



Operator's Manual

Rear-tine PTO Tiller Models

682J—Horse™

E686N—Horse™

E682L—Horse™



Model 682J Shown

IMPORTANT: READ SAFETY RULES AND INSTRUCTIONS CAREFULLY

Warning: This unit is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush-covered or grass-covered land unless the engine's exhaust system is equipped with a spark arrester meeting applicable local or state laws (if any). If a spark arrester is used, it should be maintained in effective working order by the operator. In the State of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands. A spark arrester for the muffler is available by contacting the service department at Troy-Bilt LLC, P.O. Box 361131 Cleveland, Ohio 44136-0019.

TROY-BILT LLC, P.O. BOX 361131, CLEVELAND, OH 44136-0019

PRINTED IN USA

FORM NO. 770-10598C
(9/2003)

Appendix B: Attachments & Accessories

Troy-Bilt® PTO Log Splitter **290-258-081**

The Troy-Bilt® PTO Log Splitter provides you with a convenient and easy means of splitting about a half a cord of wood per hour when working alone. When connected to the PTO Power Unit, the tiller's engine runs the splitter's hydraulic pump, providing you with 13 tons of steady, unhurried and predictable splitting force.

As an added benefit, the power-driven mobility provided by the PTO Power Unit allows you to move the splitter to and from your wood pile, over to a neighbor's place, or along the woodpile to a fresh supply of logs.

Features include a 15 second splitting cycle; can handle log sizes up to 26" long; a two-stage hydraulic pump that automatically shifts into low gear to provide four-times greater pressure when needed; slim-cut wedge design for splitting green, stringy wood; and an auto-control valve for automatic return stroke.

Dozer/Snow Blade Attachment **290-259-081**

In the winter, moves up to one foot of light snow (or 6"-to-8" of heavy snow); at other times use it to move or spread sand, gravel, loose dirt, grain, sawdust, etc. Attaches easily to the front of the Wrap-Around Bumper Guard. Set the blade to several angles. Weighs 41-lbs.; measures 15" x 32".

Row Marker Attachment **290-257-081**

Do you like very straight, even, neat rows in your garden? If so, the Row Marker is a must attachment. Hooks quickly to the Hiller/Furrower attachment— eliminates the need for string, stakes, measuring tape, etc. You'll like the straight rows it helps you make if you lay out furrows, dig compost trenches, or make raised beds. The Row Marker extends from 28"-to-49½", letting you vary the width between rows to suit the crop you're planting.

V-Sweep Cultivator **290-260-081**

The V-Sweep Cultivator is a specialized tool designed for between-row crop cultivation. Instead of stirring the soil, it slices through just below the surface to eliminate practically any weeds in its path.

The Sweep mounts easily to the optional Tow Hitch Attachment at the rear of the PTO Power Unit. The blade is made of high carbon, heat treated steel and measures 2" wide (overall wing span is 20").

The unique way the Sweep works, skimming along just underneath the soil's surface without turning the soil over, makes this the ideal tool for use in dry, dusty conditions where it is important to keep soil disturbance to a minimum. And, because of its 20" wide cutting path, it does an effective cultivation job at a fast speed.

The Sweep's natural shallow cultivation helps to prevent weed seeds from being brought to the soil's surface. This shallow cultivation feature also means there's less chance of damaging the roots of your vegetables. For deeper or more shallow cultivating, the blade depth can be changed with a simple adjustment..

Wheel Weights **290-266-081**

Help increase traction by putting extra weight directly on the wheels. They reduce bucking and jumping when deep-tilling in heavy soil. They're shipped empty— fill them with material like concrete, sand, gravel, etc. They bolt directly to the tiller wheels.

Wrap-Around Bumper Guard **290-255-081**

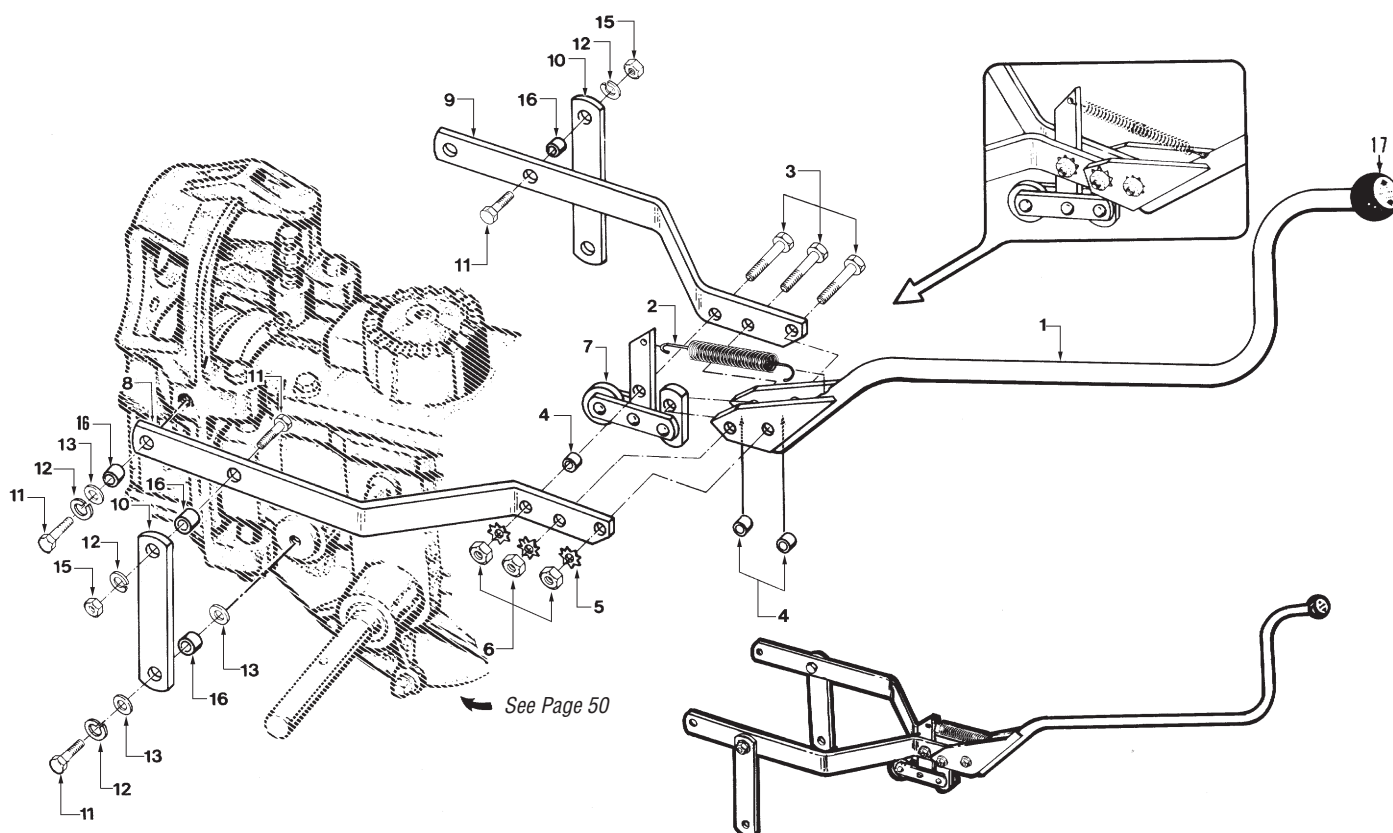
Order this Bumper Guard by itself or receive it as one of the components if you order the combination Dozer/ Snow Blade attachment. Protects the engine from damage by wrapping around and protecting many of the engine components. 1" diameter, high-strength steel tubing.

Hiller/Furrower Attachment **290-250-081**

The most popular attachment because it does so many jobs. Mounts to the rear of the depth regulator bracket. Furrower blade easily makes plant rows, trenches, ditches to 8" deep. When hiller wings are attached to furrower blade, attachment makes hilled rows and raised bed gardens. Converts from a furrower to a hiller and back again, in seconds, without tools.

Section 6 Parts List

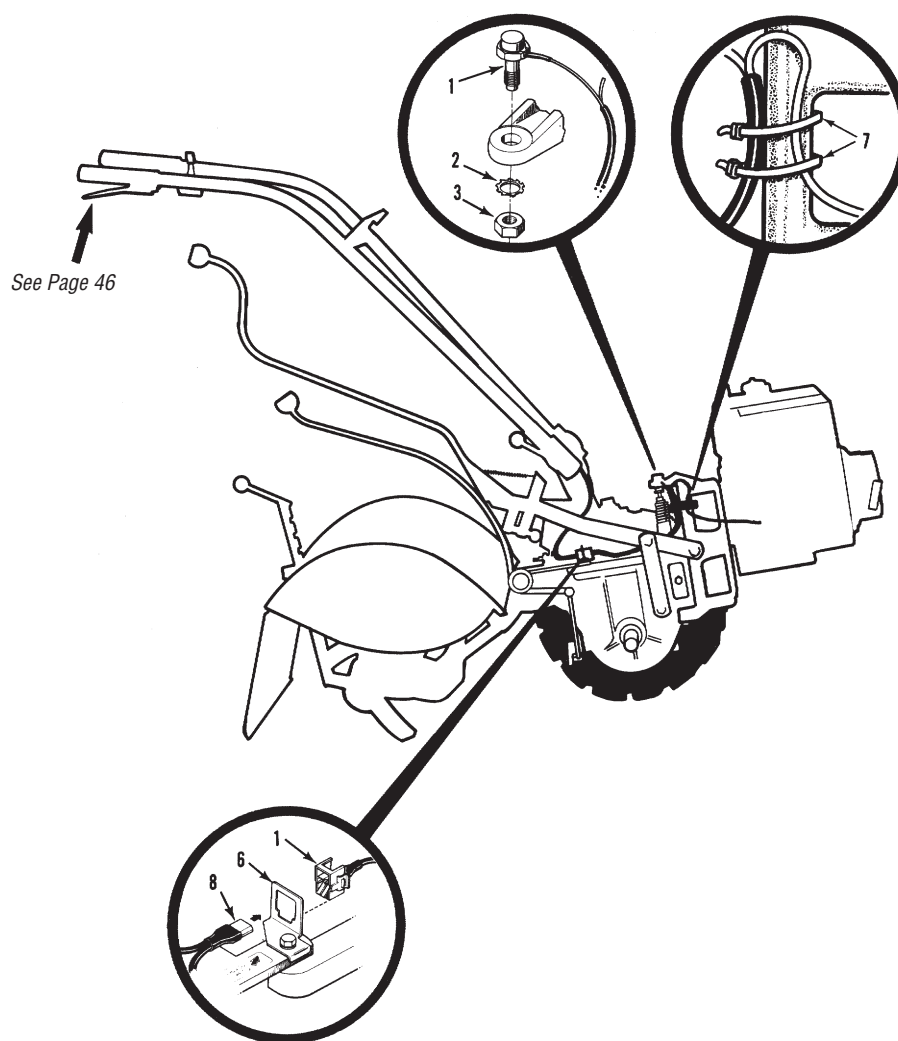
WHEELS/TINES/PTO DRIVE LEVER & YOKE ASSEMBLY



REF No.	PART No.	DESCRIPTION	QTY.
1	647-04006	Lever Assembly—Wheels/Tines/PTO Drive (Includes Ref. 17)	1
2	1908156	Spring—clutch pawl.....	1
3	710-0805	Bolt—hex hd., 5/16-18 x 1-1/2".....	3
4	GW-2447	Bushing—3/8"	3
5	1177548	Lockwasher—external tooth, 5/16"	3
6	712-3010	Nut—hex, 5/16"-18.....	3
7	686-04006	Roller Assembly	1
8	GW-2165-1	Yoke—left side	1

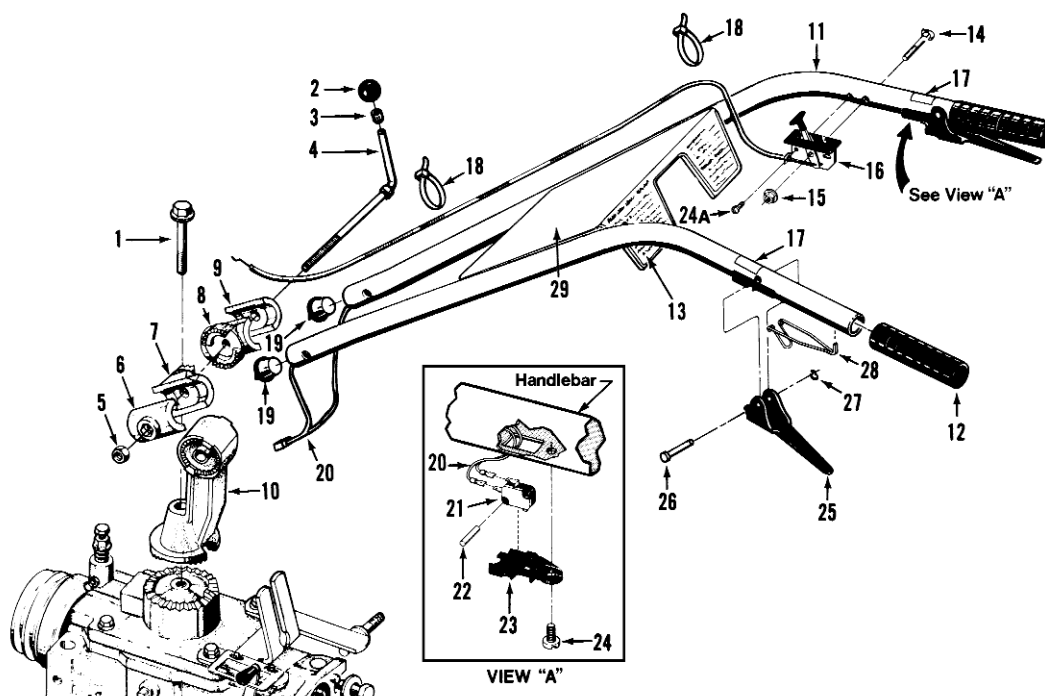
REF No.	PART No.	DESCRIPTION	QTY.
9	GW-2165-2	Yoke—right side.....	1
10	GW-2164	Link—yoke pivot, left & right, 6-7/8" long	2
11	710-0514	Bolt—hex hd., 3/8-16 x 1".....	6
12	736-0169	Lockwasher—spring lock, 3/8".....	6
13	736-3050	Washer—flat, 3/8", S.A.E.....	6
15	712-0798	Nut—hex, 3/8"-16.....	2
16	1113-1	Bushing—spacer, 19/64" (.300")	6
17	GW-2595	Knob	1

FORWARD INTERLOCK SYSTEM



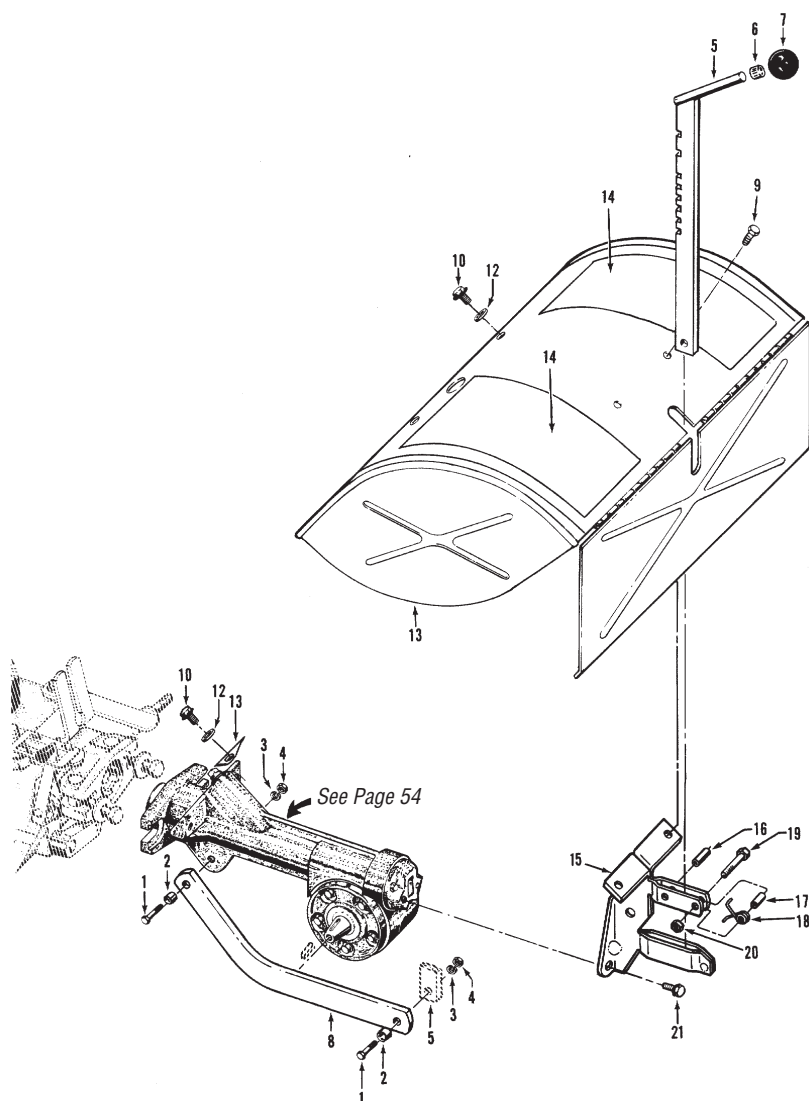
REF No.	PART No.	DESCRIPTION	QTY.	REF No.	PART No.	DESCRIPTION	QTY.
1	629-04017	Engine Wire Harness Assy—forward interlock system (Incl. one red and one black wire, plug connector, neutral switch and PVC tubing. Parts not available separately.....	1	2	GW-9971	Lockwasher—external tooth, 7/16"	1
				3	1186246	Nut—hex, 7/16"-20	1
				6	GW-9205	Clip—for plug connector	1
				7	725-0157	Tie—plastic	2
				8	GW-2551	Handlebar Wire Harness Assy—(see page 46, Ref. No. 20)	1

HANDLEBAR ASSEMBLY



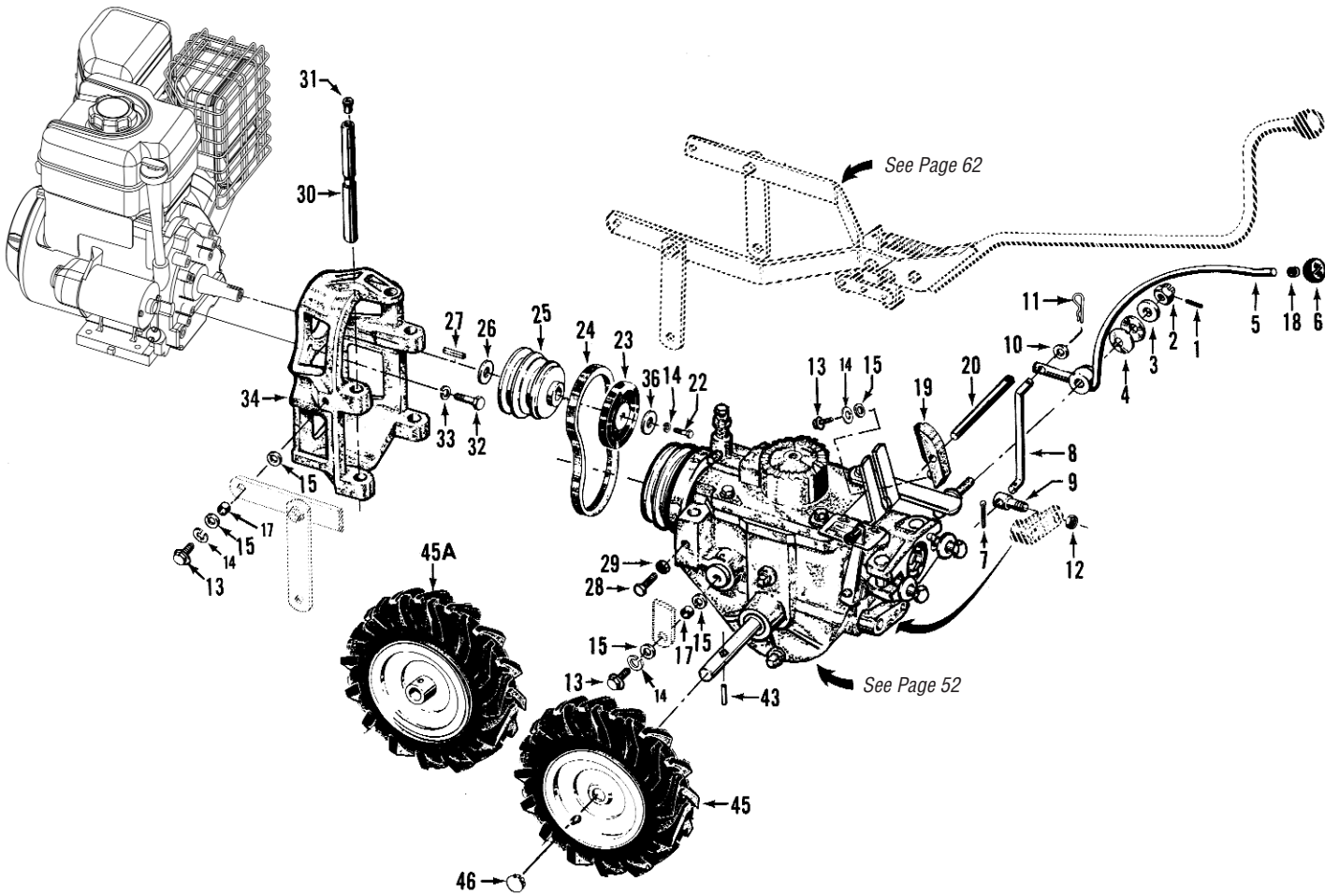
REF No.	PART No.	DESCRIPTION	QTY.	REF No.	PART No.	DESCRIPTION	QTY.
1	GW-9548	Bolt-Hex hd., flanged self-locking Grade 5, 1/2-13 x 3-1/2"	1	17	777I20946	Decal-Forward Interlock Lever	2
2	GW-9119	Knob-handlebar height adjustment	1	18	725-0157	Tie-plastic	2
3	GW-9120	Ring-retaining (tolerance ring).....	1	19	GW-9219	Plug-wire harness retainer.....	2
4	GW-2657	Stud-handlebar height adjustment	1	20	GW-2551	Handlebar Wire Harness Assy-forward interlock system.....	1
5	1186233	Nut-hex, 1/2"-13.....	1	21	GW-9250	Handlebar Switch-forward interlock system.....	2
6	GW-1021-1	Clamp-left, handlebar height adjustment	1	22	GW-9385	Lock Pin-handlebar switch.....	2
7	GW-2542-1	Ratchet-left, handlebar height adjustment	1	23	GW-2543	Switch Housing-handlebar switch.	2
8	GW-2542-2	Ratchet-right, handlebar height adjustment	1	—	GW-2563	Switch Assembly	1
9	1901784	Clamp-right, handlebar height adjustment	1			(Includes Ref. 21-23)	
10	GW-2534A	Base-handlebar mounting	1	24	1186009	Screw-pan head, 10-24 x 1/2", thread-forming	2
11	GW-2717	Handlebars	1	24A	GW-9733	Screw-phillips head, 10-32 x 1/2", thread-forming	1
12	GW-9125	Grip-handlebars	2	25	786-04003	Lever-Operator Presence Control..	2
13	777I22026	Decal-Control panel	1	26	GW-9199	Pivot Pin-forward interlock lever...	2
14	1918111	Bolt-curved hd, GR5, 1/4-20 x 2" ..	1	27	GW-9514	Retaining Ring-klip ring-forward interlock lever.....	2
15	1186389	Nut-hex, flanged self-locking, whiz lock, 1/4"-20	1	28	GW-9387	Return Spring-fwd interlock lever .	2
16	1909286	Throttle Control & Cable, 66"	1	29	777D06526	Label - Troy-Bilt Horse	1
					777D06527	Label - Troy-Bilt Horse "Big Red" .	1

DEPTH REGULATOR & TINE HOOD ASSEMBLIES



REF No.	PART No.	DESCRIPTION	QTY.	REF No.	PART No.	DESCRIPTION	QTY.
1	710-3005	Bolt-hex hd., 3/8-16 x 1-1/4"	2	12	GW-9929	Washer-flat, 5/16"	2
2	GW-1113-1	Bushing-19/64" (.300" lg.)	2	13	GW-2468	Hood	1
3	736-0169	Lockwasher-spring lock, 3/8"	2	14	777I22027	Decal-hood, operating inst. (LH) ..	1
4	712-3017	Nut-hex, 3/8"-16	2		777S32049	Decal-hood, operating inst. (RH) ..	1
5	GW-20795	Bar-depth regulator	1	15	GW-2525	Bracket	1
6	GW-9120	Ring-retaining	1	16	1185469	Pin-roll (spiral) 1/4" x 1"	1
7	GW-9119	Knob-depth regulator	1	17	GW-9534	Spacer	1
8	GW-2121	Bar-drag, depth regulator	1	18	GW-9384	Spring	1
9	710-0599	Screw-thread-forming, 1/4-20 x 1/2"	2	19	710-0597	Bolt-hex hd., 1/4-20x1"	1
10	1186329	Bolt-flanged hex hd., 5/16-18 x 3/4"	2	20	1110106	Locknut-1/4"-20	1
				21	710-04049	Bolt-flanged hex hd., 5/16-18 x 5/8"	2

WHEEL SPEED LEVER, BELT DRIVE SYSTEM, ENGINES, WHEELS



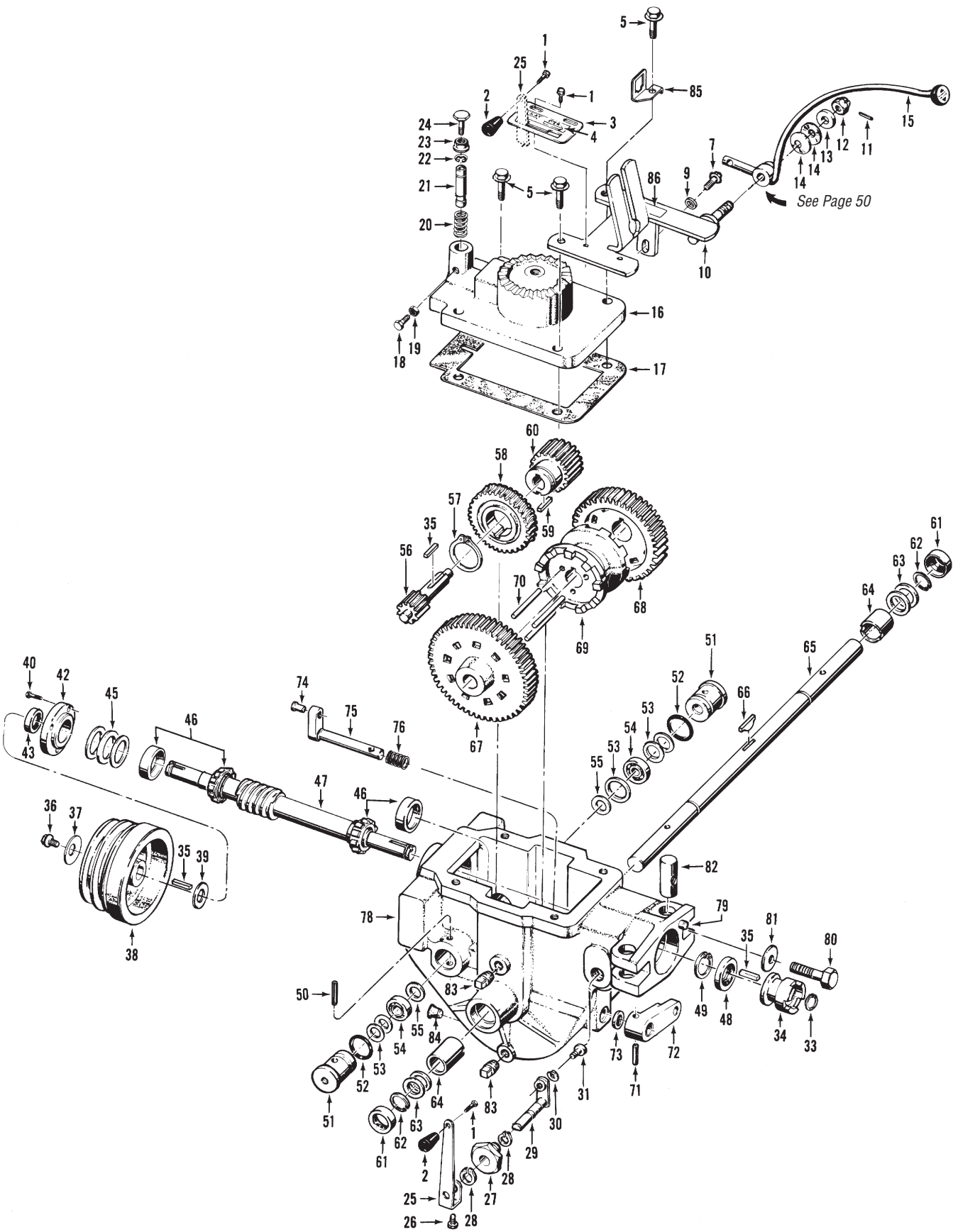
REF No.	PART No.	DESCRIPTION	QTY.	REF No.	PART No.	DESCRIPTION	QTY.
WHEEL SPEED LEVER				ENGINES AND ENGINE MOUNT			
1	GW-9362	Pin-spring, 1/8".....	1	28	710-0376	Bolt-hex hd., 5/16-18 x 1", Grade 5.....	2
2	GW-9838	Nut-castle (slotted), 1/2"-20	1	29	712-3010	Nut, hex, 5/16-18	1
3	GW-9934	Washer-shoulder, 1/2"	1	30	GW-1034	Bar-engine mounting	2
4	GW-9932	Washer-disc spring	2	31	GW-9147	Plug-thread protector, red plastic	2
5	GW-2178	Lever-wheel speed shift.....	1	32	GW-9572	Bolt-hex hd., 5/16-24 x 1-1/8"	4
6	1902240	Knob-wheel speed shift lever.....	1	33	736-0119	Lockwasher-spring lock, 5/16"	4
7	GW-9317	Pin-cotter, 3/32" x 1"	1	34	GW-2553	Mount- engine to tiller	1
8	GW-1515	Connecting rod, wheel speed -shift lever (Incl. Ref. 7 & Ref. 9).....	1	36	736-3052	Washer, flat, .406 x 1.0 x .105.....	1
9	GW-1033	Swivel-connecting rod.....	1	-	777S30647	Decal-hot surface warning	1
10	736-0275	Washer-flat, 5/16", S.A.E.	1	WHEEL & TIRE ASSEMBLIES			
11	GW-9338	Pin-hair cotter.....	1	43	1915072	Pin- roll, 5/16" x 1-1/2"	2
12	712-0158	Locknut-hex hd., 5/16"-18	1	45	1915056	**Wheel & Tire Assy - Left-Hand bar tread, left side, 4:80 x 8" tubeless tire with valve stem, on one-piece steel wheel.	1
13	710-0514	Bolt-flanged hex hd., 3/8-16 x 1"	5	45A	1915057	**Wheel & Tire Assy - Right-Hand bar tread. Same as above but for right side of tiller	1
14	736-0169	Lockwasher-spring lock, 3/8"	5	46	1902020	Cap-wheel hub	2
15	736-3050	Washer-flat, 3/8", S.A.E.	8				
17	GW-1113-1	Bushing-spacer, 19/64" (.300"lg.)....	4				
18	GW-9120	Ring-retaining (tolerance ring)	1				
BELT DRIVE SYSTEM							
19	GW-2102	Block- belt adjustment, 3-7/8"	1				
20	GW-2100	Rod- belt adjust., 7" with measuring gauge	1				
21	777I20942	Decal- engine stabilization	1				
22	1100012	Bolt-hex hd., 3/8-24 x 1-1/2"	1				
23	GW-2111	Disc-reverse	1				
24	GW-9245	Belt-forward drive (no substitute due to extra strength required)	1				
25	GW-1483	Pulley-engine power take off	1				
26	GW-1138-1	Shim-engine pulley, 1/16" As Req'd					
26	GW-1138-2	Shim-as above, 1/32" As Req'd					
27	GW-9303	Key-engine pulley, 3/16"sq. x 2-1/2" 1					

* Contact an authorized engine dealer, Troy-Bilt dealer or the Factory for replacement engine information.

Contact an authorized engine dealer for engine service or parts. Refer to the engine name-plate for engine model and type information.

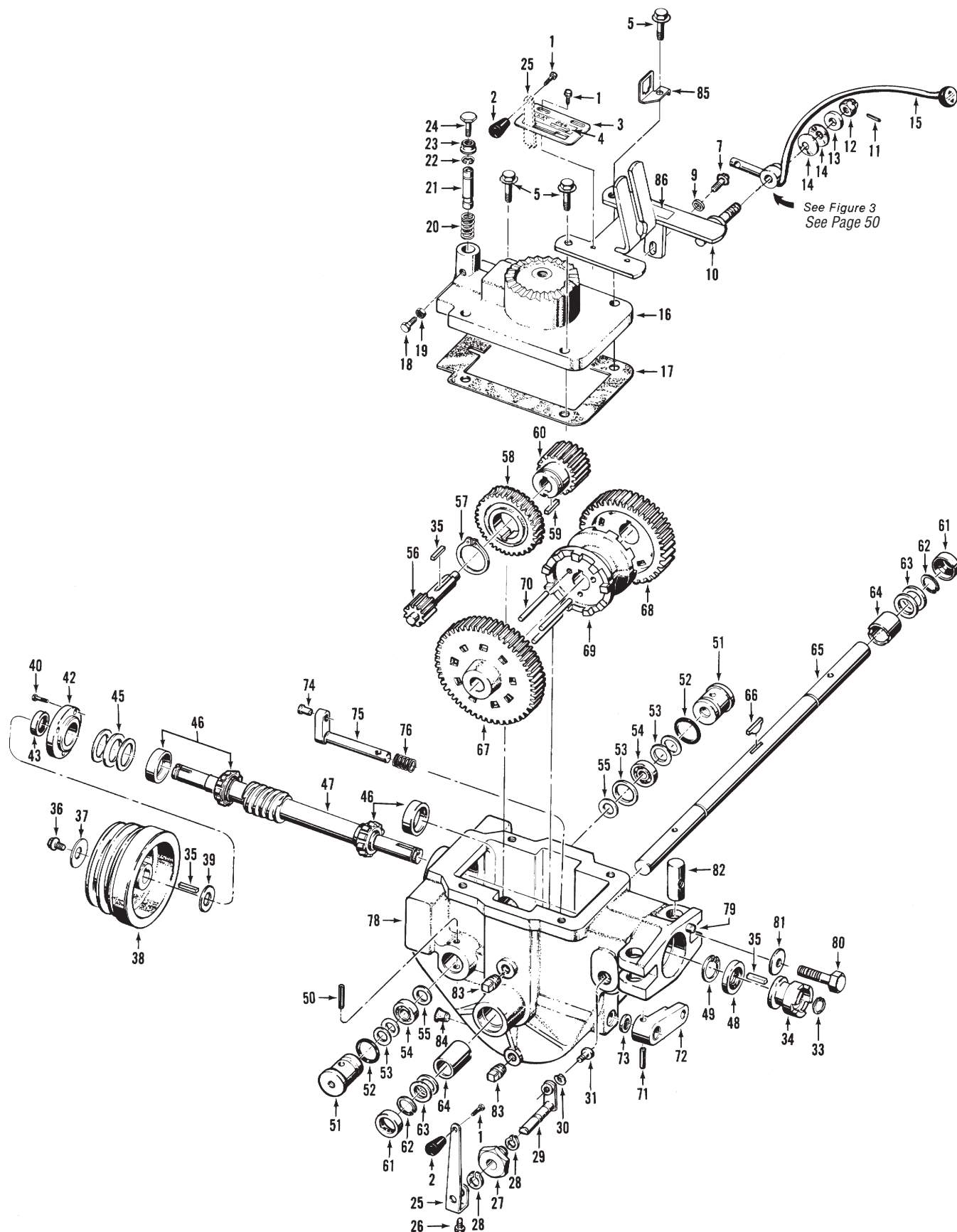
** For correct traction and directional control, Bar Tread Tires should be mounted on the tiller so the closed end of the "V" in the tire tread on top of the tire faces forward.

POWER UNIT TRANSMISSION ASSEMBLIES



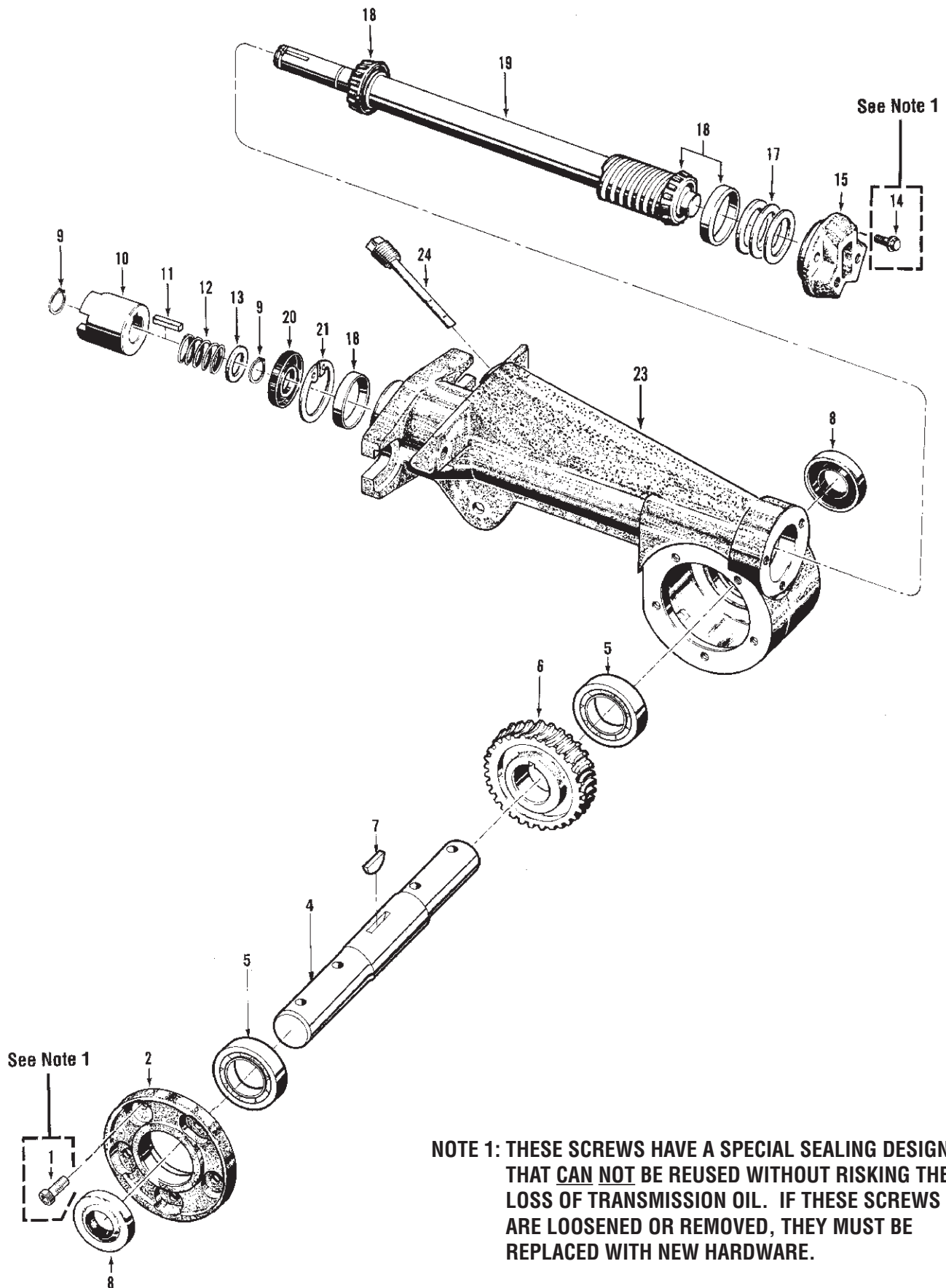
REF No.	PART No.	DESCRIPTION	QTY.	REF No.	PART No.	DESCRIPTION	QTY.
TRANSMISSION COVER & SHIFT LEVER BRACKET ASSEMBLIES				35	GW-9301	Key-3/16 sq. x 1"	3
1	1186299	Bolt-hex hd., #10-32 x 3/8", self-locking flange	3	36	1100004	Bolt-hex hd., 5/16-24 x 3/4", self-locking flange, Grade 5	1
2	GW-9463	Knob-tines/PTO clutch lever, tapered, plastic	1	37	GW-9944	Washer-disc spring (concave).....	1
3	GW-2124	Detent Plate-tines/PTO clutch lever	1	38	GW-2107	Pulley-transmission drive, cast iron	1
4	777120945	Decal-operating instructions, detent plate.....	1	39	GW-50027	Washer-flat, hardened shoulder 1-1/4".....	1
5	1186349	Bolt-flanged hex hd., 3/8-16 x 1-1/2"	4	40	1186310	Bolt-hex hd., 1/4-20 x 3/4", front bearing cap	3
7	1186329	Bolt-flanged hex hd., 5/16-18 x 3/4", Grade 5	1	42	718-04007	Cap-front bearing	1
9	736-0275	Washer-flat, 5/16", S.A.E.	1	43	721-04044	Seal-oil, front bearing cap	1
10	GW-2149	Bracket-shift levers.....	1	45	GW-1224-1	Shim-front bearing cap, .010" thick	As Req'd
11	GW-9362	Pin-spring, 1/8"	1	45	GW-1224-2	Shim-as above, .030".....	As Req'd
12	GW-9838	Nut-castle (slotted), 1/2"-20, call Tech Service for tightening instructions.	1	45	GW-1224-3	Shim-as above, .005".....	As Req'd
13	GW-9934	Washer-shoulder, 1/2"	1	45	GW-1224-4	Shim-as above, .062".....	As Req'd
14	GW-9932	Washer-disc spring	2	46	GW-1714	Bearing & Race (incl. one bearing GW-9400 and one cup (race) GW-9401) ...	2
15	GW-2178	Lever-wheel speed shift.....	1	47	GW-2655	Shaft-main drive, power unit.....	1
16	GW-2523	Cover-power unit transmission	1	48	721-04030	Seal-oil, drive shaft, rear	1
17	GW-1123	Gasket-transmission cover.....	1	49	GW-9517	Retaining Ring-(snap ring), internal.....	1
18	710-0376	Bolt-hex hd., 5/16-18 x 1", Grade 5, (remove with care)	1	PINION SHAFT ASSEMBLY			
19	712-0267	Nut-hex, 5/16"-18	1	50	715-0121	Pin-roll (spiral), 1/4 x 2"	2
20	1901439	Spring-neutral plunger (remove with care).....	1	51	718-04006	Plug-retaining, pinion bearing	2
21	GW-1035-1	Plunger-neutral (remove with care)	1	52	GW-9604	O-Ring-retaining plug.....	2
22	1901440	Clip Ring-retains neutral plunger..	1	53	GW-1132-1	Shim-retaining plug, 1-1/64" inner dia., .033" thick (on right side only one GW-1132-1 shim is also used between bearing and washer, Ref. No.'s 54 & 55).....	As Req'd
23	1186393	Nut-hex, flange locknut, 3/8"-16...	1	53	GW-1132-2	Shim-same as GW-1132-1, .062".	As Req'd
24	1902004	Bolt-hex hd., 3/8-16x1-1/2", threaded full length.....	1	53	GW-1132-3	Shim-same as GW-1132-1, .010"	As Req'd
TINES/PTO CLUTCH LEVER ASSEMBLY				54	GW-9404	Bearing-ball, pinion shaft	2
25	786-04002	Lever-eccentric, tines/PTO clutch.	1	55	GW-1126	Washer-pinion shaft	2
26	710-3013	Bolt-hex hd., 1/4-20 x 1/2"	1	56	GW-1222	Stem Pinion-slow speed gear & shaft	1
27	741-04008	Bushing-tines/PTO clutch lever eccentric shaft	1	57	GW-9502	Ring-retaining, external	1
28	GW-9516	Retaining Ring-(snap ring), external.....	2	58	GW-2656	Worm Gear-bronze, wheel drive ...	1
29	GW-2461	Eccentric-shaft, tines/PTO clutch lever.....	1	59	GW-9300	Key-3/16" x 5/8"	1
30	GW-9911	Lockwasher-hi-collar, 1/4"	1	60	GW-1233	Gear-fast speed pinion	1
31	GW-9672	Screw-socket hd., 1/4-20 x 3/8" ...	1	(continued on page 55)			
DRIVE SHAFT ASSEMBLY							
33	716-0101	Retaining Ring-external	1				
34	1909139	Dog Clutch-power unit	1				

POWER UNIT TRANSMISSION ASSEMBLIES (Continued from page 53)



REF No.	PART No.	DESCRIPTION	QTY.	REF No.	PART No.	DESCRIPTION	QTY.
(continued from page 53)							
WHEEL SHAFT ASSEMBLY							
61	721-04031	Seal-oil, wheel shaft	2	75	611-04003	Eccentric Shaft—wheel speed shifting	1
62	1909950	Retaining ring—external	2	76	GW-1441	Spring—eccentric shaft	1
63	GW-1166-1	Shim—wheel shaft, 1-1/64" inner dia., .062" thick	As Req'd	TRANSMISSION HOUSING			
63	GW-1166-2	Shim—as above, .030" thick	As Req'd	78	GW-2109	Housing—power unit transmission (Empty housing without covers, shafts, gears, seals, etc.)	1
63	GW-1166-3	Shim—as above, .015" thick	As Req'd	79	GW-9359	Pin—alignment	1
63	GW-1166-4	Shim—as above, .010" thick	As Req'd	MISCELLANEOUS PARTS			
63	GW-1166-5	Shim—same as above, .005" thick	As Req'd	80	1100067	Bolt—hex hd., 1/2-13 x 2" Grade 5 .	2
64	GW-1086	Bushing—bronze, wheel shaft bearing	2	81	GW-9928	Washer—disc spring (concave), domed side faces bolt head	2
65	711-04086	Shaft—wheel, 15-5/8"	1	82	GW-2126	Post—with threaded hole for Ref. No. 80	2
66	714-04014	Key—Hi Pro, 1/4" x 1-3/4"	1	83	1105620	Plug—pipe, 1/4"	2
67	GW-1223	Gear—slow speed, wheel drive	1	84	GW-9122	Plug—red plastic, thread protector.	1
68	GW-1232	Gear—fast speed, wheel drive	1	85	GW-9205	Clip—forward interlock system plug connector (see page 47)	1
69	GW-1237	Dog Clutch—wheel drive	1	86	777120944	Decal—forward interlock wire harness	1
70	GW-1112	Pin—clutch guide, 1/4" diameter	3	TRANSMISSION ASSEMBLY			
ECCENTRIC SHAFT ASSEMBLY				—	618-04004	Transmission —power unit (Does NOT include Ref. 35-39. Does NOT include Shift Lever and Bracket Assemblies, Ref. 3, 4, 10, 15, 85, 86, etc.)	1
71	1911372	Pin—roll, 3/16" x 1-1/4" (spirol)	1				
72	619-04000	Lever—eccentric, wheel speed shifting	1				
73	721-04034	Seal—oil, eccentric shaft	1				
74	GW-1442	Pin—eccentric shaft, wheel speed shifting	1				

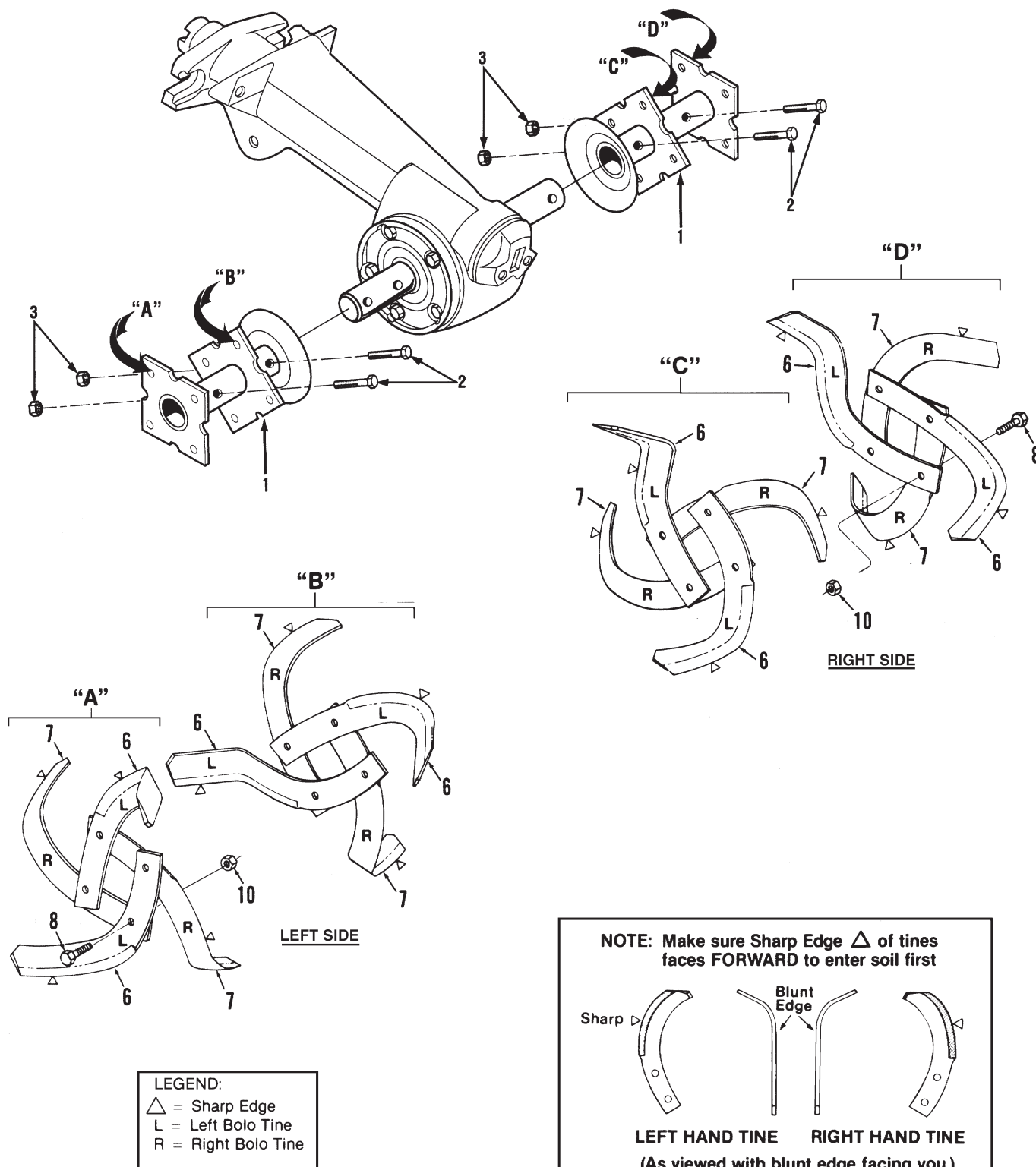
TILLER ATTACHMENT TRANSMISSION ASSEMBLIES



NOTE 1: THESE SCREWS HAVE A SPECIAL SEALING DESIGN THAT CAN NOT BE REUSED WITHOUT RISKING THE LOSS OF TRANSMISSION OIL. IF THESE SCREWS ARE LOOSENED OR REMOVED, THEY MUST BE REPLACED WITH NEW HARDWARE.

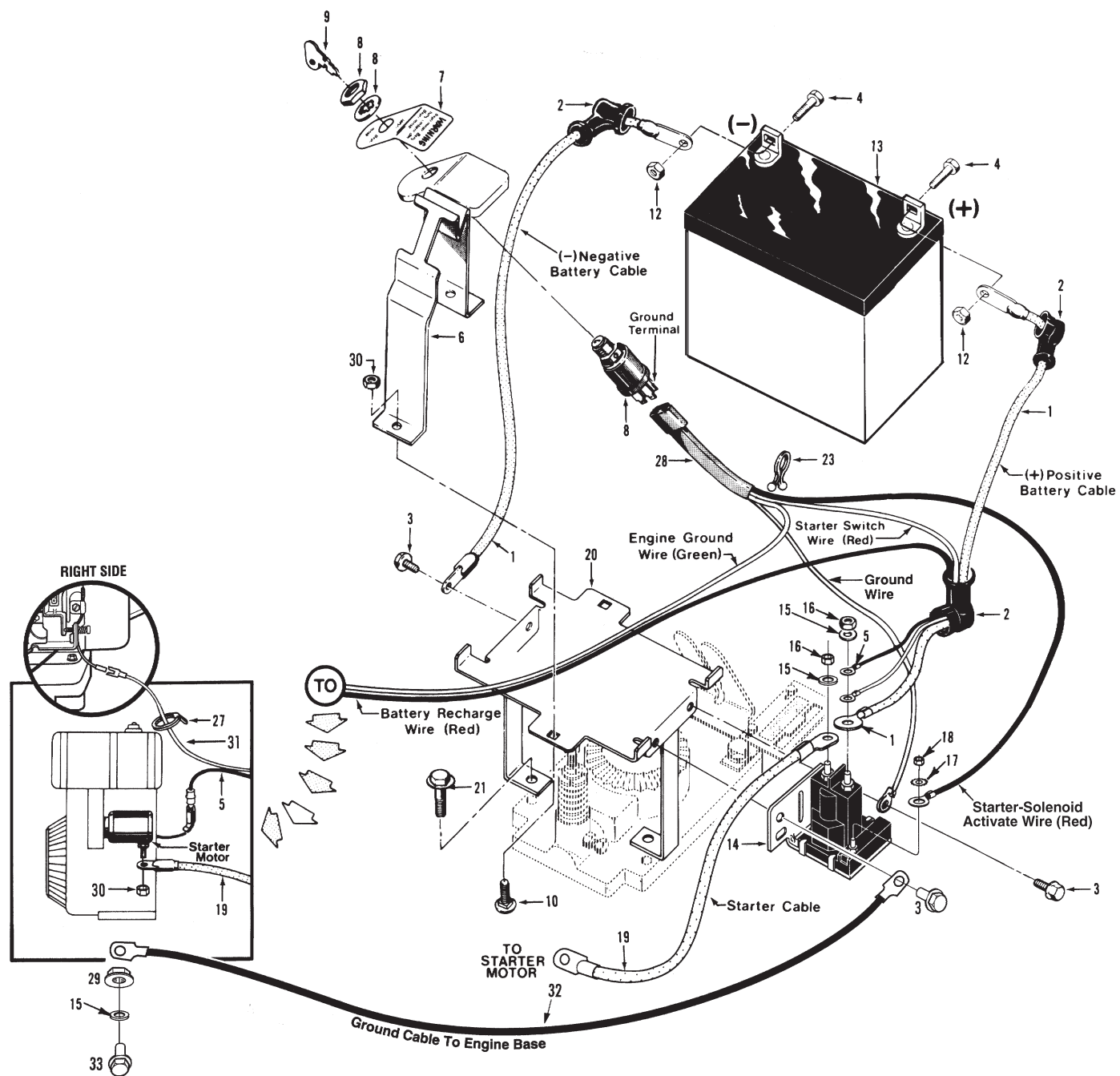
REF No.	PART No.	DESCRIPTION	QTY.	REF No.	PART No.	DESCRIPTION	QTY.
1	1915068	Screw—self-sealing, 1/4"-20 x 5/8"	5	17	GW-1224-3	Shim—same as above, .005" thick.....	As Req'd
2	GW-20873	Cover—tiller housing	1	17	GW-1224-4	Shim—same as above, .062" thick.....	As Req'd
4	711-04082	Shaft—tiller tine.....	1	18	GW-1714	Bearing & Race	2
5	741-3037	Ball Bearing.....	2			(incl. one bearing GW-9400 and one cup (race) GW-9401)	
6	1901976	Worm Gear—bronze, tiller tine shaft	1	19	GW-2653	Shaft—main tiller drive.....	1
7	GW-1104	Key—tiller tine shaft, woodruff key.	1	20	721-04030	Seal—oil, drive shaft, front	1
8	721-04035	Seal—oil, tiller tine shaft.....	2	21	GW-9517	Retaining Ring—internal.....	1
TILLER DRIVE SHAFT ASSEMBLY				TRANSMISSION HOUSING AND DIPSTICK			
9	716-0101	Retaining Ring—external.....	2	23	1901971	Housing—tiller attachment (Empty housing without shafts, gears, seals, dipstick, etc.)	1
10	1909138	Dog Clutch—tiller drive shaft.....	1	24	1909157	Dipstick—oil, tiller attachment.....	1
11	GW-9301	Key—3/16" x 1"	1	TRANSMISSION ASSEMBLY			
12	GW-2127	Spring—dog clutch.....	1	—	618-04003	Transmission —Tiller (Includes Ref. 1-24)	1
13	GW-1138-1	Shim—dog clutch, 1/16"(.62") thick..	1				
14	1915069	Screw—self-sealing, 1/4"-20 x 7/8"	3				
15	GW-1115	Cap—rear bearing.....	1				
17	GW-1224-1	Shim—front bearing cap, .010" thick.....	As Req'd				
17	GW-1224-2	Shim—same as above, .030" thick.....	As Req'd				

BOLO TINE ASSEMBLIES



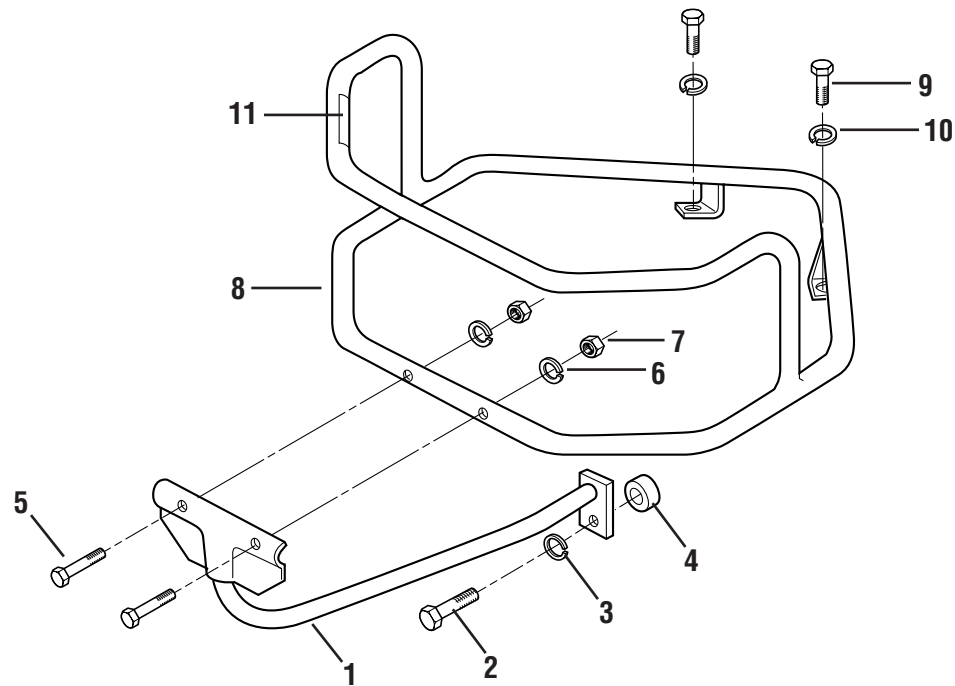
REF No.	PART No.	DESCRIPTION	QTY.	REF No.	PART No.	DESCRIPTION	QTY.
STANDARD TILLING TINES				CUSTOM TILLING TINES			
1	1901975	Tine Holder—welded steel, fits left or right sides.....	2	Special hard-faced, high-chrome carbon alloy tines that are thicker than standard Bolo Tines. These tines better resist the abrasive action of rocky, gritty or sandy soil as compared to standard Bolo Tines, and are especially suited for custom tilling or market gardening.			
2	710-3096	Bolt—hex hd., 3/8-16 x 2"	4				
3	712-3000	Locknut—hex, 3/8"-16					
6	GW-1270-1	Bolo Tine—single, left hand. Tine is stamped either "EL" or "AL"	8	---	GW-10802	Custom Tilling Tine Kit—(Incl. eight each of Part GW-2475-1 and GW-2475-2 tines and sixteen each of Ref. No.'s 8 and 10	1
7	GW-1270-2	Bolo Tine—single, right hand. Tine is stamped either "ER" or "AR"	8	---	GW-2475-1	Bolo Tine, Custom Tilling—single, left hand	8
8	710-3005	Bolt—hex hd., 3/8-16 x 1"	16	---	GW-2475-2	Bolo Tine, Custom Tilling—single, right hand	8
10	712-0375	Locknut—hex, 3/8"-16	20				
---	290-253-081	Tine Replacement Kit—unassembled (Incl. eight each of Ref. No.'s 6, and 7, sixteen each of Ref. No.'s 8 and 10). Includes easy-to-follow installation instruction. DOES NOT INCLUDE tine holders, holder mounting hardware, or tine shaft keys.....	1				

ELECTRIC START SYSTEM



REF No.	PART No.	DESCRIPTION	QTY.	REF No.	PART No.	DESCRIPTION	QTY.
1	GW-96515	Cable–battery, positive and negative terminals	2	14	GW-96514	Solenoid–starter, includes nuts and washers for cables and wires...	1
2	GW-97020	Boot–terminal insulating	3	15	736-0119	Lockwasher–5/16"	3
3	GW-9552	Screw–self-threading, 1/4-20 x 1/2"	3	16	1186211	Nut–hex, 5/16"-24	2
4	1186309	Bolt–hex hd., 1/4-20 x 5/8"	2	17	736-0147	Lockwasher–external tooth, #10..	1
5	1901894	Wire–recharge (red)	1	18	GW-9853	Nut–hex, #10-32,	1
6	GW-2614	Battery Hold-down Clamp–with attached Key Switch Plate	1	19	GW-96510	Cable–solenoid to starter motor ..	1
7	777S30648	Decal–ignition switch instruc.....	1	20	GW-2557	Battery Bracket	1
8	725-0267	Key Switch–includes two ignition keys (Ref. No. 9), one lockwasher, and one mounting nut (lock-washer and nut not available separately)	1	21	1186349	Bolt–flanged hex hd., 3/8-16 x 1-1/2"	2
9	725-0201	Key–ignition, one pair	1	23	GW-9265	Tie–plastic, wire retaining	1
10	1186073	Bolt–carriage, 1/4-20 x 1-1/4"	2	27	725-0157	Tie–plastic	2
11	1100241	Lockwasher–spring lock, 1/4"	2	28	1908118	Wire Harness & Connecting Terminal Assembly	1
12	712-3006	Nut–hex, 1/4"-20	2	29	712-3010	Nut–flange lock, 5/16"-18	1
13	725-1706A	Battery–12 volt, 270 CCA	1	30	1186389	Locknut–hex, 1/4"-20	3
				31	629-04018	Ground Wire Assembly	1
				32	1901202	Cable–ground, solenoid to engine block	1
				33	710-3180	Bolt–flange lock, 5/16-18 x 1"	1

BUMPER ATTACHMENT



REF No.	PART No.	DESCRIPTION	QTY.	REF No.	PART No.	DESCRIPTION	QTY.
---	290-255-081	Bumper Attachment. Includes Ref. Nos. 1 through 11)	1	6	736-0119	Lockwasher - spring lock, 5/16" ..	2
1	1910730	Brace - bumper bottom	1	7	712-3010	Nut - hex, 5/16"-18	2
2	710-3181	Bolt - hex hd., 1/2-13 x 1-1/2"	1	8	1910731	Bumper wraparound.....	1
3	736-0921	Lockwasher - spring lock, 1/2"	1	9	710-0514	Bolt - hex hd., 3/8-16 x 1"	2
4	1909748	Spacer, 1/2"	1	10	736-0169	Lockwasher - spring lock, 3/8"	2
5	710-0805	Bolt - hex hd., 5/16-18 x 1-1/2" ...	2	11	777S30653	Decal - for bumper	1