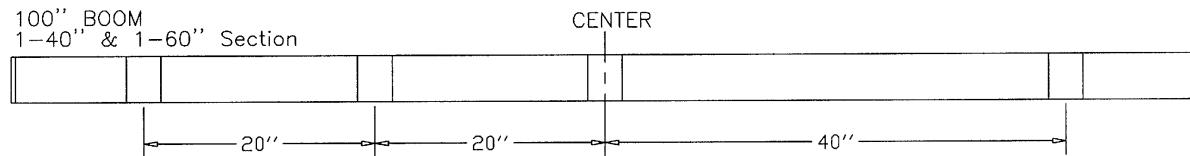
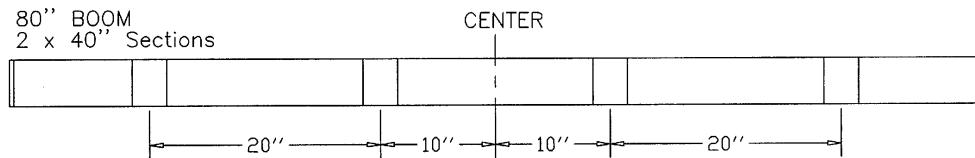
## INSTALLATION OF SAFETY SIGNS

To install safety signs, ensure 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 and align over the specified area. Carefully press in place. Slowly peel back the remaining paper and smooth the remaining portion in place. Small air pockets can be pierced with a pin and smoothed out.



**DRAG HARROW ASSEMBLY INSTRUCTIONS**

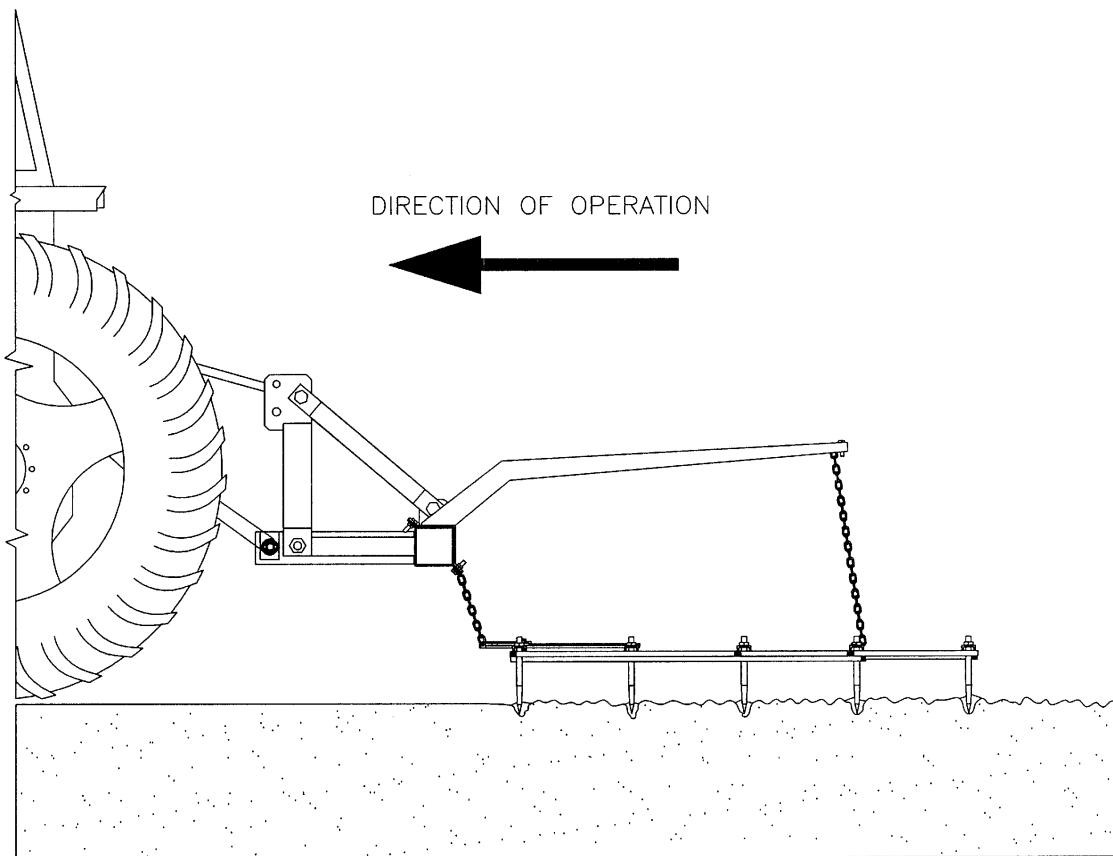
1. Assemble the hitch (#1), boom (#2) and braces (#3) using the hardware supplied.
2. Mount the assembly on the tractor using the three point pins.
3. Space the stakes according to the size of harrow sections used (see drawing on next page). Mount the stakes using stake caps,  $\frac{1}{2}$ " x  $1\frac{1}{2}$ " hex bolts,  $\frac{1}{2}$ " lock washers and  $\frac{1}{2}$ " hex nuts. Simultaneously fasten the 10-link drag chain between the stake and stake cap using the same bolts. A  $7/16$ " long spacer is fitted in the last link of drag chain. The bolt goes through the spacer and prevents the chain from being clamped tight.

**STAKE SPACING FOR DRAG HARROWS**

DH-02

4. Bolt the  $\frac{1}{4}$ " lift chains to the top of the stakes using  $3/8$ " x  $1\frac{1}{2}$ " hex bolts, flat washer and lock nuts. Use about 21 links on the lift chain to attach the stake to the harrow section.

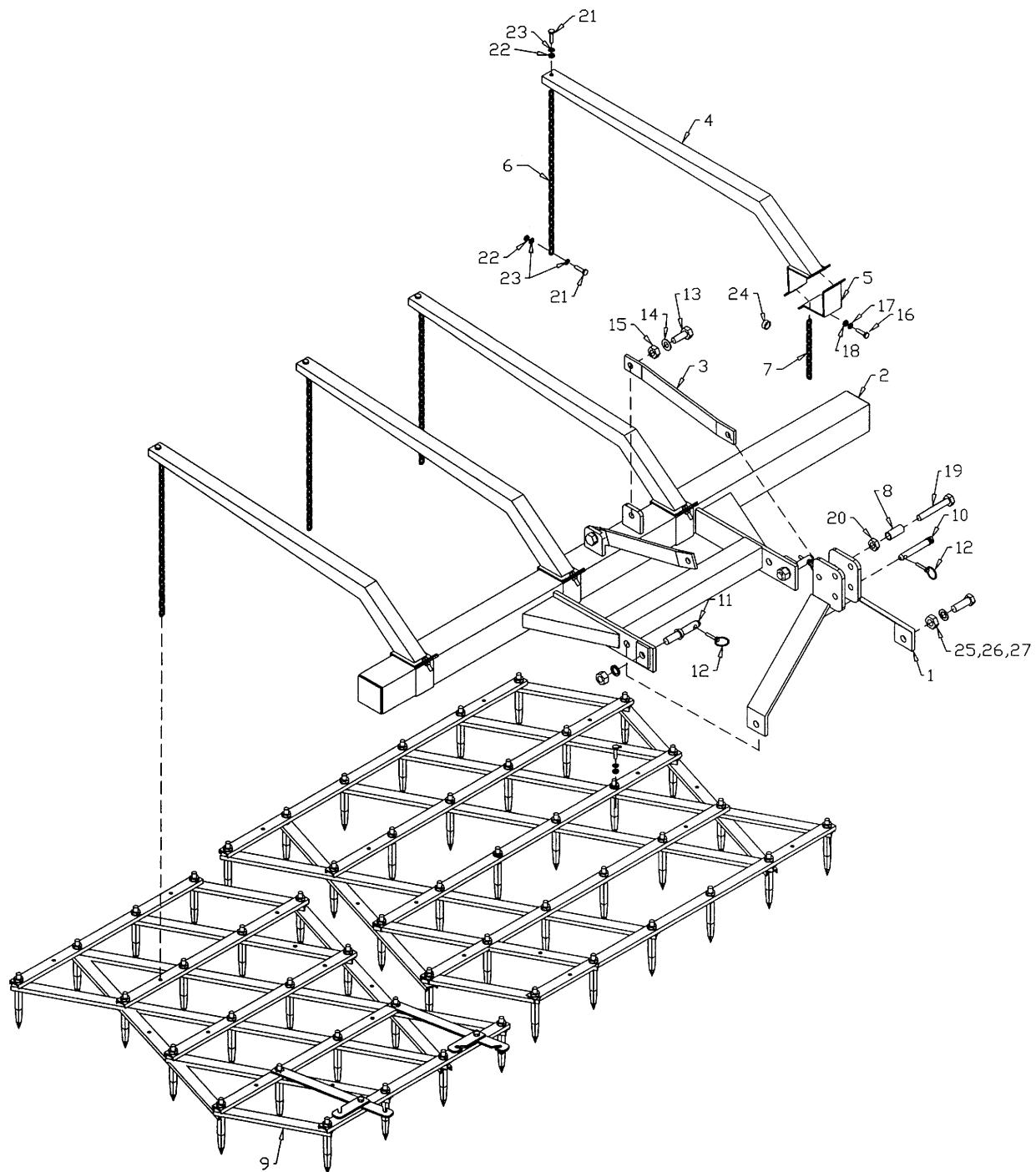
## OPERATION THEORY OF OPERATIONS



DH-04

## MAINTENANCE

Bolt Torque						
Bolt Diameter	SAE2		SAE5		SAE8	
	"A"	N.m	lb-ft	N.m	lb-ft	N.m
1/4"	8	6	12	9	17	12
5/16"	13	10	25	19	36	27
3/8"	27	20	45	33	63	45
7/16"	41	30	72	53	100	75
1/2"	61	45	110	80	155	115
9/16"	95	70	155	115	220	165
5/8"	128	95	215	160	305	220
3/4"	225	165	390	290	540	400
7/8"	230	170	570	420	880	650
1"	345	225	850	630	1320	970



DH-01

**WHEN ORDERING PARTS**

Always give your dealer the Model, Color and Serial Number of your machine to assist him in ordering and obtaining the correct parts. Use the exploded view and tabular listing of the area of interest to exactly identify the required part.

**DRAG HARROWS**

ITEM	PART #	DESCRIPTION
1	F0351	Hitch Weldment
2	906753	80" Boom Weldment
	906754	100" Boom Weldment
3	906755	Hitch Brace
4	964625	Stake
5	964627	Stake Cap
6	964633	Lift Chain - 28 Links
7	964555	Drag Chain - 10 Links
8	906770	Spacer (1" O.D. x 2 1/4" L)
9	F40P	40" Parallel Harrow
	F60P	60" Parallel Harrow
10	965807	Top Link Pin (Category 1)
11	965809	Lift Arm Pin (Category 1)
12	965911	Linch Pin (7/16")
13	84467	3/4" x 2" Hex Bolt (pl)
14	81701	3/4" Lock Washer (pl)
15	81700	3/4" Hex Nut (pl)
16	84277	1/2" x 1 1/2" Hex Bolt (pl)
17	81637	1/2" Lock Washer (pl)
18	81636	1/2" Hex Nut (pl)
19	811751	3/4" x 5" Hex Bolt (pl)
20	812365	3/4" Lock Nut (pl)
21	811792	3/8" x 1 1/2" Hex Bolt (pl)
22	812363	3/8" Lock Nuts (pl)
23	964001	Flat Washer (1" O.D. x 7/16" I.D., x 10GA) (pl)
24	964741	Chain Spacer (7/16" long) (pl)
25	966527	7/8" x 2 1/2" Hex Bolt (pl)
26	81723	7/8" Lock Washer (pl)
27	81722	7/8" Hex Nut (pl)

**SHIPPING KIT AND BUNDLE NUMBERS**

The following is a list of Kit Numbers for this product and the Bundle Numbers, Descriptions, and Quantities for each Kit.

**QUANTITY   BUNDLE NO.      DESCRIPTION****Y80DH 80" DRAG HARROW w/2 – 40" parallel harrows**

1	F2071	Stakes
2	F40P	Parallel Harrow 40"
1	F0351	Hitch
1	F0352	80" Boom
1	F0365	Carton of Parts

**Y1002DH 100" DRAG HARROW w/1 – 40" and 1 – 60" parallel harrow**

1	F2071	Stakes
1	F40P	Parallel Harrow 40"
1	F60P	Parallel Harrow 60"
1	F0351	Hitch
1	F0353	100" Boom
1	F0365	Carton of Parts

**Y1003DH 100" DRAG HARROW w/3 – 40" parallel harrows**

1	F2070	Stakes
3	F40P	Parallel Harrow 40"
1	F0351	Hitch
1	F0353	Boom 100"
1	F0366	Carton of Parts

**YDH1 80" DRAG HARROW less 2 harrow sections**

1	F2071	Stakes
1	F0351	Hitch
1	F0352	80" Boom
1	F0365	Carton of Parts

**YDH2 100" DRAG HARROW less 2 harrow sections**

1	F2071	Stakes
1	F0351	Hitch
1	F0365	Carton of Parts
1	F0353	Boom 100"

**YDH3 100" DRAG HARROW less 3 harrow sections**

1	F2070	Stakes
1	F0351	Hitch
1	F0353	100" Boom
1	F0366	Carton of Parts

## **NOTES**



**DIVISION LOCATIONS**

Farm King Division  
 301 Mountain Street S.  
 Morden, MB R6M 1X7  
 Ph.: (204) 822-4467  
 Fax: (204) 822-6348

Allied/Inland Division  
 1260 Clarence Avenue  
 Winnipeg, MB R3T 1T2  
 Ph.: (204) 284-6100  
 Fax: (204) 477-2325

B.I.I. Division  
 1330 43<sup>rd</sup> Street N.W.  
 Fargo, ND 58102  
 Ph: (701) 282-7014  
 Fax: (701) 282-5865

**U.S. WAREHOUSES**

AR, West Memphis (870) 732-3132	ND, Fargo (701) 282-7003
GA, Stone Mountain (770) 908-9439	NE, Blair (402) 426-8211
ID, Meridian (208) 887-6006	OH, Youngstown (330) 793-0862
IN, Clarksville (812) 284-3376	OR, Beaverton (503) 641-1865
KS, Wichita (316) 265-9577	SD, Huron (605) 352-8616
MN, Lakeville (952) 469-5267	TX, Houston (713) 928-2632
MT, Billings (406) 248-7771	UT, Salt Lake City (801) 972-4321
ND, Bismarck (701) 223-1886	WI, Portage (608) 742-1370

**CANADIAN WAREHOUSES**

B.C., Abbotsford  
(604) 864-2665

AB, Edmonton  
(780) 962-6991

SK, Regina  
(306) 781-2300

ON, Woodstock  
(519) 539-0435

QC, Dorion  
(450) 455-4840

**OFFSHORE WAREHOUSES**

Burando Hill  
 Katanning  
 W. Australia  
 011-618-98-214422

Chihuahua, Mexico  
 011-52-158-90306

John Kerr Equipment Ltd.  
 Wilcoxholm Farm  
 Linlithgow, W. Lothian  
 Scotland  
 011-441-506-842280

Skovde, Sweden  
 011-46-500-452651

Naestved, Denmark  
 011-45-557-29511



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