

REPAIR INSTRUCTIONS/ PARTS LIST



307-658

Rev B
SUPERSEDES A
Price: \$10.00

This manual contains **IMPORTANT WARNINGS** and **INSTRUCTIONS**
READ AND RETAIN FOR REFERENCE

ULTRA™ 433 AIRLESS PAINT SPRAYER

Model 231-433, Series A

ULTRA™ 333 AIRLESS PAINT SPRAYER

Model 231-333, Series A

ULTRA™ 400 AIRLESS PAINT SPRAYER

Model 231-400, Series A

INDEX

Section	Page	
—	10.0.00	Warnings
1	20.0.00	Troubleshooting Index
8	30.0.00	Repair Section Index
23	60.0.00	Parts Drawing Index
—	Back Cover	Technical Data

NOTE: This instruction manual uses a page numbering system that **allows** sections and single pages to be added without changing existing page numbers. **Use** this example as a guide for reading the page numbers:

Topic No.	Sub-Heading	Page No.
40	4	10

SERVICE INFORMATION

The following pages of your manual, 307-658, have been changed. To **SUBSTITUTE** a page, discard the old page and insert the new one in its place. To **ADD** a page, insert the new page in the proper page sequence. Following this procedure **will** ensure that your manual accurately covers all models and series of Ultra sprayers.

Page No.	Type of Change	Reason for Change
Front Cover	ADD	To Revision B, 7/84
20.0.00	SUBSTITUTE	New troubleshooting index
26.0.00	SUBSTITUTE	Page number reference change
26.0.20	SUBSTITUTE	Add Ultra 400 calibration info.
27.0.10	ADD	Add bridge test procedure
30.0.00	ADD	New repair section index
41.0.00	SUBSTITUTE	Add Ultra 400 calibration info.
41.3.00	SUBSTITUTE	Add Ultra 400 calibration info.
41.4.00	SUBSTITUTE	Add Ultra 400 calibration info.
41.5.00	SUBSTITUTE	Add Ultra 400 calibration info.
50.0.11	SUBSTITUTE	Repair kit number change
60.0.00	SUBSTITUTE	Pam III update
60.0.01	SUBSTITUTE	Parts drawing update
60.0.10	SUBSTITUTE	Pam III update
60.0.11	SUBSTITUTE	Parts drawing update
61.0.00	SUBSTITUTE	Repair kit number change
62.0.00	SUBSTITUTE	Paw list b drawing change
65.0.00	ADD	Paw list service info.
Back Cover	SUBSTITUTE	Add Ultra 400 technical data

TROUBLESHOOTING SUMMARY

The following chart helps **you** determine the **CAUSE** of your **sprayer** malfunction. Find the symptom that closely describes **your** problem, then turn to the appropriate section and page of the **comprehensive** troubleshooting guide for further explanation of **the cause** and for the correct repair procedures.

	SYMPTOM	POSSIBLE CAUSES	PAGE	
SECTION 1	MOTOR WON'T OPERATE (Basic Fluid Problems)	Low pressure setting Clogged spray tip	21.0.0 21.0.W	
	(Basic Mechanical Problems)	Material frozen/hardened in pump Loose pump connecting rod pin Damaged motor	21.1.W 21.1.W 21.1.00	
	(Basic Electrical Problems)	Sprayer circuit breaker opened Wrong building voltage Damaged extension cord Damaged power supply cord Worn motor brushes	21.2.W 21.2.W 21.2.00 21.2.W 21.2.W	
	(Circuit board malfunction)	Diagnose condition of circuit board indicator lamps; normal condition is red lamp on , clear lamp off when board is telling pump to run *Condition A ; red and clear lamps on : pump won't operate, motor not running Condition B : both lamps off Condition C : red lamp on , clear lamp off Wiring diagrams	21.3.00 21.3.00 21.3.00 21.3.04 21.4.W	
SECTION 2	LOW FLUID OUTPUT	Worn spray tip Pump strokes after releasing gun trigger Wrong building voltage Wrong type extension cord Loose or damaged leads from bridge Incorrect stall pressure Motor brushes worn or leads loose Malfunctioning circuit board Short in motor armature Malfunctioning bridge	22.0.W 22.0.00 22.0.00 22.0.W 22.0.00 22.0.W 22.0.01 22.0.01 22.0.01 22.0.C	
	SECTION 3	NO FLUID OUTPUT (Motor runs and pump strokes)	Empty material supply Clogged intake strainer Loose suction tube Intake valve ball and piston ball not seating Worn or damaged throat packings	23.0.00 23.0.00 23.0.00 23.0.00 23.0.00
		(Motor runs but pump does not stroke)	Loose connecting rod pin Damaged connecting rod assembly Damaged crank Motor pinion gear slipping	23.0.10 23.0.70 23.0.10 23.0.10
	SEC 4	EXCESSIVE PRESSURE FLUCTUATIONS (Spray pattern variations)	Loose leads from bridge to board Incorrect stall pressure calibration Bourdon tube flag and detector out of position Malfunctioning circuit board (See LOW OUTPUT also)	24.0.00 24.0.00 24.0.00 24.0.W
		SEC 5	MOTOR IS HOT AND RUNS INTERMITTENTLY	Operating pressure of sprayer too high for size of tip orifice Sprayer located in direct sun Sprayer left in stalled condition Loose leads from circuit board to motor
	SEC 6		ELECTRICAL SHORT	Building circuit breaker opens as soon as sprayer is plugged in : sprayer NOT turned on Building circuit breaker opens as soon as sprayer is turned ON Sprayer circuit breaker opens after sprayer operates only 5 to 10 minutes.
		SEC 7	SPIN TEST	For checking armature, motor winding and brush electrical continuity
	BRIDGE TEST		<i>For checking for malfunctioning bridge</i> 27.0.10	

ULTRA333 AIRLESS SPRAYER**
Model 231-333
Includes items 1-126

REF NO.	PART NO.	DESCRIPTION	QTY
1		MOTOR, electric Includes items 1b, 1c	
	218-322	For Ultra 433 only; 1 HP	1
	218-323	For Ultra 333 only; 3/4 HP	1
1b	218-121	.HOUSING, motor (front end bell)	1
1c	107-422	.FAN, motor	1
2		DRIVE HOUSING ASSEMBLY Includes items 2a, 4, 5	
	218-032	For Ultra 433 only; 1 HP	1
	218-231	For Ultra 333 only; 3/4 HP	1
2a	107-327	.GREASE, gear, 10 oz.(not shown)	1
3	218-034	CONNECTING ROD ASSEMBLY	1
4	178-967	.SPACER	1
5	107-089	.WASHER, race	1
6	218-324	CART FRAME	1
9	179-961	GEAR CLUSTER	1
10	100-069	BALL, 1/4"; stainless steel	2
13	100-322	COCKWASHER, external, shakeproof; 7/16"	1
14		MOTOR COVER ASSEMBLY; Includes labd 37 and identificaiton labels	
	218-147	For Ultra 433 only; 1 HP	1
	218-186	For Ultra 333 only; 3/4 HP	1
15	214-701	HOSE, grounded, nylon: 3/16" ID; cpld 1/4 npsm(f); 3 ft (0.9 m) long; spring guard both ends	1
16	208-663	SPRAY GUN, airless; see 307-046 for parts (not shown)	1
	217-893	SPRAY GUN, airless; see 307-614 for parts (shown)	1
20	176-818	PIN	1
21	179-898	STUD, motor cover	2
22	065-099	CONDUIT, electrical	8 in.
23	210-641	HOSE, grounded, nylon; 3/8" ID; cpld 1/4 npsm(f); 50 ft (15 m) long; spring guard both ends	1
27	218-035	BEARING HOUSING ASSEMBLY	1
30	100-643	CAPSCREW, socket head: 1/4 x 1" long	2
31		FRONT COVER; indudes label 94	
	218-328	For Ultra 433 only	1
	218-327	For Ultra 333 only	1
32	107-209	SCREW, machine, filh; No. 8-32 x 1" long	4
33	107-210	CAPSCREW, socket head; 3/8 x 1.75" long	4
35	176-817	SPRING, mining	1
36	218-326	COVER, pressure control	1
37	**180-393	LABEL, "Warning"	1
38	178-941	NUT, hex; 1-5/8" thread	1
39	217-577	PUMP, displacement: see separate parts list on page 44	1
40	100-214	LOCKWASHER, 5/16	2
41	107-212	CAPSCREW, socket head: 5/16 x 0.5" long	2
42	180-573	TUBE, suction	1
43	218-037	PRESSURECONTROLASSEMBLY: See separate parts list on page 62.0.00	1
44	100-001	CAPSCREW, hex head: 1/2 x 0.625" long	1
46	162-453	NIPPLE, 1/4 npt(m) x 1/4 npsm	1

ULTRA433 AIRLESS SPRAYER**
Model 231-433
Includes items 1-126

REF NO.	PART NO.	DESCRIPTION	QTY
47	218-083	HOSE, grounded, nylon; 1/4" ID; cpld 1/4 npsm(f); 29" (715mm) lg; spring guard both ends	1
48	214-570	FLUID FILTER; see 307-253 for pans	1
49	106-115	LOCKWASHER, spring; 3/8"	4
50	210-657	BALL VALVE, 1/4 not	1 or 2
51	107-218	CAPSCREW, socket head; 1/4 x 2.75" long	2
53	105-521	PLUG	2
54	101-725	TIP, rubber	2
55	179-775	SPACER	2
56	179-780	AXLE	1
57	154-636	WASHER, plain; 5/8"	2
58	178-392	CLIP, spring	2
59	104-811	CAP, hub	2
60	179-811	WHEEL	2
62	104-008	LOCKWASHER, spring; 5/16"	2
63	107-219	BUSHING, 3/4 npt(m) x 1/2 npt(f)	1
65	105510	LOCKWASHER, spring; 1/4"	6
66	**178-034	TAG, warning	1
67	102-556	RIVET, blind	2
75	216-001	RAC III SPRAY TIP KIT	1
77	102-932	CONNECTOR, conduit	1
78	179-945	ADAPTER, elbow; 7/16 stud; 1/4 x 1/4 npt(f)	1
79	155-665	UNION, adapter; 3/8 npsm(f) swivel x 3/8 npt(m)	1
84	206-994	THROAT SEAL LIQUID, 8 oz.	1
85	150-513	JAM NUT, 7/16"	1
a7	106-075	SCREW, machine, oval head; thread forming; No. 10-24, Type C; 0.5" long	4
89	179-936	MOUNTING BRACKET	1
90	106-078	SCREW, flat head; thread rolling; No. 10-24 x 0.375" long	4
91		LABEL, identification	
	179-948	For Ultra 433 only	1
	179-952	For Ultra 333 only	1
92		LABEL, identification	
	179-951	For Ultra 433 only	1
	179-953	For Ultra 333 only	1
93	179-949	LABEL, identification	1
94		LABEL, identification	
	179-950	For Ultra 433 only	1
	179-954	For Ultra 333 only	1
99	**178-934	LABEL, "Warning"	1
110	179-995	BRACKET, mounting	2
111	102-744	NUT, sheet	2
112	107-248	SCREW, machine; round head; cross head; No. 10-24 x 2.5" long	2
113	157-974	WASHER, plain; 3/16"	2
114	107-199	CLIP, receptacle	2
121	218-405	CIRCUIT BOARD, see page 63.0.30	1
122	100-509	PLUG, for Ultra 333 only	1
125	170-959	STRAINER, inlet, 16 mesh	1
126	107-447	SEAL, conduit (Refer to page 62.0.00)	1

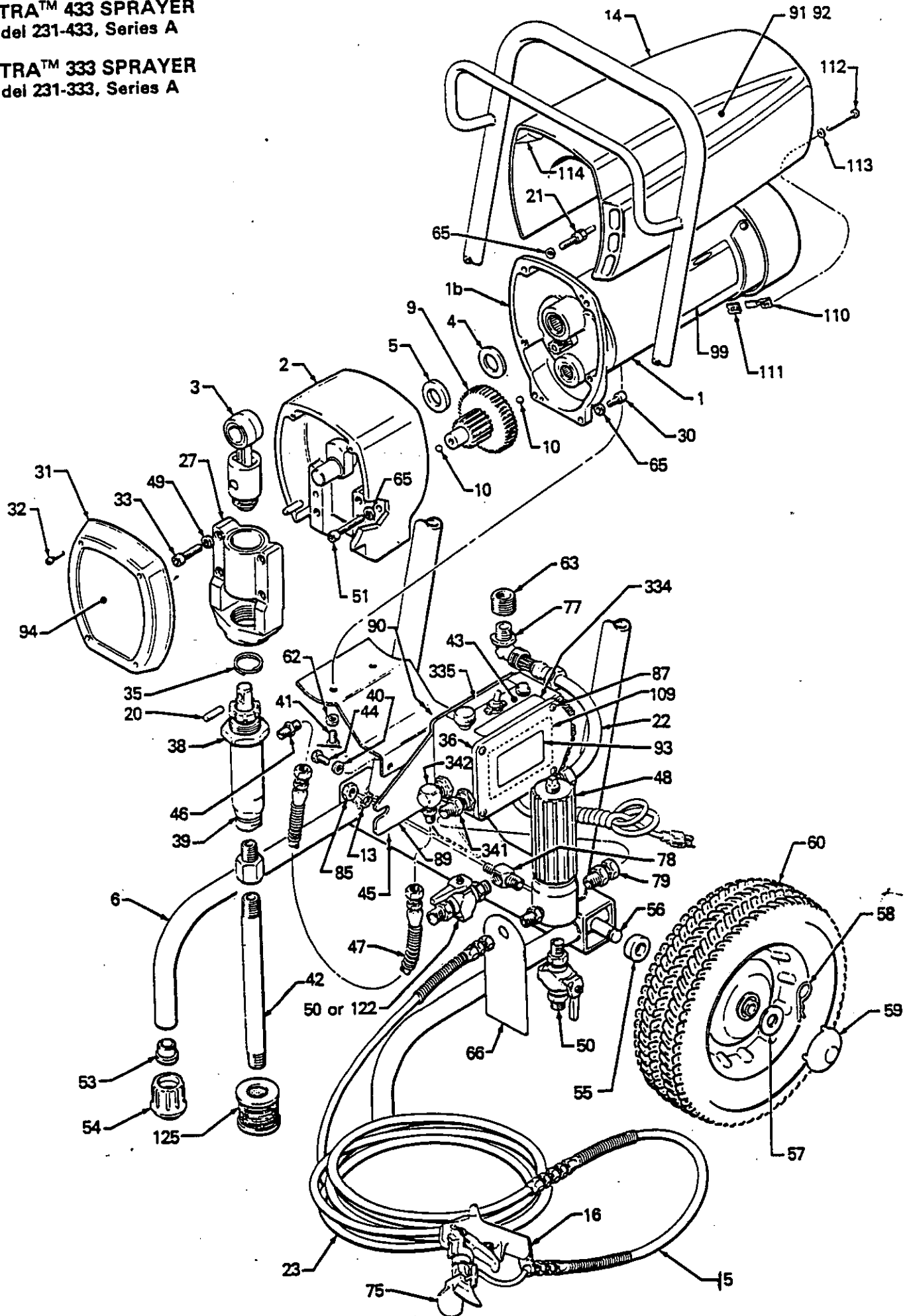
307 number in description refers to separate instruction manual.

*Warning labels and tags supplied at no charge.

Order parts by name and series letter of the assembly for which you are ordering.

ULTRA™ 433 SPRAYER
Model 231-433, Series A

ULTRA™ 333 SPRAYER
Model 231-333, Series A



ULTRA™ 400 SPRAYER
Model 231-400, series A
Includes items 1-122

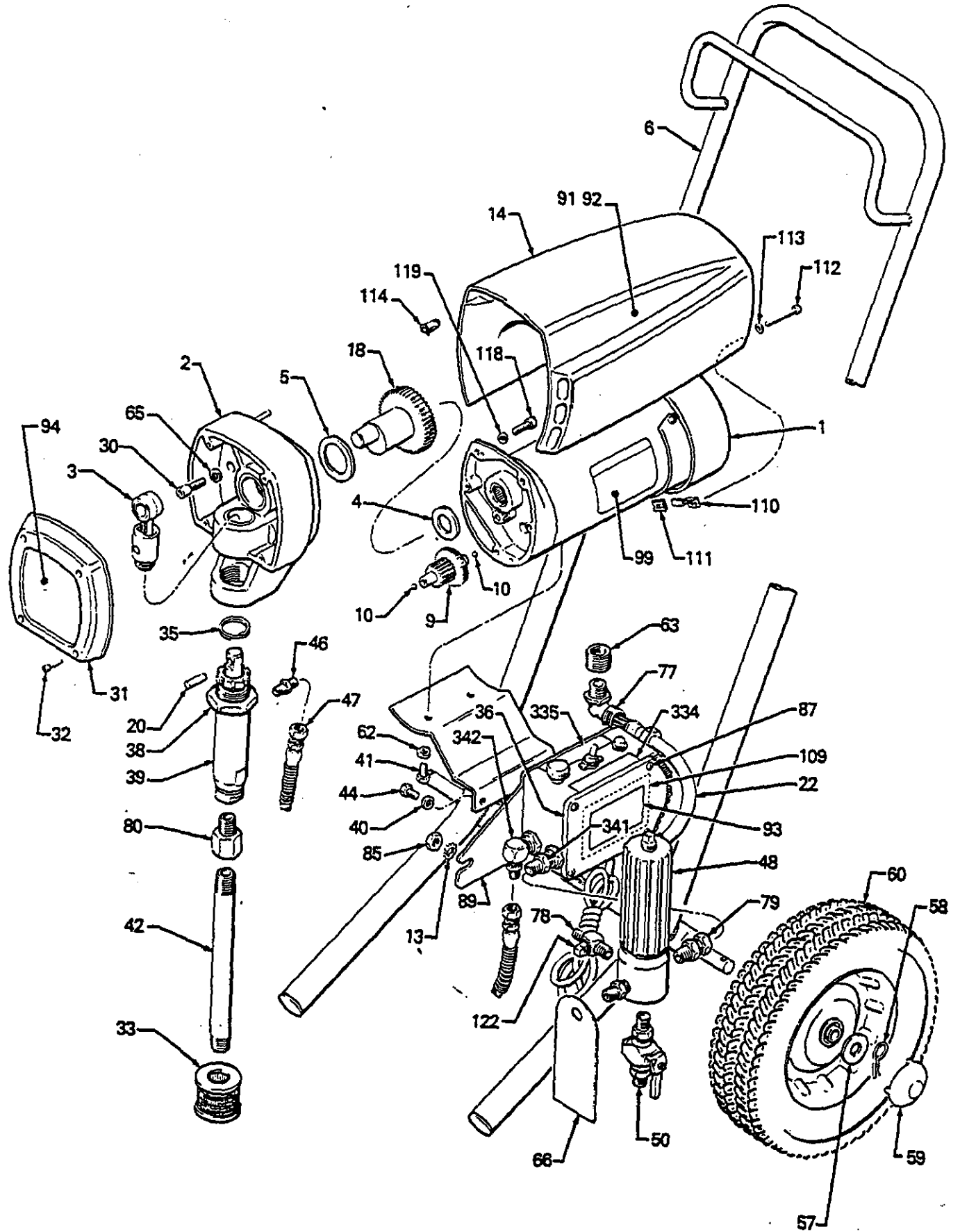
REF NO.	PART NO.	DESCRIPTION	QTY	REF NO.	PART NO.	DESCRIPTION	QTY
1	218-360	MOTOR, electric Includes items 1b, 1c		47	218-083	HOSE, grounded. nylon: 114" ID; cpld 1/4 npsm(f); 29" (715 mm) lg; spring guard both ends	1
1b	218317	.HOUSING, motor (front and bell)	1	48	216570	FLUID FILTER; see 307-253 for parts	1
1c	107-422	.FAN, motor	1	50	210-657	BALL VALVE, 1/4 npt	1 or 2
2	218-357	DRIVE HOUSING ASSEMBLY Includes item 2a		57	176-884	WASHER, plain; 5/8"	2
2a	107-327	.GREASE, gear. 10 oz. (not shown)	1	58	178-392	CLIP, retaining	2
3	218-359	CONNECTING ROD ASSEMBLY	1	59	104-811	CAP, hub	2
4	107-434	SPACER	1	60	106-062	WHEEL	2
5	180-131	WASHER, race	1	62	104-008	LOCKWASHER. spring; 5/16"	2
6	218-361	CART FRAME	1	63	107-219	BUSHING, 3/4 npt(m) x 1/2 npt(f)	1
9	218-364	GEAR CLUSTER	1	65	105-510	LOCKWASHER, spring; 1/4"	3
10	100-069	BALL, 1/4"; stainless steel	2	66	**178-034	TAG, warning	1
13	100-322	LOCKWASHER. external. shakeproof. 7/16"	1	67	102-556	RIVE?, blind'	2
14	218-362	MOTOR COVER ASSEMBLY		75	216-001	RAC III SPRAY TIP KIT	1
15	214-701	HOSE, grounded, nylon: 3/16" ID; cpld 1/4 npsm(f); 3 ft (0.9m) long; spring guard both ends	1	77	102-932	CONNECTOR, conduit	2
16	217-593	SPRAY GUN. airless; see 307-614 for parts	1	78	179-945	ADAPTER. elbow: 7/16"stud: 1/4 x 114 npt(f)	1
18	218242	CRANKSHAFT ASSEMBLY	1	79	155-665	UNION, adapter; 3/8 npsm(f) swivel x 3/8 npt(m)	1
20	176-818	PIN	1	80	178-460	ADAPTER: 3/8 npt(m) x 1/2 npt(f)	1
21	107-424	PIN	2	84	206-994	THROAT SEAL LIQUID. 8 oz.	1
22	065-099	CONDUIT, electrical	7.5 in.	85	150-513	JAM NUT, 7/16"	1
23	210-541	HOSE, grounded, nylon: 3/8" ID; cpld 1/4 npsm(f); 50 ft (15 m) long; spring guard both ends	1	87	106-075	SCREW, machine. oval head: thread forming; No. 10-24, Type C; 0.5" long	4
30	107-445	CAPSCREW. socket head: 114 x 1.5" long	3	89	179-936	MOUNTING BRACKET	2
31	218-363	FRONT COVER: includes label 94		90	106-078	SCREW. flat head: thread rolling; No. 10-24 x 0.375" long	4
32	107-209	SCREW, machine, filh; No. 8-32 x 1" long	4	91	180-084	LABEL, identification	
33	102-952	STRAINER	1	92	180-083	LABEL, identification	
35	176-817	SPRING, retaining	1	93	179-949	LABEL, identification	1
36	218-326	COVER, pressure control; includes labels 93 & 109	1	94	180-138	LABEL, identification	1
37	**180-393	LABEL, "Warning"	1	99	**178-934	LABEL, "Warning"	2
38	176-762	NUT, hex; 1.5" thread	1	109	**177-762	LABEL, "Warning"	1
39	218215	PUMP, displacement: see separate parts list on page 61.0.10	1	110	179-995	BRACKET, mounting	2
40	100-214	LOCKWASHER. 5/16"	2	111	102-744	NUT, sheet	2
41	107-212	CAPSCREW. socket head; 5/16 x 0.5" long	1	112	107-248	SCREW. machine; round head: cross head: No. 10-24 x 2.5" long	2
42	180-192	SIPHON TUBE	1	113	157-974	WASHER, plain: 3/16"	2
43	218-037	PRESSURE CONTROL ASSEMBLY; See separate parts list on page 62.0.00	1	114	107-199	CUP, receptacle	2
44	100-001	CAPSCREW. hex head; 1/2 x 0.625" long	1	118	107-423	SCREW	2
48	162-453	NIPPLE, 1/4 npt(m) x 1/4 npsm	1	119	100-028	LOCKWASHER	2
				121	218-405	CIRCUIT BOARD, see page 63.0.30	1
				122	100-509	PLUG, pipe	1

307 number in description refers to separate instruction manual.

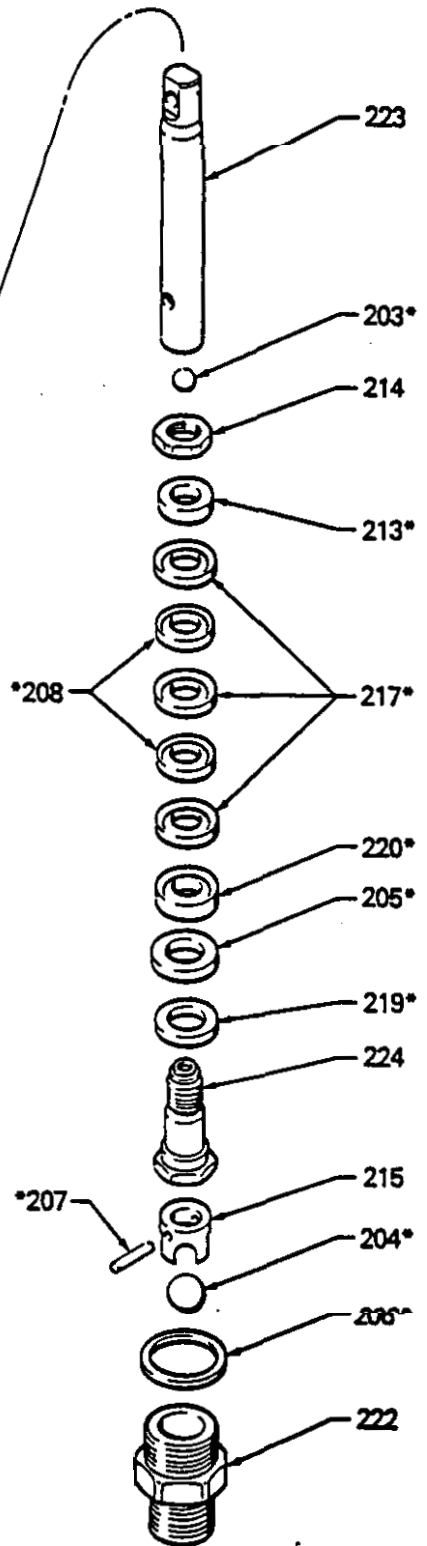
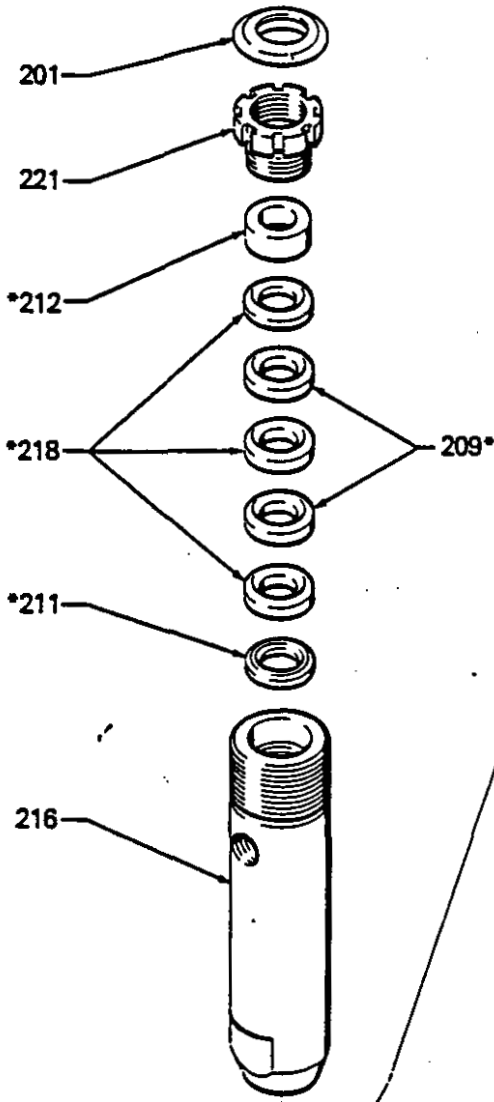
**Warning labels and tags supplied at no charge.

Order parts by name and series letter of the assembly for which you are ordering.

ULTRA™ 400 SPRAYER
Model 231-400, Series A



ULTRA™ 433 & ULTRA™ 333 SPRAYER
 Displacement Pump, 217-577, Series A
 Includes items 201 to 224



220-366

Repair Kit ~~218-033~~
 (Must be purchased separately).

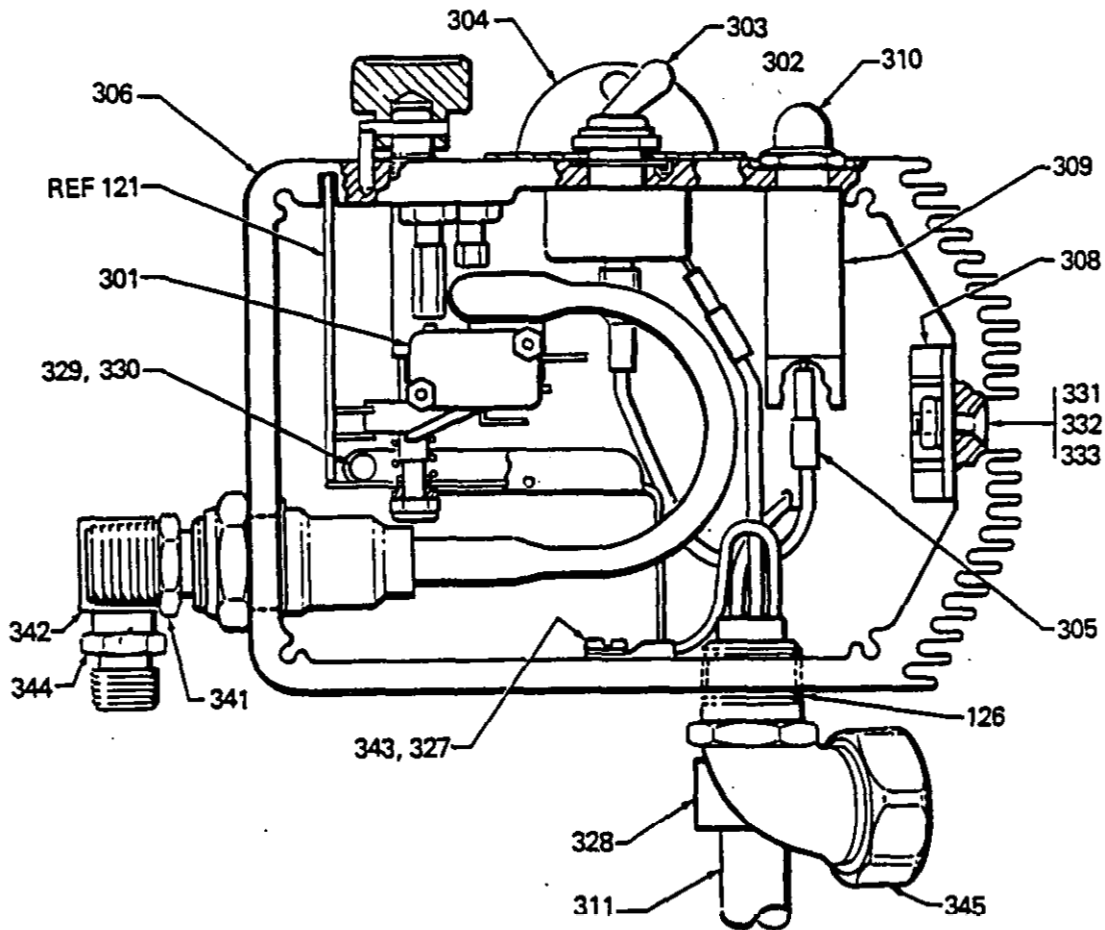
For pump packings and motor brushes. Includes all starred (*) items in parts list below, plus two motor brushes.

REF NO.	PART NO.	DESCRIPTION	QTY	REF NO.	PART NO.	DESCRIPTION	QTY
201	179-810	PLUG	1	214	178-945	NUT, hex	1
203	*105-444	BALL	1	215	178-948	GUIDE, ball	1
204	*105-445	BALL	1	216	178-949	CYLINDER	1
205	*107-093	SEAL, U-cup	1	217	*178-964	V-PACKING, plastic	3
206	*150-429	GASKET	1	218	*178-965	V-PACKING, plastic	3
207	*178-938	PIN, ball stop	1	219	*178-966	WASHER, backup	1
208	*178-939	V-PACKING, leather	2	220	*178-969	GLAND, packing	1
209	*178-940	V-PACKING, leather	2	221	179-809	NUT, packing/wet-cup	1
211	*178-942	GLAND, packing, male	1	222	217-574	VALVE, intake	1
212	*178-943	GLAND, packing, female	1	223	218-017	ROD, piston	1
213	*178-944	GLAND, packing, male	1	224	218-036	VALVE, piston	1

PRESSURE CONTROL ASSEMBLY 218-037

Includes items 301-345

NOTE: A circuit board is not included with the pressure control assembly 218-037. Order pan no. 218-405 (ref. no. 121. page 60.0.00 or 60.0.10) separately. The terminals listed in this parts list are shown in each of the wiring diagrams on the next five pages.



REF NO.	PART NO.	DESCRIPTION	QTY	REF NO.	PART NO.	DESCRIPTION	QTY
301	180-043	MICROSWITCH	1	329	107-258	TIP, pin, black plastic	1
302	105-679	ON/OFF SWITCH	1	330	-----	PIN	1
303	106-559	BOOT, ON/OFF switch	1	331	180-041	SCREW, machine, flat head: NO. 10-24 x S I (4eng)	1
304	107-255	GUARD, locking	1	332	100-179	NUT, hex, mscr, No. 1024thd	1
305	218-168	JUMPER WIRE	1	333	100-718	LOCKWASHER, internal, shakeproof; No. 10	1
306	218-126	BARE PRESSURE CONTROL BOX Includes item 301 - 304	1	334	**178-797	LABEL, WARNING	1
308	218-170	BRIDGE, rectifier, SCR	1	335	**178-035	LABEL, WARNING	1
309	107-256	CIRCUIT BREAKER	1	336	107-261	TERMINAL, male	2
310	107-254	BOOT, circuit breaker	1	337	107-503	TERMINAL, female	1
311	218-169	CORD, power supply	1	338	107-504	TERMINAL, male	1
312	107-258	ADAPTER, terminal	1	339	218-410	ADAPTER, wire	1
314	107-267	TERMINAL, male	3	340	218-409	ADAPTER, wire	1
315	107-263	TERMINAL, female	1	341	157-350	ADAPTER, 3/8 npt(m) x 1/2 npt(m)	1
316	107-264	TERMINAL, male	2	342	100-240	ELBOW, street; 1/4 npt(m x f)	1
317	107-336	TERMINAL, male	1	343	100-035	SCREW, mach; slotted pan head: No. 8 x 5/16" long	1
318	107-262	TERMINAL, female	1	344	182-433	NIPPLE, 1/4 npt(m) x 1/4 npsm	1
319	107-260	TERMINAL, female	1	345	102-332	CONNECTOR, conduit	1
320	107-266	TERMINAL, female	1				
321	103-888	TERMINAL, male	1				
322	103-888	TERMINAL, female	1				
323	107-265	TERMINAL, female	2				
324	107-263	TERMINAL, female	1				
325	102-799	TERMINAL, ring	1				
327	157-021	LOCKWASHER, No. 8, internal	1				
328	106-170	BUSHING, main relief	1				

307 number in description refers to separate inst. manual.

**Warning labels and tags supplied at no charge.

Order parts by name and series letter of the assembly for which you are ordering.

PARTS LIST SERVICE INFORMATION

Listed below by the assembly changed are **OLD**, **NEW**, **ADDED** and **DELETED** parts. Added parts marked with an asterisk (*) indicate that they were **formerly** listed as part of another assembly in your sprayer.

ASSEMBLY CHANGED	PART STATUS	REF NO.	PART NO.	NAME
231-333 B 231-433 Sprayers	OLD		179-885	Label
	NEW	37	180-393	Label
	OLD		218-078	Suction Kit
	NEW	42	180-753	Suction Tube
	NEW	125	170-959	Strainer
	DELETED	86	157-350	Adapter
	DELETED	88	100-840	Elbow
	DELETED	100	100-035	Screw
	ADDED	128	107-447	Seal
218-037 Pressure Control	ADDED*	341	157-350	Adapter
	ADDED*	342	100-840	Elbow
	ADDED*	343	100-035	Screw
	ADDED	344	162-453	Nipple
	ADDED	345	102-932	Connector
231-400 Sprayer	OLD		179-888	Stud
	NEW	21	107-424	Pin
	DELETED	37	179-885	Label
	ADDED	37	180-343	Label
	DELETED	49	106-115	Lockwasher
	DELETED	86	151-350	Adapter
	DELETED	88	100-840	Elbow
	DELETED	100	100-035	Screw

NOTE: ADDED and DELETED parts are not interchangeable.

ULTRA 433 TECHNICAL DATA

Power Requirements : 115 VAC. 60 Hz, 1 Phase, 15 AMP minimum
Operating Range : 0-3000 psi (0-210 bar)
Cycles/Gallon (liter) : 200 (53)
Maximum Delivery : .85 GPM (3.2 liter/min)
Power Card : No. 14 AWG. 3 wire, 8'6" long
Inlet Paint Strainer : 16 mesh, 1190 micron. Stainless Steel Screen, reusable
Outlet Paint Filter : 60 mesh. 250 micron. Stainless Steel screen, reusable
Pump Inlet Size : 3/4 npt w/30° I.D. chamfer
Fluid Outlet Size : 1/4 npsm fmm fluid filter
Weight : 100 lb (45 Kg) approximately
Wetted Parts : Aluminum, Oelrin, Nitralloy, Nylon, Polyethylene,
ethane. Rubber impregnated leather, Stainless Steel.
PTFE Tungsten Carbide, Zinc-plated steel
Dimensions : Width: 22.5 in.
Height: 28.0 in.
Length: 26.0 in.

ULTRA 333 TECHNICAL DATA

Power Requirements : 115 VAC, 60 Hz, 1 Phase, 15 AMP minimum
Operating Range : 0-3000 psi (0-210 bar)
Cycles/Gallon (liter) : 260 (70)
Maximum Delivery : .6 GPM (2.3 liter/min)
Power Card : No. 14 AWG. 3 wire, 8'6" long
Inlet Paint Strainer : 16 mesh, 1190 micron. Stainless Steel Screen, reusable
Outlet Paint Filter : 60 mesh, 250 micron, Stainless Steel screen, reusable
Pump Inlet Size : 3/4 npt w/30° I.D. chamfer
fluid Outlet Size : 1/4 npsm fmm fluid filter
Weight : 95 lb (43 Kg) approximately
Wetted Parts : Aluminum, Delrin, Nitralloy, Nylon, Polyethylene,
ethane. Rubber impregnated leather, Stainless Steel.
PTFE Tungsten Carbide, Zinc-plated steel
Dimensions : Width: 22.5 in.
Height: 28.0 in.
Length: 26.0 in.

ULTRA 400 TECHNICAL DATA

Power Requirements : 115 VAC. 60 Hz, 1 Phase, 10 AMP minimum
Operating Range : 0-2750 psi (0-195 bar)
Cycles/Gallon (liter) : 470 (124)
Maximum Delivery : .45 GPM (1.8 liter/min)
Power Card : No. 14 AWG. 3 wire, 8'6" long
Inlet Paint Strainer : 16 mesh, 1190 micron, Stainless Steel Screen, reusable
Outlet Paint Filter : 60 mesh, 250 micron, Stainless Steel screen, reusable
Pump Inlet Size : 1/2 npt
Fluid Outlet Size : 1/4 npsm from fluid filter
Weight : 75 lb (35 Kg) approximately
Wetted Parts : Aluminum, Delrin, Nylon, Polyethylene, Polyurethane,
Rubber impregnated leather, Stainless Steel,
Tungsten Carbide
Dimensions : Width: 21 in.
Height: 28.5 in.
Length: 23 in.

Factory Branches: Atlanta, Dallas, Detroit, Los Angeles, West Caldwell (N.J.)
Subsidiary and Affiliate Companies: Canada; England; Switzerland; France; Germany; Hong Kong; Japan
GRACO INC. P. O. Box 1441 MINNEAPOLIS, MN 55440-1444