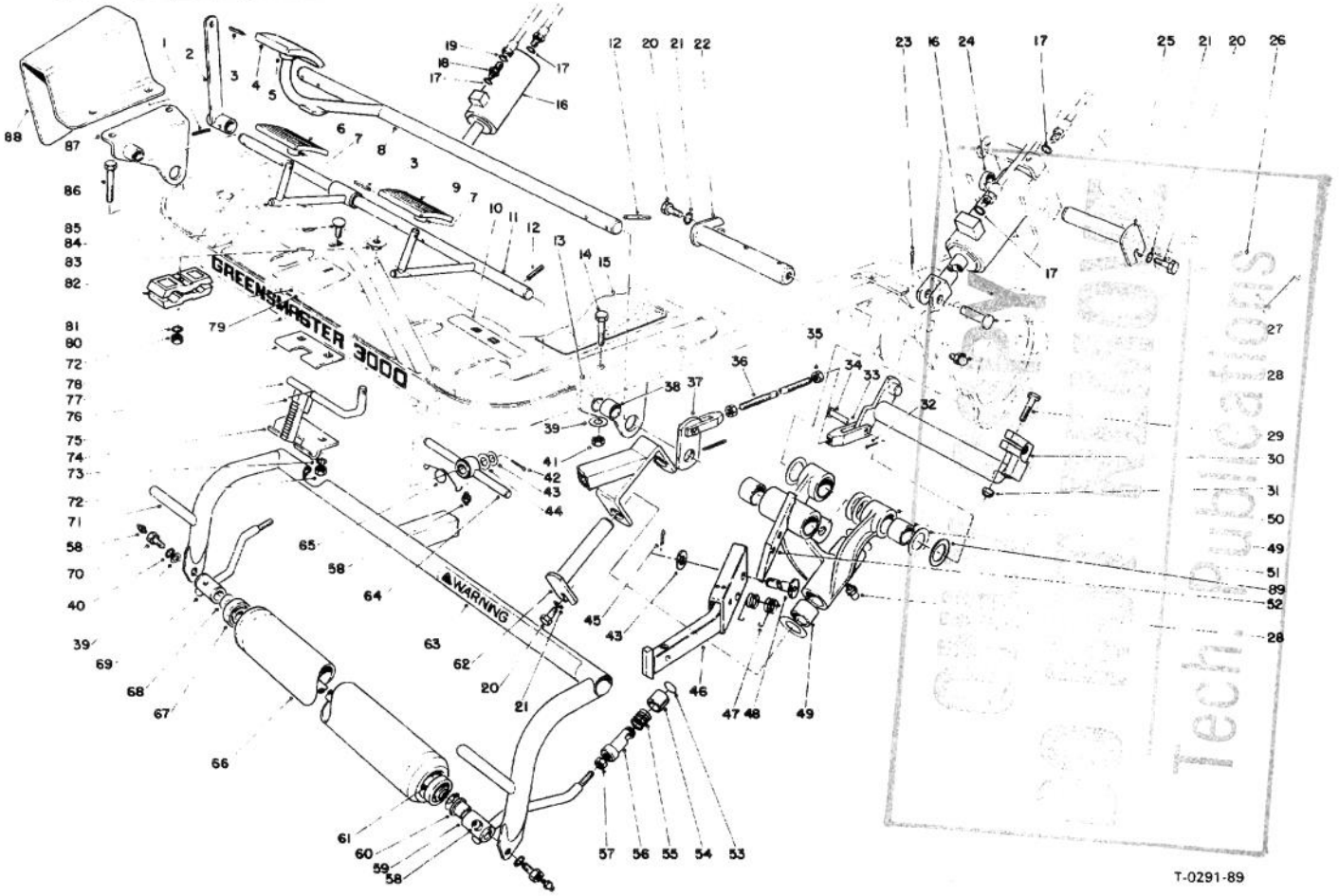
FORM NO. 3313-754

TORO

MODEL NO. 04350-90821 & UP
MODEL NO. 04405-90821 & UP
MODEL NO. 04408-90821 & UP
MODEL NO. 04450-90821 & UP
MODEL NO. 04468-90821 & UP

PARTS CATALOG

GREENSMASTER® 3000

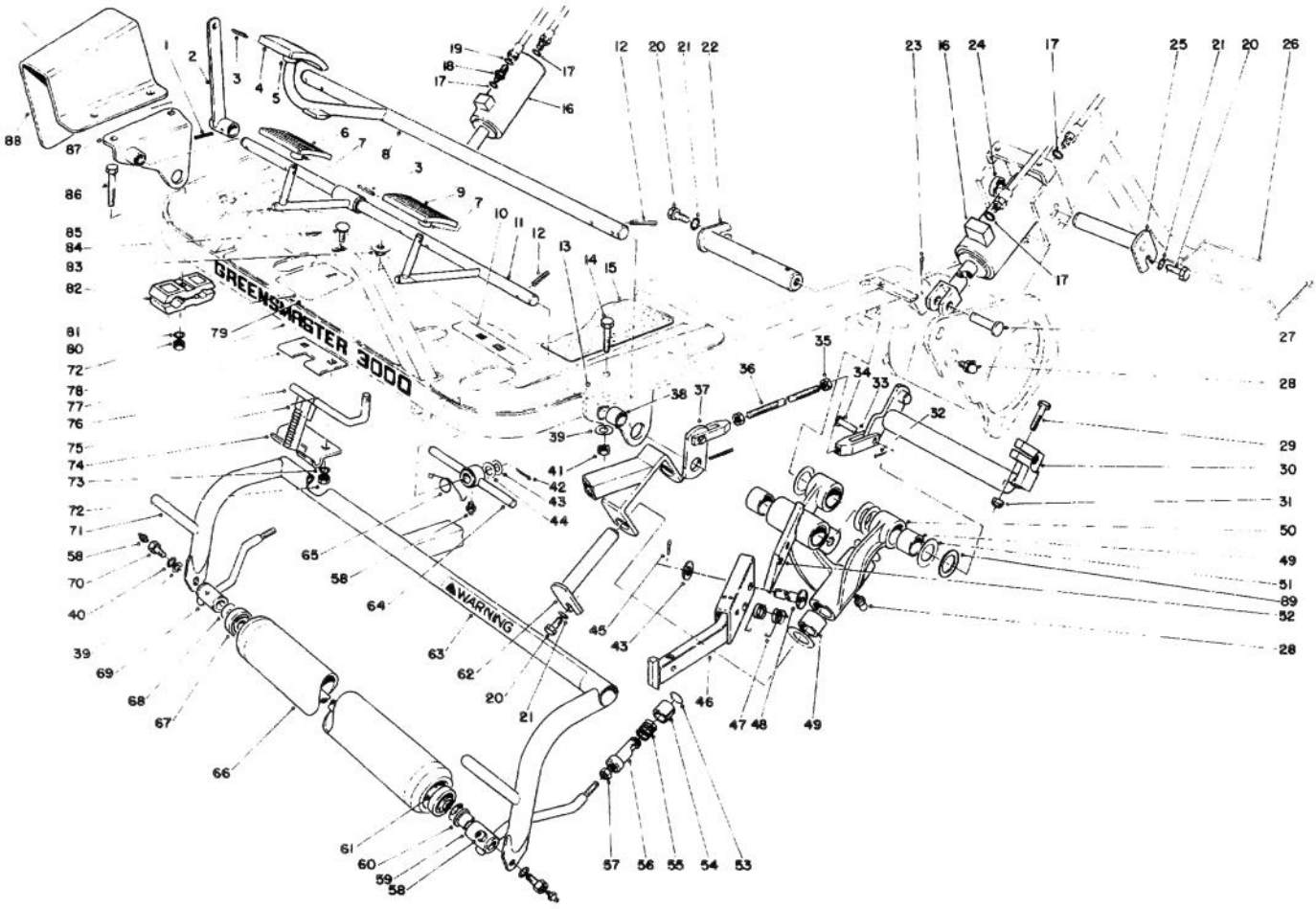


FOOT PEDALS AND ROLLER ASSEMBLY

Ref. No.	Part No.	Description	No. Used
1	32121-6	Roll Pin	1
2	49-6200	Lever — Cutting Control	1
3	32121-45	Roll Pin	3
4	49-6170	Foot Pad — Brake	1
5	49-6150	Foot Pedal — Brake	1
6	10-8250	Foot Pad — Mow	1
7	10-6540	Foot Pedal	2
8	49-6130	Brake Shaft	1
9	10-8240	Foot Pad — Lift	1
10	51-0050	Decal — Mow/Lift	1
11	49-6180	Shaft — Cutting Control	1
12	32121-35	Roll Pin	8
13	49-6090	Lift Pivot Bracket — L.H. (Incl. Ref. #38)	1
14	323-10	Capscrew — Hex Hd.	4
15	49-6120	Pad — Footrest	1
16	63-9500	Cylinder — Hydraulic	2
17	237-78	O-Ring	4

Ref. No.	Part No.	Description	No. Used
18	340-92	Fitting — Straight	1
19	237-21	O-Ring	1
20	322-1	Capscrew — Hex Hd.	6
21	3253-4	Lockwasher	6
22	10-6110	Pin — Hinge	2
23	3272-11	Pin — Cotter	2
24	46-6350	Spacer	2
25	10-6060	Pin — Ram Pivot	2
26	62-2660	Pad — Foot Step	1
27	283-8	Pin — Clevis	2
28	302-60	Grease Fitting	4
29	322-6	Capscrew — Hex Hd.	1
30	52-5540	Brake Arm — L.H.	1
31	3296-29	Nut — Lock	1
32	3272-6	Pin — Cotter	4
33	282-2	Yoke	4
34	283-1	Pin — Clevis	4
35	3220-2	Nut — Hex	4

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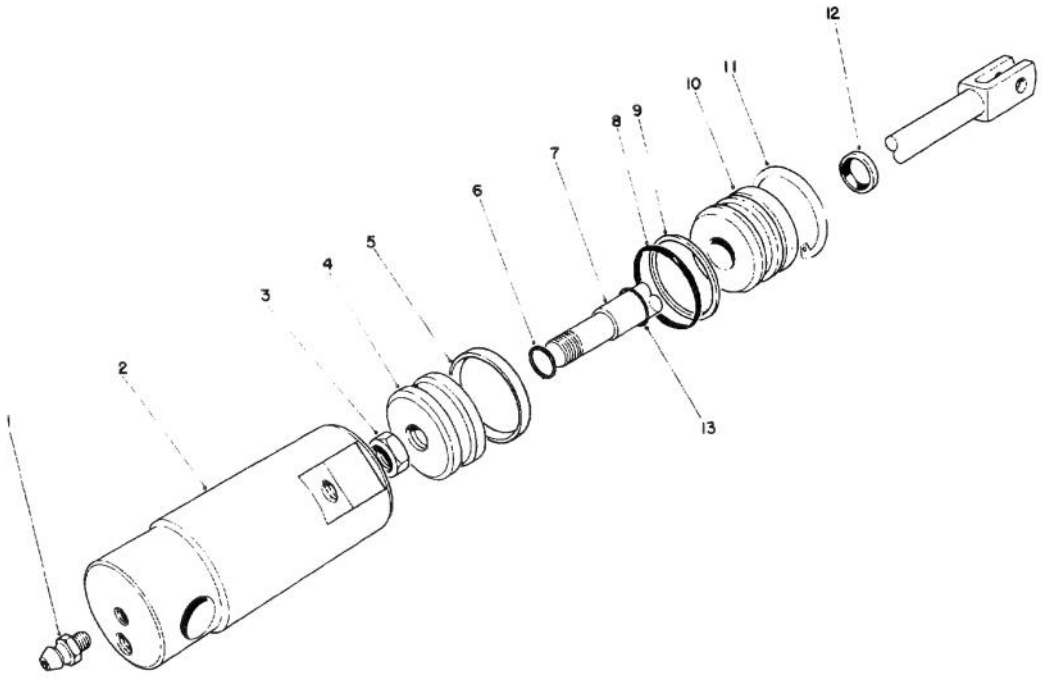


T-0291-89

FOOT PEDALS AND ROLLER ASSEMBLY (Continued)

Ref. No.	Part No.	Description	No. Used
36	27-2270	Rod — Brake Adjustment	2
37	10-8100	Strap — Brake Shaft	2
38	256-32	Bushing	2
39	3256-24	Washer — Flat	10
40	3253-21	Lockwasher	8
41	3296-59	Nut — Hex Jam	4
42	3272-11	Pin — Cotter	1
43	3256-26	Washer — Flat	2
44	3290-221	Washer — Spring	1
45	3272-12	Pin — Cotter	1
46	62-2390	Bar — Lift Arm L.H.	1
47	57-7650	Spring — Torsion	1
48	63-8750	Pin — Pivot	1
49	3-0348	Bushing	10
50	10-7820	Pivot Hinge (Incl. Ref. #49)	2
51	10-8110	Washer — Thrust	18
52	62-2460	Lift Arm — L.H. (Incl. Ref. #49)	1
53		Retaining Ring	6
54		Sleeve	6
55		Spring	6
56	8-7710	Ball Joint Receiver Assembly (Incl. Ref. #53-55)	6
57	3220-3	Nut — Hex Jam	6
58	302-5	Grease Fitting	8
59	52-2740	Pull Arm Assembly — L.H. (Incl. Ref. #60)	3
60	3-1506	Bushing	12
61	21-8470	Shaft — Yoke Roller	3
62	10-6090	Pin — Pivot	2
63	27-2890	Decal — Warning	1

Ref. No.	Part No.	Description	No. Used
64	12-9050	Lift Pivot	1
65	10-9090	Spring — Lift Pivot	1
66	52-2720	Roller Assembly (Incl. Ref. #67)	3
67	251-141	Bearing — Ball	6
68	3290-317	Washer — Spring	6
69	52-2750	Pull Arm Assembly — R.H. (Incl. Ref. #60)	3
70	11-0160	Roller Shaft Screw Assembly (Incl. Ref. #58)	6
71	47-5970	Pull Frame — L.H.	1
72	3296-16	Nut — Hex	3
73	3253-3	Lockwasher	2
74	10-7890	Hinge — Lower Park Brake	1
75	10-8140	Spring — Brake Latch	1
76	10-7850	Latch — Parking Brake	1
77	10-7880	Hinge — Upper Park Brake	1
78	62-2590	Decal — Greensmaster 3000	1
79	49-5570	Plate — Foot Rest	1
80	3256-3	Washer — Flat	1
81	27-2830	Decal — Parking Brake	1
82	56-7970	Clamp — Tube	2
83	32141-111	Nut — Hex Hd. Flanged	1
84	3229-22	Bolt — Carriage	2
85	10-6300	Foot Pedal	1
86	321-23	Capscrew — Hex Hd.	1
87	49-6070	Lift Pivot Bracket — R.H. (Incl. Ref. #38)	1
88	49-6110	Guard — Transfer Rod	1
89	5-1226	Washer — Shim	1

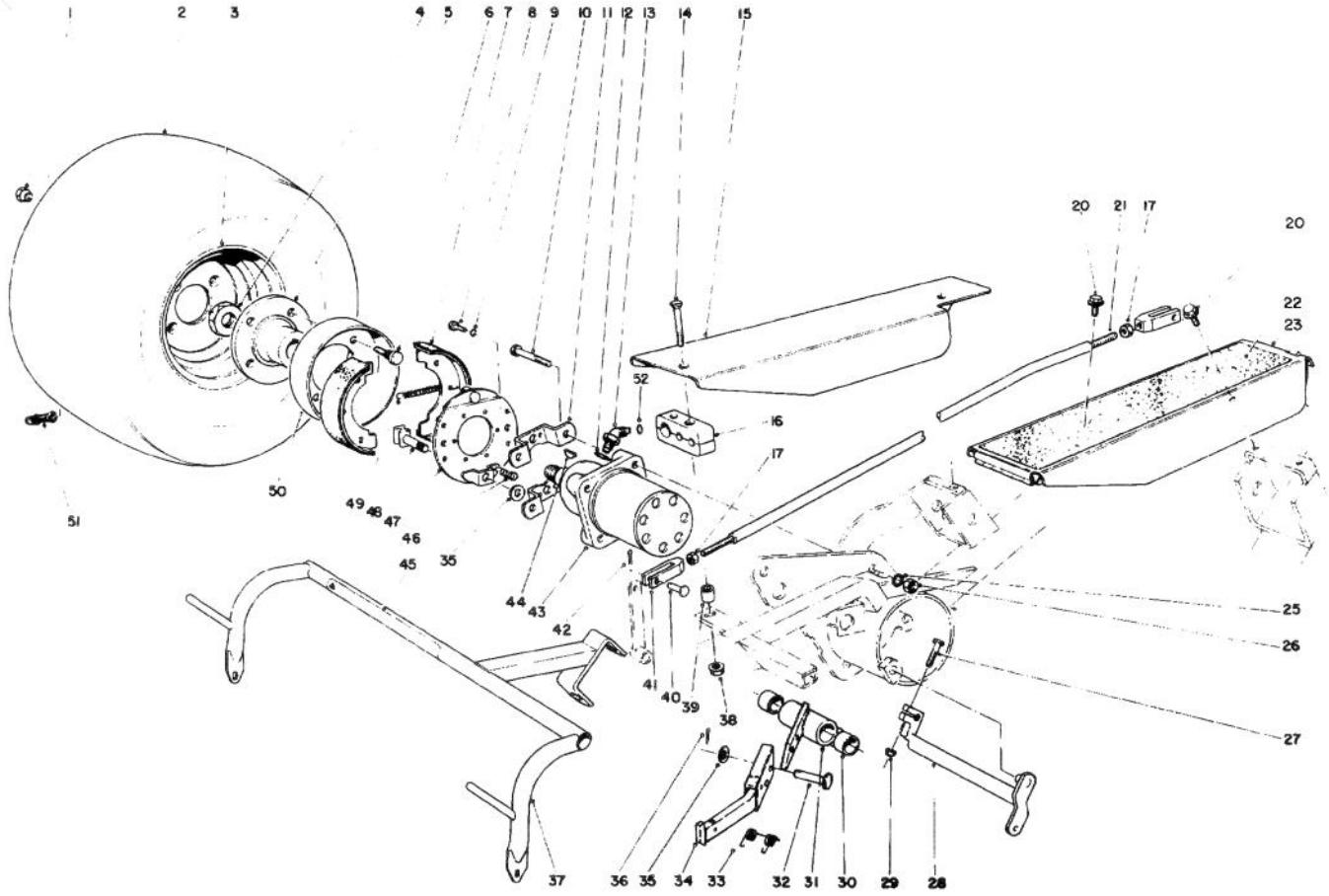


T-0292 89

HYDRAULIC CYLINDER — FRONT NO. 63-9500

Ref. No.	Part No.	Description	No. Used
1	302-2	Grease Fitting	2
2		Barrel Assembly	1
3	32152-10	Nut — Lock	1
4	52-1990	Piston	1
5		Uniring	1
6		O-Ring	1
7	52-1980	Shaft with Clevis	1
8		O-Ring	1
9		Washer — Back Up	1
10	65-4860	Head	1
11	32120-8	Ring — Retaining Internal	1
12		Dust Seal	1
13		Seal Polypak	1
*	65-2980	Seal Repair Kit (Incl. Ref. #5, 6, 8, 9 & 12-13)	1

* Not Illustrated



T-0293-89

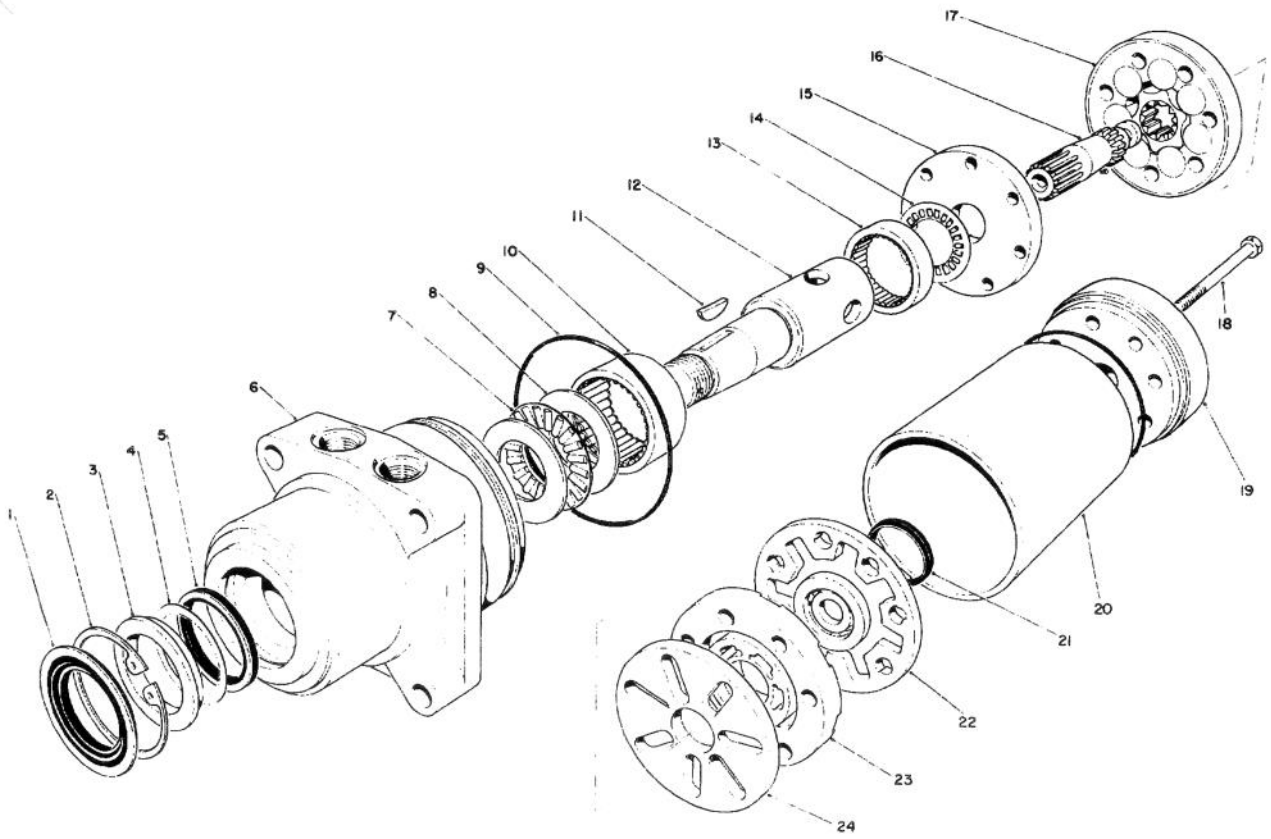
WHEEL AND BRAKE ASSEMBLY

Ref. No.	Part No.	Description	No. Used
1	242-50	Wheel Nut	8
2	28-3680	Tire	2
*	231-124	Tire Treaded	2
*	62-2580	Spacer	2
3	217-60	Rim	2
4	26-3790	Locknut	2
5	10-6870	Hub — Wheel	2
6	10-6830	Stud — Drive Type	8
7	215-73	Shoe & Lining Assembly	4
8	329-3	Hex Hd. Capscrew	8
9	3255-7	Lockwasher — Ext. Tooth	8
10	325-11	Hex Hd. Capscrew	8
11	10-8000	Bracket — Brake	4
12	237-80	O-Ring	4
13	340-14	45° Fitting	4
14	32108-100	Screw — Phillips Machine	3
15	49-5450	Plate — Cover	1
16	57-6140	Clamp — Tube, Side	4
17	3220-2	Hex Jam Nut	2
20	3234-4	Hex Hd. Capscrew	4
21	49-5430	Rod — Control	1
22	10-8220	Pad — Tool Box	1
23	49-5410	Box — Tool	1
25	3296-23	Lockwasher	8
26	3217-9	Hex Nut	8
27	322-6	Hex Hd. Capscrew	1
28	52-5510	Arm — Brake, R.H.	1

Ref. No.	Part No.	Description	No. Used
29	3296-29	Locknut	1
30	3-0348	Bushing	4
31	62-2460	Arm — Lift, L.H.	1
*	62-2440	Arm — Lift, R.H.	1
32	63-8750	Pin — Pivot	2
33	57-7650	Spring — Torsion	2
34	62-2390	Bar — Lift Arm, L.H.	1
35	3256-26	Flat Washer	3
36	3272-12	Pin — Cotter	2
37	47-5960	Pull Frame — R.H.	1
38	3296-16	Flange Locknut	3
39	22-7810	Spacer	1
40	283-1	Clevis Pin	2
41	282-2	Yoke	2
42	3272-6	Cotter Pin	2
43	10-8010	Motor — Hydraulic	2
44	3257-42	Woodruff Key	1
45	27-2890	Decal — Warning	1
46	215-75	Spring	4
47	3-6944	Support Plate Assembly	2
48	215-74	Cam — Bendix	2
49	215-76	Spring	4
50	10-6820	Brake Drum Assembly (Incl. Ref. #5 & 6)	2
51	232-24	Valve Stem w/Cap	2
52	237-65	O-Ring	4
*†	232-37	Heavy Duty Inner Tube	2

* Not Illustrated

† Service Replacement Part



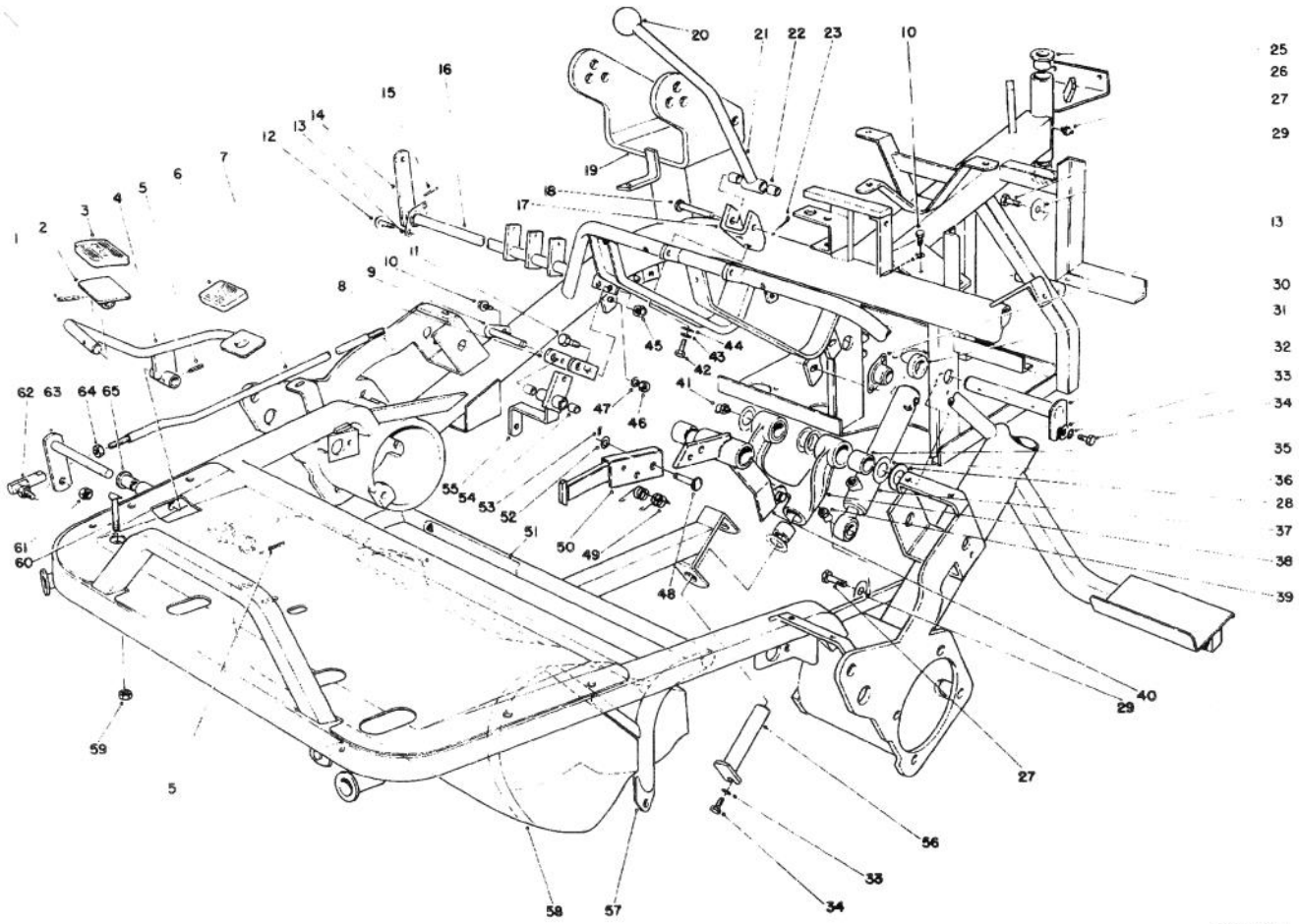
T-0294-89

NO. 10-8010 HYDRAULIC DRIVE MOTOR

Ref. No.	Part No.	Description	No. Used
1		Dirt Seal	1
2		Retaining Ring	1
3		Spacer	1
4		Shim	1
5		Seal	1
*	353-461	Hydraulic Motor Seal Kit (Incl. Ref. #1-5 & 9 & 21)	1
6†		Housing	1
7	28-1060	Thrust Bearing	1
8	28-0930	Thrust Washer	2
9		Seal Ring	2
10	28-0870	Needle Bearing	1
11	3257-42	Key	1
12	28-0940	Coupling Shaft	1

Ref. No.	Part No.	Description	No. Used
13	28-0860	Needle Bearing	1
14	28-1050	Thrust Bearing	1
15†		Wear Plate	1
16	28-0880	Drive Link	1
17	28-0890	Rotor Assembly	1
18	3211-32	Capscrew	7
19†		End Cover Assembly	1
20	353-671	Sleeve Protector	1
21		Bonded Ring	1
22	28-1100	Commutator Assembly	1
23	36-5000	Manifold Assy. (Incl. Ref. #24)	1
24		Manifold Plate	1
*‡		Seal Installation Tool	1

* Not Illustrated
† Replacement parts not available from Toro
‡ Special Tool (Ref. Page 51-52)

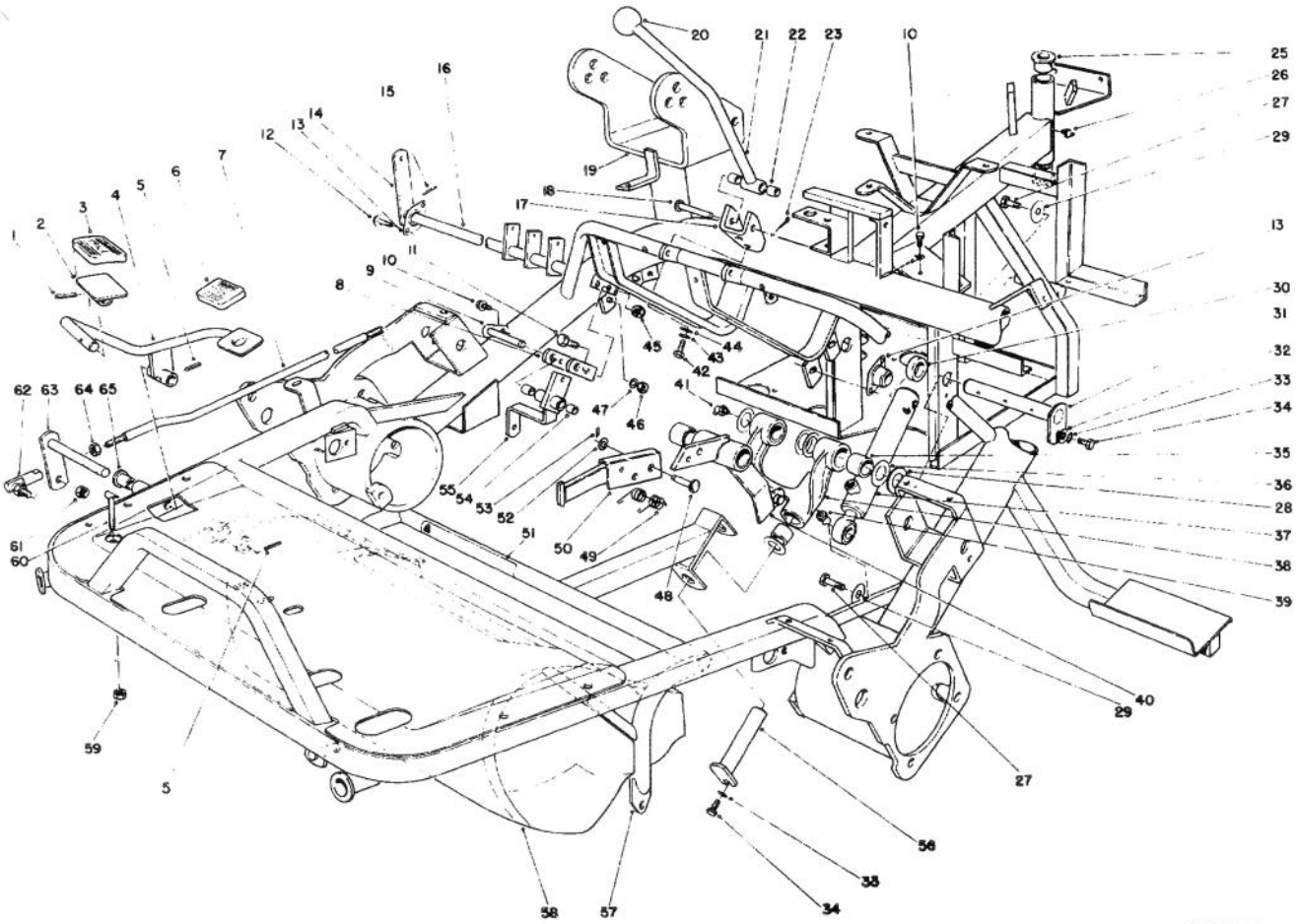


T-0295-89

FRAME ASSEMBLY

Ref. No.	Part No.	Description	No. Used
1	32121-45	Pin — Roll	1
2	49-6440	Pedal — Accelerator	1
3	49-6470	Pad — Pedal Forward	1
4	49-6380	Rod — Accelerator	1
5	32121-45	Pin — Roll	2
6	49-6430	Pad — Pedal Reverse	1
7	49-6320	Rod — Traction Control	1
8	49-6250	Bracket — Traction Pivot	1
9	49-6290	Shaft — Traction Pivot	1
10	12-3270	Screw — Pentaflo	1
11	322-5	Capscrew — Hex Hd.	2
12	3234-1	Capscrew — Flanged Hex Hd.	4
13	27-2320	Side Flange — Bearing	2
14	47-5320	Lever — Cutting Control	1
15	32121-6	Pin — Roll	1
16	44-0870	Camshaft — Rear	1
17	49-6220	Bracket — Control Arm	1
18	283-57	Pin — Clevis	1
19	62-2010	Frame (Incl. Ref. #25 & 65)	1
20	233-48	Knob	1
21	49-6230	Handle — Traction (Incl. Ref. #22)	1

Ref. No.	Part No.	Description	No. Used
22	256-251	Bushing	2
23	3272-4	Pin — Cotter	1
25	256-290	Bushing	2
26	302-5	Grease Fitting	1
27	323-4	Capscrew — Hex Hd.	2
28	5-1226	Washer	1
29	10-7920	Washer — Flat	2
30	27-2540	Spacer — Hub	1
31	27-2550	Pin — Hinge	1
32	3256-23	Washer — Flat	1
33	3253-4	Lockwasher	2
34	322-1	Capscrew — Hex Hd.	2
35	3-0348	Bushing	6
36	10-8110	Washer — Thrust	6
37	68-9700	Hydraulic Cylinder Assembly	1
38	10-7820	Pivot Hinge (Incl. Ref. #35)	1
39	302-60	Grease Fitting	1
40	62-2450	Lift Arm — Center (Incl. Ref. #35)	1
41	302-11	45° Grease Fitting	1
42	3211-1	Capscrew — Hex Hd.	2
43	3254-6	Lockwasher	2

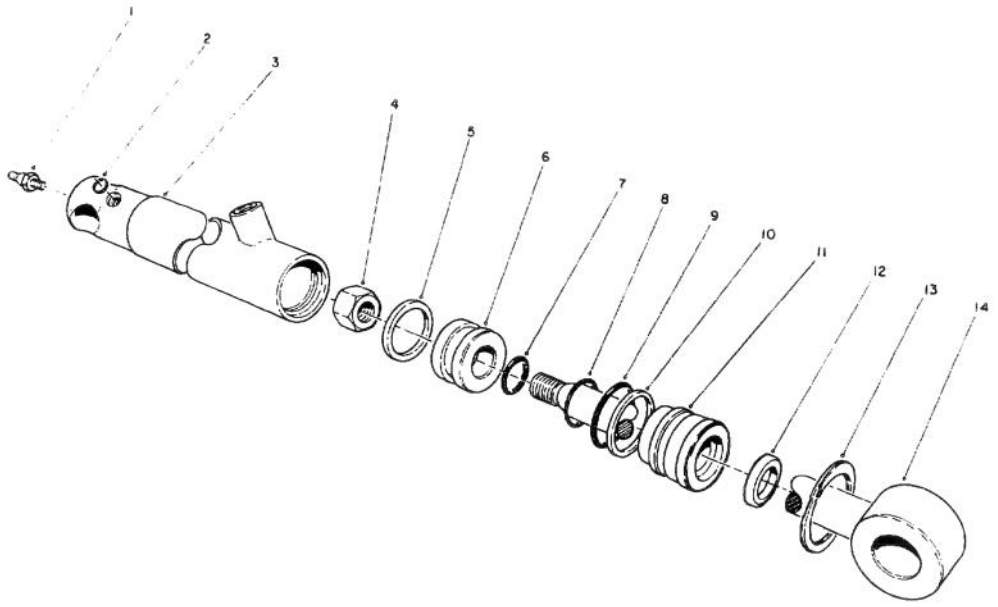


T-0295-89

FRAME ASSEMBLY (Continued)

Ref. No.	Part No.	Description	No. Used
44	3256-3	Washer — Flat	2
45	3296-29	Nut — Lock	2
46	3296-59	Nut — Lock	4
47	3256-24	Washer — Flat	4
48	63-8750	Pin — Pivot	1
49	57-7650	Spring — Torsion	1
50	62-2420	Bar — Lift Arm (R.H. & Center)	1
51	27-2890	Decal — Warning	1
52	3256-26	Washer — Flat	1
53	3272-12	Pin — Cotter	1
54	256-2	Bushing	2

Ref. No.	Part No.	Description	No. Used
55	49-6260	Tube — Traction Pivot (Incl. Ref. #54)	1
56	10-6090	Pin — Pivot	1
57	47-5960	Pull Frame — Rear	1
58	36-7250	Grass Basket	3
59	32128-20	Nut — Hex	1
60	17-9420	Screw — Accelerator Stop	1
61	3296-4	Nut — Lock	2
62	2411-32	Ball Joint	2
63	49-6350	Shaft Traction	1
64	3220-2	Nut Hex Jam	2
65	256-155	Bushing	2

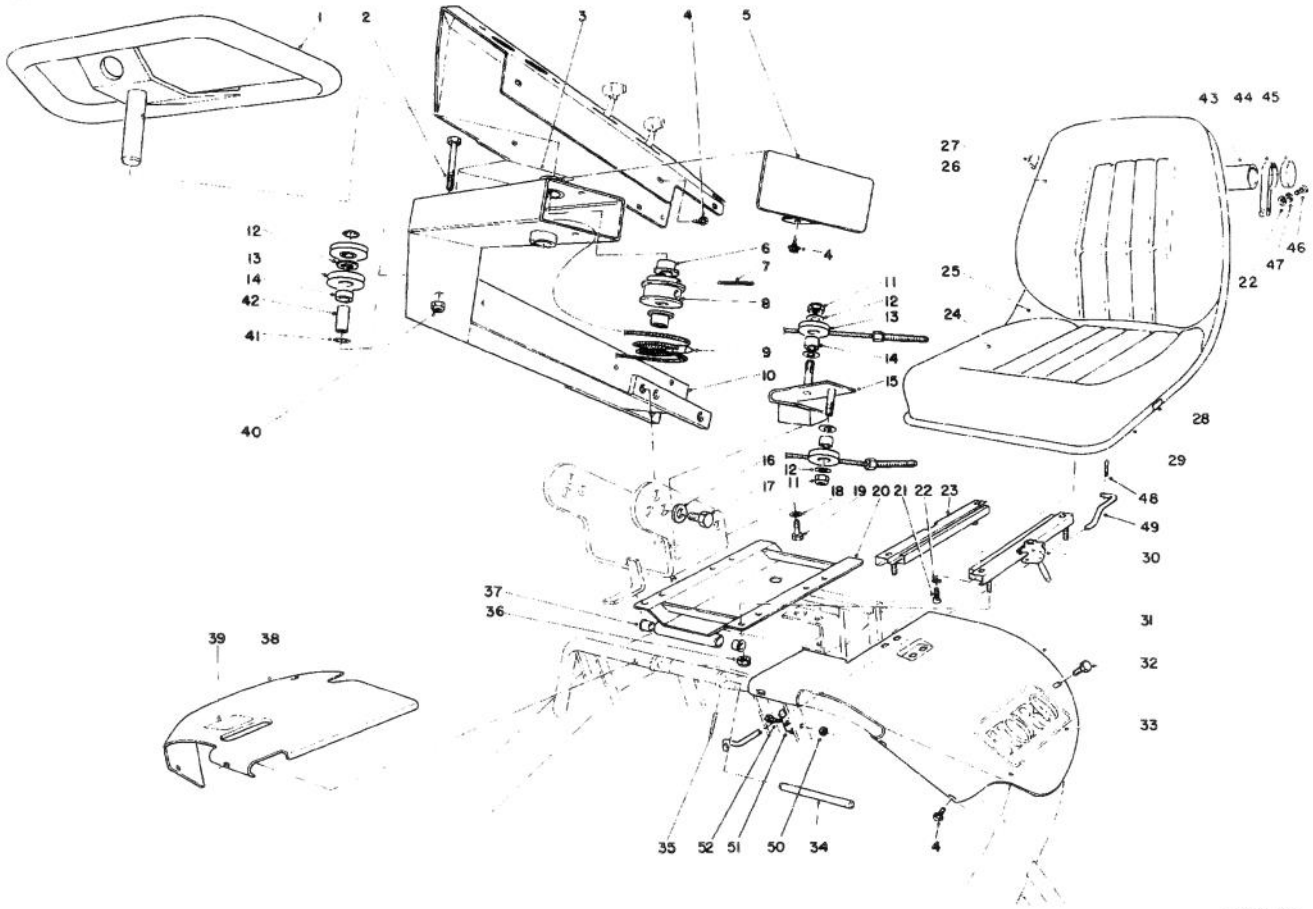


T-0217-89

HYDRAULIC CYLINDER – REAR NO. 68-9700

Ref. No.	Part No.	Description	No. Used
1	302-2	Grease Fitting	1
2	237-78	O-Ring	2
3	43-5260	Barrel w/Clevis & Ports	1
4	32152-10	Nut	1
5		Uniring	1
6	70-2780	Piston	1
7		O-Ring	1
8		Poly-Pack	1

Ref. No.	Part No.	Description	No. Used
9		O-Ring	1
10		Back Up	1
11	70-2770	Head	1
12		Dust Seal	1
13	43-5220	Retaining Ring	1
14	43-5230	Shaft with Clevis	1
15	70-2790	Seal Repair Kit (Incl. Ref. #5, 7, 8, 9, 10 & 12)	1



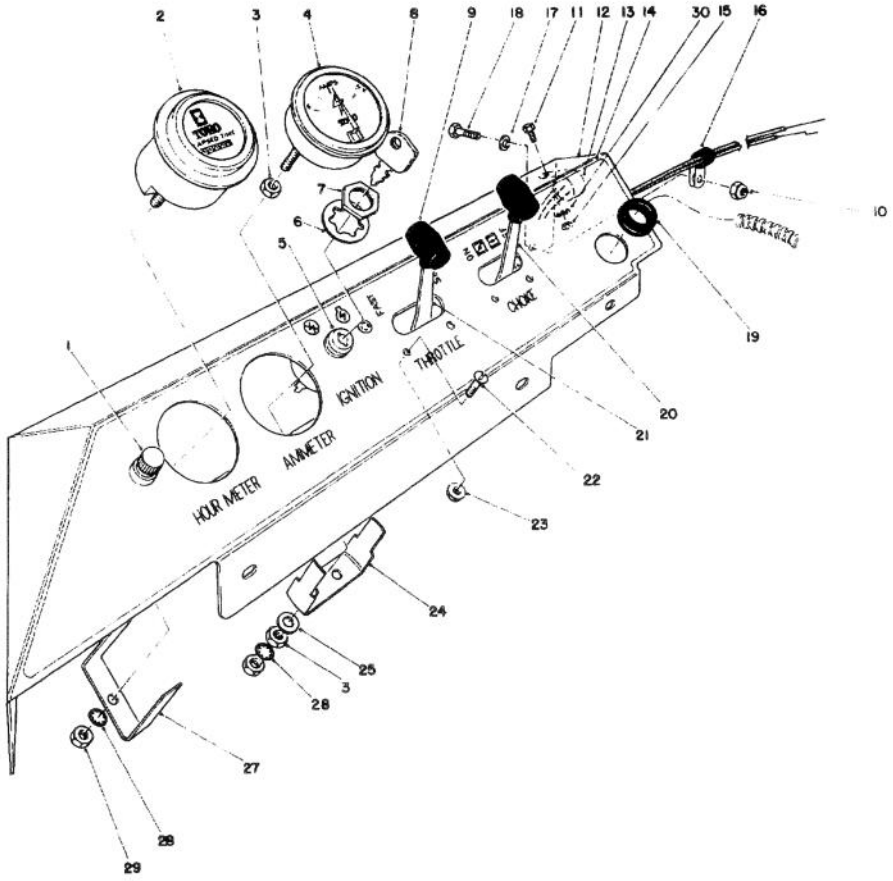
T-0297-89

STEERING AND SEAT ASSEMBLY

Ref. No.	Part No.	Description	No. Used
1	49-5900	Steering Wheel Assembly	1
2	321-15	Screw — Cap Hex Hd.	1
3	27-2880	Decal — Caution	1
4	32104-76	Screw — Tapping Acorn Hd.	15
5	10-7370	Tube Cap	1
6	256-113	Bushing	2
7	32121-34	Roll Pin	1
8	62-2160	Pulley — Front Steering	1
9	62-2180	Steering Cable	1
10	49-5910	Arm Steering	1
11	3296-39	Nut — Lock	2
12	3256-4	Washer — Flat	4
13	5-2653	Pulley Assy. (Incl. Ref. #14)	4
14	256-2	Bushing	4
15	49-5970	Bracket — Pulley	1
16	3256-26	Washer — Plain	4
17	325-3	Screw — Cap Hex Hd.	4
18	3253-21	Lockwasher	2
19	323-6	Screw — Cap Hex Hd.	2
20	49-5840	Seat Support (Incl. Ref. #37)	1
21	3274-12	Screw — Hex Socket	4
22	3256-23	Washer	6
23	51-0780	Seat Slider	1
24	351-76	Cushion — Seat (Incl. Ref. #27 & 28)	1
25	351-81	Shell	1
26	351-75	Backrest (Incl. Ref. #27 & 28)	1
27	351-79	Clip	6

Ref. No.	Part No.	Description	No. Used
28	351-80	Clip Joint	1
29	351-78	Edging	2
*	63-9410	Seat Assy. (Incl. Ref. #24-29)	1
30	51-0790	Seat Adjuster	1
31	49-5460	Shield — Valve Cover L.H.	1
32	12-3270	Screw — Thread Forming Hex Hd.	2
33	43-5110	Decal — Toro	2
34	49-5880	Shaft — Seat Support	1
35	32121-45	Pin — Roll	1
36	3296-29	Nut — Lock	4
37	256-219	Bushing	2
38	49-5470	Shield — Valve Cover R.H.	1
39	51-0010	Decal — Traction	1
40	3296-8	Nut — Lock	1
41	3290-314	Tinnerman Push-On	2
42	10-7240	Sleeve — Steering Pulley	1
43	65-5870	Tube	1
44	2412-102	R-Clamp	2
45	65-5890	Cap	2
46	322-3	Capscrew	2
47	3253-4	Lockwasher	2
48	3272-11	Cotter — Pin	1
49	68-5100	Rod — Seat Prop	1
50	3296-16	Locknut	1
51	68-5310	Clip Seat	1
52	321-3	Capscrew	1

* Not Illustrated



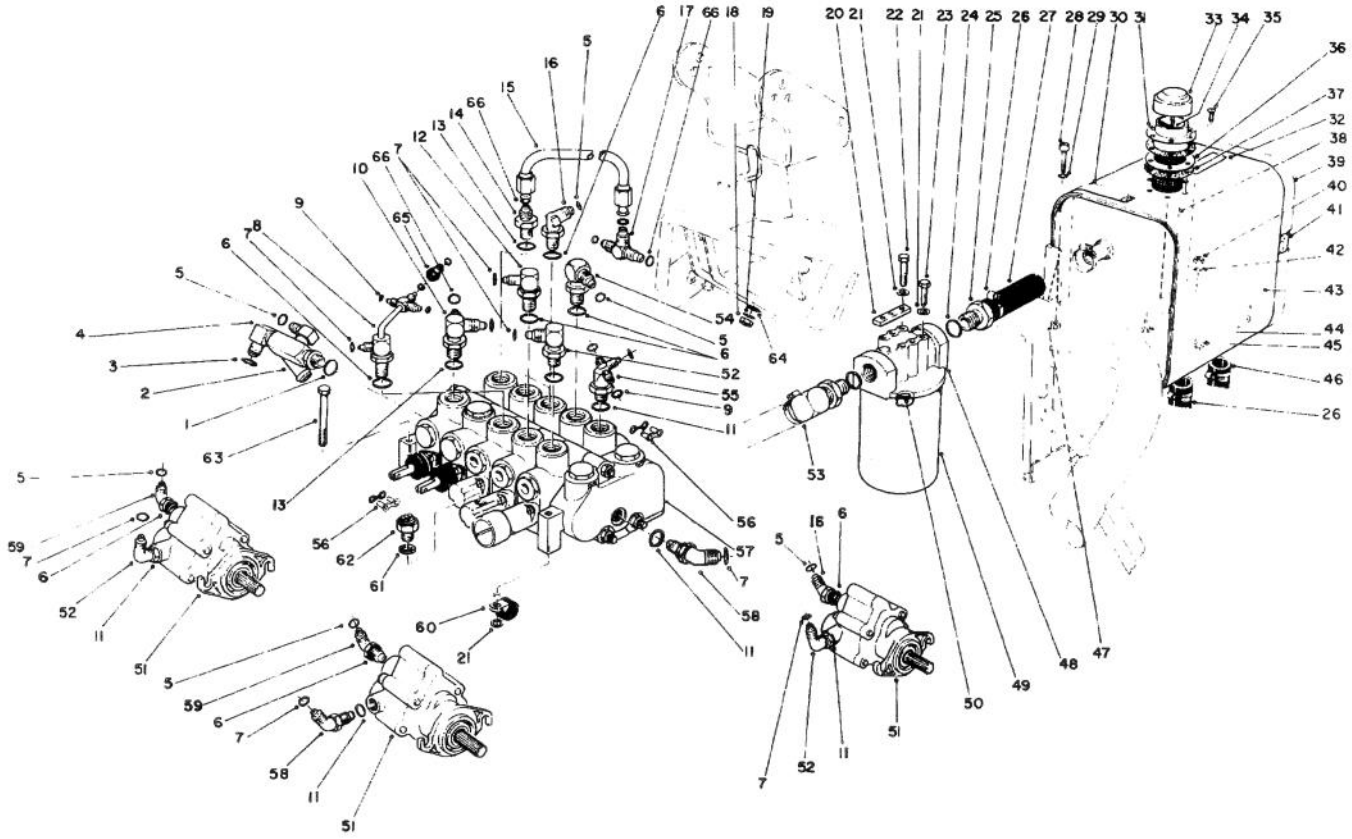
T-0298-89

INSTRUMENT PANEL ASSEMBLY

Ref. No.	Part No.	Description	No. Used
1	218-489	Fuse Holder	1
*†		30 Amp Fuse	1
2	12-9990	Hour Meter	1
3	3219-14	Nut	6
4	33-0990	Ammeter	1
5	23-0660	Key Switch (Incl. Ref. #6-7)	1
6	3254-5	Lockwasher	1
7	218-461	Hex Nut	1
8	63-8360	Key	1
9	233-50	Knob	2
10	32128-20	Nut — Lock	1
11	321-3	Hex Hd. Capscrew	1
12	68-9910	Panel — Control	1
13	59-9810	Module	1
14	68-9940	Decal — Control Panel	1
15	32149-2	Locknut — Keps	1

Ref. No.	Part No.	Description	No. Used
16	2412-41	Clip	1
17	3253-23	Flat Washer	1
18	322-4	Hex Hd. Capscrew	1
19	237-100	Grommet	1
20	62-2130	Control — Choke (Incl. Ref. #9)	1
21	68-9930	Control — Throttle (Incl. Ref. #9)	1
22	3251-3	Screw — Machine Rd. Hd. Slotted	4
23	32149-7	Locknut	1
24	39-9600	Clamp — Mounting	2
25	3256-21	Washer	2
27	218-515	Bracket — Mounting	1
28	3254-1	Lockwasher — Internal Tooth	3
29	3217-26	Nut	1
30	3254-8	Lockwasher — Internal Tooth	1

* Not Illustrated
† Obtain Locally

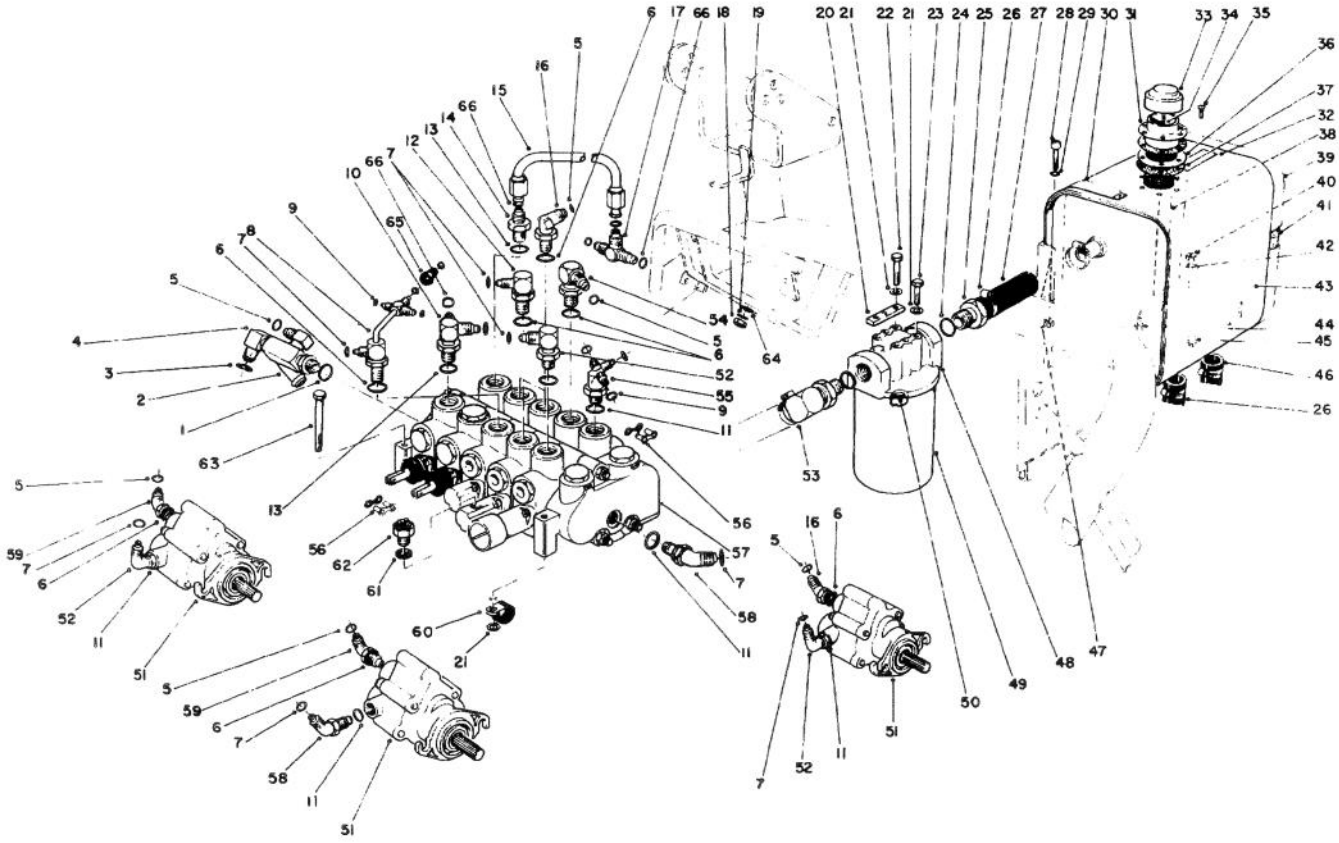


0299-89

VALVE BANK AND HYDRAULIC RESERVOIR ASSEMBLY

Ref. No.	Part No.	Description	No. Used
1	237-81	O-Ring	1
2	63-4080	Manifold Drain Orifice	1
3	237-58	O-Ring	A/R
4	340-16	90° Fitting	1
5	237-30	O-Ring	A/R
6	237-79	O-Ring	8
7	237-22	O-Ring	A/R
8	63-4060	Brazed Tube Assembly	1
9	237-21	O-Ring	7
10	63-4050	Fitting Traction Upper	1
11	237-42	O-Ring	A/R
12	340-18	90° Elbow	1
13	237-80	O-Ring	2
14	340-7	Fitting — Straight	1
15	63-3980	Traction Interconnect Line (Lower)	1
16	340-101	45° Fitting	3
17	340-19	Fitting — Tee	1
18	32128-20	Nut — Hex	3
19	3253-4	Lockwasher	3
20	27-2380	Spacer — Filler Mount	1
21	3256-23	Washer — Flat	5

Ref. No.	Part No.	Description	No. Used
22	322-4	Capscrew — Hex Hd.	2
23	322-2	Capscrew — Hex Hd.	2
24	237-101	O-Ring	1
25	353-563	Fitting — Straight	1
26	2412-3	Clamp — Hose	8
27	27-2040	Hose	1
28	3274-54	Setscrew — Hex Socket Hd.	2
29	3256-22	Washer — Flat	2
30	27-7980	Strap — Reservoir Assembly Front (Includes Ref. #41)	1
31	353-961	Flange Adaptor	1
32	58-6530	Decal — Oil	1
33	62-2570	Breather Cap (Incl. Ref. #31, 34, & 36-37)	1
34	353-962	Cap and Chain Assembly	1
35	32144-34	Screw	6
36	62-2610	Screen Assembly	1
37	353-963	Gasket	2
38	27-2420	Felt Strap — Angle	2
39	27-2400	Strap — Reservoir Assembly (Incl. Ref. #41)	1
40	3296-16	Nut — Hex	2



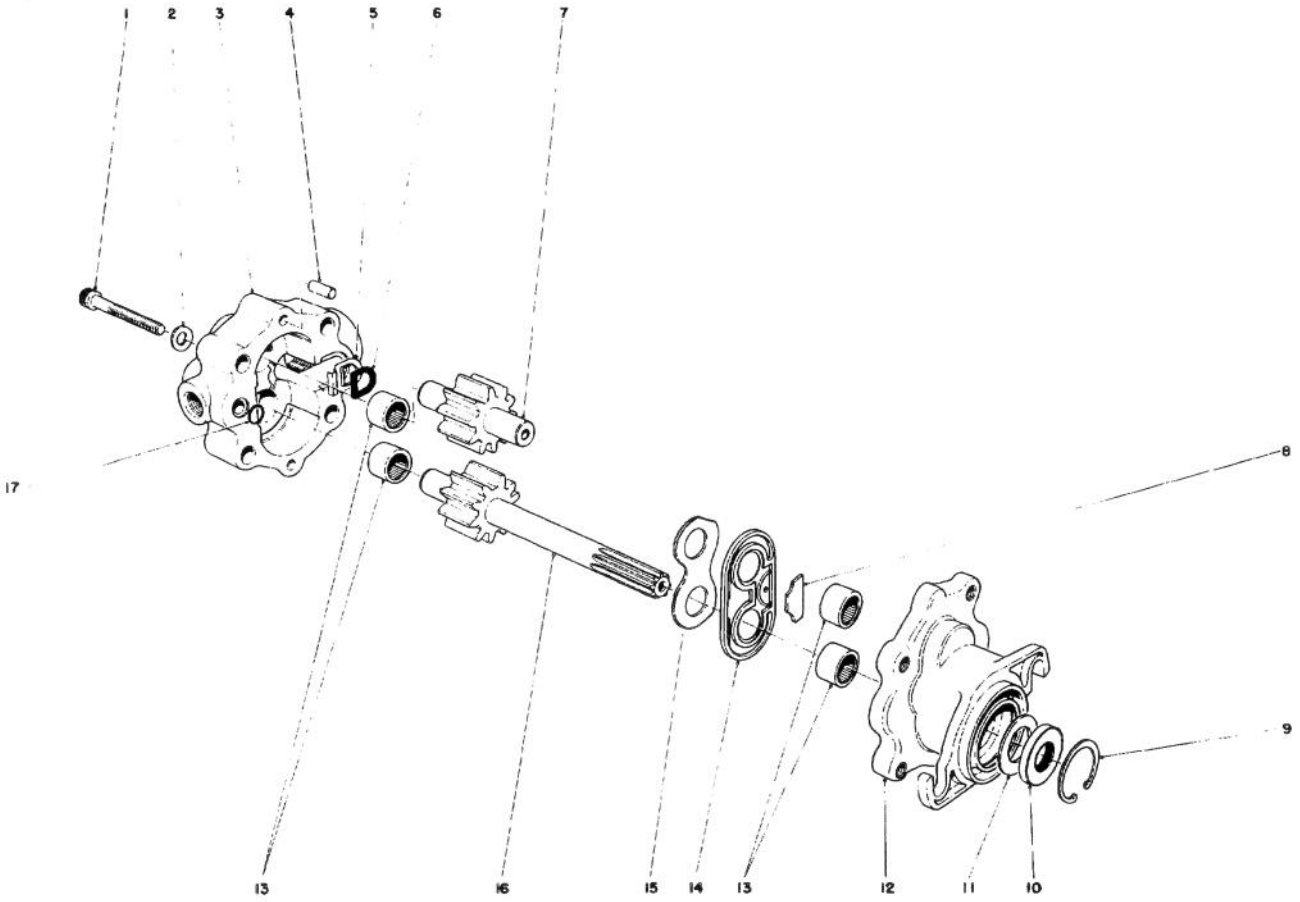
T-0299-89

VALVE BANK AND HYDRAULIC RESERVOIR ASSEMBLY (Continued)

Ref. No.	Part No.	Description	No. Used
41	27-3030	Felt Strip	2
42	3253-3	Lockwasher	2
43	55-8480	Tank Hydraulic	1
44	321-3	Capscrew — Hex Hd.	2
45	281-1	Plug — Oil	1
46	27-3040	Hose — Pump	2
47	32153-4	Nut — Lock	2
48	44-5560	Filter Head — Hydraulic	1
49	68-9880	Filter Element (Incl. Ref. #50)	1
50	72-3850	Seal — Ring	1
51	26-5690	Reel Motor	3
52	340-77	90° Elbow	3
53	353-564	90° Fitting	1
54	63-4090	90° Fitting — Extended	1

Ref. No.	Part No.	Description	No. Used
55	70-2630	Fitting — Crow Foot	1
56	57-6220	Link Connector	5
57	49-5540	Control Valve	1
58	340-87	45° Fitting	2
59	340-98	90° Elbow	2
60	304-61	Clamp	1
61	38-0410	Nut — Hex	2
62	43-8520	Switch	2
63	322-14	Capscrew — Hex Hd.	3
64	3254-2	Lockwasher — Internal Tooth	1
65	71-0990	Fitting — One Way Orifice	1
66	237-65	O-Ring	6
*	44-2500	Hydraulic Oil Dye	1

* Not Illustrated



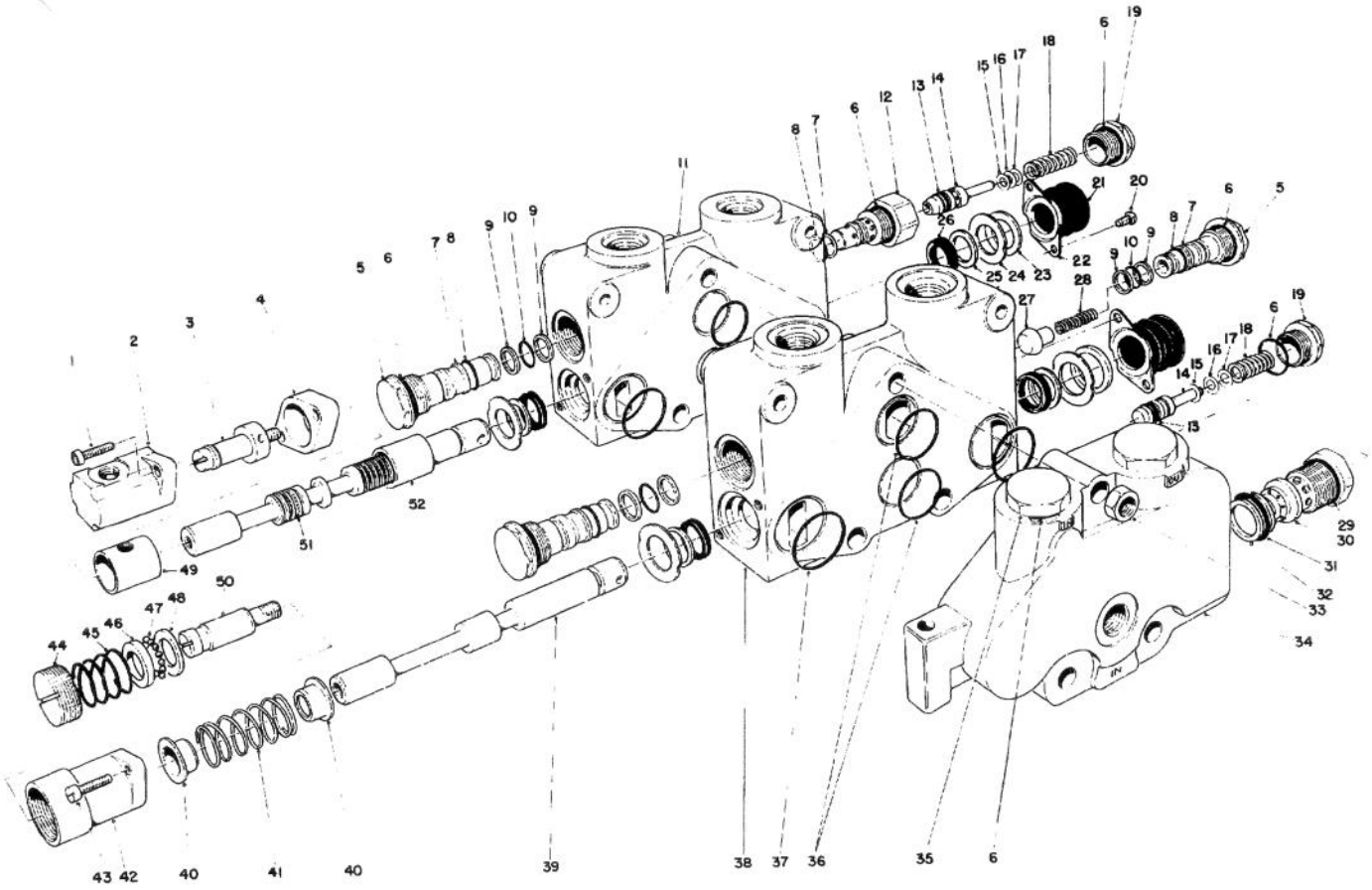
T-0300-89

REEL MOTOR NO. 26-5690

Ref. No.	Part No.	Description	No. Used
1	353-601	Screw Hex Socket Hd.	4
2	353-600	Washer	4
3	353-588	Cover Motor (Incl. Ref. #13)	1
4	353-599	Dowel Pin	2
5	353-597	Bridging Insert	1
6	353-598	Gasket Insert	1
7	353-593	Idler Gear Assembly	1
8	353-591	Block Anti-Extrusion	1
9	32151-41	Retaining Ring	1
10	354-34	Seal Shaft	1
11	353-590	Spacer	1

Ref. No.	Part No.	Description	No. Used
12	353-777	Body Motor	1
13	353-586	Needle Bearing	4
14	353-594	Seal Assembly	1
15	353-595	Wear Plate	1
16	353-592	Drive Shaft Assembly	1
17	353-596	O-Ring	1
18	72-4380	Seal Kit (Incl. Ref. #9-11)	1
19	72-4390	Repair Kit (Incl. Ref. #5, 6, 8-11, 14, 15 & 17)	1
*†		Seal Installer	1
*†		Seal Protector	1

* Not Illustrated
† Special Tool (Ref. Page 51-52)



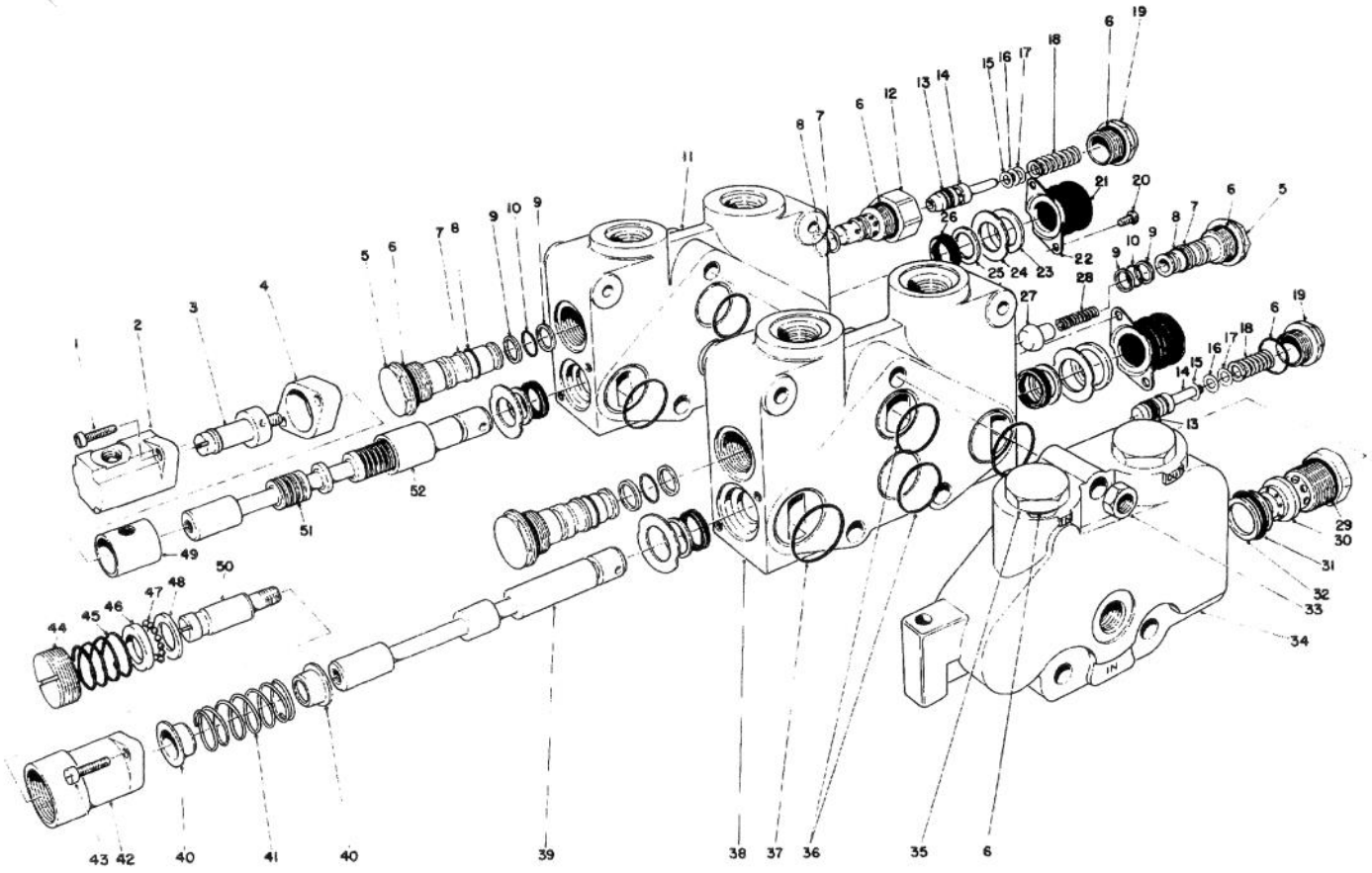
T-0301-89

CONTROL VALVE ASSEMBLY NO. 49-5540 Section 1 and 2

Ref. No.	Part No.	Description	No. Used
1	3274-70	Screw — Hex Socket Hd.	2
2	353-727	Bonnet	1
3	353-729	Spud — Detent	1
4	353-733	Spacer — Bonnet	1
5	353-481	Plug — Load Check (Incl. Ref. #6-10)	3
6	237-54	Seal — O-Ring	8
7	353-306	Ring — Back-Up	4
8	353-305	Seal — O-Ring	4
9	353-303	Ring — Back-Up	6
10	353-302	Seal — O-Ring	3
11		Housing V20T	1
12	353-851	Body — Relief CP-RC Mod.	1
13	353-392	Seal — Relief Poppet PTFE	2
14	353-531	Poppet Assy. (Incl. Ref. #13)	2
15	353-328	Washer — Shim	A/R
16	353-329	Washer — Shim	A/R
17	353-330	Washer — Shim	A/R
18	353-855	Spring	2
19	353-334	Cap — Relief	2
20	3274-52	Screw — Hex Socket Hd.	4
21	353-575	Boot — Dust Cap	2

Ref. No.	Part No.	Description	No. Used
22	353-559	Retainer — Boot	2
23	353-560	Washer — Breather	2
24	353-959	Plate — Seal Retainer	4
25	353-958	Ring — Back-Up	4
26	353-957	Seal — Lip	4
27	353-301	Poppet	1
28	353-304	Spring	1
29	353-331	Seal — O-Ring	1
30	353-760	Body Relief	1
31	353-758	Seal — O-Ring	1
32	353-952	Ring — Back-Up	1
33	353-852	Nut — Hex	3
34	353-772	Left End Cover	1
35	353-721	Plug (Incl. Ref. #6)	2
36†		Seal — O-Ring	4
37†		Seal — O-Ring	4
38†		Housing Section #1	1
39†		Spool — V20 SPL	1
40	353-417	Collar Spring	2
41	353-530	Spring	1
42	353-754	Bonnet — R. Detent	1
43	3274-15	Screw — Fillister Hd.	2

† Parts available in assemblies listed as (*Not Illustrated) on Page 15.



T-0301-89

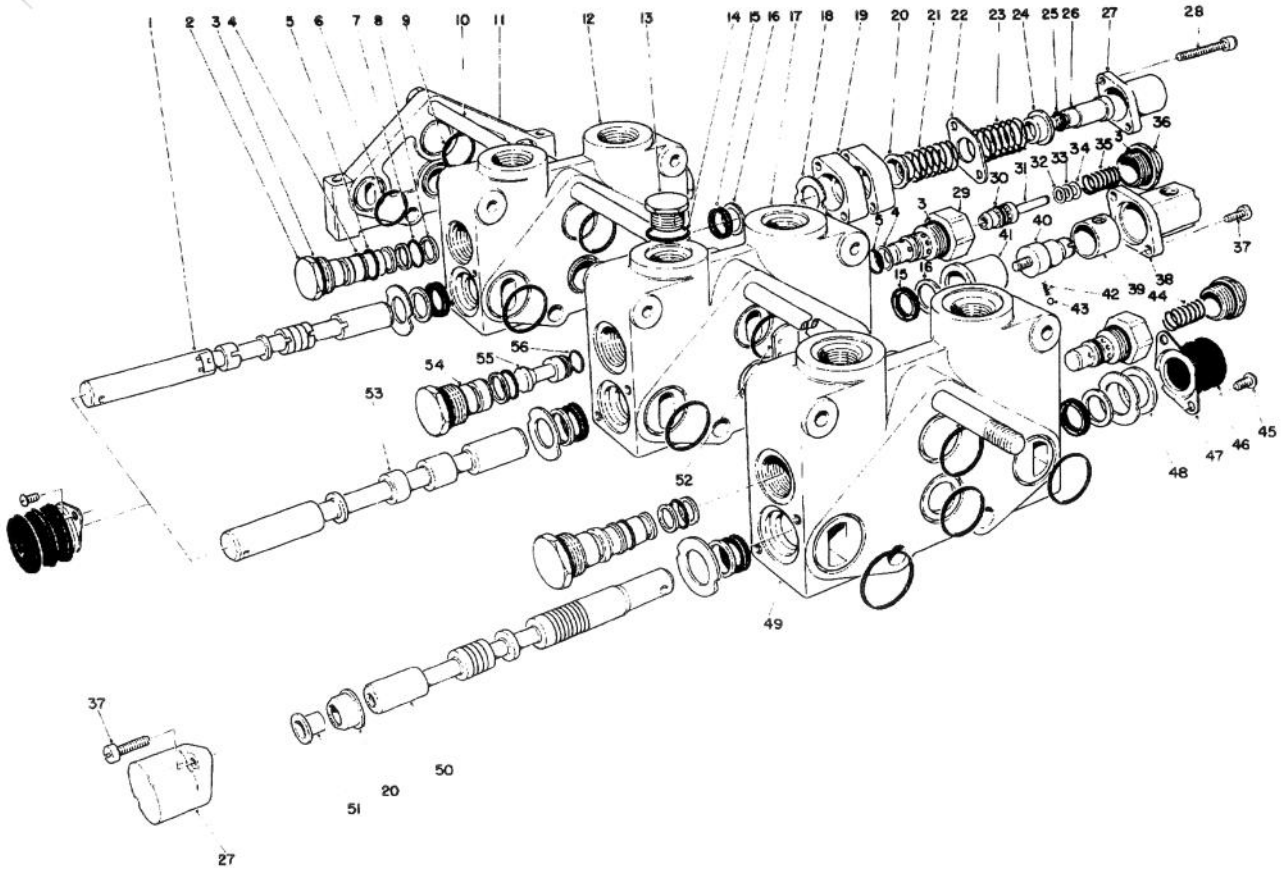
CONTROL VALVE ASSEMBLY NO. 49-5540 Section 1 and 2 (Continued)

Ref. No.	Part No.	Description	No. Used
44	353-763	Cap — Adjustment	1
45	353-579	Spring	1
46	42-2680	Race R. Detent	1
47	353-418	Ball — Steel	12
48	353-582	Plate — Thrust	1
49	353-728	Sleeve	1
50	353-762	Spud — Detent Out	1
51†		Spool — V20 3 Way F.F.	1
52	353-732	Sleeve — Detent	1
*	353-766	Relief WH (2000) PSI Assy. (Incl. Ref. #6, 13-19, 29, 30, & 32)	1
*	353-768	Section #1 Complete	1

Ref. No.	Part No.	Description	No. Used
*	353-837	Section #2 Complete	1
*	353-780	Positioner — R. Detent (Out) (Incl. Ref. #3, 40-49)	1
*	353-839	Positioner — DI (SPL) Assy. (Incl. Ref. #1, 3-5, 50, & 52)	1
*	353-642	Relief — RC Mod. (Incl. Ref. #6-8, 12-19)	2
*	353-835	Seals — Section, Set (Incl. Ref. #36 & 37)	1
*	12-7009	Seal — Spool, Set (Incl. Ref. #24-26)	1
*	353-854	Boot — Spool Protective Assembly (Incl. Ref. #20-23)	2

* Not Illustrated

† Parts available in assemblies listed as (*Not Illustrated) on This Page.



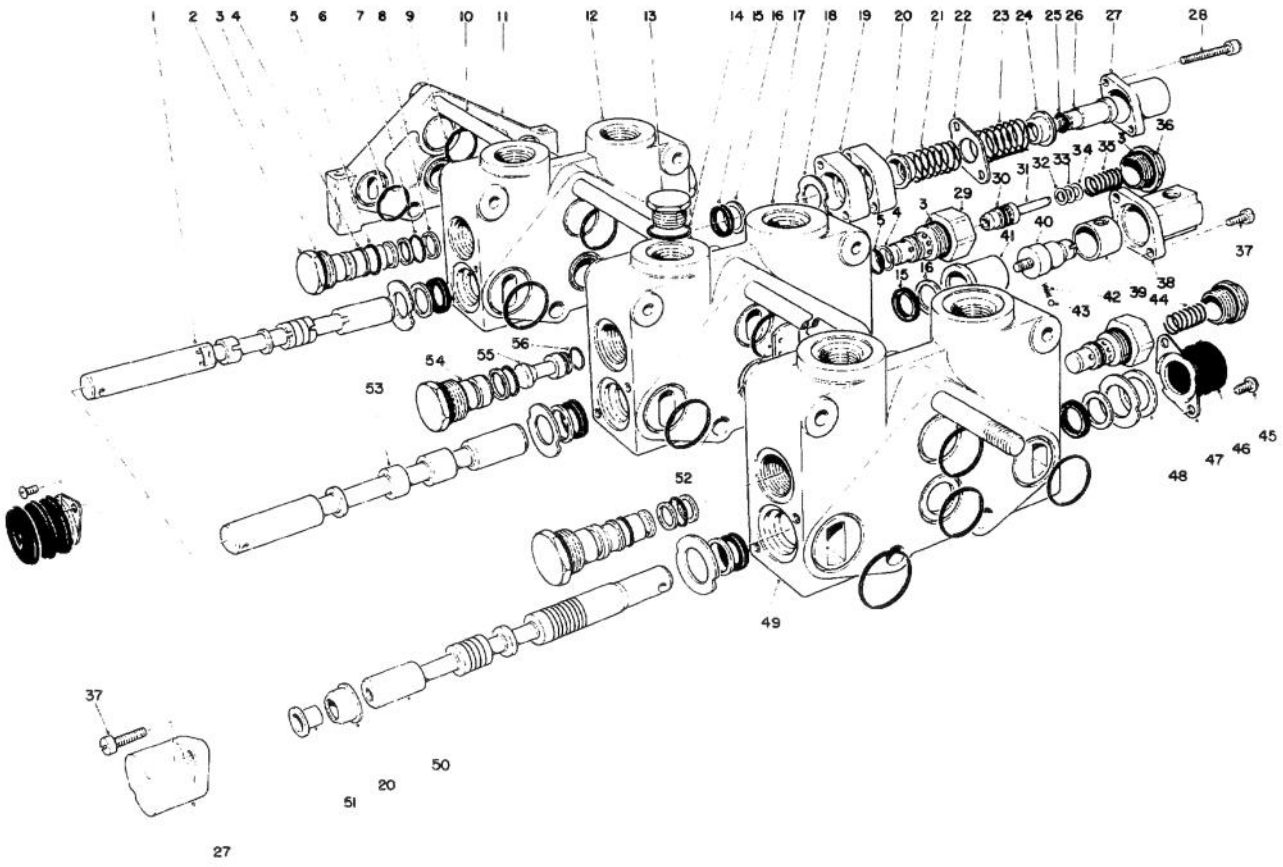
T-0302-89

CONTROL VALVE ASSEMBLY NO. 49-5540 Section 3 thru 5

Ref. No.	Part No.	Description	No. Used
1†		Spool #5	1
2	353-481	Plug — Load Check (Incl. Ref. #3-5 & 7-8)	3
3	237-54	Seal — O-Ring	6
4	353-306	Ring — Back-Up	5
5	353-305	Seal — O-Ring	5
6†		Seal — O-Ring	8
7	353-302	Seal — O-Ring	3
8	353-303	Ring — Back-Up	6
9†		Seal — O-Ring	8
10	353-853	Bolt Hex Hd.	3
11	353-668	Plate — Cap Rt. Cover	1
12		Housing V20 #5	1
13	353-550	Plug Assy. (Incl. Ref. #14)	1
14	353-848	Seal — O-Ring	1
15	353-957	Seal — Lip	6
16	353-958	Ring — Back-Up	6
17†		Housing V20 #4	1
18	353-959	Plate — Seal Retainer	6
19	353-733	Spacer — Bonnet	2
20	353-417	Collar Spring	2
21	353-831	Spring	1

Ref. No.	Part No.	Description	No. Used
22	353-529	Plate Seal	1
23	353-581	Spring	1
24	353-808	Collar — Spring	1
25	353-830	Seal — O-Ring	1
26	353-829	Collar Spool	1
27	52-5870	Bonnet	2
28	3274-62	Screw — Hex Socket Hd.	2
29	353-851	Body — Relief CP-RC Mod.	2
30	353-392	Seal — Relief Poppet PTFE	2
31	353-531	Poppet Assy. (Incl. Ref. #30)	2
32	353-328	Washer — Shim	A/R
33	353-329	Washer — Shim	A/R
34	353-330	Washer — Shim	A/R
35	353-398	Spring	1
36	353-334	Cap Relief	2
37	52-5900	Screw — Fillister Hd.	4
38	353-847	Bonnet (SPL)	1
39	353-849	Sleeve	1
40	353-846	Spud — DI (SPL)	1
41	353-845	Sleeve — Detent	1
42	353-730	Spring	1
43	353-731	Ball	1

† Parts available in assemblies listed as (*Not Illustrated) on Page 17.



T-0302-89

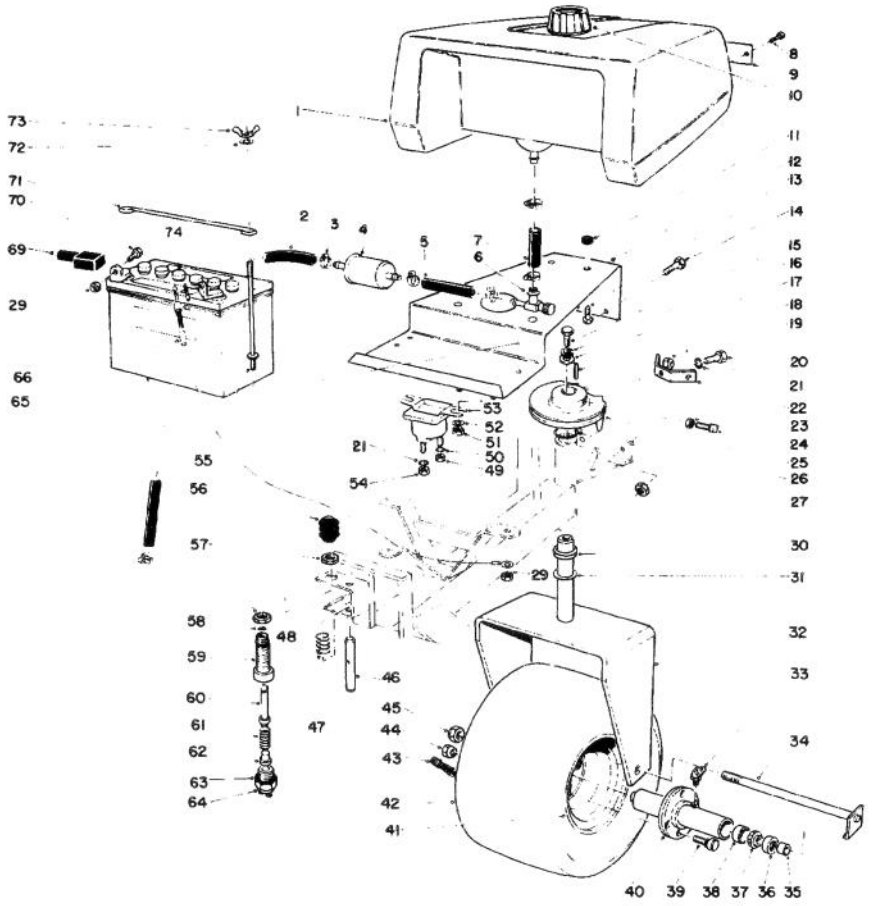
CONTROL VALVE ASSEMBLY NO. 49-5540 Section 3 thru 5 (Continued)

Ref. No.	Part No.	Description	No. Used
44	353-855	Spring	1
45	3274-52	Screw — Hex Socket Hd.	6
46	353-575	Boot — Dust Cap	3
47	353-559	Retainer — Boot	3
48	353-560	Washer — Breather	3
49		Housing V20 #2	1
50		Spool V20 3 Way F.F.	1
51	52-5860	Collar — Spool	1
52	353-765	Disc — Seal	1
53		Spool #4	1
54	353-953	Plug Assembly	1
55	353-844	Plus Series (Incl. Ref. #56)	1
56	353-850	Seal — O-Ring	1
*	353-835	Seals — Section, Set (Incl. Ref. #6 & 9)	1
*	353-960	Seal — Spool, Set (Incl. Ref. #15, 16 & 18)	1

Ref. No.	Part No.	Description	No. Used
*	353-854	Boot — Spool Protective Assy. (Incl. Ref. #45-48)	3
*	353-770	Section #3 Assy. (Complete)	1
*	353-838	Section #4 Assy. (Complete)	1
*	353-834	Section #5 Assy. (Complete)	1
*	353-841	Position — Spool Assembly (Incl. Ref. #20, 27, 37 & 51)	1
*	353-840	Position — DI (SP) Assembly (Incl. Ref. #37-43)	1
*	353-642	Relief — RC Mod. Assembly (Incl. Ref. #3-5 & 29-36)	1
*	353-833	Positioner Assembly (Incl. Ref. #19-28)	1
*	49-5540	Control Valve Assembly Complete	1

* Not Illustrated

† Parts available in assemblies listed as (*Not Illustrated) on This Page.

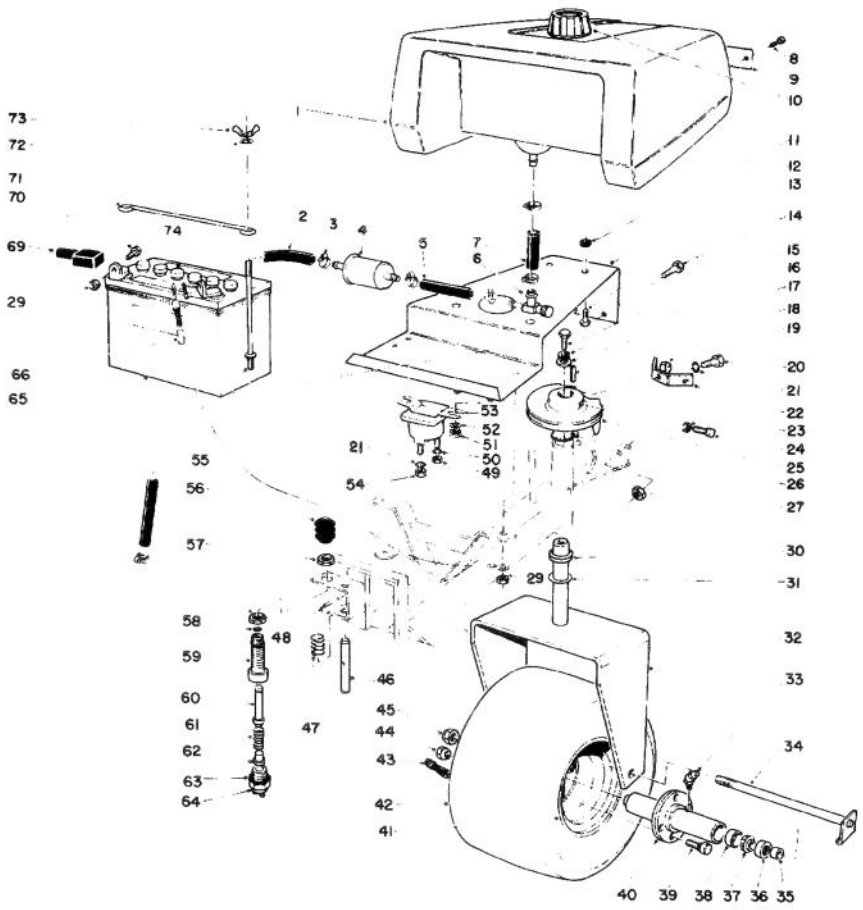


T-0303-89

GAS TANK, BATTERY AND CASTER WHEEL ASSEMBLY

Ref. No.	Part No.	Description	No. Used
1	54-9660	Gas Tank	1
2	62-2470	Hose — Gas Line (Long)	1
3	2412-36	Clamp — Gas Line	6
4	18-1520	Fuel Filter	1
5	56-2240	Hose — Gas Line (Short)	1
6	56-2520	Fitting — Fuel Shutoff	1
7	56-2230	Hose — Fuel Line	1
8	3290-470	Screw — Oval Head	2
9	61-3310	Plate — Logo	1
10	55-3570	Gas Cap	1
11	237-136	Grommet	4
12	62-2210	Tank Base	1
13	3250-36	Capscrew — Phil. Hd.	4
14	323-6	Capscrew — Hex Hd.	2
15	322-3	Capscrew — Hex Hd.	1
16	3253-4	Lockwasher	1
17	62-2190	Washer — Special	1
18	5-0698	Key	1
19	3296-4	Nut — Lock	2
20	322-5	Capscrew — Hex Hd.	1
21	3253-4	Lockwasher	3
22	3-8516	Anchor — Cable	1

Ref. No.	Part No.	Description	No. Used
23	3218-2	Nut — Jam	2
24	3242-9	Setscrew — Sq. Hd. Cup Point	2
25	61-9390	Drum — Steering	1
26	237-149	O-Ring — Seal	1
27	3296-39	Nut — Lock	2
29	3217-5	Nut — Hex	4
30	237-148	Seal — Quad Ring	1
31	62-2170	Washer — Thrust	1
32	62-2220	Caster Fork	1
33	302-11	Grease Fitting	1
34	5-3934	Bolt	1
35	217-96	Spacer	2
36	253-111	Seal	2
37	254-78	Cone	2
38	254-79	Cup	2
39	10-6830	Drive Stud	4
40	217-95	Hub Assembly	1
41	217-60	Rim	1
42	28-3680	Tire	1
43	232-24	Valve Stem — With Cap	1
44	242-50	Nut — Wheel	4
45	3296-50	Nut — Lock	1



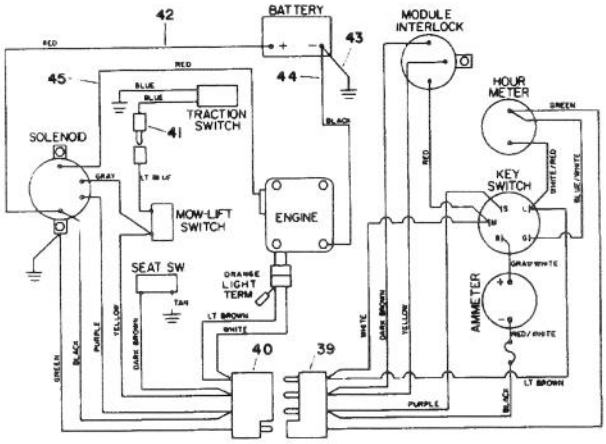
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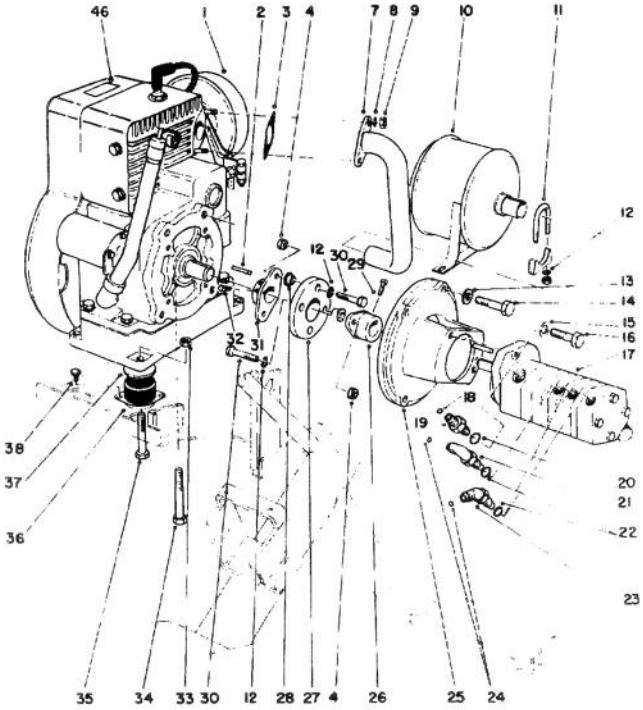
GAS TANK, BATTERY AND CASTER WHEEL ASSEMBLY (Continued)

Ref. No.	Part No.	Description	No. Used
45	3296-50	Nut — Lock	1
46	51-0350	Pin — Seat Spring	1
47	3-6685	Spring	1
48	3284-3	Pin Groove	1
49	3219-14	Nut — Hex	3
50	3254-1	Lockwasher	2
51	32153-4	Nut — Lock	2
52	3256-22	Washer	2
53	28-4210	Solenoid	1
54	3218-13	Nut — Jam	2
55	10-8120	Bolt — Battery	2
56	43-8870	Boot — Switch	1
57	218-461	Nut — Jam	2
58	237-7	O-Ring	1
59	43-8620	Guide — Switch Pin	1

Ref. No.	Part No.	Description	No. Used
60	43-8860	Plunger — Switch	1
61	43-8600	Spring — Compression	1
62	43-8610	Guide — Spring & Ball Seat	1
63	237-30	O-Ring	1
64	38-0430	Switch — Neutral	1
65	28-1400	Battery	1
66	3-8168	Decal — Negative Ground	1
69	218-331	Boot Terminal	1
70	321-3	Capscrew — Hex Hd.	2
71	7-0536	Hold Down — Battery	1
72	3256-1	Washer	2
73	32103-12	Wing Nut	2
74	68-9520	Cap — Battery	6
*	44-1070	Switch Assy. (Incl. Ref. #56-64)	1

* Not Illustrated





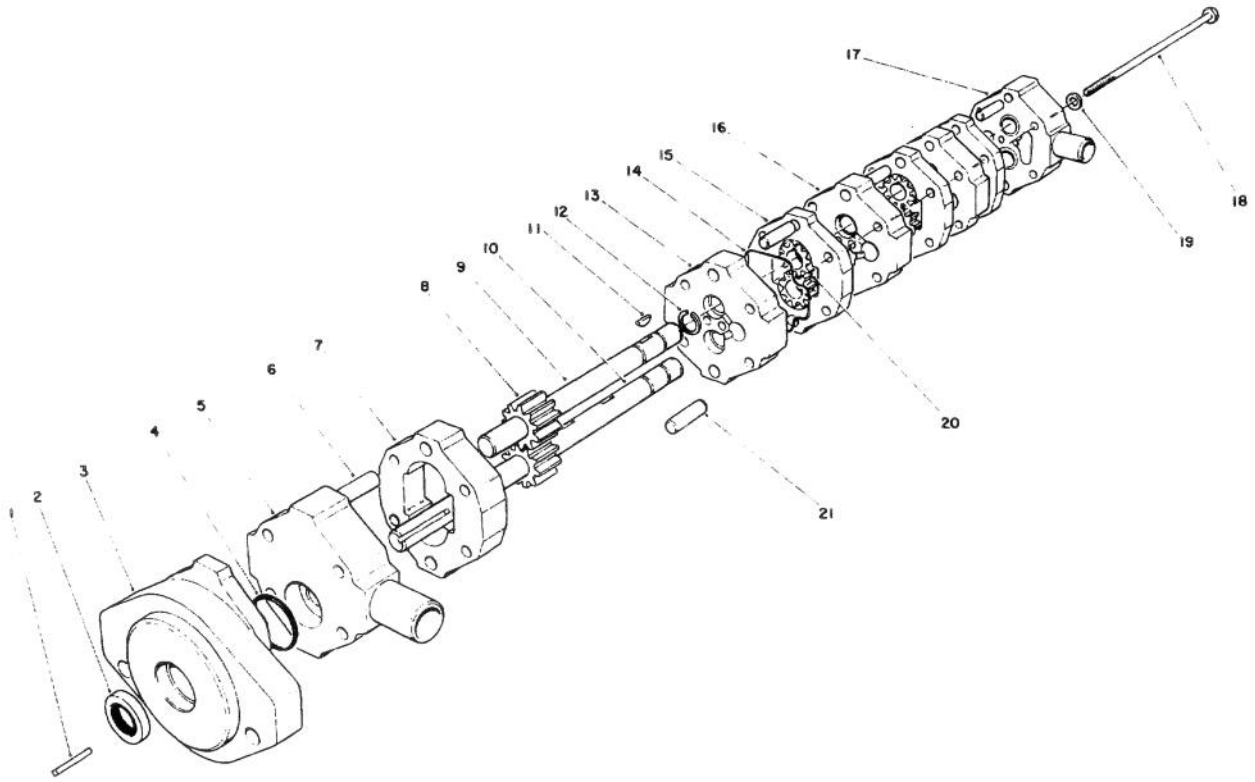
T-0304-89

ENGINE AND WIRING DIAGRAM

Ref. No.	Part No.	Description	No. Used
1	62-2400	Engine	1
2	10-7070	Key — Engine	1
3	2210-275	Gasket — Exhaust	1
4	3296-29	Nut — Lock	4
7	62-2270	Exhaust Pipe	1
8	3253-4	Lockwasher	2
9	3217-6	Nut — Hex	2
10	62-2110	Muffler Assembly	1
*	62-2780	Spark Arrestor Muffler (Optional)	1
11	2412-76	Muffler Clamp Assembly	1
12	3256-23	Washer — Flat	6
13	3253-6	Lockwasher	4
14	324-6	Capscrew — Hex Hd.	4
15	3253-29	Lockwasher	2
16	323-8	Capscrew — Hex Hd.	2
17	62-2300	Traction Pump Assembly	1
18	237-30	O-Ring	1
19	340-6	Fitting — Straight	1
20	237-79	O-Ring	1
21	340-77	90° Fitting	1
22	237-42	O-Ring	3
23	340-87	45° Fitting	2

Ref. No.	Part No.	Description	No. Used
24	237-22	O-Ring	2
25	27-1930	Pump Mount	1
26	27-1970	Coupling — Pump	1
27	44-2230	Coupling — Rubber	1
28	27-6600	Spacer — Rubber	4
29	3241-6	Setscrew — Sq. Hd.	2
30	322-6	Capscrew — Hex Hd.	4
31	27-1960	Coupling — Engine	1
32	3241-2	Setscrew — Sq. Hd.	2
33	3296-39	Nut — Lock	4
34	323-15	Capscrew — Hex Hd.	1
35	323-20	Capscrew — Hex Hd.	3
36	27-2150	Mounting Pad — Engine	4
37	28-1140	Washer — Flat	4
38	32144-1	Screw — Thread Forming	8
39	62-2350	Wire Harness — Column	1
40	62-2340	Wire Harness — Frame	1
41	62-2360	Wire Harness — Traction Lead	1
42	10-7130	Wire — Solenoid to Starter	1
43	28-2120	Wire — Battery to Ground	1
44	27-3070	Wire — Battery to Engine	1
45	62-2630	Wire Assembly	1
46	68-7220	Decal — Engine RPM	1

* Not Illustrated

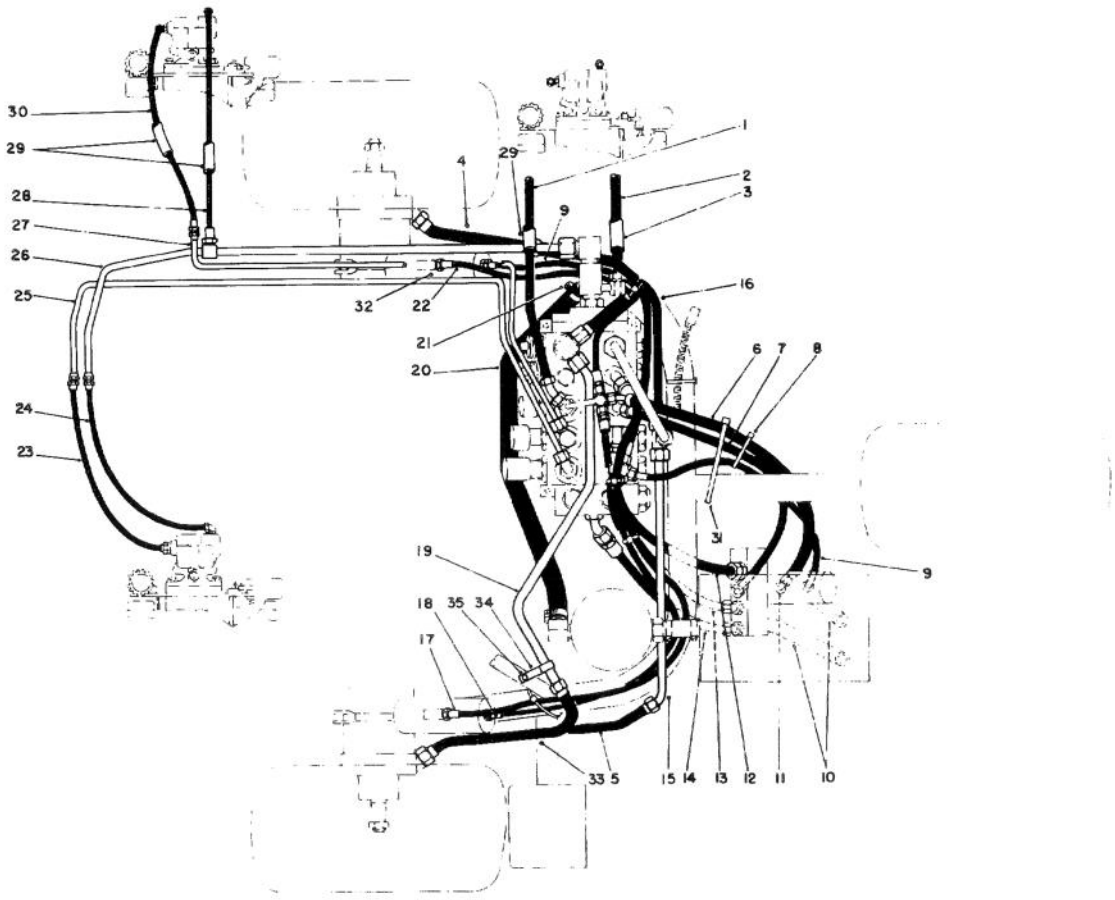


T-0305-89

TRACTION PUMP NO. 62-2300

Ref. No.	Part No.	Description	No. Used
1	5-0946	Key — Square	1
2	353-931	Seal — Oil	1
3	353-916	Flange Assembly	1
4	353-917	Seal — O-Ring	1
5	353-918	Body Assembly	1
6	353-970	Dowel	2
7	353-971	Gear Plate — Pump	1
8	353-964	Gear — 59B	2
9	353-965	Idler Shaft Assembly	1
10	353-972	Shaft — Drive	1
11	353-884	Key — Woodruff	4

Ref. No.	Part No.	Description	No. Used
12	353-886	Ring — Retaining	2
13	353-921	Plate Assembly	1
14	353-922	Seal Ring — Pump	8
15	353-969	Gear Plate — 30B	3
16	353-923	Plate Assembly	2
17	353-927	Cover Assembly	1
18	353-966	Screw — Cap Hex Hd.	4
19	353-600	Washer — Flat	4
20	353-967	Gear — 30B	5
21	353-968	Dowel	6

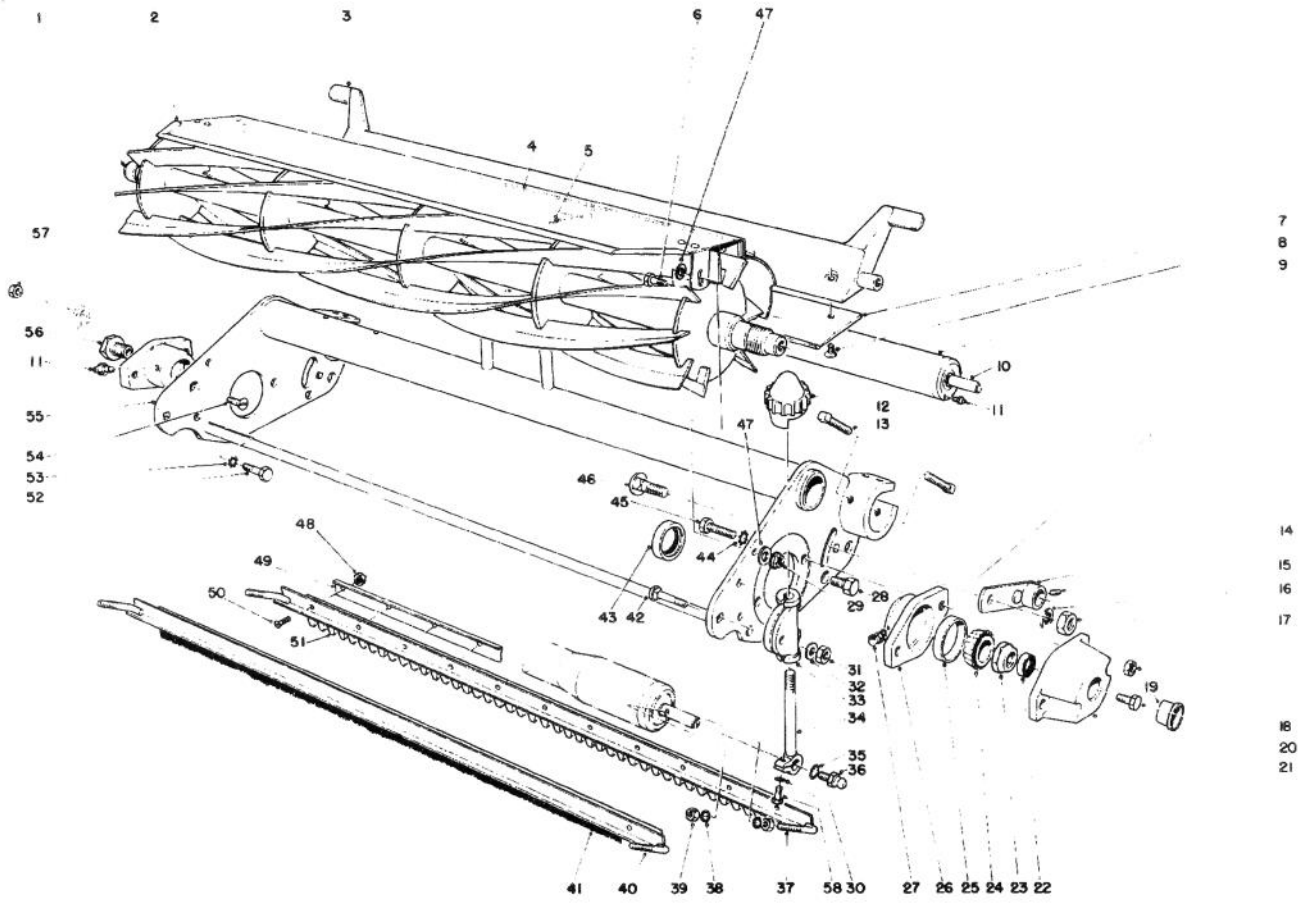


T-0306-89

HYDRAULIC SYSTEMS DIAGRAM

Ref. No.	Part No.	Description	No. Used
1	63-3860	Hose — Pressure Rear	1
2	63-3840	Hose — Return Rear	1
3	56-7981	Splash Shield	1
4	70-7160	Traction Hose — Upper R.H.	1
5	70-7150	Traction Hose — Lower L.H.	1
6	63-3930	Hose Cylinder — Drop Rear	1
7	63-3900	Hose — Pump #3	1
8	3290-379	Cable Tie	6
9	63-3880	Hose Cylinder — Lift R.H. and Rear	2
10	27-3040	Hose — Pump/Inlet	2
11	340-103	45° Elbow Adjustable	1
12	63-3940	Hose — Pump #4	1
13	63-3910	Hose — Pump #2	1
14	63-3920	Hose — Pump #1	1
15	70-7120	Tube — Traction Lower L.H.	1
16	70-7170	Hose — Traction Lower R.H.	1
17	63-3850	Hose Cylinder — Drop L.H.	1
18	63-3890	Hose Cylinder — Lift L.H.	1
19	70-7130	Traction Line — Upper L.H.	1

Ref. No.	Part No.	Description	No. Used
20	51-0040	Return Line — Manifold to Filter	1
21	2412-3	Clamp — Hose	2
22	63-3950	Hose Cylinder — Drop L.H.	1
23	63-3870	Hose — Pressure L.H.	1
24	63-3830	Hose — Return L.H.	1
25	63-4020	Pressure Line — Cutting Unit L.H.	1
26	63-4040	Return Line — R.H.	1
27	63-4030	Pressure Line — Cutting Unit R.H.	1
28	63-3820	Hose — Return R.H.	1
29	56-7980	Splash Shield	3
30	63-3810	Hose — Pressure R.H.	1
31	3333-975	Cable Tie	1
32	340-92	Fitting — Orifice Str.	1
33	70-7140	Hose — Traction Upper L.H.	1
34	2412-41	R-Clamp	3
35	12-3270	Capscrew	3



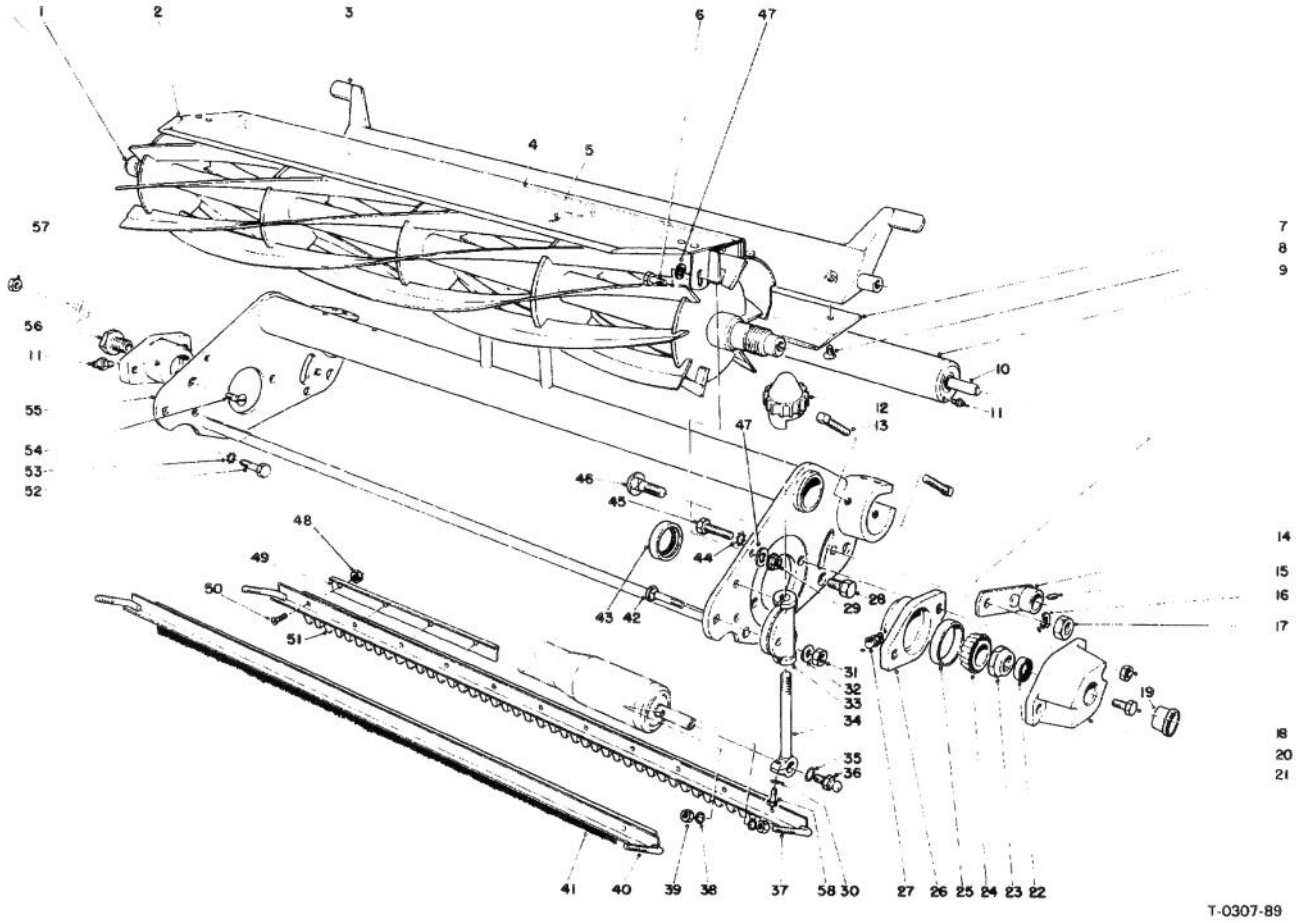
T-0307-89

CUTTING UNITS (5 BLADE) MODEL NO. 04405 (8 BLADE) MODEL NO. 04408

Ref. No.	Part No.	Description	No. Used
1	12-3599	Reel Assembly 8 Blade	1
1*	12-8779	Reel Assembly 5 Blade	1
2	36-7190	Grass Shield	1
3	10-4930	Bed Bar	1
4	36-7260	Cut-Off Bar	1
5	32144-73	Screw — Machine Round Hd.	5
6	321-5	Capscrew	2
7	63-8500	Bed Knife 1/8"	1
*	62-2510	Bed Knife 3/16"	1
*	63-8550	Bed Knife — Tournament	1
*	63-8610	Bed Knife — Fairway	1
8	57-4910	Screw — Special	7
9	21-8450	Rear Roller Assembly (Incl. Ref. #10 & 11)	1
10	21-8430	Rear Bearing	2
11	302-5	Grease Fitting	3
12	10-5040	Knob — Height Adjustment	2
13	3243-13	Set Screw Sq. Hd. Oval Point	4
14	27-2650	Height-of-Cut Adjustment	2
15	3290-125	Setscrew	2
16	3253-7	Lockwasher	2
17	3217-9	Locknut	2

Ref. No.	Part No.	Description	No. Used
18	3296-39	Locknut	2
19	12-0460	Caplug	1
20	323-2	Machine Screw Hex Hd.	1
21	10-5080	End Cap	1
22	253-61	Seal	1
23	3296-60	Stop Nut	1
24	254-94	Bearing Cone	2
25	254-72	Bearing Cup	2
26	10-5120	Bearing Housing	2
27	302-40	Grease Fitting	1
28	217-74	Wheel Bolt	2
29	3296-42	Nut — Lock	2
30	3253-3	Lockwasher	2
31	3296-29	Locknut	2
32	3256-23	Flat Washer	2
33	10-5060	Bracket Height of Cut	2
34	10-5010	Screw Roller Adjustment	2
35	3254-6	Shakeproof Washer	2
36	2411-7	Ball Stud	2
37	11-0070	Scraper Comb Assembly (Incl. Ref. #48-51)	1
38	3254-8	Shakeproof Washer	4

* Not Illustrated

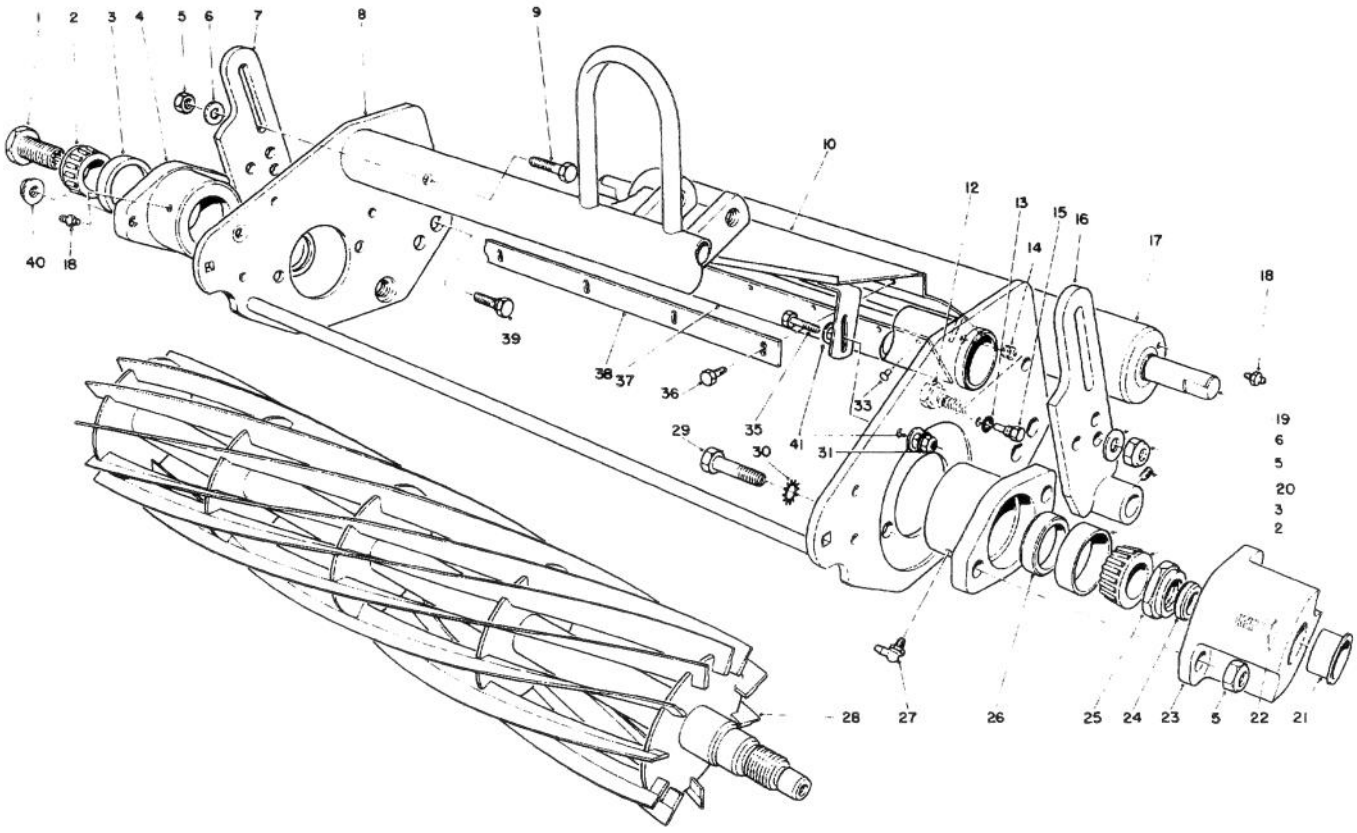


CUTTING UNITS (5 BLADE) MODEL NO. 04405
(8 BLADE) MODEL NO. 04408 (Continued)

Ref. No.	Part No.	Description	No. Used
39	3219-1	Hex Nut	4
40	33-1000	Scraper Brush Assembly (Incl. Ref. 41) (Optional)	1
41	33-0630	Brush	1
42	3-7253	Carriage Bolt	2
43	253-96	Oil Seal	2
44	3255-9	Shakeproof Washer	4
45	57-3210	Machine Screw — Special	4
46	3233-26	Carriage Bolt	2
47	3256-22	Washer	4
48	3296-9	Locknut	11
49	8-2520	Support Comb	1
50	3249-3	Round Head Screw	11

Ref. No.	Part No.	Description	No. Used
51	8-2530	Comb — Urethane	1
52	322-5	Capscrew	2
53	3255-8	External Shakeproof	2
54	32108-20	Screw Flat Head	2
55	70-1100	Frame Reel	1
56	10-5100	Nut Spline	1
57	32128-36	Locknut — Flange	2
58	321-4	Capscrew	2
*	1-8789	Bar Adj. Gauge (Includes †)	1
†	32122-22	Screw Truss Head	1
†	3219-14	Nut	1
*‡		Bearing Replacement Tool Kit	1
*‡		Tool — Bed Knife Screw	1

* Not Illustrated
‡ Special Tool (Ref. Page 51-52)



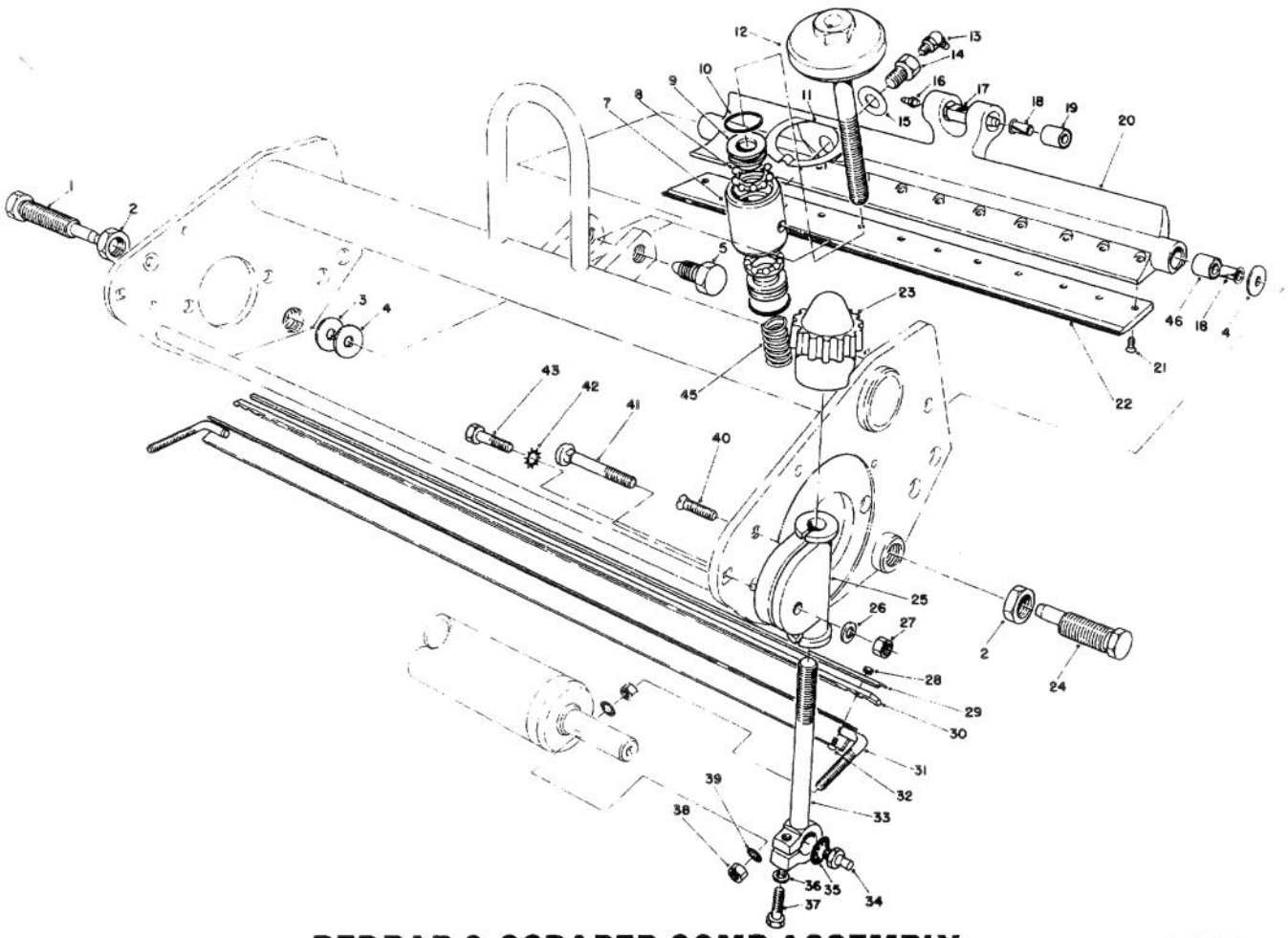
CUTTING UNITS (11 BLADE) MODEL NO. 04450 (8 BLADE) MODEL NO. 04468

T-0309-89

Ref. No.	Part No.	Description	No. Used
1	10-5100	Nut — Spline	1
2	254-94	Bearing — Cone	2
3	254-72	Bearing — Cup	2
4	10-5120	Bearing — Housing	2
5	3296-39	Nut — Lock	6
6	3256-24	Washer	4
7	52-3060	Height of Cut Adjustment R.H.	1
8	70-1200	Frame — Reel	1
9	323-7	Capscrew Hex Hd.	2
10	57-5200	Grass Shield Assembly (Incl. Ref. #33 & 37)	1
12	52-3100	Bolt — Eccentric Height of Cut L.H.	1
13	3254-6	Washer — Lock	2
14	237-84	Grommet	2
15	57-9910	Screw — Pivot	2
16	52-3090	Height of Cut Adjustment L.H.	1
17	52-3120	Rear Roller Assembly (Incl. Ref. #18 & 19)	1
18	302-5	Grease Fitting	3
19	21-8430	Bearing — Rear Roller	2
20	3290-125	Set Screw	2
21	12-0460	Caplug	1
22	323-2	Screw — Machine Hex Hd.	1
23	10-5080	Cap — End	1

Ref. No.	Part No.	Description	No. Used
24	253-61	Seal	1
25	3296-60	Nut — Lock	1
26	253-96	Seal	2
27	302-40	Grease Fitting 90°	1
28	12-2789	Reel — 11 Blade (Model No. 04450)	1
*	12-3599	Reel — 8 Blade (Model No. 04468)	1
29	57-3210	Screw — Machine Special	4
30	3255-9	Washer — Lock	4
31	3296-42	Locknut	2
33	3295-46	Rivet	13
35	321-5	Capscrew — Hex Hd.	2
36	32144-73	Screw — Self Tapping	5
37	57-5210	Flap — Shield	1
38	36-7260	Cut-Off Bar	1
39	52-3110	Bolt — Shoulder Height of Cut R.H.	1
40	32128-36	Locknut — Flange	2
41	3256-22	Washer — Flat	4
*	1-8789	Bar Adj. Gauge (Includes †)	1
†	32122-2	Screw Truss Hd.	1
†	3219-14	Nut	1
*‡		Bearing Replacement Tool Kit	1
*‡		Backlapping Brush Assembly	1

* Not Illustrated
‡ Special Tool (Ref. Page 51-52)



T-0310-89

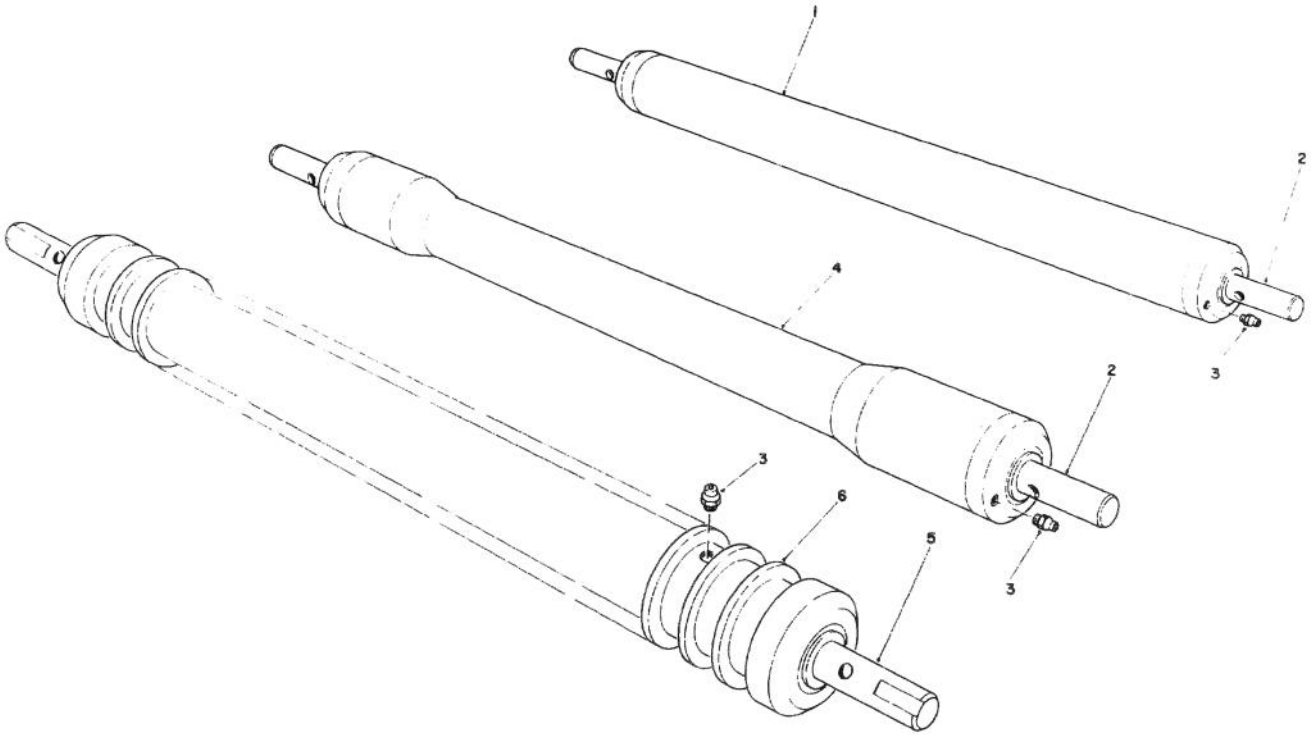
BEDBAR & SCRAPER COMB ASSEMBLY
(Cutting Units Model Nos. 04450 & 04468)

Ref. No.	Part No.	Description	No. Used
1	52-2930	Bolt — Adjustment Shoulder	1
2	3220-6	Nut — Hex Jam	2
3	52-2860	Washer	1
4	52-2900	Washer — Poly	2
5	66-7240	Screw — Pivot Spa	2
7	57-5250	Pivot — Single Point Adjust	1
8	57-5280	Bearing — Cup & Cone Retainer	2
9	57-5290	Race — Inner Bearing	2
10	237-77	Seal — O-Ring	2
11	66-7220	Arm — Spring	1
12	66-7250	Handle Assembly	1
13	302-40	Grease Fitting	1
14	52-2990	Capscrew — Spring Retainer	1
15	3256-25	Washer	1
16	302-18	Grease Fitting	1
17	57-5260	Pivot — Bedbar	1
18	52-2890	Bushing — Flanged	4
19	62-5510	Rubber Bushing Assembly	2
20	57-4940	Bedbar	1
21	57-4910	Screw — Special	13
22	63-8470	Bed Knife 1/8"	1
*	62-2500	Bed Knife 3/16"	1
*	63-8560	Bed Knife — Tournament	1
*	63-8600	Bedknife — Fairway	1

Ref. No.	Part No.	Description	No. Used
23	10-5040	Knob — Height Adjustment	2
24	52-2910	Bolt — Eccentric Shoulder L.H.	1
25	10-5060	Bracket — Height of Cut	2
26	3256-23	Washer	2
27	3296-29	Nut — Lock	2
28	3296-9	Locknut	11
29	8-2520	Support — Comb	1
30	8-2530	Comb — Urethane	1
31	11-0070	Scraper Comb Assembly (Incl. Ref. #28-30 & 32)	1
32	3249-3	Round Hd. Screw	11
33	10-5010	Screw — Roller Adjustment	2
34	2411-7	Ball Stud	2
35	3254-6	Washer — Lock	2
36	3253-3	Washer — Lock	2
37	321-4	Capscrew Hex Hd.	2
38	3219-1	Nut — Hex	4
39	3254-8	Washer — Lock	4
40	32108-20	Screw — Machine Flat Hd.	2
41	3-7253	Bolt — Carriage	2
42	3255-8	Washer — Lock	2
43	322-5	Capscrew Hex Hd.	2
45	66-7230	Spring — Compression	1
46	63-9510	Rubber Bushing Assembly	2
*‡		Tool — Bed Knife Screw	1

* Not Illustrated

‡ Special Tool (Ref. Page 51-52)



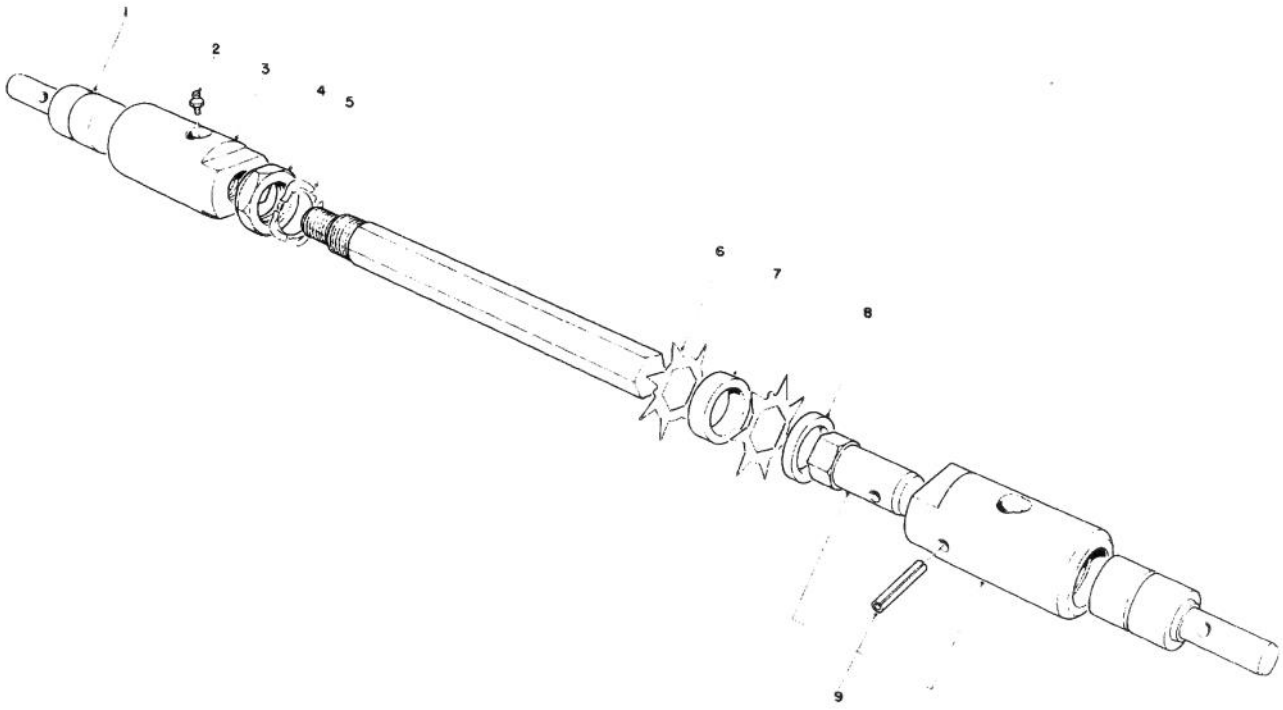
T-0311-89

CUTTING UNIT ROLLER OPTIONS

Ref. No.	Part No.	Description	No. Used
1	52-3170	Full Front Roller Assembly (Incl. Ref. #2 & 3)	1
2	52-3180	Bearing — Front Roller	2
3	302-5	Grease Fitting	2
4	52-3590	Swaged Roller Assembly (Incl. Ref. #2 & 3)	1

Ref. No.	Part No.	Description	No. Used
5	52-3210	Bearing — Wiehle Roller	2
6	52-3200	Wiehle Roller Assembly (Incl. Ref. #3 & 5)	1
*	04412	Full Roller Carton of 3	1
*	04414	Swaged Roller Carton of 3	1
*	04423	Wiehle Roller Carton of 3	1

* Not Illustrated

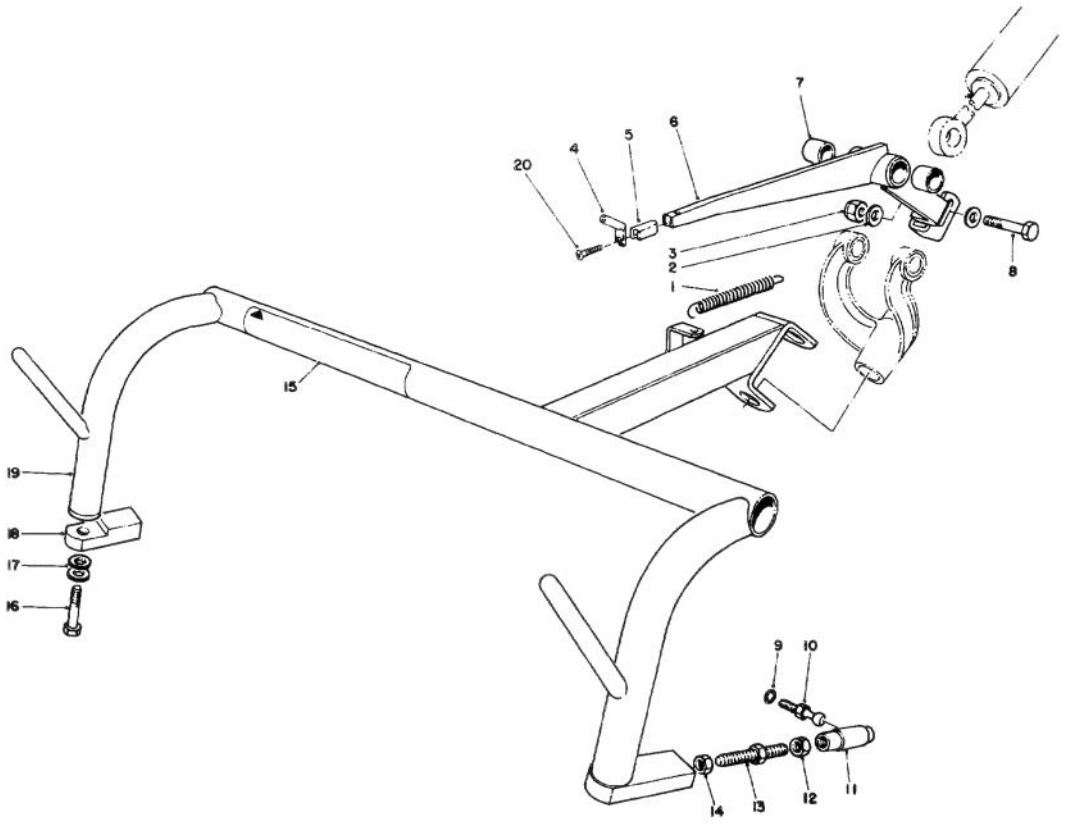


T-0312-89

SPIKER ROLLER MODEL NO. 04430 (Optional)

Ref. No.	Part No.	Description	No. Used
1	52-3180	Bearing — Front Roller	2
2	302-5	Fitting — Grease	2
3	57-0970	Hub — Bearing	1
4	3296-49	Nut — Lock	1
5	57-7790	Washer — Spring	1

Ref. No.	Part No.	Description	No. Used
6	57-0950	Blade — Spiker Roller	26
7	26-1580	Spacer 1/2	27
8	27-1040	Spacer 1/4	2
9	57-7780	Hex Shaft Assembly	1

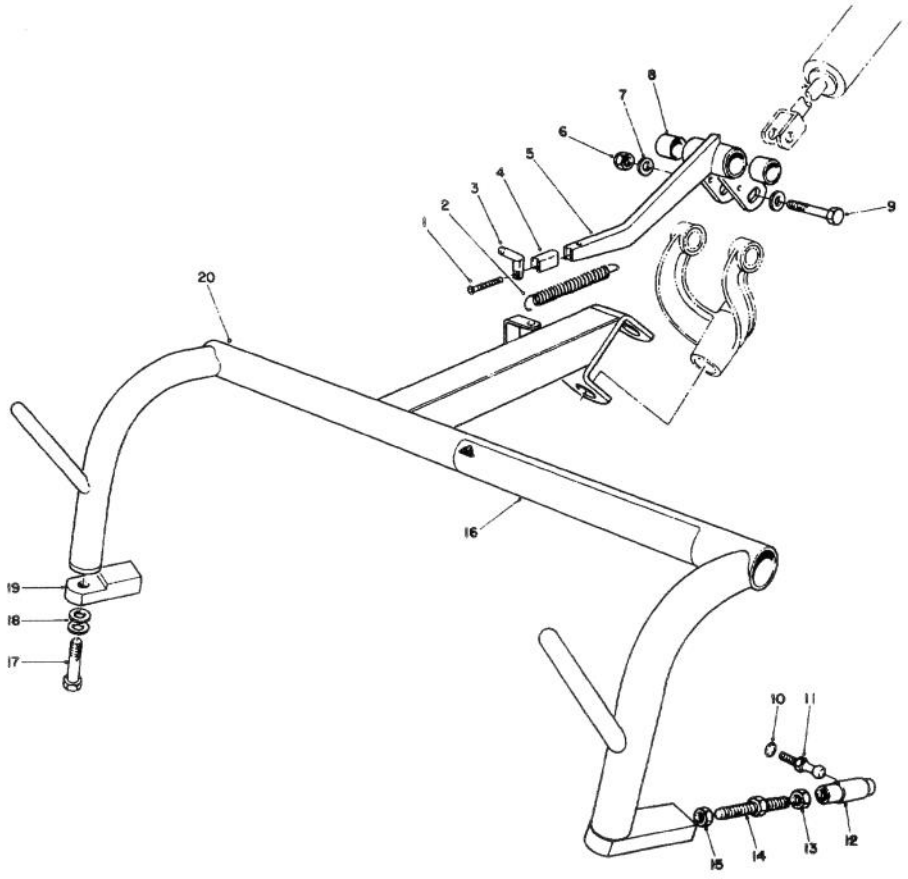


T-0313-89

DIRECT SUSPENSION PULL FRAME KIT MODEL NO. 04452 (Optional)

Ref. No.	Part No.	Description	No. Used
1	54-9490	Spring — Extension	1
2	3256-28	Washer	2
3	3296-15	Nut — Lock	1
4	54-9470	Lift Pin Stop	1
5	67-5940	Extension — Direct Suspension	1
6	54-9400	Lift Arm Center (Incl. Ref. #7)	1
7	3-0348	Bushing	2
8	3216-1	Capscrew	1
9	3254-6	Washer — Lock Internal Tooth	2
10	54-7430	Ball Stud	2

Ref. No.	Part No.	Description	No. Used
11	57-3230	Ball Joint	2
12	3220-5	Nut — Jam R.H.	2
13	54-9460	Stud — Take Up	2
14	3220-12	Nut — Jam L.H.	2
15	27-2890	Decal — Warning	1
16	3212-25	Capscrew	1
17	3256-25	Washer — Flat	2
18	54-9450	Bar — Swing, Pull Frame	1
19	54-7340	Pull Frame R.H. & Center	1
20	3289-22	Screw — Hex Socket Flat Hd.	1

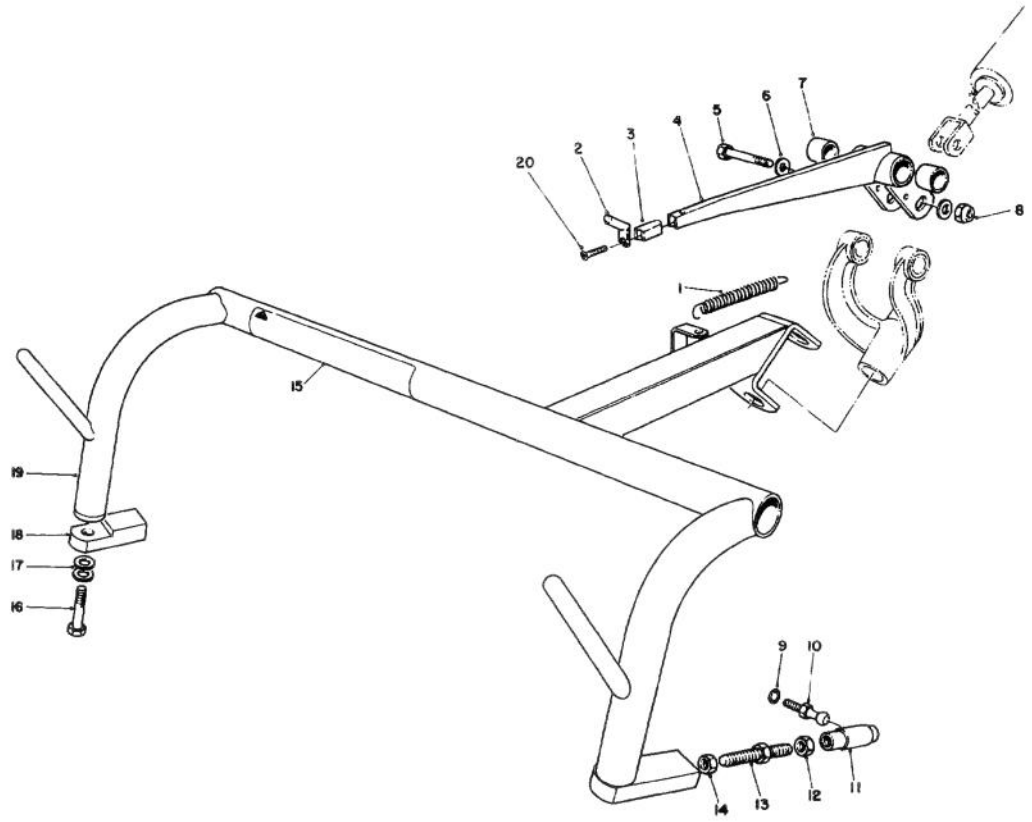


DIRECT SUSPENSION PULL FRAME KIT
MODEL NO. 04452 (Optional) (Continued)

T-0314-89

Ref. No.	Part No.	Description	No. Used
1	3289-22	Screw — Hex Socket Flat Hd.	1
2	54-9490	Spring — Extension	1
3	54-9470	Lift Pin Stop	1
4	67-5940	Extension — Direct Susp.	1
5	54-7550	Lift Arm L.H. (Incl. Ref. #8)	1
6	3296-45	Nut — Lock	1
7	3256-26	Washer — Flat	2
8	3-0348	Bushing	2
9	325-11	Capscrew	1
10	3254-6	Washer — Lock Internal Tooth	2

Ref. No.	Part No.	Description	No. Used
11	54-7430	Ball Stud	2
12	57-3230	Ball Joint	2
13	3220-5	Nut — Jam R.H.	2
14	54-9460	Stud — Take Up	2
15	3220-12	Nut — Jam L.H.	2
16	27-2890	Decal — Warning	1
17	3212-25	Capscrew	1
18	3256-25	Washer — Flat	2
19	54-9450	Bar — Swing, Pull Frame	1
20	54-7420	Pull Frame L.H.	1

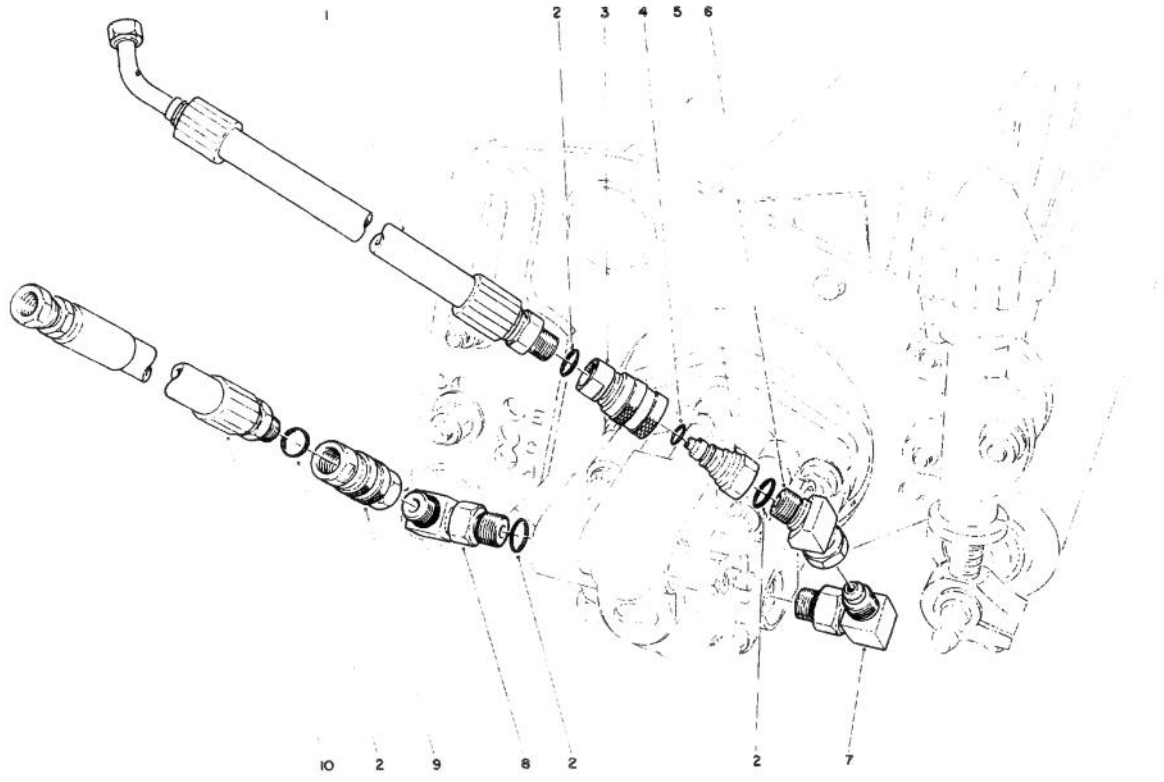


DIRECT SUSPENSION PULL FRAME KIT
MODEL NO. 04452 (Optional) (Continued)

T-0315-89

Ref. No.	Part No.	Description	No. Used
1	54-9490	Spring — Extension	1
2	54-9470	Lift Pin Stop	1
3	67-5940	Extension — Direct Suspension	1
4	54-7530	Lift Arm R.H. (Incl. Ref. #7)	1
5	325-11	Capscrew	1
6	3256-26	Washer — Flat	2
7	3-0348	Bushing	2
8	3296-45	Nut — Lock	1
9	3254-6	Washer — Lock Internal Tooth	2
10	54-7430	Ball — Stud	2

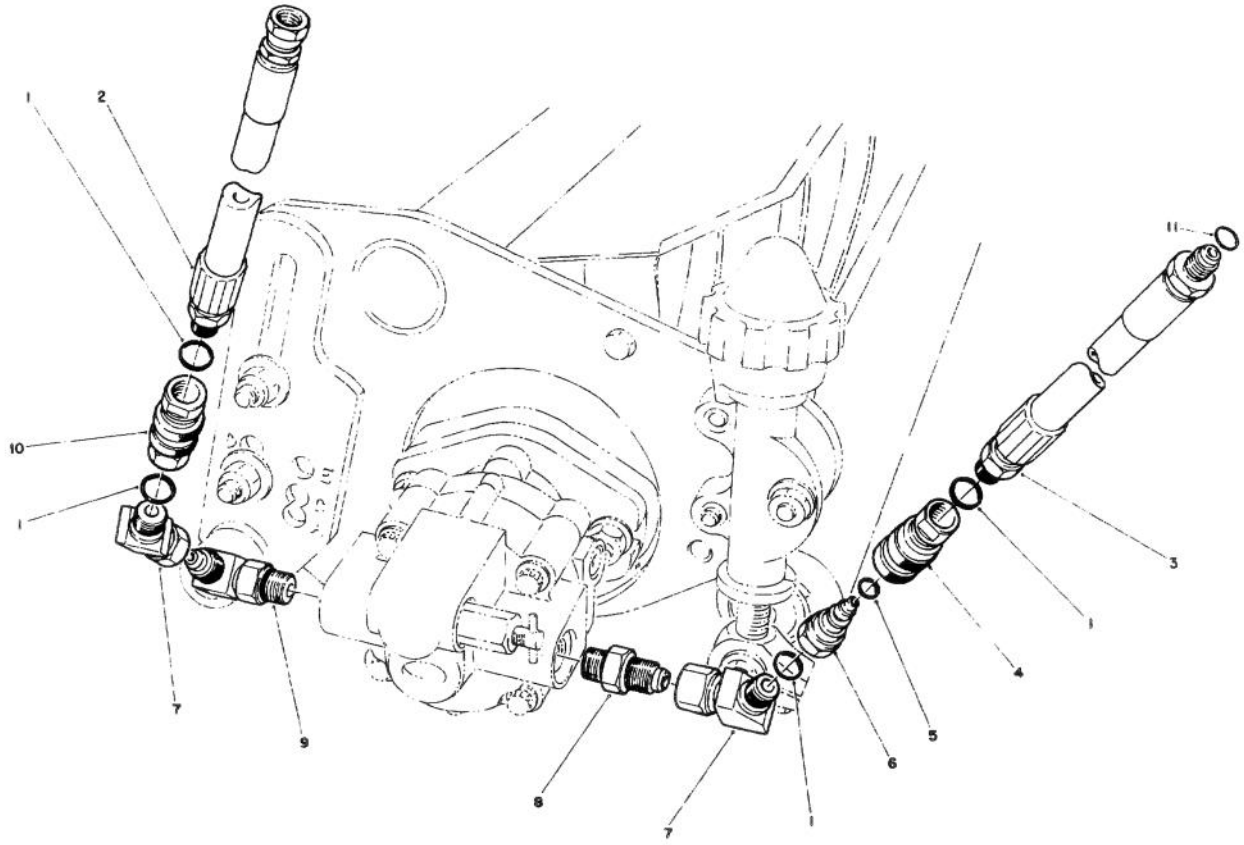
Ref. No.	Part No.	Description	No. Used
11	57-3230	Ball Joint	2
12	3220-5	Nut — Jam R.H.	2
13	54-9460	Stud — Take Up	2
14	3220-12	Nut — Jam L.H.	2
15	27-2890	Decal — Warning	1
16	3212-25	Capscrew	1
17	3256-25	Washer — Flat	2
18	54-9450	Bar — Swing	1
19	54-7340	Pull Frame R.H. & Center	1
20	3289-22	Screw — Hex Socket Flat Hd.	1



T-0316-89

BACKLAPPING KIT NO. 63-4960 (Optional)

Ref. No.	Part No.	Description	No. Used
1	63-4990	Hose Assembly — Pressure (Incl. Ref. #2)	1
2	237-42	Seal — O-Ring	6
3	353-934	Coupling	2
4	237-142	Seal — O-Ring (Quick Disconnect)	2
5	353-933	Coupling	2
6	54-9530	Fitting — 45° Swivel Elbow (Incl. Ref. #2)	1
7	353-374	Fitting — 90° Adjustable Elbow	1
8	54-9540	Fitting — 90° Adjustable Elbow (Incl. Ref. #2)	1
9	54-9620	Coupling — Quick Disconnect (Incl. Ref. #3-5)	2
10	63-4980	Hose Assembly — Return (Incl. Ref. #2)	1

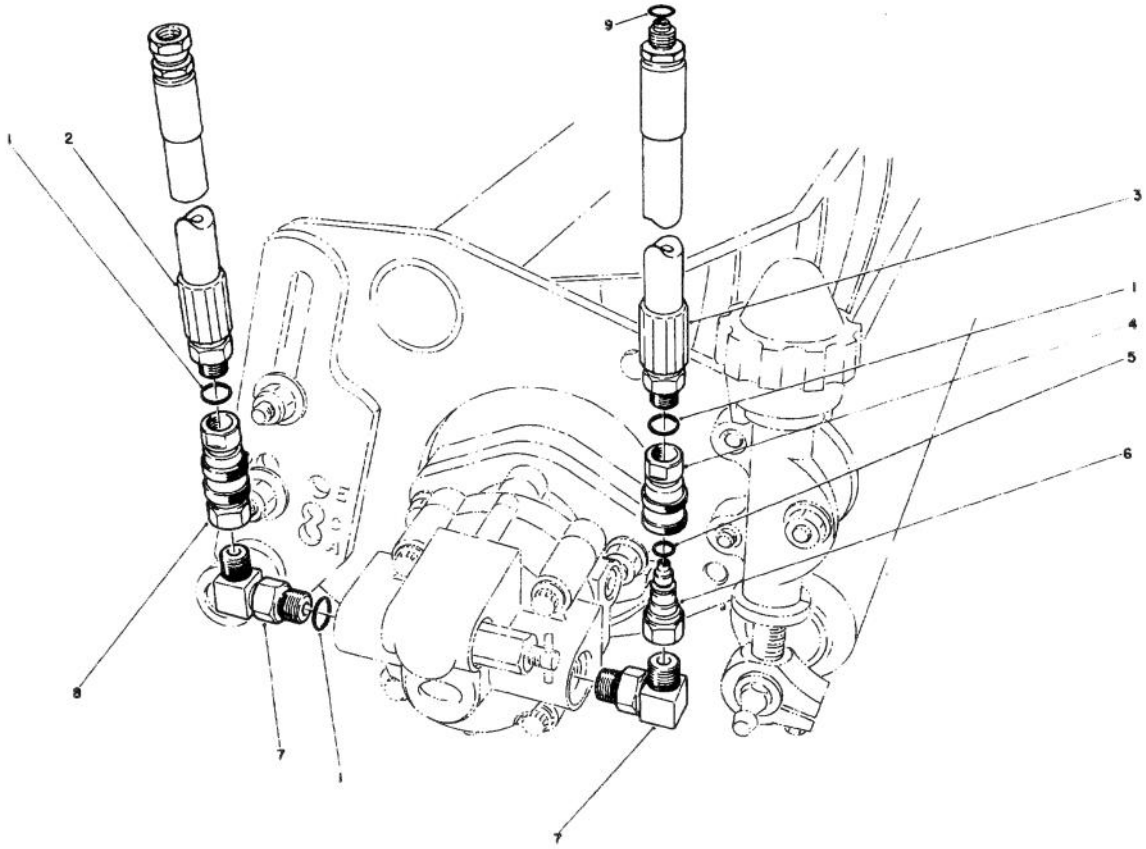


T-0317-89

BACKLAPPING KIT NO. 63-4960 (Optional) (Continued)

Ref. No.	Part No.	Description	No. Used
1	237-42	Seal — O-Ring	6
2	63-4980	Hose Assembly — Return (Incl. Ref. #1)	1
3	63-4970	Hose Assembly — Pressure (Incl. Ref. #1 & 11)	1
4	353-934	Coupling	2
5	237-142	Seal — O-Ring (Quick Disconnect)	2

Ref. No.	Part No.	Description	No. Used
6	353-933	Coupling	2
7	54-9530	Fitting — 45° Swivel Elbow (Incl. Ref. #1)	2
8	353-384	Fitting — Straight	1
9	353-374	Fitting — 90° Adjustable Elbow	1
10	54-9620	Coupling — Quick Disconnect (Incl. Ref. #4-6)	2
11	237-22	Seal — O-Ring	1

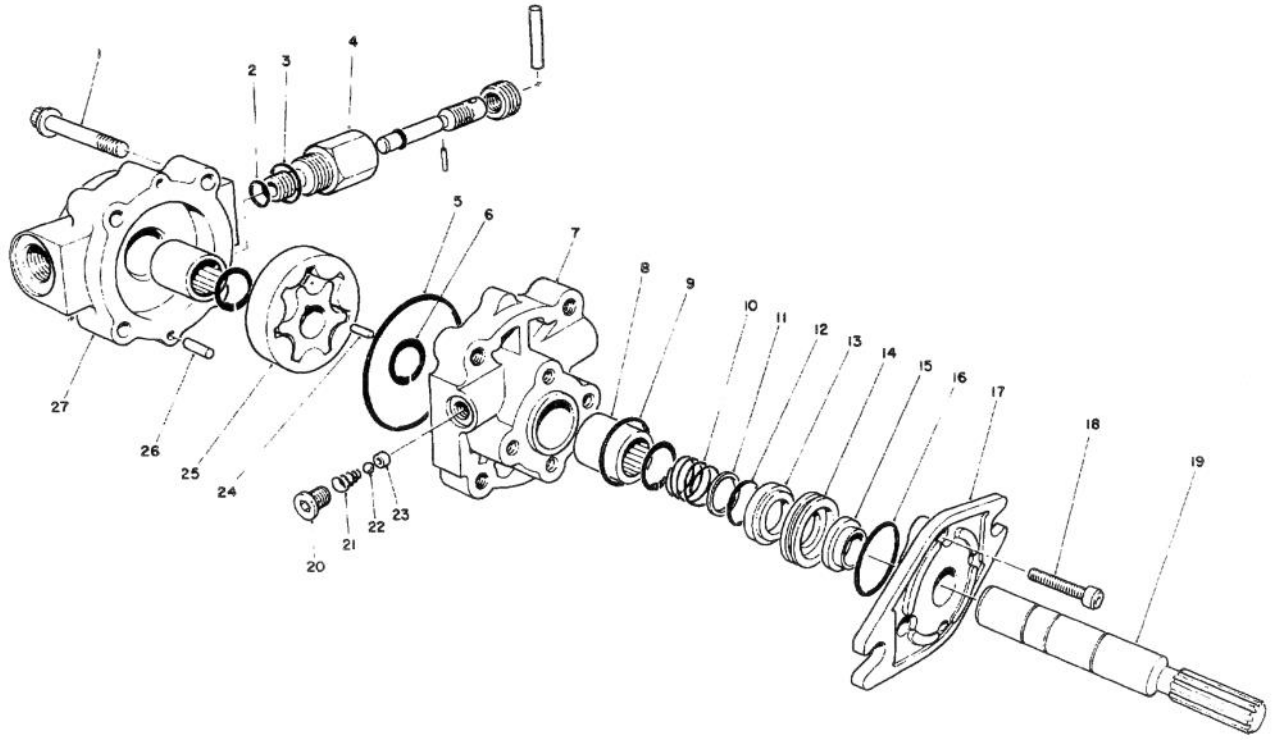


T-0318-89

BACKLAPPING KIT NO. 63-4960 (Optional) (Continued)

Ref. No.	Part No.	Description	No. Used
1	237-42	Seal — O-Ring	6
2	63-4980	Hose Assembly — Return (Incl. Ref. #1)	1
3	63-4970	Hose Assembly — Pressure (Incl. Ref. #1 & 9)	1
4	353-934	Coupling	2
5	237-142	Seal — O-Ring (Quick Disconnect)	2

Ref. No.	Part No.	Description	No. Used
6	353-933	Coupling	2
7	54-9540	Fitting — 90° Adjustable Elbow (Incl. Ref. #1)	2
8	54-9620	Coupling — Quick Disconnect (Incl. Ref. #4-6)	2
9	237-22	Seal — O-Ring	1



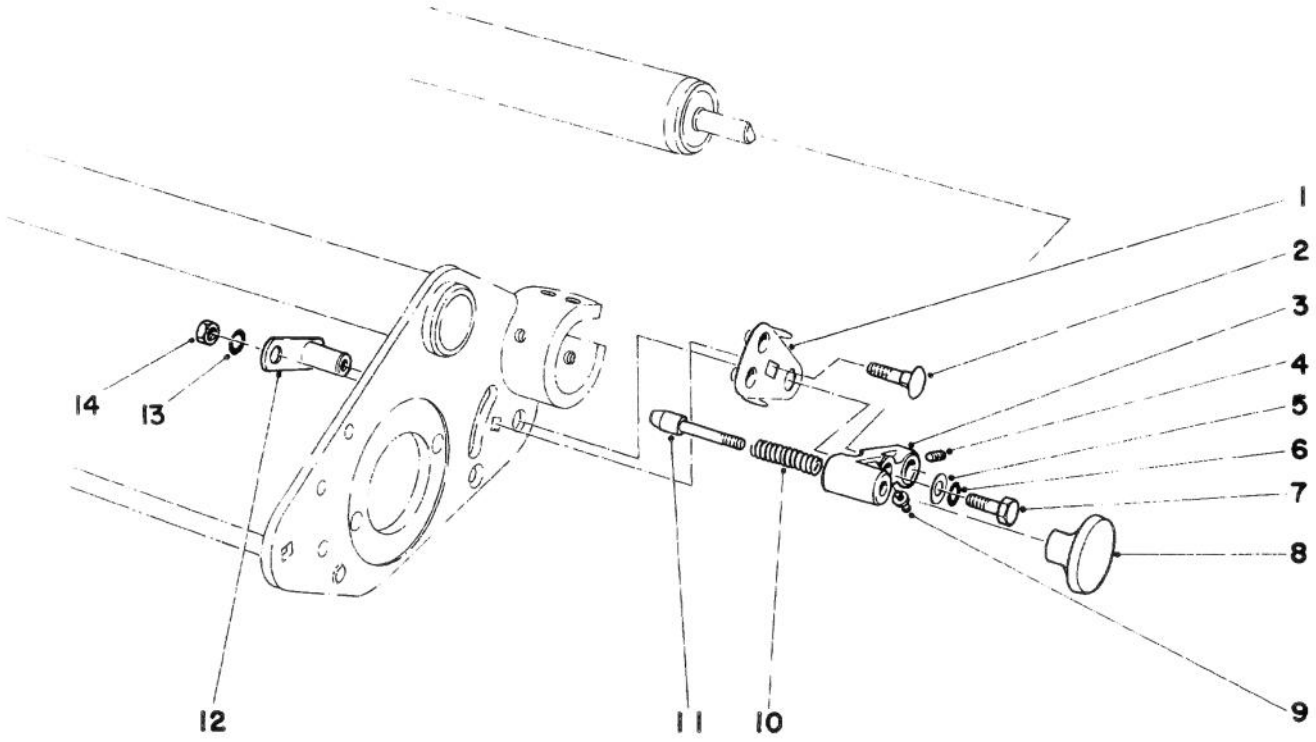
T-0319-89

BACKLAPPING KIT NO. 63-4960 (Optional) (Continued)

Ref. No.	Part No.	Description	No. Used
1	353-892	Screw — 12 Pt.	4
2	353-850	Seal — O-Ring	1
3	353-914	Seal — O-Ring	1
4	54-9520	Valve — By-Pass (Incl. Ref. #2 & 3)	1
5		Seal — O-Ring	1
6	353-907	Ring — Retaining	3
7	353-895	Cover (Incl. Ref. #23)	1
8	353-910	Bearing — Needle	2
9		Seal — O-Ring	1
10	353-906	Spring	1
11	353-897	Washer — Seal	1
12		Seal — O-Ring	1
13	353-899	Cup — Seal	1
14		Seat — Seal	1
15		Seal — Block	1

Ref. No.	Part No.	Description	No. Used
16		Seal — O-Ring	1
17	353-900	Flange — Mounting	1
18	353-905	Screw	4
19	353-904	Shaft	1
20	353-911	Plug	2
21	353-912	Spring — Conical	2
22	353-664	Ball	2
23		Seat	2
24	353-893	Pin — Drive	1
25	353-909	Element — Gerotor	1
26	353-894	Pin — Dowel	2
27	353-891	Body	1
*	353-913	Bearing & Seal Kit (Incl. Ref. #5, 8, 9, 12-16)	1
*	54-9510	Motor & By-Pass Assembly (Complete)	3

* Not Illustrated

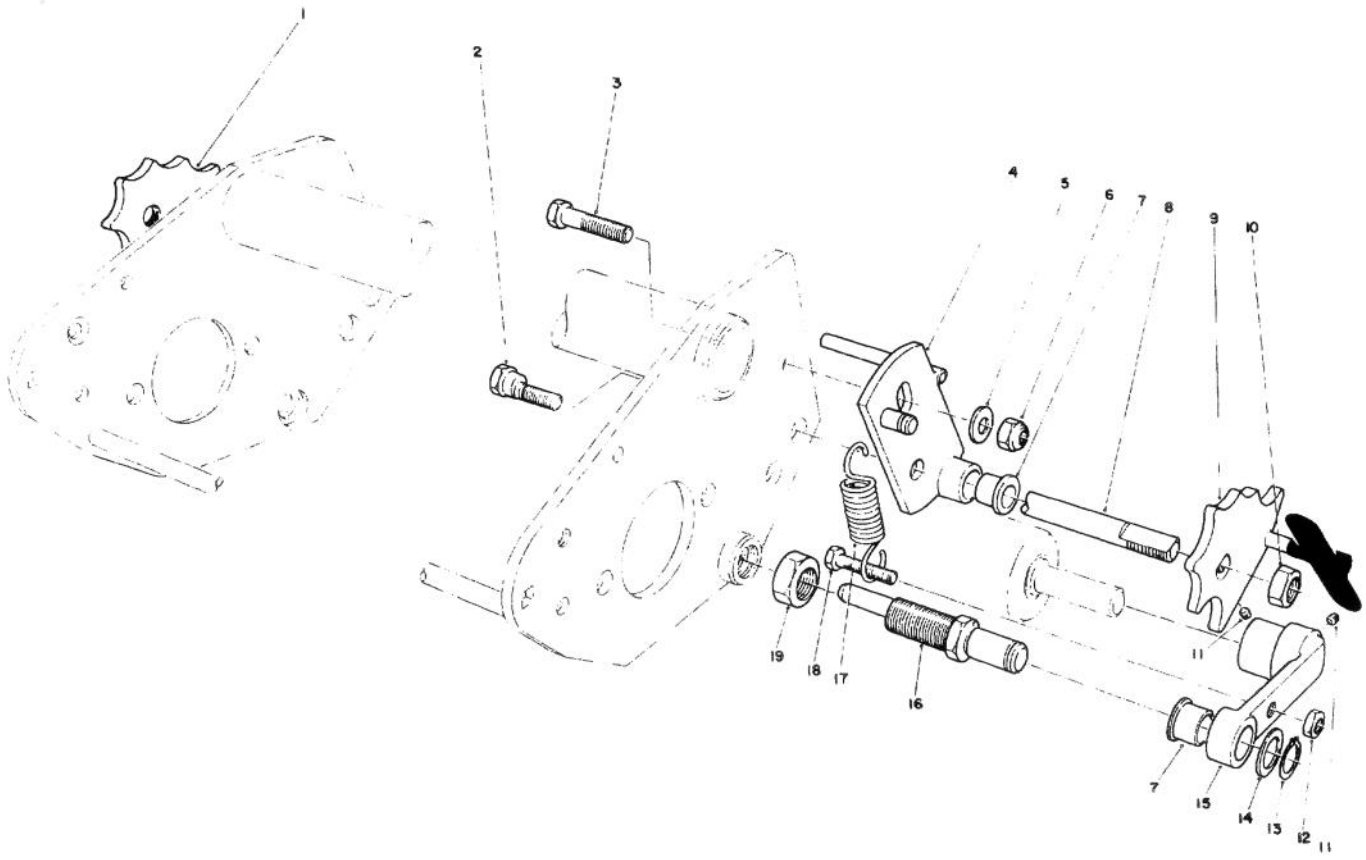


QUICK HEIGHT-OF-CUT KIT NO. 29-5910 (Optional) (MODEL NO. 04405 & 04408 CUTTING UNITS)

T-0320-89

Ref. No.	Part No.	Description	No. Used
1	10-5140	Adj. Plate — Height-of-Cut	6
2	3-5861	Carriage Bolt	6
3	10-4870	Bracket Height-of-Cut	6
4	3245-7	Set Screw	6
5	3256-2	Washer	6
6	3253-3	Lockwasher	6
7	321-3	Capscrew	6
8	233-28	Knob	6

Ref. No.	Part No.	Description	No. Used
9	302-18	Grease Fitting	6
10	10-4850	Spring Compression	6
11	10-4880	Pin Height-of-Cut	6
12	20-4700	Pivot Pin	6
13	3253-4	Lockwasher	6
14	3217-6	Hex Nut	6
		Note: Use Rear Roller (21-8450 21-5/8" Lg.) with kit.	



QUICK HEIGHT-OF-CUT SINGLE POINT ADJUST KIT
MODEL NO. 04451 (Optional)

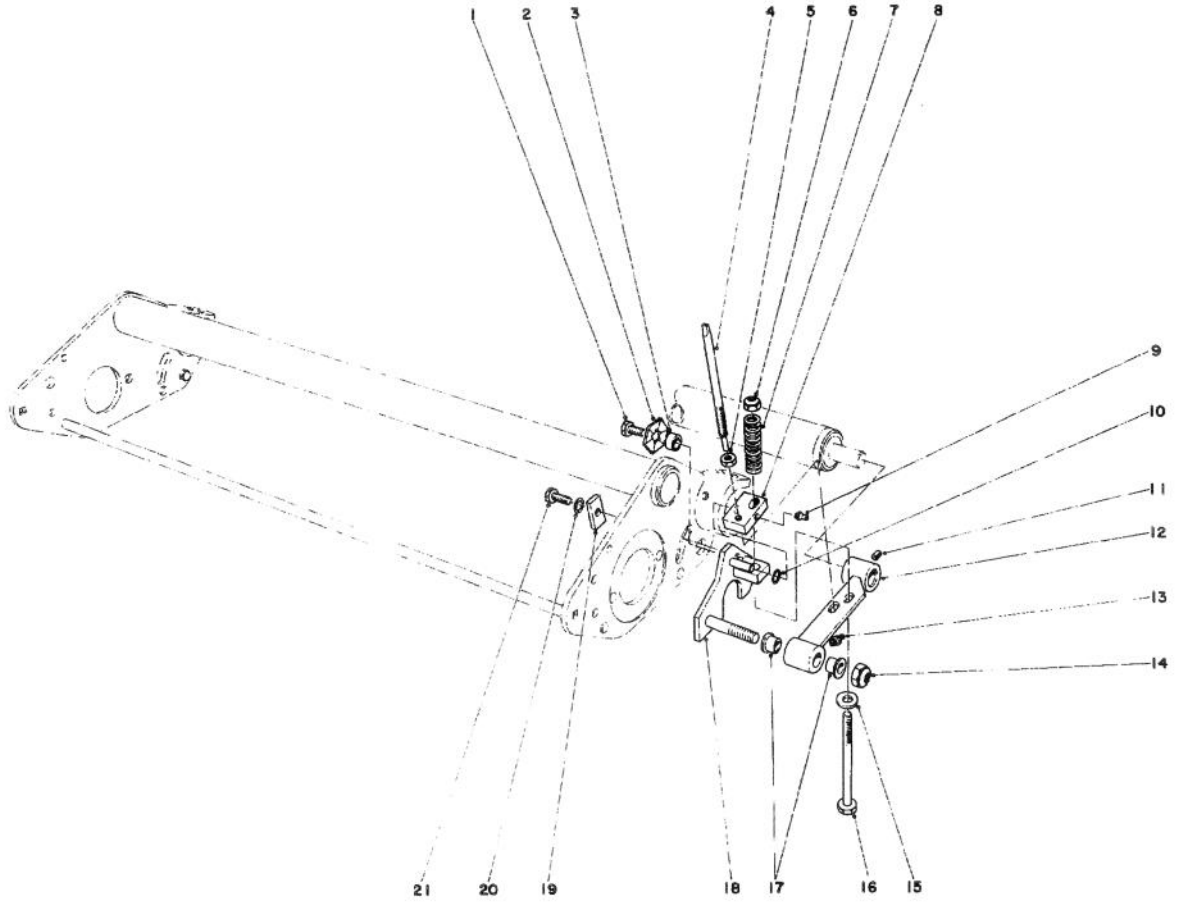
T-0321-89

Ref. No.	Part No.	Description	No. Used
1	54-7190	Cam — Quick H.O.C.	3
2†	52-3100	Bolt — H.O.C. (L.H. Eccentric)	3
*†	52-3110	Bolt — H.O.C. (R.H. Shoulder)	3
3†	323-7	Screw — Cap Hex Hd.	6
4	54-7250	Bracket — Quick H.O.C. (L.H.) (Incl. Ref. #7)	3
*	54-7120	Bracket — Quick H.O.C. (R.H.) (Incl. Ref. #7)	3
5†	3256-24	Washer — Flat	12
6†	3296-39	Nut — Lock	12
7	256-155	Bushing — Flange	12
8	54-7180	Shaft — Cam	3
9	54-7240	Cam — Quick H.O.C. (L.H. & Center)	2

Ref. No.	Part No.	Description	No. Used
*	54-7200	Cam — Quick H.O.C. (R.H.)	1
10	32153-7	Nut — Lock	6
11	3290-125	Screw — Set	12
12	3218-2	Nut — Jam	6
13	32120-3	Ring — Snap	6
14	36-4780	Washer	6
15	54-7140	Pull Arm Assembly (Incl. Ref. #7)	6
16	54-7300	Bolt — Bedbar (L.H. Eccentric)	3
*	54-7310	Bolt — Bedbar (R.H. Shoulder)	3
17	54-7170	Spring — Extension	6
18	322-9	Screw — Cap Hex Hd.	6
19†	3220-6	Nut — Lock	6

* Not Illustrated

† Items Not Included in Quick H.O.C. Kit. Obtain From Existing Cutting Units.



VARIABLE QUICK HEIGHT-OF-CUT KIT NO. 29-9400 (Optional)

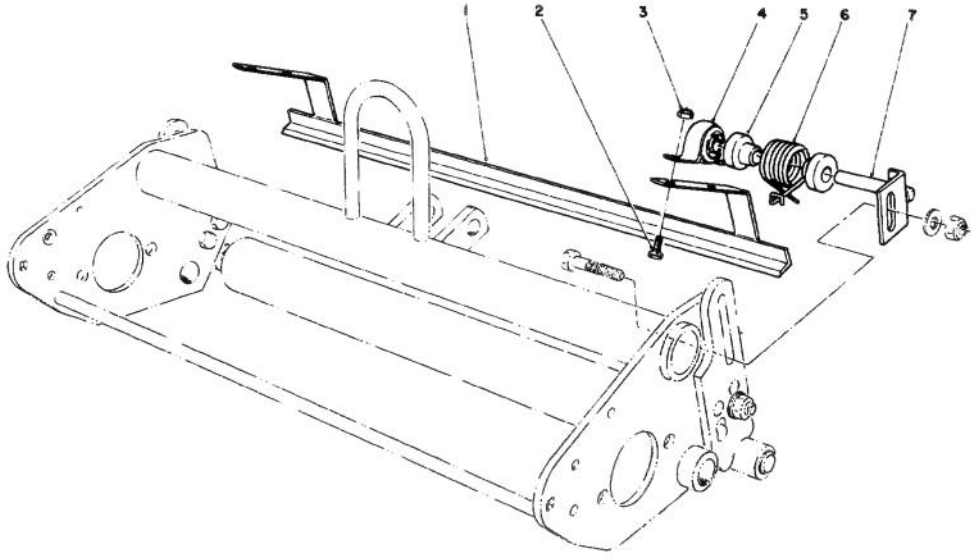
T-0322-89

(For Cutting Units Model 04405 & 04408)

Ref. No.	Part No.	Description	No. Used
1	322-2	Capscrew	2
2	3290-238	Lockwasher	2
3	24-9200	Spacer Mounting	2
4	24-9260	Rod Adjustment	2
5	3218-2	Jam Nut	2
6	3296-29	Locknut	2
7	24-9370	Spring — Compression	2
8	24-9220	Pivot Plate	2
9	302-22	Grease Fitting	2
10	237-21	O-Ring	2
11	3245-1	Set Screw	2
12	24-9330	Pivot Arm L.H. (Incl. Ref. #13 & 17)	1

Ref. No.	Part No.	Description	No. Used
*	24-9340	Pivot Arm R.H. (Incl. Ref. #13 & 17)	1
13	302-5	Grease Fitting	2
14	3296-44	Locknut	2
15	3256-23	Washer	2
16	322-23	Capscrew	2
17	256-116	Bushing	4
18	24-9320	Base Plate L.H.	1
*	24-9310	Base Plate R.H.	1
19	24-9240	Washer	2
20	3254-2	Washer	2
21	322-3	Capscrew	2
		Note: Use Rear Roller (21-8450 21-5/8" Lg.) with kit.	

* Not Illustrated

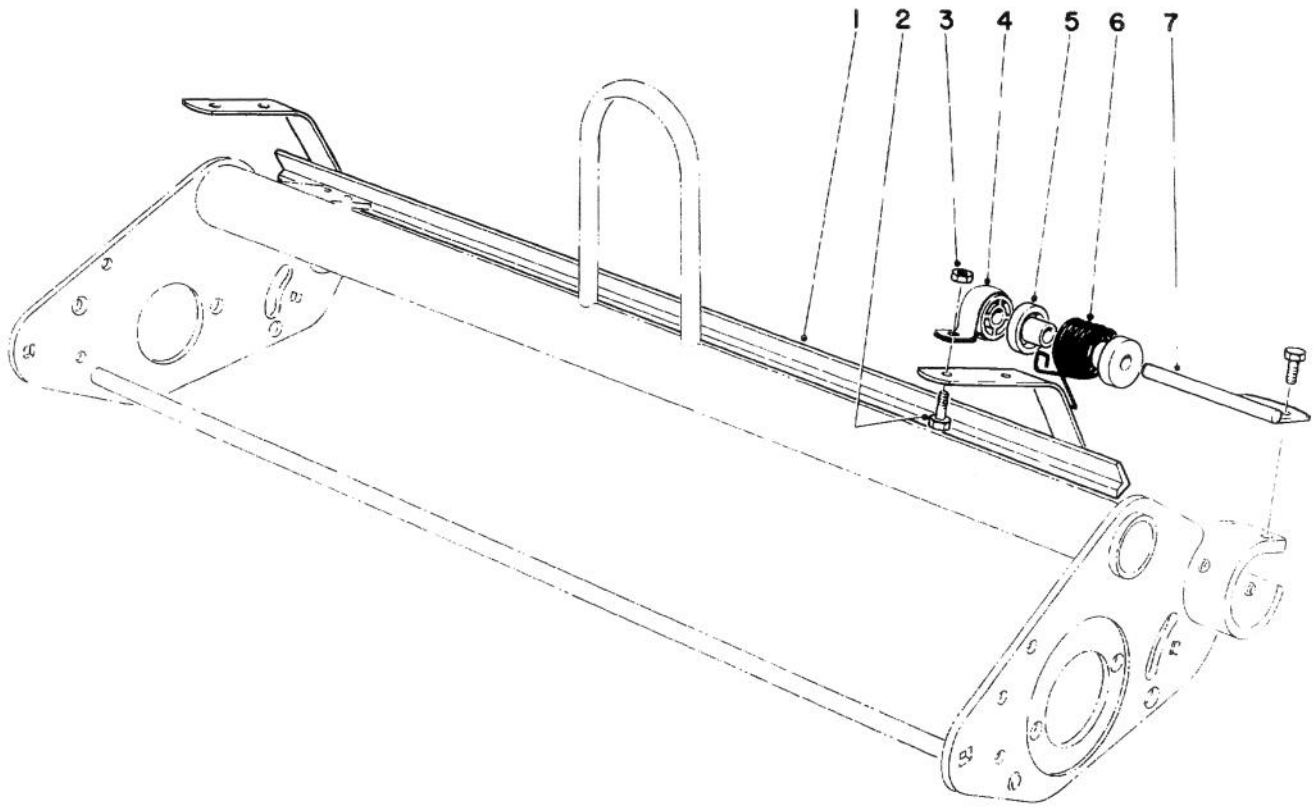


T-0323-89

ROLLER SCRAPER (S.P.A.) KIT NO. 53-9240 (Optional)

Ref. No.	Part No.	Description	No. Used
1	42-4800	Scraper Bar	1
2	321-3	Capscrew	4
3	32152-4	Locknut	4
4	256-239	Bearing	2
5	19-9560	Spring Spacer	4
6	19-9540	Spring L.H.	1
*	19-9550	Spring R.H.	1
7	53-9250	Bracket — Scraper Mount	2

* Not Illustrated



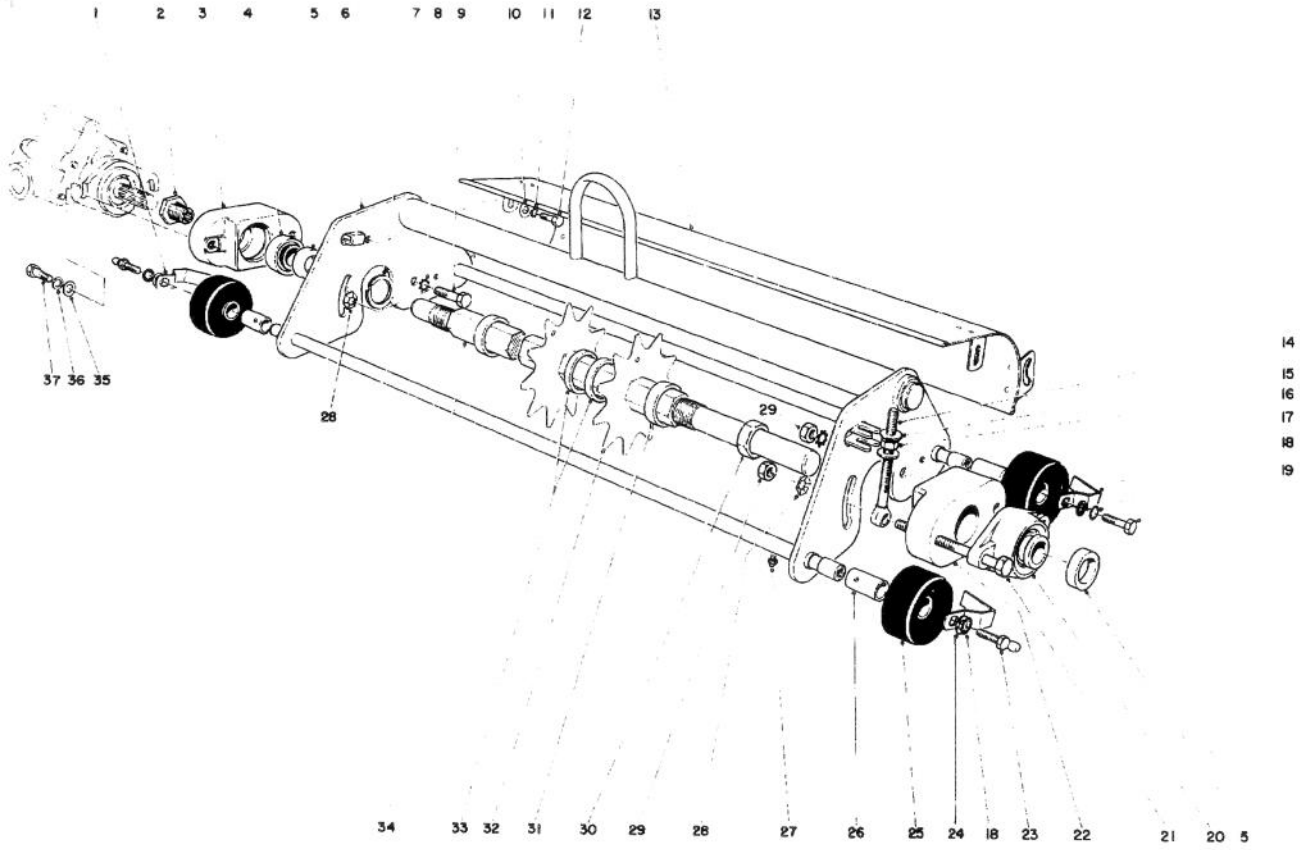
T-0324-89

ROLLER SCRAPER KIT NO. 42-4820 (Optional)
(For Cutting Units Model 04405 & 04408)

Ref. No.	Part No.	Description	No. Used
1	42-4800	Scraper Bar	1
2	321-3	Capscrew	8
3	32152-4	Locknut	4
4	256-239	Bearing	2
5	19-9560	Spring Spacer	4

Ref. No.	Part No.	Description	No. Used
6	19-9540	Spring L.H.	1
*	19-9550	Spring R.H.	1
7	42-4780	Scraper Mount L.H.	1
*	42-4790	Scraper Mount R.H.	1

* Not Illustrated



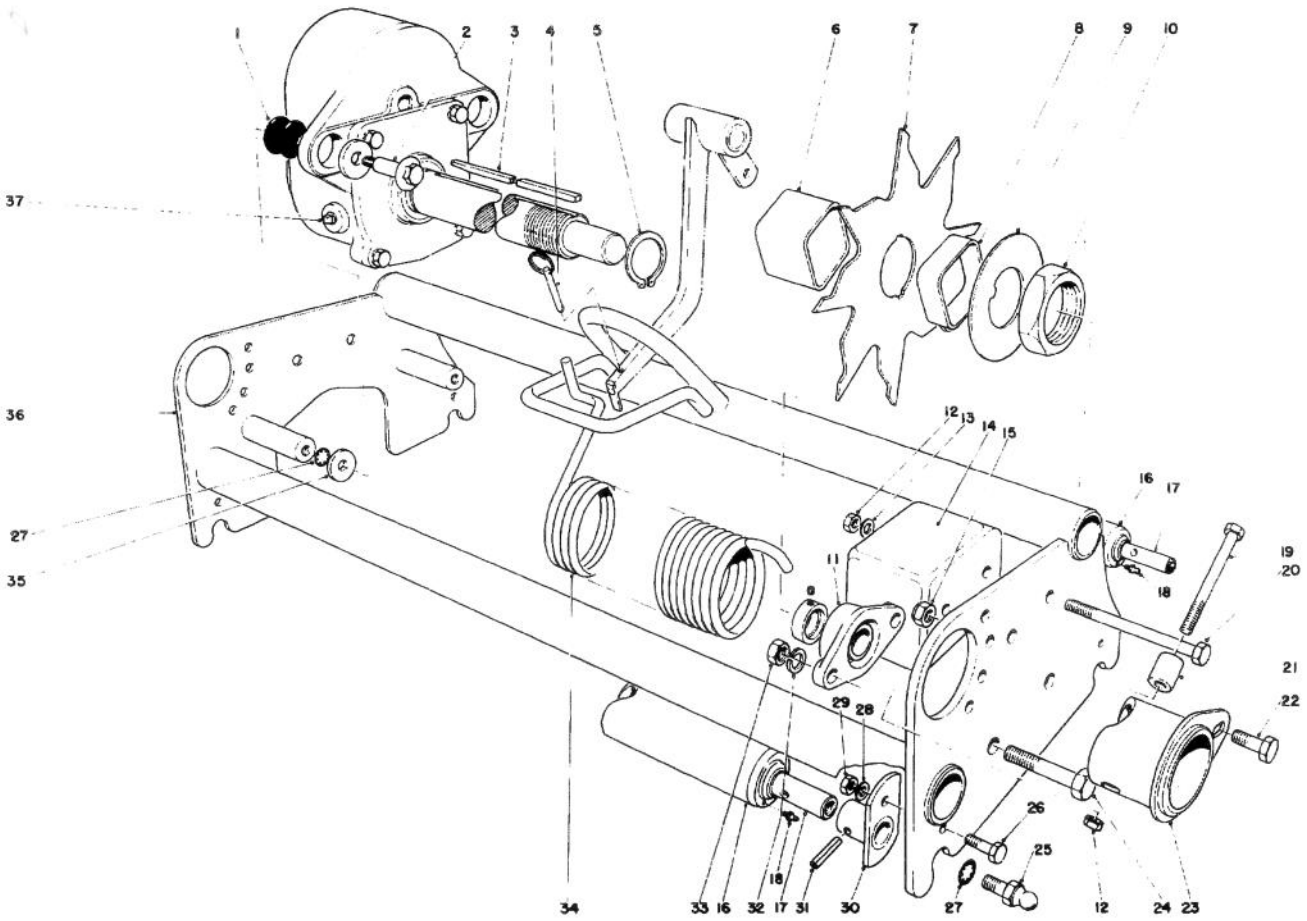
T-0325-89

THATCHING REEL ATTACHMENT MODEL NO. 04416 (Optional)

Ref. No.	Part No.	Description	No. Used
1	17-1650	Scraper — Wheel R.H.	2
2	10-5100	Spline Nut	1
3	17-1610	Housing — Bearing	1
4	251-206	Bearing	1
5	251-77	Lock Collar	2
6	17-1450	Frame W.A.	1
7	32120-77	Retaining Ring	1
8	3255-16	Ext. Lockwasher	2
9	324-6	Capscrew	2
10	3256-22	Washer	4
11	3255-7	Ext. Lockwasher	4
12	329-1	Capscrew	4
13	17-1530	Grass Shield	1
14	17-1510	Eye Bolt	2
15	17-1710	Washer	4
16	3217-7	Nut	2
17	17-1640	Scraper — Wheel L.H.	2
18	3254-6	Int. Lockwasher	4
19	3211-3	Capscrew	2
20	251-247	Bearing — Housing	1

Ref. No.	Part No.	Description	No. Used
21	324-13	Capscrew	2
22	17-1520	Counterweight	1
23	2411-7	Ball Stud	2
24	3256-3	Washer	4
25	17-1630	Wheel	4
26	17-1620	Bushing Wheel	4
27	302-5	Grease Fitting	4
28	3290-334	Pyramidal Lockwasher	2
29	3217-8	Nut	2
30	3220-18	Jam Nut	2
31	17-1580	Spacer	2
32	17-1590	Blade	37
33	17-1600	Spacer	72
34	17-1570	Shaft Hex	1
35	3256-24	Washer	2
36	3255-9	Lockwasher	2
37	323-6	Capscrew	2
*	17-2290	Gauge .060	2
*	17-2300	Gauge .120	2
*	17-2310	Gauge .250	2

* Not Illustrated



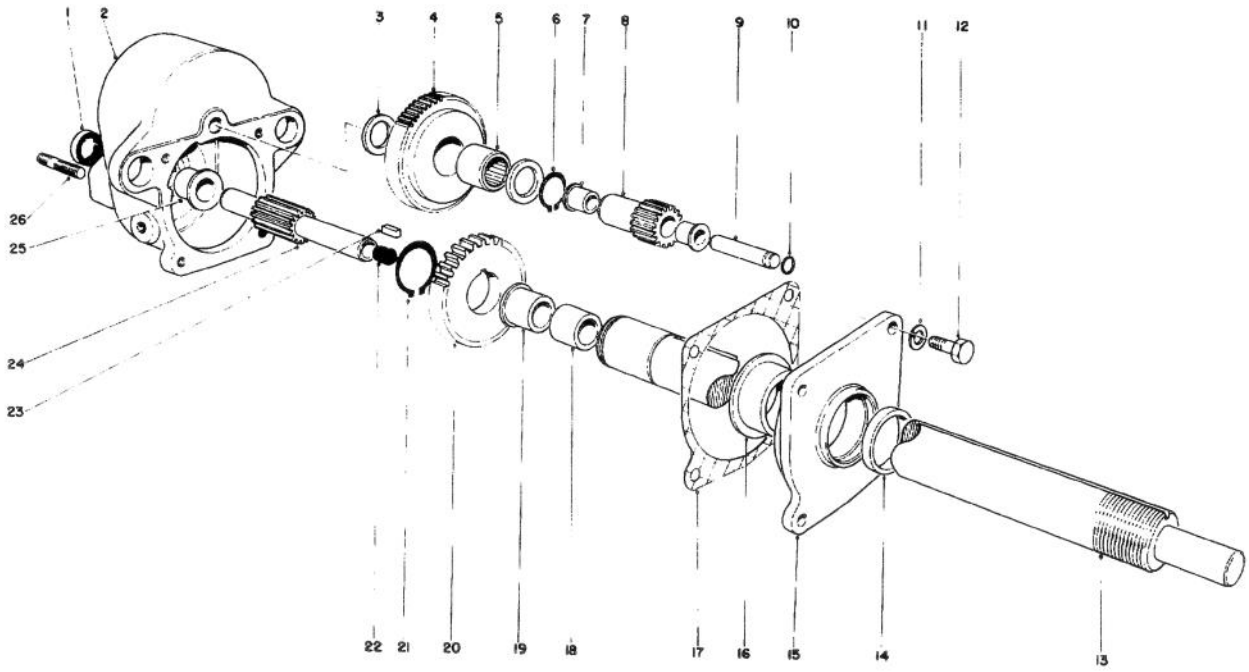
T-0326-89

SPIKER ATTACHMENT MODEL NO. 04420 (Optional)

Ref. No.	Part No.	Description	No. Used
1	237-90	Grommet	2
2	3-2652	Bolt	2
3	20-7370	Square Key	1
4	21-9110	Ball Lock Pin	1
5	32151-44	Retaining Ring	1
6	20-7390	Spacer	9
7	20-7380	Blade	10
8	20-7400	Spacer	1
9	20-7790	Washer	1
10	3218-17	Nut	1
11	251-247	Bearing Assembly	1
12	3296-39	Locknut	3
13	3256-4	Flatwasher	2
14	20-7720	Counter-Weight	1
15	3296-47	Locknut	1
16	52-3170	Roller Assembly (Complete) (Incl. Ref. #17 & 18)	2
17	52-3180	Front Roller Bearing	4
18	302-5	Grease Fitting	4
19	323-15	Capscrew	1

Ref. No.	Part No.	Description	No. Used
20	323-11	Capscrew	2
21	20-7530	Spacer	1
22	322-3	Capscrew	1
23	20-7540	Spring Tube	1
24	324-6	Capscrew	2
25	2411-7	Ball Stud	2
26	321-4	Capscrew	4
27	3254-6	Lockwasher — Int. Tooth	4
28	3253-3	Lockwasher	4
29	3217-5	Nut	4
30	20-7570	Roller Mounting Bracket	4
31	32121-16	Roll Pin	4
32	3255-16	Lockwasher	2
33	3217-8	Nut	2
34	20-7520	Spring	1
35	20-7510	Spacer	4
36	20-7420	Frame	1
37	281-2	Pipe Plug	1
*	21-6000	Spiker Depth Gauge	1

* Not Illustrated

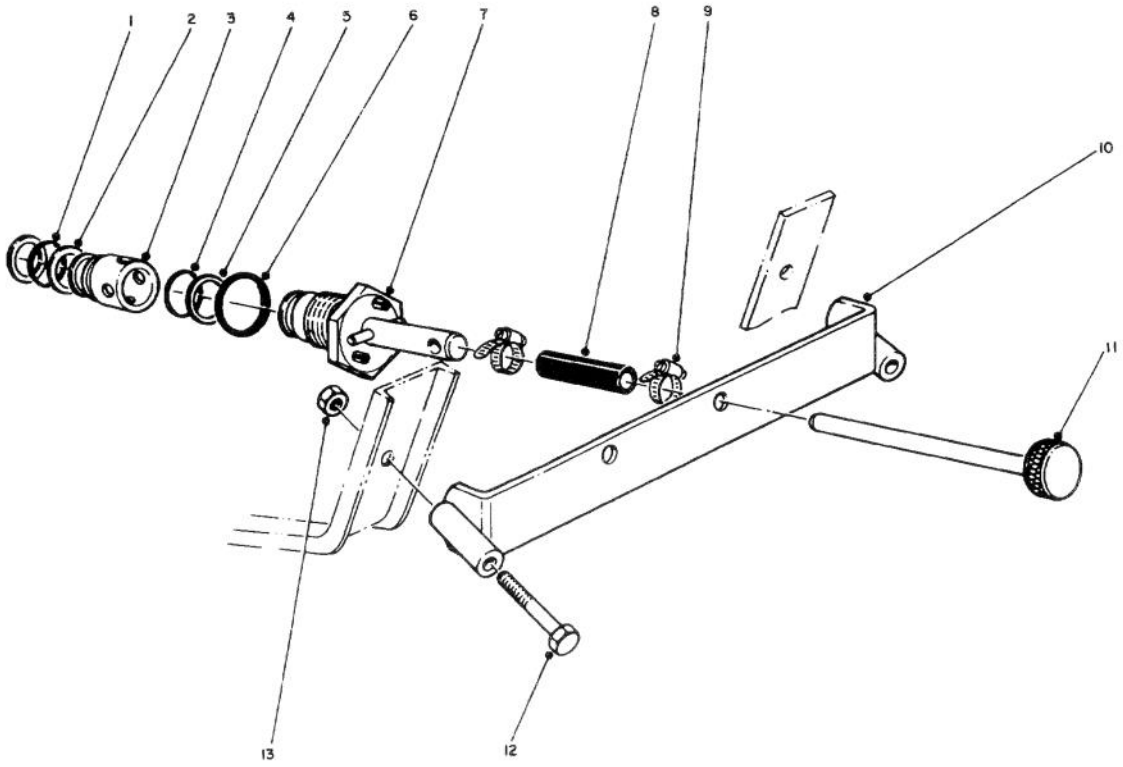


T-0327-89

SPIKER ATTACHMENT MODEL NO. 04420 (Optional) (Continued)

Ref. No.	Part No.	Description	No. Used
1	253-131	Seal	1
2	53-9960	Housing Assembly (Incl. Ref. #1, 25-26)	1
3	256-115	Thrust Washer	2
4	20-7850	Gear 64T	1
5	352-284	Bearing	1
6	32151-29	Snap Ring	1
7	256-243	Bushing	2
8	20-7690	Gear 15T (Incl. Ref. #7)	1
9	20-7330	Countershaft	1
10	237-22	O-Ring	1
11	3253-4	Lockwasher	4
12	322-5	Capscrew	4
13	23-5150	Shaft Assembly	1

Ref. No.	Part No.	Description	No. Used
14	253-130	Seal	1
15	20-7700	Cover Assembly (Incl. Ref. #14 & 16)	1
16	20-7740	Bushing	1
17	20-7410	Gasket	1
18	256-27	Bushing	1
19	256-117	Bushing	1
20	20-7820	Gear 45T	1
21	32151-35	Snap Ring	1
22	2410-34	Plug	1
23	20-7360	Key	1
24	20-7750	Gear 16T	1
25	256-244	Bushing	1
26	20-7350	Stud	2

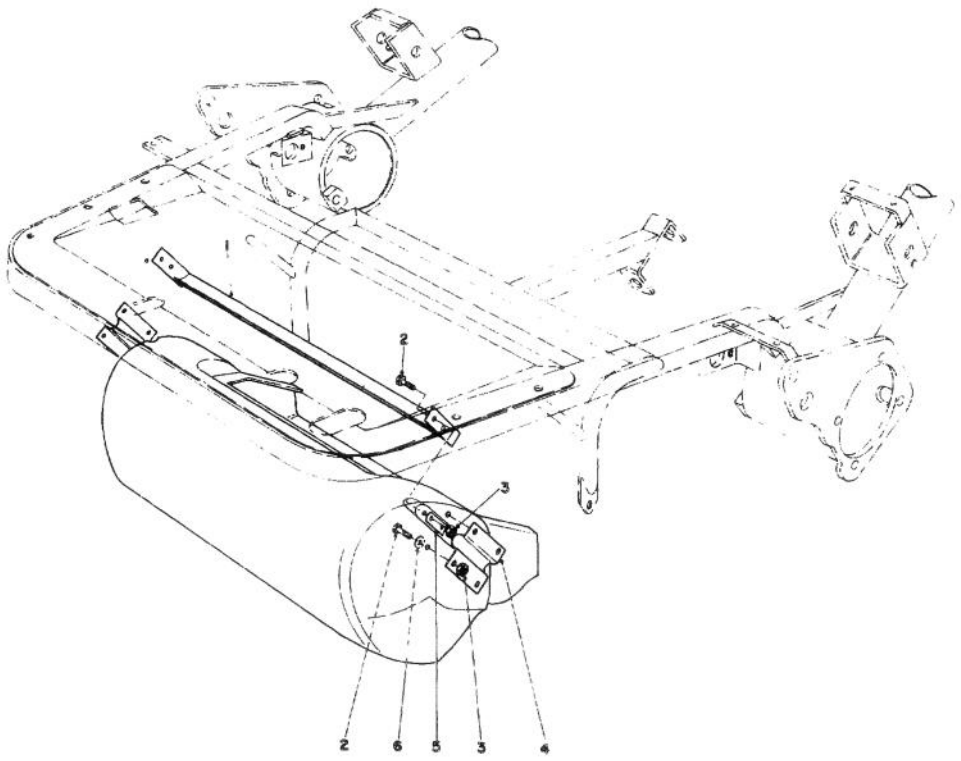


T-0328-89

REEL SHUTOFF KIT NO. 28-2150 (Optional)

Ref. No.	Part No.	Description	No. Used
1	353-302	O-Ring	2
2	353-303	Back-Up Seal	4
3	353-484	Check (Incl. Ref. #1 & 2)	2
4	353-305	O-Ring	2
5	353-306	Back-Up Washer	2
6	237-54	O-Ring	2
7	353-503	Shutoff Valve Set (2 Valves Per Set) (Incl. Ref. #1-6)	1

Ref. No.	Part No.	Description	No. Used
8	18-2400	Hose — Rubber	2
9	2412-45	Hose Clamp	4
10	28-2070	Front Bracket	1
11	20-2210	Knob Assembly	2
12	321-10	Capscrew	2
13	3217-5	Nut	2

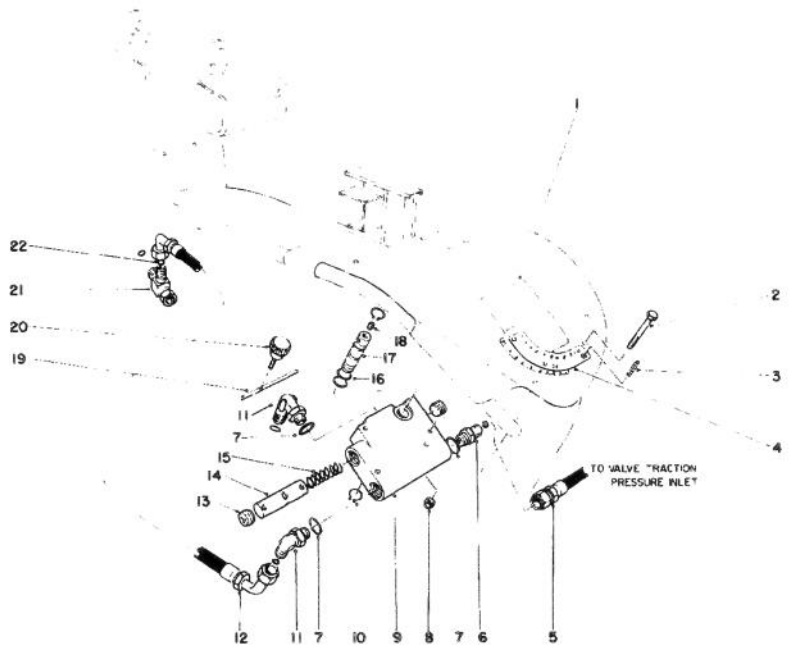


T-0333-89

BASKET REINFORCEMENT KIT NO. 26-0900 (Optional)

Ref. No.	Part No.	Description	No. Used
1	26-0930	Lift Support	3
2	321-2	Hex Hd. Capscrew	36
3	32153-4	Locknut	36

Ref. No.	Part No.	Description	No. Used
4	26-0940	Wear Plate	6
5	26-0950	Plate Dished	6
6	3256-2	Washer	24



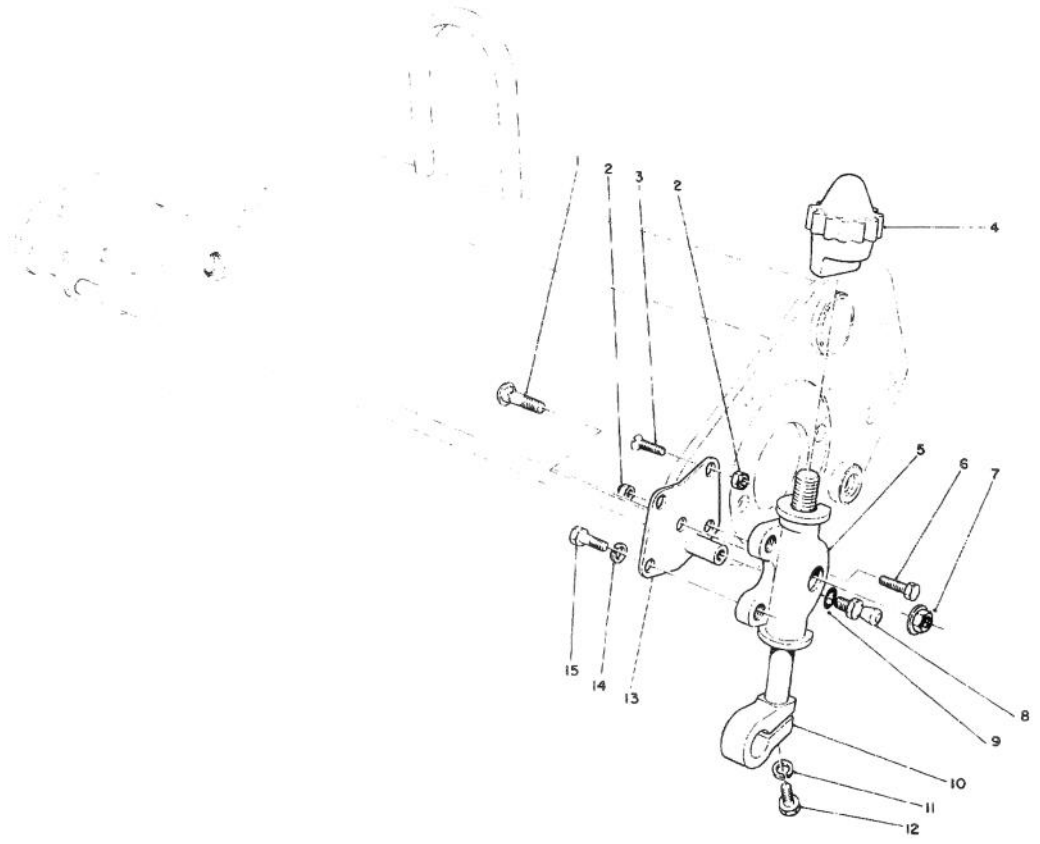
T-0334-89

VARIABLE TRACTION CONTROL KIT MODEL NO. 04411 (Optional)

Ref. No.	Part No.	Description	No. Used
1	47-6650	Decal — Traction Control	1
2	321-33	Screw — Cap Hex Hd.	2
3	32121-4	Pin — Roll, Slotted	2
4	49-0320	Plate — Dial	1
5	63-4250	Hose — Hydraulic (Pressure)	1
6	340-89	Elbow — 45° (Incl. Ref. #7)	1
7	237-80	O-Ring	3
8	3296-56	Nut — Lock	2
9		Body — Main	1
10	32120-76	Ring — Snap	2
11	340-105	Elbow — 90° Adjustable	2
12	63-4210	Hose — Hydraulic (Return)	1
13	49-0300	Plug Pipe	2

Ref. No.	Part No.	Description	No. Used
14	49-0370	Spool — Metering	1
15	49-0340	Spring — Metering	1
16	237-54	O-Ring	2
17	66-1660	Spool — Lever Side	1
18	3274-42	Screw — Set Hex Socket	1
19	49-0350	Handle	1
20	49-0360	Screw — Thumb	1
21	340-104	Tee — Swivel Run	1
22	237-30	O-Ring	5
*	47-6640	Valve Flow Control (Incl. Ref. #3, 4, 9, 10 & 13-20)	1
*	3290-378	Cable Tie	2

* Not Illustrated



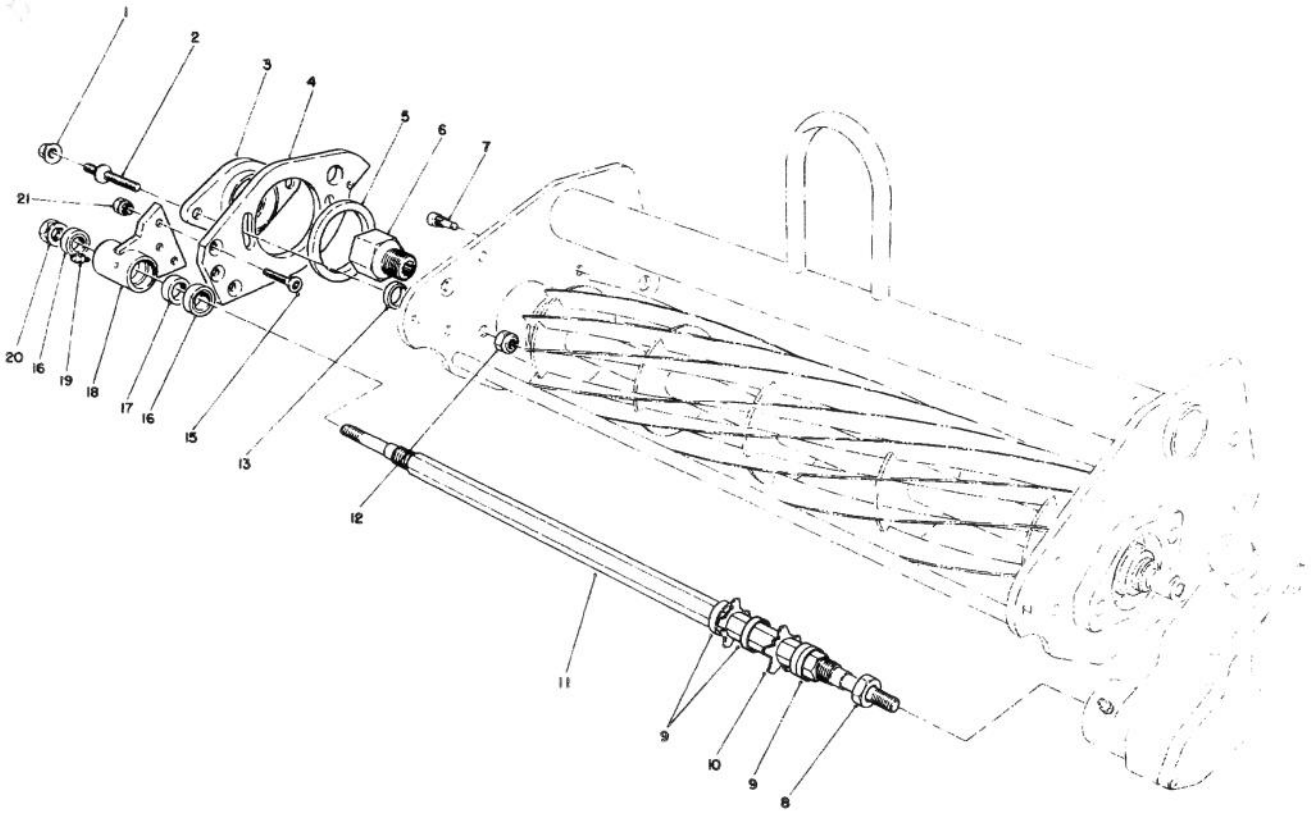
T-0329-89

GROOMING REEL KIT MODEL NO. 04455 (Optional)

Ref. No.	Part No.	Description	No. Used
1	3230-5	Bolt — Carriage	2
2	3296-47	Nut — Lock	4
3	32108-20	Screw — Machine Flat Head	2
4	10-5040	Knob — Height Adjustment	2
5	65-9490	Bracket — HOC	2
6	322-3	Screw — Cap Hex Hd.	2
7	32128-25	Nut — Hex Flange	2
8	2411-7	Stud — Ball	2
9	3254-6	Lockwasher — Int. Tooth	2
10	65-9500	Screw — Roller Adjustment	2

Ref. No.	Part No.	Description	No. Used
11	3253-3	Washer — Lock	2
12	321-4	Screw — Cap Hex Hd.	2
13	65-9530	Roller Extension W.A. — L.H.	1
*	65-9460	Roller Extension W.A. — R.H.	1
14	3253-4	Washer — Lock	4
15	322-2	Screw — Cap Hex Hd.	4
†	65-9620	Bar — Gauge	1
**	70-2330	Roller Extension — L.H.	1
**	70-2320	Roller Extension — R.H.	1

* Not Illustrated
† Optional
** Four bolt only



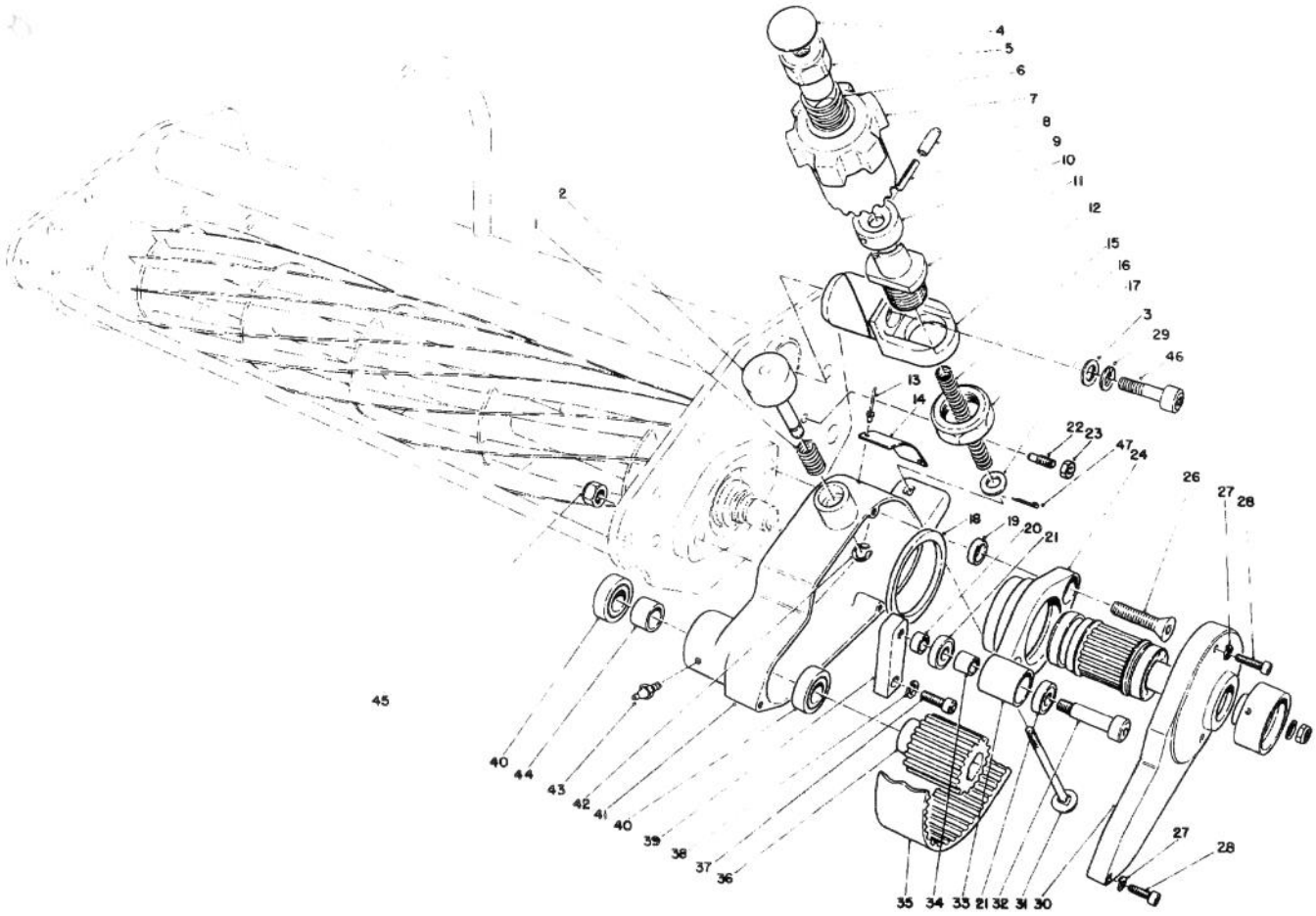
T-0330-89

GROOMING REEL KIT MODEL NO. 04455 (Optional) (Continued)

Ref. No.	Part No.	Description	No. Used
1	32128-36	Nut — Flange	2
2	65-9970	Stud	2
3	65-9350	Adapter	1
4	65-9230	Plate — Side	1
5	65-9860	Bearing	1
6	65-9730	Nut — Splined	1
7	65-9960	Screw — Pivot	1
8	3296-60	Nut — Lock	2
9	70-1350	Spacer (76 Blade Reel)	79
9	70-1350	Spacer (26 Blade Reel)	4
*	70-1370	Spacer (26 Blade Reel)	25
10	70-1170	Blade (76 Blade Reel)	76
10	70-1170	Blade (26 Blade Reel)	26

Ref. No.	Part No.	Description	No. Used
11	70-1360	Shaft	1
12	32152-2	Nut — Lock	2
13	65-9820	Spacer	2
15	3289-21	Screw — Flat Hd. Hex Socket	3
16	251-327	Bearing — Ball	2
17	65-9300	Spacer	1
18	65-9220	Housing — Bearing	1
19	302-5	Fitting — Grease	1
20	3296-62	Nut	1
21	65-9360	Nut — Special	3
*	70-1610	Groomer Reel Assy. (26 Blade Reel) (Incl. Ref. #8-11)	3

* Not Illustrated

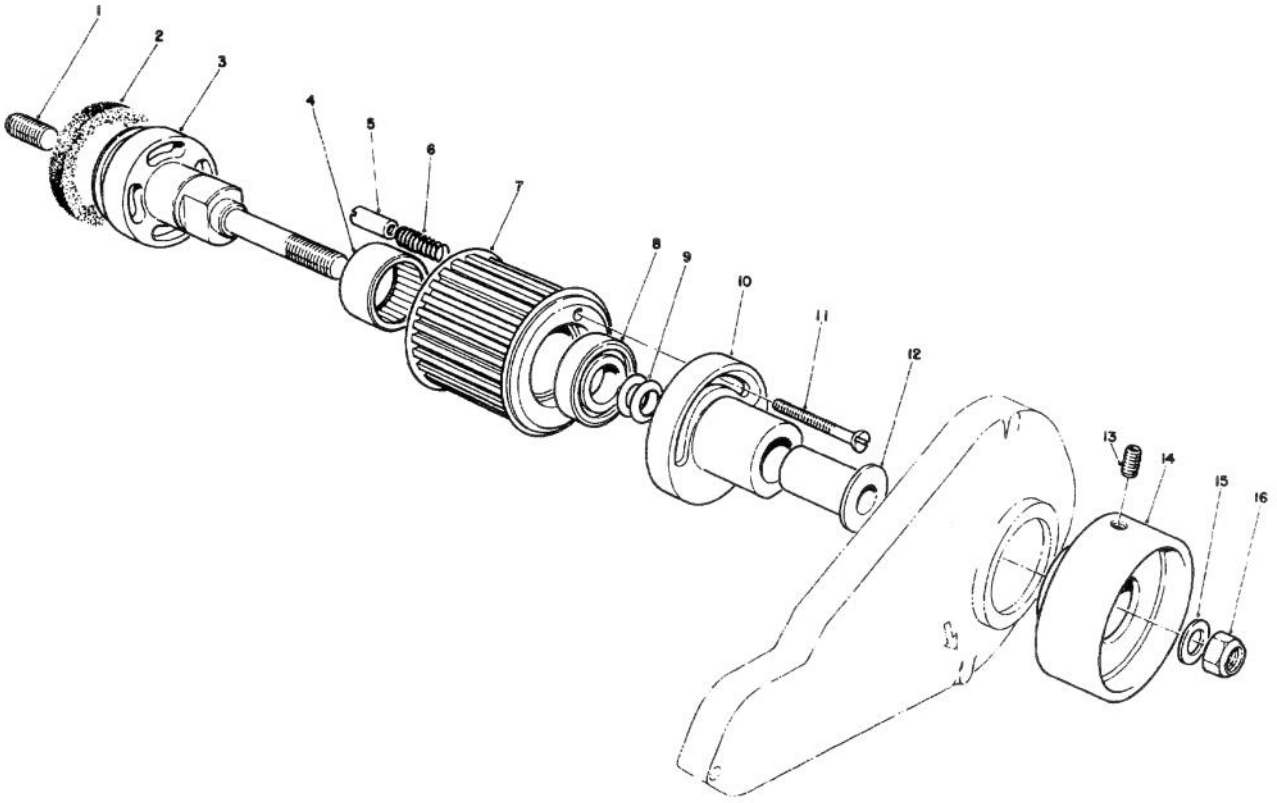


T-0331-89

GROOMING REEL KIT MODEL NO. 04455 (Optional) (Continued)

Ref. No.	Part No.	Description	No. Used
1	65-9940	Spring	1
2	65-9930	Cap	1
3	3256-74	Washer	1
4	284-3	Plug — Expansion	2
5	65-9570	Driver	2
6	65-9580	Spring	2
7	65-9560	Adjustment Knob Assembly (Incl. Ref. #4-7)	2
8	2410-68	Cover — Pin	2
9	32121-15	Roll Pin	2
10	65-9550	Cap	2
11	65-9830	Ramp	2
12	70-7470	Block — Mounting (Modified)	2
13	3290-271	Rivet — Pop	2
14	65-9950	Plate — Caution	1
15	65-9810	Spring	2
16	3296-49	Nut — Lock	2
17	3256-24	Washer — Flat (L.H. Side)	1
17	65-9850	Washer (R.H. Side)	1
18	65-9860	Bearing	1
19	65-9820	Spacer	2
20	65-9330	Spacer	1
21	251-328	Bearing	2
22	65-9740	Screw — Pivot	1

Ref. No.	Part No.	Description	No. Used
23	3217-7	Nut — Hex	1
24	65-9350	Adapter	1
26	3289-19	Screw — Flat Hd. Socket	2
27	3253-12	Washer — Lock	3
28	3274-13	Screw — Soc. Hd. Cap	3
29	3253-4	Lockwasher	1
30	65-9710	Cover — Belt	1
31	65-9890	Bolt — Carriage	1
32	65-9340	Screw — Shoulder	1
33	65-9320	Idler — Pulley	1
34	65-9980	Spacer — Idler Pulley	1
35	65-9700	Belt	1
36	65-9290	Pulley — Driven	1
37	3274-10	Screw — Cap Hex Socket	1
38	3253-4	Washer — Lock	2
39	65-9310	Block — Idler	1
40	251-327	Bearing	2
41	65-9270	Housing — Belt Drive	1
42	32120-18	Ring — Retaining	1
43	302-5	Fitting — Grease	1
44	65-9300	Spacer — Pulley, Driven	1
45	32152-2	Nut — Lock	2
46	3274-83	Capscrew — Soc. Hd.	2
47	3272-11	Cotter Pin	1



T-0332-89

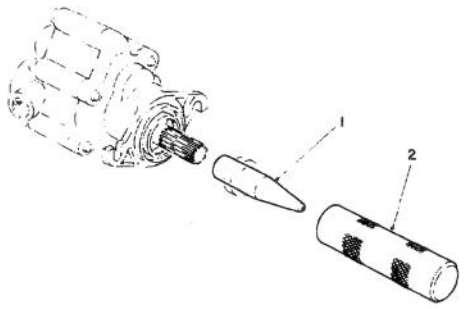
GROOMING REEL KIT MODEL NO. 04455 (Optional) (Continued)

Ref. No.	Part No.	Description	No. Used
1	3247-7	Set Screw — Soc. Hd.	1
2	65-9900	Seal — Felt	1
3	65-9610	Adapter	1
4	252-110	Bearing — Needle	1
5	65-9660	Pin — Clutch	1
6	65-9670	Spring — Compression	1
7	65-9630	Pulley — Driver	1
8	251-327	Bearing — Roller	1

Ref. No.	Part No.	Description	No. Used
9	3290-480	Washer — Belleville	2
10	65-9640	Disc — Release, Clutch	1
11	65-9650	Screw — Special	1
12	256-300	Bushing — Flange	1
13	32110-13	Screw — Set	2
14	65-9680	Knob — Clutch	1
15	3256-24	Washer — Flat	1
16	3296-39	Nut — Lock	1

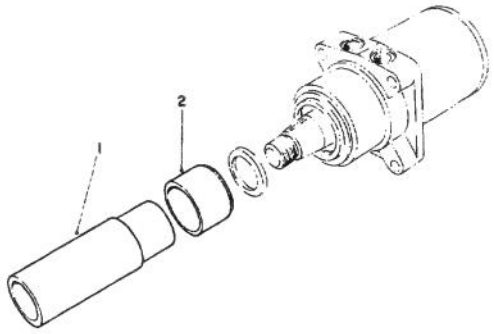
SPECIAL TOOLS

REEL MOTOR SEAL INSTALLATION TOOLS



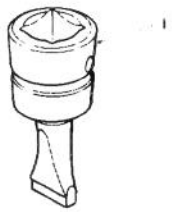
Ref. No.	Part No.	Description	No. Used
1	49-1430	Protector — Seal	1
2	49-1450	Installer — Seal	1

DRIVE MOTOR SEAL INSTALLATION TOOL NO. 19-2660



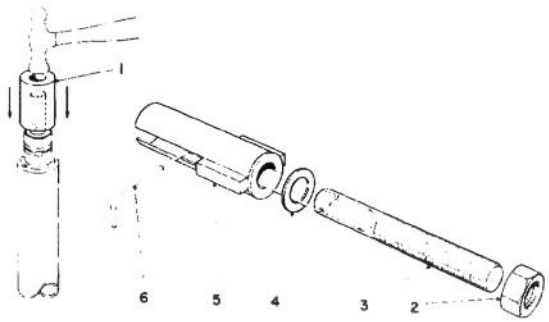
Ref. No.	Part No.	Description	No. Used
1		Driver — Seal	1
2		Holder — Seal	1

BED KNIFE SCREW TOOL NO. 51-0880



Ref. No.	Part No.	Description	No. Used
1		Tool — Bed Knife Screw	1

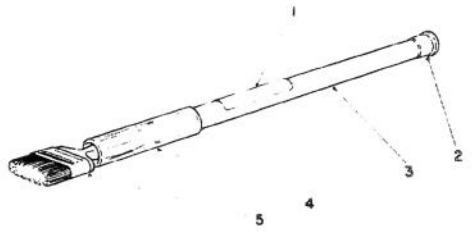
BEARING REPLACEMENT TOOL KIT NO. 23-8900



Ref. No.	Part No.	Description	No. Used
1	23-8880	Driver — Bearing	2
2	3219-18	Nut — Hex	1
3	23-8840	Puller — Bolt	1
4	22-6090	Washer — Thrust	1
5	23-8850	Tube — Support	1
6	23-8860	Pin — Bearing Replacement	1

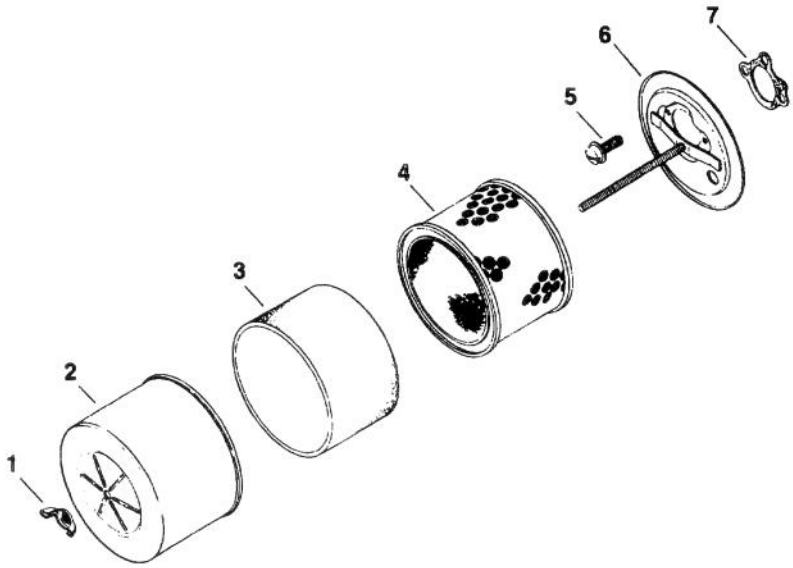
SPECIAL TOOLS (Continued)

BACKLAPPING BRUSH ASSEMBLY NO. 29-9100



Ref. No.	Part No.	Description	No. Used
1	12-9140	Decal	1
2	2410-18	Plug	1
3	29-9080	Handle	1
4	29-9090	Hose — Handle	1
5	36-4310	Brush	1

Group 1
AIR INTAKE

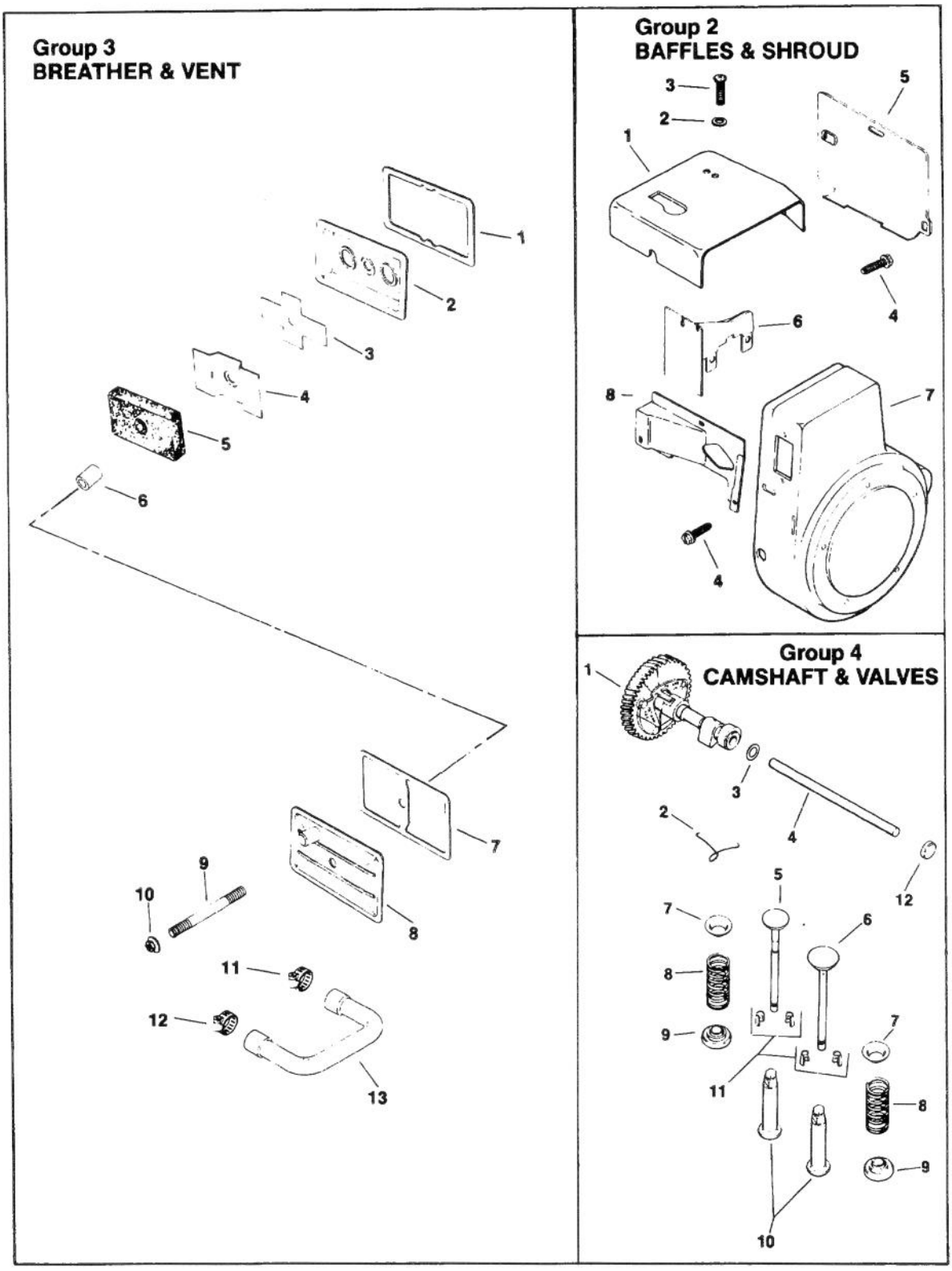


ENGINE ASSEMBLY – KOHLER MODEL NO. M16S-711533

Ref. No.	Part No.	Description	No. Used
		Air Intake — Group 1	
1	X-276-7	Wing Nut	1
2	45 082 01	Cover — Air Cleaner	1
3	45 083 01	Precleaner — Element	1
4	45 083 02	Element	1
5	X-167-2	Screw — F.H. Sems	3
6	45 094 01	Base — Air Cleaner	1
7	275341	Gasket — Air Horn	1
*	25 113 07	Decal	1

* Not Illustrated

ENGINE ASSEMBLY – KOHLER MODEL NO. M16S-711533



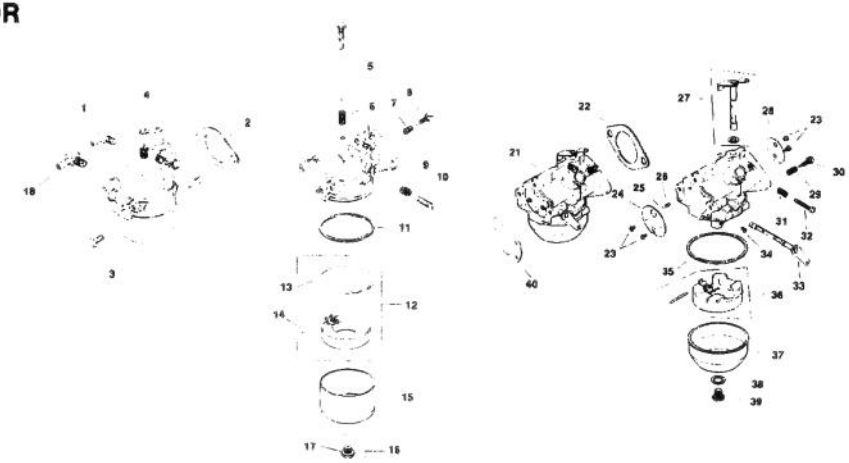
ENGINE ASSEMBLY — KOHLER MODEL NO. M16S-711533

Ref. No.	Part No.	Description	No. Used
		Baffles & Shroud — Group 2	
1	45 063 08	Baffle, Head	1
2	X-25-53	Washer, Plain	1
3	47 086 08	Screw, Pozidriv T.H.	1
4	52 086 11	Screw, Hex Wash. Hd.	6
5	47 063 10	Baffle, Cylinder	1
6	47 063 07	Baffle, Inner	1
7	47 027 42	Housing, Blower	1
8	47 063 11	Baffle, Side Air	1
		Breather & Vent — Group 3	
1	235048	Gasket, Breather Plate	1
2	235631	Plate, Breather	1
3	235047	Reed, Breather	1
4	235117	Baffle, Breather	1
5	235118	Filter, Breather	1
6	231032	Seal, Breather	1
7	275144	Gasket, Valve Cover	1
8	275839	Cover, Valve	1
9	275220	Stud, Valve Cover	1

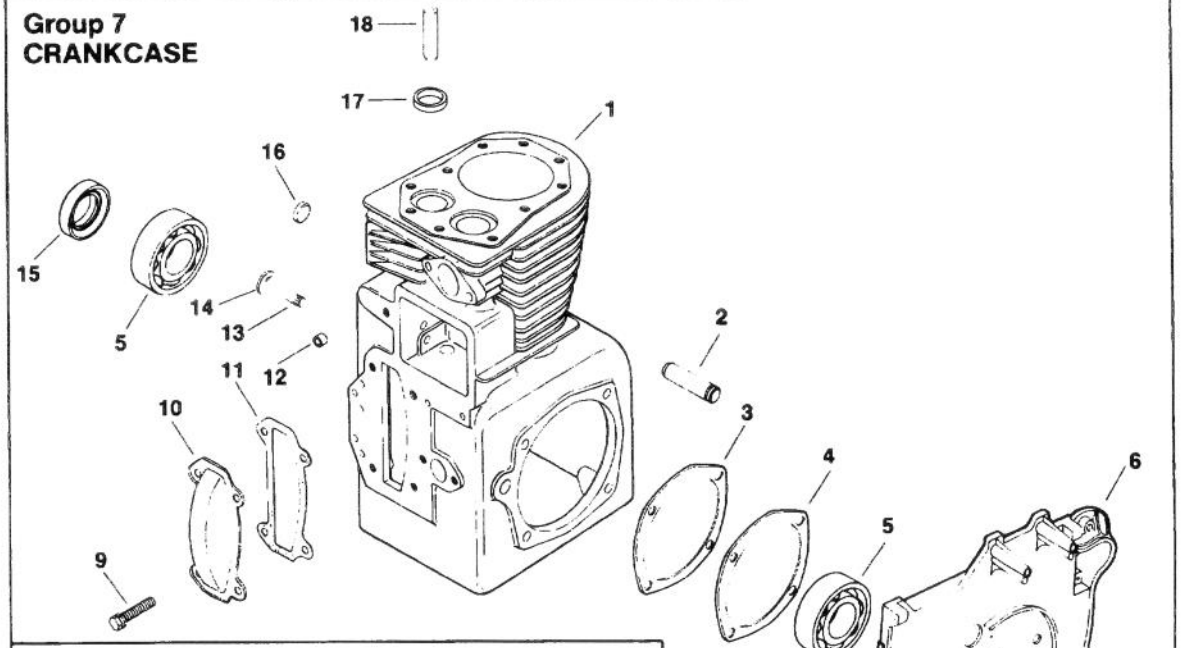
Ref. No.	Part No.	Description	No. Used
10	X-799-1	Palnut	1
11	X-426-3	Clamp, Hose 1/2" Wide	1
12	X-426-9	Clamp, Hose 5/16" Wide	1
13	47 326 02	Hose, Breather	1
		Camshaft & Valves — Group 4	
1	47 010 11	Camshaft Assembly	1
2	47 089 01	Spring, Actuating	1
3	275066	Spacer .005	A/R
3	275067	Spacer .010	A/R
4	47 380 09	Pin — Camshaft	1
5	237672	Valve, Exhaust	1
6	235582	Valve, Intake	1
7	235011	Retainer, Upper Spring	2
8	235168	Spring, Valve	2
9	52 413 01	Rotator	2
10	D-235327	Tappet	2
11	41 755 10	Kit, Retainer	2
12	X-702-3	Plug, Cup 1/2 O.D.	1

ENGINE ASSEMBLY – KOHLER MODEL NO. M16S-711533 (Continued)

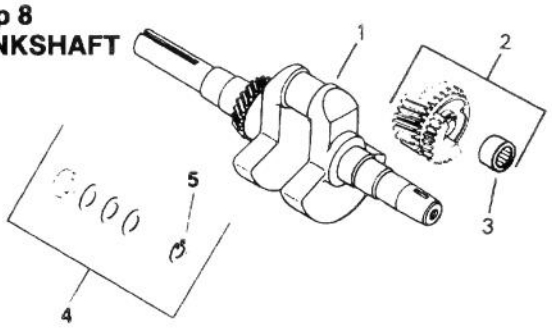
Group 5
CARBURETOR



Group 7
CRANKCASE



Group 8
CRANKSHAFT

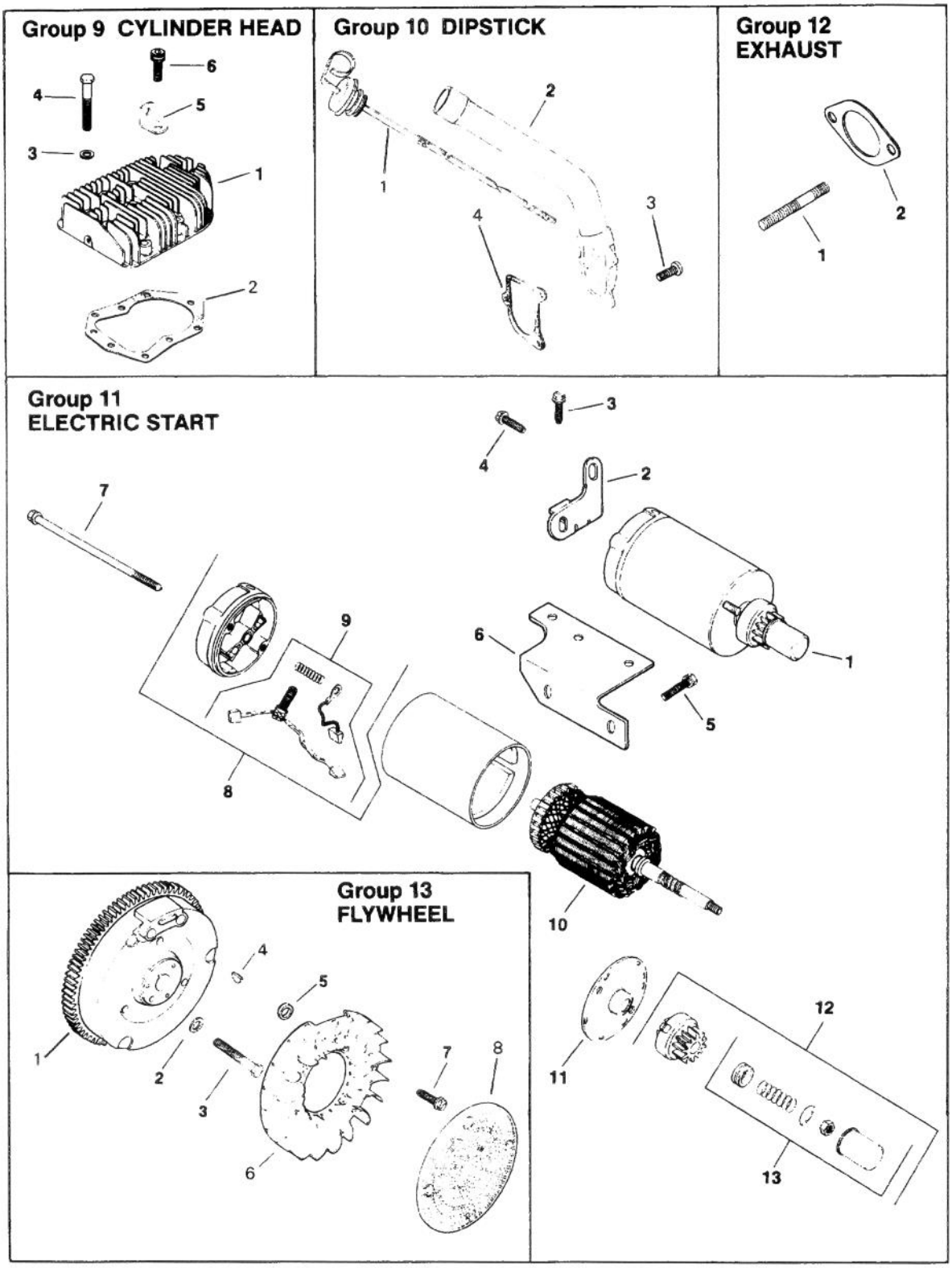


ENGINE ASSEMBLY – KOHLER MODEL NO. M16S-711533 (Continued)

Ref. No.	Part No.	Description	No. Used
		Carburetor — Group 5	
1	45 155 01	Connector — Hose	1
2	47 049 01	Gasket — Carburetor	1
3	X-770-1	Screw — Sltd. Hd. 5/16-18x1	2
		*For Engines Built Before Serial No. 1808809063 Use The Following Parts:	
4	45 053 76*	Carburetor Assembly	1
5	45 103 01*	Needle — Main Fuel Adj.	1
6	200383*	Spring — Main Fuel	1
7	200380*	Spring — Idle Fuel	1
8	275231*	Needle — Idle Fuel Adj.	1
9	232555*	Spring — Idle Speed	1
10	232556*	Screw — Idle Speed Adj.	1
11	200375*	Gasket — Bowl	1
12	25 757 03*	Kit — Float	1
13	25 041 02*	Gasket — Bowl Baffle	1
14	200376*	Pin — Float Hinge	1
15	235448*	Bowl — Fuel	1
16	47 100 06*	Screw — Bowl Retainer	1
17	200372*	Gasket — Bowl Ret. Screw	1
18	X-391-10	Connector — Hose	1
19	25 757 02*	Kit — Carburetor Repair (Not Illustrated)	1
20	25 757 05*	Kit — Choke & Throttle Repair (Not Illustrated)	1
		#For Engines Built After Serial No. 1808809053 Use The Follwoing Parts:	
21	45 853 07#	Kit — Carburetor w/Linkage	1
22	47 049 01#	Gasket — Carburetor	1
23	25 086 27#	Screw — Throttle & Choke Plate	4
24	45 146 07#	Plate — Choke	1
25	25 194 01#	Ball — Choke Friction	1
26	25 089 03#	Spring — Choke Friction	1
27	47 144 25#	Shaft — Throttle w/Lever & Seal	1
28	47 146 10#	Plate — Throttle	1
29	25 089 02#	Spring — Idle Fuel	1
30	25 368 01#	Needle — Idle Fuel Adj.	1
31	25 089 04#	Spring — Idle Speed	1
32	25 086 26#	Screw, Idle Speed Adj.	1
33	47 090 38#	Shaft — Choke w/Lever	1
34	45 337 01#	Jet — Main	1
35	25 041 04#	Gasket — Bowl	1
36	25 757 09#	Kit — Float	1
37	25 104 01#	Bowl — Fuel	1
38	25 041 03#	Gasket — Bowl Retainer Screw	1
39	25 100 05#	Screw — Bowl Retainer	1
40	45 041 07#	Gasket — Air Cleaner	2
41	25 757 08#	Kit — Carburetor Repair (Not Illustrated)	1
42	45 755 14#	Kit — High Altitude Jet (Not Illustrated)	1

Ref. No.	Part No.	Description	No. Used
		Crankcase — Group 7	
1	45 782 27	Cylinder Block Assembly (USE: Miniblock) (Incl. Ref. #12, 17 & 18)	1
2	236559	Shaft, Balance Gear Stub	2
3	47 422 05	Gasket, Shim	A/R
4	47 041 09	Gasket, Bearing Plate	1
5	235376	Bearing, Ball	2
6	47 146 07	Plate, Bearing	1
7	47 032 06	Seal, Front Oil	1
8	X-159-2	Screw, H.C. Sems	4
9	X-132-6	Screw, H.C. Sems	4
10	235026	Cover, Camshaft	1
11	235025	Gasket, Camshaft Cover	1
12	234866	Bearing, Governor Cross Shaft	1
13	235125-S	Shaft, Governor	1
14	X-230-11	Plug, Expansion	1
15	47 032 07	Seal, Rear Oil	1
16	47 139 01	Plug, Cup	2
17	230265	Insert, Valve	2
18	235007-S	Guide, Valve	2
		Crankshaft — Group 8	
1	45 142 36	Kit, Crankshaft	1
2	45 043 03	Gear Assembly	2
3	47 030 01	Bearing, Needle	2
4	47 755 01	Kit, Spacer	1
5	X-269-34	Retainer	2

ENGINE ASSEMBLY – KOHLER MODEL NO. M16S-711533 (Continued)

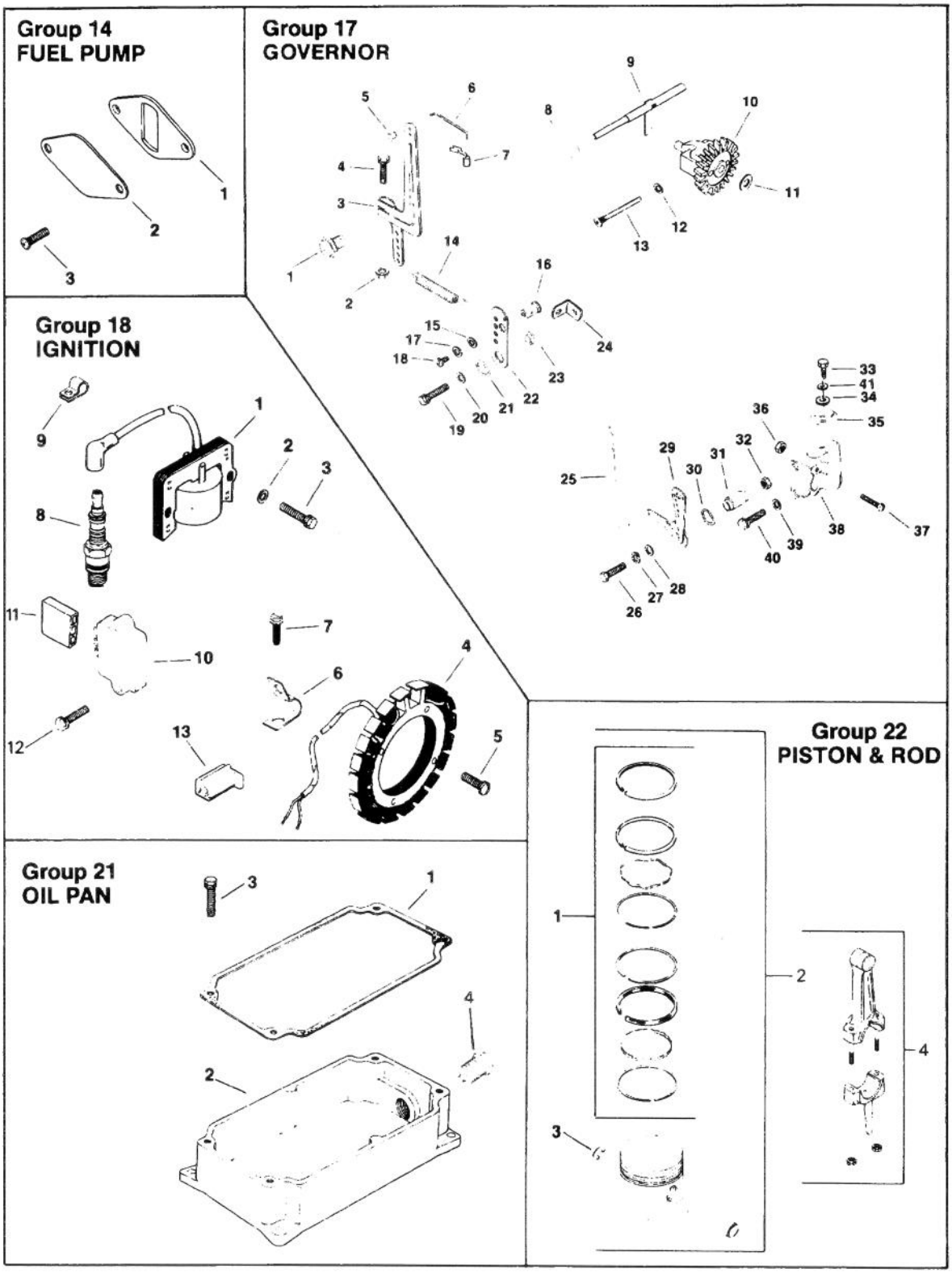


ENGINE ASSEMBLY — KOHLER MODEL NO. M16S-711533 (Continued)

Ref. No.	Part No.	Description	No. Used
		Cylinder Head — Group 9	
1	45 015 09	Head, Cylinder	1
2	45 041 16	Gasket, Head	1
3	270889	Washer, Plain	10
4	270158	Screw, H.C.	9
5	47 445 02	Strap, Lifting	1
6	47 086 17	Screw, Hex Socket Hd.	1
		Dipstick — Group 10	
1	47 272 03	Dipstick	1
2	47 123 14	Adapter, Oil Fill	1
3	X-131-2	Screw, F.H. Sems	3
4	237064	Gasket, Adapter	1
*	45 014 83	Extension	1
		Electric Start — Group 11	
1	41 098 04	Starter Assembly (Incl. Ref. #8-13)	1
2	45 126 17	Brace, Tail	1
3	X-67-83	Screw, Hex Wash. Hd.	1
4	X-67-62	Screw, Hex Wash. Hd.	1
5	X-159-2	Screw, H.C. Sems	2
6	47 126 29	Bracket, Solenoid	1
7	41 086 19	Bolt, Thru	2
8	41 227 04	Cap, Commutator End Assy.	1
9	52 755 15	Kit, Brush	1
10	45 170 02	Armature	1
11	41 227 03	Cap, Drive End	1
12	47 755 07	Kit, Drive	1
13	47 755 13	Kit, Drive Parts	1
*	25 450 03	Tag, Caution	1
*	52 357 01	Lubricant, Starter	1
		Exhaust — Group 12	
1	41 072 19	Stud	2
2	45 041 15	Gasket, Exhaust	1
		Flywheel — Group 13	
1	47 025 53	Flywheel	1
2	52 468 15	Washer, Plain	1
3	25 086 24	Screw, Hex Mach.	1
4	X-46-3	Key, Woodruff	1
5	25 112 04	Spacer	4
6	25 157 01	Fan	1
7	25 086 21	Screw, Hex Wash. Hd.	4
8	25 162 01	Screen, Grass	1

* Not Illustrated

ENGINE ASSEMBLY – KOHLER MODEL NO. M16S-711533 (Continued)



ENGINE ASSEMBLY – KOHLER MODEL NO. M16S-711533 (Continued)

Ref. No.	Part No.	Description	No. Used
		Fuel Pump — Group 14	
1	25 041 05	Gasket, Fuel Pump	1
2	240282	Cover, Pump Pad	1
3	X-174-2	Screw, Pozidriv F.H. Sems	2
		Governor — Group 17	
1	235476	Bushing, Governor Shaft	1
2	X-799-1	Palnut	1
3	47 090 20	Lever, Governor	1
4	X-776-1	Screw, H.C. Sems	1
5	47 158 07	Bushing, Natural Linkage Retaining	1
6	47 079 05	Linkage, Governor (Governor to Carburetor)	1
7	25 158 09	Bushing, Black Linkage Retaining	1
8	X-400-80	Spacer	1
9	A-235256-S	Kit, Governor Cross Shaft	1
10	A-235743-S	Kit, Governor Gear	1
11	237022	Washer, Thrust	1
12	25 468 01	Washer, Plain	1
13	231355	Pin, Governor Stop	1
14	235496	Spring, Governor	1
15	X-25-102	Washer, Plain	1
16	48 755 10	Kit, Clamp (Incl. Ref. #17 & 18)	1
17	X-25-53	Washer	1
18	X-102-3	Screw	1
19	X-132-9	Screw, H.C. Sems	1
20	X-25-63	Washer, Plain	1
21	275690	Washer, Wave	1
22	236249	Bracket, Speed Control	1
23	235085	Spacer	1
24	235084	Bracket	1
25	47 079 01	Linkage, Choke (Carburetor to Lever)	1
26	X-5-26	Screw, H.C.	1
27	X-20-1	Washer, Lock	1
28	X-25-63	Washer, Plain	1
29	47 090 06	Lever, Choke Control	1
30	275690	Washer, Wave	1
31	47 112 02	Spacer	1
32	X-76-2	Nut, Hex	1
33	X-67-51	Screw	1
34	25 468 04	Washer	1
35	47 237 02	Clamp, Swivel	1
36	X-72-4	Nut, Hex	1
37	232556	Screw	1
38	47 126 09	Bracket, Control	1
39	X-25-72	Washer, Plain	1
40	X-132-1	Screw, H.C. Sems	1
41	X-19-1	Washer — Lock	1
		Ignition — Group 18	
1		Module, Ignition	
	47 584 01	Before Serial No. 1715900013	1
	47 584 02	After Serial No. 1715900003	1
2	X-25-79	Washer, Plain	2
3	X-156-1	Screw, H.C. Sems	2
4	237878	Kit, Stator (15 amp.)	1
5	X-778-1	Screw, Stator Mounting (Before Serial No. 1723100015)	1
5	X-67-51	Screw, Stator Mounting (After Serial No. 1728100005)	1
6	X-728-1	Clip, Lead	1
7	X-67-59	Screw, Hex Wash. Hd.	1
8	235041-S	Spark Plug RH-10	1
9	210281	Clip, Hi-Tension Lead	1
10	25 755 03	Kit, Rectifier — Regulator	1
11	236602	Connector, Female (3 Contact)	1
12	X-132-5	Screw, H.C. Sems	2
13	41 155 03	Connector, Male (2 Contact)	1
		Not Illustrated	
	47 518 36	Lead, Violet, Rectifier-Regulator to Connector (23" - 14 Gauge - Uninsulated Push on Tab Terminals)	1
		Lead, White, Module to Connector	
	47 518 43	Before Serial No. 1715900013	1
	47 518 37	After Serial No. 1715900003	1
		Oil Pan — Group 21	
1	235057	Gasket, Oil Pan	1
2	235147	Pan, Oil	1
3	X-159-3	Screw, H.C. Sems	4
4	X-305-4	Plug, Hex Hd.	1
		Piston & Rod — Group 22	
1		Ring Set (Std. & .003)	
	45 108 06	Before Serial No. 1820000013	1
	45 108 10	After Serial No. 1820000003	1
1		Ring Set (.010)	
	45 108 07	Before Serial No. 1820000013	1
	45 108 11	After Serial No. 1820000003	1
1		Ring Set (.020)	
	45 108 08	Before Serial No. 1820000013	1
	45 108 12	After Serial No. 1820000003	1
1		Ring Set (.030)	
	45 108 09	Before Serial No. 1820000013	1
	45 108 13	After Serial No. 1820000003	1
2		Piston w/Ring Set (Std.)	
	45 874 01	Before Serial No. 1820000013	1
	45 874 11	After Serial No. 1820000003	1
2		Piston w/Ring Set (.003)	
	45 874 02	Before Serial No. 1820000013	1
	45 874 12	After Serial No. 1820000003	1
2		Piston w/Ring Set (.010)	
	45 874 03	Before Serial No. 1820000013	1
	45 874 13	After Serial No. 1820000003	1
2		Piston w/Ring Set (.020)	
	45 874 04	Before Serial No. 1820000013	1
	45 874 14	After Serial No. 1820000003	1
2		Piston w/Ring Set (.030)	
	45 874 05	Before Serial No. 1820000013	1
	45 874 15	After Serial No. 1820000003	1
3	47 018 01	Retainer, Piston Pin	2
4		Connecting Rod (Std.)	
	45 067 22	Before Serial No. 1731000013	1
	45 067 24	After Serial No. 1731000003	1
4		Connecting Rod (.010)	
	45 067 23	Before Serial No. 1731000013	1
	45 067 25	After Serial No. 1731000003	1