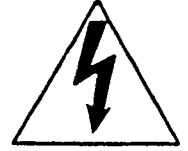


WRANGLER 24

IMPORTANT SAFETY INSTRUCTIONS



**READ AND UNDERSTAND ALL INSTRUCTIONS
BEFORE OPERATING OR SERVICING MACHINE**



DANGER!

Failure to Observe These Instructions Can Cause Personal Injury to Machine Operator, By-Standers or Possible Machine Damage.

- **NEVER** attempt to operate this machine unless you have been trained in its operation.
- **NEVER** allow an untrained person to operate this machine.
- Use this machine **ONLY** as described in this manual.
- **NEVER** attempt to operate this machine if it is not working properly or has been damaged in any manner.
- **NEVER** disconnect or modify any switch or safety device (circuit breaker) on this machine.
- **ALWAYS** operate this machine from the rear control panel, not from the side.
- **NEVER** drop or insert any object into any machine opening.
- **ALWAYS** keep face, fingers, hair or any body part, or loose clothing away from any machine opening or moving part (revolving brush, pad driver or vacuum motor).
- **NEVER** operate machine with any air opening blocked. Keep all air openings free of dust, lint, hair etc.
- **NEVER** spray machine with water or any liquids.
- **NEVER** allow vacuum motor or battery charging plug to get wet. Vacuum motor and battery charging plug will short out if wet.
- **NEVER** operate machine when battery charger is plugged in.
- **NEVER** operate machine in an explosive atmosphere (grain dusts, flammable liquids or fumes).
- **NEVER** use flammable liquids (gas, kerosene, solvents or thinners) to clean floor.
- **ALWAYS** turn OFF brush switch when attaching pads or brushes.
- **NEVER** operate machine with splash skirt removed.
- **NEVER** leave machine unattended.
- **ALWAYS** store this machine indoors in a dry, cool area.

PERSONAL INJURY AND PROPERTY DAMAGE FROM MACHINE OVERTURNING, BATTERIES FALLING OUT OF MACHINE OR BATTERIES LEAKING ACID CAN OCCUR IF YOU DO NOT FOLLOW THESE PRECAUTIONS:

ALWAYS be sure ramp is secured to vehicle before attempting to load/unload.

ALWAYS use extreme caution when operating machine on a ramp or loading/unloading a machine into or out of a truck. Use extreme caution if ramp is wet, oily or covered with cleaning chemicals.

NEVER turn machine on an incline.

NEVER stop machine on a ramp.

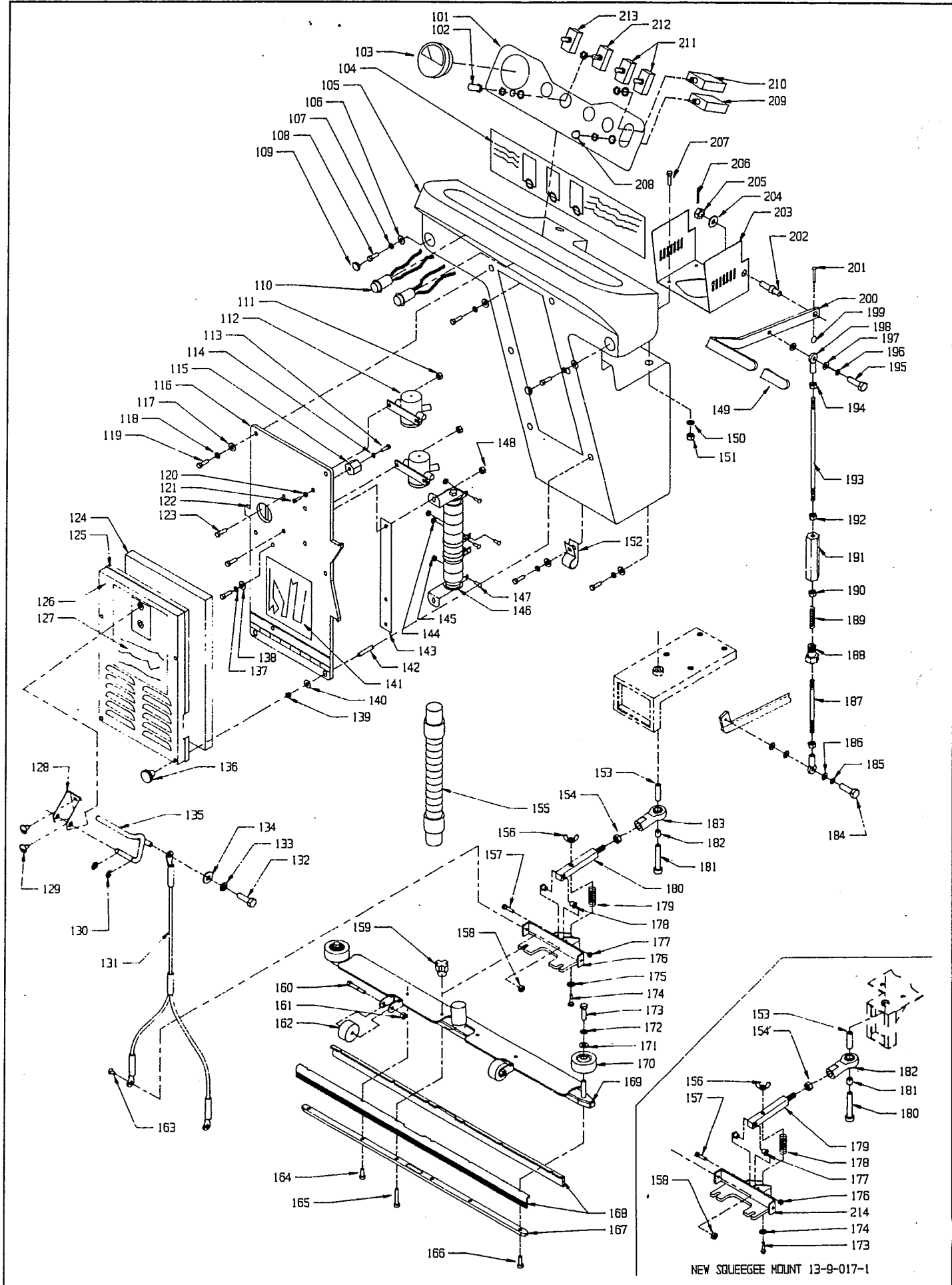
NEVER attempt to climb a grade of more than 20 degrees.

NEVER park machine near a dock or on ramps.

ALL repair service must be performed by an NSS authorized distributor/service station. Use only NSS original equipment parts.

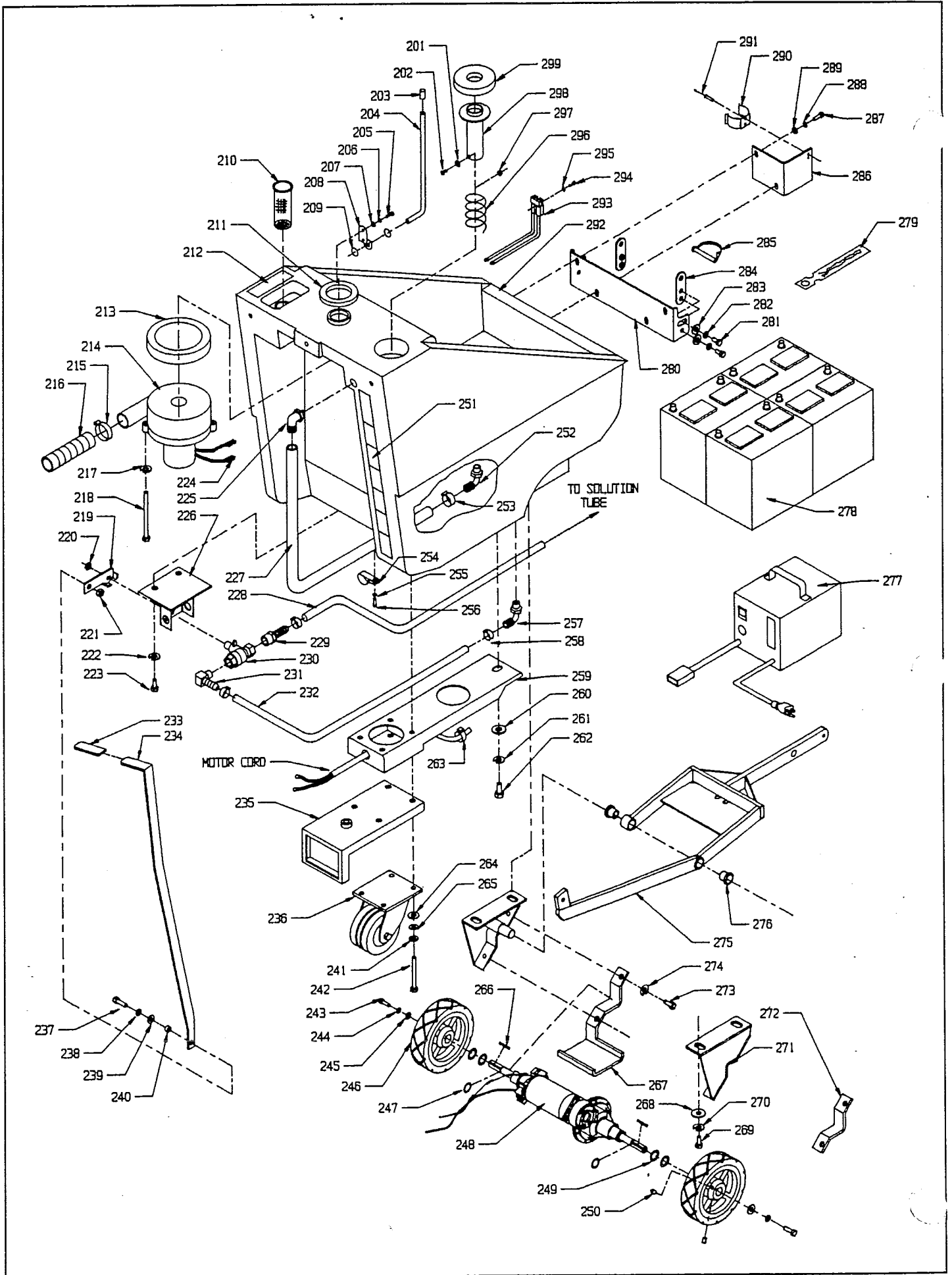
SAVE THESE INSTRUCTIONS





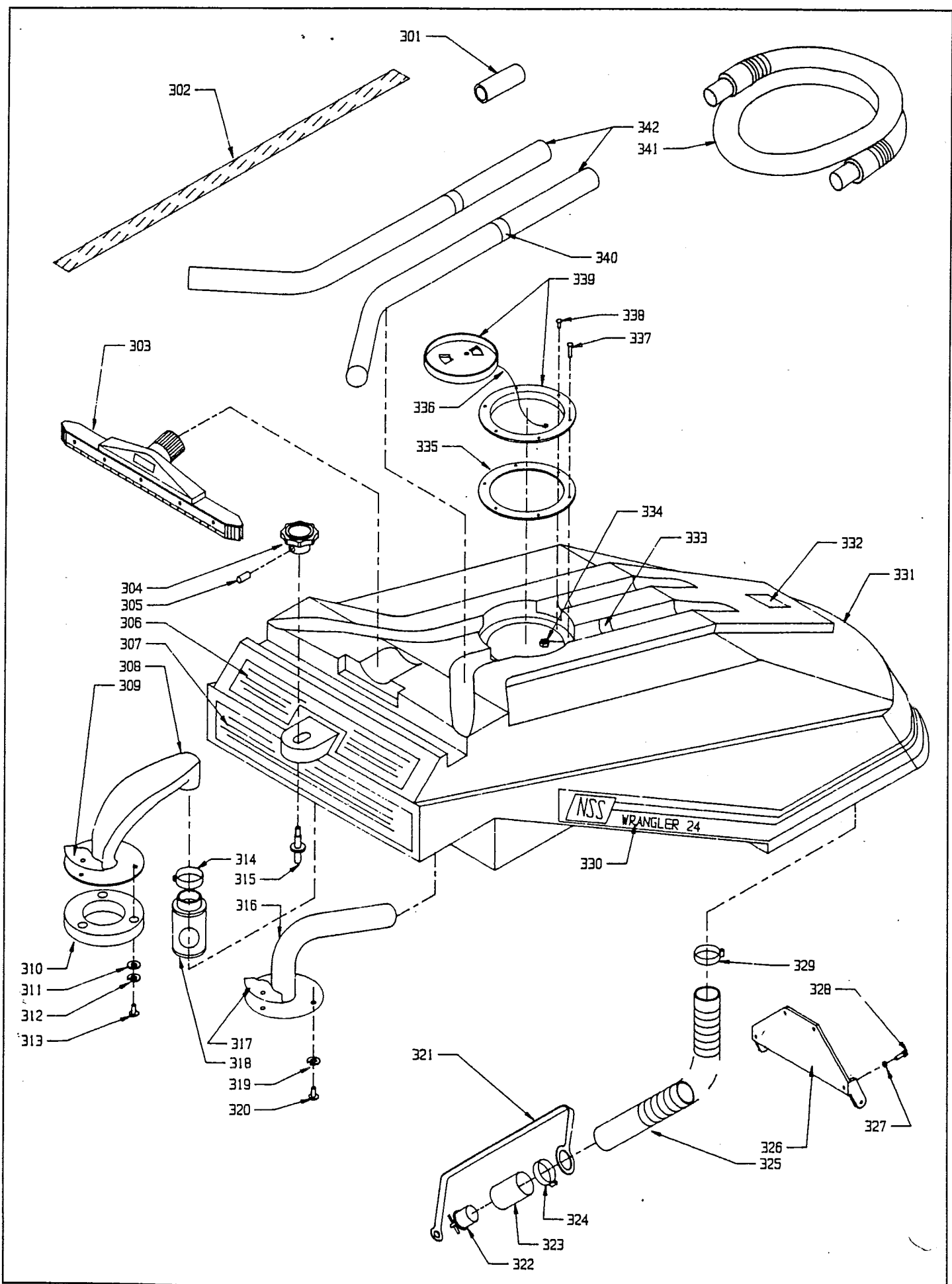
CONTROL PANEL/SQUEEGEE ASSEMBLY

ITEM NO	PART NO	DESCRIPTION	QTY	ITEM NO	PART NO	DESCRIPTION	QTY
101	23-9-553-1	LABEL, CONTROL WR20/24WD	1	159	27-9-100-2	SQUEEGEE KNOB, MACHINED	2
102	06-9-314-1	RUBBER SWITCH BOOT	4	160	————	BOLT, 5/16-18x1 3/4 HEX HD	2
103	23-9-139-1	BATTERY METER -24V	1	161	————	NUT, 5/16-18 ESNA	2
104	23-9-183-1	WIRE DIAGRAM-BATTERY	1	162	30-9-674-1	WHEEL, BUMPER-SMALL GRAY	1
105	23-9-552-1	PANEL, CONTROL WR20/24WD	1	163	————	SCREW, 1/4-20x3/4 TRUSS HD PHIL	2
106	————	WASHER, 5/16 FLAT SAE	5	164	————	SCREW, 5/16-18x3/4 SKT HD CAP	2
107	————	WASHER, 5/16 EXT STAR LOCK	5	165	————	SCREW, 5/16-18x1 1/2 SKT HD CAP	2
108	————	BOLT, 5/16-18x3/4 HEX HD	5	166	————	SCREW, 5/16-18x3/4 SKT HD CAP	2
109	06-9-076-1	PLUG BUTTON	2	167	26-9-253-3	INNER CHANNEL SQUEEGEE NAR. MNT.1	1
110	23-9-555-1	SWITCH, DEADMAN BUTTON	2	168	27-9-106-1	32-RPL. SQ. BLADES, SET OF 2	1
111	————	NUT, 1/4-20 KEPS	5	169	26-9-252-3	HOUSING, NAR MNT SQUEEGEE WR27 1	1
112	23-9-135-1	SOLENOID, 24V	2	26-9-253-9	26-9-253-9	SQUEEGEE ASSY. NAR MNT. WR-27 1	1
113	————	BOLT, 1/4-20x1/2 HEX HD	1	170	27-9-028-1	3- BUMPER WHEEL	2
114	————	WASHER, 1/4 EXT STAR LOCK	1	171	————	WASHER, 5/16 SAE FLAT	2
115	44-9-056-1	INSULATED STANDOFF	1	172	————	WASHER, 5/16 EXT STAR LOCK	2
116	23-9-539-3	PANEL, COVER	1	173	————	BOLT, 5/16-18x1/2 HEX HD	2
117	————	WASHER, #10 FLAT	2	174	————	BOLT, 5/16-18x2 1/4 HEX HD	1
118	————	WASHER, #10 SPLIT LOCK	2	175	————	WASHER, 5/16 SPLIT LOCK	1
119	————	BOLT, #10-32x3/8 RND HD PHIL	2	176	13-9-017-3	SQUEEGEE BRACKET	1
120	————	WASHER, 1/4 EXT STAR LOCK	1	177	————	NUT, 3/8 16 ESNA	1
121	————	BOLT, 1/4-20-3/8 HEX HD	1	178	13-9-117-1	BUSHING, SQUEEGEE SHAFT	2
122	99-9-756-0	VELCRO LOOP, P.S.	.08 FT	179	26-9-558-1	SPRING	1
123	————	BOLT, 1/4-20x3/8 HEX HD	6	180	13-9-015-6	SQUEEGEE PIVOT ROD	1
124	23-9-153-1	FILTER - WRANGLER 20/24	1	181	————	BOLT, 1/2-13x3 HEX HD	1
125	04-9-355-1	C-14 BAG RING GASKET	1	182	10-9-098-1	SPACER	1
126	23-9-549-3	COVER BOX	1	183	23-9-194-1	BALL JOINT -WRANGLER 20	1
127	23-9-543-1	LABEL, BRUSH-WA 20/24	1	184	————	BOLT, 3/8-16x1 1/4 HEX HD	1
128	13-9-079-3	SQUEEGEE LIFT BRACKET	1	185	————	WASHER, 3/8 SPLIT LOCK	1
129	————	SCREW, 1/4-20x3/8 TRUSS HD PHIL	2	186	————	WASHER, 3/8 FLAT	3
130	13-9-094-1	5/16 E RING	2	187	26-9-181-1	SHORT UFT ROD, BRUSH	1
131	24-9-530-1	SQUEEGEE LIFT CABLE	1	188	26-9-183-1	SPRING HOUSING, RETAINER	1
132	————	SCREW, 10-24x3/8 TRUSS HD	1	189	26-9-184-1	SPRING, BRUSH PRESSURE	1
133	————	WASHER, #10 SPLIT LOCK	1	190	————	NUT, 3/8 16 ESNA LOCK	1
134	————	WASHER, #10 FLAT	1	191	26-9-182-1	SPRING HSG., BRUSH LIFT	1
135	24-9-067-1	HANDLE, SQUEEGEE LIFT	1	192	————	NUT, 3/8-16 HEX NUT	1
136	23-9-137-1	KNURLED KNOB - WRANGLER 20	4	193	23-9-537-1	LOCK DOWN LIFT ROD WR 20/24	1
137	————	WASHER, 1/4 SPLIT LOCK	2	194	————	NUT, 3/8 24 JAM	2
138	————	WASHER, 1/4 FLAT	2	195	————	BOLT, 3/8-16x1 HEX HD	1
139	————	NUT, 10-32 KEPS	4	196	————	WASHER 3/8 SPLIT LOCK	1
140	————	WASHER, #12 FLAT	4	197	————	WASHER 3/8 FLAT	2
141	24-9-511-1	WIRING DIAGRAM DECAL	1	198	44-9-053-1	3/8" ROD END	2
142	23-9-249-1	10-32x1-3/4 SETSCREW	4	199	23-9-256-1	CIRCLE COTTER - #CC-7	1
143	23-9-577-3	BRACKET, RESISTOR	1	200	26-9-137-3	LIFT HANDLE, BRUSH	1
144	————	NUT, 10-24 SQUARE	1	201	23-9-195-1	PIN -WRANGLER 20	1
145	————	NUT, 10-24 KEPS	3	202	24-9-066-1	PIVOT STUD	1
146	26-9-512-1	RESISTOR	1	203	23-9-556-3	BRACKET, MOUNT LIFT ARM	1
147	————	SCREW, 10-24x1/2 RND HD PHIL	4	204	————	1/2 SAE WASHER	1
148	————	NUT, 1/4-20 HEX	2	205	23-9-271-1	1/2-13 HEX SLOTTED NUT	1
149	26-9-098-1	LIFT HANDLE GRIP	1	206	52-9-652-1	HUMPED COTTER PIN	1
150	————	WASHER, 1/4 SAE FLAT	4	207	————	BOLT, 1/4-20x3/4 HEX HD	4
151	————	NUT, 1/4-20 KEPS	4	208	48-9-247-1	C. BRKR BUTTON SEAL	2
152	42-9-232-1	HOSE CLAMP	1	209	23-9-220-1	CIRCUIT BREAKER, 10AMP	1
153	24-9-059-1	SPACER	1	210	23-9-136-1	CIRCUIT BRKR, 25 AMP	1
154	————	NUT, 1/2-20 JAM	1	211	33-9-041-1	FOOD-REV SWITCHES	2
155	26-9-059-1	SQUEEGEE VAC HOSE W/CUFFS	1	212	27-9-204-1	VAC MOTOR SWITCH	1
156	————	NUT, 5/16-18 WING	1	213	44-9-110-1	TOGGLE SWITCH	1
157	————	BOLT, 3/8 16x2 HEX HD	1	214	13-9-017-1	SQUEEGEE BRACKET	1
158	————	NUT, 1/4-20 ESNA	2				



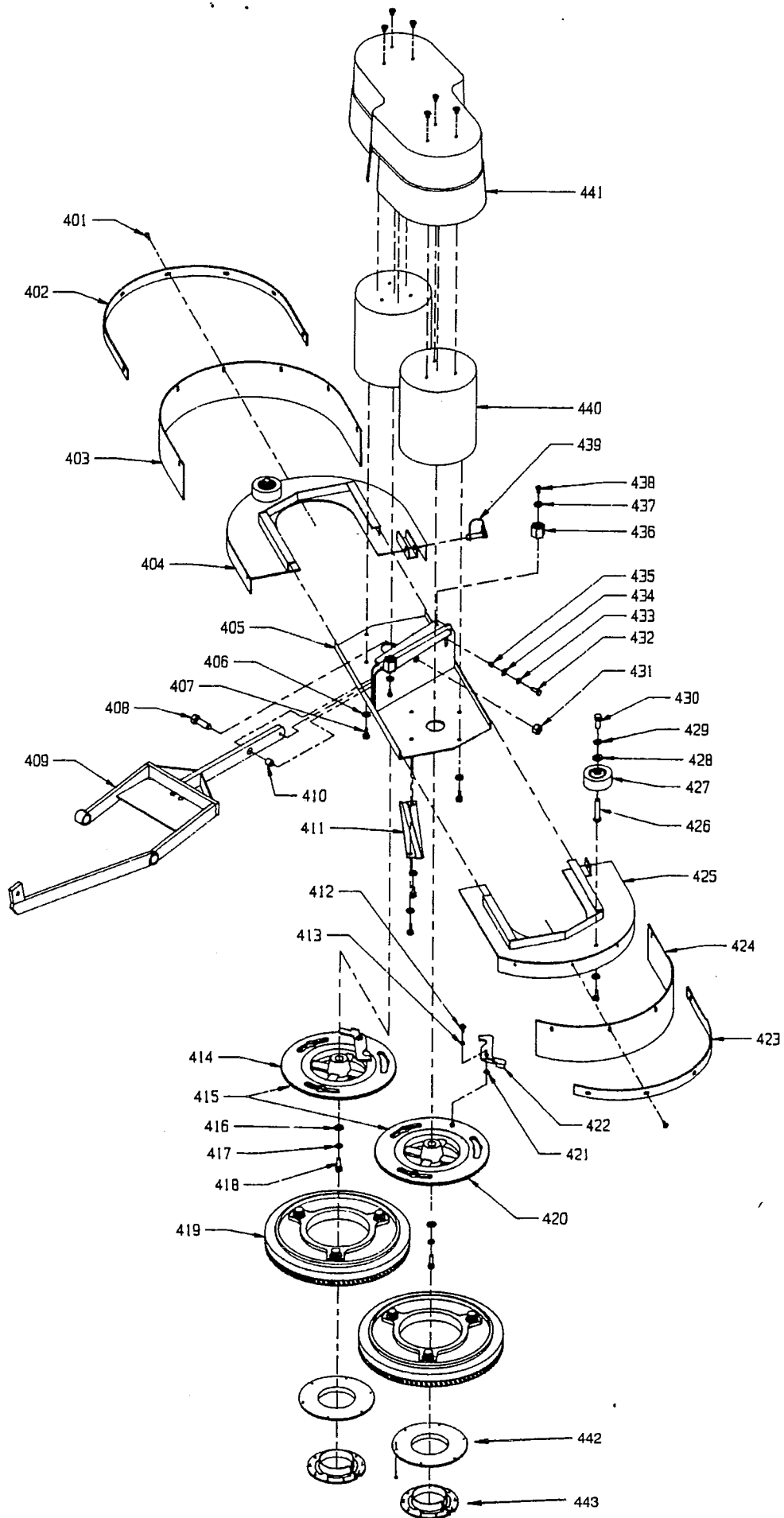
SOLUTION TANK/CHASSIS TRANSAXLE ASSEMBLY

ITEM NO	PART NO	DESCRIPTION	QTY	ITEM NO	PART NO	DESCRIPTION	QTY
201	—	WASHER, #10 SPLIT LOCK	1	252	23-9-177-1	90 DEGREE HOSE BARB	1
202	—	SCREW, 10-24x3/8 RND HD PHIL	1	253	24-9-214-1	CLAMP, HOSE STEEL .953-1.093	1
203	50-9-253-1	SOL. FEED TUBE CAP	1	254	23-9-576-1	CLAMP, TUBE	1
	23-9-163-6	HOOD ROD, PLATED -WRANGLER 20/24	1	255	—	WASHER, 5/16 SPLIT LOCK	1
205	—	BOLT, 1/4-20x1/2 HEX HD	2	256	—	BOLT, 5/16-18x3/4 HEX HD	1
206	—	WASHER 1/4 SPLIT LOCK	2	257	24-9-515-1	FITTING, ELL, 1/2 BARB x 1/4 MNPT	1
207	—	WASHER 1/4 FLAT	2	258	27-9-584-1	HOSE CLAMP 9/16 - 11/16	3
208	23-9-164-6	ROD BRACKET	1	259	23-9-532-3	CASTER-CHANNEL DRIVE	1
209	23-9-256-1	CIRCLE COTTER - #CC-7	2	260	—	WASHER, 1/2 FLAT	1
210	27-9-189-1	TANK SCREEN BAG	1	261	—	WASHER, 1/2 SPLIT LOCK	1
211	02-9-434-1	TOP MOTOR SEAL-NEOPRENE	1	262	—	BOLT, 1/2-13x7/8 HEX HD	1
212	23-9-217-1	DECAL, CLEAN WATER	1	263	50-9-229-1	CORD CLAMP	1
213	02-9-433-1	MOTOR SEAL GASKET	1	264	—	WASHER, 3/8 WROUGHT	4
214	23-9-557-1	MOTOR, VAC 24V 3 STAGE	1	265	—	WASHER, 3/8 FLAT	4
215	48-9-409-1	CLAMP, HOSE, 1.875"-2.125" RANGE	1	266	49-9-121-1	KEY, MAIN AXLE SPRKT	2
216	23-9-565-1	HOSE, VAC MTR EXHAUST	1	267	23-9-524-3	ALXE STRAP W/BRUSH GUARD	1
217	—	WASHER, 1/4 SPLIT LOCK	3	268	—	WASHER, 1/2 FLAT	4
218	—	BOLT, 1/4-20x4 HEX HD	3	269	—	BOLT, 1/2-13x7/8 HEX HD	4
219	23-9-547-1	LEVER, VALVE (SHORT)	1	270	—	WASHER, 1/2 SPLIT LOCK	4
220	—	NUT, 5/16-24 HEX	1	271	23-9-546-3	BRKT, RT. AXLE SUPPORT	1
221	—	NUT, 1/4-20 THIN ESNA HEX	1	272	23-9-535-3	CLAMP, AXLE	2
222	—	WASHER, 5/16 SPLIT LOCK	2	273	—	BOLT, 1/4-20x3/4	4
223	—	BOLT, 5/16-18x3/4 HEX HD	2	274	—	WASHER, 1/4 SPLIT LOCK	4
224	54-9-017-1	1/4 MALE SPADE FULLY INS.	2	275	24-9-508-3	LIFT FORK WR 24	1
225	23-9-177-1	90 DEGREE HOSE BARB	1	276	27-9-137-1	FLANGE BEARING FF-838-3	2
226	23-9-531-3	BRACKET, SOLUTION VALVE	1	277	23-9-134-1	BATT. CHARGER (115V)	1
227	87-9-103-0	VINYL TUBING, 3/4"IDx1"OD,1/8	3FT		23-9-199-1	BATT. CHARGER (240V)	1
228	87-9-115-0	VINYL TUBE,1/2"IDx5/8"OD	2FT		23-9-201-1	BATT. CHARGER (120V)	1
229	24-9-516-1	FITTING 1/2 HS BARB X 1/4 MNPT	1		23-9-251-1	BATT. CHARGER (100V-JAPAN)	1
	13-9-153-1	W-17 SOLUTION VALVE	1		23-9-295-1	BATT. CHARGER (100V-250V. GELL CELL)	1
231	24-9-515-1	FITTING, ELL, 1/2 HS BARB X 1/4 MNPT	1	278	33-9-036-1	BATT. (6V, 220A.H.)	4
232	87-9-115-1	VINYL TUBE,1/2"IDx5/8"OD	1.5FT		33-9-095-1	BATT. (6V, 220A H. DRY)	4
233	23-9-118-1	GRIP, VALVE LEVER	1	279	23-9-276-1	WARNING TAG- BATTERY TERMINAL	1
234	26-9-028-3	VALVE LEVER	1	280	23-9-594-3	HINGE BRACKET- LOWER	1
235	24-9-016-1	SQUEEGEE MOUNT & STOP BRACKET	1	281	—	BOLT, 1/4-20x5/8 HEX HD	4
236	44-9-050-1	CASTER, SWIVEL	1	282	—	WASHER, 1/4 SPLIT LOCK	4
	44-9-039-1	CASTER WHEEL ONLY W/BEARING	1	283	—	WASHER, 1/4 SAE FLAT	4
237	—	BOLT, 1/4-20x3/4 HEX HD	1	284	23-9-593-3	ADJUSTMENT PLATE - HINGE BRACKET	2
238	—	WASHER, 1/4 SPLIT LOCK	1	285	23-9-165-1	HINGE PIN-WRANGLER 20	2
239	—	WASHER, 1/4 FLAT	1	286	24-9-517-3	HOSE CLIP BRACKET	1
240	27-9-128-6	SPACER	1	287	—	BOLT, 1/4-20 x 3/4 HEX HD	4
241	—	WASHER, 3/8 SPLIT LOCK	4	288	—	WASHER, 1/4 SPLIT LOCK	4
242	—	BOLT, 3/8-16x3 HEX HD	4	289	—	WASHER, 1/4 SAE FLAT	4
243	—	BOLT, 3/8-16x1 HEX HD	2	290	23-9-213-1	SPRING CLIP, HOSE	1
244	—	WASHER, 3/8 SPLIT LOCK	2	291	23-9-175-1	POP RIVET 1/8"x5/8"	2
245	—	WASHER, 1/2 FLAT	2	292	23-9-101-1	SOLUTION TANK-WRANGLER 20/24	1
246	23-9-550-1	WHEEL, DRIVE 8X2	2	293	23-9-200-1	CHRGR PLUG, RED 24V WWIRES	1
247	52-9-315-1	RETAINING RING	2	294	—	BOLT, #6-32x3/4 RND HD PHIL	2
248	23-9-548-1	TRANSAXLE, 20"	1	295	—	WASHER, #6 EXT STAR LOCK	2
	24-9-525-1	CARBON BRUSH - TRANSAXLE	2	296	23-9-158-1	SPRING TUBE ADAPTOR	1
	24-9-526-1	CARBON BRUSH CAP - TRANSAXLE	2	297	—	NUT, 10-24 HEX	1
	24-9-527-1	TOP MOTOR BRACKET - TRANSAXLE	1	298	23-9-157-3	TUBE ADAPTER	1
249	52-9-341-1	1-1/4.x.770"x.082.WASHER	4	299	23-9-159-1	GASKET TUBE ADAPTER-WRANGLR 20/24	1
250	—	SCREW, 5/16-18x3/8 KNURLED SET	4				
251	23-9-185-1	SOLUTION LABEL, WRANGLER 20/24	1				



RECOVERY TANK ASSEMBLY

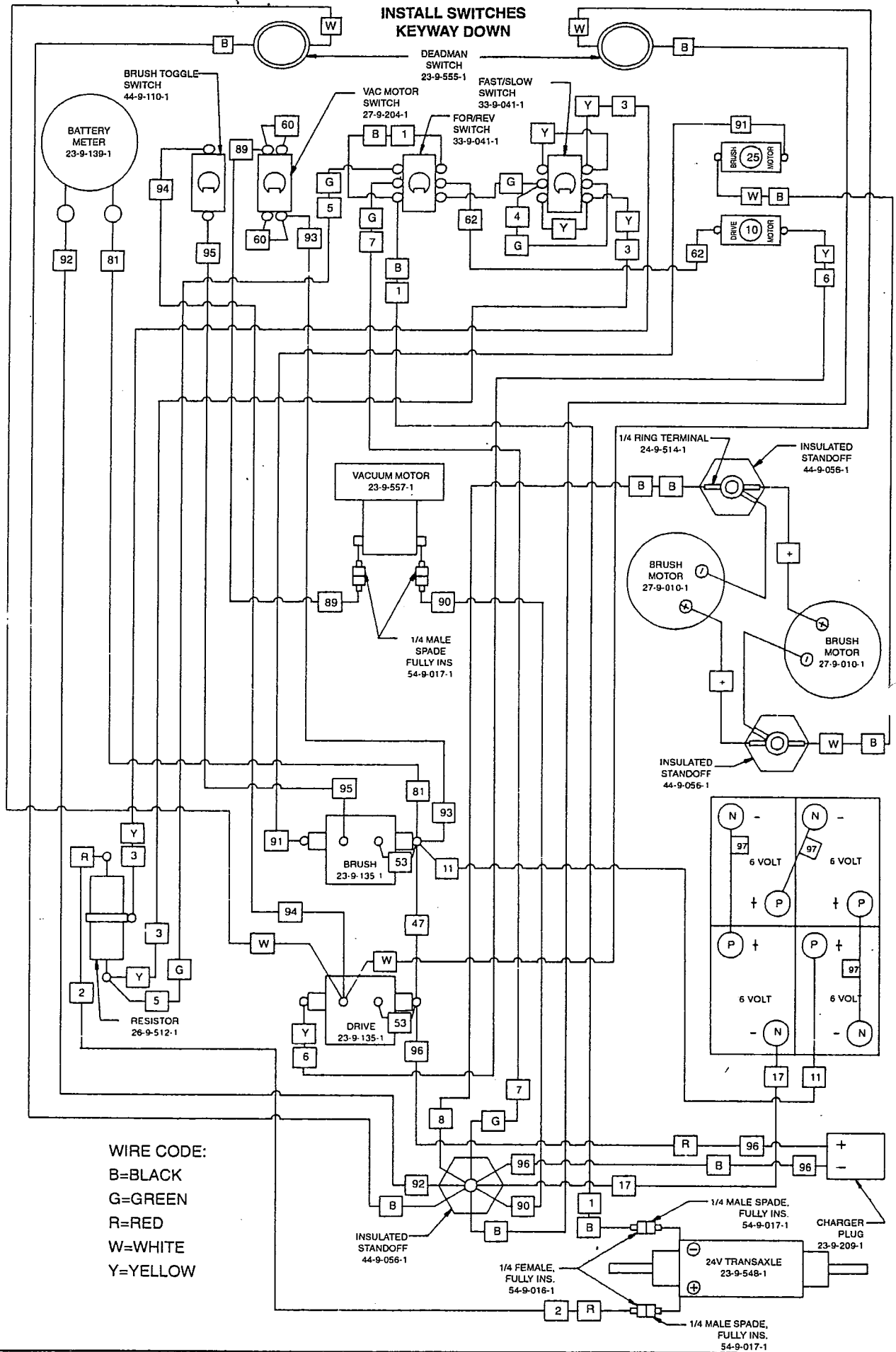
<u>ITEM NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QTY</u>
301	22-9-121-1	5 IN ALUM CONNECTOR	1
302	23-9-124-1	HOSE STRAP - WRANGLER 20/24	1
303	57-9-021-1	17" SQUEEGEE	1
304	44-9-052-1	LOAD ADJUST KNOB	1
305	-----	SCREW, 10-32x1/2 SET	1
306	23-9-178-1	WARNING/OPERATE LABL, WRANGLR 20/24	1
307	23-9-566-1	LABEL, DRAIN TANK	1
308	23-9-545-1	TUBE, VACUUM	1
309	23-9-161-1	GASKET, INLET TUBE - W20/24	1
310	23-9-160-1	GASKET, VAC.TUBE -W20/24	1
311	-----	WASHER, 1/4 FLAT	3
312	-----	WASHER, 1/4 EXT STAR	3
313	-----	SCREW, 114-20x518 TRUSS HD	3
314	48-9-408-1	CLAMP, HOSE, 1.593"-1.812" RANGE	1
315	23-9-162-6	STUD, HOOD KNOB	1
316	23-9-156-3	INLET TUBE	1
317	23-9-161-1	GASKET, INLET TUBE -W20/24	1
318	23-9-154-1	FLOAT SCREEN ASSY.-W20/24	1
319	-----	WASHER, 1/4 EXT STAR	3
320	-----	SCREW, 1/4-20x5/8 TRUSS HD	3
321	27-9-188-1	PLUG STRAP	1
322	27-9-562-1	DRAIN PLUG	1
323	23-9-166-6	HOSE TUBE	1
324	23-9-216-1	TUBE HOSE CLAMP,CRIMP-ON TYPE	1
325	23-9-167-1	DRAIN HOSE, CRUSH PROOF-WRANGLR20/24	1
326	23-9-169-3	UPPER HINGE -WRANGLER 20/24	1
327	-----	WASHER, 1/4 SPLIT LOCK	4
328	-----	BOLT, 1/4-20x5/8 HEX HD	4
329	44-9-544-1	HOSE CLAMP, 1 9/16-2 1/2 DIA	1
330	24-9-512-1	SIDE LABEL-LEFT,WRANGLER 24	1
	24-9-513-1	SIDE LABEL-RIGHT,WRANGLER 24	1
331	23-9-544-1	TANK, RECOVERY- WR 20/24	1
332	27-9-196-1	BATTERY COVER LABEL-NSS/HORSE	1
333	99-9-755-0	VELCRO HOOK, P.S. 2 IN	.3 FT
334	-----	NUT, 10-24 KEPS	2
335	26-9-089-1	RECOVERY TANK LID GASKET	1
336	269-093-1	LID CHAIN RECOVERY TANK	1
337	-----	SCREW, 10-24x1 RND HD PHIL	1
338	-----	SCREW, 10-16x5/8 SHEET METAL	5
339	26-9-088-1	REC.TANK LID ASSY	1
340	99-9-756-0	VELCRO LOOP, P.S. 6 IN	1 FT
341	23-9-123-1	VACUUM HOSE -WRANGLER 20/24	1
342	57-9-033-1	WAND-2PC.	1



BRUSH MOTOR ASSEMBLY

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QTY</u>
401	_____	10-24 X 5/8 RD HD	12
402	24-9-507-1	SKIRT STRAP, LEFT SIDE	1
403	24-9-505-1	WIPER, LEFT SIDE	1
404	24-9-503-3	LEFT SKIRT	1
	24-9-503-9	LEFT SKIRT ASSM. INCLUDES ITEMS 401-404, 426-430	1
405	24-9-501-3	BRUSH MOTOR MOUNT	1
406	_____	1/4 SPLIT LOCKWASHER	8
407	_____	1/4-20 X 5/8 HEX HD	8
408	_____	1/2-13 X 1 1/2 HEX HD S.S.	1
409	24-9-508-3	LIFT FORK	1
	24-9-508-9	LIFT FORK ASSM. (INCLUDES 27-9-137-1)	1
410	27-9-075-6	BUSHING SPACER	1
411	24-9-509-3	WATER FEED CHANNEL	1
412	_____	1/4-20 X 1/2 TRUSS HD S.S.	2
413	27-9-128-6	BUSHING SPACER	2
414	27-9-249-9	LEFT BRUSH DRIVE PLATE ASSM. INCL. ITEMS 412-413, 415-418, 421-422	1
415	27-9-020-2	BRUSH DRIVE PLATE	2
416	_____	5/16 WROUGHT WASHER S.S.	2
417	_____	5/16 SPLIT LOCK WASHER	2
418	_____	5/16-18 X 1 HEX HD S.S.	2
419	24-9-519-1	PAD DRIVER ASSM. 12"	2
	24-9-551-1	NYLON BRUSH	2
	24-9-552-1	GRIT BRUSH	2
420	27-9-248-9	RIGHT BRUSH DRIVE PLATE ASSM. INCL. ITEMS 413-414, 417-419, 421-423	1
421	44-9-062-1	3/8 SPRING WASHER	2
422	27-9-021-6	BRUSH PLATE LATCH	2
423	24-9-506-1	SKIRT STRAP, RIGHT SIDE	1
424	24-9-504-1	WIPER, RIGHT SIDE	1
425	24-9-502-3	RIGHT SKIRT	1
	24-9-502-9	RIGHT SKIRT ASSM. INCLUDES ITEMS 401, 423-430	1
426	23-9-227-6	AXLE, BUMPERWHEEL	2
427	27-9-028-1	BUMPER WHEEL 3"	2
428	_____	5/16 SAE FLAT WASHER S.S.	2
429	_____	5/16 EXTERNAL STAR WASHER S.S.	2
430	_____	5/16-18 X 1/2 HEX HD S.S.	4
431	27-9-556-1	1/2 THIN ESNA LOCKNUT S.S.	1
432	_____	1/4-20 X 3/4 HEX HD	1
433	_____	1/4 SPLIT LOCK WASHER	1
434	_____	1/4 FLATWASHER	1
435	27-9-128-6	BUSHING SPACER	1
436	44-9-056-1	INSULATED STANDOFF	2
437	_____	1/4 SPLIT LOCK WASHER	2
438	_____	1/4-20 X 3/8 HEX HD	2
439	23-9-165-1	HINGE PIN	1
440	27-9-010-1	DRIVE MOTOR	2
441	24-9-510-1	BRUSH MOTOR COVER	1
442	27-9-524-1	PAD HOLDER W/RING	2
443	27-9-523-1	SPLIT RING, ONLY	2

INSTALL SWITCHES KEYWAY DOWN



WIRE CODE:
 B=BLACK
 G=GREEN
 R=RED
 W=WHITE
 Y=YELLOW

ELECTRICAL COMPONENTS

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QTY</u>
1	23-9-558-1	WIRE ASSM. TRANSAXLE FOR/REV SWITCH	1
2	23-9-559-1	WIRE ASSM. TRANSAXLE, RESISTOR	1
3	23-9-560-1	WIRE ASSM. HIGH/LOW SWITCH, RESISTOR	2
4	23-9-561-1	WIRE ASSM. FOR/REV, HIGH/LOW JUMPER	1
5	23-9-562-1	WIRE ASSM. FOR/REV, RESISTOR	1
6	23-9-563-1	WIRE ASSM. DRIVE SOLENOID, DRIVE C.B.	1
7	23-9-564-1	WIRE ASSM. FOR/REV, STANDOFF	1
8	23-9-307-1	MOTOR CORD	1
11	23-9-254-1	POS. BATTERY CABLE	1
17	23-9-255-1	NEG. BATTERY CABLE	1
47	27-9-214-1	CABLE ASSM. #6 X 6"	1
53	27-9-219-1	WIRE ASSM. #14 X 6"	1
60	23-9-223-1	WIRE ASSM. #14 X 3"	2
62	27-9-237-1	WIRE ASSM. #14 X 6"	1
81	33-9-068-1	WIRE ASSM. #18 X 17"	1
89	23-9-202-1	WIRE ASSM. VAC LEAD, VAC-SWITCH	1
90	23-9-203-1	WIRE ASSM. VAC LEAD, STANDOFF	1
91	23-9-204-1	WIRE ASSM. BRUSH SOL., BREAKER	1
92	23-9-205-1	WIRE ASSM. BATTERY METER, STANDOFF	1
93	23-9-206-1	WIRE ASSM. BRUSH SOL., VAC SWITCH	1
94	23-9-207-1	WIRE ASSM. METER, BRUSH SWITCH	1
95	23-9-208-1	WIRE ASSM. BRUSH SOL., BRUSH SWITCH	1
96	23-9-200-1	CHARGER PLUG, RED 24V W/WIRES	1
97	23-9-198-1	BATTERY JUMPER 3/8 RING	3
--	23-9-135-1	SOLENOID CONTACTOR 24V SINGLE POLE	2
--	23-9-136-1	CIRCUIT BREAKER 24V 25AMP	1
--	23-9-139-1	BATTERY METER	1
--	23-9-209-1	CHARGER PLUG ONLY, RED 24V	1
--	23-9-220-1	CIRCUIT BREAKER 10AMP	1
--	23-9-548-1	TRANSAXLE, 20"	1
--	23-9-522-1	DEADMAN BUTTON SWITCH	2
--	23-9-557-1	VAC MOTOR 24V 3 STAGE	1
--	24-9-514-1	TERMINAL, 1/4 RING, 10-14 GA.	6
--	26-9-512-1	RESISTOR	1
--	27-9-010-1	DRIVE MOTOR, BRUSH	2
--	27-9-204-1	VAC MOTOR SWITCH	1
--	33-9-041-1	FORWARD/ REVERSE SWITCH	2
--	44-9-056-1	INSULATED STAND-OFF	3
--	44-9-110-1	TOGGLE SWITCH	1
--	54-9-016-1	1/4 FEMALE TERMINAL FULLY INS. 16-14 GA.	4
--	54-9-017-1	1/4 MALE SPADE TERMINAL FULLY INS. 16-14 GA.	4
--	23-9-521-1	COMPLETE BACK PANEL WIRE HARNESS	1
--	23-9-523-1	COMPLETE MAIN WIRE HARNESS	1

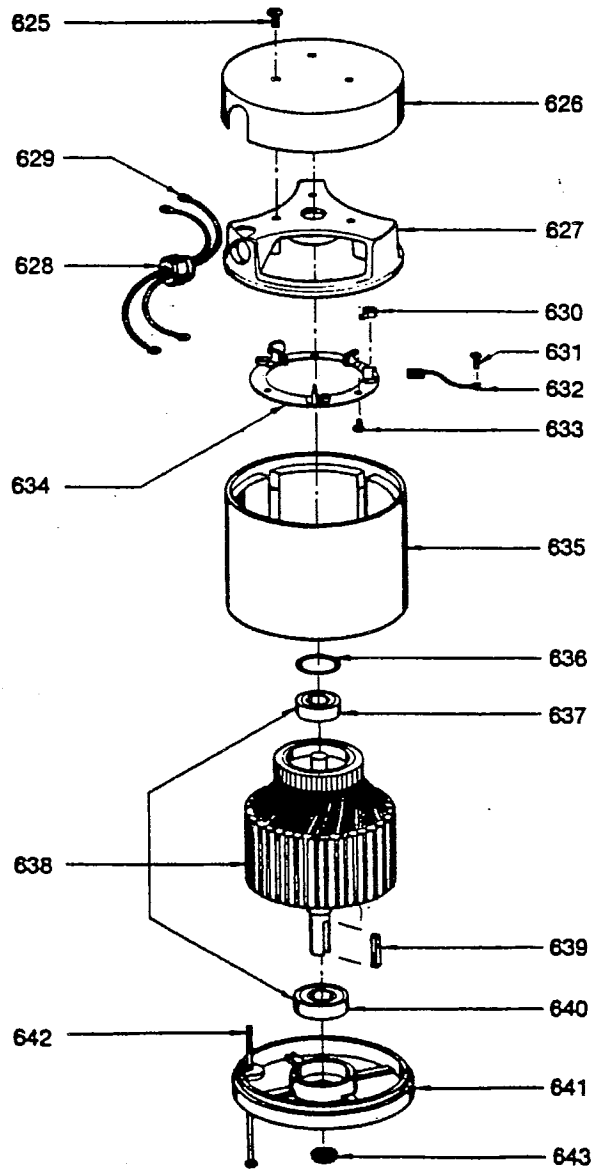
BRUSH DRIVE MOTORS

Part No. 27-9-010-1

625	-----	Pan Head Screw, 1/4-20 x 3/8	3
626	27-9-772-1	Top Cover	1
627	27-9-767-1	Top End Bell w/Brush Board Ass'y	1
628	27-9-763-1	Heyco	1
629	27-9-758-1	Lead Ass'y (1 wire w/terminals)	2
630	27-9-757-1	Brush Spring	4
631	-----	10-32 X 3/8 Brass Pan Head Screw	4
632	27-9-769-1	Brush Ass'y (Carbon Brush w/lead & terminal)	4
633	-----	10-24-x 1/2 Self Tapping Rd. Hd. Screw	3
634	27-9-768-1	Brush Board Ass'y w/springs & brushes	1
635	27-9-765-1	Stator Frame Ass'y. w/magnets	1
636	27-9-759-1	Helical Washer	1
637	50-9-204-1	Bearing F.E (Commutator End)	1
638	27-9-766-1	Armature Ass'y w/bearings	1
639	27-9-268-1	Shaft Key	1
640	27-9-031-1	Bearing, B.E (Shaft End)	1
641	27-9-771-1	Bottom End Bell	1
642	27-9-770-1	Thru Bolt	2
643	27-9-773-1	Shaft Seal	1

NOTE - TOP COVER ITEM 626 IS REMOVED FOR IMPROVED MOTOR COOLING

NOTE - THE VOLTAGE OF THE NSS WRANGLER 24 IS 24 VOLT. THE MOTOR MAY BE NAME PLATE MARKED 36V. THE MOTOR WILL OPERATE PROPERLY AT 24 VOLT.



TROUBLE-SHOOTING FOR THE WRANGLER 24

Problem	Cause	Solution
No solution flow	The solution valve is closed. Obstruction in the solution hose. Solution valve or linkage damaged. Solution tank is empty.	Open the solution valve. Remove the obstruction. Repair/replace the valve/linkage. Fill the tank.
Solution flow does not stop	The solution valve is open. Solution valve or linkage damage. Solution valve is dirty. Damaged seat & washer in valve. The valve stem is dirty.	Close the solution valve. Repair/replace the valve/linkage. Clean the solution valve. Replace seat & washer. Clean & lubricate valve stem.
Will not pick-up any water from floor.	Squeegee is up. Vac motor switch is "off." Recovery tank is full. Vacuum shut-off float is stuck. Obstruction/damage in the squeegee, squeegee hose. Vac motor is not running.	Lower squeegee. Turn vac motor switch "on." Empty tank. Clean/replace float assembly. Remove obstruction/repair damage. Have an authorized service person repair it.
Will not pick-up all water from floor.	Squeegee blade is worn/damaged. Obstruction/damage in the squeegee, squeegee hose. Squeegee blades need adjustment. Vacuum motor worn out.	Reverse/replace squeegee blade. Remove obstruction/repair damage. Adjust blade angle. Replace vacuum motor.
Batteries do not seem to run long enough.	Tops of batteries are dirty/wet. Battery terminals are dirty/damaged. Electrolyte level is too low. Batteries are not fully charged. Charger is damaged. Battery is defective.	Clean/dry, charge batteries. Clean terminals and connectors, replace damaged cables. Charge. Add distilled water and charge. Charge batteries for 8 hours. Have an authorized service person repair it. Check cell voltage while discharging.
Cleaning is not even.	Brushes/pads are worn. Damage to brush assembly, casters, or solution valve. Motors are not running.	Replace. Have an authorized service person repair it. Repair wiring, replace switch, replace carbon brushes. Push circuit breaker button.
Machine does not run.	The machine loses power.	Reset circuit breaker. Check battery connections. Check master switch.

Note: If problems remain after taking the above steps, contact your local authorized service station for further evaluation and repair.



THE NATIONAL SUPER SERVICE COMPANY

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