

**VIPER**

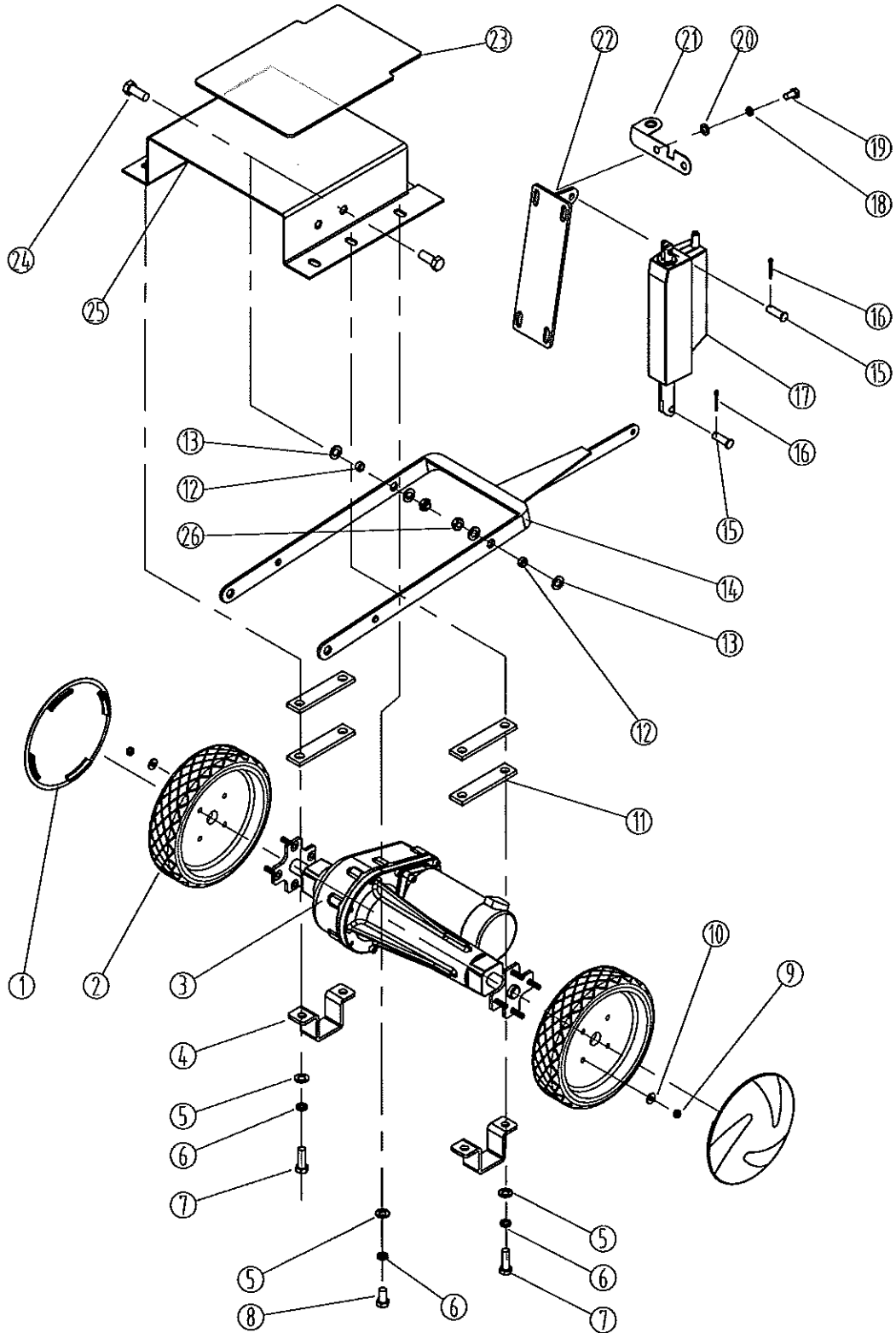
**FANG**

**FANG20HD**

**20" HD AUTOSCRUBBER**

PARTS LIST

FANG20HD - BRUSH LIFT / DRIVE ASSEMBLY

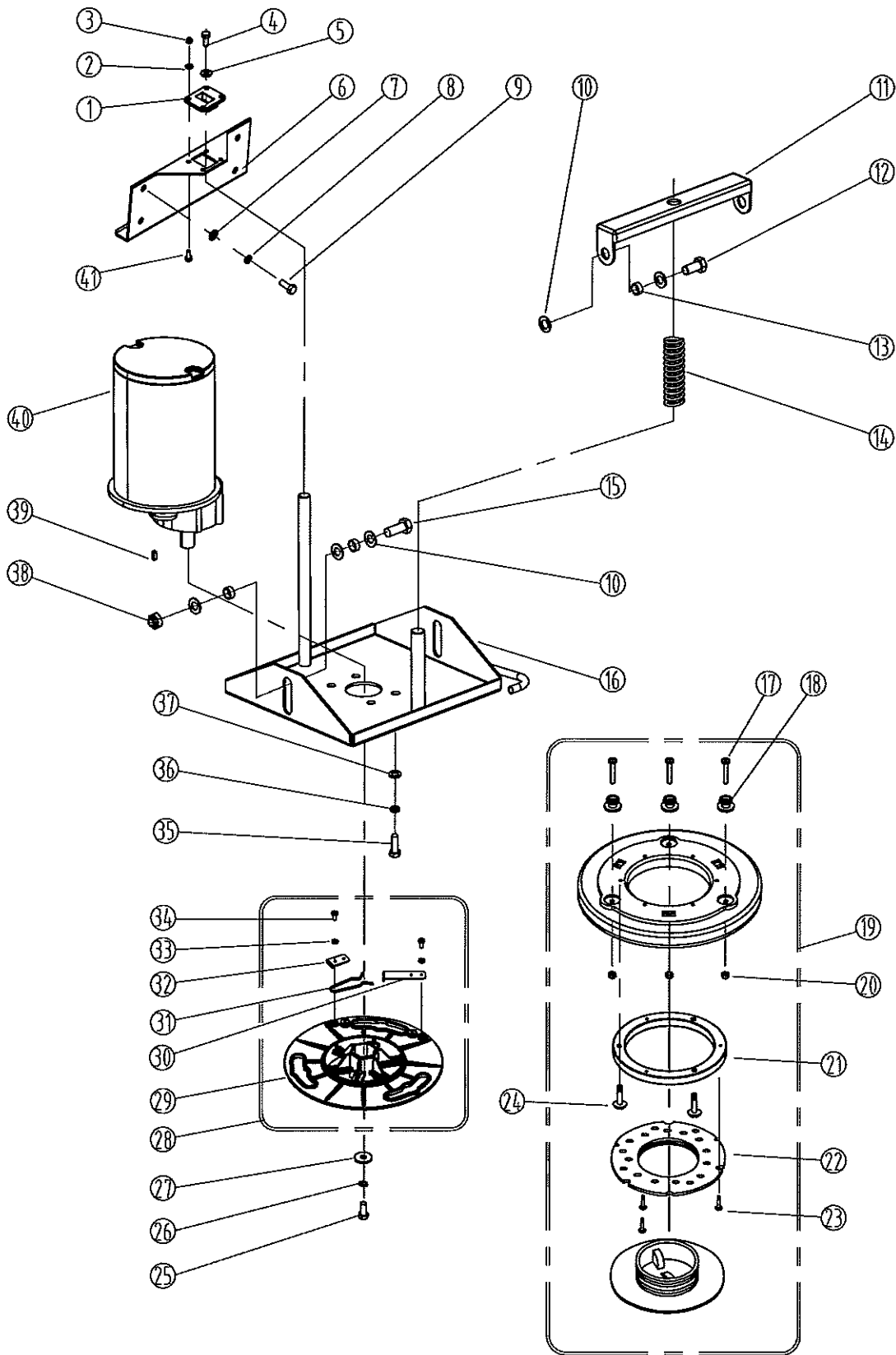


## FANG20HD - BRUSH LIFT/DRIVE ASSEMBLY

DIA NO	PART NUMBER	DESCRIPTION	NO REQ'D
1	VF82080	HUB CAP	2
2	VF81106	WHEEL, 8"	2
3	VF81600	TRANSAXLE	1
	ZD72000A	TRANSAXLE MOTOR, 24VDC	1
4	VF81102	BRACKET, TRANSAXLE MOUNT	2
5	VF13537	WASHER, PLAIN, M10 X M26 X 2	6
6	VF13518	WASHER, LOCK, M10	6
7	VF13636	SCREW, M10 X 45	4
8	VF13634	SCREW, M10 X 30	2
9	VF13502	NUT, LOCK, M6	8
10	VF13533	WASHER, PLAIN, M6 X M16 X 2	8
11	VF81103	SPACER	4
12	VF82016A	BUSHING	2
13	VF13538	WASHER, PLAIN, M12 X M22 X 2	4
14	VF82803	BRACKET, LIFT MOTOR	1
15	VF83139	PIN, M10 X 30	2
16	VF14084	PIN, COTTER, M3.2 X 24	2
17	VF81301	ACTUATOR	1
18	VF13519	WASHER, LOCK, M8	4
19	VV13604	SCREW, M8 X 20	4
20	VF13535	WASHER, PLAIN, M8 X M20 X 2	4
21	VF83126	BRACKET, CABLE GUIDE	1
22	VF83135	BRACKET, ACTUATOR	1
23	VF83115	SPACER, BATTERY	1
24	VF14247	SCREW, M12 X 25	2
25	VF81101A	PLATE, BASE TRANSAXLE	1
26	VF13501	NUT, LOCK, M12	2

PARTS LIST

FANG20HD - BRUSH / PAD DRIVE ASSEMBLY

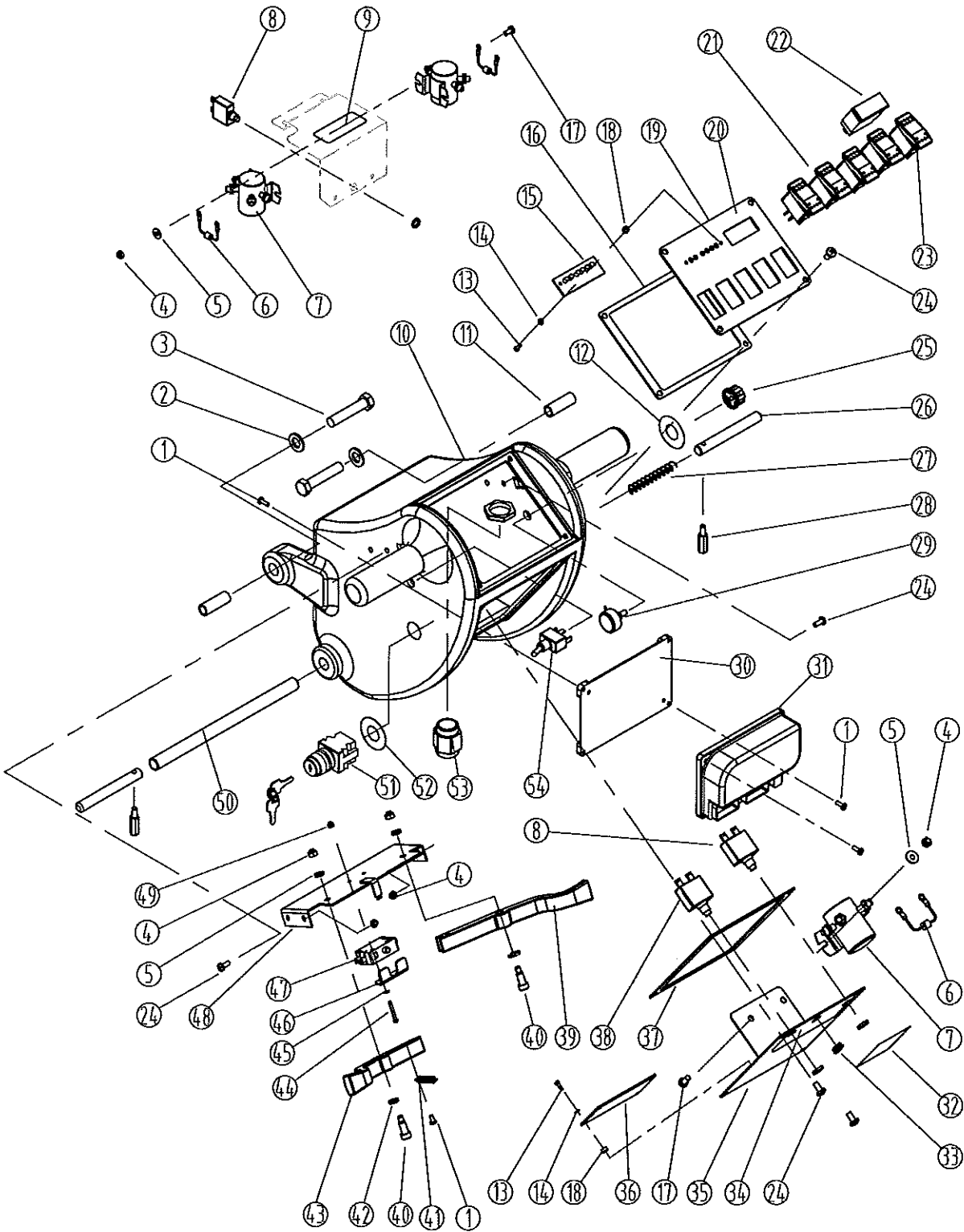


## FANG20HD - BRUSH/PAD DRIVE ASSEMBLY

DIA NO	PART NUMBER	DESCRIPTION	NO REQ'D
1	VF83112A	BLOCK, GUIDE	1
2	VA13400	WASHER, PLAIN, M5 X M11 X 1	4
3	GT13022	NUT, LOCK, M5	4
4	VF14234	SCREW, M8 X 16	1
5	VF13542	WASHER, PLAIN, M8 X M26 X 2	1
6	VF83116A	SUPPORT PLATE, SKIRT	1
7	VF13535	WASHER, PLAIN, M8 X M20 X 2	4
8	VF13519	WASHER, LOCK, M8	4
9	VV13604	SCREW, M8 X 20	4
10	VF13538	WASHER, PLAIN, M12 X M22 X 2	10
11	VF82805	BRACKET, SPRING	1
12	VF14247	SCREW, M12 X 25	2
13	VF82016A	BUSHING	6
14	VF83117	SPRING	1
15	VF14238	SCREW, M 12 X 30	2
16	VF82804	BRACKET, MOTOR MOUNT	1
17	VF14225A	SCREW, M6 X 40	3
18	VF83133	STUD	3
19	VF82057	PAD DRIVER, 19"	1
20	VF13502	NUT, LOCK, M6	3
21	VF83118	SPACER	1
22	VF99003A	BIG MOUTH	1
23	VA13484	SCREW, SELF-TAPPING, ST, M4 X 12	3
24	MF-VF002-4A	SCREW, SELF-TAPPING, 1/4" - 1"	3
25	VF14241	SCREW, 5/16" - 1"	1
26	VV20298	WASHER, LOCK, 5/16"	1
27	VF82058	WASHER	1
28	VF83130A	PLATE, DRIVE, ASSY	1
29	VF83130	PLATE, DRIVE	1
30	VF83134	STOP, DRIVE RELEASE	1
31	VF83132	SPRING	1
32	VF83131	CLAMP, BRUSH PLATE	1
33	VV13601	WASHER, LOCK, M5	4
34	VF13545	SCREW, SELF-TAPPING, ST, M5 X 10	4
35	VF14242	SCREW, 3/8" - 1"	4
36	VV13620	WASHER, LOCK, 3/8"	4
37	VF13537	WASHER, PLAIN, M10 X M26 X 2	4
38	VF13501	NUT, LOCK, M12	2
39	ZD45000	BRUSH MOTOR, 24VDC, .75HP	1
40	ZD45407	KEY, 6.35 X 25	1
41	VF14230	SCREW, M5 X 15	4

PARTS LIST

FANG20HD - CONTROL HOUSING

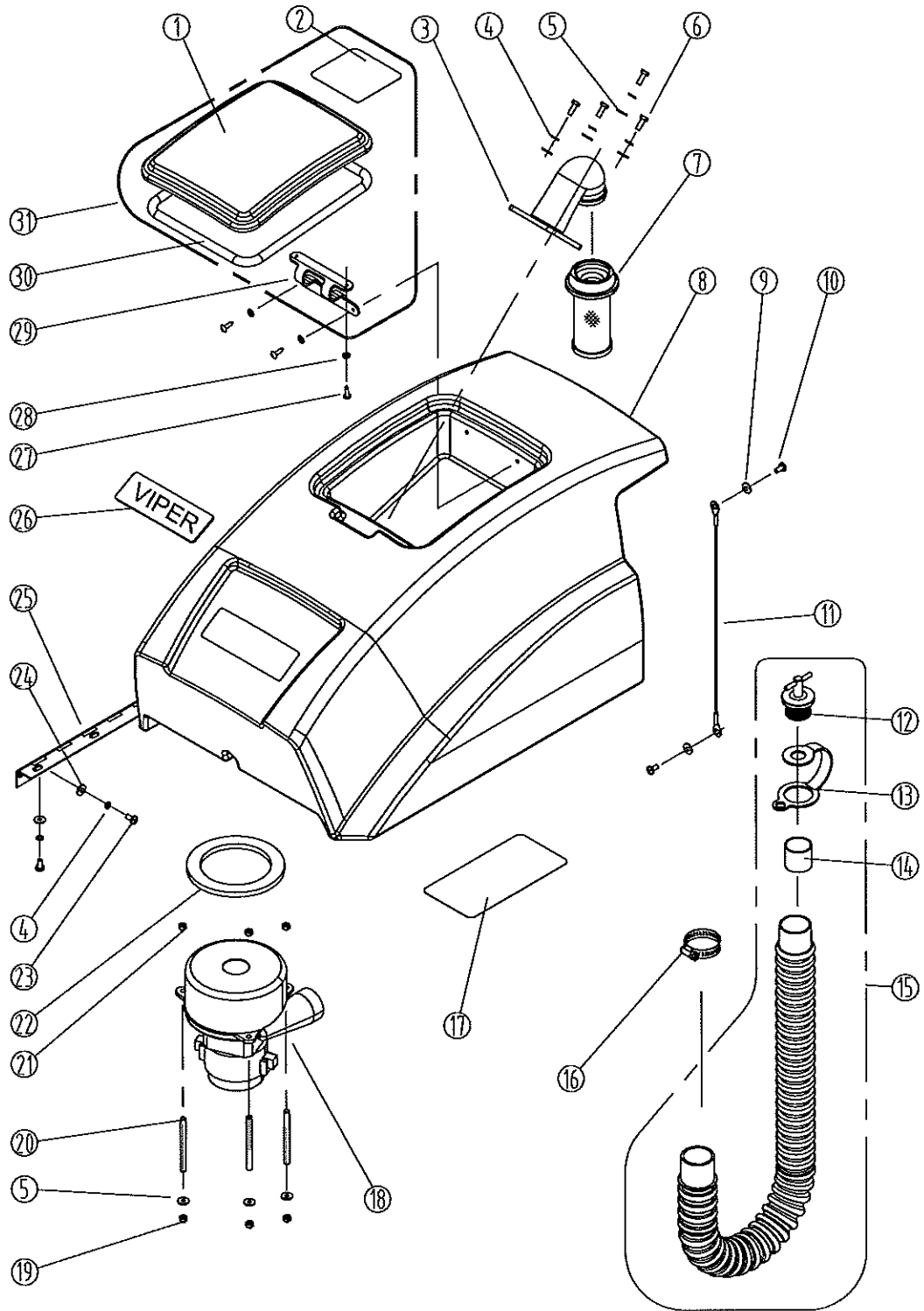


## FANG20HD - CONTROL HOUSING

DIA NO	PART NUMBER	DESCRIPTION	NO REQ'D
1	VF13491	SCREW, M4 X 12	7
2	VF14122	WASHER, PLAIN, M10 X M20 X 2	2
3	VF14121	SCREW, M10 X 65	2
4	VF13502	NUT, LOCK, M6	10
5	GT13032	WASHER, PLAIN, M6	6
6	VF81781	DIODE, 400V	3
7	VF81726	SOLENOID, 24V	3
8	VF81734	CIRCUIT BREAKER, 35AMP	2
9	VF83149	LABEL, CIRCUIT BREAKER	1
10	VF82301	CONTROL HOUSING	1
11	VF81713	BUSHING	2
12	VF82305	LABEL, SPEED CONTROL	1
13	VF14078	SCREW, M3 X 10	6
14	VA50477	WASHER, PLAIN, M3 X M10 X 1	6
15	VF81718	LIGHTS, BATTERY CAPACITY	1
16	VF82313	GASKET	1
17	VF13495	SCREW, M6 X 16	4
18	VF81719	SPACER	6
19	VF83137A	PANEL, SWITCH	1
20	VF82811	LABEL, SWITCH	1
21	VF81721	SWITCH, LIGHTED ROCKER	4
22	VF81727	GAUGE, BRUSH PRESSURE	1
23	VF81725	SWITCH, BRUSH LIFT	1
24	VF14200	SCREW, M6 X 16	12
25	VF81730	KNOB, SPEED CONTROL	1
26	VF81709	PIN, HANDLE LOCK	2
27	VF81716	SPRING	1
28	VF81710	PIN, HANDLE ADJUSTMENT	2
29	VF81729	POTENTIOMETER, 4.7K	1
30	VF82316	PLATE	1
31	VF81739-20T	SPEED CONTROL BOARD	1
32	VF82812	SERIAL TAG	1
33	GV40239	COVER	1
34	VF83148	LABEL, CIRCUIT BREAKER	1
35	VF82303	PANEL, CONTROL HOUSING	1
36	VF81703	BATTERY CAPACITY CONTROL, BOARD	1
37	VF82312	GASKET	1
38	VF99012	CIRCUIT BREAKER, 12AMP	1
39	VF82107B	HANDLE, RIGHT	1
40	VF81711	BOLT, SHOULDER, M8 X 15 X M6	2
41	VF81712	SPRING	1
42	VF13514A	WASHER, PLAIN, M8 X M16.5 X 1	2
43	VF82106B	HANDLE, LEFT	1
44	VF14212	SCREW, M3 x 25	2
45	VF13511	WASHER, TOOTH, M3	2
46	VF82327	GUIDE, SWITCH	1
47	VF44203	SWITCH ASSEMBLY	1
48	VF81707	BRACKET, SWITCH	1
49	VV13652	NUT, LOCK, M3	2
50	VF81714	TUBE, HANDLE, ADJUSTMENT	1
51	VF82153	SWITCH, KEY	1
52	VF82160	LABEL, KEY SWITCH	1
53	VF81744	STRAIN RELIEF, CORD	1
54	VF81722	SWITCH, TOGGLE	1

PARTS LIST

FANG20HD - RECOVERY TANK ASSEMBLY



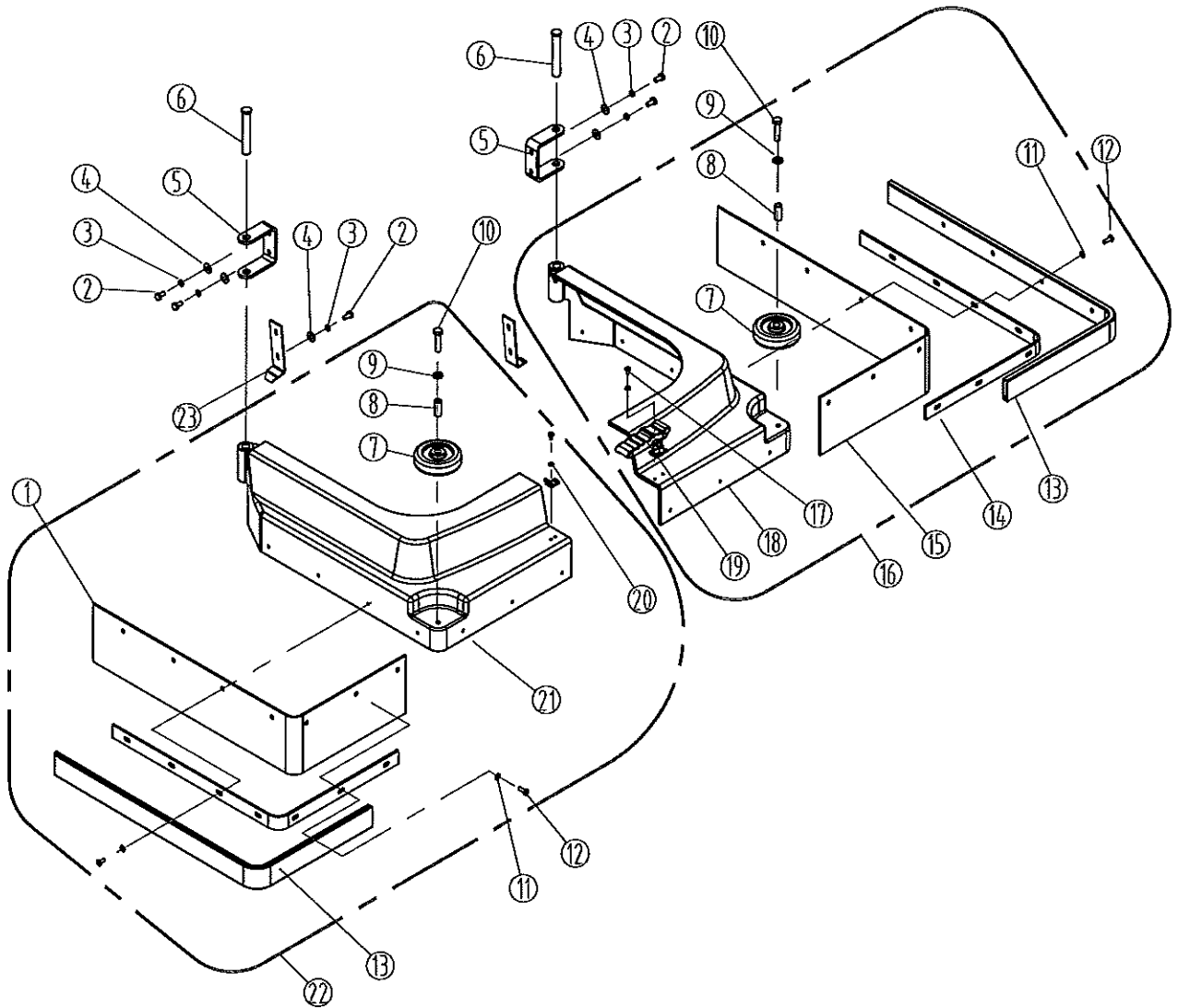


## FANG20HD - RECOVERY TANK ASSEMBLY

DIA NO	PART NUMBER	DESCRIPTION	NO REQ'D
1	VF82010	CLEAR COVER, RECOVERY TANK	1
2	VF82083	DECAL, WARNING, BATTERY	1
3	VF82009	ELBOW ADAPTOR, FLOAT	1
4	VV13607	WASHER, LOCK, M6	13
5	VF13533	WASHER, PLAIN, M6 X M16 X 2	7
6	VF14233	SCREW, M6 X 20	4
7	VF81504	FLOAT	1
8	VF82802	RECOVERY TANK	1
9	VF13528	WASHER, TOOTH, LOCK, M6	2
10	VF13495	SCREW, M6 X 16	2
11	VF82028	CABLE	1
12	VF81509	PLUG, EXPANSION	1
13	VF81510-9	STRAP, DRAIN HOSE	1
14	VF81510-2	SLEEVE, DRAIN HOSE	1
15	VF81510A	DRAIN HOSE ASSEMBLY	1
16	VV10113	CLAMP, 2"	2
17	VF83154	DECAL, BATTERY INSTALLATION	1
18	ZD54000	MOTOR, VAC 3 STAGE, 24VDC	1
19	VF13502	NUT, LOCK, M6	3
20	VF81508	STUD	3
21	VF13521	NUT, M6	3
22	VF81503	SEAT	1
23	VF14200	SCREW, M6 X 16	9
24	GT13032	WASHER, PLAIN, M6 X M16 X 1.5	9
25	VF82011	HINGE, RECOVERY TANK	1
26	VF82082	LOGO	1
27	VA13477	SCREW, SELF-TAPPING, ST, M4 X 16	4
28	VV13664	WASHER, PLAIN, M4 X M12 X 1	4
29	VF82010A	RUBBER HINGE	1
30	VF82010B	GASKET	1
31	VF82010X	KIT, LID	1

PARTS LIST

FANG20HD - BRUSH SKIRT ASSEMBLY

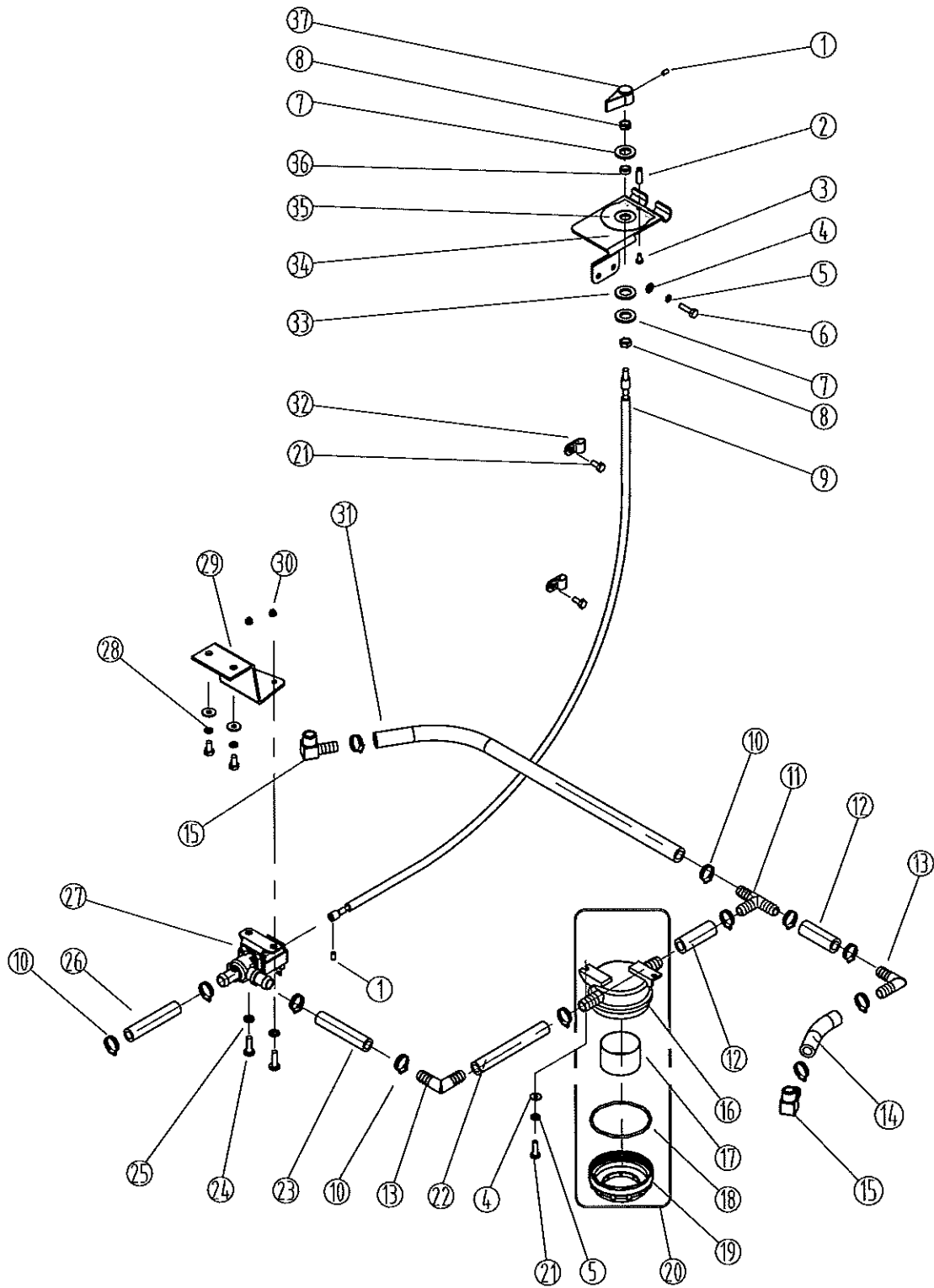


## FANG20HD - BRUSH SKIRT ASSEMBLY

DIA NO	PART NUMBER	DESCRIPTION	NO REQ'D
1	VF82808	BUMPER	1
2	VF13495	SCREW, M6 X 16	8
3	VV13607	WASHER, LOCK, M6	8
4	VF13533	WASHER, PLAIN, M6	8
5	VF83107	BRACKET, SKIRT MOUNT	2
6	VF83108	PIN, SKIRT	2
7	VF82013	WHEEL, 3"	2
8	VF82055	BUSHING	2
9	VF13514A	WASHER, PLAIN, M8 X M16.5 X 1	2
10	VF14236	SCREW, M8 X 40	2
11	VA13400	WASHER, PLAIN, M5 X M25 X 1.5	16
12	VA13474	SCREW, M5 X 16	16
13	VF82810	GRIP, BUMPER	2
14	VF82809	CLAMP, BUMPER	2
15	VF82815	BUMPER	1
16	VF82807R	RIGHT SKIRT, ASSEMBLY	1
17	VV20291	WASHER, LOCK, M4	4
18	VF82807	SKIRT, RIGHT	1
19	VF83109	LATCH, HOOD	1
20	VV20291	WASHER, LOCK, M4	4
21	VF82806	SKIRT, LEFT	1
22	VF82806L	LEFT SKIRT, ASSEMBLY	1
23	VF83142	BLOCK, SKIRT	2

PARTS LIST

FANG20HD - SOLUTION CONTROL ASSEMBLY

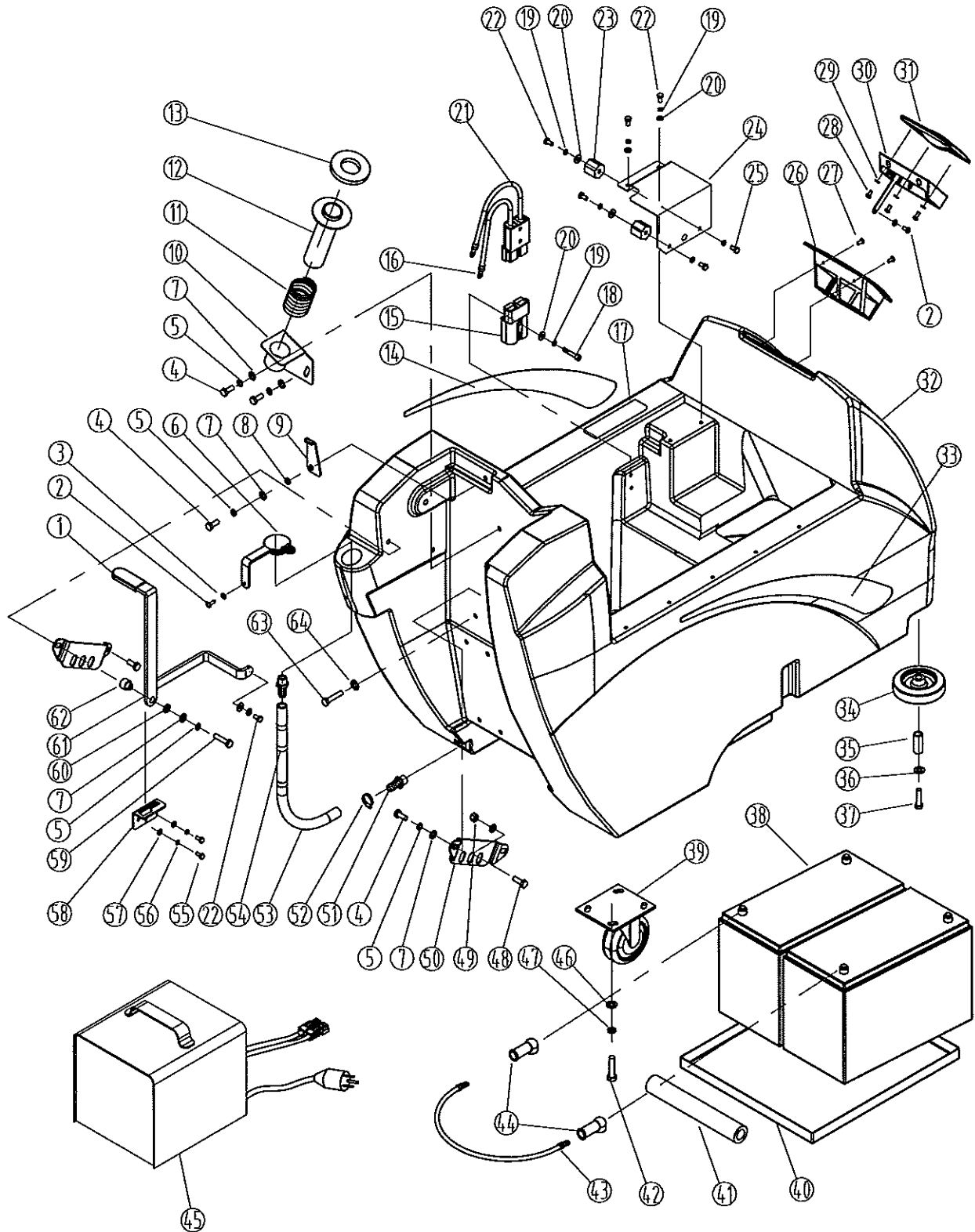


## FANG20HD - SOLUTION CONTROL ASSEMBLY

DIA NO	PART NUMBER	DESCRIPTION	NO REQ'D	
1	VF14245	SCREW, M5 X 6	2	
2	VF82036	SHAFT	1	
3	VV13650	SCREW, M4 X 10	1	
4	VF13532	WASHER, PLAIN, M5	4	
5	VV13601	WASHER, LOCK, M5	4	
6	VF14230	SCREW, M5 X 15	2	
7	VF13536	WASHER, PLAIN, M9.8 X M16 X 1	2	
8	VF82075	NUT, 3/8"	2	
9	VF83121	CABLE, SOLENOID	1	
10	VF82148	CLAMP, 16mm	14	
11	VF82040	HOSE BARB, TEE	1	
12	VF81134	TUBING, 50mm	2	
13	VF82042	ELBOW	2	
14	VF81124	TUBING, 115mm	1	
15	VF81403A	ELBOW, SOLUTION TANK	2	
16	VF80112	SEAT, FILTER	1	
17	VF80113	SCREEN, FILTER	1	
18	VF82139	"O"RING, M2.65 X M64.8	1	
19	VF80111	COVER, FILTER	1	
20	VF80111A	KIT, FILTER	1	
21	VV20509	SCREW, M5 X 10	5	
22	VF81125	TUBING, 200mm	1	
23	VF81126	TUBING, 80mm	1	
24	VF13495	SCREW, M6 X 16	4	
25	VF13533	WASHER, PLAIN, M6 X M16 X 2	4	
26	VF81127	TUBING, 65mm	1	
27	VF82033-24	SOLUTION VALVE SOLENOID, 24VDC	1	
28	VV13607	WASHER, LOCK, M6	2	
29	VF83120	BRACKET, SOLENOID	1	
30	VF13502	NUT, LOCK, M6	2	
31	VF81128	TUBING, 320mm	1	
32	VF81118	CLAMP	2	
33	VF13540	WASHER, WAVE, M12	1	
34	VF82037	BRACKET, DRAIN HOSE & VALVE	1	
35	VF82069	LABEL, VALVE	1	
36	VF82074	BUSHING	1	
37	VF82038	KNOB, VALVE ADJUST	1	

PARTS LIST

FANG20HD - SOLUTION TANK ASSEMBLY



## FANG20HD - SOLUTION TANK ASSEMBLY

DIA NO	PART NUMBER	DESCRIPTION	NO REQ'D
1	VF81405	GRIP, HANDLE	1
2	VA13477	SCREW, SELF-TAPPING, ST, M4 X 16	3
3	VV13664	WASHER, PLAIN, M4 X M12 X 1	1
4	VV13604	SCREW, M8 X 20	6
5	VF13519	WASHER, LOCK, M5 X M11 X 28	6
6	VF82154	PLUG, EXPANSION	1
7	VF13535	WASHER, PLAIN, M8 X M20 X 2	8
8	VF81406	BUSHING	1
9	VF81404	SUPPORT, RECOVERY TANK	1
10	VF82029	BRACKET, VACUUM TUBE	1
11	VF82032	SPRING	1
12	VF82030	ADAPTER, TUBE	1
13	VF82031	GASKET, TUBE ADAPTER	1
14	VF82070	LABEL, LEFT	1
15	VF81306	CONNECTOR, 175A	2
16	VF81747	WIRE, #6 X 750	1
17	VF82123	DECAL	1
18	VF13633	SCREW, M6 X 35	2
19	VV13607	WASHER, LOCK, M6	8
20	GT13032	WASHER, PLAIN, M6 X M16 X 1.5	6
21	VF81748	WIRE, #6 X 750	1
22	VF13495	SCREW, M6 X 16	4
23	VF81715	STANDOFF	2
24	VF82067	BRACKET	1
25	VF14232	SCREW, M6 X 10	2
26	VF82078	SCREEN, FILL	1
27	VF13543	SCREW, SELF-TAPPING, ST, M4 X 16	2
28	VF13544	SCREW, SELF-TAPPING, ST, M4 X 10	6
29	VA13483	WASHER, PLAIN, M4 X M9 X 0.8	7
30	VF82081	PLUG, FILL SCREEN	1
31	VF82079	COVER, FILL SCREEN	1
32	VF82801	SOLUTION TANK	1
33	VF82071	LABEL, RIGHT	1
34	VF99001	WHEEL, 4"	2
35	VF83129	BUSHING	2
36	VF13514A	WASHER, PLAIN, M8 X M16.5 X 1	2
37	VF13635	SCREW, M8 X 50	2
38	BAT195I	BATTERY, 12V, 195 A/H	2
39	VF83111	CASTER, 4"	2
40	VF83140	TRAY, BATTERY	1

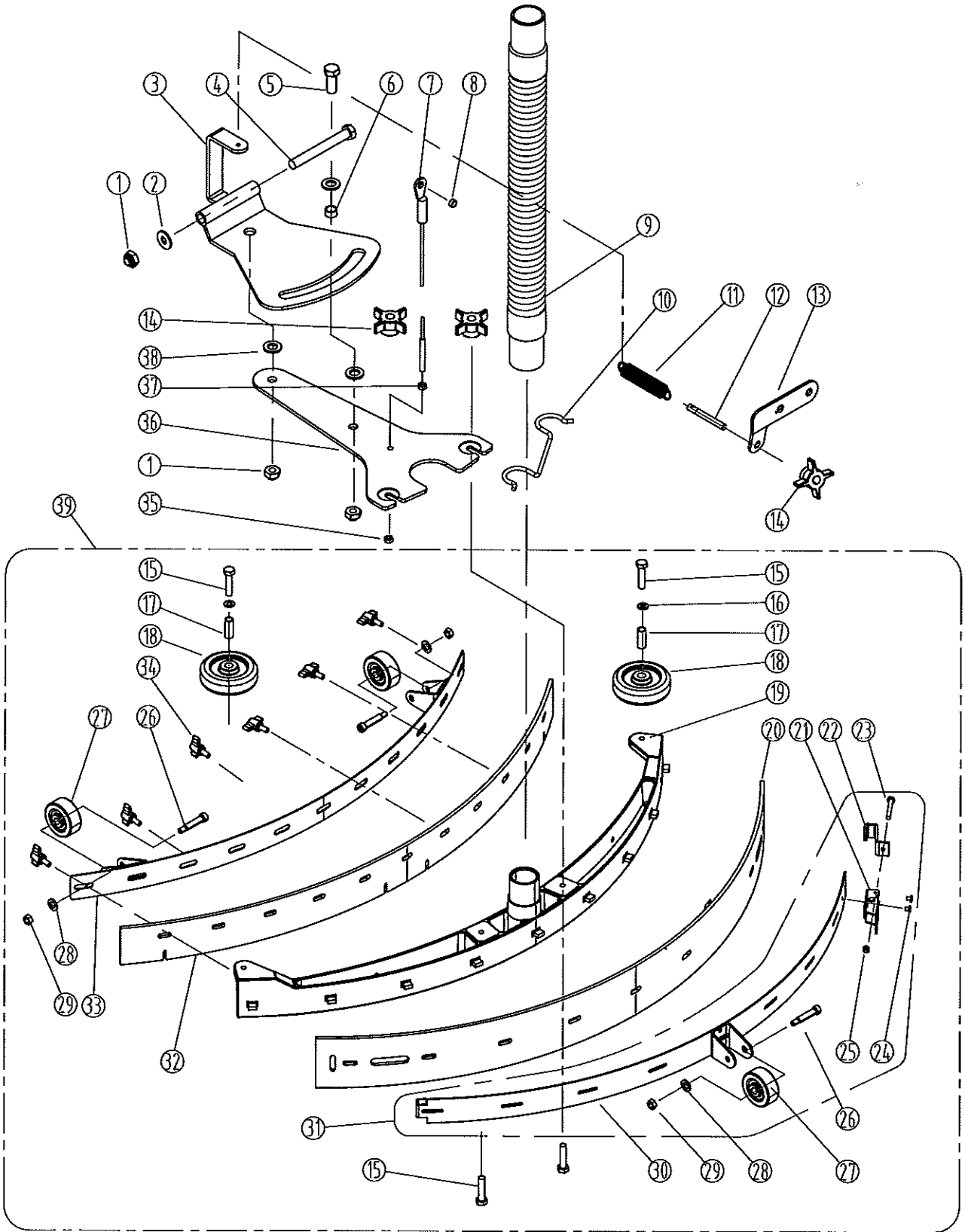
## FANG20HD - SOLUTION TANK ASSEMBLY

DIA NO	PART NUMBER	DESCRIPTION	NO REQ'D
41	VF82072A	SPACER, BATTERY	1
42	VF13634	SCREW, M10 X 30	8
43	VF82403	CABLE, BATTERY	1
44	VF81724	CAPS, BATTERY, BLACK	2
	VF81724R	CAPS, BATTERY, RED	2
45	CHRGR18	CHARGER, 24V, 18AMP	1
46	VF13537	WASHER, PLAIN, M10 X M26 X 2	8
47	VF13518	WASHER, LOCK, M10	8
48	VF14234	SCREW, M8 X 16	2
49	VF13513	NUT, M8	2
50	VF81408	PLATE, LOCK	2
51	VF81416	HOSE BARB	2
52	VF82161	CLAMP (16-25)	1
53	VF81123	TUBING	1
54	VF82306A	KIT, LABEL, MARKERS	1
55	VF14230	SCREW, M5 X 15	3
56	VV13601	WASHER, LOCK, M5	3
57	VF13532	WASHER, PLAIN, M5 X M11 X 2	3
58	VF81202	PLATE, SQUEEGEE, LOCK	1
59	VF14235	SCREW, M8 X 35	1
60	VF48216	WASHER, LOCK, M12.7	1
61	VF83124	HANDLE, SQGE, LIFT	1
62	VF82050A	BUSHING	1
63	VF14248	SCREW, M8 X 100	1
64	VA13516	WASHER, PLAIN, M10 X M30 X 1.5	1



PARTS LIST

FANG20HD - SQUEEGEE ASSEMBLY



## FANG20HD - SQUEEGEE ASSEMBLY

DIA NO	PART NUMBER	DESCRIPTION	NO REQ'D
1	VF13501	NUT, LOCK, M12	3
2	VF13538	WASHER, PLAIN, M12 X M26 X 2	1
3	VF83122	MOUNT, PIVOT	1
4	VF13637	SCREW, M12 X 130	1
5	VF14238	SCREW, M12 X 30	2
6	VF82016A	BUSHING	2
7	VF81243	CABLE, SQUEEGEE, LIFT (24")	1
8	VF82112	BUSHING	1
9	VF81203A	HOSE	1
10	VF83150	HOLDER, "U" HOSE	1
11	VF83144	SPRING	1
12	VF82047	SHAFT	1
13	VF83125	BRACKET, SPRING	1
14	VF81210	KNOB, M8	3
15	VF14236	SCREW, M8 X 40	4
16	VF13514A	WASHER, PLAIN, M8 X M16.5 X 1	2
17	VF82055	BUSHING	2
18	VF82013	WHEEL, 3"	2
19	VF82116	HOUSING, SQUEEGEE	1
20	VF82063	BLADE, SQUEEGEE, REAR (PU)	1
	VF82119	BLADE, SQUEEGEE, REAR (NEOPRENE)	1
21	VF81218	LATCH, HOOD	1
22	VF81209	HOOK, REAR, SQUEEGEE BACKUP ADJUSTMENT	1
23	VF14310	SCREW, M5 X 70	1
24	VF81208A	RIVET, M4 X 5	2
25	GT13022	NUT, LOCK, M5	1
26	VF81222	BOLT, SHOULDER, 5/16" X 1.25"	3
27	VF81219	WHEEL, 2"	3
28	VF13535	WASHER, PLAIN, M8 X M20 X 2	3
29	VV20203	NUT, LOCK, 5/16"	3
30	VF82120	BACKUP STRIP, SQUEEGEE, REAR	1
31	VF82120A	KIT, SQUEEGEE, BACKUP STRIP, REAR	1
32	VF82062	BLADE, SQUEEGEE, FRONT, (PU)	1
	VF82117	BLADE, SQUEEGEE, FRONT, (NEOPRENE)	1
33	VF82118	BACKUP STRIP, SQUEEGEE, FRONT	1
34	VF82121	KNOB, M6	6
35	VF13502	NUT, LOCK, M6	1
36	VF83123	BRACKET, SQUEEGEE, MOUNT	1
37	VF13521	NUT, M6	1
38	VF13539	WASHER, PLAIN, M12 X M32 X 2	4
39	VF82908A	SQUEEGEE ASSEMBLY	1