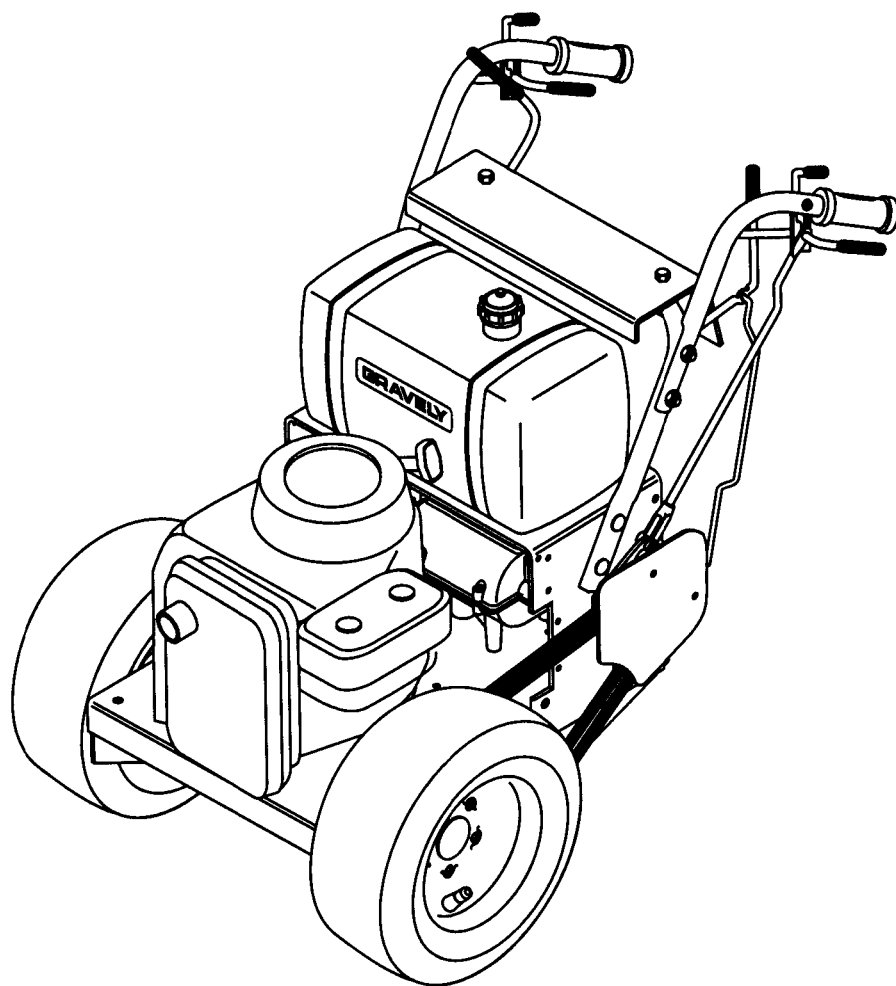


GRAVELY®

PRO 150

Parts Manual



MODELS

086-Pro 150
088-Pro 150
091-Pro 150
309-Pro 150

08473200A Rev. 07/99
Supersedes 08473200
Printed in USA

A Message to Gravely Parts Manual User

Your Gravely Dealer will be happy to supply any service or advice which may be required to keep your Gravely equipment operating at peak efficiency. He stocks genuine Gravely parts and lubricants, manufactured with the same precision and skill as the original equipment. His factory trained staff is kept well informed on the best methods of servicing Gravely equipment and is ready and able to serve

you. If engine repairs or services are required, they can be obtained from a Gravely Dealer or from an authorized engine manufacturer's service center. If service is required, be prepared to supply the service person with the Model Number and Serial Number of the equipment and engine, as well as a full description of the problem encountered.

Introduction

The information contained herein is intended for use by Gravely Dealers' trained servicemen and serves as a supplement to and reminder of training sessions conducted by Gravely Company. Before you attempt any repair, adjustment or maintenance project, be certain that you have read and fully understand the instructions in your Owner's and Repair Manuals. Understand and follow each Danger, Warning, Caution and all instructions exactly as given. Also be sure that you have all tools, replacement parts and other materials required to complete the project.

A network of Gravely Dealers is maintained in order to assure you of an adequate supply of replacement parts and technical assistance. When replacement parts are required, use only genuine Gravely parts. Failure to do so may result in product malfunction and possible injury to operator and/or bystander. **NOTE:**

The descriptions and specifications contained in this manual were in effect at the time the manual was approved for printing. Gravely Company reserves the right to discontinue models without notice and without incurring obligation. The equipment described within this manual may not be identified as either standard or optional and the various illustrations may not all be applicable to your particular unit. If you have questions always check with your Gravely Dealer.

NOTE: All references to "Left", "Right", "Front" and "Rear" are given from operators position.

NOTE TO GRAVELY DEALERS: Refer to your current Parts Price List for suggested parts stocking. Service training for dealers is available at the Gravely Service School.

How to Order Replacement Parts

This Parts Manual is arranged for easy identification of genuine Gravely Service parts that are illustrated showing their relationship to one another. Item numbers in the illustrations correspond to item numbers in the first column of the parts list and are followed by the Gravely Part number, Description and Quantity with variations between models and/or serial numbers designated in the part description. S/N 000000> means this serial number and up, with S/N <000000 meaning up to this serial number.

Order parts from your nearest authorized Gravely Dealer. For prompt service when ordering parts, provide the following information.

1. **MODEL AND SERIAL NUMBERS OF EQUIPMENT**
2. **PART NUMBER (not Item Number)**
3. **DESCRIPTION**
4. **QUANTITY REQUIRED**

Contents

Decals	2
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Steering Control	6
PTO Clutch Linkage	8
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Fuel and Exhaust System	14
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NOTE: Most hardware description are given in decimals. Refer to the following table to find the equivalent in fractions:

Decimals to Fractions			
.063	1/16	.563	9/16
.125	1/8	.625	5/8
.188	3/16	.688	11/16
.250	1/4	.750	3/4
.313	5/16	.813	13/16
.375	3/8	.875	7/8
.438	7/16	.938	15/16
.500	1/2	1.00	1

Models

Model 988086

Pro-150, 12.5 Tecumseh
Serial No. 000101 and up

Model 988088

Pro-150, 14 Kawasaki
Serial No. 000101 and up

Model 988091

Pro-150, 12.5 Kawasaki
Serial No. 000101 and up

Model 988309 (International)

Pro-150, 14 Kawasaki
Serial No. 000101 and up

This manual covers the models listed. Specific Model and Serial Numbers of your unit and attachment are on a label on the unit. Record these numbers in the space provided and use them whenever parts or service are required.

Model Number _____

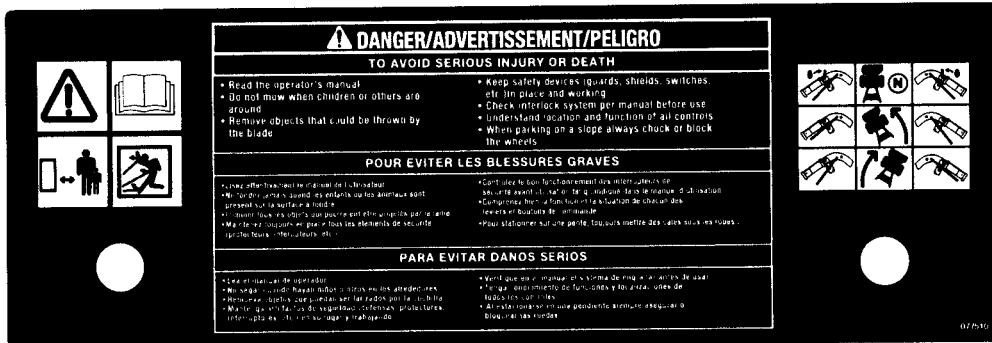
Serial Number _____

Engine Number _____

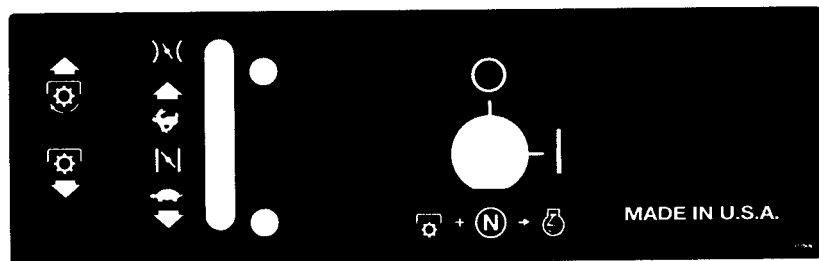
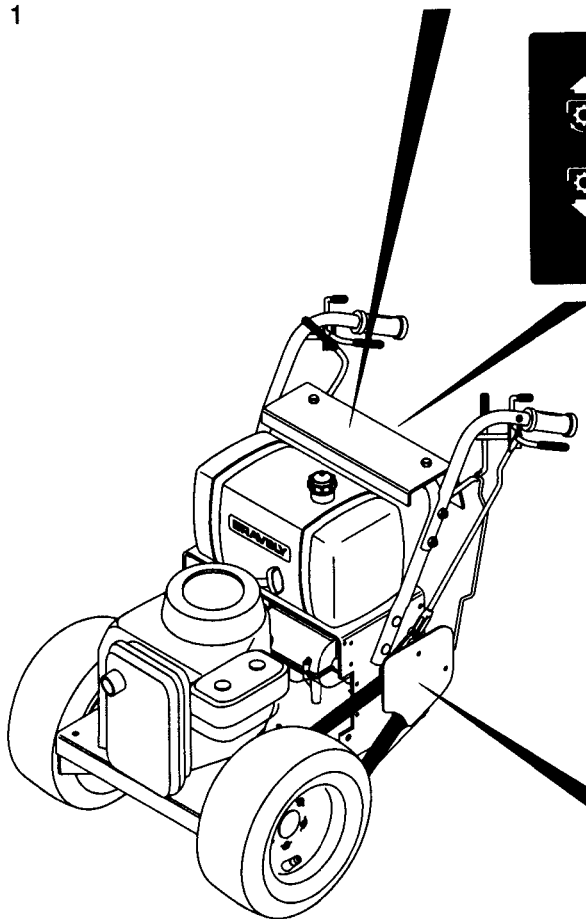
Serial Number _____

Decals

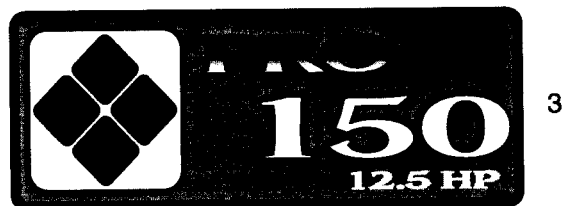
Models 988086, 088, 091, 309



1



2



PG0382

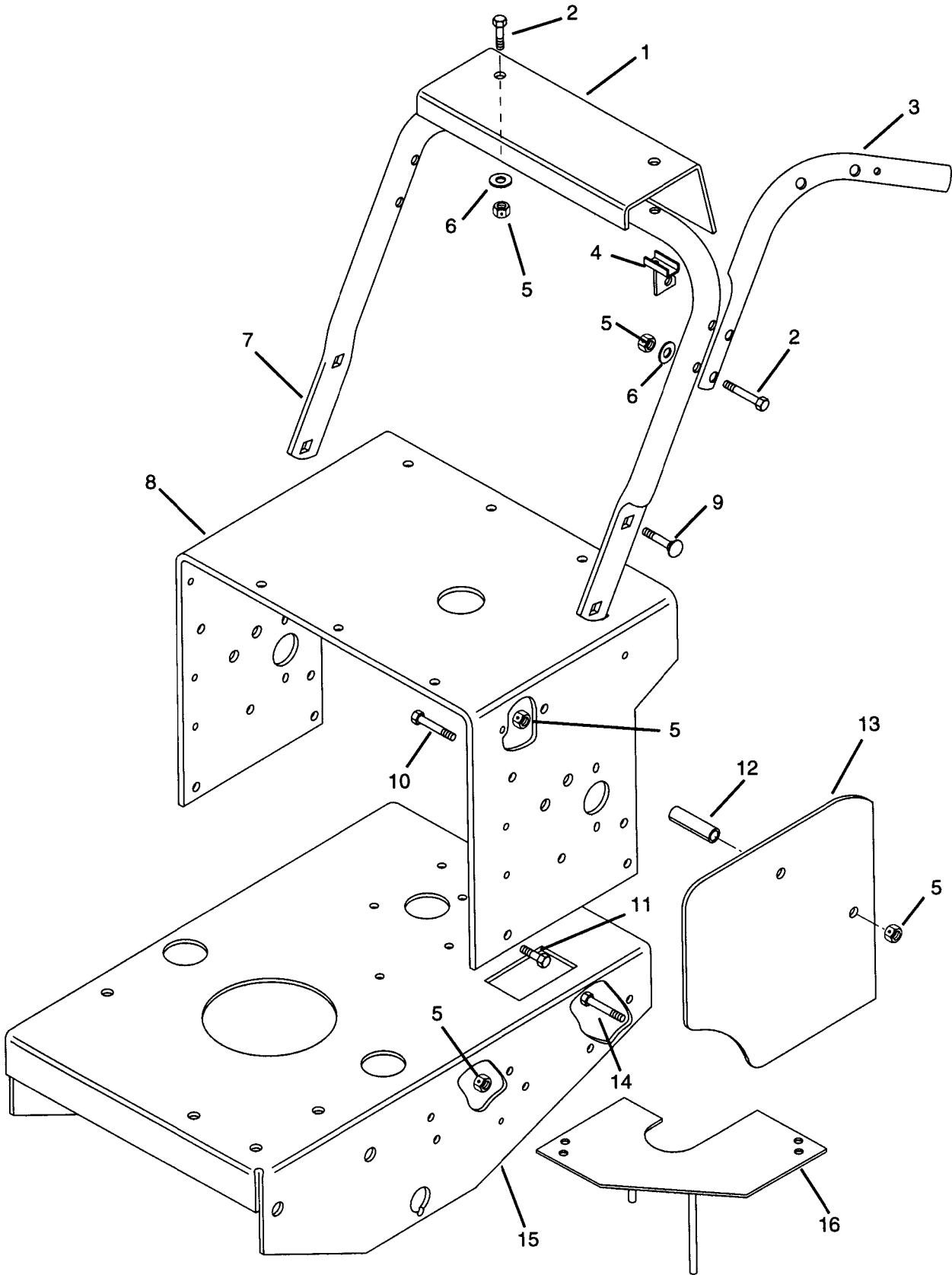
Decals

Models 988086, 088, 091, 309

ITEM NO.	PART NO.	DESCRIPTION	QTY
1	07751000	Decal-Safety	1
2	07750900	Decal-Control Panel	1
3	07740000	Decal-Logo (988086, 091)	1
	07740100	Decal-Logo (988088, 309)	1

Frame

Models 988086, 088, 091, 309



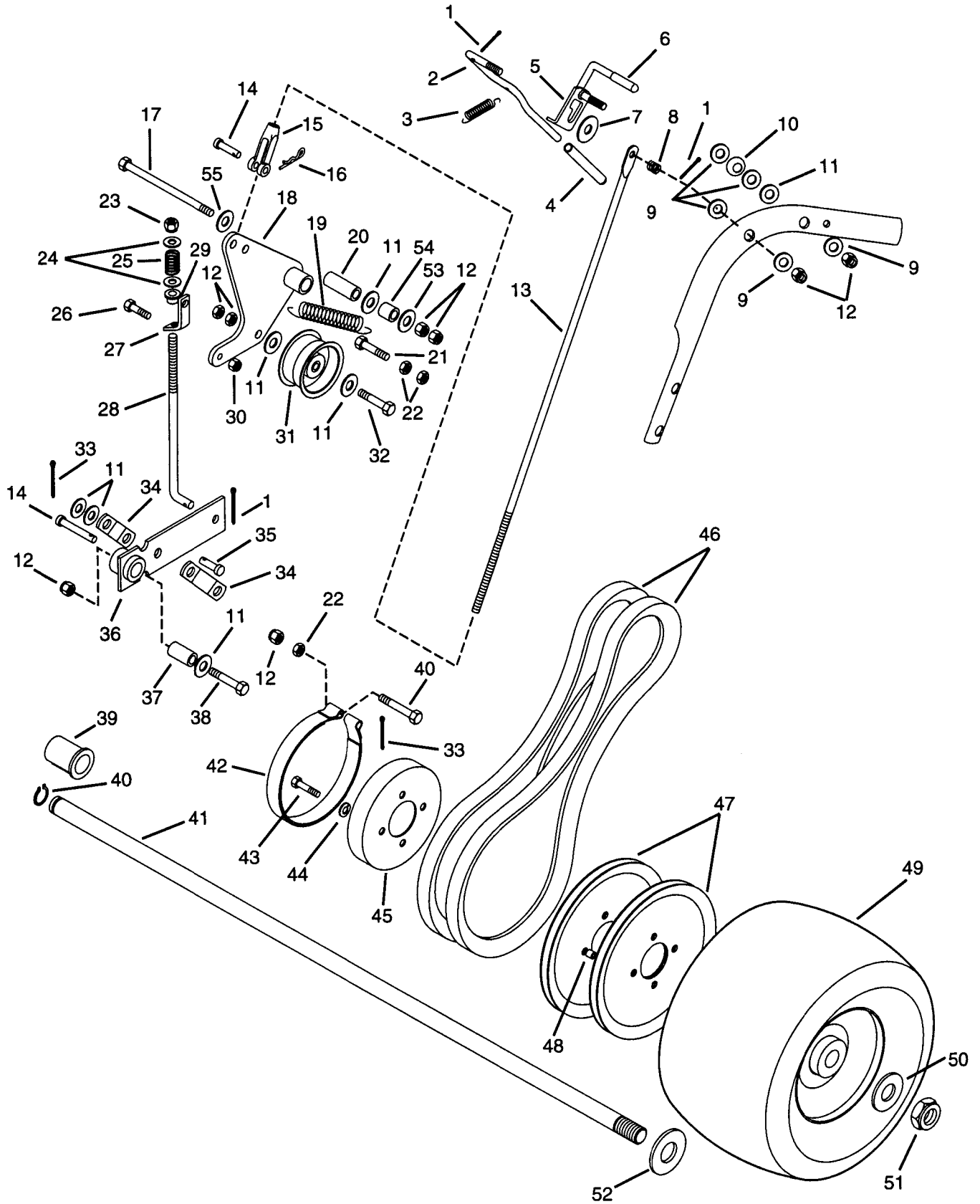
Frame

Models 988086, 088, 091, 309

ITEM NO.	PART NO.	DESCRIPTION	QTY
1	08834900	Panel-Instrument	1
2	05963300	Bolt-Hex .38-16 x 2.00 Grade 5	6
3	08847500	Handlebar Left Hand	1
	08847600	Handlebar Right Hand	1
4	08873400	PTO Lever Mounting Bracket	1
5	06529600	Nut-Locking-Center .375-16	11
6	06436200	Washer-Flat-Steel .406 x .812 x .065	5
7	08873500	Lower Handlebar-Pro 100	1
8	08872100	Bolt-Round Head Square Neck .38-16 x 1.0	4
9	06215500	Bolt-Hex .38-16 x 4.00	2
10	05965400	Bolt-Hex .38-16 x 1.00 Grade 5	2
11	05948700	Bolt-Hex .38-16x 1.00 Grade 5	2
12	08875300	Bushing-Spacer 3.25 x 3/8 ID x 5/8 OD	2
13	08873700	Guard-Drive Pro-100 Side Cover	1
14	05957900	Bolt-Hex.38-16 x 1.50 Grade 5	1
15	08872000	Pro-150 Main Frame	1
16	08873900	Belt Brake Finger-Deck Clutch	1

Steering Control

Models 988086, 088, 091, 309



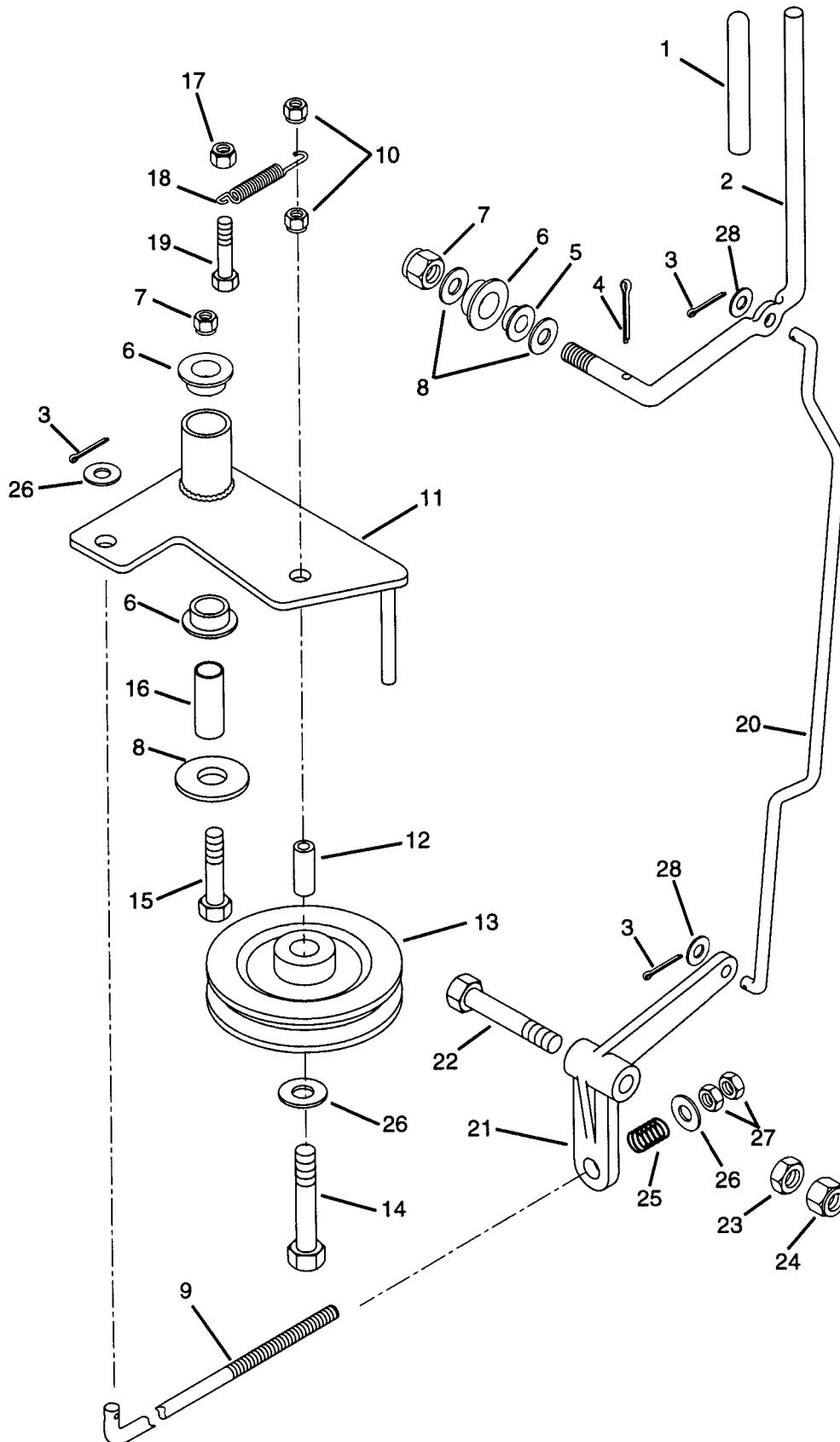
Steering Control

Models 988086, 088, 091, 309

ITEM NO.	PART NO.	DESCRIPTION	QTY
1	06706900	Pin-Cotter .09 x .75	6
2	052624	Lever-Hand Control	2
3	043446	Spring-Tension .041 x .500 x 1.750	2
4	043197	Grip-Hand Clutch Lever	2
5	042990	Weldment-Clutch-Brake Lock	2
6	043192	Tip-Brake Lock Lever	2
7	06442400	Washer-Flat-Steel .4 x 1.375	2
8	043193	Spring-Compression .045 x .600 x .750	2
9	020775	Washer-Flat-Nylon .375 x .75 x .060	10
10	029024	Spring Washer	2
11	06436200	Washer-Flat-Steel .406 x .812 x .065	16
12	06529600	Nut-Locking-Center .38-16	16
13	08878200	Rod-Clutch Actuating	2
14	06814900	Pin-Clevis .38 x 1.25	4
15	018380	Clevis .38-24 Adjustable	2
16	06709800	Pin-Hair Internal .08 x .18 x 1.18	2
17	05965400	Bolt-Hex .38-16 x 4.00 Grade 5	2
18	08831200	Weldment-Wheel Clutch Arm	2
19	034400	Spring-Tension .069 x .62 x 3.50	2
20	08831500	Bushing-Sleeve .385 x .610 x 1.80	2
21	05957900	Bolt-Hex .38-16 x 1.50 Grade 5	2
22	06529200	Nut-Hex .31-18	6
23	06529800	Nut-Locking-Center .31-18	2
24	06437200	Washer-Flat-Steel .344 x .688 x .065	4
25	011779	Spring-Compression .125 x .78 x 1.00	2
26	05946800	Bolt-Hex .25-20 x .75 Grade 5	2
27	088726	Left-Bracket-Pro Brake Link	2
28	049282	Rod-Brake	2
29	045789	Bushing-Flange .320 x .620 x .312	2
30	06529700	Nut-Locking-Center .25-20	2
31	048870	Sheave 3.25 x 1.25	2
32	05963700	Bolt-Hex .31-18 x 2.25	2
33	06707300	Pin-Cotter .12 x .75 Extpsqct	4
34	049026	Link-Brake Arm	4
35	06814800	Pin-Clevis .38 x .75	2
36	049023	Weldment-Brake Arm	2
37	049027	Bushing-Sleeve .391 x .622 x .950	2
38	05963300	Bolt-Hex .38-16 x 2.00 Grade 5	4
39	049969	Bushing-Flange 1.010 x 1.38 x 1.4 x 1.65	2
40	017980	Ring-Retaining-External .906 x .078	1
41	08875200	Axle Shaft-Pro-150	1
42	08880600	Assembly-Brake Band-Pro	2
43	05952400	Bolt-Hex .31-18 x 1.50 Grade 5	8
44	06308600	Washer-Lock .31 x .078	8
45	049015	Drum-Brake	2
46	07225800	Drive Belt-Matched Pair	2
47	049033	Pulley-V 9.00 x 3.75	4
48	048868	Bushing-Sleeve .385 x .625 x .475	8
49	07147300	Assembly-Wheel, 13 x 6.00-6	2
50	06436300	Washer-Flat-Steel 1.010 x 1.505 x .062	1
51	06536400	Nut-Locking-Center .44 -14	1
52	06426500	Washer-Thrust 1.55 x 1.002 x .093	AR
53	06439100	Washer-Flat-Steel .38 x .87 x .179	2
54	043922	Bushing	2
55	06440800	Washer-Flat-Steel .44 x 1.625 x .315	2

PTO Clutch Linkage

Models 988086, 088, 091, 309



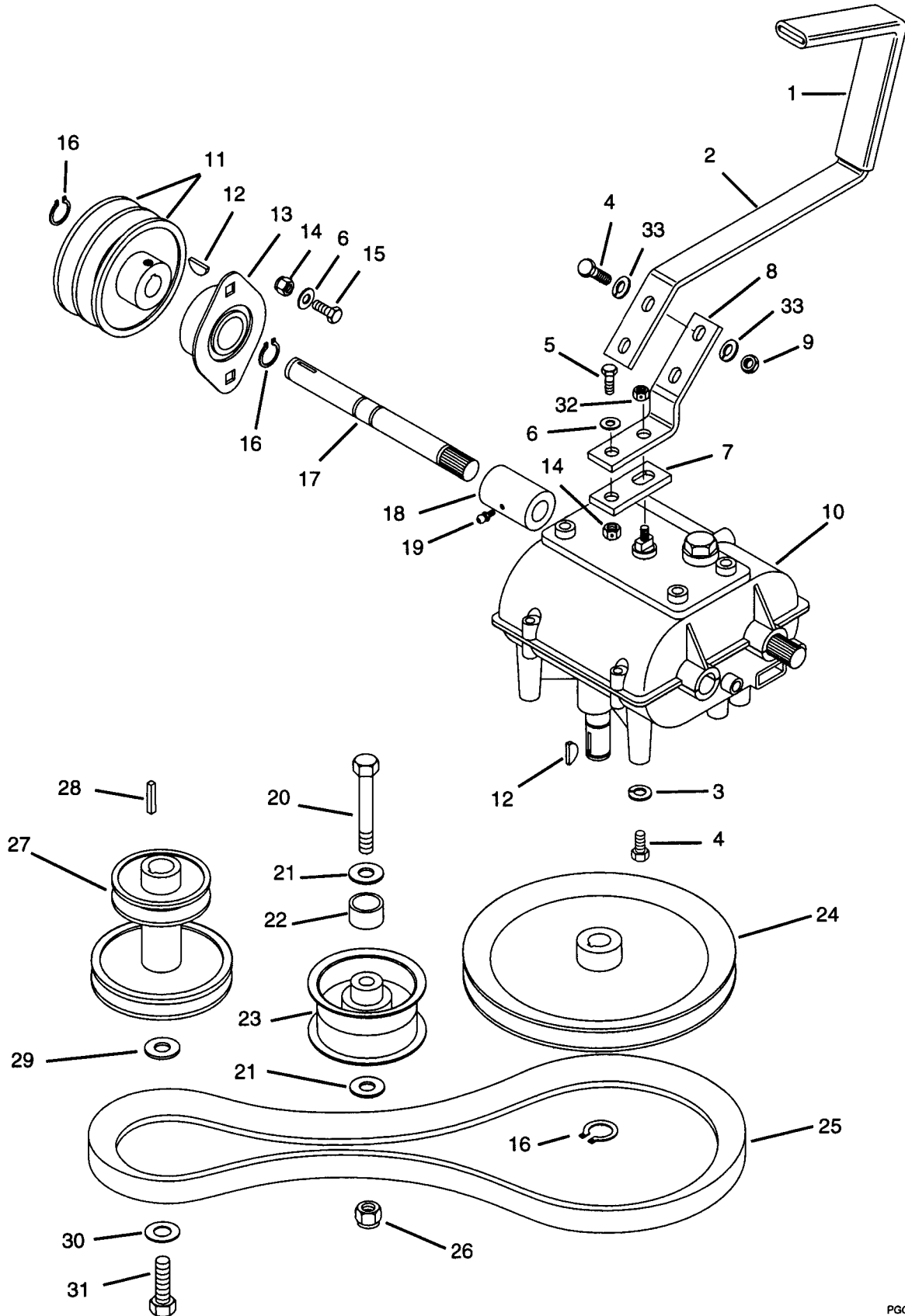
PTO Clutch Linkage

Models 988086, 088, 091, 309

ITEM NO.	PART NO.	DESCRIPTION	QTY
1	043196	Grip-PTO Lever	1
2	06707000	Lever-PTO Actuating	1
3	121222	Pin-Cotter .09 x 1.00	3
4	06712800	Pin-Cotter .188 x 1.50	1
5	034738	Bushing-Flange .515 x .750 x .745 x 1.00	1
6	010174	Bushing-Flange .762 x 1.0 x .580 x 1.48	3
7	06536300	Nut-Locking-Center .50-13	3
8	06441000	Washer-Flat-Steel .50 x 1.25 x .083	3
9	08873000	PTO Rod	1
10	06529600	Nut-Locking-Center .38-16	2
11	08872300	Declutch Arm-Pro PTO	1
12	08874100	Spacer .391 ID x .75 OD x 1.25	1
13	052062	Idler-Pulley-Flat 3.25 x .625	1
14	05960900	Bolt-Hex .38-16 x 3.50 Grade 5	1
15	05960000	Bolt-Hex .50-13 x 3.25 Grade 5	1
16	08872400	Bushing for Declutch Arm Pivot	1
17	08329500	Spring-Tension .095 x .85 x 4.38	1
18	06529800	Nut-Locking-Center .31-18	2
19	05947500	Bolt-Hex .31-18X1.25 Grade 5	1
20	08873300	PTO Lever Link Rod, Pro 100	1
21	049271	Lever-PTO Clutch	1
22	05966600	Bolt-Hex .50-13 x 2.50 Grade 5	1
23	06537300	Nut-Hex .50-13	1
24	06536300	Nut-Locking-Center .50-13	1
25	011779	Spring-Compression .125 x .78 x 1.00	1
26	06436200	Washer-Flat-Steel .406 x .812 x .065	3
27	06529400	Nut-Hex .38-16	2
28	06437200	Washer-Flat-Steel .344 x .688 x .065	2

Gear Selector

Models 988086, 088, 091, 309



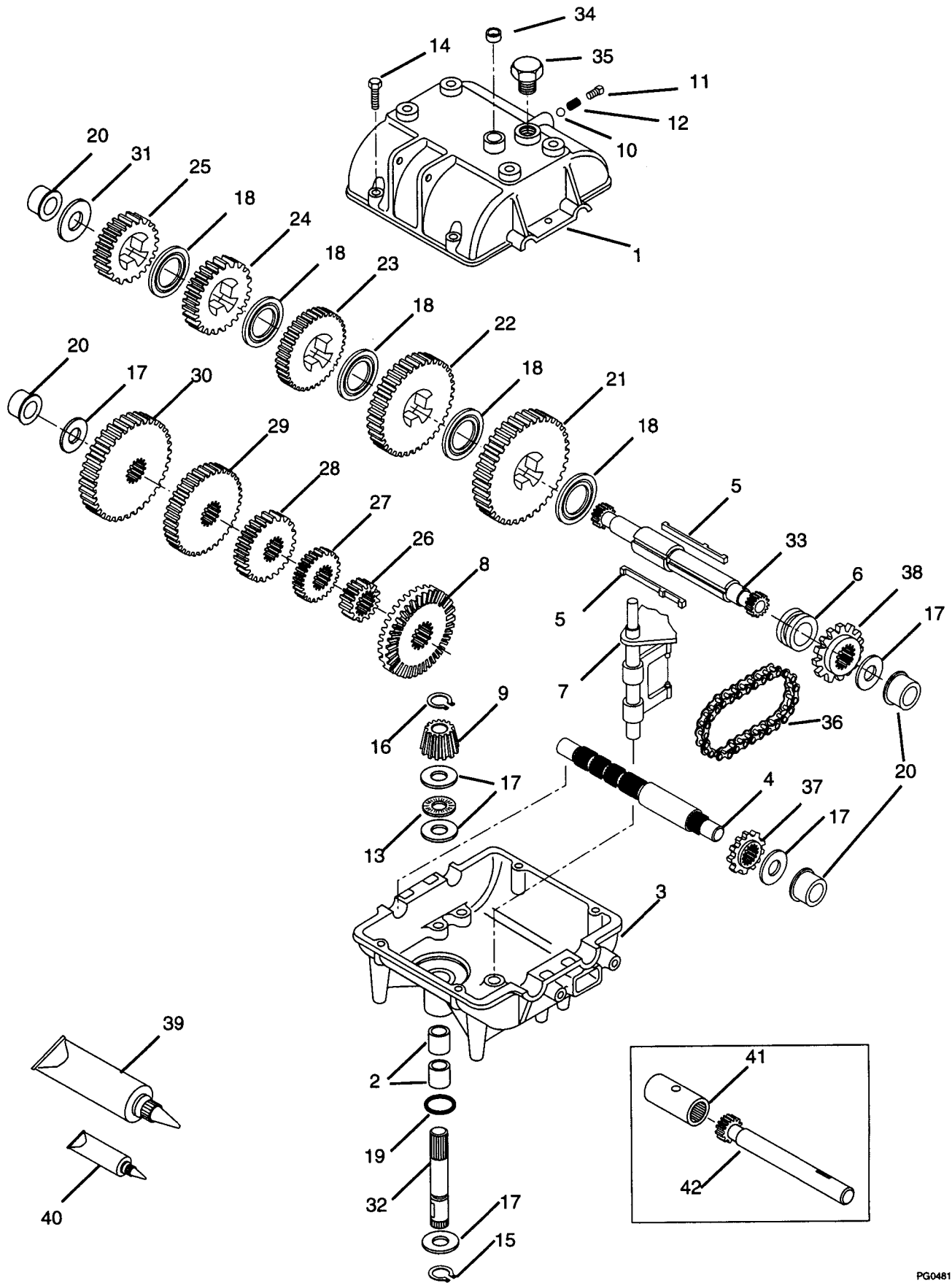
Gear Selector

Models 988086, 088, 091, 309

ITEM NO.	PART NO.	DESCRIPTION	QTY
1	045550	Grip	1
2	048997	Lever-Transmission Shift	1
3	06308600	Washer-Locking .31 x .078 Regular	4
4	05946900	Bolt-Hex .31-18 x 1.00 Grade 5	6
5	05947700	Bolt-Hex .25-20 x 1.00 Grade 5	1
6	06437300	Washer-Flat-Steel .281 x .62 x .065	5
7	04901300	Plate-Shift	1
8	04902100	Arm-Shift	1
9	06529800	Nut-Locking-Center .31-18	2
10	04901000	Transmission	1
11	088725	Drive Sheave (Upper) - Pro-100	2
12	124549	Key-Woodruff .19 x .75	3
13	049277	Bearing-Flange .625 x 1.875 x .797	2
14	06529700	Nut-Locking-Center .25 -20	5
15	05946800	Bolt-Hex .25-20 x .75 Grade 5	4
16	015338	Ring-Retaining-External .579 x .93	5
17	04901100	Half Shaft-Transmission, Pro-150	2
18	04901200	Coupler-Transmission Shaft	2
19	411027	Fitting-Lube .25-28 x .256	2
20	05962900	Bolt-Hex .38-16 x 2.25 Grade 5	1
21	06436200	Washer-Flat-Steel .406 x .812 x .065	2
22	049708	Spacer .625 x .385 x .55	1
23	052062	Idler-Pulley Flat 3.25 x .625	1
24	048995	Pulley-V 7.50 x .63	1
25	049270	V-Belt A-Section 14.9 x 33/64	1
26	06529600	Nut-Locking-Center .38-16	1
27	088722	Crank Sheave-Pro1	1
28	06607000	Key-Square .248 X 2.38	1
29	120383	Washer-Locking .44	1
30	044379	Washer-Special .42 X 2.000 X 2.50	1
31	05968300	Bolt-Hex M10 X 1.5 X 60	1
32	06539400	Nut-Locking-Center .38-24	1
33	06437200	Washer-Flat-Steel .344 x .688 x .065	4

Models 988086, 088, 091, 309

Models 988086, 088, 091, 309



Transmission

Models 988086, 088, 091, 309

Transmission Model 700-079

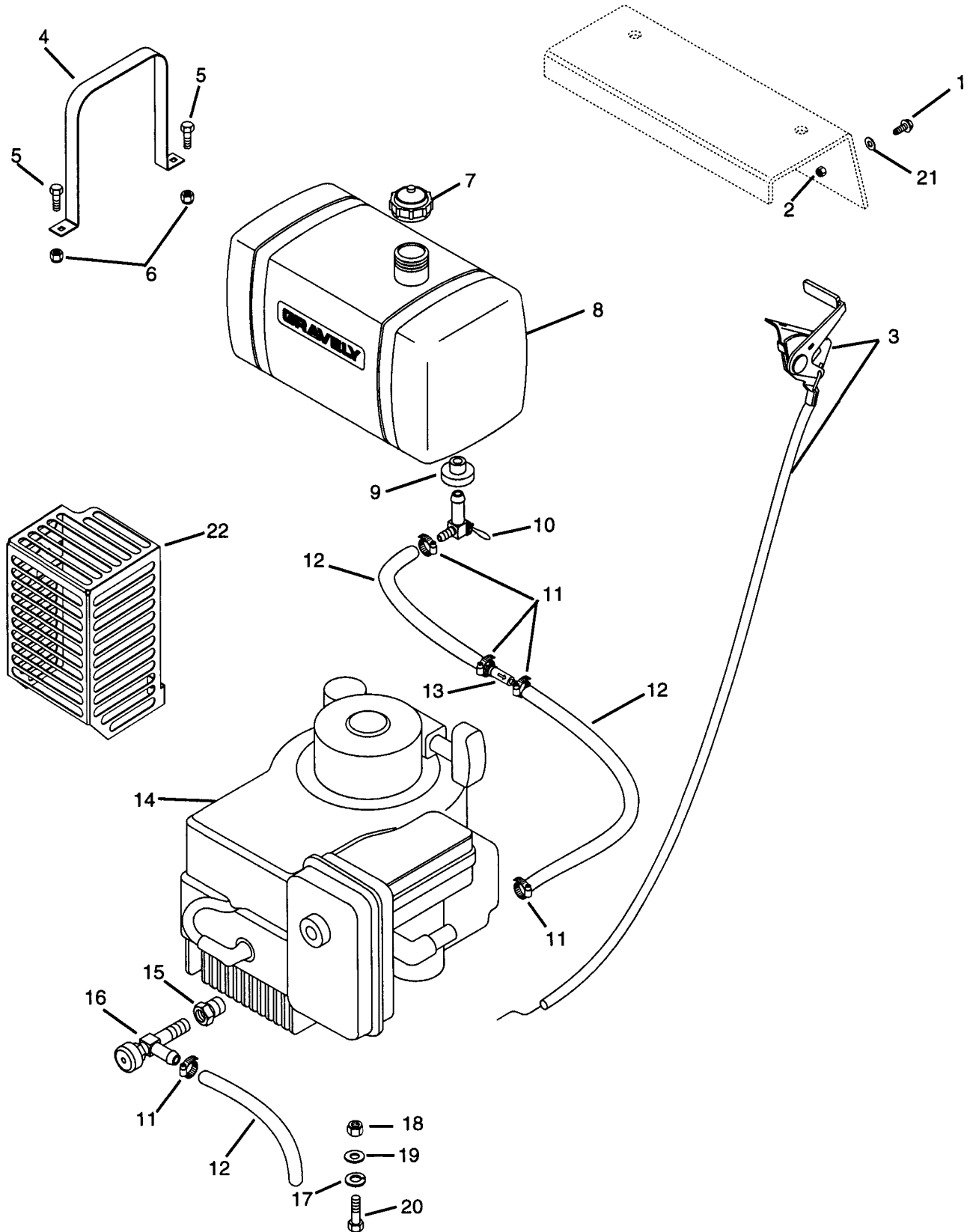
ITEM NO.	PART NO.		DESCRIPTION	QTY
1	772083A	1	Transmission Cover	
2	780086A	1	Needle Bearing .625 ID x .50	
	780142	1	Needle Bearing .625 ID x .75	
3	770061A	1	Transmission Case	
4	776134	1	Countershaft	
5	792089A	4	Shift Key	
6	784266	1	Shift Collar	
7	784376	1	Shift Rod & Fork Assembly	
8	778154	1	Bevel Gear (42 Teeth)	
9	792176	1	Bevel Pinion (14 Teeth-Steel)	
10	792077	1	Steel Ball .31 Diameter	
11	792078	1	Set Screw .38-16 x .38	
12	780079	1	Spring	
13	792071	1	Thrust Bearing	
14	792073A	6	Screw .25-20 x 1.25	
15	792035	1	Ring, Retaining	
16	788040	1	Ring, Retaining	
17	780072	6	Washer	
18	780108	5	Washer	
19	792001	1	"O"-Ring	
20	780105A	4	Bushing-Flanged	
21	778146A	1	Spur Gear (37 Teeth)	
22	778125	1	Spur Gear (35 Teeth)	
23	778239A	1	Spur Gear (32 Teeth-Steel)	
24	778124A	1	Spur Gear (30 Teeth)	
25	778250	1	Spur Gear (27 Teeth)	
26	778145	1	Spur Gear (12 Teeth)	
27	778151	1	Spur Gear (15 Teeth)	
28	778240	1	Spur Gear (18 Teeth)	
29	778126A	1	Spur Gear (20 Teeth)	
30	778249	1	Spur Gear (23 Teeth)	
31	780139	1	Washer	
32	776135	1	Input Shaft 3.69 long	
33	776402	1	Shifter and Brake Shaft	
34	788069	1	Square Cut Ring	
35	792074	1	Threaded Plug	
36	786081	1	Roller Chain (No. 41, 24 Links)	
37	786082	1	Sprocket (9 Teeth)	
38	786083	1	Sprocket (18 Teeth)	
39	788067B	1	Grease (32 oz. Bottle Bentonite Grease)	
40	510334	1	Gasket Eliminator (Loctite #515)	
41	786176	1	Optional Coupling (1.813 OD)	
	786177	1	Optional Coupling (1.188 OD)	
42	776401	1	Optional Connector (6.095 long)	
	776403	1	Optional Connector (6.25 long)	
	776407	1	Optional Connector (6.630 long)	
	776416	1	Optional Connector (7.000 long)	

TECUMSEH PRODUCTS COMPANY
Engine and Gear Service Division
Grafton, Wisconsin

NOTE: Part Numbers listed on this page are Tecumseh part numbers and are to be ordered or purchased from the nearest Tecumseh Service Outlet, which may be found in the Yellow Pages of the Telephone Directory.

Fuel and Exhaust System

Models 988086, 088, 091, 309



Fuel and Exhaust System

Models 988086, 088, 091, 309

ITEM NO.	PART NO.	DESCRIPTION	QTY
1	06116700	Screw-Machine Hex Washer Head 10-24 x .50	2
2	06536000	Nut-Locking-Nylon 10-24 w/Insert	2
3	06940900	Cable-Throttle	1
4	09112100	Tank Strap for 4.5 G Fuel Tank	2
5	05946800	Bolt-Hex .25-20 x .75 Grade 5	4
6	06529700	Nut-Locking-Center .25-20	4
7	048856	Cap-Fuel Tank	1
8	09112000	Fuel Tank 4.5 Gallon	1
9	047613	Bushing-Flange .375 x 1.06 x .625	1
10	049284	Valve-Ball Shut-Off	1
11	032045	Hose Clamp	5
12	021134	Gas Line-Bulk	3 ft.
13	040742	Filter-Fuel	1
14	08235000	Engine-Kawasaki 12.5	1
	08237500	Engine-14 HP Kawasaki	1
	08256300	Engine 12.5 HP Tecumseh Recoil	1
15	041831	Adapter-Oil Drain	1
16	035329	Cock-Oil Drain	1
17	06308600	Washer-Lock .313 x .078	4
18	06529800	Nut-Locking-Center .31-18	4
19	06437200	Washer-Flat-Steel .344 x .688 x .065	4
20	05968200	Bolt-Hex M8 x 1.25 x 30 Grade 5	4
21	06442700	Washer-Flat-Steel .219 x .50 x .049	2
22	04903000	Muffler Guard (309)	1

Continuity Diagrams

Models 988086,088,091, 309

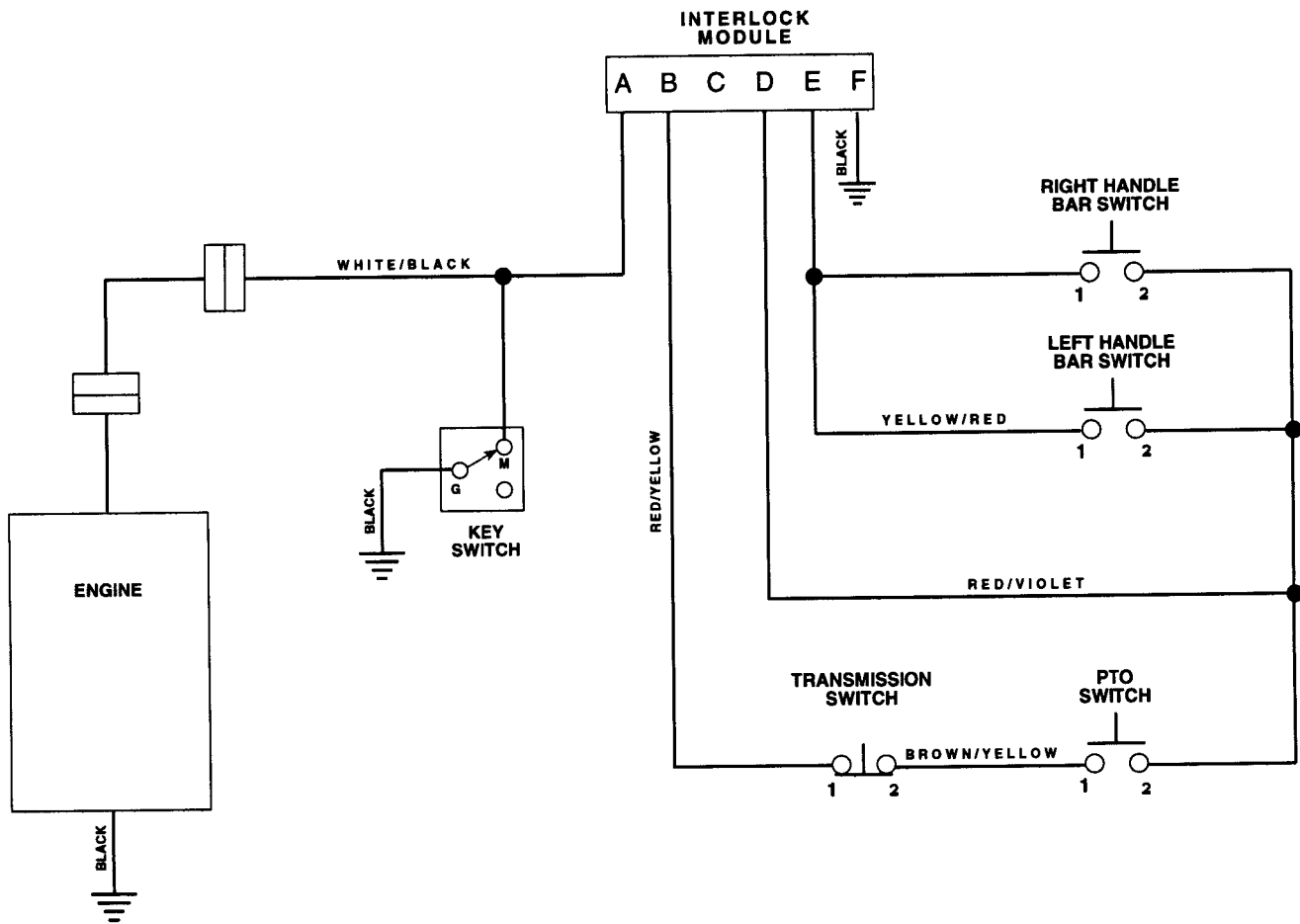
The diagrams below show the various states of connection for electrical components.
The solid lines on switches show continuity.

NOTE: All switches are viewed from the rear.

Key Switch (02456500) OFF (button up) RUN (button down)	Handlebar Switch (08828300) HAND ON HANDLE HAND OFF HANDLE
Transmission Neutral Switch (034640) ENGAGED (button in) DISENGAGED (button out)	PTO Switch (020916) RUN (button up) NEUTRAL (button down)

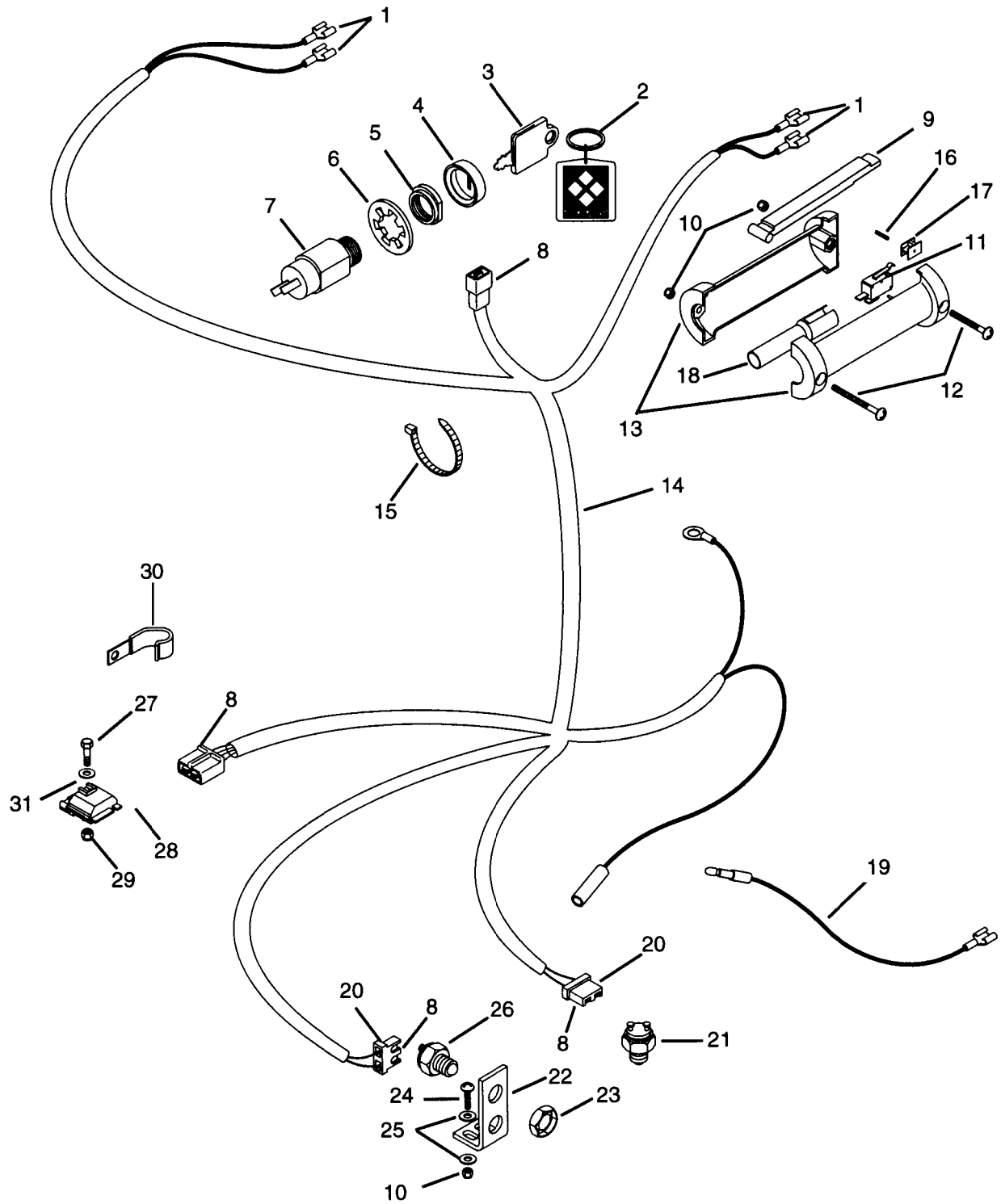
Wiring Diagram

Models 988086,088,091, 309



Electrical System

Models 988086, 088, 091, 309



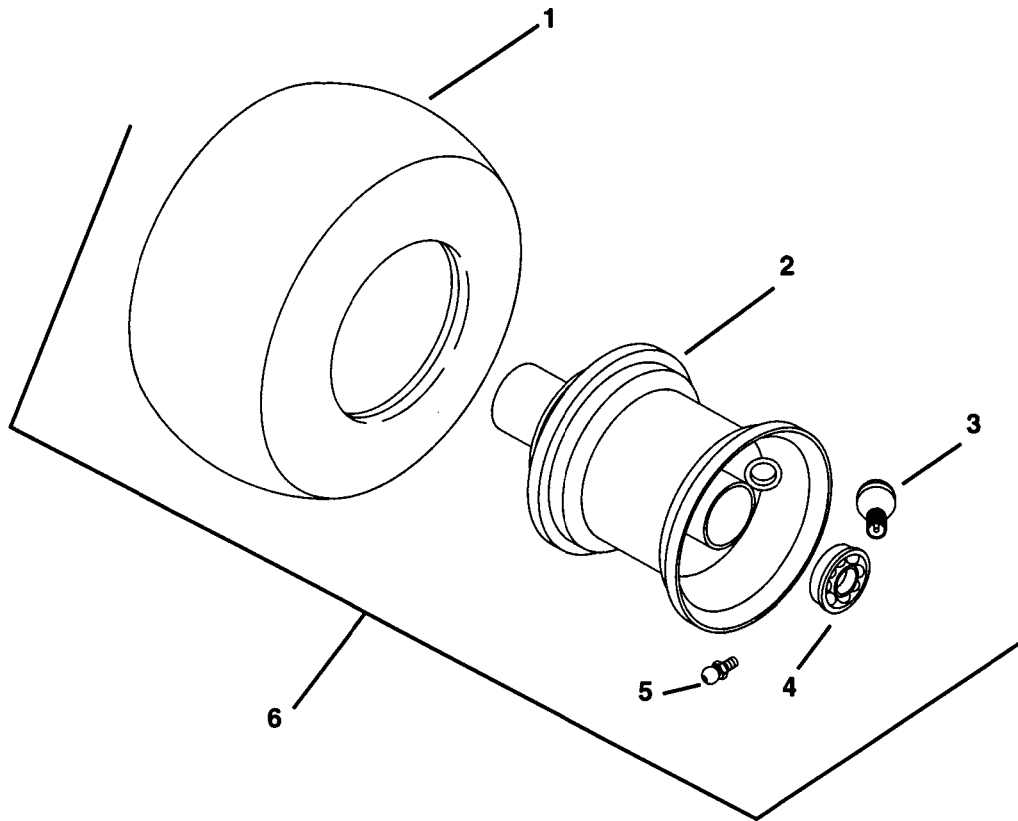
Electrical System

Models 988086, 088, 091, 309

ITEM NO.	PART NO.	DESCRIPTION	QTY
1	046988	Terminal-Female	4
2	045842	Key Chain	1
3	045488	Ignition Switch Key	2
4	045490	Cap-Ignition Switch	1
5	045497	Nut-Panel .625-32	1
6	018586	Washer-Lock .625	1
7	024565	Key Switch Assembly	1
8	038059	Terminal	8
9	08602200	Lever	2
10	06536000	Nut-Locking-Nylon w/Insert 10-24	6
11	08828300	Switch	2
12	061183	Screw-Machine-Pan Head 10-24 x 1.50	4
13	08870200	Handle-Left Hand & Right Hand	2
14	04902000	Harness-Wiring Pro Recoil	1
15	041634	Tie Wrap-Black	10
16	058081	Pin-Roll .094 x .750	2
17	08855100	Holder-Switch	2
18	08853100	Insert-Handlebar	2
19	04902200	Wire-Ground (086)	1
20	042176	Connector 2-Wire Switch	2
21	034640	Switch-Neutral Start (N.C.)	2
22	034637	Bracket-Interlock Switch	1
23	107354	Nut-Stamped .56-18	1
24	06116900	Bolt-Hex 10-24 x .75	2
25	06442700	Washer-Flat-Steel .219 x .50 x .049	4
26	020916	Switch-Neutral Start	1
27	05946800	Bolt-Hex .25-20 x .75 Grade 5	1
28	04901900	Module	1
29	06529700	Nut-Locking-Center .250-20	1
30	06916000	J-Clamp	1
31	06412300	Washer-Flat-Steel .344 x .688 x .065	1

Wheel

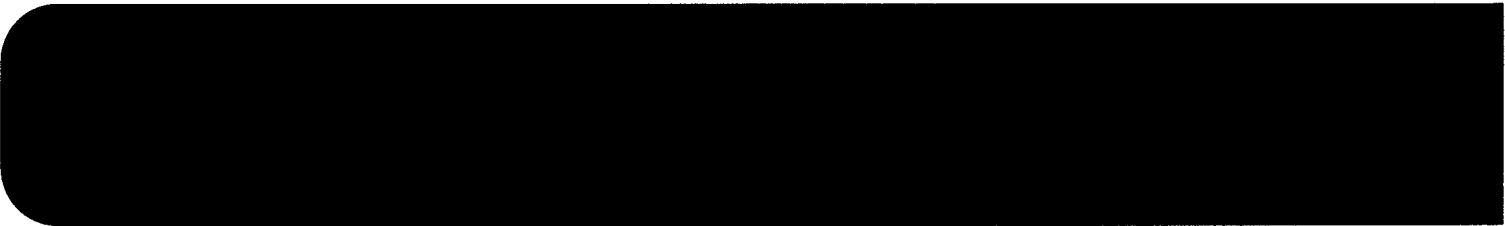
Models 988086, 088, 091, 309



ITEM NO.	PART NO.	DESCRIPTION	QTY
1	07147400	Tire, 13 x 6.5-6	1
2	07147500	Rim-Assembly	1
3	07520000	Valve Stem Assembly	1
4	21370700	Radial Bearing	2
5	07012600	Fitting-Lube .25-28 x .256	1
6	07147300	Assembly, Wheel, 13 x 6.50-6	2

GRAVELY®

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- Professional Chippers
- Professional Vacuum