



# NORWEST

**MANUFACTURING INC.**

71 SOUTH 215 WEST - RUPERT, ID 83350 - (208) 436-1770 FAX (208) 436-1776

## **\*\*NORWEST SPIDER CULTIVATOR\*\***

This manual contains valuable information about your new Norwest cultivator. It has been carefully prepared to give you helpful suggestions for operating, adjusting and servicing of your equipment. If assistance is needed to understand the information within this manual, please contact Norwest Manufacturing.

Keep this information in a convenient place for quick and easy reference. You have purchased dependable and sturdy equipment, but only with proper care, operation and maintenance can you expect to receive the service and long life designed and built into it. Give this equipment proper attention during slack periods and it will always be ready when you need it.

Norwest proudly displays the FEMA seal of quality on this and other equipment made by us. All our equipment must meet the following standards:

1. The company will provide replacement parts promptly and at a fair price for a maximum of ten years on all machines from the date of manufacture to which the seal will be affixed so long as the company produces that particular piece.
2. The majority of Norwest's farm equipment distribution is through servicing bona fide retailers and /or wholesalers with a majority of their sales related to agriculture.
3. The company will reproduce the FEMA seal on a majority of its farm and trade press advertisements and is entitled to reproduce said seal on its company letterhead, sales literature, operators manuals, and parts books.
4. The company will apply the FEMA seal only to new machines either accompanied by repair parts lists or by notification that a parts list is available.
5. The seal will be attached only to new machines that carry a written warranty.
6. Norwest Manufacturing will discontinue use of the seal, in any form, upon notification by the Farm Equipment Manufacturers Association that it has violated any terms of this agreement.





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### LIMITED WARRANTY

Norwest Manufacturing warrants, to the original retail customer, the new Norwest equipment identified in this owner's manual to be free of defects in material and workmanship. Any part of said equipment that in Norwest's judgment shows evidence of such defects will be repaired without charge, provided that the failure of part(s) shall have occurred within twelve (12) months from the date of delivery of said equipment to the retail customer. Tires, batteries, engines, electrical and hydraulic components and other trade accessories may be warranted by their respective manufacturers and those warranties, if any, are hereby extended to the retail customer. Expendable components such as blades, teeth, chain, sprockets, springs, sweeps and the like are excluded from this warranty.

The retail customer must pay the transportation cost to and from the Norwest dealer's service shop for warranty service. Warranty service will be performed by the Norwest dealer from whom the equipment was purchased, in his service shop and during his regularly scheduled days and hours of operation.

All Norwest obligations under this warranty shall be terminated if the equipment is modified or altered in any way not approved in writing by Norwest if repair parts other than genuine Norwest repair parts have been used, or if the equipment has been subjected to misuse, neglect, accident, improper maintenance or improper protection in storage.

Norwest reserves the right to make improvements in design or changes in specifications at any time without incurring any obligation to owners of equipment previously sold.

No agent or person has the authority to alter, add to or waive the above warranties which are agreed to be the only warranties, representations or promises, expressed or implied, as to the quality or performance of the products covered and which do not include any implied warranty of merchantability or fitness. In no event will Norwest be liable for incidental or consequential damages or injuries, including, but not limited to, loss of crops, loss of profits, rental of substitute equipment or other commercial loss.

### SAFETY

Most accidents, whether they occur in industry, on the farm, at home, or on the highway, are caused by failure of some individual to follow simple and fundamental safety rules or precautions.

Study and heed the following safety rules and precautions when operating your tractor. Personal injury may result if these precautions are ignored.

### WHEN OPERATING YOUR TRACTOR (CAUTION)

Securely fasten your seat belt if the tractor has a ROPS.

Where possible, avoid operating the tractor near ditches, embankments and holes.

Reduce speed when turning, crossing slopes, and on rough, slick, or muddy surfaces.

Stay off slopes too steep for safe operation.

Watch where you are going, especially at edges of work site, on roads, and around trees.

Do not permit others to ride.

Operate the tractor smoothly; no jerky turns, starts, or stops.

Hitch only to the drawbar and hitch points recommended by the tractor manufacturer.

When stopped, set brake securely and use park lock if available.



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### WHEN OPERATING CULTIVATOR (CAUTION)

Stop engine, disengage PTO, and wait for all movements to stop before attempting to unclog, clean, adjust or service this machine unless otherwise recommended in the "Operations Manual".

Always lower cultivator to the ground when not in use.

Do not unhitch cultivator from tractor until supporting stands are in place and secured. Pipe stands are required if the cultivator is not equipped with gauge wheels or front mounted coulter.

Keep hands, feet and clothing away from moving parts.

Keep off equipment unless an operator's seat or platform is provided. Keep others off equipment.

Make sure everyone is clear of machine before starting tractor engine or operating cultivator.

Use extreme care when operating close to ditches, fences or on hillsides.

Before moving cultivator on highway, make sure the triangular SMV (slow moving vehicle) sign is clean from dust or dirt, and make sure the propelling vehicles flashing lights are operating. In this regard, check local governmental regulations.

Before transporting cultivator on highway, all transport pins must be in place, to prevent accidental lowering of the cultivator and components.

When assembling cultivator be sure that supporting and lifting devices are stable and have sufficient capacity to withstand the weight of the cultivator during assembly.

Never attach cables, chains, or ropes to cultivator for the purpose of lifting, towing, or pulling. Personal injury or damage of equipment may result.

Never stand or work under the tool bar wings without locking the transport braces to prevent accidental lowering.

Be alert to electrical wires and other overhead obstacles when transporting the cultivator with a folding tool bar.

Be careful when working around the coulters blades. The edge of the coulters is sharp enough to cause injury if accidentally contacted.

The maximum towing speed is 20 MPH.



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## CULTIVATOR NUMBERING SYSTEM

A brief explanation of the method Norwest uses to number our cultivators might be helpful when you are attempting to order a Norwest cultivator. The explanation is based on cultivator model number **14P-516845**.

<u>SPIDER DIAMETER</u>	<u>P-PLAIN SPIDER</u>	<u>BAR SIZE HORIZONTAL</u>	<u>TOOL BAR LENGTH</u>	<u># OF ROWS</u>	<u># OF SPIDERS</u>
14 = 14 1/2" 16 = 16"	D = DURAFACED	5= 7" x 5" 7= 7" x 7"			

14

P

7

168

4

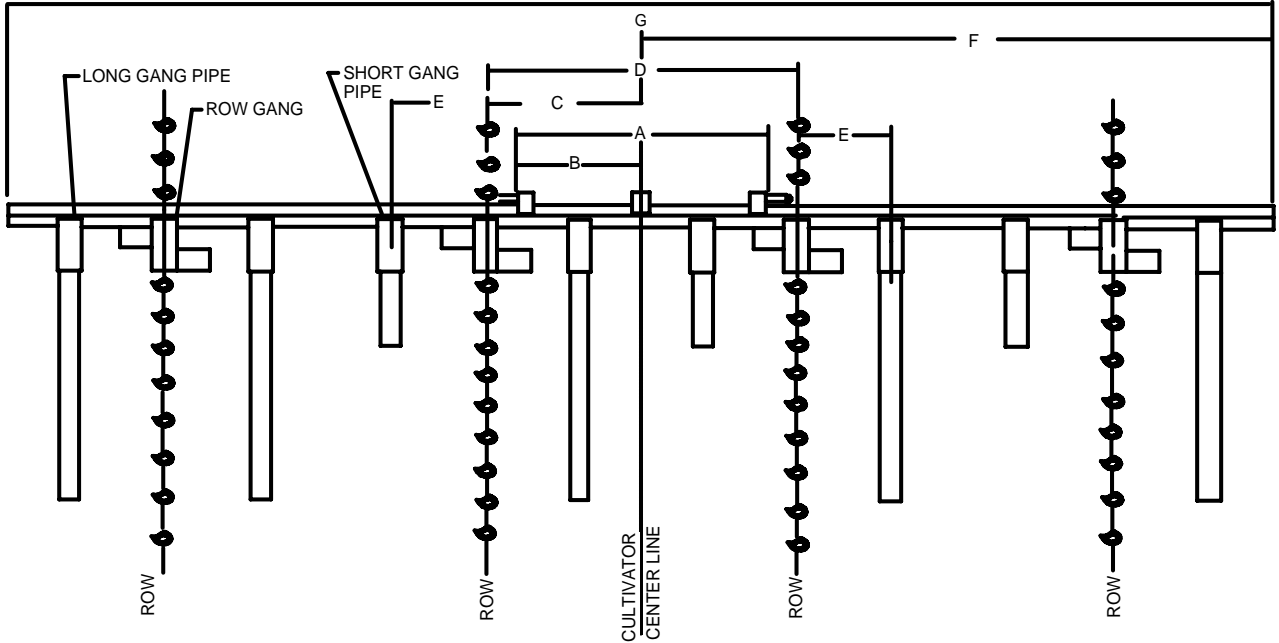
5

14P-716843	14D-716843	16P-716843	16D-716843
14P-716844	14D-716844	16P-716844	16D-716844
14P-716845	14D-716845	16P-716845	16D-716845
14P-718863	14D-718863	16P-718863	16D-718863
14P-718864	14D-718864	16P-718864	16D-718864
14P-718865	14D-718865	16P-718865	16D-718865
14P-724863	14D-724863	16P-724863	16D-724863
14P-724864	14D-724864	16P-724864	16D-724864
14P-724865	14D-724865	16P-724865	16D-724865
14P-724883	14D-724883	16P-724883	16D-724883
14P-724884	14D-724884	16P-724884	16D-724884
14P-724885	14D-724885	16P-724885	16D-724885
14P-732883	14D-732883	16P-732883	16D-732883
14P-732884	14D-732884	16P-732884	16D-732884
14P-732885	14D-732885	16P-732885	16D-732885

Cultivators up to 15 rows with 40" spacing are available on folding tool bars upon request.

Cultivators and cultivator gangs are available plain or durafaced.

## BASIC ASSEMBLY DIAGRAM



## CULTIVATOR DIMENSION CHART

SET-UP DIMENSIONS	A	B	C	D	E	F	G
CATEGORY II HITCHES (1 1/8")	32 1/2"	16 1/4"					
CATEGORY III HITCHES (1 7/16")	38"	19"					
168" TOOL BAR						84"	168"
188" TOOL BAR						94"	188"
248" TOOL BAR						124"	248"
328" TOOL BAR						164"	328"
24" ROW SPACING			12"	24"	8"		
28" ROW SPACING			14"	28"	9 1/2"		
30" ROW SPACING			15"	30"	10"		
32" ROW SPACING			16"	32"	11"		
34" ROW SPACING			17"	34"	11 1/2"		
36" ROW SPACING			18"	36"	12"		
38" ROW SPACING			19"	38"	12 1/2"		
40" ROW SPACING			20"	40"	13"		
42" ROW SPACING			21"	42"	14"		



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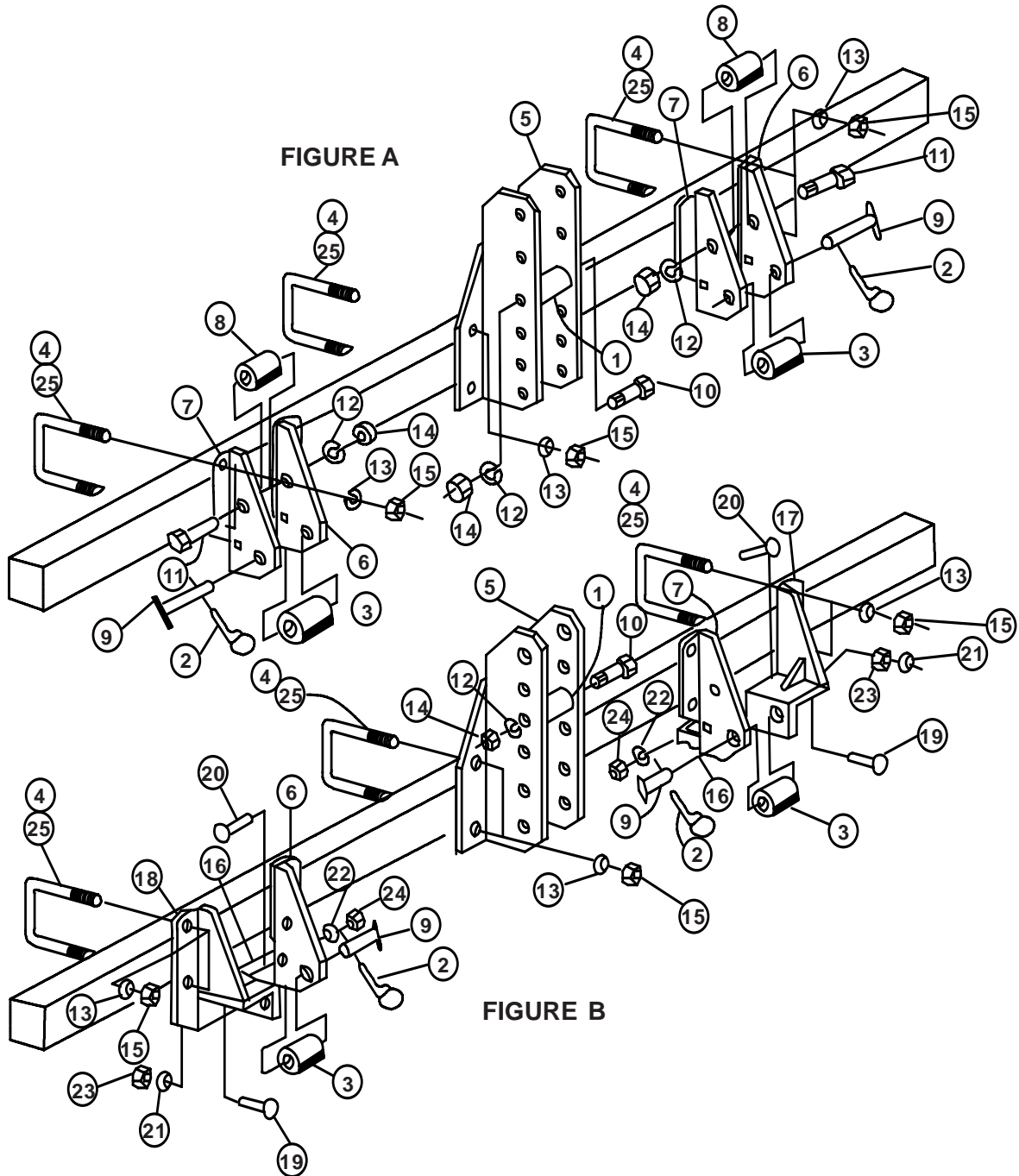
- 16-00200 – STRAIGHT HITCH ASSEMBLY 7" x 5" (FIGURE A)
- 16-11200 – OFFSET HITCH ASSEMBLY 7" x 5" (FIGURE B)
- 18-11200 – OFFSET HITCH ASSEMBLY 7" x 7" (FIGURE B)

<u>REF.</u>	<u>PART #</u>	<u>DESCRIPTION</u>	<u>REQ.</u>
1	21197	LIFT ARM BUSHING CAT 2 – 3	2
2	21938	7/16" LYNCHPIN - LONG	2
3	16-00208	LIFT BRACKET SPACER	2
4	16-00204	7/8" U BOLT FOR 7" x 5" BAR	6
5	16-00205	HITCH CENTER MAST	1
6	16-00206	STRAIGHT HITCH #1	2
7	16-00207	STRAIGHT HITCH #2	2
8	16-00208	LIFT BRACKET SPACER	2
9	21290	HITCH LIFT ARM PIN	2
10	FHB34400G5	3/4" x 4" HEX BOLT	1
11	FHB34500G5	3/4" x 5" HEX BOLT	2
12	FLW34	3/4" LOCKWASHER	3
13	FLW78	7/8" LOCKWASHER	12
14	FHN34	3/4" HEX NUT	3
15	FHNF78	7/8" FINISHED HEX NUT	12
16	16-00225	HITCH BRACE (FIG. B)	2
17	16-00221	LEFT OFFSET HITCH (FIG. B)	1
18	16-00224	RIGHT OFFSET HITCH (FIG. B)	1
19	FCB12175G5	1/2" x 1 3/4" CARRIAGE BOLT (FIG. B)	2
20	FCB58200G5	5/8" x 2" CARRIAGE BOLT (FIG. B)	2
21	FLW12	1/2" LOCKWASHER (FIG. B)	2
22	FLW58	5/8" LOCKWASHER (FIG. B)	2
23	FHN12	1/2" HEX NUT (FIG. B)	2
24	FHN58	5/8" HEX NUT (FIG. B)	2
25	16-03204	7/8" U BOLT FOR 7" x 7" TOOL BAR	6

16-00200 - STRAIGHT HITCH ASSEMBLY 7" x 5" (FIGURE A)

16-11200 - OFFSET HITCH ASSEMBLY 7" x 5" (FIGURE B)

18-11200 - OFFSET HITCH ASSEMBLY 7" x 7" (FIGURE B)



## 7" x 5" AND 7" x 7" TOOL BAR

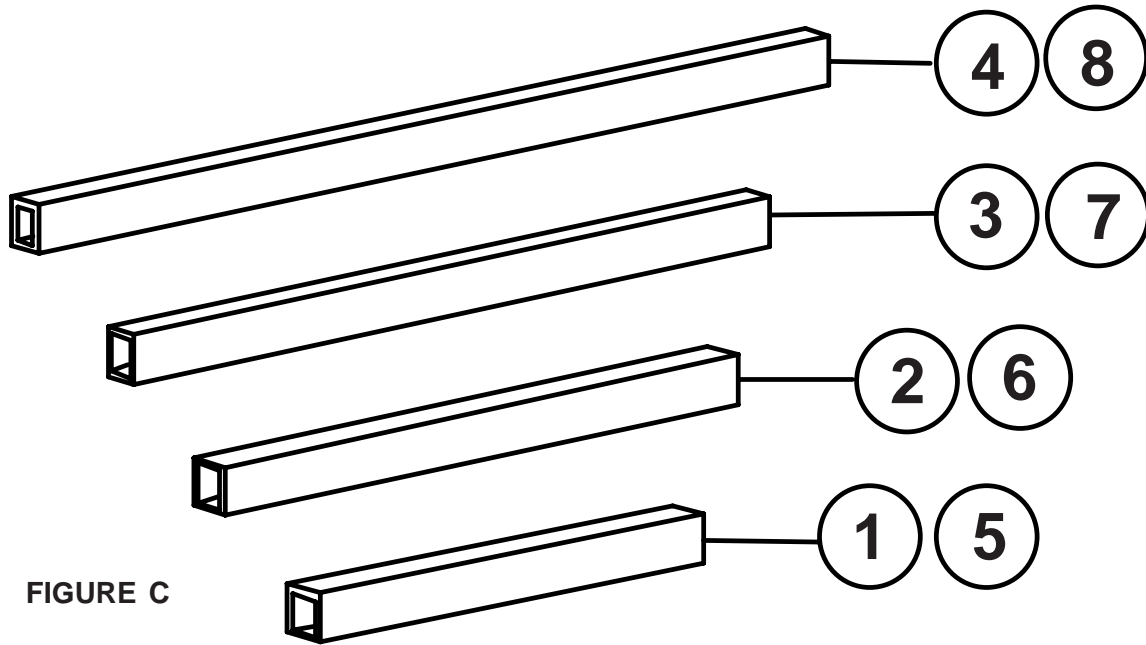
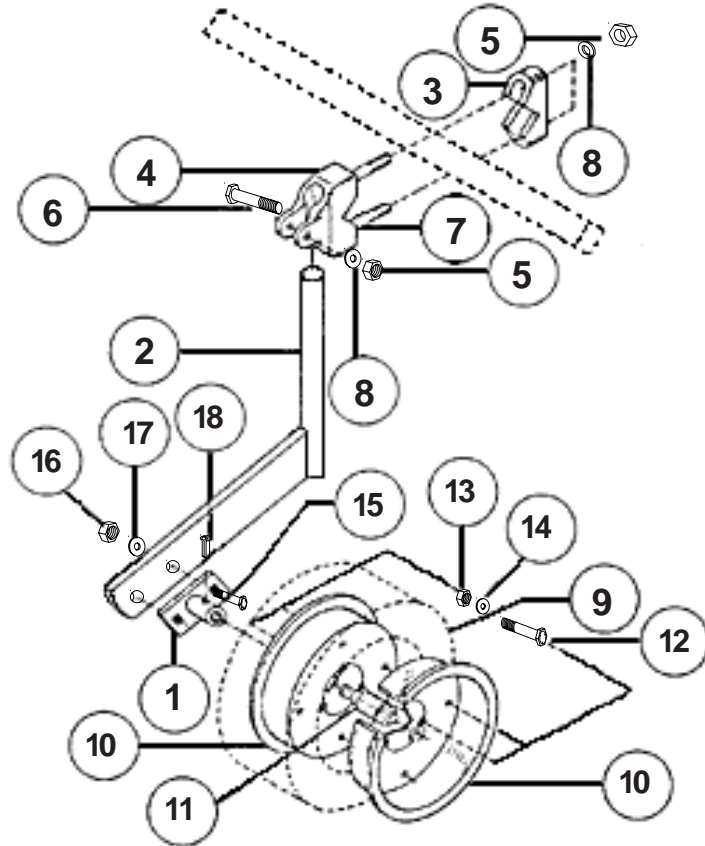


FIGURE C

REF.	PART #	DESCRIPTION	REQ.
1	16-00101	7" x 5" x 1/4" x 168" TOOL BAR	1
2	16-00102	7" x 5" x 1/4" x 188" TOOL BAR	1
3	16-00103	7" x 5" x 1/4" x 248" TOOL BAR	1
4	16-00104	7" x 5" x 3/8" x 328" TOOL BAR	1
5	18-00101	7" x 7" x 1/4" x 168" TOOL BAR	1
6	18-00102	7" x 7" x 1/4" x 188" TOOL BAR	1
7	18-00103	7" x 7" x 1/4" x 248" TOOL BAR	1
8	18-00104	7" x 7" x 3/8" x 328" TOOL BAR	1

16-35030 - GAUGE WHEEL ASSEMBLY WITH SEMI-PNEUMATIC TIRE  
 16-41210 - TIRE AND WHEEL ASSEMBLY WITH BEARING (ITEMS 9 - 14)



<u>REF.</u>	<u>PART #</u>	<u>DESCRIPTION</u>	<u>REQ.</u>
1	16-35001	GAUGE WHEEL HUB ONLY	1
2	16-35002	GAUGE WHEEL ARM ASSEMBLY	1
3	16-35701	CLAMP BRACKET	1
4	16-00601B	ROUND SHANK CLAMP	1
5	FHN12	1/2" HEX NUT	3
6	FCB12175G5	1/2" x 1 3/4" CARRIAGE BOLT	1
7	FSHB12250	1/2" x 2 1/2" SQUARE HEAD BOLT	2
8	FLW12	1/2" LOCKWASHER	3
9	16-35009	SEMI-PNEUMATIC 4" x 12" TIRE	1
10	16-35010	HALF WHEEL	2
11	16-35011	BEARING	1
12	FHB5675G5	5/16" x 3/4" HEX BOLT	7
13	FHN56	5/16" HEX NUT	7
14	FLW56	5/16" LOCKWASHER	7
15	FCB38125G5	3/8" x 1 1/4" CARRIAGE BOLT	2
16	FHN38	3/8" HEX NUT	2
17	FLW38	3/8" LOCKWASHER	2
18	FSHSS3875	3/8" x 3/4" SET SCREW	1



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16-01300 – SHORT PIPE ASSEMBLY, LESS U-BOLT SET, INCLUDES ALL BUT ITEMS 30-33 (FIG.E)

16-02300 – LONG PIPE ASSEMBLY, LESS U-BOLT SET, INCLUDES ALL BUT ITEMS 30-33 (FIG.E)

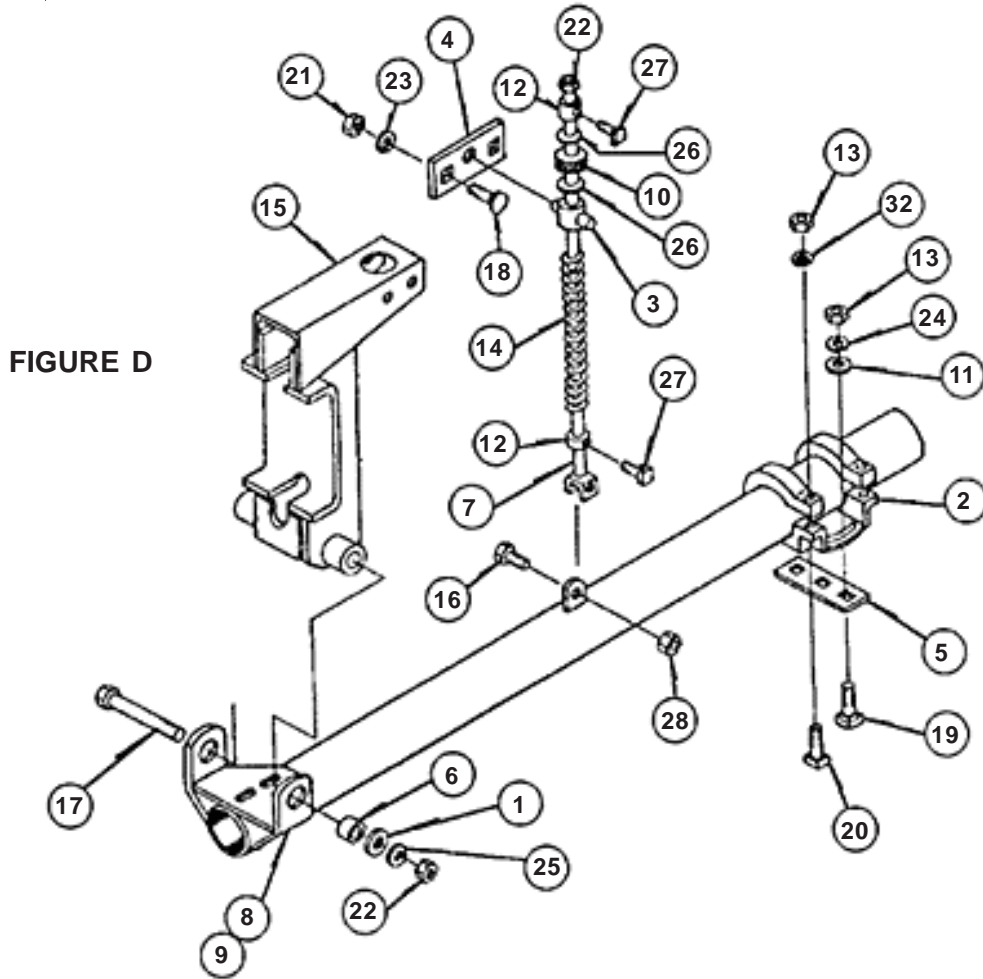
<u>REF.</u>	<u>PART #</u>	<u>DESCRIPTION</u>	<u>REQ.</u>
1	FFW58S	5/8" SPECIAL WASHER	1
2	16-35601	GANG PIVOT CLAMP BODY	1
3	16-35311	CAST STEEL TRUNNION	1
4	16-35312	TRUNNION BRACKET	2
5	16-35602	PIVOT CLAMP GANG SPACER	1
6	16-35313	PIVOT BUSHING	2
7	16-35317	TENSION ROD	1
8	16-00301	SHORT GANG PIPE	1
9	16-00302	LONG GANG PIPE	1
10	16-35315	SPRING BUFFER	1
11	FFW12	1/2" FLATWASHER	2
12	16-35316	ADJUSTABLE COLLAR	2
13	FHN12	1/2" HEX NUT	2
14	16-35314	TENSION ROD SPRING	1
15	16-35318	PIPE SUPPORT BRACKET	1
16	FHB12150G5	1/2" x 1 1/2" HEX BOLT	1
17	FHB58750G5	5/8" x 7 1/2" HEX BOLT	1
18	FCB38100G5	3/8" x 1" CARRIAGE BOLT	4
19	FCB12175G5	1/2" x 1 3/4" CARRIAGE BOLT	2
20	FHB58350G5	5/8" x 3 1/2" HEX BOLT	2
21	FHN38	3/8" HEX BOLT	4
22	FHN58	5/8" HEX BOLT	2
23	FLW38	3/8" LOCKWASHER	4
24	FLW12	1/2" LOCKWASHER	2
25	FLW58	5/8" LOCKWASHER	2
26	FFW58	5/8" FLATWASHER	2
27	FSHSS1275	1/2" x 3/4" SET SCREW	2
28	FYHN12	1/2" NYLOCK HEX NUT	1
29	FSHSS12100	1/2" x 1" SET SCREW	1

16-12800 – U-BOLT SET FOR PIPE GANGS SHOWN ABOVE  
(FOR 7" x 5" TOOL BAR, INCLUDES ITEMS 30, 32 & 33)

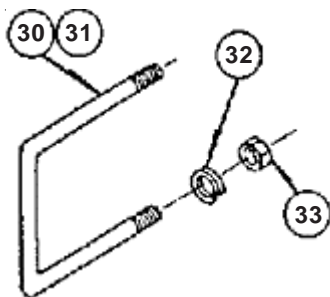
16-12900 – U-BOLT SET FOR PIPE GANGS SHOWN ABOVE  
(FOR 7" x 7" TOOL BAR, INCLUDES ITEMS 31, 32 & 33)

<u>REF.</u>	<u>PART #</u>	<u>DESCRIPTION</u>	<u>REQ.</u>
30	16-01204	7/8" U-BOLT FOR 7" x 5" TOOL BAR	1
31	16-02204	7/8" U-BOLT FOR 7" x 7" TOOLBAR	1
32	FLW78	7/8" LOCKWASHER	2
33	FHNF78	7/8" FINISHED HEX NUT	2

16-01300 - SHORT PIPE ASSEMBLY, LESS U-BOLT SET, INCLUDES ALL BUT ITEMS 30-33 (FIGURE E)  
16-02300 - LONG PIPE ASSEMBLY, LESS U-BOLT SET, INCLUDES ALL BUT ITEMS 30-33 (FIGURE E)



16-12800 - U-BOLT SET FOR PIPE GANGS SHOWN ABOVE  
16-12900 - U-BOLT SET FOR PIPE GANGS SHOWN ABOVE

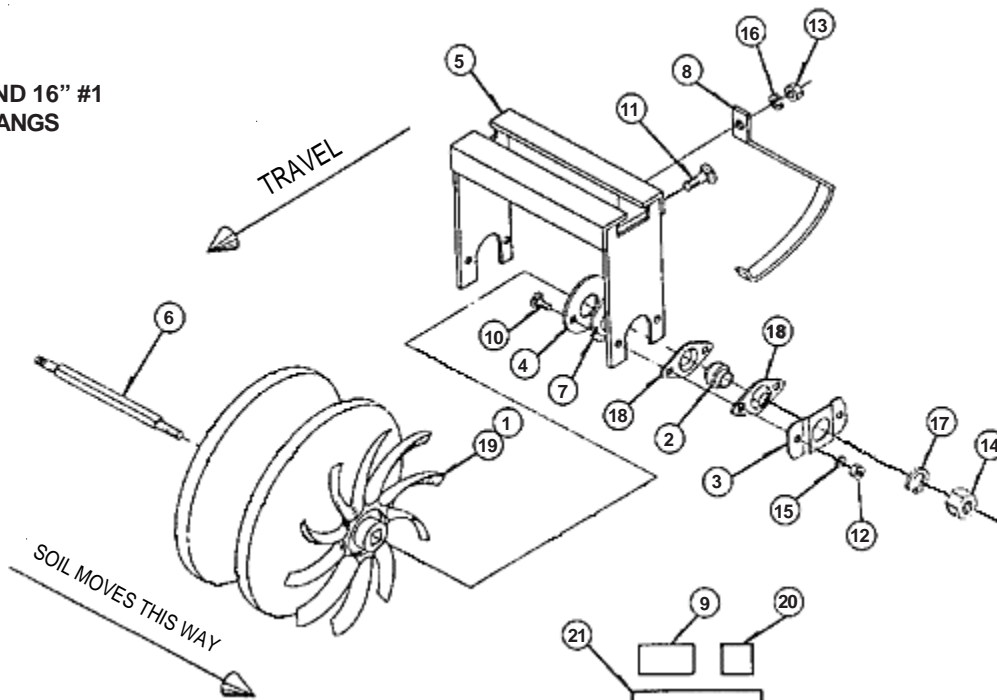


14D-4003 - 14 1/2" #1, 3 SPIDER GANG TUFF KOAT  
14D-4004 - 14 1/2" #1, 4 SPIDER GANG TUFF KOAT  
14D-4005 - 14 1/2" #1, 5 SPIDER GANG TUFF KOAT  
14P-4003 - 14 1/2" #1, 3 SPIDER GANG PLAIN  
14P-4004 - 14 1/2" #1, 4 SPIDER GANG PLAIN  
14P-4005 - 14 1/2" #1, 5 SPIDER GANG PLAIN

16D-4003 - 16" #1, 3 SPIDER GANG TUFF KOAT  
16D-4004 - 16" #1, 4 SPIDER GANG TUFF KOAT  
16D-4005 - 16" #1, 5 SPIDER GANG TUFF KOAT  
16P-4003 - 16" #1, 3 SPIDER GANG PLAIN  
16P-4004 - 16" #1, 4 SPIDER GANG PLAIN  
16P-4005 - 16" #1, 5 SPIDER GANG PLAIN

<u>REF.</u>	<u>PART #</u>	<u>DESCRIPTION</u>	<u>REQ.</u>
1	14P-1451	#1, 14 1/2" PLAIN SPIDER	A/R
	16P-1601	#1, 16" PLAIN SPIDER	A/R
2	16-354021	PEER 205PPB7 15/16" BEARING	2
3	16-35403	OUTER SEAL FOR GANG	2
4	16-35404	INNER BEARING SHIELD	2
5	16-354053	3 SPIDER GANG FORK	1
	16-354054	4 SPIDER GANG FORK	1
	16-354055	5 SPIDER GANG FORK	1
6	16-354063	15/16" AXLE FOR 3 SPIDER GANG	1
	16-354064	15/16" AXLE FOR 4 SPIDER GANG	1
	16-354065	15/16" AXLE FOR 5 SPIDER GANG	1
7	16-35407	INNER SEAL GUARD	2
8	16-35408	CLEANING TINE FOR SPIDER GANGS	A/R
9	16-35420	#1 OR #2 GANG DECAL	2
10	FCB56125G5	5/16" x 1 1/4" CARRIAGE BOLT	4
11	FCB38100G5	3/8" x 1" CARRIAGE BOLT	A/R
12	FHN56	5/16" HEX NUT	4
13	FHN38	3/8" HEX NUT	2
14	FHN78	7/8" HEX NUT	2
15	FLW56	5/16" LOCKWASHER	4
16	FLW38	3/8" LOCKWASHER	2
17	FLW78	7/8" LOCKWASHER	2
18	16-35418	BEARING FLANGE (52 MST)	4
19	14D-1451	#1, 14 1/2" TUFF KOAT SPIDER	A/R
	16D-1601	#1, 16" TUFF KOAT SPIDER	A/R
20	16-35421	TUFF KOAT SPIDER DECAL	2
21	16-35422	ADJUSTING DECAL	1

14 1/2" AND 16" #1  
 SPIDER GANGS

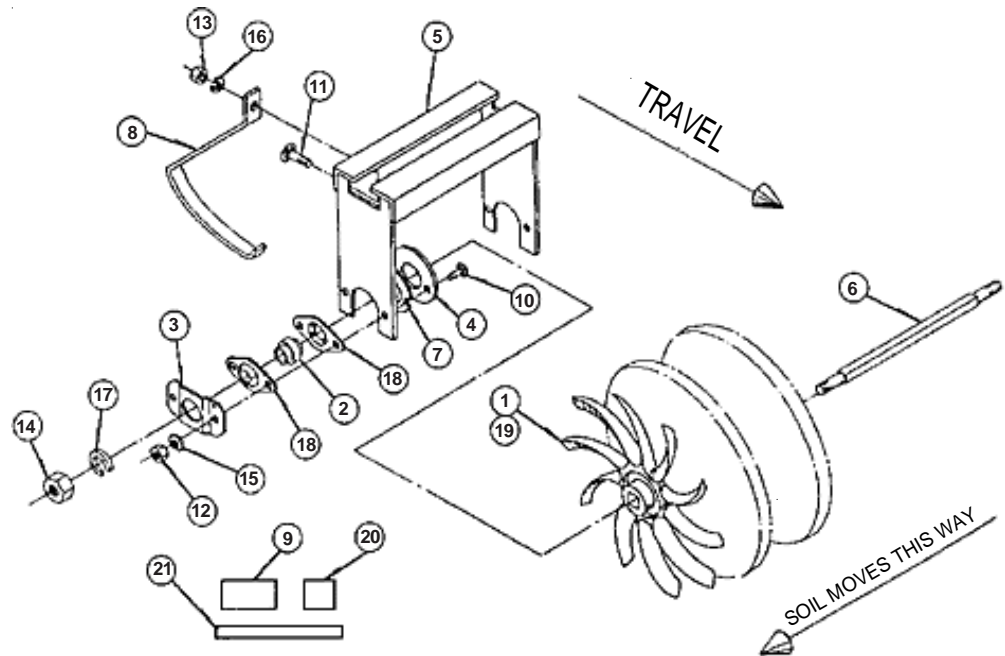


14D-5003 - 14 1/2" #2, 3 SPIDER GANG TUFF KOAT  
14D-5004 - 14 1/2" #2, 4 SPIDER GANG TUFF KOAT  
14D-5005 - 14 1/2" #2, 5 SPIDER GANG TUFF KOAT  
14P-5003 - 14 1/2" #2, 3 SPIDER GANG PLAIN  
14P-5004 - 14 1/2" #2, 4 SPIDER GANG PLAIN  
14P-5005 - 14 1/2" #2, 5 SPIDER GANG PLAIN

16D-5003 - 16" #2, 3 SPIDER GANG TUFF KOAT  
16D-5004 - 16" #2, 4 SPIDER GANG TUFF KOAT  
16D-5005 - 16" #2, 5 SPIDER GANG TUFF KOAT  
16P-5003 - 16" #2, 3 SPIDER GANG PLAIN  
16P-5004 - 16" #2, 4 SPIDER GANG PLAIN  
16P-5005 - 16" #2, 5 SPIDER GANG PLAIN

<u>REF.</u>	<u>PART #</u>	<u>DESCRIPTION</u>	<u>REQ.</u>
1	14P-1452	#2, 14 1/2" PLAIN SPIDER	A/R
	16P-1602	#2, 16" PLAIN SPIDER	A/R
2	16-354021	PEER 205PPB7 15/16" BEARING	2
3	16-35403	OUTER SEAL FOR GANG	2
4	16-35404	INNER BEARING SHIELD	2
5	16-354053	3 SPIDER GANG FORK	1
	16-354054	4 SPIDER GANG FORK	1
	16-354055	5 SPIDER GANG FORK	1
6	16-354063	15/16" AXLE FOR 3 SPIDER GANG	1
	16-354064	15/16" AXLE FOR 4 SPIDER GANG	1
	16-354065	15/16" AXLE FOR 5 SPIDER GANG	1
7	16-35407	INNER SEAL GUARD	2
8	16-35408	CLEANING TINE FOR SPIDER GANGS	A/R
9	16-35420	#1 OR #2 GANG DECAL	2
10	FCB56125G5	5/16" x 1 1/4" CARRIAGE BOLT	4
11	FCB38100G5	3/8" x 1" CARRIAGE BOLT	A/R
12	FHN56	5/16" HEX NUT	4
13	FHN38	3/8" HEX NUT	2
14	FHN78	7/8" HEX NUT	2
15	FLW 56	5/16" LOCKWASHER	4
16	FLW 38	3/8" LOCKWASHER	2
17	FLW 78	7/8" LOCKWASHER	2
18	16-35418	BEARING FLANGE (52 MST)	4
19	14D-1452	#2, 14 1/2" TUFF KOAT SPIDER	A/R
	16D-1602	#2, 16" TUFF KOAT SPIDER	A/R
20	16-35421	TUFF KOAT SPIDER DECAL	2
21	16-35422	ADJUSTING DECAL	1

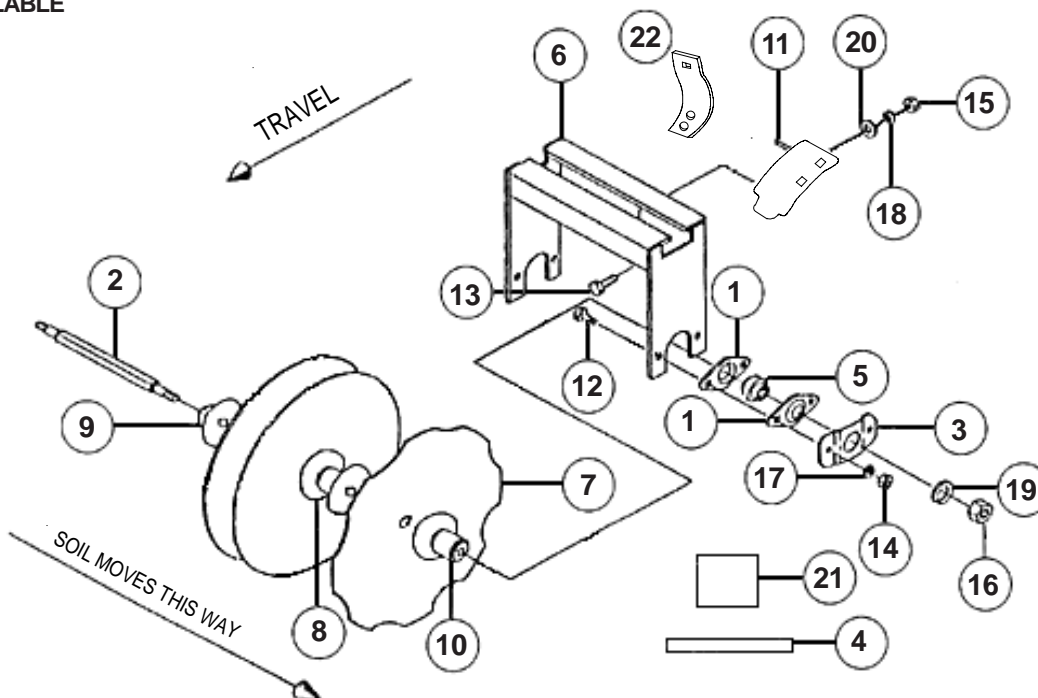
**14 1/2" AND 16" #2  
 SPIDER GANGS**



16S-4003 - #1, 3 DISC GANG WITH SMOOTH BLADES  
16N-4003 - #1, 3 DISC GANG WITH NOTCHED BLADES

<u>REF.</u>	<u>PART #</u>	<u>DESCRIPTION</u>	<u>REQ.</u>
1	16-35418	BEARING FLANGE (52 MST)	4
2	16-354063	15/16" AXLE FOR 3 SPIDER GANG	1
3	16-35403	OUTER SEAL FOR GANG	2
4	16-35422	ADJUSTING GANG DECAL	1
5	16-354021	PEER 205PPB7 15/16" BEARING	2
6	16-315063	CULTIVATOR 3 BLADE DISC FRAME	1
7	DS1630	16" SMOOTH DISC BLADE	3
	DN1630	16" NOTCHED DISC BLADE	3
8	16-31303	DOUBLE SPACER SPOOL	2
9	16-31304	CONCAVE HALF SPOOL	1
10	16-31305	CONVEX HALF SPOOL	1
11	16-313081	SCRAPER FOR #1 DISC GANG	1
12	FCB56125G5	5/16" x 1 1/4" CARRIAGE BOLT	4
13	FHB38100G5	3/8" x 1" HEX BOLT	2
14	FHN56	5/16" HEX NUT	4
15	FHN38	3/8" HEX NUT	2
16	FHN78	7/8" HEX NUT	2
17	FLW56	5/16" LOCKWASHER	4
18	FLW38	3/8" LOCKWASHER	2
19	FLW78	7/8" LOCKWASHER	2
20	FFW38	3/8" FLATWASHER	2
21	16-35420	GANG DECAL	2
22	16-313082B	DISC SCRAPER GANG HANGER	2

**5 BLADE GANGS ALSO  
 AVAILABLE**



16S-5003 - #2, 3 DISC GANG WITH SMOOTH BLADES  
16N-5003 - #2, 3 DISC GANG WITH NOTCHED BLADES

<u>REF.</u>	<u>PART #</u>	<u>DESCRIPTION</u>	<u>REQ.</u>
1	16-35418	BEARING FLANGE (52 MST)	4
2	16-354063	15/16" AXLE FOR 3 SPIDER GANG	1
3	16-35403	OUTER SEAL FOR GANG	2
4	16-35422	ADJUSTING GANG DECAL	1
5	16-354021	PEER 205PPB7 15/16" BEARING	2
6	16-315063	CULTIVATOR 3 BLADE DISC FRAME	1
7	DS1630	16" SMOOTH DISC BLADE	3
	DN1630	16" NOTCHED DISC BLADE	3
8	16-31303	DOUBLE SPACER SPOOL	2
9	16-31304	CONCAVE HALF SPOOL	1
10	16-31305	CONVEX HALF SPOOL	1
11	16-313082	SCRAPER FOR #2 DISC GANG	1
12	FCB56125G5	5/16" x 1 1/4" CARRIAGE BOLT	4
13	FHB38100G5	3/8" x 1" HEX BOLT	2
14	FHN56	5/16" HEX NUT	4
15	FHN38	3/8" HEX NUT	2
16	FHN78	7/8" HEX NUT	2
17	FLW56	5/16" LOCKWASHER	4
18	FLW38	3/8" LOCKWASHER	2
19	FLW78	7/8" LOCKWASHER	2
20	FFW38	3/8" FLATWASHER	2
21	16-35420	GANG DECAL	2
22	16-313082B	DISC SCRAPER GANG HANGER	2

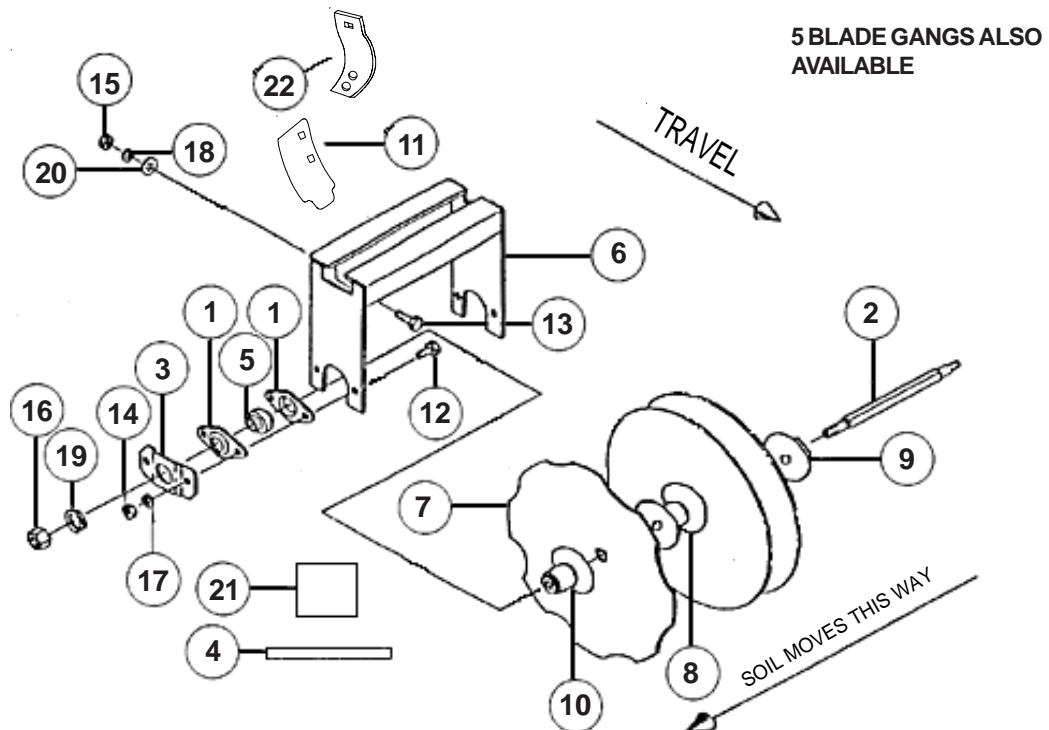


FIGURE F

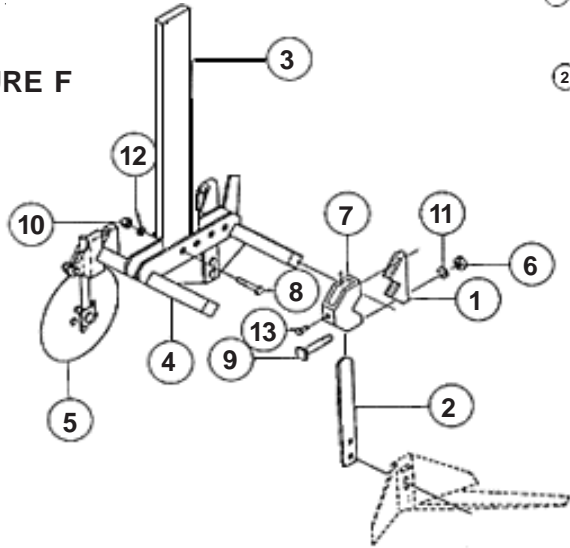


FIGURE F1

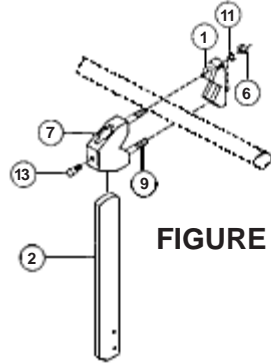


FIGURE G2

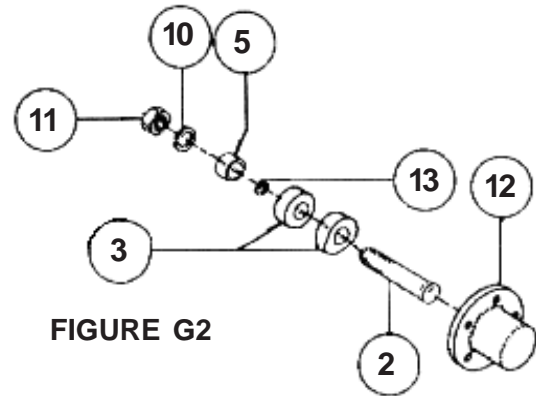


FIGURE G1

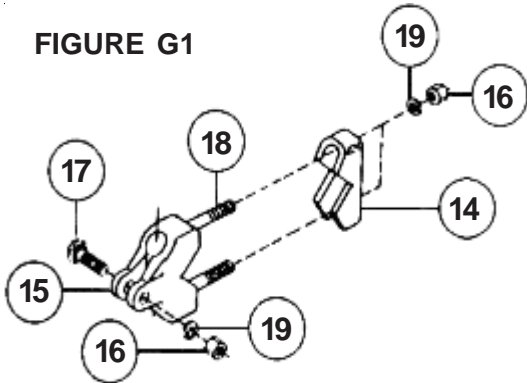
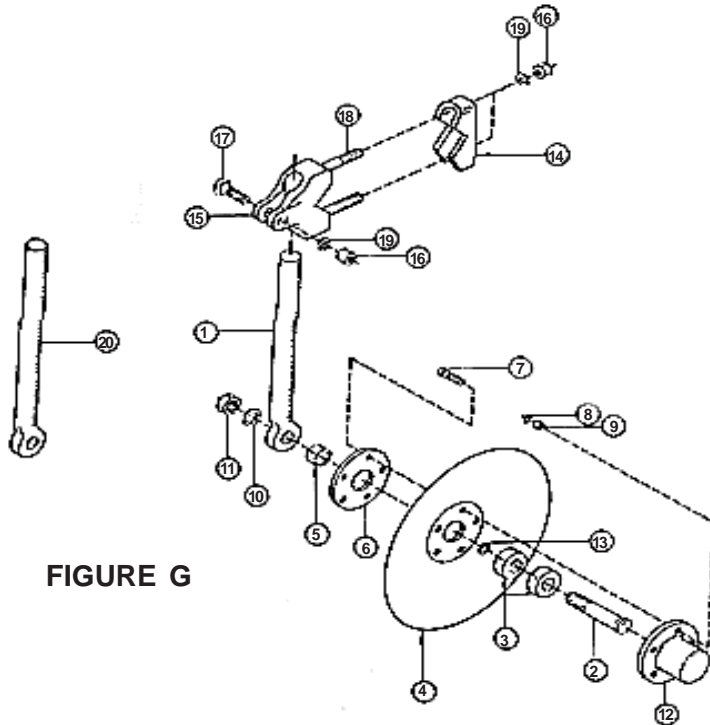


FIGURE G





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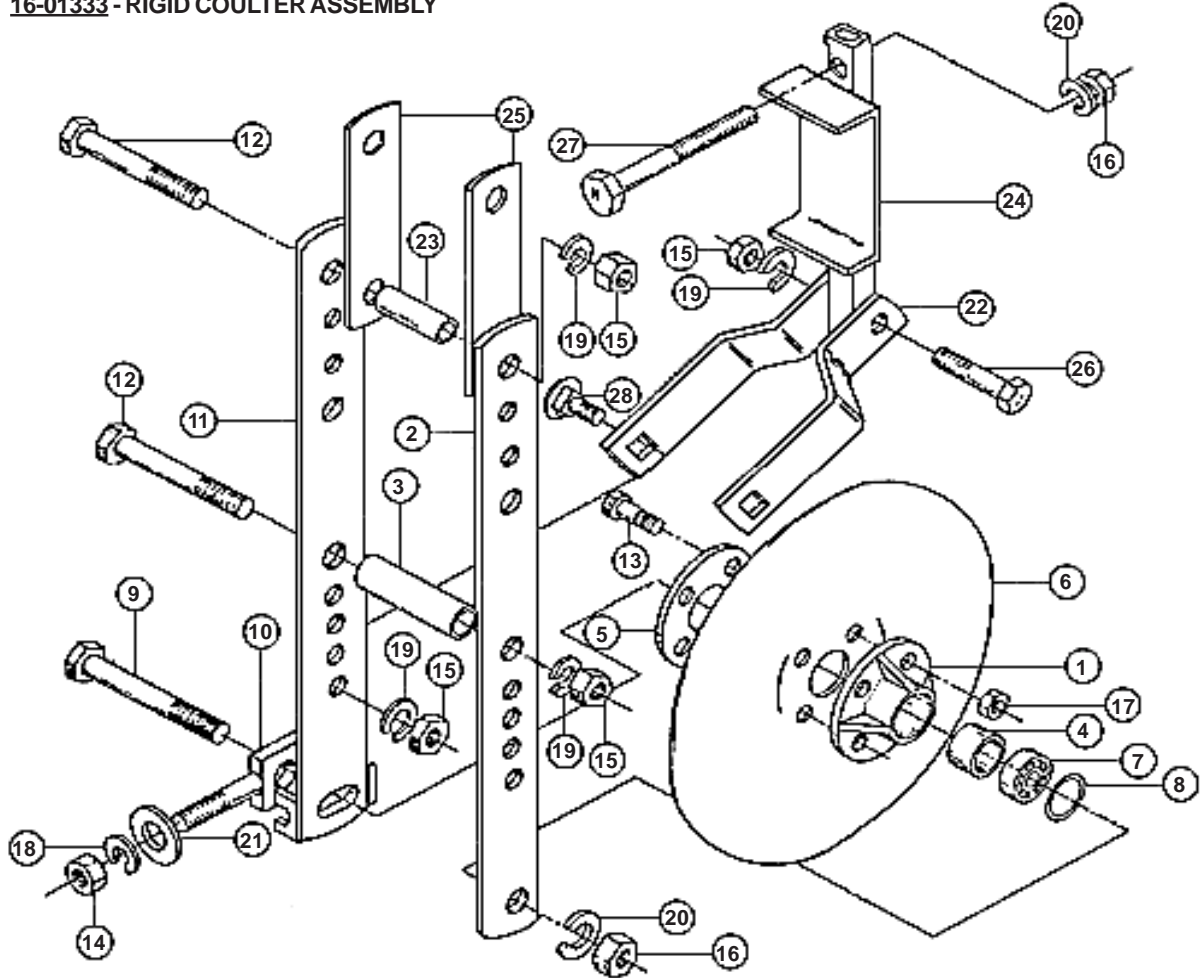
- 16-00660 – DISC WEEDER ASSEMBLY COMPLETE (FIGURE F)  
16-00604 – HOE SHANK COMPLETE (INC: 1,6,7,9,11,13) (FIGURE F1)  
16-00900 – HOE SHANK ASSEMBLY (FIGURE F1)

<u>REF.</u>	<u>PART #</u>	<u>DESCRIPTION</u>	<u>REQ.</u>
1	16-35701	CLAMP BRACKET	2
2	16-00602	HOE SHANK ½" x 2" x 15"	2
3	16-00603	TOOL BAR SHANK (1" x 3")	1
4	16-00606	DISC WEEDER LINK ASSEMBLY	1
5	16-00600I	DISC WEEDER ASSEMBLY (SEE FIG G)	2
6	FHN12	½" HEX NUT	4
7	16-00604C	CLAMP BODY FOR HOE SHANK	2
8	FHB58250G5	5/8" x 2 ½" HEX BOLT	2
9	FSHB12250	½" x 2 ½" SQUARE HEAD BOLT	4
10	FHN58	5/8" HEX NUT	2
11	FLW12	½" LOCKWASHER	4
12	FLW58	5/8" LOCKWASHER	2
13	FSHSS1275	½" x ¾" SET SCREW	2

- 16-00660 – DISC WEEDER ASSEMBLY COMPLETE W/ROUND SHANK, 12" DISC BLADE & HUB (FIG G)  
16-00601 – DISC WEEDER CLAMP COMPLETE FOR ROUND SHANK (FIG. G1)  
16-00661 – DISC ASSEMBLY LESS CLAMP (FIG. G, LESS G1)  
16-00662 – DISC ASSEMBLY LESS SHANK & CLAMP (16-00668 AND 16-001230)  
16-00668 – HUB ASSEMBLY COMPLETE (FIG. G2)

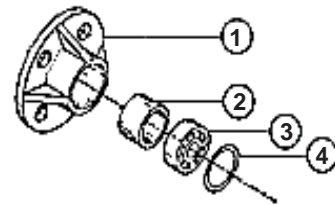
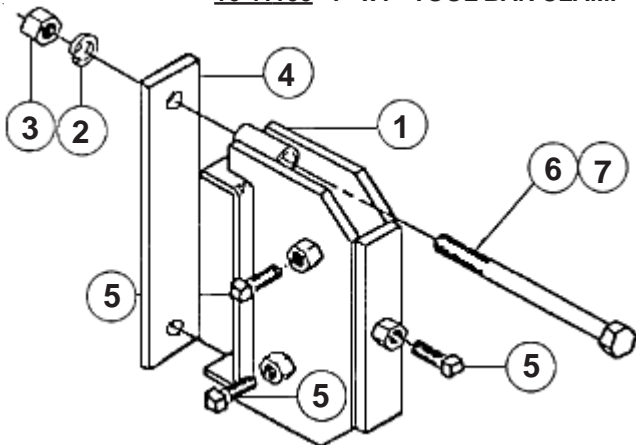
<u>REF.</u>	<u>PART #</u>	<u>DESCRIPTION</u>	<u>REQ.</u>
1	16-00605	DISC SHANK, STANDARD	1
2	16-00609	DISC AXLE	1
3	16-00610	BEARING	2
4	16-001230	12" WEEDER BLADE W/5 BOLT PATTERN	1
5	16-00611	BEARING SPACER	1
6	16-00612	DISC BLADE BACKING PLATE	4
7	FHB56100G5	5/16" x 1" HEX BOLT	5
8	FLW56	5/16" LOCKWASHER	5
9	FHN56	5/16" HEX NUT	5
10	FLW34	¾" LOCKWASHER	1
11	FJN34	¾" JAM NUT	1
12	16-00608	MACHINED HUB CASTING ONLY	1
13	16-00613	O-RING	1
14	16-35701	CLAMP BRACKET	1
15	16-35601R	ROW GANG CLAMP	1
16	FHN12	½" HEX NUT	3
17	FCB12175G5	½" x 1 ¾" CARRIAGE BOLT	1
18	FSHB12250	½" x 2 ½" SQUARE HEAD BOLT	2
19	FLW12	½" LOCKWASHER	3
20	16-00705	DISC SHANK, LONG	1

16-01333 - RIGID COULTER ASSEMBLY



16-01100 - 7" X 5" TOOL BAR CLAMP

16-11100 - 7" x 7" TOOL BAR CLAMP



16-01332 - HUB ASSEMBLY FOR RIGID COULTER ASSEMBLY



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16-01333 – RIGID COULTER ASSEMBLY

<u>REF.</u>	<u>PART #</u>	<u>DESCRIPTION</u>	<u>REQ.</u>
1	16-01301	RIGID COULTER HUB CASTING	1
2	16-01302	COULTER ARM	1
3	16-01303	ARM SPACER	1
4	16-01304	BEARING SPACER	1
5	16-01306	BOLTING FLANGE	1
6	16-002060	20" x 6mm RIGID COULTER DISC	1
7	16-01308	HUB BEARING 205PP9	2
8	16-01309	RETAINING RING	2
9	16-01310	COULTER AXLE	1
10	16-01311	COULTER PIVOT	1
11	16-01312	COULTER ARM WITH EARS	1
12	FHB58550G5	5/8" x 5 1/2" HEX BOLT	2
13	FHB38125G5	3/8" x 1 1/4" HEX BOLT	4
14	FHN12	1/2" HEX NUT	2
15	FHN58	5/8" HEX NUT	5
16	FHN34	3/4" HEX NUT	3
17	FHN38	3/8" HEX NUT	4
18	FLW12	1/2" LOCKWASHER	2
19	FLW58	5/8" LOCKWASHER	5
20	FLW34	3/4" LOCKWASHER	3
21	FFW12	1/2" FLATWASHER	2
22	16-01323	RIGID COULTER BRACE	2
23	16-01324	BUSHING	1
24	16-01325	BRACKET	1
25	16-01326	SHIM	2
26	FHB58275G5	5/8" x 2 3/4" HEX BOLT	1
27	FHB34850G5	3/4" x 8 1/2" HEX BOLT	2
28	FCB58200G5	5/8" x 2" CARRIAGE BOLT	2

16-01100 – TOOL BAR CLAMP FOR 7" x 5" FOR 1" x 2 1/2" & 3"

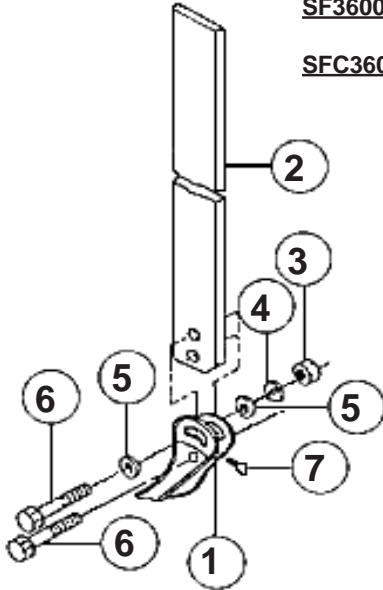
16-11100 – TOOL BAR CLAMP FOR 7" x 7" FOR 1" x 3"

<u>REF.</u>	<u>PART #</u>	<u>DESCRIPTION</u>	<u>REQ.</u>
1	Z-70	7" CLAMP BODY COMPLETE	1
2	FLW34	3/4" LOCKWASHER	2
3	FHN34	3/4" HEX NUT	2
4	16-01104	CLAMP STRAP	1
5	FSHSS58200	5/8" x 2" SQUARE HEAD SET SCREW	1
6	FHB34700G5	3/4" x 7" HEX BOLT	2
7	FHB341000G5	3/4" x 9" HEX BOLT	2
8	FSHSS58150	5/8" x 1 1/2" SQUARE HEAD SET SCREW	2
9	FSN58	5/8" SQUARE NUT	3

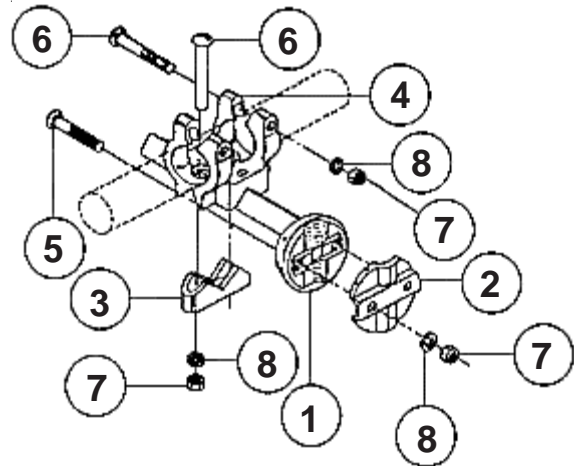
16-01332 – HUB ASSEMBLY FOR RIGID COULTER ASSEMBLY

<u>REF.</u>	<u>PART #</u>	<u>DESCRIPTION</u>	<u>REQ.</u>
1	16-01301	HUB CASTING ONLY	1
2	16-01304	BEARING SPACER	1
3	16-01308	HUB BEARING	2
4	16-01309	RETAINING RING	2

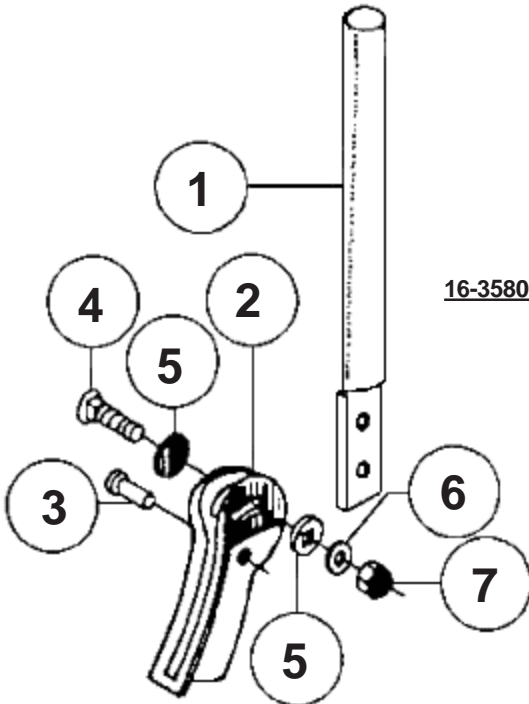
**SF3600 - STANDARD 1" x 3" x 36" WITH  
 ADJUSTABLE FOOTPIECE**  
**SFC3600 - STANDARD 1" x 3" x 36" WITH  
 ADJUSTABLE CAST FOOTPIECE**



**16-35700 - STANDARD SUPPORT  
 ASSEMBLY**



**16-35800 - RIGID SHANK ASSEMBLY**





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SF3600 – 1" x 3" x 36" STANDARD W/ADJUSTABLE FP10 FOOTPIECE  
 SFC3600 – 1" x 3" x 36" STANDARD W/ADJUSTABLE CAST FPC10 FOOTPIECE

<u>REF.</u>	<u>PART #</u>	<u>DESCRIPTION</u>	<u>REQ.</u>
1	FP10	ADJUST. FABRICATED FOOTPIECE	1
	FPC10	ADJUST. CAST FOOTPIECE	1
2	S3036	1" x 3" x 36" STRAIGHT SHANK	1
3	FHN58	5/8" HEX NUT	2
4	FLW58	5/8" LOCKWASHER	2
5	FFW58	5/8" FLATWASHER	2
6	FHB58300G5	5/8" x 3" HEX BOLT	1
7	FSHSS58200	5/8" x 2" SQUARE HEAD SET SCREW	1
8	FSN58	5/8" SQUARE NUT	1
9	FHB58250G5	5/8" x 2 1/2" HEX BOLT	1

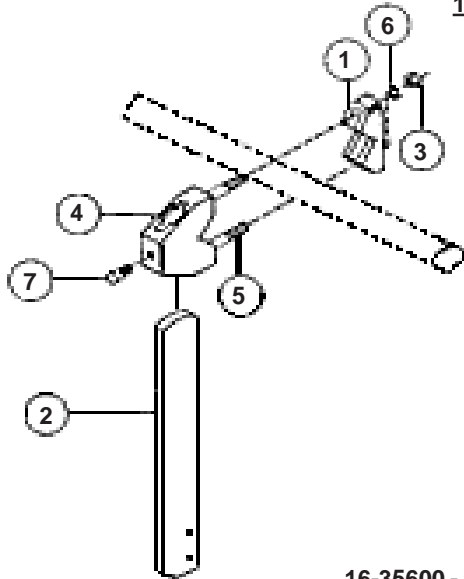
16-35700 – STANDARD SUPPORT BUNDLE

<u>REF.</u>	<u>PART #</u>	<u>DESCRIPTION</u>	<u>REQ.</u>
1	16-35703	SHANK BRACKET	1
2	16-35702	SHANK CLAMP	1
3	16-35701	CLAMP BRACKET	1
4	16-35704	SWEEP CLAMP	1
5	FCB12300G5	1/2" x 3" CARRIAGE BOLT	2
6	FCB12400G5	1/2" x 4" CARRIAGE BOLT	4
7	FHN12	1/2" HEX NUT	6
8	FLW12	1/2" LOCKWASHER	6

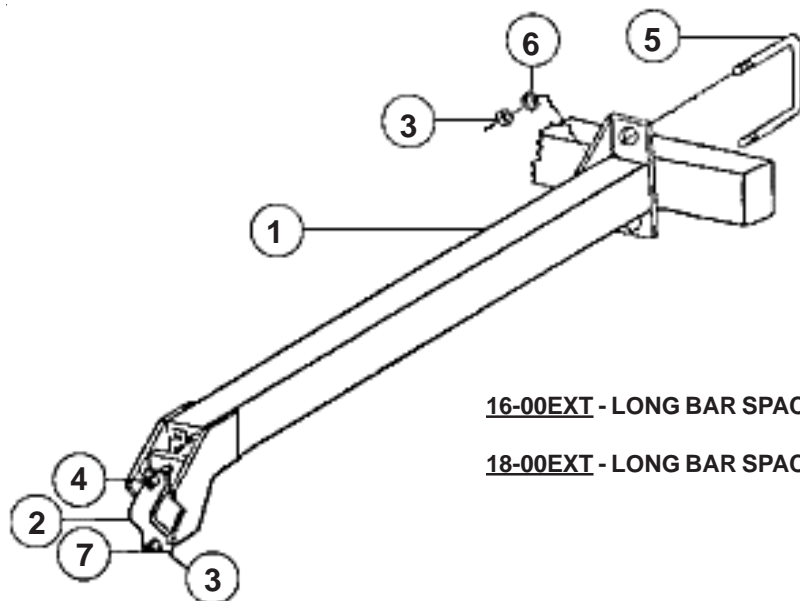
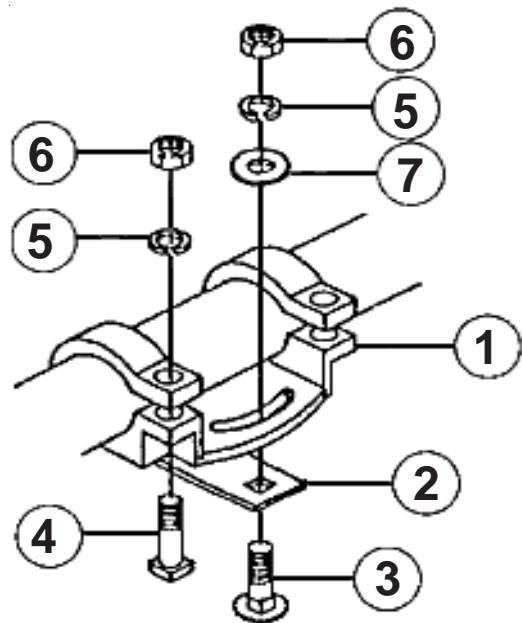
16-35800 – RIGID SHANK ASSEMBLY

<u>REF.</u>	<u>PART #</u>	<u>DESCRIPTION</u>	<u>REQ.</u>
1	16-35801	SWEEP SHANK	1
2	16-35802	FOOTPIECE	1
3	FHB12200G5	1/2" x 2" HEX BOLT	1
4	FCB12250G5	1/2" x 2 1/2" CARRIAGE BOLT	1
5	16-35805	RACHET WASHER W/EAR	2
6	FLW12	1/2" LOCKWASHER	2
7	FHN12	1/2" HEX NUT	2

16-35600 - HOE SHANK ASSEMBLY  
 LESS CLAMP



16-35600 - PIVOT CLAMP ASSEMBLY



16-00EXT - LONG BAR SPACER (7" x 5" TO 2 1/4")

18-00EXT - LONG BAR SPACER (7" x 7" TO 2 1/4")



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16-00900 – HOE SHANK ASSEMBLY LESS CLAMP

<u>REF.</u>	<u>PART #</u>	<u>DESCRIPTION</u>	<u>REQ.</u>
1	16-35701	CLAMP BRACKET	1
2	16-00602	HOE SHANK ½" x 2" x 15"	1
3	FHN12	½" HEX NUT	2
4	16-00604C	CLAMP BODY	1
5	FSHB12250	½" x 2 ½" SQUARE HEAD BOLT	2
6	FLW12	1/2" LOCKWASHER	2
7	FSHSS1275	½" x ¾" SET SCREW	1

16-35600 – PIVOT CLAMP ASSEMBLY

<u>REF.</u>	<u>PART #</u>	<u>DESCRIPTION</u>	<u>REQ.</u>
1	16-35601	PIVOT CLAMP BODY	1
2	16-35602	PIVOT CLAMP GANG SPACER	1
3	FCB12175G5	½" x 1 ¾" CARRIAGE BOLT	2
4	FSHB12350	½" x 3 ½" SQUARE HEAD BOLT	2
5	FLW12	½" LOCKWASHER	2
6	FHN12	½" HEX NUT	2
7	FFW12	½" FLATWASHER	2
8	FSHSS12100	½" x 1" SET SCREW	1
9	FHB58350G5	5/8" x 3 ½" HEX BOLT	2
10	FHN58	5/8" HEX NUT	2
11	FLW58	5/8" LOCKWASHER	2

16-00EXT – LONG BAR SPACER FOR 7" x 5" TOOL BAR  
 18-00EXT – LONG BAR SPACER FOR 7" x 7" TOOL BAR

<u>REF.</u>	<u>PART #</u>	<u>DESCRIPTION</u>	<u>REQ.</u>
1	16-35133	MAIN BAR SPACER FRAME	1
2	342SH	TOOL BAR STRAP ¾" x 2"	1
3	FHNF78	7/8" FINISHED HEX NUT	2
4	FHB78550G5	7/8" x 5 ½" HEX BOLT	2
5	16-00204	7/8" U BOLT FOR 7" x 5" TOOL BAR	1
	16-03204	7/8" U BOLT FOR 7" x 7" TOOL BAR	1
6	FLW78	7/8" LOCKWASHER	4
7	FHN78	7/8" HEX NUT	2

- 16-00AUX – AUXILIARY TOOL BAR ADAPTER (7" x 5")  
 USE 16-00AUX FOR ATTACHING AN AUXILIARY TOOL BAR (2 ¼" DIAMOND) IN FRONT OF THE 7" x 5" OR 7" x 7" MAIN TOOL BAR, OR WHEN NEEDING TO ATTACH CLAMPS AND STANDARDS IN FRONT OF THE MAIN BAR.
- 18-00AUX – AUXILIARY TOOL BAR ADAPTER (7" x 7")  
 SAME AS 16-00AUX EXCEPT IT FITS 7" x 7" TOOL BAR

<u>REF.</u>	<u>PART #</u>	<u>DESCRIPTION</u>	<u>REQ.</u>
1	16-00AUX	AUXILIARY ADAPTER MAIN FRAME	1
2	16-35132	CLAMP STRAP	1
3	342SH	TOOL BAR STRAP	1
4	FHB78500G5	7/8" x 5" HEX BOLT	2
5	FHN78	7/8" HEX NUT	2
6	FLW78	7/8" LOCKWASHER	2
7	FHB34800G5	¾" x 8" HEX BOLT (FOR 7" x 5" BAR)	2
	FHB341000G5	¾" x 10" HEX BOLT (FOR 7" x 7" BAR)	2
8	FHN34	¾" HEX NUT	2
9	FLW34	¾" LOCKWASHER	2

