

LineLazer IV 250sPS Self-Propelled Line Striper

3A2598G
EN

For the application of line striping materials. For professional use only. For outdoor use only. Not for use in hazardous locations or explosive atmospheres.

Maximum Operating Speed: 10 mph (16 kph)
Maximum Operating Pressure: 3300 psi (22.8 MPa, 228 bar)



IMPORTANT SAFETY INSTRUCTIONS

Read all warnings and instructions in this manual and the engine manual. Be familiar with the controls and the proper usage of the equipment. Save these instructions.

Related Manuals	
3A2593	Repair
3A2090	Operation
311254	Gun
309277	Pump
312307	Auto-Layout Application Methods
332230	Pressurized Bead System (PBS)
332226	Bead Gun Kit (PBS)

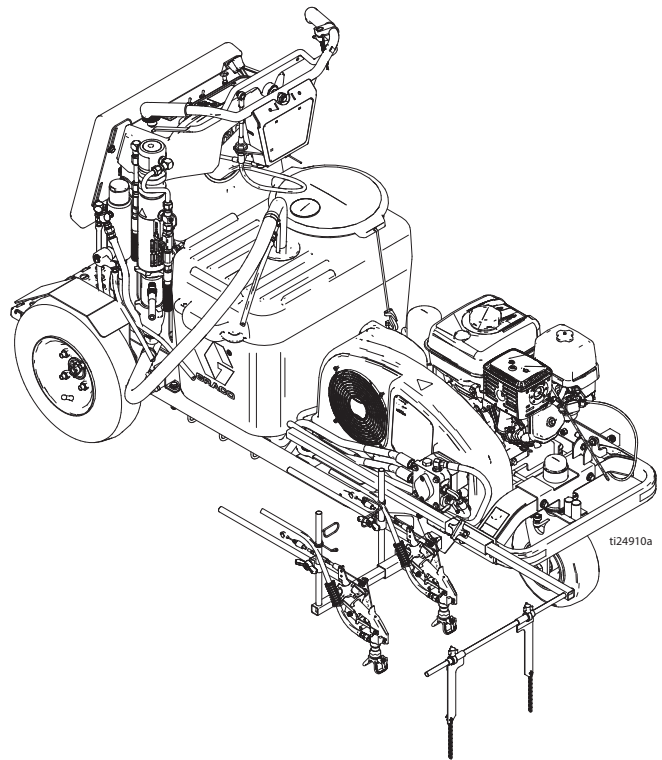
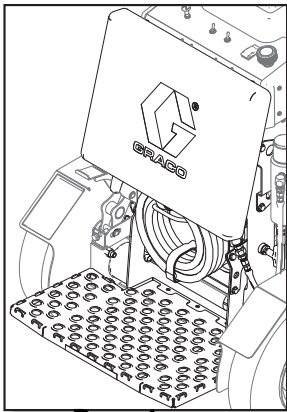
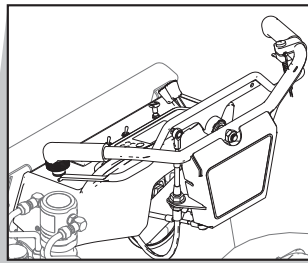


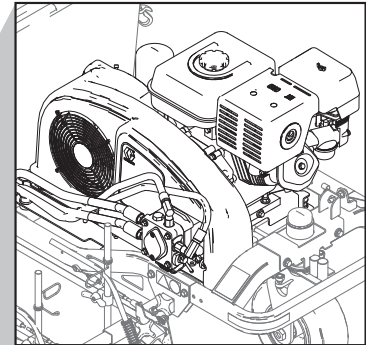
Table of Contents



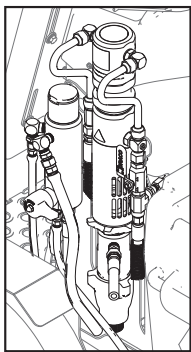
Page 4



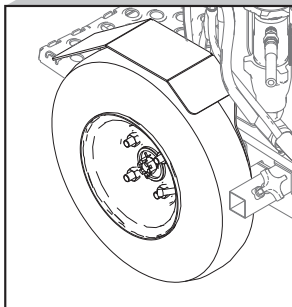
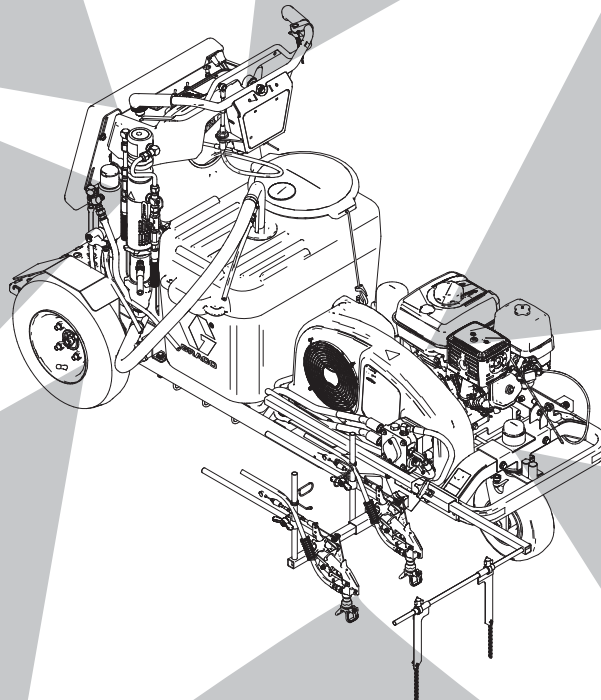
Page 6



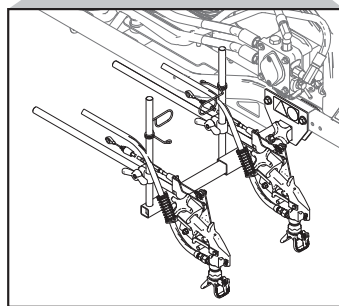
Page 10



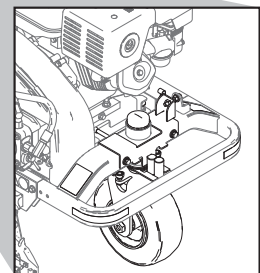
Page 18



Page 17



Page 16

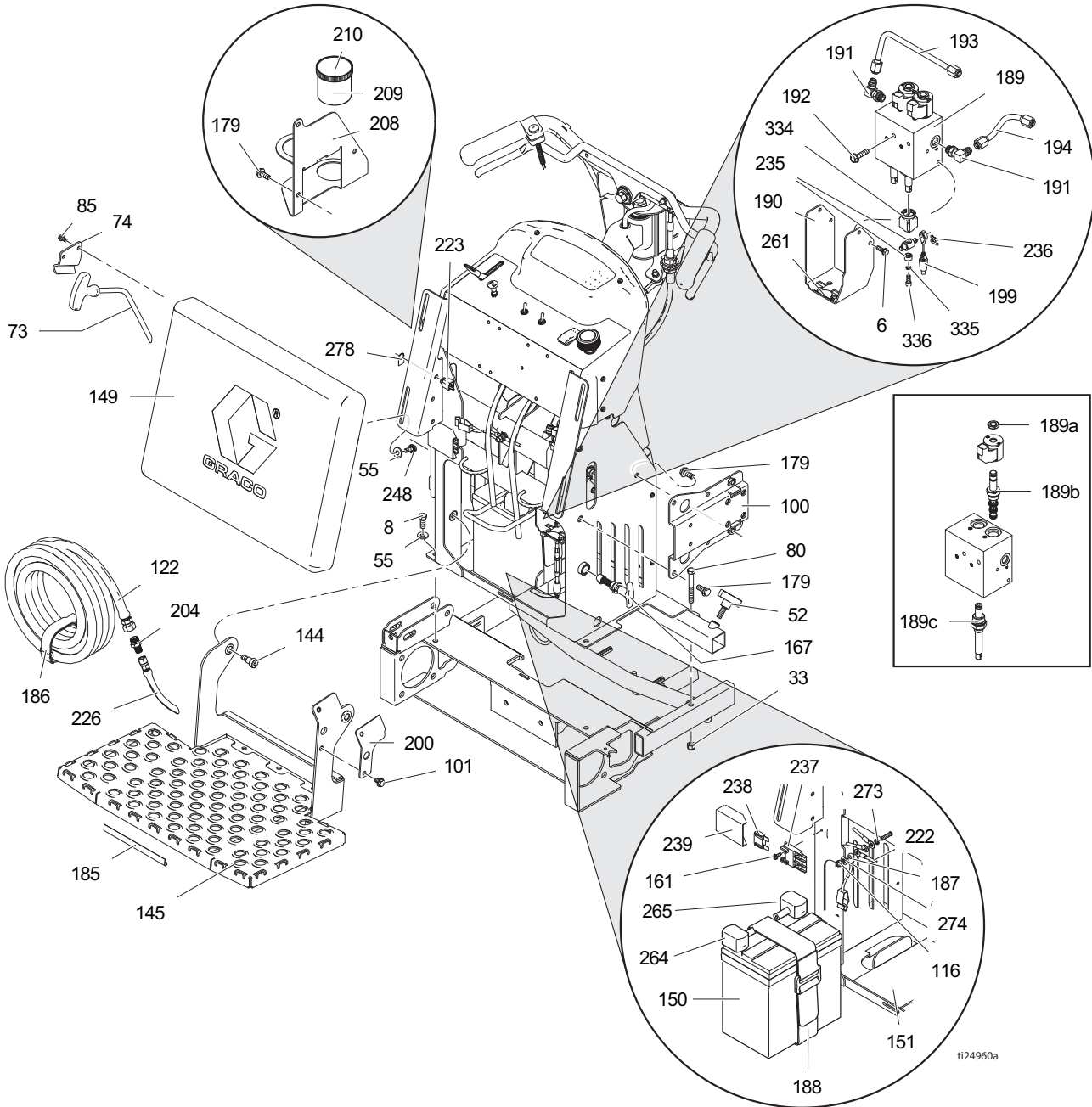


ti24959a
Page 14

Models

Model	Guns	Series	Pressurized Bead System	Description
24F307	2	A - D	No	LLIV 250SPS (North America, Latin America, Asia Pacific)
24K960	1	A - D	No	LLIV 250SPS (Latin America, Asia Pacific)
24K961	1	A - D	No	LLIV 250SPS (Europe)
24K962	2	A - D	No	LLIV 250SPS (Europe)
24M608	1	A - D	No	FieldLazer G400 (North America)
16V470	1	A - C	Yes, 1 Tank	LLIV 250 SPS (Latin America, Asia Pacific)
16V471	1	A - C	Yes, 1 Tank	LLIV 250 SPS (Europe)
16V473	2	A - C	Yes, 1 Tank	LLIV 250 SPS (North America, Latin America, Asia Pacific)
16V474	2	A - C	Yes, 1 Tank	LLIV 250 SPS (Europe)
24U561	2	A - C	Yes, 2 Tanks	LLIV 250 SPS (North America, Latin America, Asia Pacific)

Parts

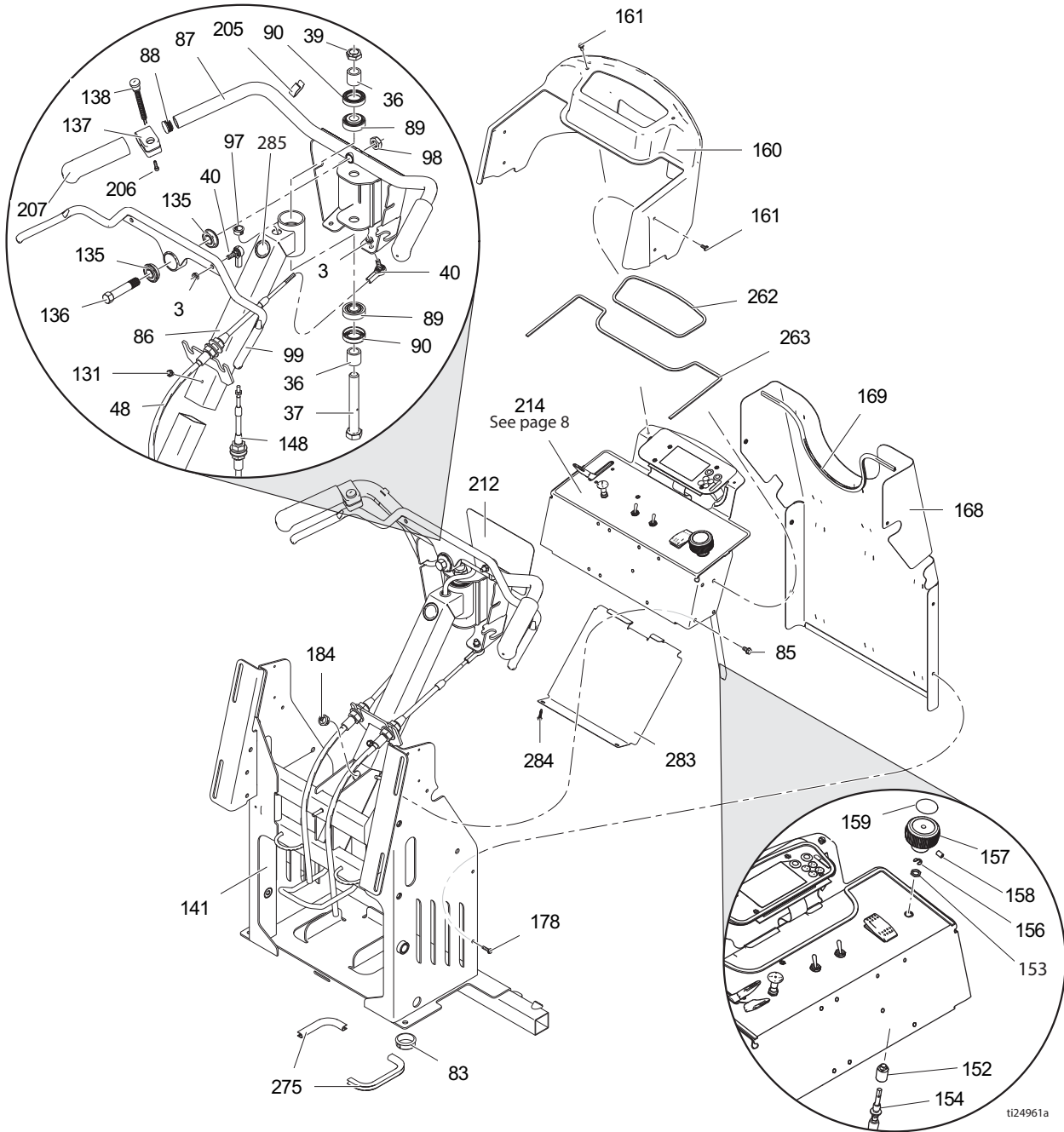


Parts List

Ref.	Part	Description	Qty.	Ref.	Part	Description	Qty.
6	260212	SCREW, hex washer hd, thd form	13	190	16N102	BRACKET, manifold, hydraulic, gun	1
8	100101	SCREW, cap, hex hd	4	191	116829	FITTING, 90 degree	2
33	101566	NUT, lock	16	192	15C753	SCREW, mach, hex wash hd	2
52	111145	KNOB, pronged	4	193	24M625	TUBE, supply, hydraulic	1
55	100023	WASHER, flat	25	194	24M626	TUBE, supply, hydraulic	1
73*	16N100	TUBE, remote start, LL250	1	199	24N492	KIT, repair, gun cable (includes 236)	1
74*	16N101	BRACKET, support, recoil, engine	1	200	16N380	BRACKET, pin ramp	1
80	120721	SCREW, cap, 3/8-16, hexhd	9	204	196177	ADAPTER, nipple	2
85	107257	SCREW, thd forming	11	208	16N595	BRACKET, tool holder	1
100	16M717	BRACKET, mount, pump, LL250, paint	1	209	119293	JAR, 6 oz	1
101	111801	SCREW, cap, hex hd	4	210	119316	LID, 6 oz	1
116	102040	NUT, lock, hex	2	222	16N541	WIRE, negative battery	1
122	124884	HOSE, coupled, 3/8 in. x 20 ft	1	223	16N540	HARNESS, light connection	2
144	116942	SCREW, shoulder, skt hd	2	226	245798	KIT, repair, hose	1
145	24L909	FRAME, platform, painted, LL250	1	235	16W760	ADAPTER, manifold, cable, gun	2
149	278421	PAD, foam	1	236	126111	RETAINER, circlip, external, 8mm	6
150	115753	BATTERY, 33 AH, sealed	1	237	126095	HOLDER, fuse	1
151	801972	PAD, battery	1	238	126096	FUSE, 30A	1
161	118444	SCREW, mach, slot hex wash hd	7	239	126097	COVER, fuse holder	1
167	24D618	PIN, handle, Grindlazer	1	248	110963	SCREW, cap, flange head	4
179	111192	SCREW, cap flang hd	8	261	16P145	LABEL, gun indicator	1
185	290159	LABEL, reflective	7	264	801958	PROTECTOR, terminal, red	1
186	114271	STRAP, retaining	2	265	801959	TERMINAL, protector, black	1
187	237686	WIRE, ground assembly w/ clamp	1	273		WASHER, 1/4 external tooth lock	1
188	126071	STRAP, battery	1	274	110755	WASHER, plain	1
189	17C925	MANIFOLD, hydraulic, two piston	1	278	16P138	LABEL, energy source	2
189a	24N577	KIT, repair, coil, hydraulic manifold	1	334	16P450	BELLOWS, constant volume	1
189b	24N490	KIT, repair, solenoid (includes 189a)	1	335	105510	WASHER, lock, spring, (hi collar)	1
189c		KIT, repair, actuator, piston (includes 235, 236, 334, 335, 336)	1	336	126242	SCREW, cap, sch	1
	24N491	For 16N513 MANIFOLD number found on manifold					
	24V560	For 17C925 MANIFOLD number found on manifold					

* For Series A, B of 24F307, 24K960, 24K961, 24K962, 24M608 and Series A of 16V470, 16V471, 16V473, 16V474, 24U561

Parts



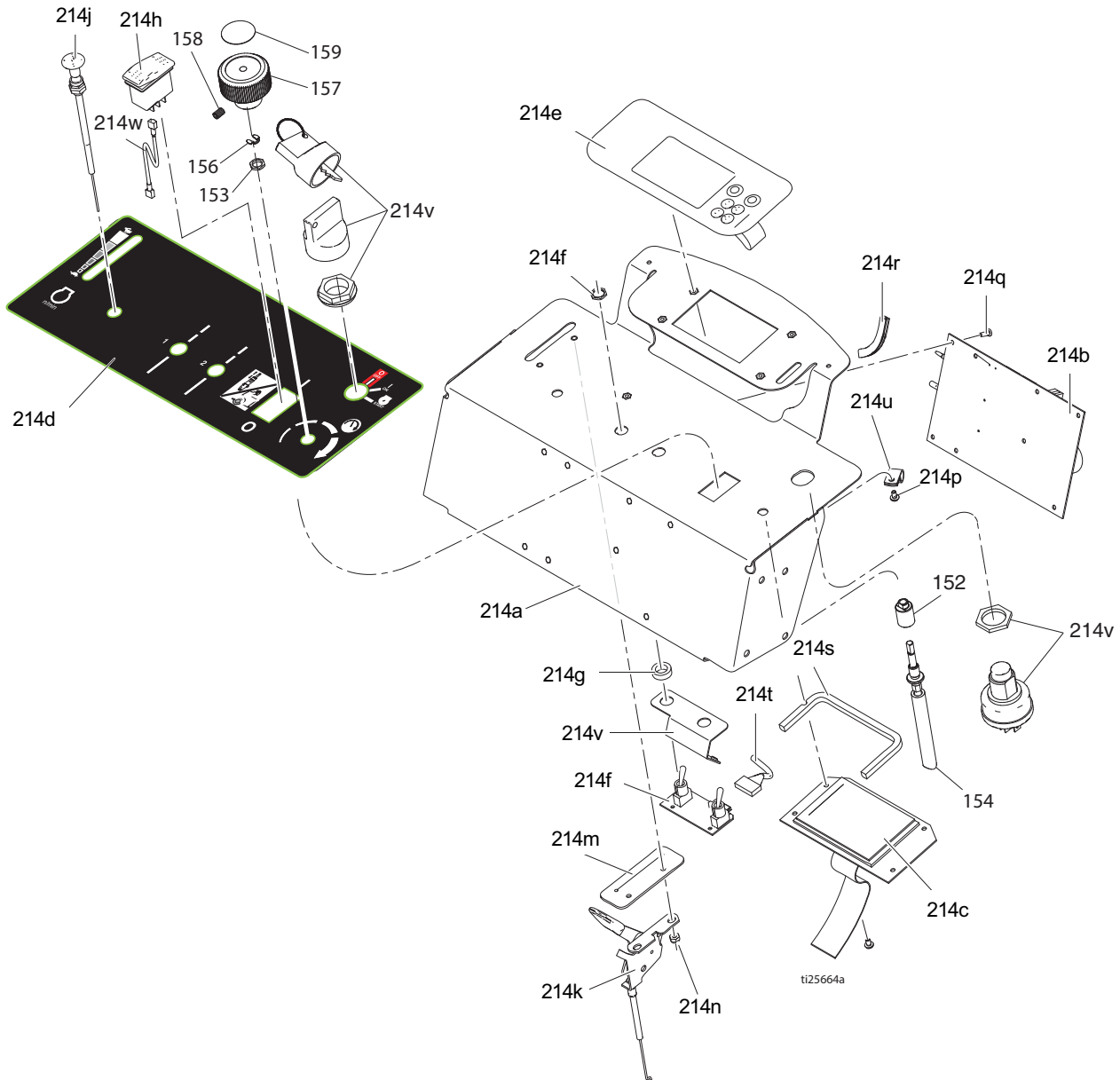
Parts List

Ref.	Part	Description	Qty.	Ref.	Part	Description	Qty.
3	102393	NUT, lock	6	159	15A464	LABEL, control	1
36	193658	SPACER, seal	2	160	16N003	COVER, display, LL250, painted	1
37	113471	SCREW, cap, hex hd	1	161	118444	SCREW, mach, slot hex wash hd	7
39	112405	NUT, lock	1	168	24N496	KIT, repair, shield, paint (includes 169)	1
40	125792	BALL, joint, rod end	6	169	114225	TRIM, edge protection	1
48	16M273	CABLE, steering push/pull, LL250	2	178	107439	SCREW, mach, hex hd	6
83	113677	BUSHING, nylon	3	184	127372	BUSHING, strain relief	1
85	107257	SCREW, thd forming	7	205	178342	CLIP, spring	1
86	24N494	KIT, repair, support, steering (includes 89, 90)	1	206	C20004	SCREW, cap	1
87	24L900	BAR, handle, LL250	1	207	114659	GRIP, handle	2
88	120151	RETAINER, caplug	2	212	16N519	LABEL, brand, LineLazer, SPS, top	1
89	113485	BEARING, cup/cone	2		16N517	LABEL, brand, FieldLazer, G400, top (Model 24M608 only)	1
90	115503	SEAL, grease	2	214	24M235*	KIT, repair, control panel	1
97	119569	BUSHING, strain relief	1		24X059**	KIT, repair, control panel (see Page 8 for parts)	1
98	119554	NUT, lock, nylon, thin pattern	1	262	16N547	GASKET, display	1
99	24M196	HANDLE, control, forward/reverse	1	263	16N548	GASKET, control	1
131	112798	SCREW, thread forming, hex hd	1	275	126215	TRIM, edge, protection	1
135	119532	BEARING, flanged	2	283	16P554	PLATE, cover, control board	1
136	15E780	PIN, fork	1	284	122667	SCREW, drill, hex washer head	2
137	15K162	BLOCK	1	285	127373	PLUG, hole	1
138	16N401	SWITCH, push button	1				
141	16M702	FRAME, upright, LL250, paint	1				
148	16M274	CABLE, forward/reverse, push/pull	1				
152	16Y411	BUSHING, mount, panel	1				
153	119775	NUT, panel	1				
154	24V563	KIT, repair, shaft, flexible	1				
155	176754	GLAND, packing, male	1				
156	115999	RING, retaining	1				
157	16Y408	KNOB, pressure control	1				
158	101962	SCREW, set, sch, 1/4-20	1				

* For Series A, B of 24F307, 24K960, 24K961, 24K962, 24M608 and Series A of 16V470, 16V471, 16V473, 16V474, 24U561

**For Series C, D of 24F307, 24K960, 24K961, 24K962, 24M608 and Series B, C of 16V470, 16V471, 16V473, 16V474, 24U561

Parts (Control Panel)



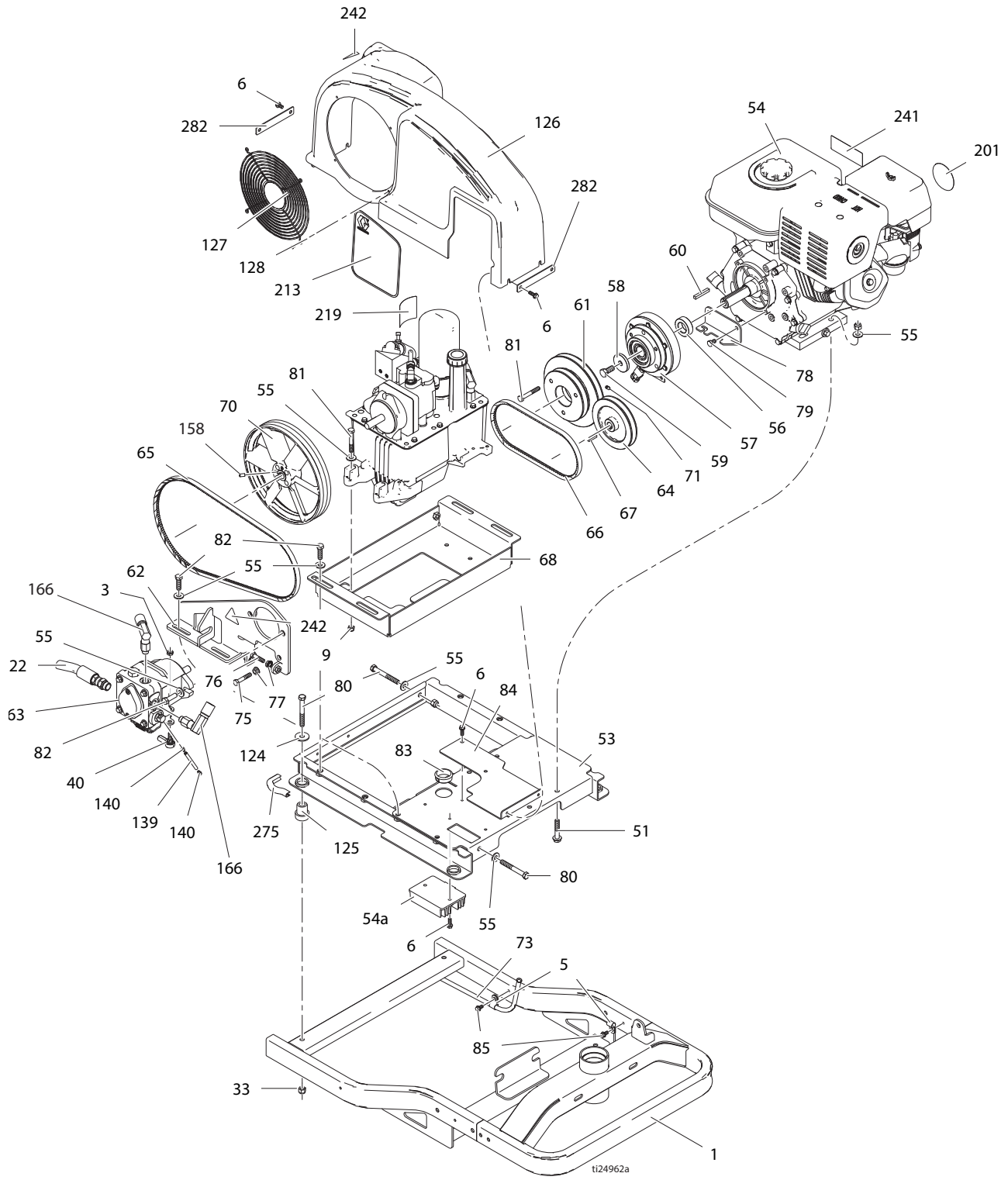
Parts List (Control Panel)

Ref.	Part	Description	Qty.	Ref.	Part	Description	Qty.
214a	16M781*	PLATE, control, LL250	1	214n	109466	NUT, lock, hex	2
	17D218**	PLATE, control, LL250		214p	120743	SCREW, mach, pnh, sems	5
214b	24N565	KIT, repair, control board (includes 214q)	1	214q	111839	SCREW, mach, pnh, sems	8
214c	24N564	KIT, repair, display board (includes 214p)	1	214r	114225	TRIM, edge protection	1
214d	16N439*	LABEL, control	1	214s	15M509	GASKET, board, LineLazer	1
	17D217**	LABEL, control	1	214t	16P019	HARNESS, switch board	1
214e	16N374	SWITCH, membrane	1	214u	119736	CLAMP, cable	1
214f	24N566	BOARD, switch (includes 214g)	1	214v**	16X075	SWITCH, ignition	1
214g	16G332	SPACER, switch, toggle	2	214w**	17C064	WIRE, positive	1
214h	126078*	SWITCH, rocker, dpdt	1				
	17C063**	SWITCH, rocker, spst					
214j	16M508	CABLE, choke	1				
214k	16M509	CONTROL, throttle	1				
214m	16N549	GASKET, throttle	1				

* For Series A, B of 24F307, 24K960, 24K961, 24K962, 24M608 and Series A of 16V470, 16V471, 16V473, 16V474, 24U561

**For Series C, D of 24F307, 24K960, 24K961, 24K962, 24M608 and Series B, C of 16V470, 16V471, 16V473, 16V474, 24U561

Parts



tl24962a

Parts List

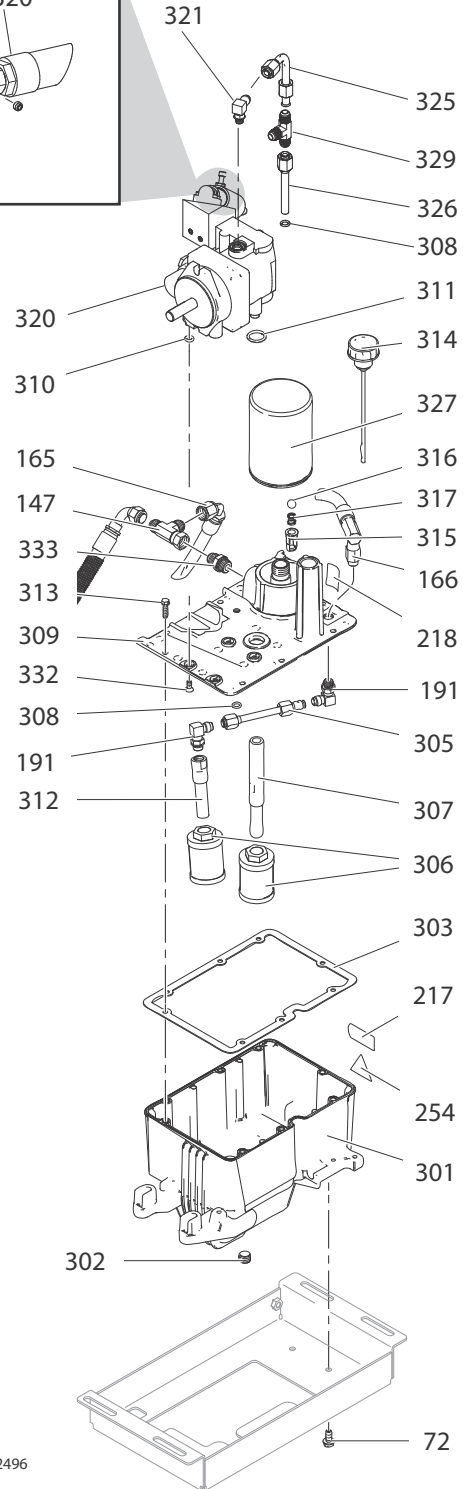
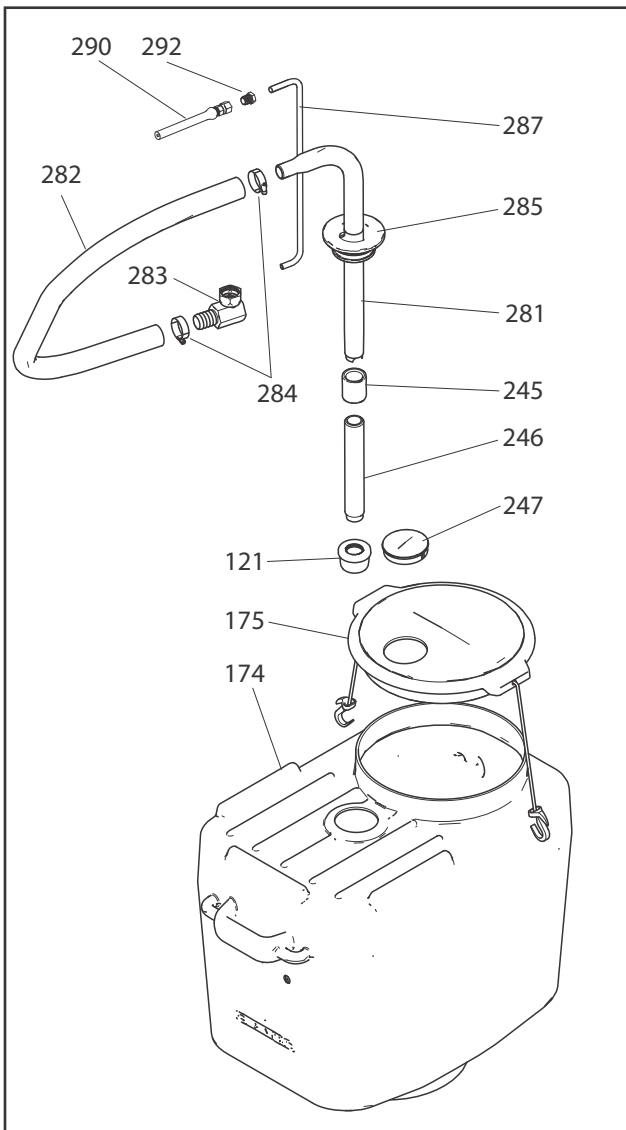
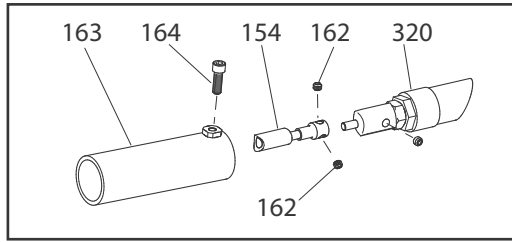
Ref.	Part	Description	Qty.	Ref.	Part	Description	Qty.
1	24L896	FRAME, painted, LL250	1	81	108481	SCREW, cap, hex hd	5
3	102393	NUT, lock	6	82	100004	SCREW, cap, hex hd	8
5	108868	CLAMP, wire	4	83	113677	BUSHING, nylon	3
6	260212	SCREW, hex washer hd, thd form	13	84	16M715	BRACKET, mount, belt guard, LL250	1
9	111040	NUT, lock, insert, nylock, 5/16	2	85	107257	SCREW, thd forming	7
22	16M271	HOSE, coupled, assembly, LL250	2	124	108851	WASHER, plain	6
33	101566	NUT, lock	16	125	119695	DAMPENER, engine mount	4
40	125792	BALL, joint, rod end	6	126	24N498	KIT, repair, guard, belt (includes 85, 127, 128, 242)	1
51	114982	SCREW, cap, flng hd	6	127	117284	GRILL, fan guard	1
53	16M072	FRAME, mount, engine, paint	1	128	123035	RIVET, blind	4
54	24N501*	KIT, repair, engine, GX270 (includes 54a, 201, 202, 241, 247)	1	139	15R309	ROD, standoff, 1/4 in. od x 2.75 in. LG	1
	24V562**	KIT, repair, engine GX390 (includes 54a, 60, 202, 241)	1	140	111006	SCREW, cap	2
54a	24N502	KIT, repair, rectifier, voltage	1	158	101962	SCREW, set 1/4-20 x 0.38	2
55	100023	WASHER, flat	25	166	16M276	HOSE, coupled, feed line, LL250	2
56	16M075	SPACER, clutch, 1.00 id x .5 thk	1	201*	16N154	LABEL, GX270	1
57	125877	CLUTCH, electric, LL250	1	202	126072	KIT, Honda remote choke (not shown)	1
58	16M076	WASHER, 7/16 id x .25 thk	1	213	16N518	LABEL, brand, FieldLazer, G400, side (Model 24M608 only)	1
59	116645	SCREW, cap, hex head	1		16N520	LABEL, brand, LineLazer, SPS, side	1
60	125919	KEY, parallel, square, 1/4	1	219	189892	LABEL, Graco logo	1
61	16M077	PULLEY, double	1	241▲	194126	LABEL, warning	1
62	24N499	KIT, repair, bracket, hydro pump (includes 75, 76, 77, 242)	1	242▲	16M768	LABEL, pinch hazard iso	1
63	247930	KIT, repair, hydraulic pump	1	275	126215	TRIM, edge, protection	1
64	16M078	PULLEY, 5 o.d. x 15mm	1	282	16P547	PLATE, backer, belt guard, paint	2
65	125793	BELT, vee, tri-power, AX44	1				
66	125876	BELT, vee, tri-power, AX26	1				
67	117222	KEY, square	1				
68	16M084	TRAY, hyd reservoir, LL250, paint	1				
70	16U205	PULLEY, fan	1				
71	120087	SCREW, set, 1/4 in. x 1/2 in.	2				
73*	16N100	TUBE, remote start, LL250	1				
75	100678	SCREW, cap hex hd	1				
76	100521	SCREW, cap hex hd	1				
77	110996	NUT, hex, flange head	4				
78	16M082	BRACKET, clutch, anti-rotation	1				
79	112406	SCREW, cap, hex hd	2				
80	120721	SCREW, cap, 3/8-16, hexhd	9				

▲ Replacement warning labels may be ordered free of charge.

* For Series A, B of 24F307, 24K960, 24K961, 24K962, 24M608 and Series A of 16V470, 16V471, 16V473, 16V474, 24U561

**For Series C, D of 24F307, 24K960, 24K961, 24K962, 24M608 and Series B, C of 16V470, 16V471, 16V473, 16V474, 24U561

Parts



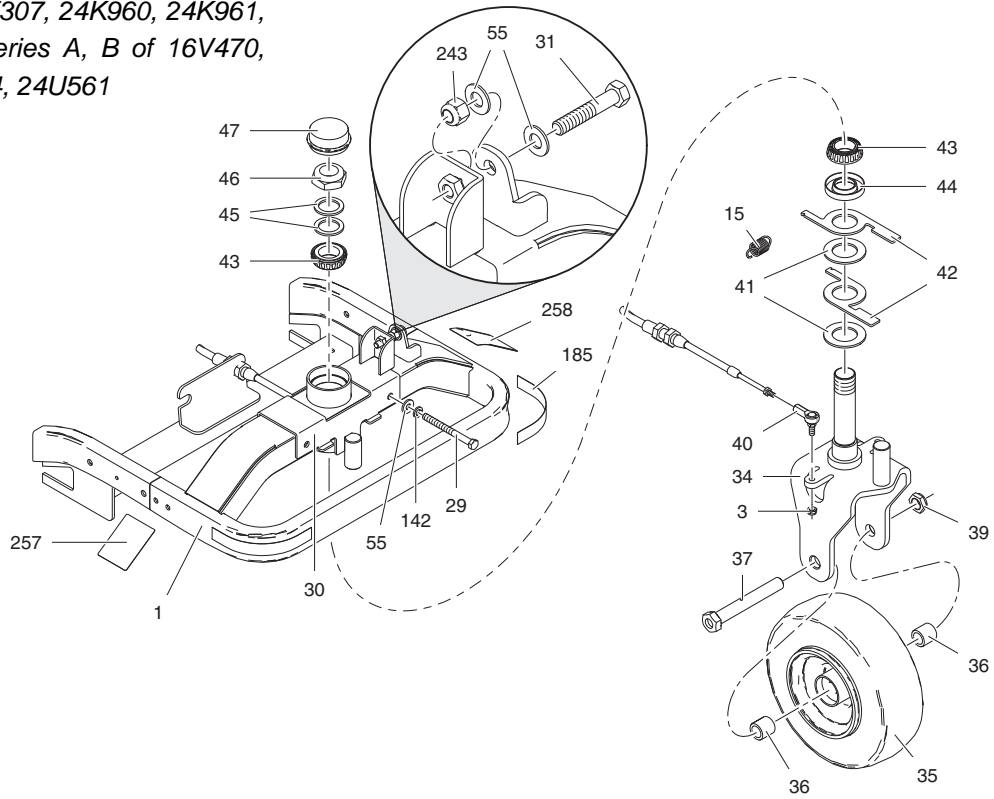
ti2496

Parts List

Ref.	Part	Description	Qty.	Ref.	Part	Description	Qty.
72	125794	SCREW, taptite, hex washer hd	2	306	116919	FILTER	2
121	181072	KIT, repair, strainer	1	307	15E587	TUBE, suction	1
147	126061	FITTING, #8 jic tee, swivel	1	308	154594	PACKING, o-ring	2
154	24V563	KIT, repair, shaft, flexible (includes 162)	1	309	16M160	COVER, reservoir, LL250, painted	1
162	112303	SCREW, set, sch	2	310	107188	PACKING, o-ring	4
163	15C958	GUARD, control, pressure	1	311	156401	PACKING, o-ring	1
164	112166	SCREW, cap, sch	1	312	16M112	TUBE, suction, hydraulic, LL250	1
165	16M275	HOSE, coupled, return line, LL250	1	313	119426	SCREW, mach, hex washer hd	8
166	16M276	HOSE, coupled, feed line, LL250	1	314	120726	CAP, breather, filler	1
191	116829	FITTING, 90 degree	2	315	198841	RETAINER, ball, pressure bypass	1
217	15K440	LABEL, brand, GH/EH cooling	1	316	100084	BALL, metallic	1
218	16P142	LABEL, hydraulic only icon	1	317	116967	SPRING, compression	1
245	114967	COUPLING, pipe, 1 in.	1	320	16X083	KIT, repair, pump, 200HS (includes 310, 311, 332)	1
246	189674	TUBE, intake	1	321	110792	FITTING, elbow, male, 90 deg	1
254▲	189285	LABEL, caution	1	325	246167	KIT, repair, case drain (includes 308)	1
281	15F149	TUBE, suction	1	326	17A582	TUBE, hydraulic, case drain	1
282	194306	HOSE, fluid	1	327	246173	KIT, repair, oil filter	1
283	198119	FITTING, elbow, barbed	1	329	127686	FITTING, tee	1
284	101818	CLAMP, hose	2	332	117471	SCREW, mach, hex flat head	4
285	278722	GASKET, pail	1	333	120184	FITTING, hydraulic	1
287	16X071	DRAIN tube	1	174	278720	RESERVOIR, 15 gallon	1
290	248008	HOSE, cpld, 1/4 in. x 44 in.	1	175	24U241	KIT, pail lid assembly	1
292	196180	BUSHING	1	247	127375	PLUG, 3.0" hole	1
301	15J513	TANK, reservoir, blue	1	▲ Replacement warning labels may be ordered free of charge.			
302	101754	PLUG, pipe	1				
303	120604	GASKET, reservoir	1				
305	24K967	TUBE, supply, hydraulic	1				

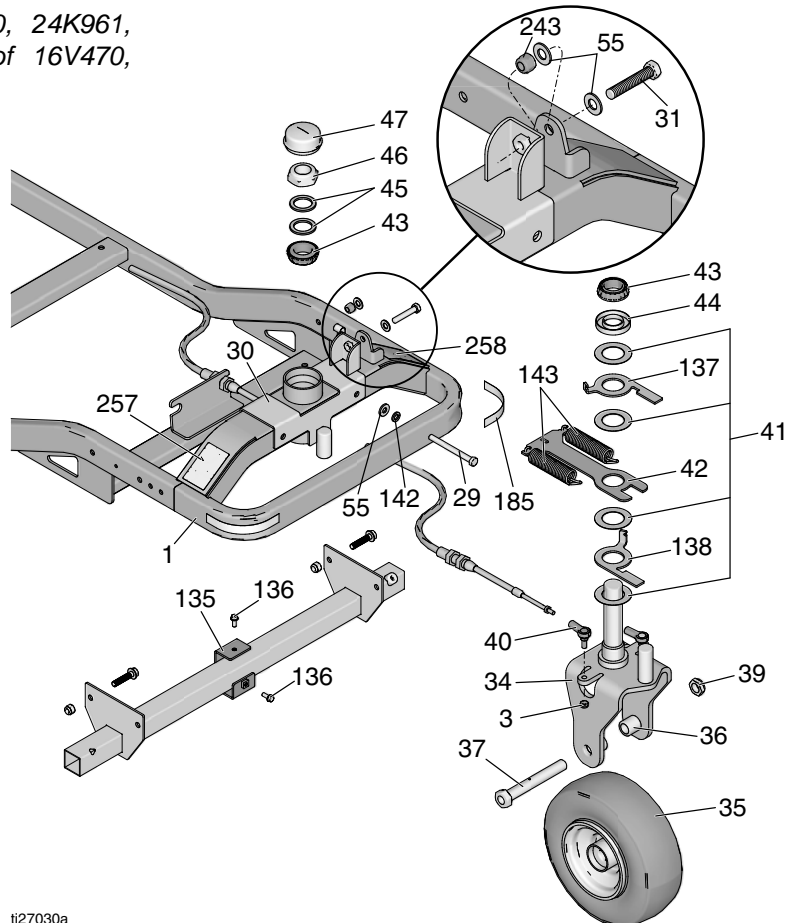
Parts (Front Wheel)

For Series A, B, C of 24F307, 24K960, 24K961, 24K962, 24M608 and Series A, B of 16V470, 16V471, 16V473, 16V474, 24U561



ti19066b

For Series D of 24F307, 24K960, 24K961, 24K962, 24M608 and Series C of 16V470, 16V471, 16V473, 16V474, 24U561



ti27030a

Parts List

For Series A, B, C of 24F307, 24K960, 24K961, 24K962, 24M608 and Series A, B of 16V470, 16V471, 16V473, 16V474, 24U561

Ref.	Part	Description	Qty.
1	24L896	FRAME, painted, LL250	1
3	102393	NUT, lock	2
15*	15V264	SPRING, extension	1
29	113743	SCREW, cap, hex hd	2
30	24L902	ADJUSTER, caster, weldment, LL250	1
31	126204	SCREW, cap, hex hd	1
34	24L897	CASTER, painted, LL250	1
35	16W284	WHEEL, foam filled (LL250 SPS, DC)	1
36	193658	SPACER, seal	2
37	113471	SCREW, cap, hex hd	1
39	112405	NUT, lock	1
40	125792	BALL, joint, rod end	2
41*	125893	WASHER, thrust, 1-1/2 in. id	2
42*	16M267	LEVER, self centering, LL250	2
43	126112	BEARING, tapered 1 1/4, cone	2
44	125892	SEAL, bearing, 1-1/4 shaft	1
45	126064	SHIM, caster	2
46	125890	NUT, 1 1/4-12 unf	1
47	126063	CAP, dust	1
55	100023	WASHER, flat	4
142	100133	WASHER, lock, 3/8	2
185	290159	LABEL, reflective	2
243	101714	NUT, lock	1
257	16P143	LABEL, release hydraulic drive	1
258	16P144	LABEL, caster wheel adjustment	1

* Replace with upgrade Kit 24Y509

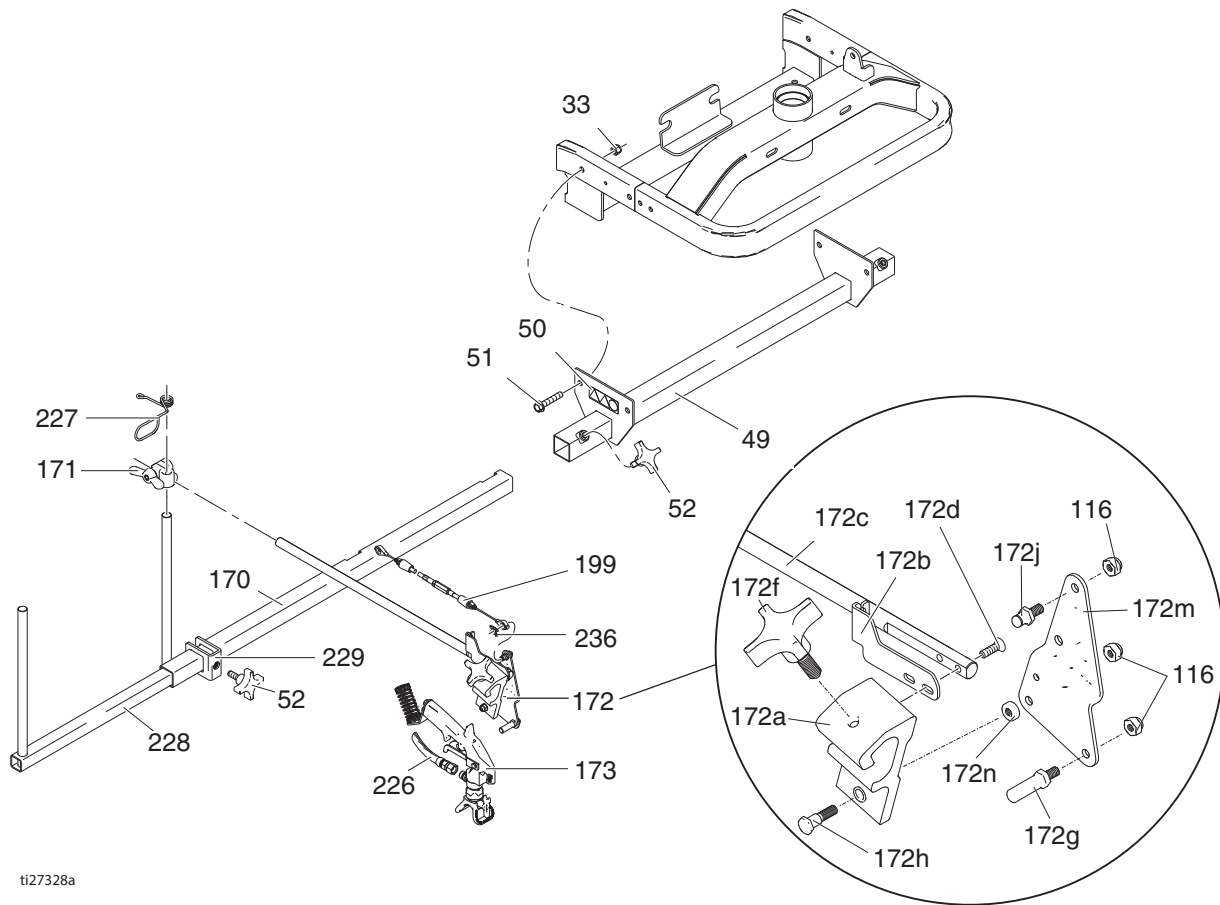
Parts List

For Series D of 24F307, 24K960, 24K961, 24K962, 24M608 and Series C of 16V470, 16V471, 16V473, 16V474, 24U561

Ref.	Part	Description	Qty.
1	24L896	FRAME, painted, LL250	1
3	102393	NUT, lock	2
29	113743	SCREW, cap, hex hd	2
30	24L902	ADJUSTER, caster, weldment, LL250	1
31	126204	SCREW, cap, hex hd	1
34	24L897	CASTER, painted, LL250	1
35	16W284	WHEEL, foam filled (LL250 SPS, DC)	1
36	193658	SPACER, seal	2
37	113471	SCREW, cap, hex hd	1
39	112405	NUT, lock	1
40	125792	BALL, joint, rod end	2
41*	17H372	WASHER, thrust, 1-1/2 in. id	4
42*	17H377	BRACKET, steering, self centering	1
43	126112	BEARING, tapered 1 1/4, cone	2
44	125892	SEAL, bearing, 1-1/4 shaft	1
45	126064	SHIM, caster	2
46	125890	NUT, 1 1/4-12 unf	1
47	126063	CAP, dust	1
55	100023	WASHER, flat	4
135*	17H386	BRACKET	1
136*	260213	SCREW	2
137*	17H387	LEVER, upper	1
138*	17H388	LEVER, lower	1
143*	17H374	SPRING	2
142	100133	WASHER, lock, 3/8	2
185	290159	LABEL, reflective	2
243	101714	NUT, lock	1
257	16P143	LABEL, release hydraulic drive	1
258	16P144	LABEL, caster wheel adjustment	1

* Included in Kit 24Y509

Parts



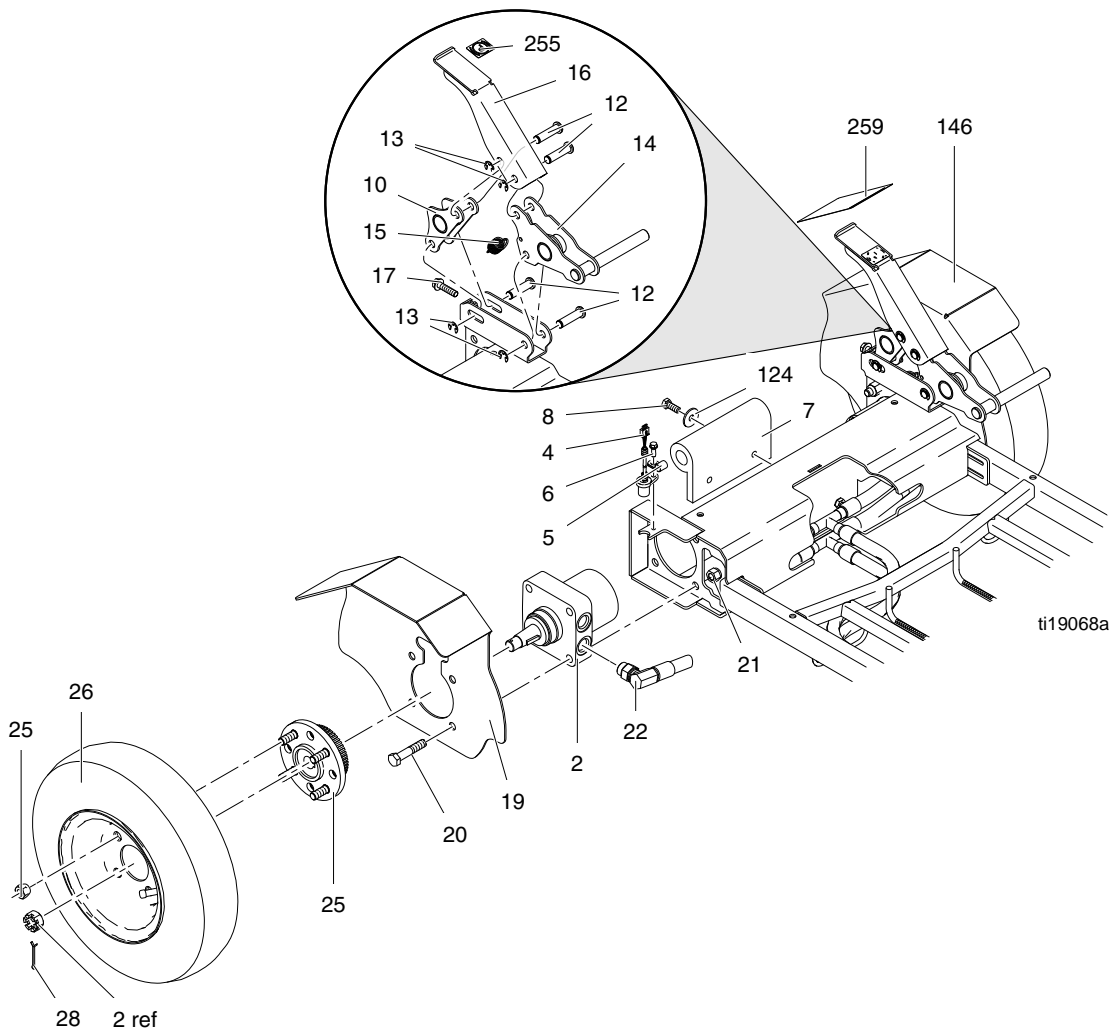
ti27328a

Parts List

Ref.	Part	Description	Qty.	Ref.	Part	Description	Qty.
33	101566	NUT, lock	16	172h	24Y991	KIT, pivot	1
49	24N350	BRACKET, gun arm	1	172j	16N788	STUD, cable, gun, circlip	1
50▲	16P136	LABEL, injection read manual iso	1	172k	119664	BEARING, sleeve	
51	114982	SCREW, cap, flng hd	6	172m	15F214	LEVER, actuator	
52	111145	KNOB, pronged	4	172n	24Y991	KIT, pivot	1
116	102040	NUT, lock, hex	6	173	248157	KIT, accessory, gun, flex	2
170	224052	BRACKET, support gun	1	199	16M671	CABLE, gun, solenoid	2
171	287566	KIT, clamp	2	226	245798	KIT, repair, hose	2
172	24M638	BAR, gun holder, LLIV 250 SPS	2	227	188135	GUIDE, cable	2
172a	287569	KIT, repair, gun holder	1	228	224096	BRACKET, support, extension	1
172b	16M850	BRACKET, cable, gun,	1	229	224136	CLAMP, extension	1
172c	16P047	ARM, holder, gun	1	236	126111	RETAINER, circlip, external, 8mm	6
172d	119647	SCREW, cap, socket, flthd	2				
172f	15F750	KNOB, holder, gun	1				
172g	15F209	STUD, pull, trigger	1				

▲ Replacement warning labels may be ordered free of charge.

Parts

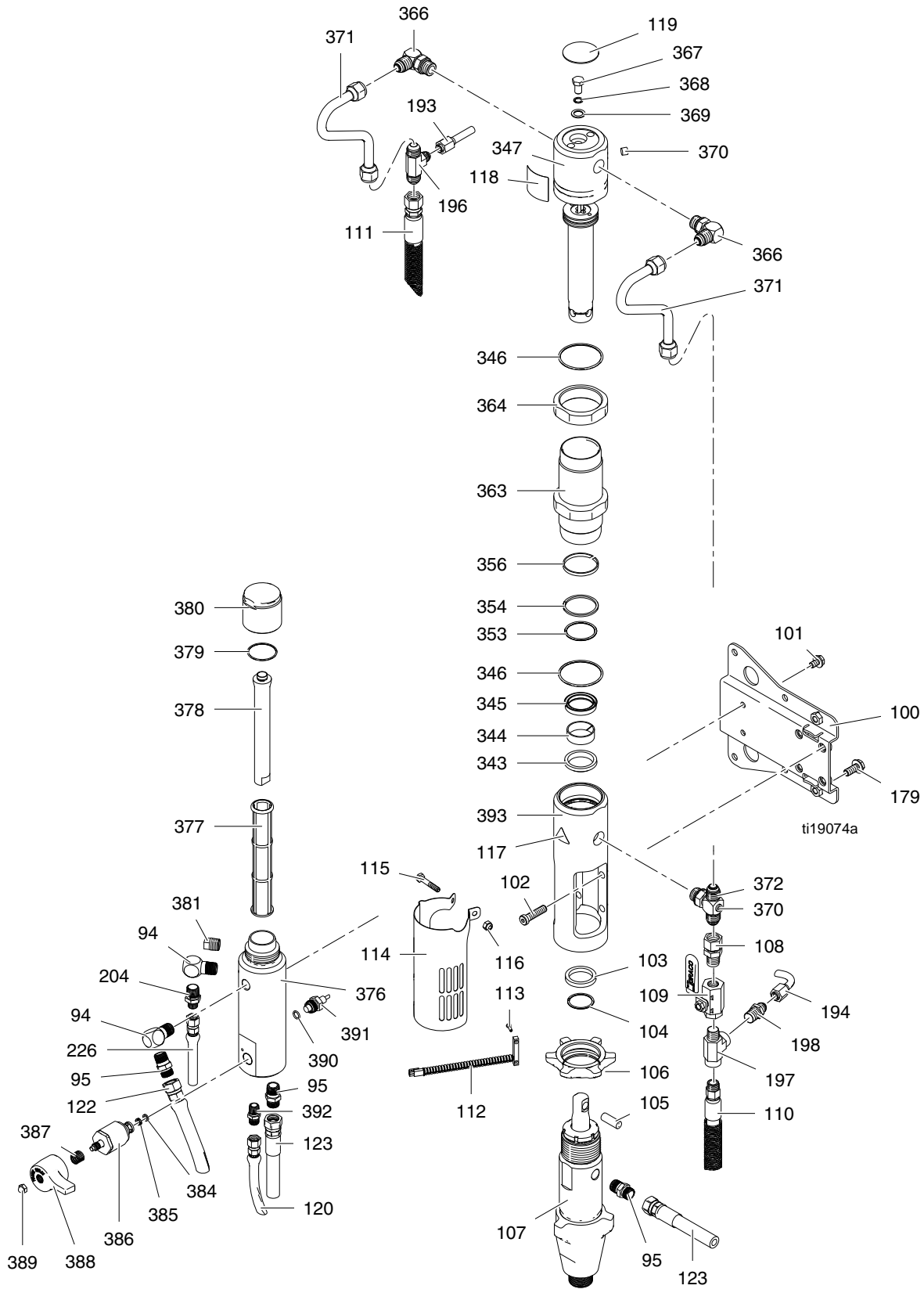


Parts List

Ref.	Part	Description	Qty.	Ref.	Part	Description	Qty.
2	125929	MOTOR, wheel	2	22	16M271	HOSE, coupled, assembly, LL250	2
4	15K357	SENSOR, distance	1	25	24N508	KIT, repair, hub and gear assy	2
5	108868	CLAMP, wire	4	26	245340	KIT, repair, tire	1
6	260212	SCREW, hex washer hd, thd form	13		249083	KIT, turf tire, LineDriver (Model 24M608 only)	1
7	16M279	BUMPER, platform, LL250	1	28	100104	PIN, cotter	2
8	100101	SCREW, cap, hex hd	4	124	108851	WASHER, plain	6
10	24M214	BRACKET, plate, pivot, brake, LL250	1	146	16N394	FENDER, wheel, left, LL250, paint	1
12	16M656	PIN, brake	4	255	16P141	LABEL, parking brake icon	1
13	126073	RING, retaining, e ring, 1/2 dia	4	259▲	16P139	LABEL, multiple hazard iso (Models 24K960, 24F307, 24M608)	1
14	24M215	BRACKET, lock, brake, LL250	1		16P137	LABEL, multiple hazard iso (Models 24K961, 24K962)	1
15	15V264	SPRING, extension	2				
16	16M743	PEDAL, brake, LL250	1				
17	112785	SCREW, hex hd, flanged	1				
19	16M753	FENDER, wheel, right, LL250, paint	1				
20	114766	BOLT, cap hex head	8				
21	801020	NUT, lock, hex	8				

▲ Replacement warning labels may be ordered free of charge.

Parts



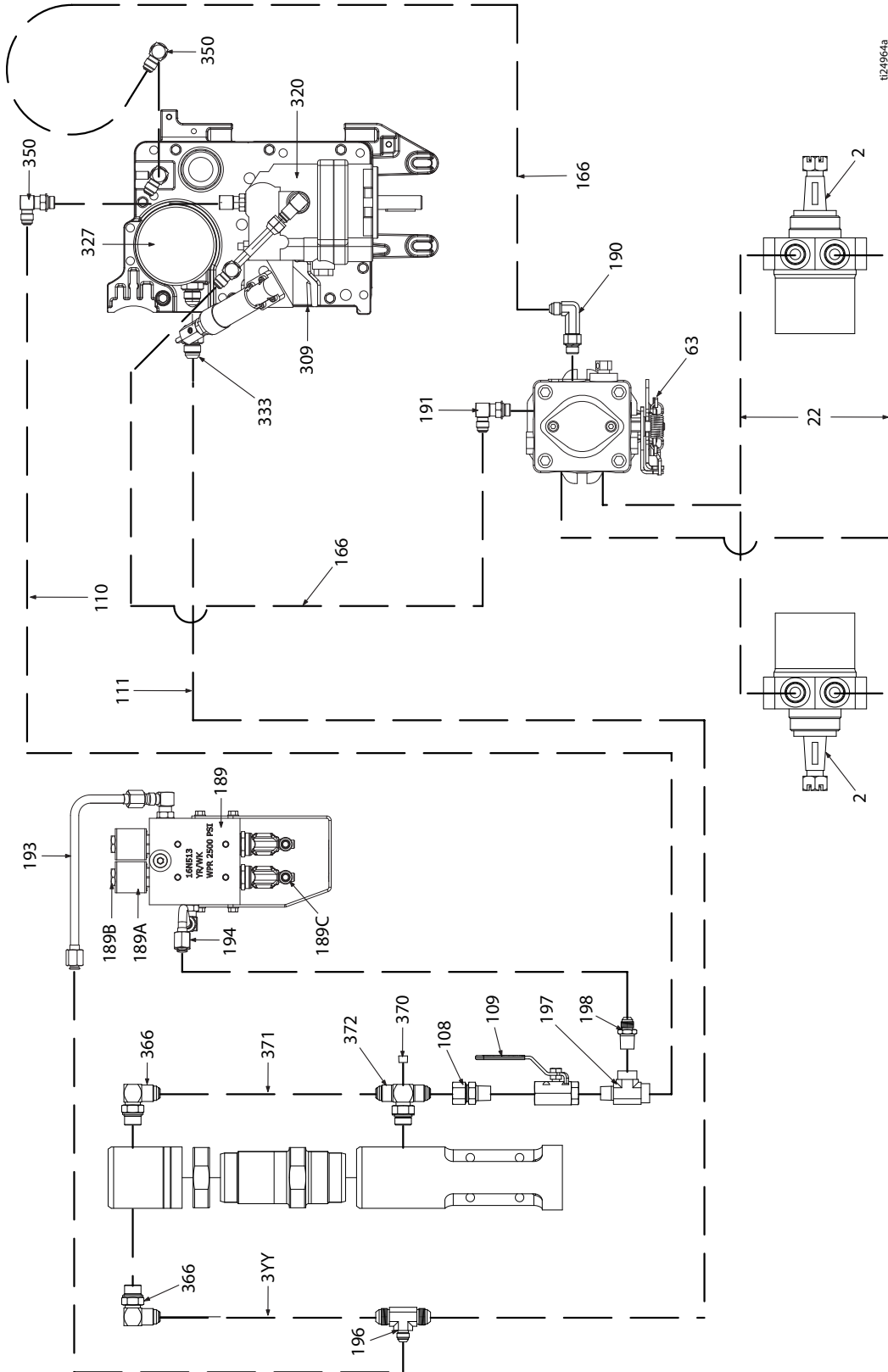
Parts List

Ref.	Part	Description	Qty.	Ref.	Part	Description	Qty.
94	196179	FITTING, elbow, street	1	346	117283	PACKING, o-ring	1
95	196178	ADAPTER, nipple	2	347	288754	KIT, repair, trip rod/piston	1
100	16M717	BRACKET, mount, pump, LL250, paint	1	353	108014	PACKING, o-ring	1
101	111801	SCREW, cap, hex hd	4	354	178226	SEAL, piston	1
102	107210	SCREW	4	356	178207	BEARING, piston	1
103	287186	KIT, repair, magnet	1	363	246176	SLEEVE, hydraulic, cylinder (includes 346)	1
104	116551	RING, retaining	1	364	15A726	NUT, jam	1
105	197443	PIN, pump	1	366	117607	FITTING, elbow std thd	2
106	193394	NUT, retaining	1	367	106276	SCREW, cap, hex head	1
107	277068	KIT, repair, pump 200HS (includes 95, 103, 104, 105)	1	368	155685	PACKING, o-ring	1
108	117328	FITTING, nipple, straight	1	369	178179	WASHER, sealing	1
109	117441	VALVE, ball	1	370	100139	PLUG, pipe	2
110	287175	KIT, repair, hose, hydraulic, s	1	371	15F519	TUBE, hydraulic, supply	2
111	287176	KIT, repair, hose, hydraulic, r	1	372	119841	FITTING, tee, branch	1
112	119720	SWITCH, reed w/connector	1	376*	15H561	MANIFOLD	1
113	114528	SCREW, mach, phillips, pnhd	2	377*	244067	FILTER, 60 mesh, ultra	1
114	15F911	GUARD, pump rod	1	378*	15C766	TUBE, diffusion	1
115	100058	SCREW, cap, hex hd	1	379*	117285	PACKING, o-ring	1
116	102040	NUT, lock, hex	2	380*	287285	KIT, repair, filter cap (includes 378, 379)	1
117▲	15H108	LABEL, pinch point	1	381	15G331	PLUG, pipe	1
118	15B804	LABEL, Graco logo	1	384	193710	SEAL, seat, valve	1
119▲	15B063	LABEL	1	385	193709	SEAT, valve	1
120	287206	KIT, repair, suction hose	1	386*	245103	KIT, repair, drain valve (includes 384, 385, 387, 388, 389)	1
122	124884	HOSE, coupled, 3/8 in. x 20 ft	1	387	114708	SPRING, compression	1
123	245797	KIT, repair, hose	1	388*	15G563	HANDLE, valve	1
179	111192	SCREW, cap flang hd	8	389	116424	NUT, cap	1
193	24M625	TUBE, supply, hydraulic	1	390*	111457	PACKING, o-ring	1
194	24M626	TUBE, supply, hydraulic	1	391*	24N516	KIT, repair, transducer (includes 390)	1
196	126082	FITTING, tee, #8 x #8 x #6 jic	1	392	196181	FITTING, nipple	1
197	126080	FITTING, tee, street	1	393	15A728	MANIFOLD, adapter	1
198	126081	FITTING, nipple, 3/8-18 x #6 jic	1				
204	196177	ADAPTER, nipple	2				
226	245798	KIT, repair, hose	2				
343	117739	WIPER, rod	1				
344	15A726	NUT, jam	1				
345	112561	PACKING, block	1				

* Included in Filter Repair Kit 24N517

▲ Replacement warning labels may be ordered free of charge.

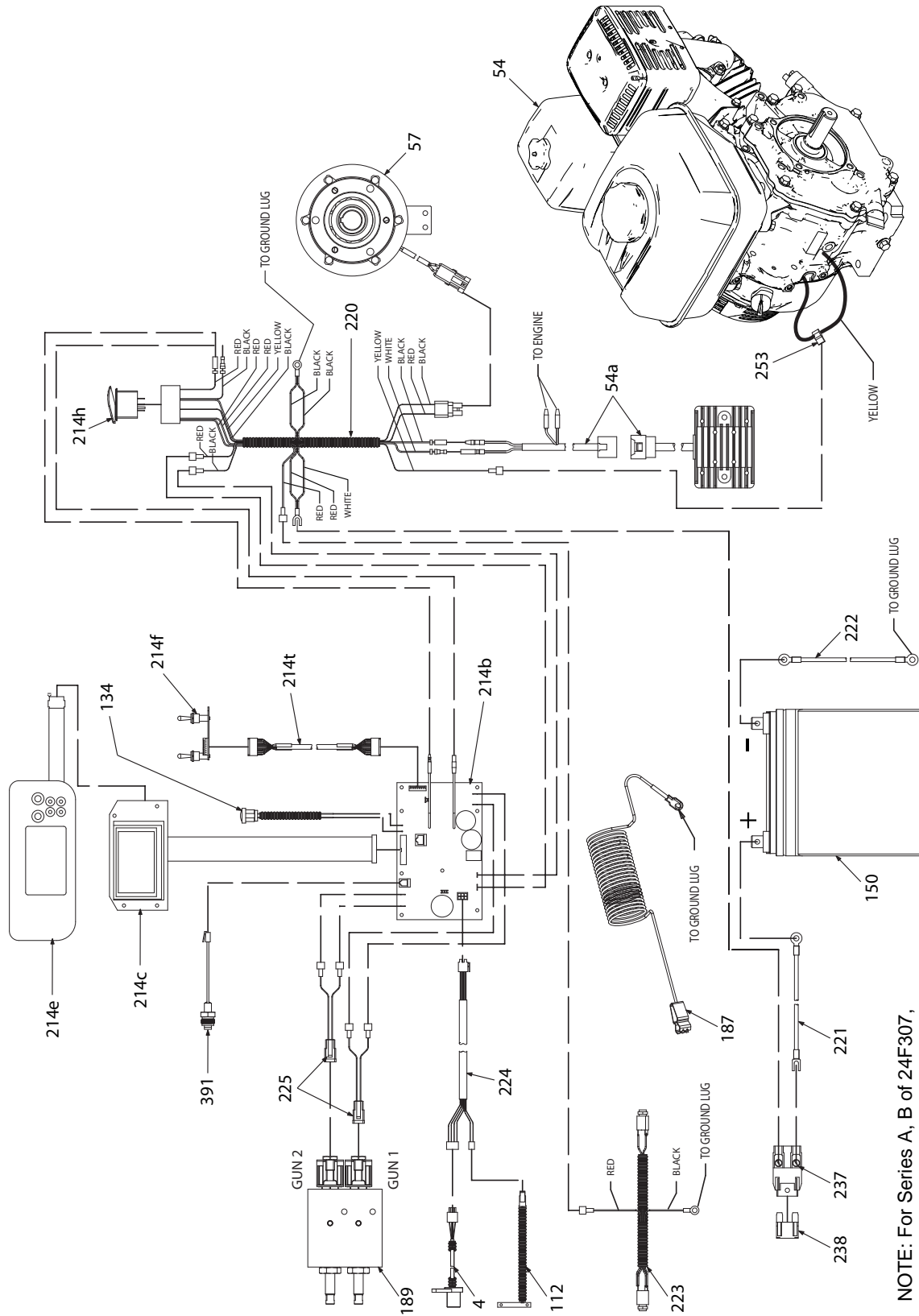
Hydraulic Diagram



Hydraulic Parts List

Ref.	Part	Description	Qty.	Ref.	Part	Description	Qty.
2	125929	MOTOR, wheel	2	196	126082	FITTING, tee, #8 x #8 x #6 JIC	1
22	16M271	HOSE, coupled, assembly, LL250	2	197	126080	FITTING, tee, street	1
63	247930	KIT, repair, hydraulic pump	1	198	126081	FITTING, nipple, 3/8-18 x #6 JIC	1
108	117328	FITTING, nipple, straight	1	309	16M160	COVER, reservoir, LL250, painted	1
109	117441	VALVE, ball	1	320	16X083	KIT, repair, pump, 250SPS	1
110	287175	KIT, repair, hose, hydraulic s	1	333	122970	FITTING, hydraulic	1
111	287176	KIT, repair, hose, hydraulic r	1	350	116829	FITTING, 90° w/ adjustable o-ring	2
166	16M276	HOSE, coupled, feed line, LL250	2	366	117607	FITTING, elbow std thd	2
189	17C925	MANIFOLD, hydraulic, two piston	1	370	100139	PLUG, pipe	2
191	116829	FITTING, 90 degree, w/adjustable	2	371	15F519	TUBE, hydraulic, supply	2
193	24M625	TUBE, supply, hydraulic	1	372	119841	FITTING, tee, branch	1
194	24M626	TUBE, supply, hydraulic	1				

Wiring Diagram



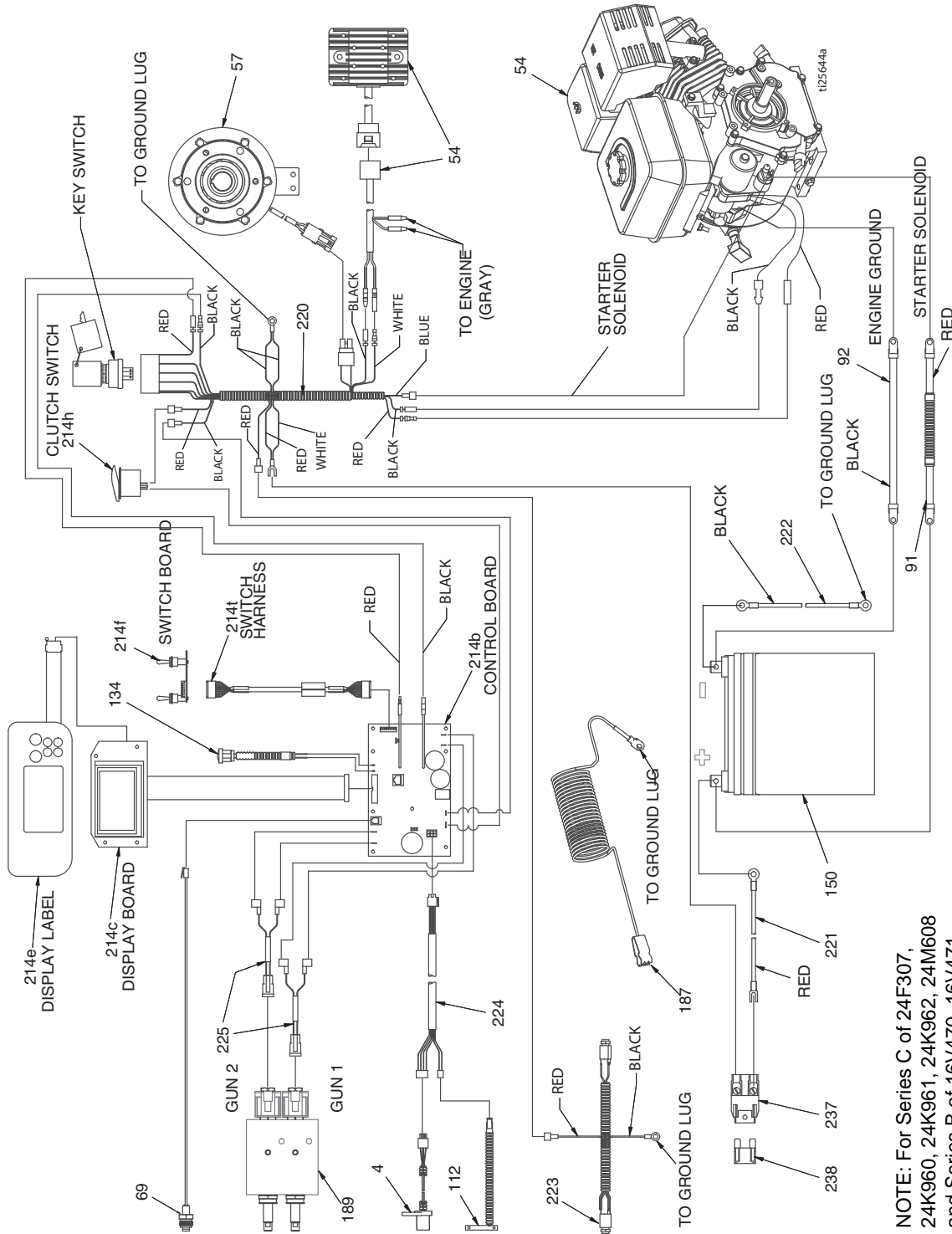
NOTE: For Series A, B of 24F307, 24K960, 24K961, 24K962, 24M608 and Series A of 16V470, 16V471, 16V473, 16V474, 24U561

Wiring Parts List

NOTE: For Series A, B of 24F307, 24K960, 24K961, 24K962, 24M608 and Series A of 16V470, 16V471, 16V473, 16V474, 24U561

Ref.	Part	Description	Qty.	Ref.	Part	Description	Qty.
54	24N501	KIT, repair, engine, GX270 (includes 54a)	1	214e	16N374	SWITCH, membrane	1
54a	24N502	KIT, repair, rectifier, voltage	1	214f	24N566	KIT, repair, switch board	1
57	125877	CLUTCH, electric, LL250	1	214h	126078	SWITCH, rocker, dpdt	1
112	119720	SWITCH, reed w/connector	1	214t	16P019	HARNESS, switch board	1
134	24L904	CONTROL, handlebar	1	220	16N407	HARNESS, wire, LL250	1
150	115753	BATTERY, 33 AH, sealed	1	221	16N542	WIRE, positive battery	1
187	237686	WIRE, ground assembly w/ clamp	1	222	16N541	WIRE, negative battery	1
189	17C925	MANIFOLD, hydraulic, two piston	1	223	16N540	HARNESS, light connection	1
214b	24N565	KIT, repair, control board	1	224	16N539	HARNESS, sensor adapter	1
214c	24N564	KIT, repair, display board	1	225	16N543	HARNESS, wire, hydraulic actuator	2
				237	126095	HOLDER, fuse	1
				238	126096	FUSE, 30A	1
				253	114956	TERMINAL, wire tap, insulated	1
				391	24N516	KIT, repair, transducer	1

Wiring Diagram



NOTE: For Series C of 24F307,
 24K960, 24K961, 24K962, 24M608
 and Series B of 16V470, 16V471,
 16V473, 16V474, 24U561

Wiring Parts List

NOTE: For Series C, D of 24F307, 24K960, 24K961, 24K962, 24M608 and Series B, C of 16V470, 16V471, 16V473, 16V474, 24U561

Ref.	Part	Description	Qty.	Ref.	Part	Description	Qty.
54	24V562	KIT, repair, engine GX390	1	214e	16N374	SWITCH, membrane	1
54a	24N502	KIT, repair, rectifier, voltage	1	214f	24N566	KIT, repair, switch board	1
57	125877	CLUTCH, electric, LL250	1	214h	17C063	SWITCH, rocker, spst	1
91	16X079	CABLE, electric, battery, positive	1	214j	16X075	SWITCH, key, switch	1
92	16X080	CABLE, electric, battery, negative	1	214t	16P019	HARNESS, switch board	1
112	119720	SWITCH, reed w/connector	1	220	16X078	HARNESS, wiring, LL250DC	1
134	24L904	CONTROL, handlebar	1	221	16N542	WIRE, positive battery	1
150	115753	BATTERY, 33 AH, sealed	1	222	16N541	WIRE, negative battery	1
187	237686	WIRE, ground assembly w/ clamp	1	223	16N540	HARNESS, light connection	1
189	17C925	MANIFOLD, hydraulic, two piston	1	224	16N539	HARNESS, sensor adapter	1
214b	24N565	KIT, repair, control board	1	225	16N543	HARNESS, wire, hydraulic actuator	2
214c	24N564	KIT, repair, display board	1	237	126095	HOLDER, fuse	1
				238	126096	FUSE, 30A	1
				391	24N516	KIT, repair, transducer	1

Graco Standard Warranty

Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

GRACO MAKES NO WARRANTY, AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IN CONNECTION WITH ACCESSORIES, EQUIPMENT, MATERIALS OR COMPONENTS SOLD BUT NOT MANUFACTURED BY GRACO. These items sold, but not manufactured by Graco (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

Graco Information

For the latest information about Graco products, visit www.graco.com.

For patent information, see www.graco.com/patents.

TO PLACE AN ORDER, contact your Graco distributor or call 1-800-690-2894 to identify the nearest distributor.

All written and visual data contained in this document reflects the latest product information available at the time of publication. Graco reserves the right to make changes at any time without notice.

For patent information, see www.graco.com/patents.

Original instructions. This manual contains English. MM 3A2598

Graco Headquarters: Minneapolis

International Offices: Belgium, China, Japan, Korea

GRACO INC. AND SUBSIDIARIES • P.O. BOX 1441 • MINNEAPOLIS MN 55440-1441 • USA

Copyright 2010, Graco Inc. is registered to ISO 9001

www.graco.com

Revised G, October 2015