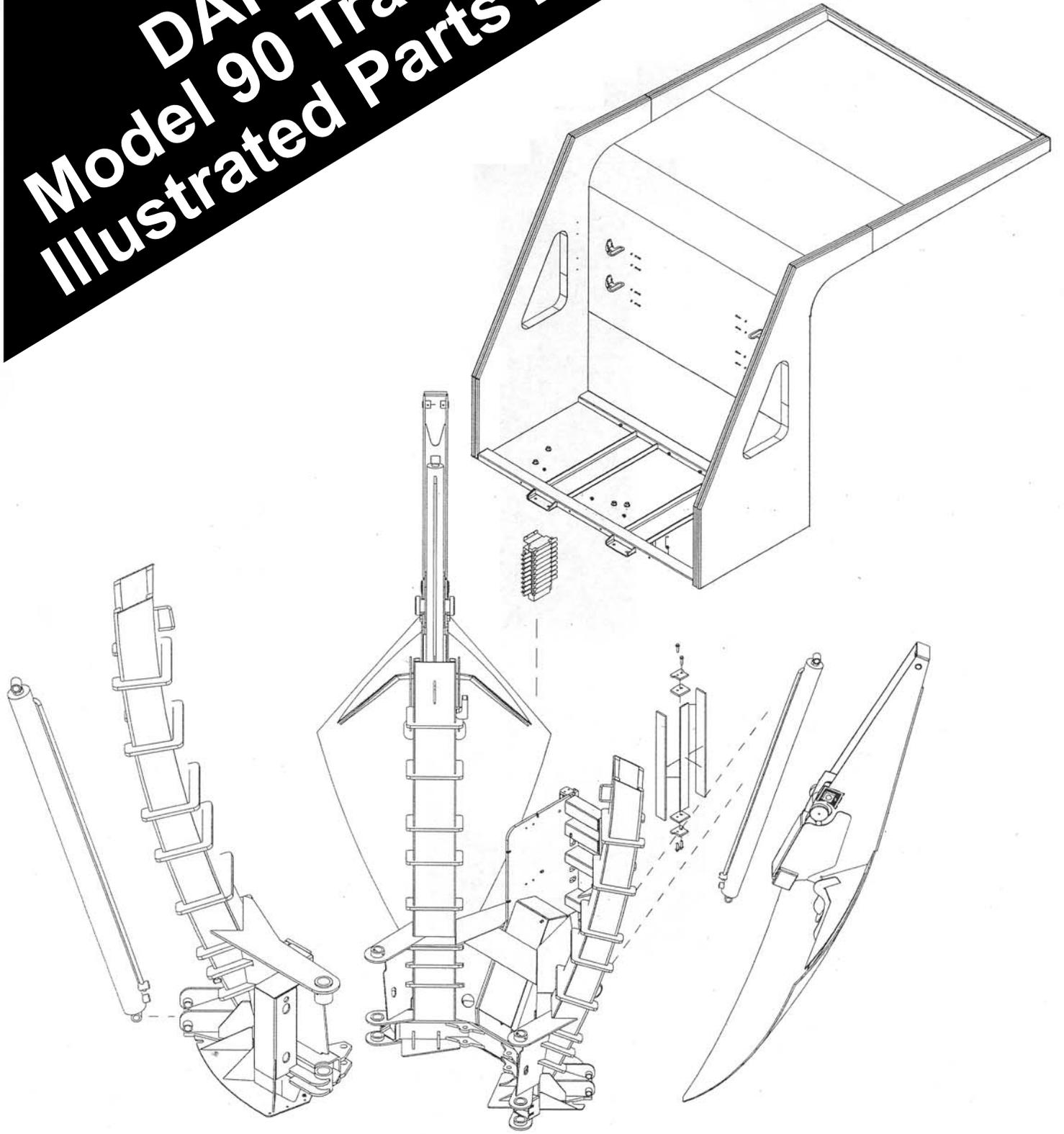


DAKOTA™ Model 90 Transplanter Illustrated Parts Manual



INTRODUCTION

To ensure optimum performance and safety, always purchase genuine **DAKOTA** replacement parts and accessories. NEVER USE “WILL-FIT” REPLACEMENT PARTS AND ACCESSORIES MADE BY OTHER MANUFACTURERS. Using either inappropriate or unapproved replacement parts and accessories may result in progressive damage to the Transplanter and also voids the warranty. Right and left-hand sides are determined by sitting in the driver’s seat of the truck.

This manual provides a listing to the parts and assemblies that are available as replacement parts. For the most part, common hardware is not listed in this manual. Be sure, however, that when replacement of hardware is necessary, to replace with the same length, diameter, and grade. Quantities listed on each page are not machine quantities, but quantities for the particular assembly being illustrated.

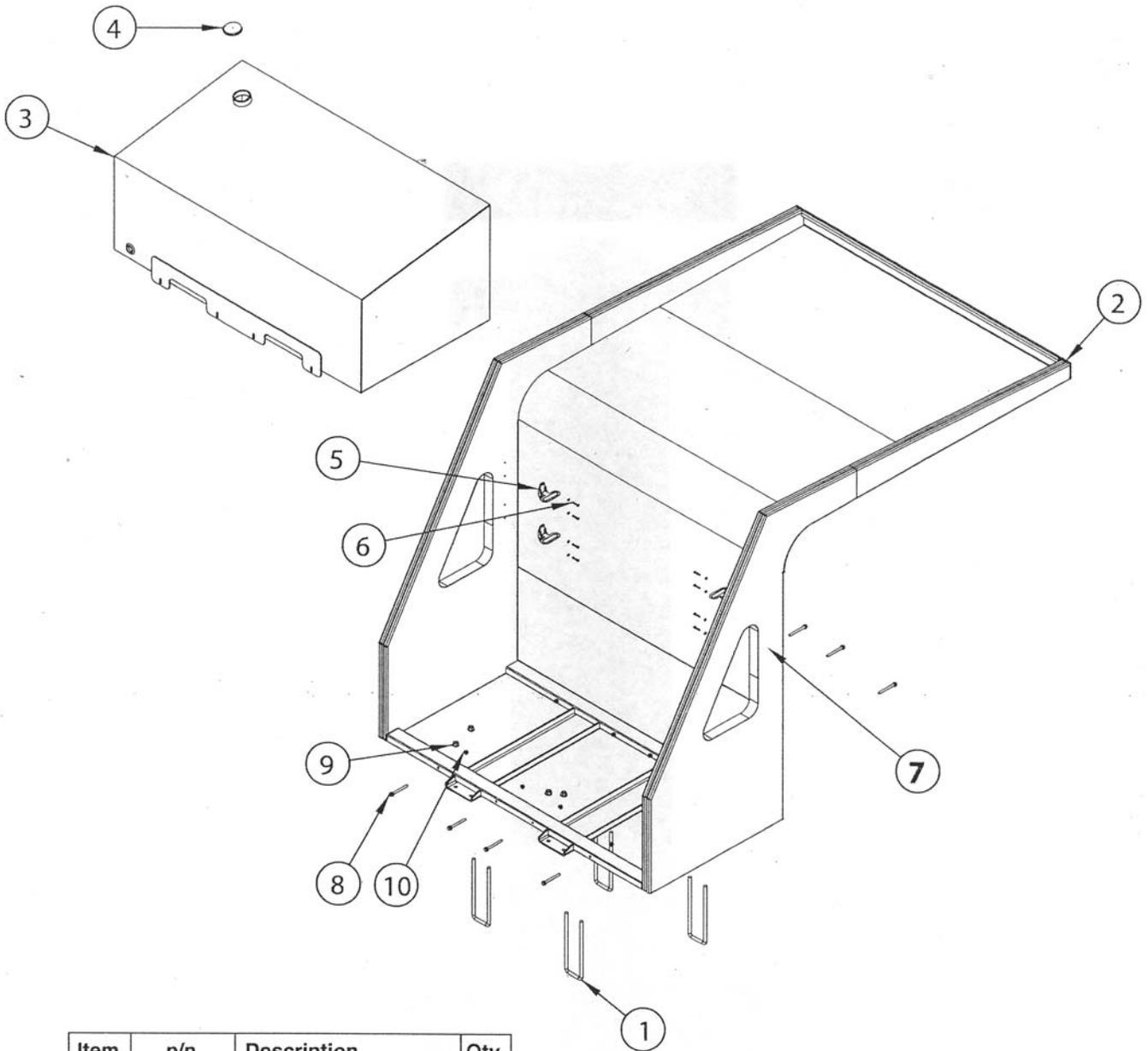
The illustrations used in this Parts manual are for reference to replacement parts only. This manual is not to be used for assembly. If in need of replacement parts or in need of a replacement part not called out in this manual, contact the Parts Department at:

Dakota Peat & Equipment
833 Gateway Drive NE
East Grand Forks, Minnesota 56721
1 800-477-8415

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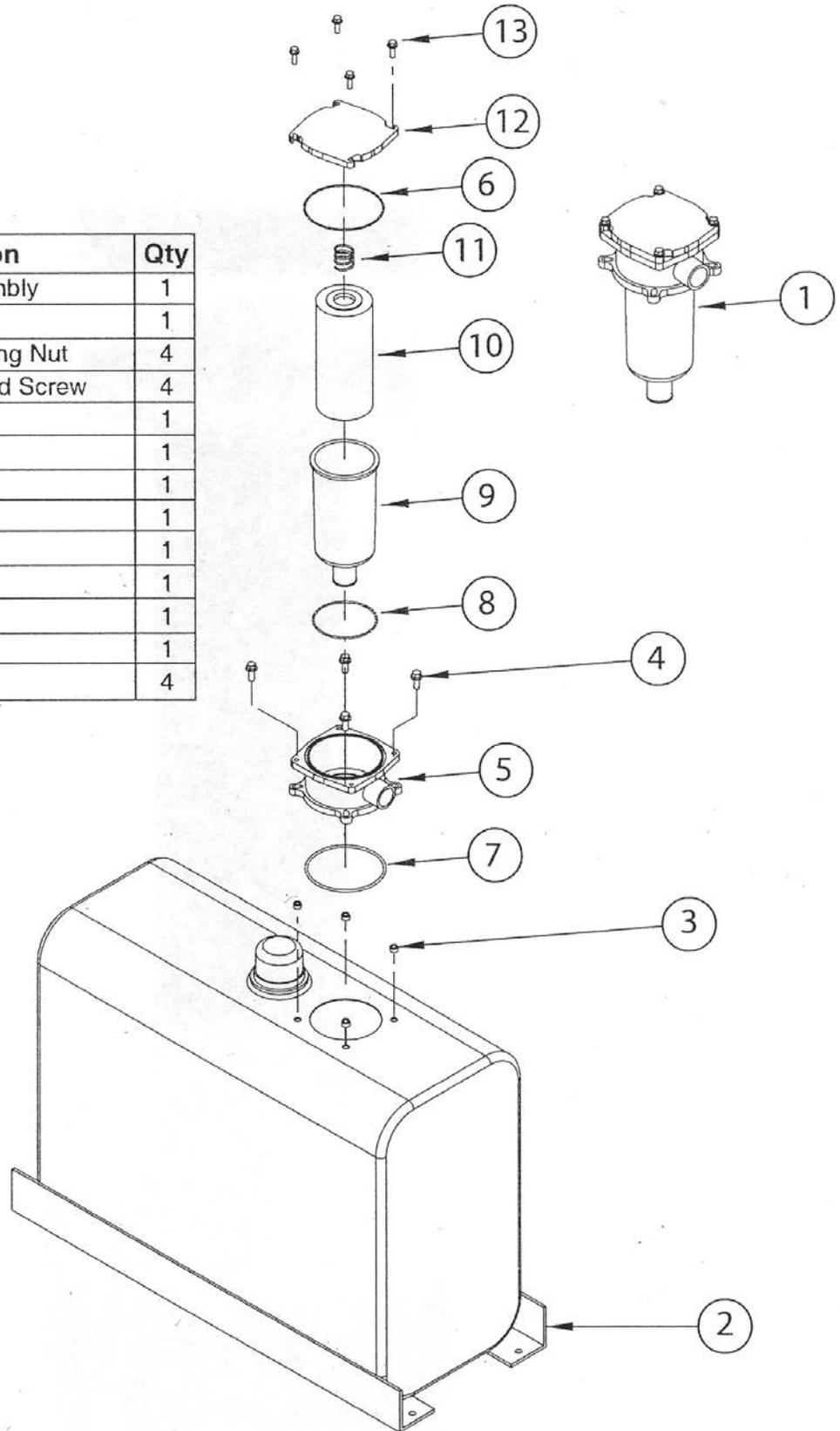
CAB GUARD



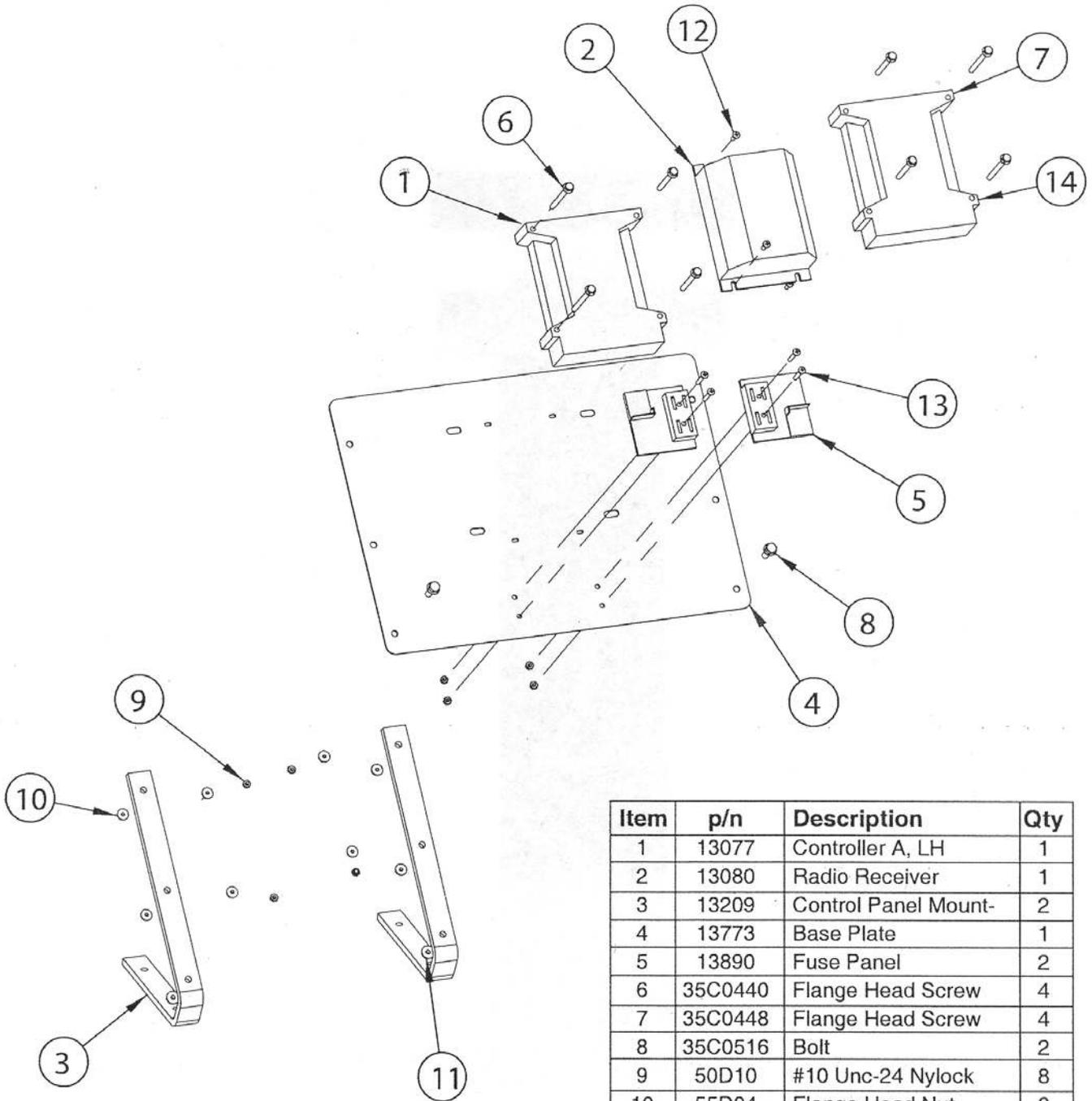
Item	p/n	Description	Qty
1	13410	U-Bolt	4
2	13647	Cab Guard	1
3	13667	Water Tank	1
4	13998	Cap	1
5	14018	Step	3
6	18C524	Bolt	8
7	25E15	Washer	8
8	35C0880	Flange Head Screw	8
9	83D12	Nut	8
10	89D08	Flange Head Nut	8

HYDRAULIC TANK & FILTER ASSEMBLY

Item	p/n	Description	Qty
1	13611	Filter Assembly	1
2	13681	Reservoir	1
3	13792	Self-Clinching Nut	4
4	35C0616	Flange Head Screw	4
5	14077	Mount	1
6	14078	O-Ring	1
7	14079	O-Ring	1
8	14080	O-Ring	1
9	14081	Canister	1
10	14082	Filter	1
11	14083	Spring	1
12	14084	Cap	1
13	35C0516	Bolt	4

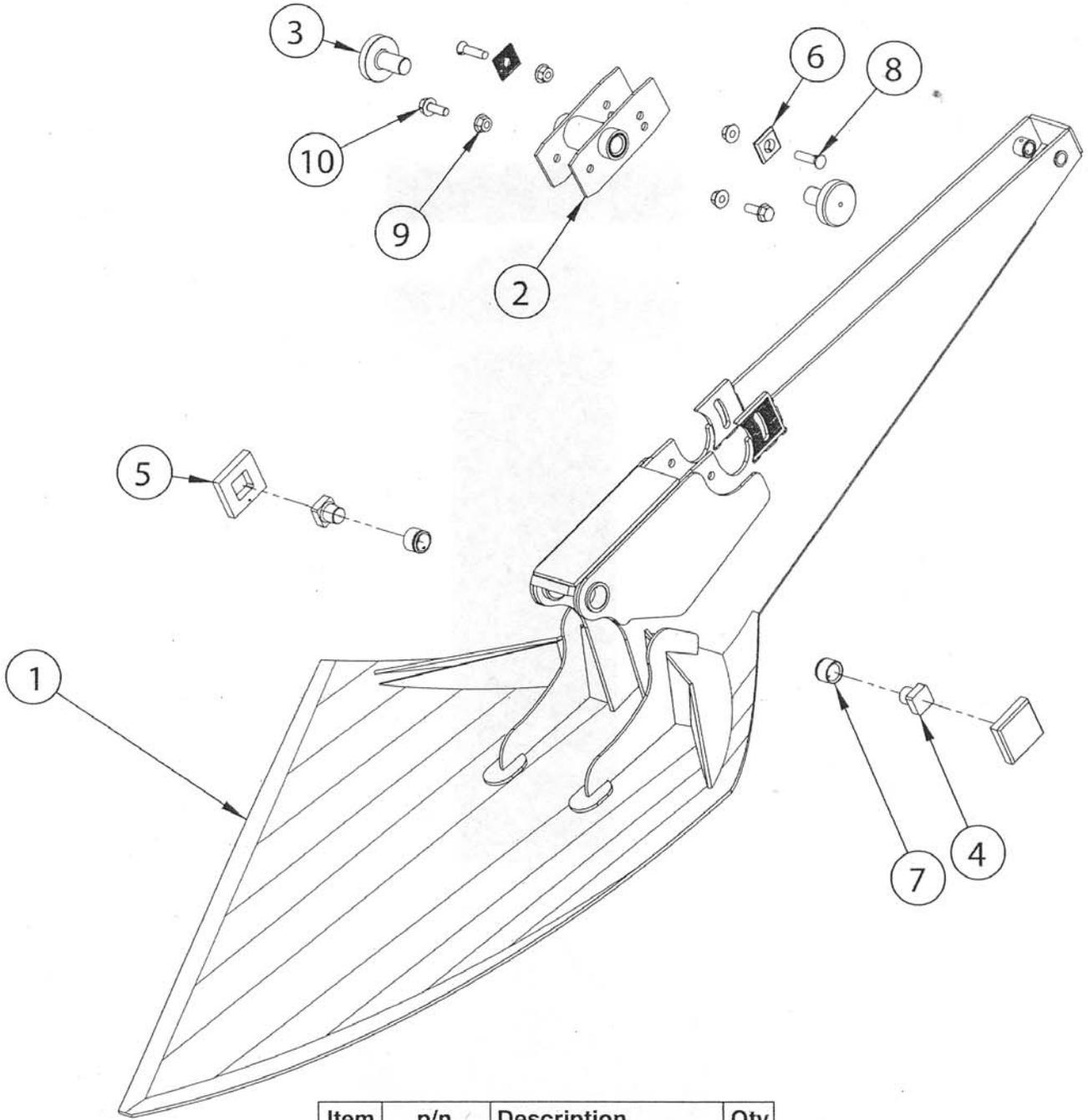


CONTROLLER



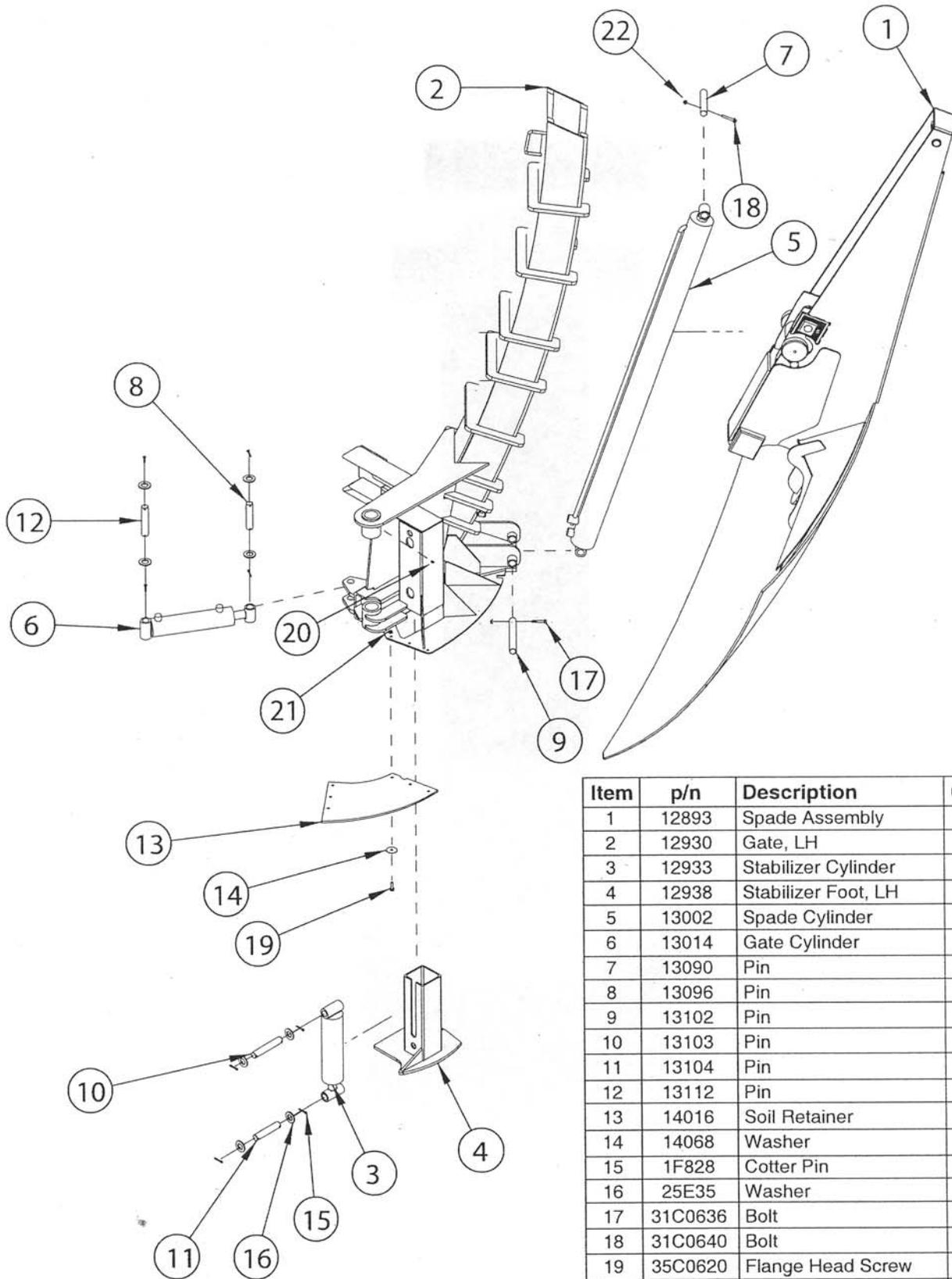
Item	p/n	Description	Qty
1	13077	Controller A, LH	1
2	13080	Radio Receiver	1
3	13209	Control Panel Mount-	2
4	13773	Base Plate	1
5	13890	Fuse Panel	2
6	35C0440	Flange Head Screw	4
7	35C0448	Flange Head Screw	4
8	35C0516	Bolt	2
9	50D10	#10 Unc-24 Nylock	8
10	55D04	Flange Head Nut	8
11	55D05	Flange Head Nut	2
12	87G1010	Recessed Pan Head	4
13	87G1020	Recessed Pan Head	4
14	14102	Controller B, RH	1

SPADE



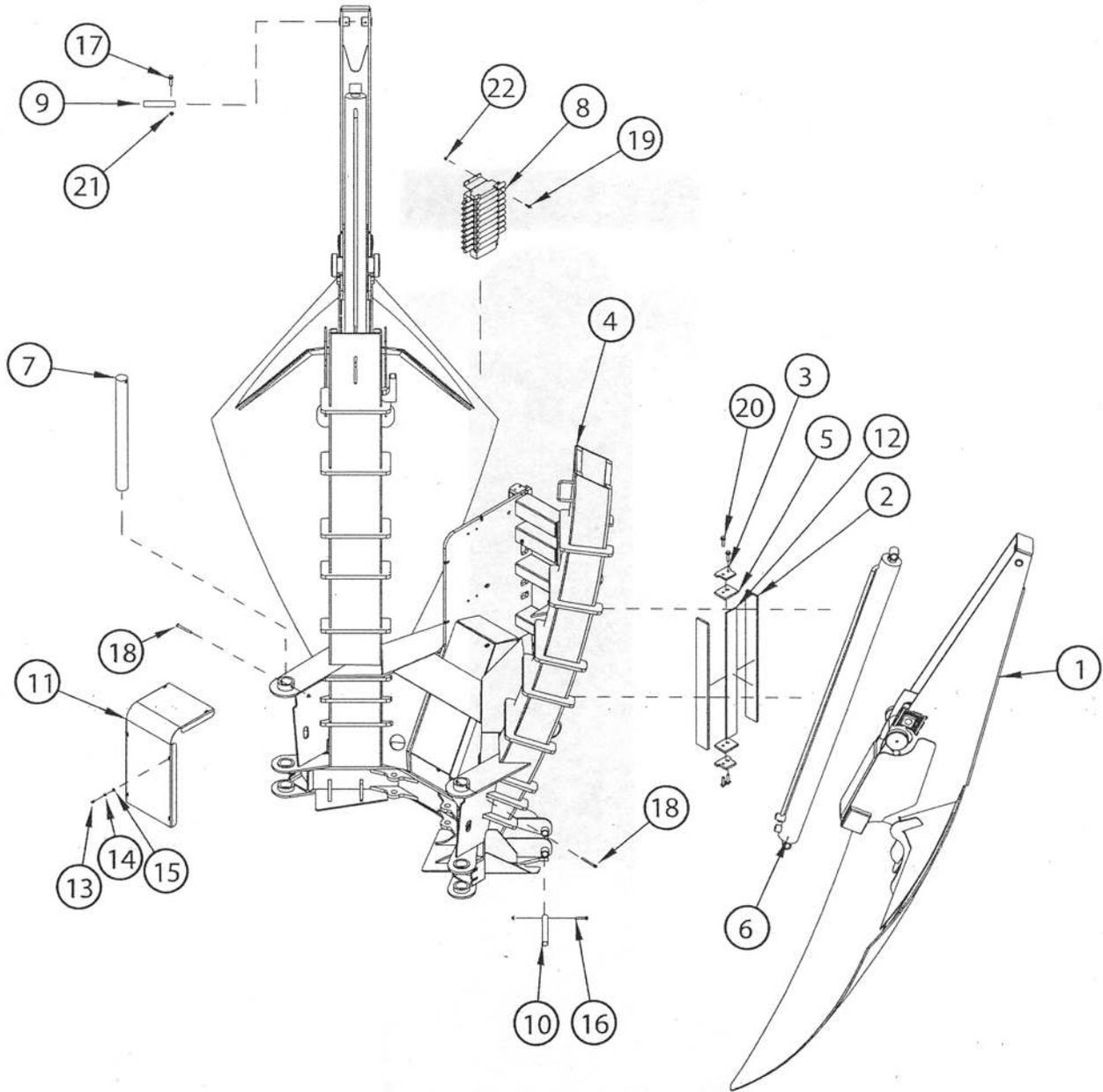
Item	p/n	Description	Qty
1	12838	Spade	1
2	12883	Guide Roller Mount	1
3	12889	Guide Roller	2
4	12891	Guide Block Spindle	2
5	12892	Guide Block	2
6	12888	Pitch Adjuster Block	2
7	12890	Guide Block Bushing	2
8	13814	Countersunk Bolt	2
9	83D14	Nut	4
10	31C1440	Bolt	2

LEFT HAND LIFT ASSEMBLY



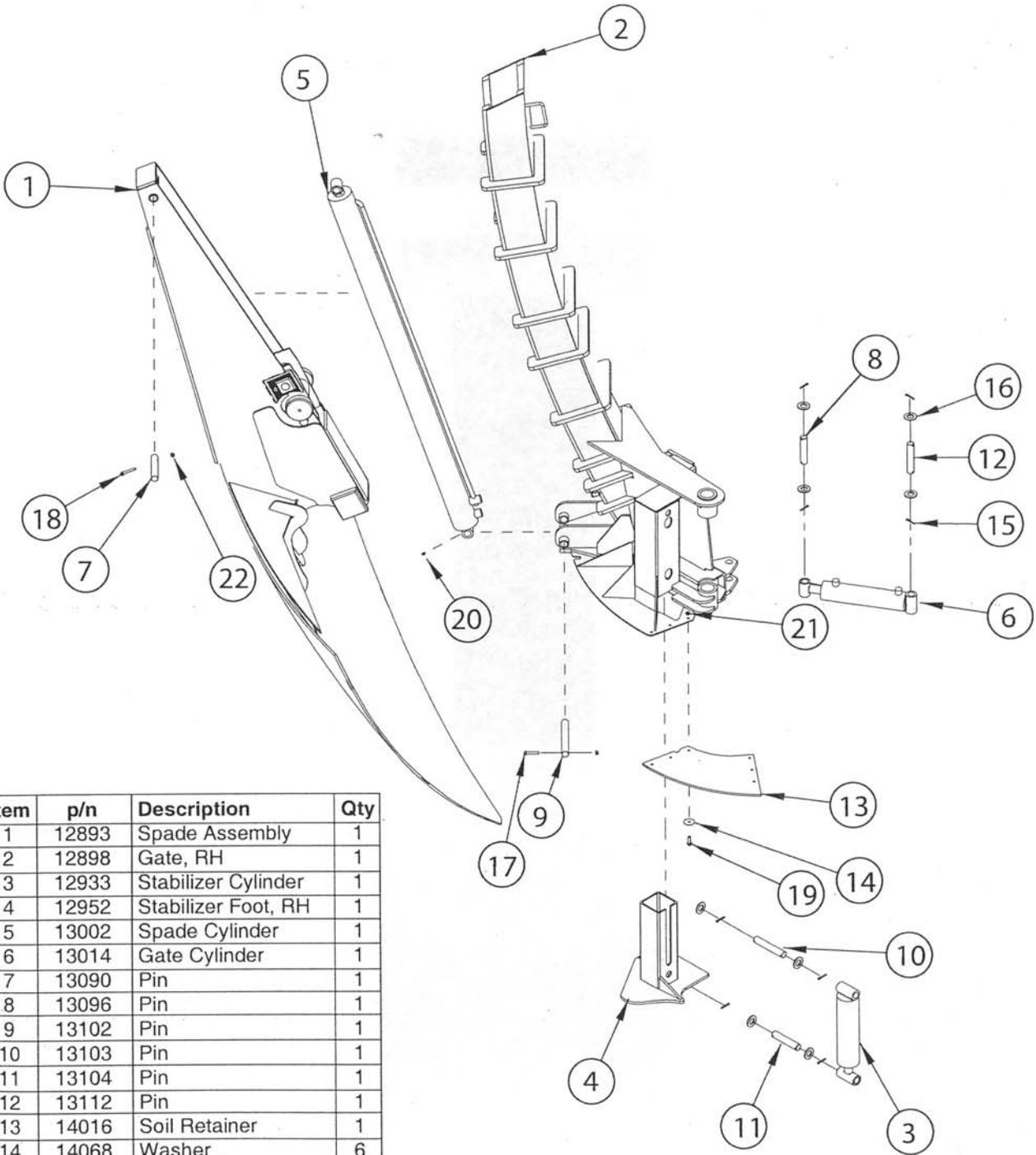
Item	p/n	Description	Qty
1	12893	Spade Assembly	1
2	12930	Gate, LH	1
3	12933	Stabilizer Cylinder	1
4	12938	Stabilizer Foot, LH	1
5	13002	Spade Cylinder	1
6	13014	Gate Cylinder	1
7	13090	Pin	1
8	13096	Pin	1
9	13102	Pin	1
10	13103	Pin	1
11	13104	Pin	1
12	13112	Pin	1
13	14016	Soil Retainer	1
14	14068	Washer	6
15	1F828	Cotter Pin	8
16	25E35	Washer	8
17	31C0636	Bolt	1
18	31C0640	Bolt	1
19	35C0620	Flange Head Screw	6
20	36H25	Grease Fitting	2
21	55D06	Nut	6
22	83D06	Nut	2

CENTER LIFT ASSEMBLY



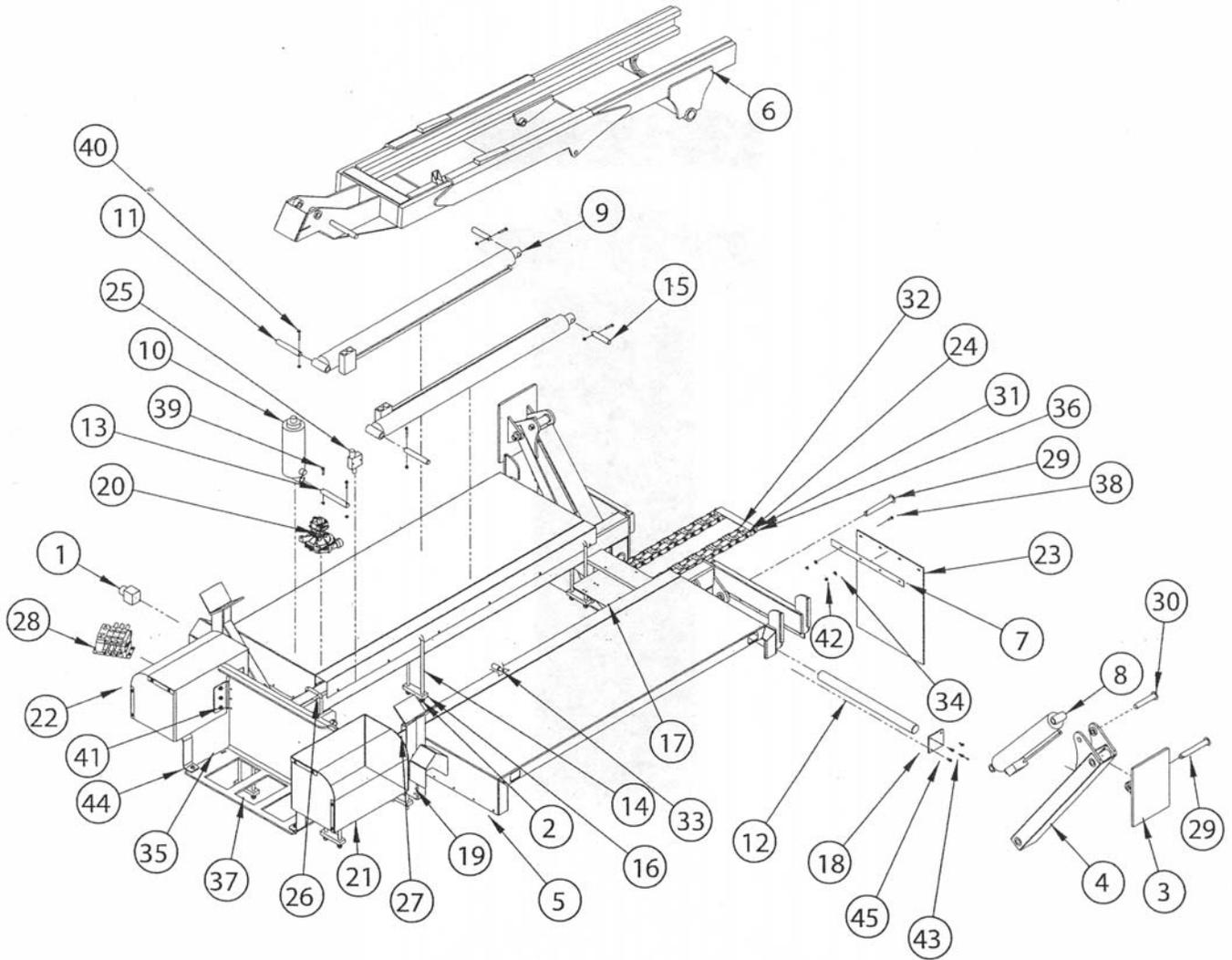
Item	p/n	Description	Qty	Item	p/n	Description	Qty
1	12893	Spade Assembly	2	12	13712	Mast Rub Strip, Side	2
2	12895	Mast Rub Strip	4	13	1C0516	Cap Screw	6
3	12896	Rail Retainer Cap	4	14	24E5	Lock Washer	6
4	12897	Center Lift Assembly	1	15	25E15	Washer	6
5	12979	Turtle Rail Cap	4	16	31C0636	Bolt	2
6	13002	Spade Cylinder	2	17	31C0640	Bolt	2
7	13030	Pin	2	18	31C0664	Bolt	2
8	13087	Valve Bank	1	19	35C0520	Flange Head Screw	4
9	13090	Pin	2	20	35C0832	Flange Head Screw	8
10	13102	Pin	2	21	83D06	Nut	6
11	13326	Valve Cover	1	22	89D05	Nut	4

RIGHT HAND LIFT ASSEMBLY



Item	p/n	Description	Qty
1	12893	Spade Assembly	1
2	12898	Gate, RH	1
3	12933	Stabilizer Cylinder	1
4	12952	Stabilizer Foot, RH	1
5	13002	Spade Cylinder	1
6	13014	Gate Cylinder	1
7	13090	Pin	1
8	13096	Pin	1
9	13102	Pin	1
10	13103	Pin	1
11	13104	Pin	1
12	13112	Pin	1
13	14016	Soil Retainer	1
14	14068	Washer	6
15	1F828	Cotter Pin	8
16	25E35	Washer	8
17	31C0636	Bolt	1
18	31C0640	Bolt	1
19	35C0620	Flange Head Screw	6
20	36H25	Grease Fitting	2
21	55D06	Nut	6
22	83D06	Nut	2

TRUCK BED



Item	P/N	Description	Qty	Item	p/n	Description	Qty	Item	p/n	Description	Qty
1	11458	E-Stop Switch	2	16	13363	U-Bolt Plate	8	31	14014	Hose Guard Strap	1
2	8D12	Nut	16	17	13374	Hose Guide	1	32	14071	Center Strap	1
3	12738	Ground Pad	2	18	13474	Tilt Pin Retainer	2	33	14073	Limit Switch	2
4	12742	Outrigger Arm	2	19	13618	E-Stop Guard	2	34	25E18	Washer	8
5	12743	Main Truck Bed	1	20	13675	Water Pump	1	35	25E22	Washer	4
6	12792	Main Mast	1	21	13726	Remote Housing	1	36	89D06	Nut	4
7	12881	Backing Plate	2	22	13728	Valve Housing	1	37	84D12	Nut	16
8	12998	Cylinder	2	23	13739	Mud Flap	2	38	31C0620	Bolt	8
9	13000	Cylinder	2	24	13758	Hose Guard Assy	2	39	31C0628	Bolt	2
10	13001	Lift Assist Cylinder	1	25	13808	Dump Valve	1	40	31C0640	Bolt	4
11	13007	Pin	2	26	13836	Hose Cover, RH	1	41	31C0816	Bolt	6
12	13018	Mast Pivot Pin	1	27	13837	Hose Cover, LH	1	42	83D06	Nut	14
13	13088	Pin	1	28	13882	Hydraulic Valve	1	43	36H25	Grease Fitting	2
14	13105	U-Bolt	8	29	14010	Outrigger Pin Long	5	44	31C0832	Bolt	2
15	13239	Pin	2	30	14011	Outrigger Pin Short	2	45	35C0616	Flange Head Screw	8

NON-ILLUSTRATED SERVICE PARTS

HYDRAULIC HOSES			WIRING HARNESSSES	
ITEM	ROUTING	P/N	ITEM	P/N
Gate Cylinder	Extend	13190	Main Power	
Gate Cylinder	Retract	13180	Control Panel	13614
Leveler Cylinder	Extend	13191	Control Box Connector	
Leveler Cylinder	Retract	13191	Truck Chassis	13615
Lift Assist		13184	Mast	13613
Mast Cylinder	Extend	13189	Taillight	13861
Mast Cylinder	Retract	13189		
			MISCELLANY	
Outrigger (RH)	Extend	13177	ITEM	P/N
Outrigger (RH)	Retract	13177	Hydraulic Pump	13094
Outrigger (LH)	Extend	13176	Limit Switch	14073
Outrigger (LH)	Retract	13176	Water Switch	14120
Spade (Front)	Extend	13192		
Spade (Front)	Retract	13193		
Spade (Rear)	Extend	13194		
Spade (Rear)	Retract	13195		
Tilt (From Valve)	Extend	13183		
Tilt (From Valve)	Retract	13183		
Tilt (From Fitting)	Retract	13184		
Mast Valve	Pressure	13187		
Mast Valve	Tank Return	13196		
Mast Valve	Pilot	13184		
Fender Valve	Pressure	Truck Specific		
Fender Valve	Return	13182		
Water Pump	Supply	Truck Specific		
Water Pump	Return	13199		
Water Pump	Dump Valve	13199		
Dump Valve	Tank Return	13200		

TEAM DAKOTA™

With your purchase of the Dakota Transplanter, you have become an important member of Team DAKOTA. Yet we have found that many of the team members do not know all of the components of Team DAKOTA. Team DAKOTA includes many facets including quality tending and blending equipment, laboratory testing services, agronomy services, top dressing material, and material recommendations. Since you are already aware of the quality and function of the Transplanter, we will inform you of the other Team DAKOTA components.

Blending Equipment

The Dakota Blender™, manufactured by Dakota Blenders, Inc. (another valuable member of Team DAKOTA) is the most thorough blender available in the industry today. For a complete description of the blender, see us on the web at dakotapeat.com or contact us directly at 1 800 477-8415 for the dealer nearest you. If the size of your operation does not justify the purchase of a blender, blending services are available from Team DAKOTA by Dakota Blenders, Inc. or through numerous sand companies that Team DAKOTA has blending relationships with. Check with us for the participating sand company nearest you.

Testing Laboratory

The testing of sand for USGA spec's can be obtained through another member of Team DAKOTA. Dakota Analytical, Inc. is one of eight laboratories world wide accredited by A2LA to be listed on the USGA's web site as one of the labs to be used in the testing of construction materials for greens and other sports fields. Our lab has analyzed hundreds of sand and mix samples since its establishment and is ready to serve any of your needs.

Agronomy Services

Dakota Agronomics provides root zone and greens construction advice, sand sourcing, and maintenance consultation. Our staff has nearly 20 years of experience. All advice is based upon individual customer needs and desires. If you would like to speak to us on any agronomy issues, contact us either on the web or at 1 800 477-3443.

Top Dressing Material

In cooperation with several universities and soil testing laboratories nationwide, Team DAKOTA has developed a highly concentrated organic material called Dakota Peat.

Dakota Peat is formed principally from partially decomposed reeds, sedges, marsh grasses, and other associated plants. These plants have a unique cellular structure that resists further decomposition. Cells with exceptionally high plant feeding ability are essential for successful development of a plant's root system and the right balance of air and water. This makes it an ideal soil conditioner and growing medium.

Dakota Peat is the finest quality peat from selected deposits, carefully processed to maintain its excellent, agronomic horticultural attributes. It is naturally dried by summer sun and winds; then gently packaged by vibrating machines to preserve its unique cellular structure. Dakota Peat is high in organic content, odorless, and free of harmful substances.

Material Recommendations for Use in Greens, Tees Boxes, and Sports Field Maintenance

The Agronomists at Dakota Peat and Equipment have performed thousands of hours of research into top dressing materials and have many recommendations for maintaining a quality green and healthy turf. One such recommendation is using a mix of USGA spec. sand and Dakota Peat in varying ratios for all situations of green and tee box maintenance. Dakota Peat blends can be utilized in sand-to-peat ratios from 80/20 to 90/10 (depending upon the needs of various turf problems or objectives). Simply stated, the facts are that this combination of components will enhance the quality, resiliency and playability of all surfaces and subsurfaces for future use. This applies to normal top dressing, top dressing prior to over-seeding, and top dressing after coring or other soil tillage practices. Using Dakota Peat/sand blends also helps mend the problem spots that may show up on all courses and/or fields from time to time.

Dakota Peat is the "one" amendment which virtually fulfills all dressing needs for healthy growth and maintenance of golf and sports turf. What makes Dakota Peat different from other peat materials and necessary for sand blends? We believe the following points will explain the benefits of Dakota Peat.

- When used with a tested, spec. sand, the resulting Dakota Peat/sand blend increases the water holding capacity of the sand while allowing excellent water infiltration and air exchange for optimum root growth and turf health.
- The Dakota Peat/sand blend retains fertilizer and pesticides in the upper soil horizon thereby maximizing usage and absorption by the turf and target pests. This limits chemical runoff and leaching potential creating a fertilizer and pesticide cost savings while reducing environmental responsibilities. This increase in retention is due to the unique CEC (cation exchange capacity) of Dakota Peat which greatly increases the blend's capacity for stabilization of leachable inputs and its water holding capacity.
- The "near neutral" pH of Dakota Peat continues to provide the best environment for microbial activity that decomposes thatch. This reduction in thatch keeps the turf as healthy as possible since (as we all know), thatch ties up fertilizer, prevents water infiltration, and is a huge disease "reservoir." Thatch also reduces root mass due to poor gas exchange. Even if using an aggressive aeration program, Dakota Peat/sand blends increase positive results by increasing the ability of the "sterile" sand to hold more fertility and water without inhibiting air exchange and water infiltration.
- The humic acid content of Dakota Peat aids in the gas exchange through the soil surface plus water infiltration by promoting soil particle aggregation. Its fulvic acid content helps stimulate root growth into core areas and also into any new root zones.
- Ideal particle size and density allows the Dakota Peat to become "part" of the sand since most of the particles fit the profile of the sand and stay there.

The goal of Team Dakota is to be your one-stop center for all of your golf course and sports field questions, needs, and equipment. For additional information, contact us either on the web at dakotapeat.com or by phone at either 1 800 477-8415 or 1 800 424-3443.