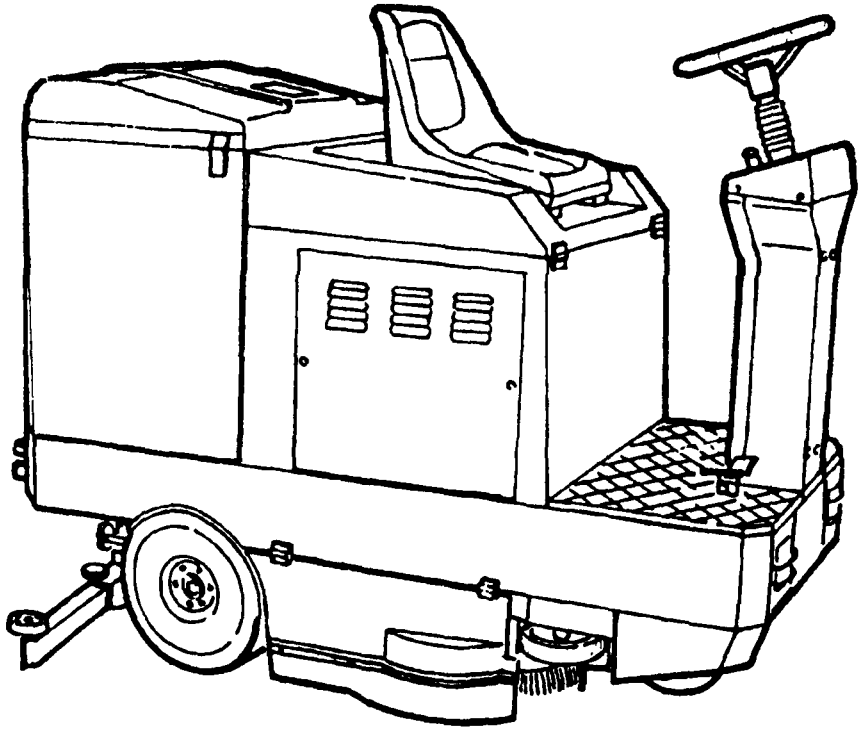
KENT

OWNER'S MANUAL

OPERATION • CARE • SERVICE

RIDER BATTERY SCRUBBER

KA-33BR



THE KENT COMPANY • 2310 INDUSTRIAL PARKWAY • P O.BOX 1665 • ELKHART, IN 46515, U.S A
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MACHINE SPECIFICATIONS

MODEL KA-33BR	
Scrubbing Width	33 in.
Coverage (ft.²/hr.)	54,000 @ 328 fpm
No. of Batteries	6
Battery Capacity	330 AH - 6V - 6 req'd.
Running Time	6.5 hours
Machine Volts - DC	36
Brush Diameter	17 in.
Brush RPM	200
Number of Brushes	2
Brush Pressure	0-200 lbs.
Brush Drive Motors	Two - 500W thru Gearbox
Brush Change	Click-On Click-Off
Clean Water Tank Capacity	33.1 gal.
Clean Water Tank Material	SS-303
Recovery Tank Capacity	38.5 gal.
Recovery Tank Material	SS-303
Tank Drain - Clean	Ball Valve
Tank Drain - Recovery	Ball Valve and Pump-Out
Tank Material	SS-303
Water Control	4 Rates, Push-Button
Squeegee Width	44.1 in.
Squeegee Swing	12.6 in.
Side Squeegee	No
Machine Speed - Forward	109 ft./min. 218 ft./min. 328 ft./min.
Machine Speed - Reverse	164 ft./min.
Backup Beeper - Standard	Yes

MODEL KA-33BR	
Head Lights - Standard	Yes
Front Wheel	One - 9.8 in. x 3.5 in.
Rear Wheel(s)	Two - 9.8 in. x 3.5 in.
Maximum Grade	14%
Traction Motor	1550 Watts
Type of Drive	Motor & Gearbox
Vac Motor	730 Watt, 3-Stage, 36 Volt Bypass
Machine Body Width	30.7 in.
Machine Overall Body Width	33.1 in.
Machine Overall Length	59.8 in.
Machine Body Length	59.8 in.
Machine Body Height	43.7 in.
Wheel Base	33 in.
Key Lock	Yes
Horn	Yes
Battery Condition Meter	Yes
Charger	30 Amp (P/N 31369, 115/60)
Steering Wheel	12 in.
Hour Meter	Yes
Turning Radius	46.5 in.
Brake	Yes - Electric and Manual
Operator Seat	Adjustable
Wt. - w/o Batteries	812 lbs.
Wt. - w Batteries	1370 lbs.
Options	Overhead Guard - Late 1994 Warning Light Kit - 1994 PreSweep Attachment 1995 Recycle System - 1995

INTRODUCTION

This manual is a guide to the use of the machine and also contains practical information concerning the functioning, regulation and ordinary maintenance of your new rider scrubber. Your machine has been designed and constructed to ensure maximum performance, comfort and operating facility in a large variety of conditions.

Before delivery, the machine has been checked in our factory to ensure that it is delivered to you in perfect condition. To maintain the machine in these conditions and guarantee functioning without problems, it is very important that the periodical maintenance operations indicated in this manual are properly carried out.

Before using the machine, carefully read this manual (particularly the chapter concerning safety measures) and keep it within easy reach for further reference.

Indications of "left" and "right" are referred to the direction of movement of the rider scrubber. If you should need any further information concerning the machine, do not hesitate to contact our dealer. Thanks to competent personnel, availability of original spare parts and the necessary equipment, he will certainly be able to satisfy all your requests.

The machine must not be used without its protective equipment. For your own safety, make sure that all protective devices are closed or correctly in place before switching on machine.

MODIFICATIONS AND IMPROVEMENTS

The Kent Company aims towards a constant perfectioning of its machines and reserves the right to carry out modifications and improvements whenever necessary without being obliged to carry out the same operations on previously sold machines.

SPARE PARTS

Contact your local dealer for supply of original spare parts. When ordering spares, always indicate model, serial and part number of item(s) needed if known of your rider scrubber.

SAFETY

YOU TOO CAN AVOID ACCIDENTS

No safety program is effective without the total cooperation of the people directly responsible for the functioning of the machine.

The majority of accidents which may occur in a factory, during work or transfer, are caused by the inobservance of the most elementary safety rules.

An alert and cautious operator is the best guarantee against accidents and is more efficient than any prevention program.

SPECIAL INSTRUCTIONS

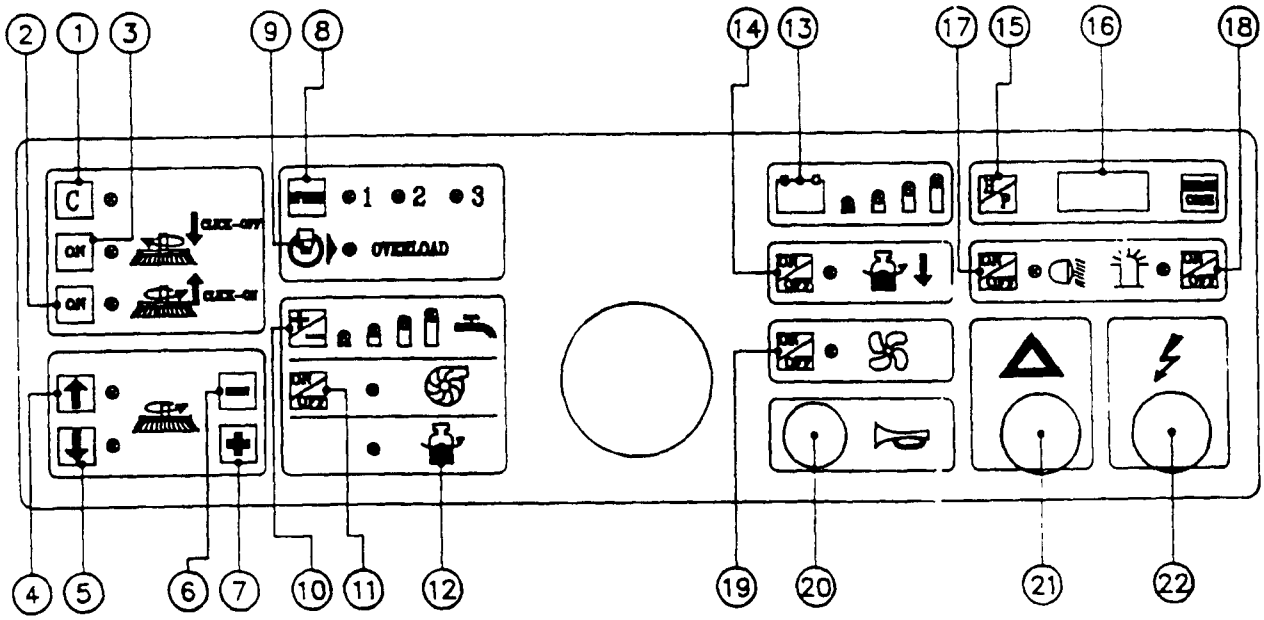
IT IS FORBIDDEN TO USE SOLUTIONS INCLUDING INFLAMMABLE, EXPLOSIVE OR FOAMY LIQUIDS.

IT IS FORBIDDEN TO SWITCH OFF MACHINE WHEN THE VARIOUS FUNCTIONS ARE STILL ACTIVATED AS THIS COULD DAMAGE THE ELECTRONICS.

HOW TO USE THE MACHINE

SWITCHING ON

Turn key n° 22 (fig.1) clockwise.



1. Access to brush changing sequence
2. Hooking up brushes
3. Unhooking brushes
4. Raising brush head
5. Lowering brush head
6. Decreasing brush pressure
7. Increasing brush pressure
8. Choice of speed range
9. Drive motorwheel fault
10. Adjusting solution flow
11. Solution pump on/off
12. Recovery tank level
13. Voltmeter
14. Recovery tank drain switch
15. Choice of data on display
16. Display
17. Lights switch
18. Flashing beacon switch
19. Vacuum switch
20. Horn
21. Emergency button
22. Starter key

Fig. 1

DRIVE CONTROLS

Drive is controlled by means of a pedal.
The machine is equipped with 3 different speed ranges and can be selected on the dashboard by means of button n°8 (fig.1):

-1 speed ranging from 0 to 109 ft./min.
-2 " " " 0 to 218 ft./min.
-3 " " " 0 to 328 ft./min.

Reverse works only if the squeegee is in raised position; therefore, if reverse is selected during work, the machine automatically raises the squeegee. When reverse is engaged a beeping sound is heard which acts as a safety feature.

The machine is equipped with 2 braking systems: an electro-magnetic brake on the front drive wheel and a couple of shoe brakes on the 2 rear wheels.

BRUSH UNIT CONTROLS

Before activating the brush unit the pressure value must be selected by means of button + and - (pos. 6 and 7, fig. 1): the value selected will appear on display n°16 (fig. 1).

Press button n°5 (fig. 1) to lower the brush unit. The brush head is brought onto the floor and the 2 brush motors switch on automatically and start working at the pressure indicated on the display.

If during work the operator wishes to change the pressure value it is sufficient to press either + or - buttons.

To temporarily suspend work, push button n°4 (fig. 1) which raises the brush unit but the motors remain on. To recommence work, at the previous pressure value, repush button 5 (fig. 1).

When work is over push button 4 (fig. 1) to raise the brush head and when it is up and motors are still on, as described in the previous paragraph, if button 4 (fig. 1) is pushed once again the motors switch off.

If, during work, the machine is left alone by the operator for about 30 seconds the brush motors automatically switch off and the brush head returns to the rest position (up).

HOW TO REPLACE BRUSHES

The machine is equipped with an automatic click-on and click-off for the brushes.

This operation is possible only when machine is on but with all other functions disactivated.

To begin the sequence press button 1 (fig.1)

To unhook the brushes keep button 3 (fig.1) pushed until brushes fall onto floor.

Position the new brushes (1-2 fig.2) making sure that they fit against the relative guides (3-4 fig.2), therefore press button 2 (fig.1); the machine will automatically hook up the brushes and then bring the brush head to the raised position.

To restore the normal working conditions of the machine the sequence must be completed by pushing again button 1 (fig. 1).

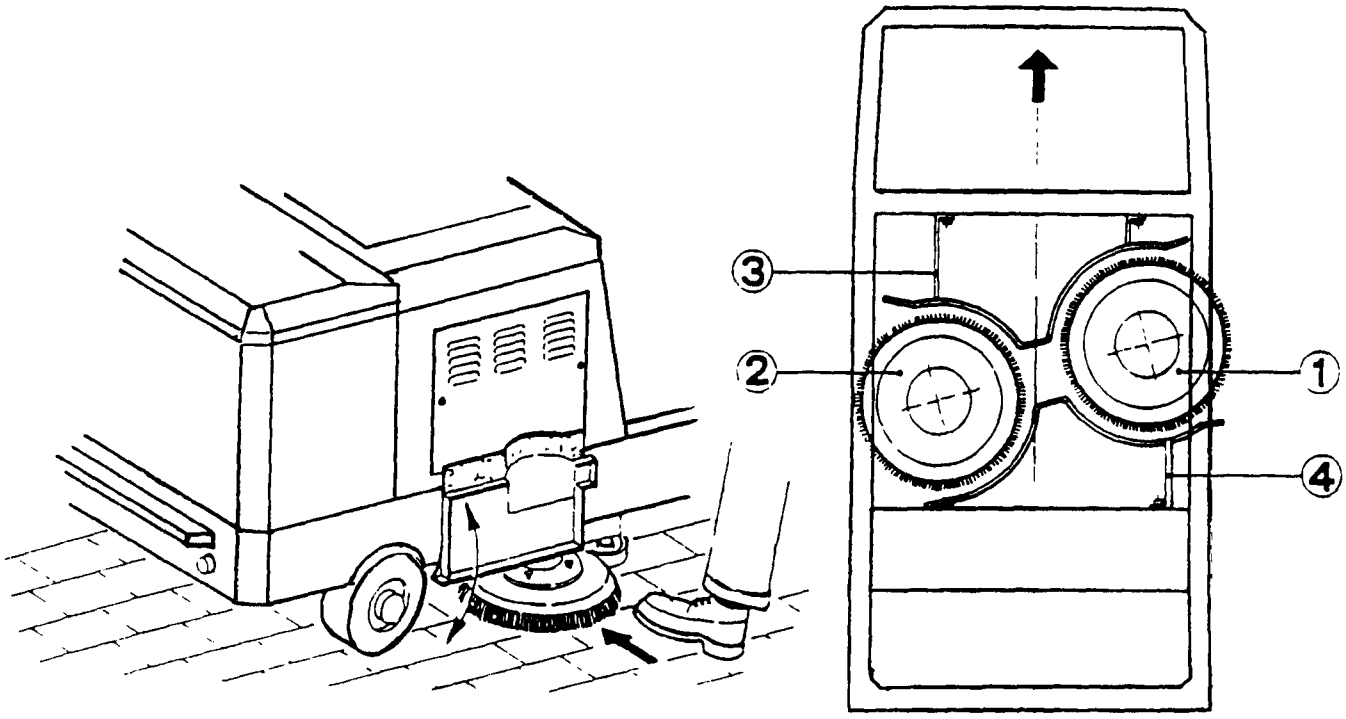


Fig. 2

VACUUM AND SQUEEGEE CONTROLS

The vacuum motor is switched on by means of button 19 (fig.1).

When the motor is switched on the squeegee unit is automatically lowered to the floor.
The squeegee can be adjusted in 2 ways: inclination and pressure.
To adjust the pressure to the floor turn hand wheel 1 (fig. 3) clockwise (to increase) or anticlockwise (to decrease).
The inclination is adjusted by means of hand grip 2 (fig.3).

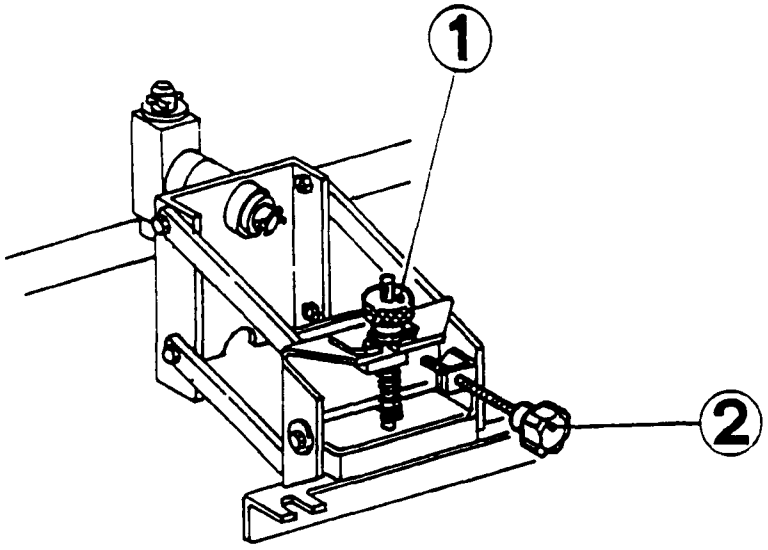


Fig. 3

To switch off the vacuum motor repush button 19 (fig.1). There is a 5 second delay to allow elimination of any liquid in the squeegee hose whereas the squeegee is immediately raised.

If reverse is engaged during work with brush head and squeegee both on floor, the machine will automatically raise the squeegee and reverse will not be possible until the squeegee has reached the correct upper limit.

In this case also, if the machine is left for more than 30 seconds, the motor is automatically switched off and the squeegee is raised.

This function is also automatically activated when liquid in recovery tank reaches a certain level (see paragraph on LIQUIDS,

SOLUTION FLOW CONTROLS

The flow of the solution is controlled by means of button 10 (fig.1). Every time the button is pushed the flow increases by a step.
An auxiliary pump is available and is activated by means of button 11 (fig.1).

Regardless of which quantity of solution is selected, flow to brushes occurs only at the following 2 conditions.

a) forward drive is engaged

b) brush unit is on the floor

LIQUIDS AND DRAINING OF TANKS

Inside the solution recovery tank there is a microswitch acting as a float which automatically switches off the vacuum motor when the tank is full.

The machine is also equipped with a pressurized system of draining the recovery tank. This function can be activated only if machine is on but with all its other functions disactivated otherwise it will not work.
To carry out the draining operation fix the appropriate hose n°1 onto the pipe union 2 (fig.4), open valve 4 and then press button 14 (fig.1).

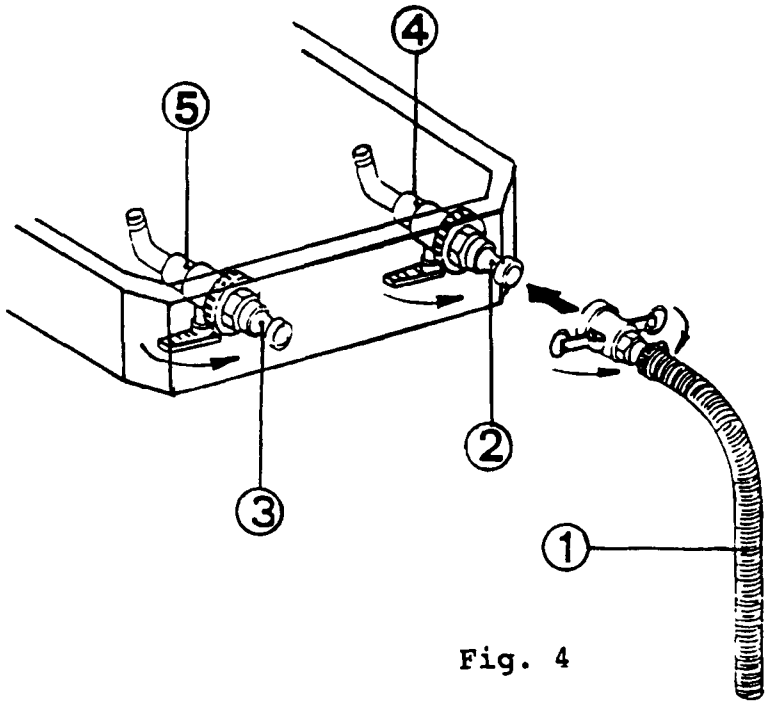


Fig. 4

This operation can be carried out even when the machine is blocked because batteries are run down (see paragraph on AUXILIARY CONTROLS).

To drain the clean water tank use hose 1 (fig. 4), fix it onto pipe union 3 and then open valve 5.

EMERGENCY BUTTON

In case of emergency, the machine can be immediately disactivated by pushing the red mushroom shaped button n° 21 (fig. 1) and the electrobrake is also activated.
To restore the normal working conditions of the machine turn the button in the direction indicated by arrow.

AUXILIARY CONTROLS (Figure 1)

The machine is equipped with various other auxiliary features such as working lights, flashing beacon, horn, voltmeter, and hour meter display.

WORKING LIGHTS - This is part of the machines standard equipment. Lights are switched on by means of button 17.

FLASHING BEACON - This is an optional and is activated by means of button 18 when present on machine.

HORN - This is part of the machines standard equipment. It is activated by means of button 20.

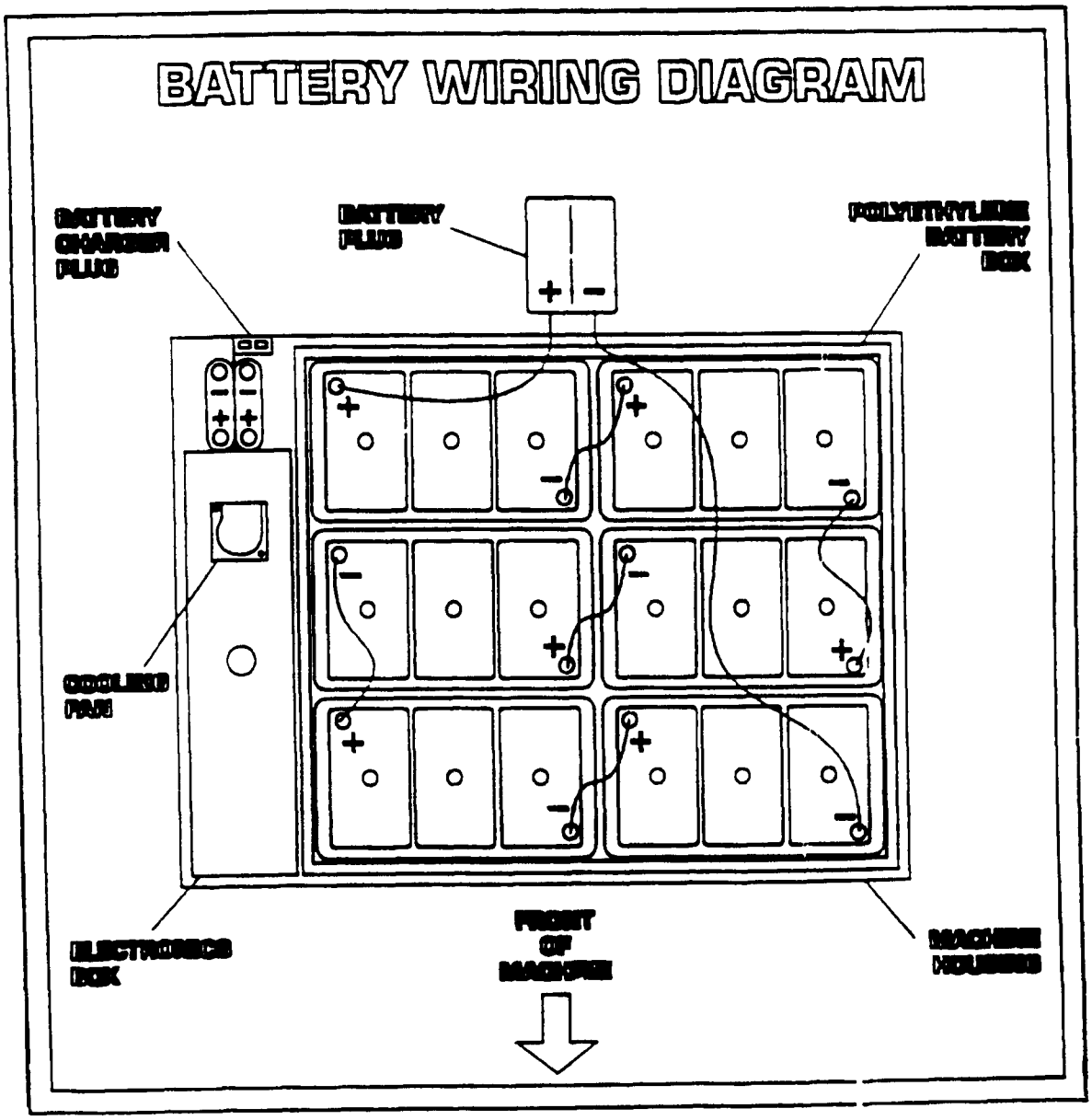
VOLTMETER - This instrument has 2 functions:
- it indicates the charge level of the batteries
- if the minimum charge level of batteries is reached or overcome it automatically disactivates all the machines functions except for drive and the draining of the recovery tank.

HOUR METER DISPLAY - Display n° 16 has various functions. It normally indicates the pressure value selected for the brushes and this is distinguishable from other readings as the number is preceded by the letter P.
By pushing button 15 one time, the display indicates the number of hours the machine has worked (hour meter function), distinguishable thanks to letter H.
If button 15 is pushed a second time the display indicates also minutes.
Apart from the pressure value, all other types of indications selected for display are visualized for a limited time after which the display automatically returns to the pressure value reading.
If necessary, the display also indicates the error code which differs from other readings as it is a flashing number.

BATTERIES & CHARGING

Before recharging batteries make sure that the caps on the battery cells are vented so that fumes produced can escape or that the battery is equipped with some similar device. Remember to keep the seat/battery compartment cover open during the battery recharging operation.

Standard Batteries: P/N 27048, 6VDC ea., 330AH, wet (6/machine).
Battery Conn. Cables: P/N 25085, 6 Ga, black, 10" lg.(5/machine).
Battery Box: P/N 53534 - Polyethylene



To charge the batteries, disconnect large battery plug and replug it into the second mating plug which is wired to the small battery charger plug. Hook battery charger (36VDC) DC plug into charging plug on machine, plug in AC cord and charger will operate automatically.

Battery Charger: P/N 31369 - 36 VDC, 120 VAC/60 Hz, *30* ADC.

CLEANING THE FILTER IN THE CLEAN SOLUTION TANK (Figure 5)

This filter must be cleaned every 10/15 hours work. Access to filter n° 1 is through the top of the tank. To remove filter unscrew and remove from its base.

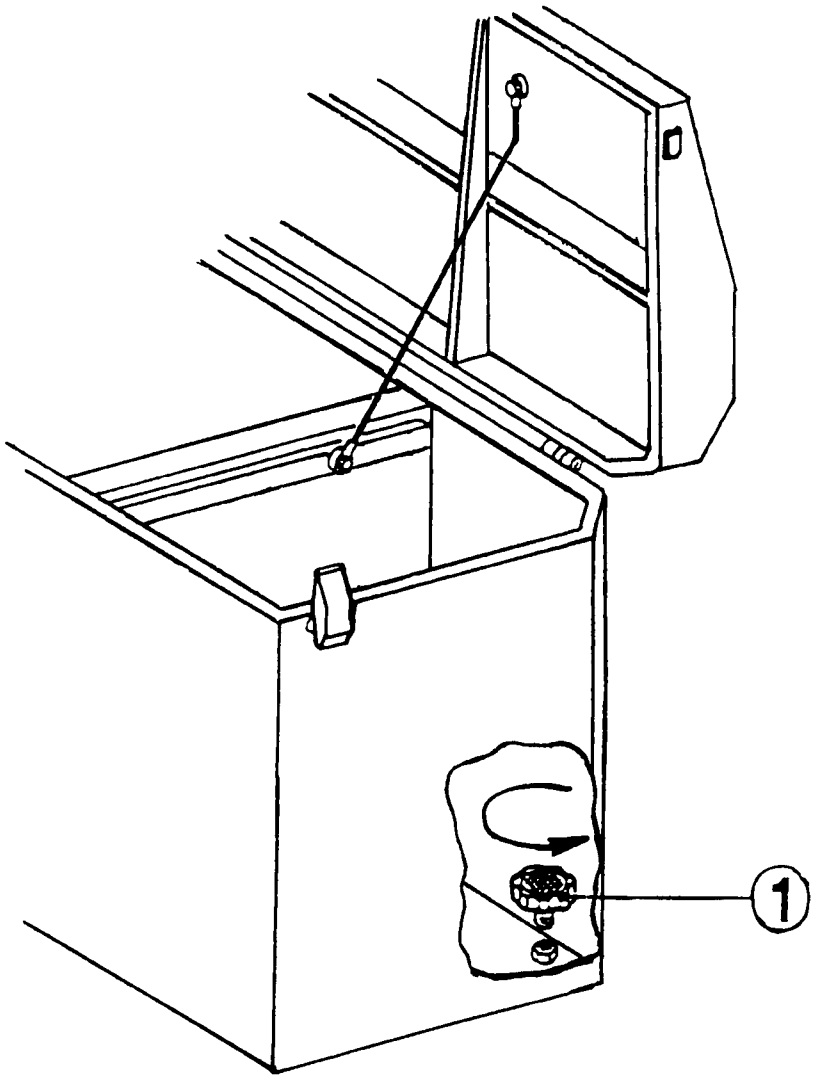


FIG. 5

GREASING (FIGURE 6)

Periodically grease the rotating pin on the squeegee unit together with all the other points indicated in the figure.

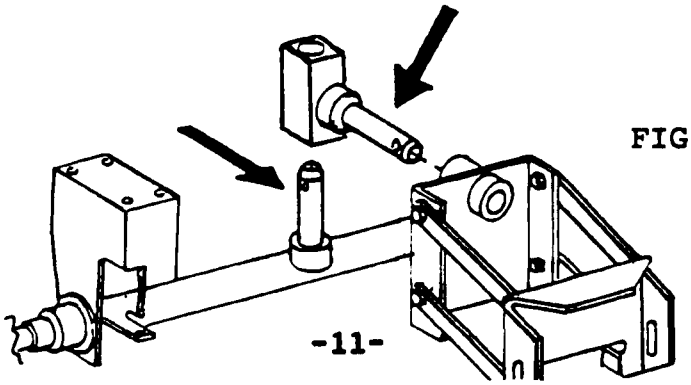


FIG. 6

HOW TO MOVE THE MACHINE WITHOUT BATTERIES

a) Loosen dowels (1) and remove protective cover (2).

b) Turn the metal ring counterclockwise (3) until the braking action of the machine is cancelled.

The machine is now free to be moved by hand.

HOW TO ADJUST ELECTRIC BRAKE

a) Unscrew the metal ring (3) until the springs are freed from compression (counterclockwise).

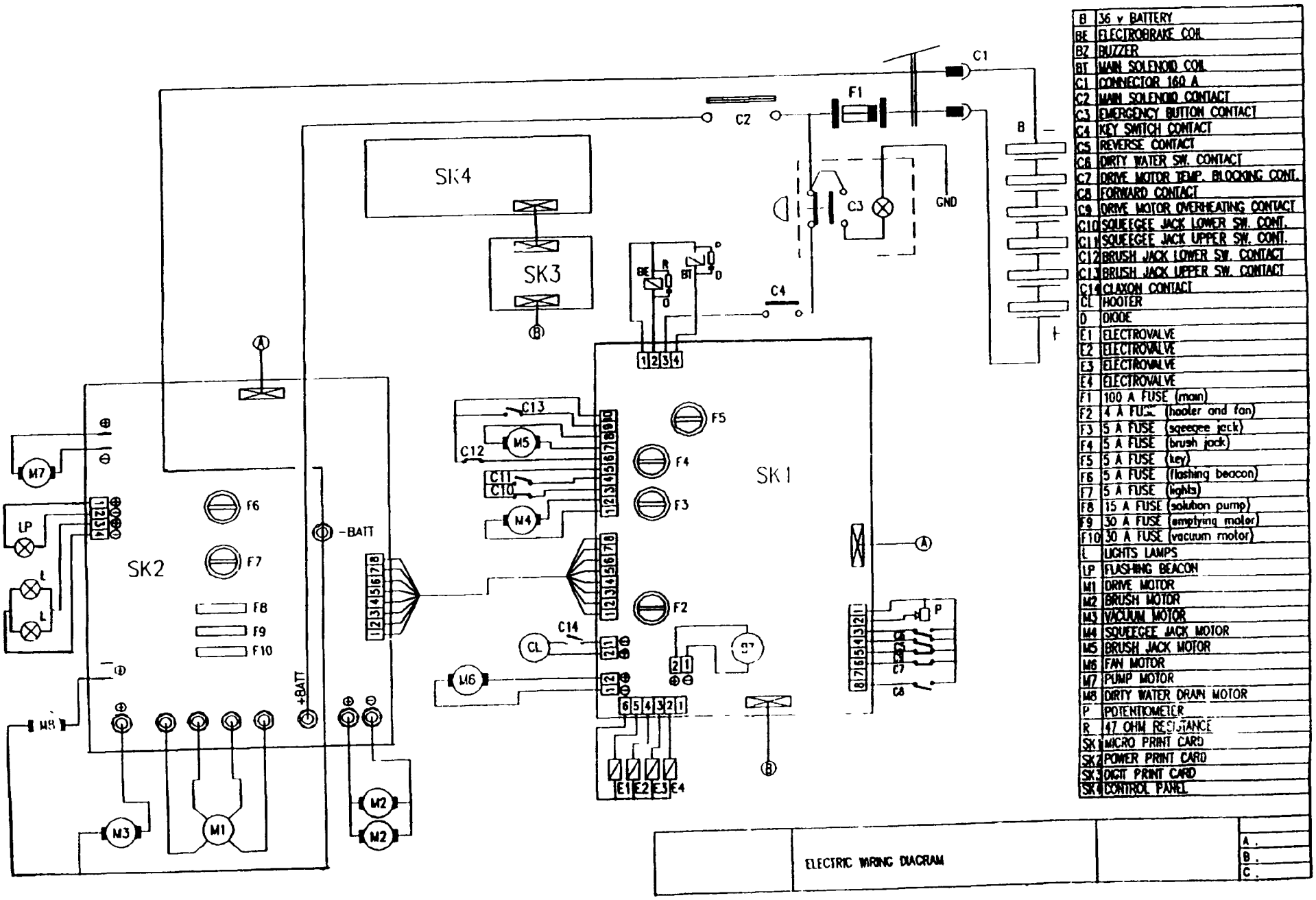
b) Tighten again the metal ring (turn clockwise) until it touches the springs.

c) Tighten further by turning twice:
Check braking and, if necessary, tighten further (half a turn at a time). The correct braking distance should be approx. 50/60 cm.

d) Replace cover (2).

TROUBLE SHOOTING AND ERROR CODES

ERROR CODE	FAULT
300	Temperature rise in drive wheel motor
301	Blockage due to temperature rise in drive wheel motor
302	Drive motor transistor short circuited
303	Drive overcurrent
304	Temp. rise on drive cooling vents (185°F)
305	Temp. rise on drive cooling vents (203°F)
306	Temp. rise on drive (221°F) with subsequent cut-off
307	Accelerator/key sequence fault
308	Potentiometer wire broken
402	Brush motor transistor short circuited
403	Overcurrent to brushes
404	Temp. rise on brush cooling vents (185°F)
405	Temp. rise on brush cooling vents (203°F)
406	Temp. rise on brushes (203°F) and subsequent cut-off
602	Brush jack motor transistor short circuited
700	Fault in 24V power supply



B	36 v BATTERY
BE	ELECTROBRAKE COIL
BZ	BUZZER
BT	MAIN SOLENOID COIL
C1	CONNECTOR 160 A
C2	MAIN SOLENOID CONTACT
C3	EMERGENCY BUTTON CONTACT
C4	KEY SWITCH CONTACT
C5	REVERSE CONTACT
C6	DIRTY WATER SW. CONTACT
C7	DRIVE MOTOR TEMP. BLOCKING CONT.
C8	FORWARD CONTACT
C9	DRIVE MOTOR OVERHEATING CONTACT
C10	SQUEEGEE JACK LOWER SW. CONT.
C11	SQUEEGEE JACK UPPER SW. CONT.
C12	BRUSH JACK LOWER SW. CONTACT
C13	BRUSH JACK UPPER SW. CONTACT
C14	CLAXON CONTACT
CL	HOOTER
D	DIODE
E1	ELECTROVALVE
E2	ELECTROVALVE
E3	ELECTROVALVE
E4	ELECTROVALVE
F1	100 A FUSE (main)
F2	4 A FUSE (hooter and fan)
F3	5 A FUSE (squeegee jack)
F4	5 A FUSE (brush jack)
F5	5 A FUSE (key)
F6	5 A FUSE (flashing beacon)
F7	5 A FUSE (lights)
F8	15 A FUSE (solution pump)
F9	30 A FUSE (emptying motor)
F10	30 A FUSE (vacuum motor)
L	LIGHTS LAMPS
LP	FLASHING BEACON
M1	DRIVE MOTOR
M2	BRUSH MOTOR
M3	VACUUM MOTOR
M4	SQUEEGEE JACK MOTOR
M5	BRUSH JACK MOTOR
M6	FAN MOTOR
M7	PUMP MOTOR
M8	DIRTY WATER DRAIN MOTOR
P	POTENTIOMETER
R	47 OHM RESISTANCE
SK1	MICRO PRINT CARD
SK2	POWER PRINT CARD
SK3	DIGIT PRINT CARD
SK4	CONTROL PANEL

ELECTRIC WIRING DIAGRAM

A .
B .
C .

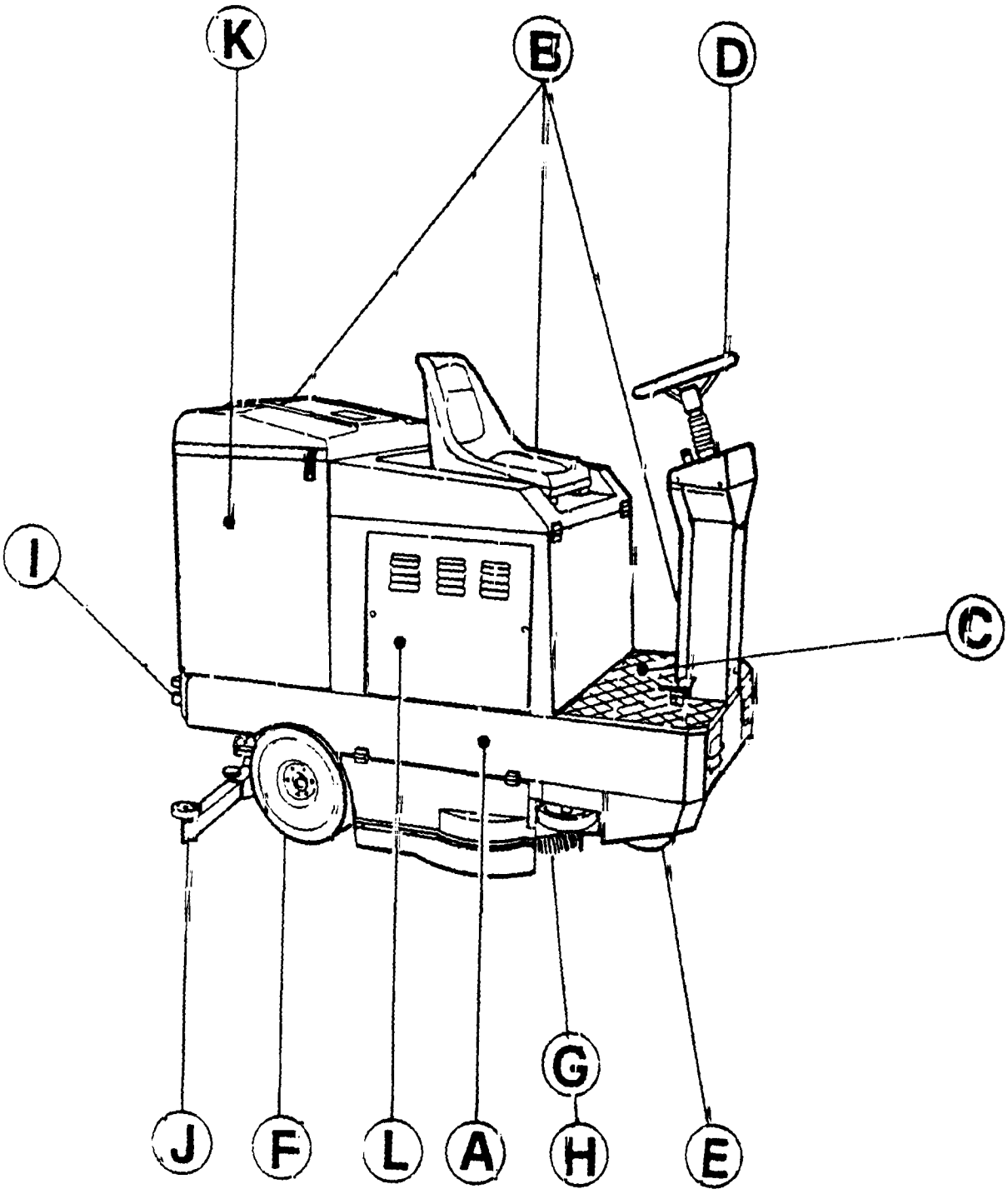


ILLUSTRATION FIGURES

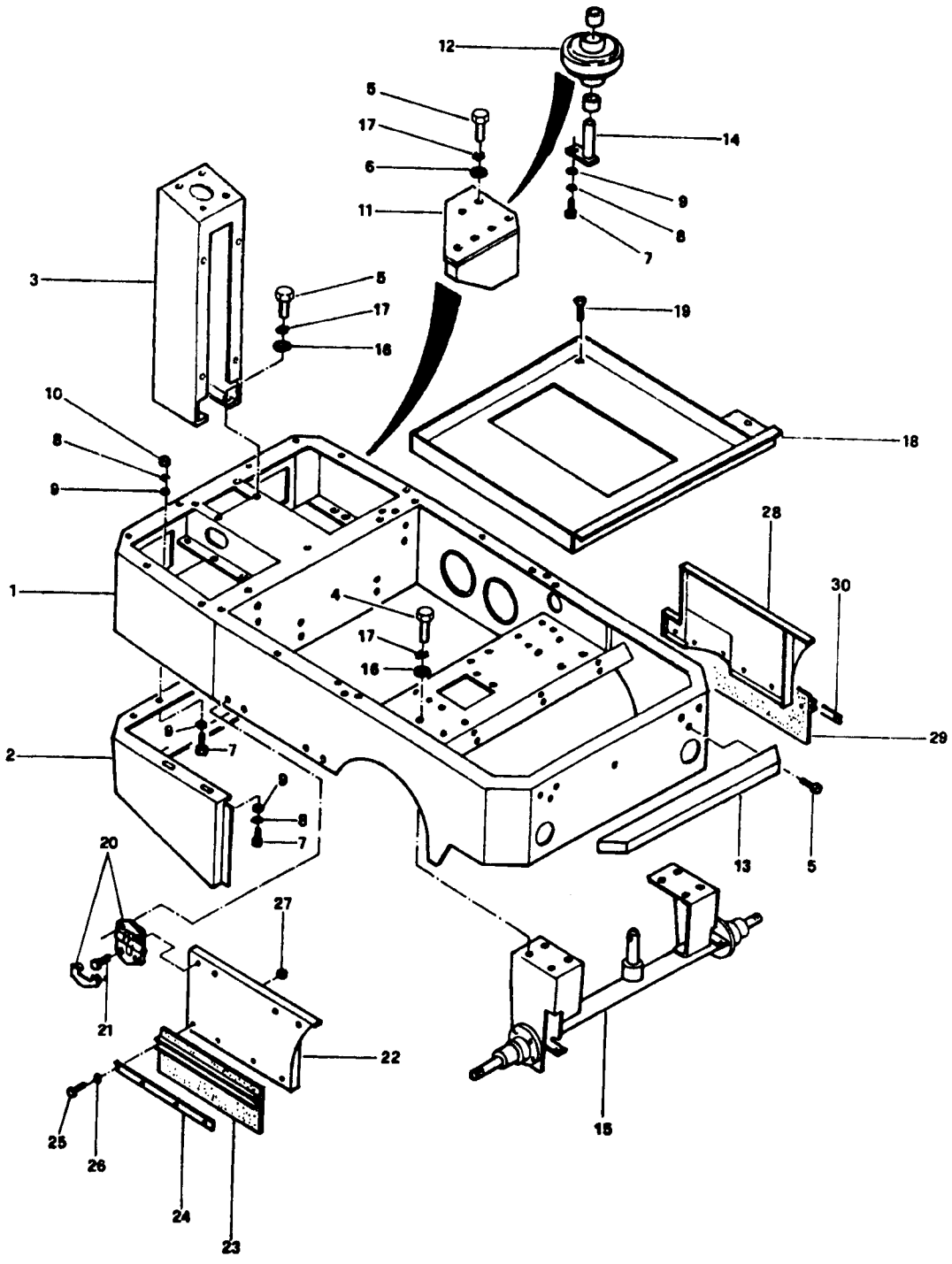

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FIGURE A

SEQ NO	COMPONENT	DESCRIPTION	QUANTITY PER ASSM
01	PF01.20500	FRAME,CHASSIS--RIDER	1
02	PF00.57500	COVER,BUMPER	1
03	PE02.64200	STEERING COLUMN	1
04	PV02.014	SCR--8X25,HH	8
05	PV02.013	SCR--M8X20,HEX HD	10
06	PV09.020	WSHR, 8X24X2	3
07	PV02.003	SCR--6X16,HEX HD	9
08	PV11.004	WSHR, LK #6	9
09	PV09.004	WSHR--#6	14
10	PV13.004	NUT--#6,HEX	5
11	PF03.53400	SUPPORT--BUMPER WHEEL,RIGHT	1
12	PD00.05700	WHEEL,BUMPER	1
13	PF00.57400	MOUNTING BRACKET	1
14	PE02.64300	PIN	1
15	PF04.15900	ASM,REAR WHEEL SUPPORT	1
16	PV09.005	WASHER,M8	12
17	PV11.005	WASHER,M8	15
18	PF03.55400	BATTERY HOLDER--FRAME	1
19	PV03.004	SCREW--M6X16,FL HD	4
20	PL02.14400	HINGE	4
21	PV02.023	SCREW--M5 X 12	8
22	PF00.57600	COVER,LEFT BRUSH	1
23	PH02.27500	FLAP--LEFT BRUSH COVER	1
24	PF03.56800	BRACKET--LEFT FLAP	1
25	PV02.09203	SCREW, M5 X 16	9
26	PV09.003	WASHER,M5	9
27	PV13.003	NUT--#5,HEX	9
28	PF00.57700	COVER--RIGHT BRUSH	1
29	PH02.27600	FLAP--RIGHT BRUSH COVER	1
30	PF03.56900	BRACKET--RIGHT FLAP	1

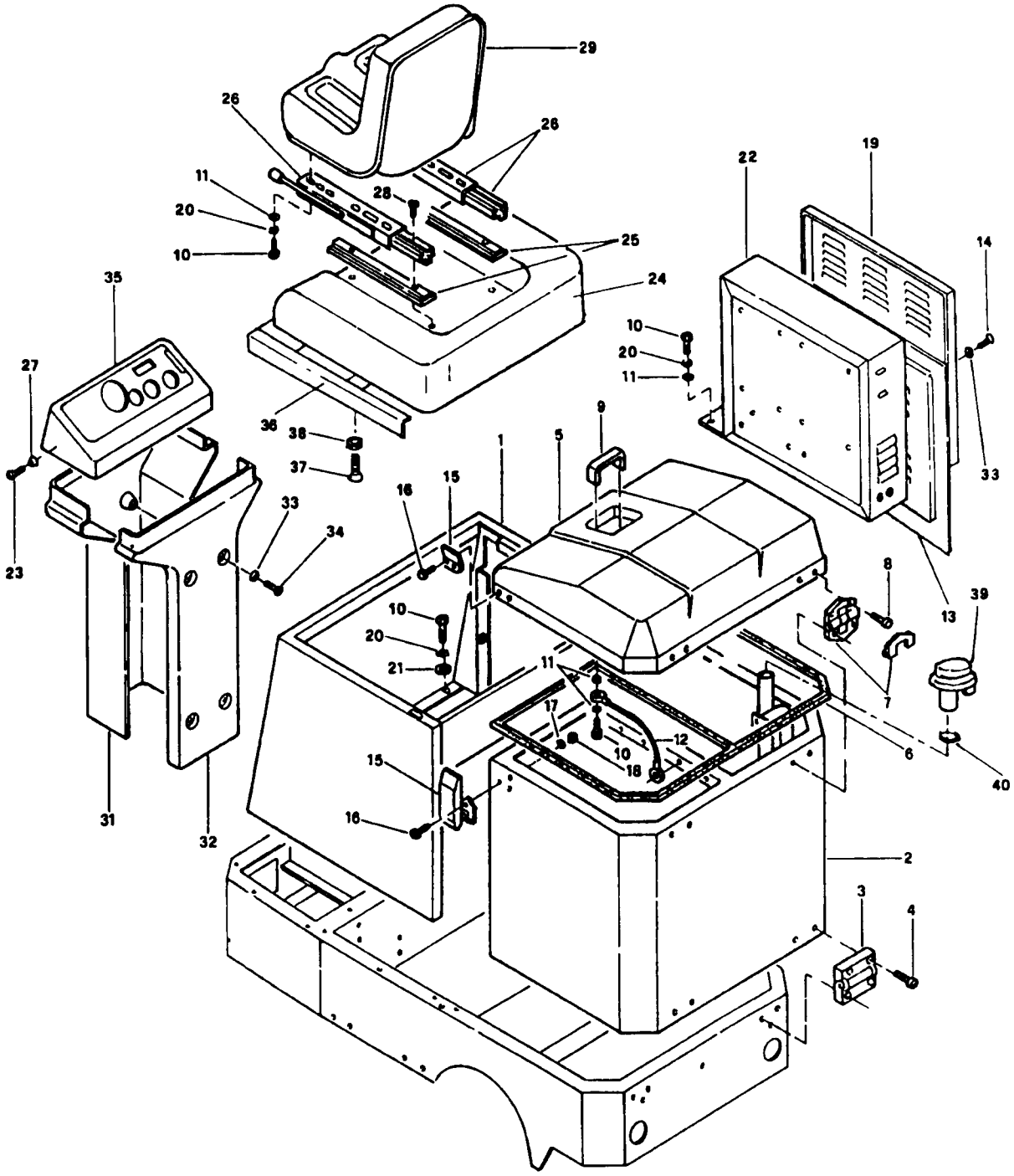
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FIGURE B

TECH MANUAL--KA33BR,RIDER,FIGB

SEQ NO	COMPONENT	DESCRIPTION	QUANTITY PER ASSM
01	PF00.57100	COVER--BATTERY COMPARTMENT	1
02	PF04.20000	TANK-CLEAN/RECOVERY,SS	1
03	PL02.08000	HINGE	2
04	PV04.01500	SCR, 6X16	4
05	PH01.21300	LID,COVER--CLEAN/RECOVERY TANK	1
06	PH04.03200	GASKET--TANKS	1
07	PL02.14400	HINGE	2
08	PV02.023	SCREW--M5 X 12	8
09	PL02.14000	HANDLE	1
10	PV02.003	SCR--6X16,HEX HD	16
11	PV09.004	WSHR--#6	9
12	PE08.13100	CABLE--LID STOP	1
13	PH01.21700	LID,COVER--CONTROL BOX	1
14	PV03.04302	SCREW, M6 X 30	2
15	PL02.13900	PROTECTION SIDE PLATE	2
16	PV02.09203	SCREW, M5 X 16	10
17	PV09.003	WASHER,M5	6
18	PV13.003	NUT--#5,HEX	6
19	PF00.57300	COVER--CONTROL BOX,BLUE	1
20	PV11.004	WSHR, LK #6	16
21	PV09.022	WSHR--6X18X2	7
22	PF03.55700	ELECTRICAL CONTROL BOX	1
23	PV05.01503	SCREW, M2.9 X 15	4
24	PH01.24000	COVER--BATTERIES&SEAT SUPPORT	1
25	PF03.07620	SUPPORT,SEAT--	2
26	PL03.03300	SLIDE--SEAT ADJUSTER	1
27	PV11.03200	WASHER,M4	4
28	PV02.013	SCR--M8X20,HEX HD	4
29	PL03.03200	SEAT--OPERATOR	1
30	PV13.005	NUT--M8,HEX,NYLOC	4
31	PH01.22300	COVER--FRONT,CONTROL PANEL	1
32	PH01.22200	COVER--REAR, CONTROL PANEL	1
33	PV11.02200	WSHR	10
34	PV03.004	SCREW--M6X16,FL HD	8
35	PH01.22400	INSTRUMENT CONTROL BOX	1
36	PF03.59800	CROSS PIECE--SUPPORT	1
37	PV02.004	SCR--6X20,HEX HED	2
38	PV13.004	NUT--#6,HEX	2
39	PH01.25200	COVER--INTAKE PIPE	1
40	PV20.009	CLAMP,M40 X 60	1

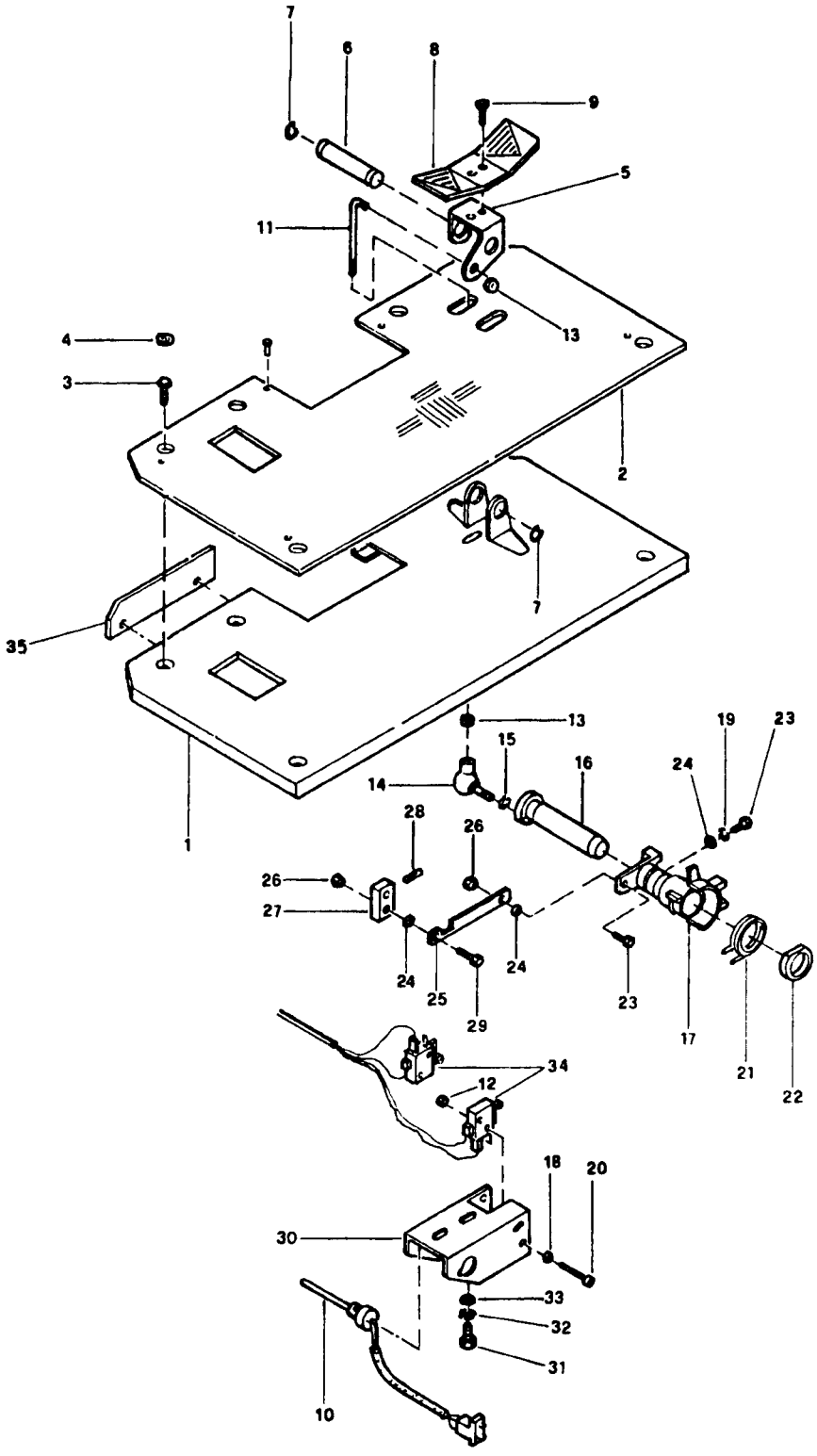
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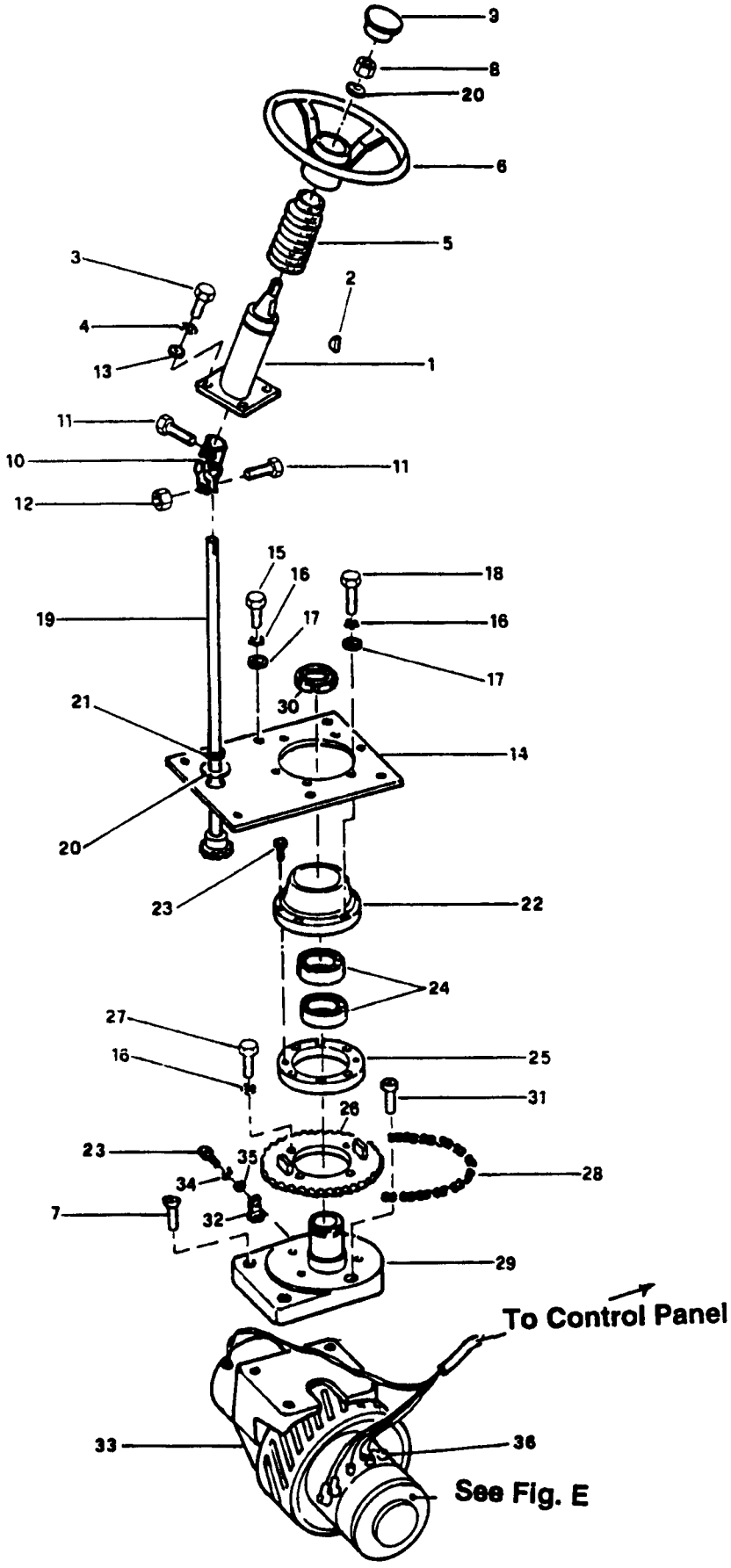
FIGURE C

TECH MANUAL--KA33BR,RIDER,FIGC

SEQ NO	COMPONENT	DESCRIPTION	QUANTITY PER ASSM
01	PF01.20600	LOWER FRAME--FOOT PLATE	1
02	PF03.53900	COVERING--FOOT PLATE	1
03	PV02.003	SCR--6X16,HEX HD	6
04	PL02.05200	CAP,D.15	6
05	PF03.54000	PEDAL HOLDER--FOOT	1
06	PE02.64900	PIN	1
07	PV14.007	RING,RETAINING--E 10	2
08	PF03.04000	PEDAL--FOOT	1
09	PV03.004	SCREW--M6X16,FL HD	2
10	PG01.01800	POTENTIOMETER--SPEED CONTROL	1
11	PE02.65000	TENSION ROD	1
12	PV13.06200	NUT--#3	4
13	PV13.003	NUT--#5,HEX	2
14	PV17.05300	ARTICULATED HEAD--SPEED CONTRL	1
15	PV11.002	WASHER,M4 X 12	1
16	PE02.65100	PIN	1
17	PL02.13300	CAM--SPEED CONTROL	1
18	PV09.001	WSHR	8
19	PV11.003	WASHER,M5	1
20	PV04.04300	SCREW,M3 X 20	4
21	PE04.08100	SPRING,COIL--TORSIONAL	1
22	PE05.18400	SPACER	1
23	PV02.023	SCREW--M5 X 12	2
24	PV09.003	WASHER,M5	3
25	PF03.46600	LEVER	1
26	PV13.018	NUT--#5,HEX,NYLOC	2
27	PF03.43400	CONNECTING ROD--	1
28	PV08.02800	DOWEL--M3 X 10	1
29	PV02.07400	SCR--5X20,HEX HD	1
30	PF03.46700	SUPPORT	1
31	PV02.002	SCR,6X12,HEX HED	2
32	PV11.004	WSHR, LK #6	2
33	PV09.004	WSHR--#6	2
34	PG05.04900	MICROSWITCH,SPEED CONTROL--	2
35	PF03.59100	FOOT STOP	2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See Fig. E

FIGURE D

TECH MANUAL--KA33BR,RIDER,FIGD

SEQ NO	COMPONENT	DESCRIPTION	QUANTITY PER ASSM
01	PF00.57000	SUPPORTING COLUMN--STEERING WH	1
02	PV17.10800	KEY,M5 X 15	1
03	PV02.022	SCREW,M10 X20	4
04	PV11.006	WASHER,M10	4
05	PH06.00800	STEERING COLUMN GUARD--	1
06	PL03.02900	STEERING WHEEL--	1
07	PV03.06100	SCREW, M10 X 25	2
08	PV13.009	NUT, #16	1
09	PL02.12300	CAP--STEERING WHEEL	1
10	PE09.001	JOINT--D.17	1
11	PV02.051	SCREW--M8X35,HEX HD	2
12	PV13.020	NUT--#8,NYLOC,HEX HD	2
13	PV09.006	WSHR, #10	4
14	PF04.15700	STEERING WHEEL SUPPORT	1
15	PV02.013	SCR--M8X20,HEX HD	6
16	PV11.005	WASHER,M8	12
17	PV09.005	WASHER,M8	12
18	PV02.015	SCR, 8X30	6
19	PE02.64700	SHAFT--STEERING COLUMN	1
20	PV09.009	WASHER--M16X30X3	2
21	PV14.008	RING,RETAINING--E 17	1
22	PE02.64500	FLANGE--WHEEL SUPPORT	1
23	PV04.01300	SCR, 5X16	3
24	PE00.05500	BALL BEARING--M40ID X 80OD X18	2
25	PE02.64600	FLANGE--PLATE, WHEEL SUPPORT	1
26	PE06.04200	CROWN--GEAR PLATE	1
27	PV02.012	SCR--8X16	4
28	PE07.03900	CHAIN	1
29	PE02.64400	SUPPORT--WHEEL DRIVE	1
30	PV13.09000	NUT	1
31	PV04.04400	SCREW,M10 X 25	2
32	PF03.18900	U-BOLT	1
33	PA00.06400	DRIVE WHEEL UNT W/GEAR BOX	1
34	PV11.003	WASHER,M5	1
35	PV09.003	WASHER,M5	1
36	PG07.00600	GUARD	4

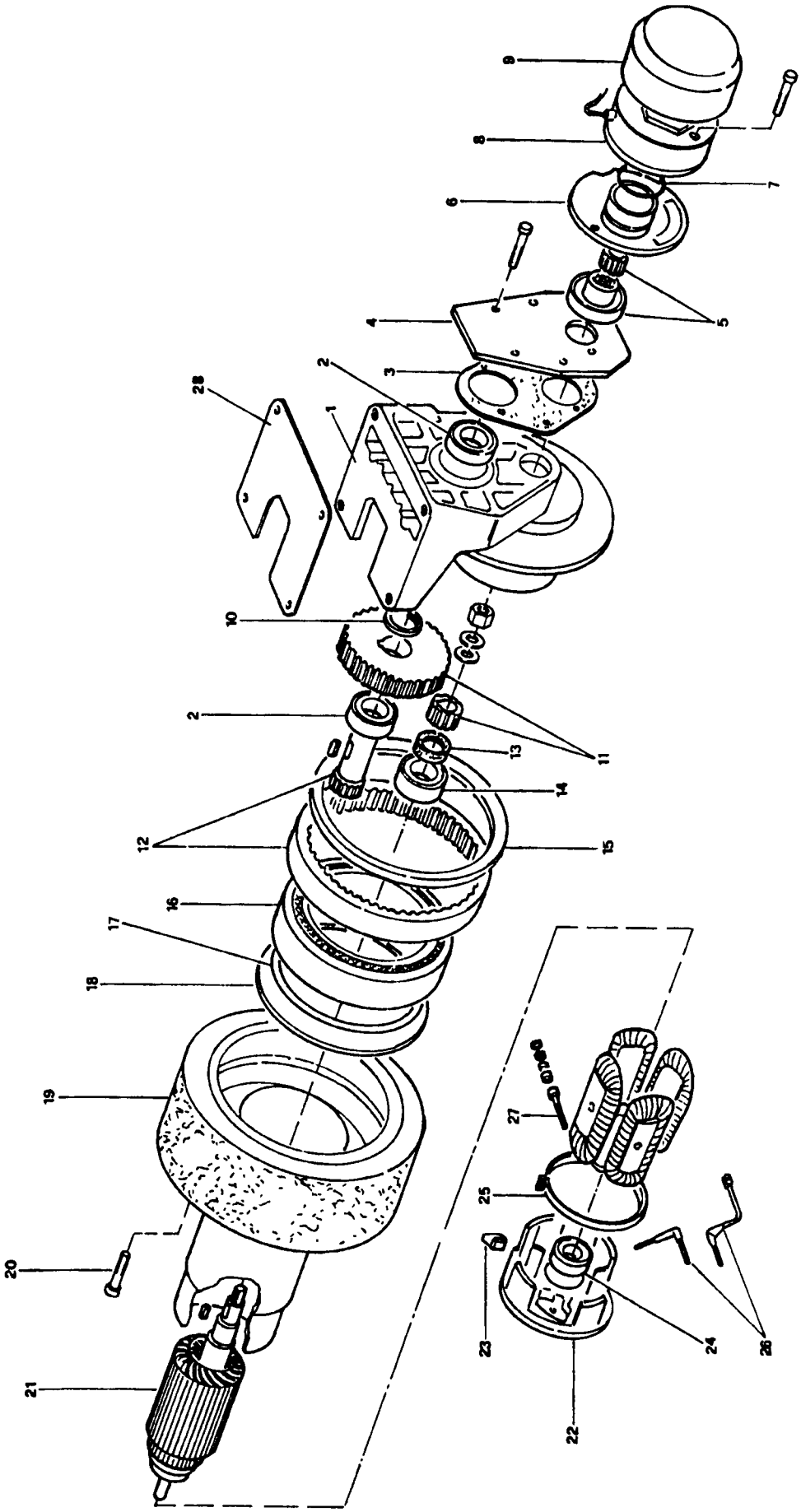

FIGURE E

SEQ NO	COMPONENT	DESCRIPTION	QUANTITY PER ASSM
01	PA07.03300	MOTOR CASING--CASTING	1
02	PE00.05700	BALL BEARING--M30ID X 55OD X9W	2
03	PH04.06900	GASKET	1
04	PA07.03400	PLATE--BRAKE MOUNT	1
05	PA07.02400	PAD	1
06	PA07.03600	SUPPORT--BRAKE	1
07	PH04.07000	GASKET	1
08	PA07.03700	BRAKE--DRIVE WHEEL	1
09	PA07.03800	LID,COVER--BRAKE	1
10	PA07.03900	SPACER	1
11	PA07.04000	GEAR,SMALL	1
12	PA07.04100	GEAR,LARGE	1
13	PH04.07100	GASKET	1
14	PE00.05800	BALL BEARING--M20ID X 42OD X12	1
15	PH04.07200	GASKET	1
16	PE00.05900	BALL BEARING--M12OIDX18OODX15W	1
17	PH04.07300	GASKET	1
18	PA07.04200	WHEEL RING	1
19	PA07.04300	WHEEL	1
20	PA07.04400	SCREW	9
21	PA07.04500	ROTOR--DRIVE MOTOR	1
22	PA07.04600	SUPPORT--DRIVE MOTOR ROTOR	1
23	PA07.04700	BRUSH MECHANISM	2
24	PE00.06000	BALL BEARING--M15ID X 35OD X11	1
25	PA07.04800	CLAMP	1
26	PA07.04900	CLAMP	2
27	PA07.05000	CLAMP	2
28	PH04.07400	GASKET	1

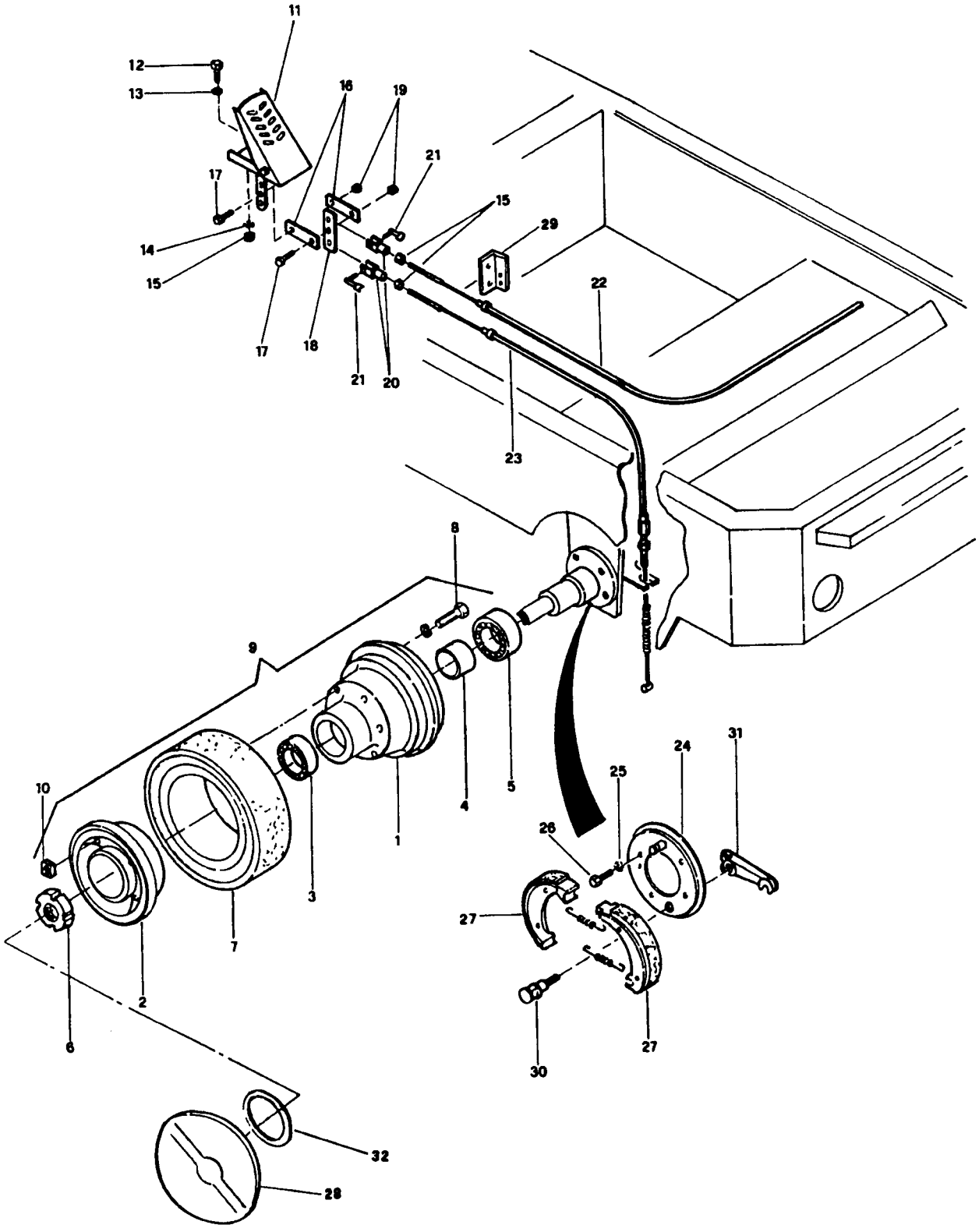
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FIGURE F

SEQ NO	COMPONENT	DESCRIPTION	QUANTITY PER ASSM
01	PD01.01900	HUB--REAR WHEEL	2
02	PD01.008	SEMICIRCLE--REAR WHEEL	2
03	PE00.003	BALL BEARING--M20ID X 42OD X12	2
04	PE05.038	BUSHING	2
05	PE00.006	BALL BEARING--M120 IDX180ODX28	2
06	PV13.032	NUT,M20 X 1	2
07	PD02.01600	RUBBER--TIRE,REAR WHEEL	2
08	PV04.04500	SCREW,M8 X 40	12
09	PD00.06000	ASM,REAR WHEEL	2
10	PV13.07603	NUT,M8	12
11	PL04.01800	BRAKE--MANUAL,DRUM	1
12	PV02.003	SCR--6X16,HEX HD	3
13	PV09.022	WSHR--6X18X2	3
14	PV11.004	WSHR. LK #6	3
15	PV13.004	NUT--#6,HEX	5
16	PF03.59200	TENSION ROD	2
17	PV02.09203	SCREW, M5 X 16	2
18	PF03.59300	BALANCE BAR	1
19	PV13.018	NUT--#5,HEX,NYLOC	2
20	PV17.06700	CLEVIS--	2
21	PV17.06800	CLIP,CLEVIS PIN--	2
22	PE08.13200	BRAKE CABLE--RIGHT	1
23	PE08.13300	BRAKE CABLE--LEFT	1
24	PL04.011	BRAKE--ADAPTER PLATE	2
25	PV09.004	WSHR--#6	8
26	PV02.004	SCR--6X20,HEX HED	8
27	PL04.004	SHOE--BRAKE	4
28	PH01.23900	LID,COVER--REAR WHEEL	2
29	PF03.59400	SHEATH STOP	1
30	PL04.005	CAM	2
31	PL04.006	BRAKE LEVER	2
32	PH04.07900	GASKET--REAR WHEEL	4

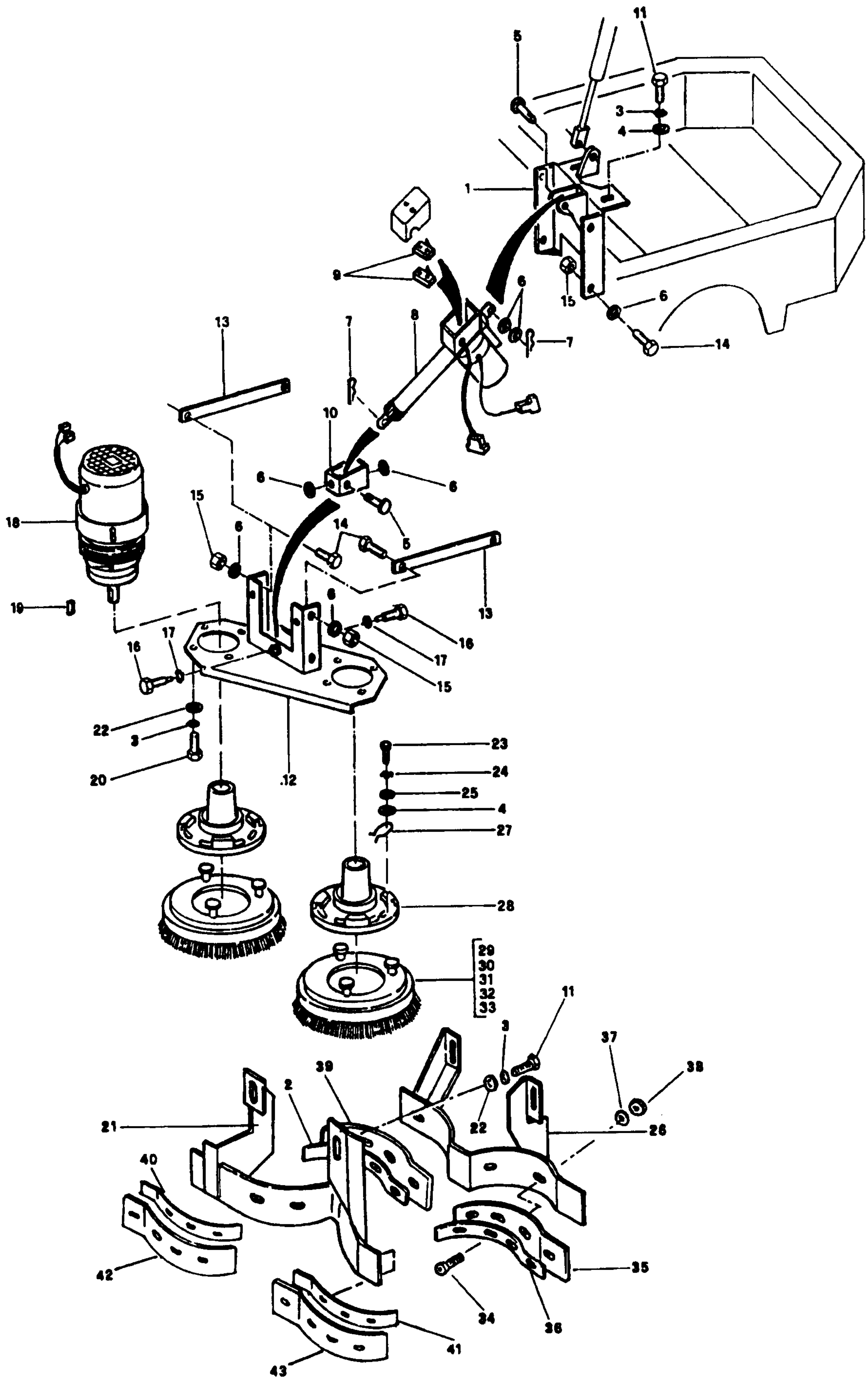
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FIGURE G

TECH MANUAL--KA33BR,RIDER,FIGG

SEQ NO	COMPONENT	DESCRIPTION	QUANTITY PER ASSM
01	PF03.53600	PLATE--BRUSH LIFT	1
02	PF03.58600	PLATE--BRUSH GUIDE, RIGHT	2
03	PV11.005	WASHER,M8	20
04	PV09.025	WSHR, 8X32X2	6
05	PE02.49500	PIN	2
06	PV09.006	WSHR, #10	12
07	PV15.01603	SPLIT PIN,M3	2
08	PA12.00100	ACTUATOR--BRUSH,UP/DOWN	1
09	PG05.10000	MICROSWITCH	3
10	PF03.53700	LINK--ACTUATOR/BRUSH PLATE	1
11	PV02.014	SCR--8X25,HH	12
12	PE04.15800	PLATE--BRUSH MOTOR MOUNT	1
13	PF03.53500	LEVER--BRUSH MOTOR PLATE	4
14	PV02.022	SCREW,M10 X20	8
15	PV13.006	NUT--M8,HEX,NYLOC	8
16	PE02.49600	SCREW	2
17	PV11.006	WASHER,M10	2
18	PA05.00800	ASM,MOTOR&REDUCTION GEAR,36VDC	2
19	PV17.06900	TAB	4
20	PV02.012	SCR--8X16	8
21	PF03.54700	BRUSH GUIDE--FRONT	1
22	PV09.020	WSHR, 8X24X2	16
23	PV02.002	SCR,6X12,HEX HED	2
24	PV11.004	WSHR, LK #6	2
25	PV09.012	WSHR--6X24X2	2
26	PF03.54600	BRUSH GUIDE--REAR	1
27	PE04.08000	SPRING,BRUSH LUG LOCK	2
28	PE09.03300	HUB--BRUSH DRIVE	2
29	PB04.01700	BRUSH--POLYPROP,.039BR.,17IN	2
30	PB04.02100	BRUSH--POLYPROP,.027BR,17IN.	2
31	PB04.02200	BRUSH--NATURAL SCRUB,17IN.	2
32	PB04.02800	BRUSH--TYNEX,.039BR.,17IN	2
33	PB04.02000	PAD HOLDER--16.0 OD	2
33	020401	BRUSH,FLAT--17.00,STEEL WIRE	2
33	020402	BRUSH,FLAT--17.00,MAL-GRIT	2
34	PV03.003	SCR,6X20,SOC HD	8
35	PH02.28600	FLAP--BRUSH GUIDE, LEFT	2
36	PF03.58700	PLATE--BRUSH GUIDE,LEFT	2
37	PV09.004	WSHR--#6	8
38	PV13.019	NUT--#6,HEX,NYLOC	8
39	PH02.28700	FLAP--BRUSH GUIDE, RIGHT	2

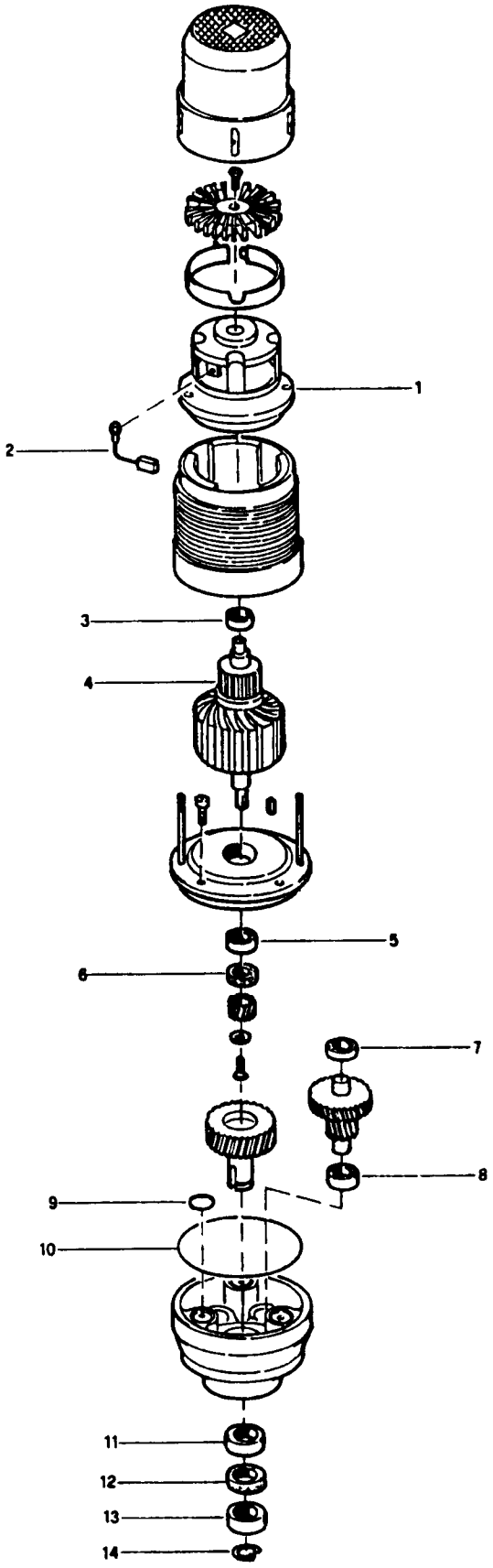

FIGURE H

SEQ NO	COMPONENT	DESCRIPTION	QUANTITY PER ASSM
01	PA11.01000	BRUSH HOLDER--BRUSH DRIVE MTR	1
02	PA11.01100	BRUSH MECHANISM--BRUSH DRIVE	4
03	PE00.06100	BALL BEARING--M17ID X 40OD X12	1
04	PA11.01200	ROTOR--BRUSH DRIVE MOTOR	1
05	PE00.06200	BALL BEARING--M25ID X 47OD X12	1
06	PH04.07500	GASKET	1
07	PE00.06300	BALL BEARING--M10ID X30OD X 9W	3
08	PE00.06400	BALL BEARING--M10ID X 30OD X14	3
09	PH04.07600	GASKET--GEAR BOX, BRUSH MOTOR	3
10	PH04.07700	GASKET--GEAR BOX, BRUSH MOTOR	1
11	PE00.06500	BALL BEARING--M25ID X52OD X15W	1
12	PH04.07800	GASKET--GEAR BOX, BRUSH MOTOR	1
13	PE00.06600	BALL BEARING--M85ID X58OD X15W	1
14	PV14.03802	RETAINING RING	1

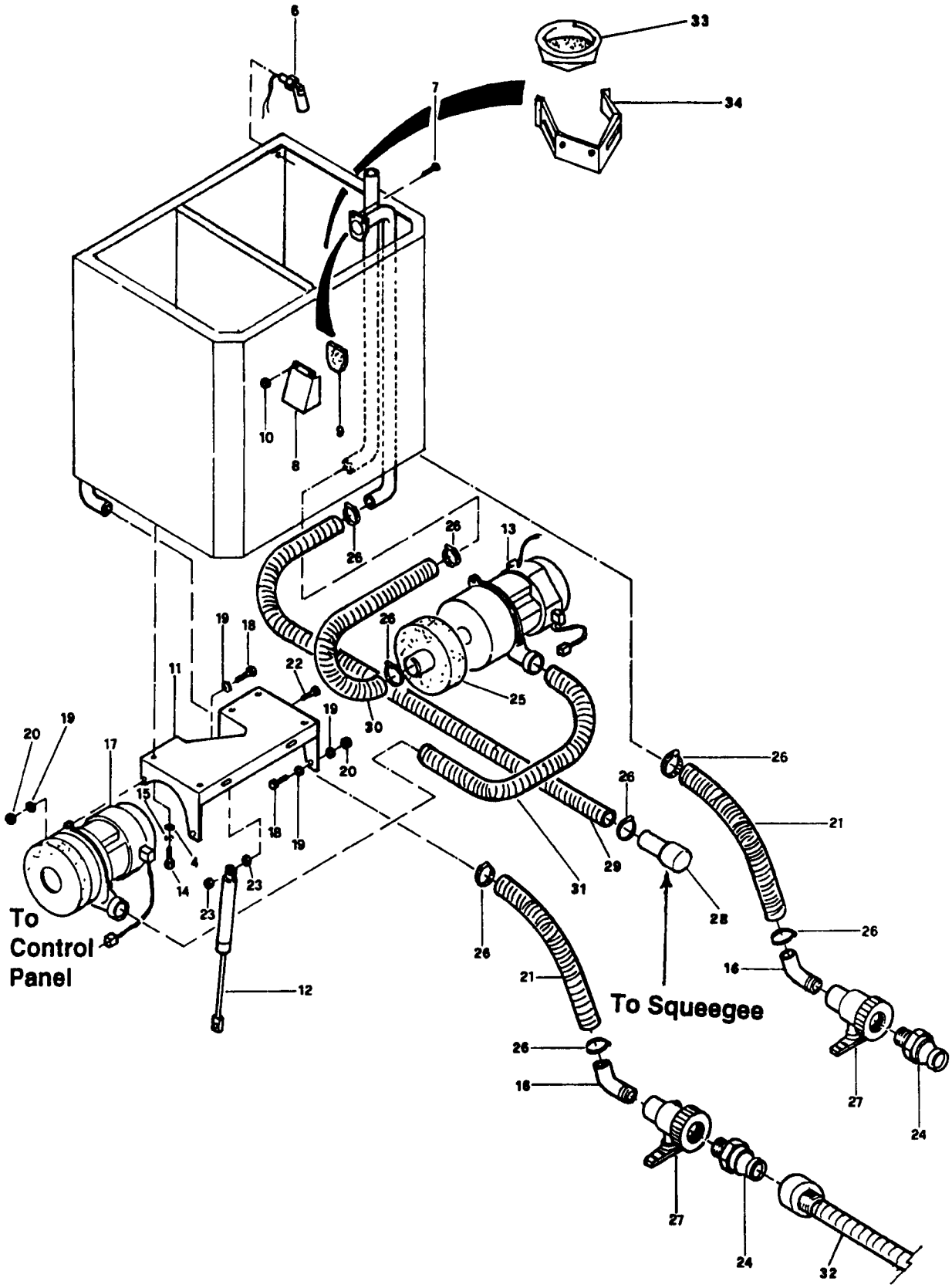

FIGURE I

SEQ NO	COMPONENT	DESCRIPTION	QUANTITY PER ASSM
06	PG05.09200	ASM,FLOAT SWITCH	1
07	PV02.06700	SCR--4X16	2
08	PF03.55000	PLATE--INLET DEFLECTOR	1
09	PH02.26600	GASKET--RUBBER FLAP VALVE	1
10	PV13.002	NUT--#4	2
11	PF03.55100	BRACKET--VAC MOTOR MOUNTING	1
12	PE04.08300	SPRING--SHOCK ABSORBER	1
13	PA00.06500	MOTOR,VACUUM--36VDC,2-STG,BP	1
14	PV02.11600	SCREW,M6 X 14	5
15	PV11.004	WSHR, LK #6	5
16	PM03.25100	PIPE HOLDER	2
17	PA00.06600	MOTOR,VACUUM--36VDC,PUMPOUT	1
18	PV02.003	SCR--6X16,HEX HD	4
19	PV09.022	WSHR--6X18X2	8
20	PV13.004	NUT--#6,HEX	4
21	PH06.03200	PIPE--DRAIN HOSE	2
22	PV02.015	SCR, 8X30	1
23	PV13.005	NUT--M8,HEX,NYLOC	2
24	PM03.24500	HOSE CONNECTOR	2
25	PH01.19900	FLANGE--HOSE ADAPTER,VAC MOTOR	1
26	PV20.02100	CLAMP	8
27	PA03.08600	VALVE--DRAIN HOSE	2
28	PH06.01800	CONNECTING PIPE--HOSE	1
29	PH06.03300	HOSE--M0.8	1
30	PH06.02700	HOSE--M0.5	1
31	PH06.03400	HOSE--M0.55	1
32	PH06.03500	HOSE--DRAIN,M3.0	1
33	PB02.04200	FILTER--SLUDGE TRAP	1
34	PF03.62900	SUPPORT--FILTER	1

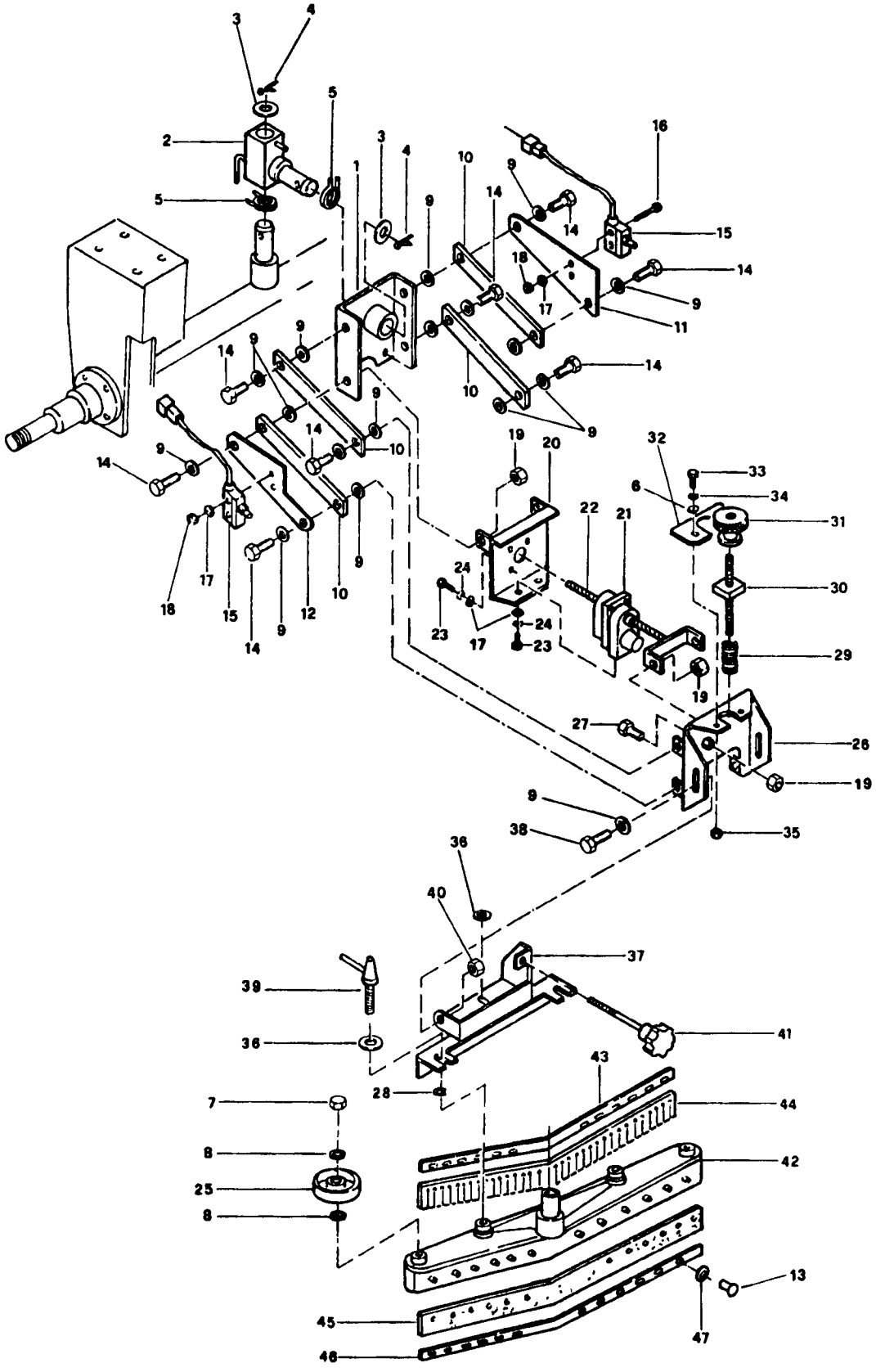

FIGURE J

SEQ NO	COMPONENT	DESCRIPTION	QUANTITY PER ASSM
01	PF04.16100	PLATE--SQUEEGEE PIVOT	1
02	PF04.16000	LINK--SQUEEGEE PIVOT	1
03	PV09.011	WASHER,M20 X 3 X 3,5	2
04	PV15.01603	SPLIT PIN,M3	2
05	PE04.08400	SPRING	2
06	PV09.004	WSHR--#6	2
07	PV13.005	NUT--M8,HEX,NYLOC	2
08	PV09.005	WASHER,M8	4
09	PV09.006	WSHR, #10	18
10	PF03.54100	LEVER--SQUEEGEE LIFT	4
11	PF03.56500	BRACKET--SQUEEGEE LIFT, RIGHT	1
12	PF03.56401	BRACKET--SQUEEGEE LIFT, LEFT	1
13	PL02.14700	KNOB--SQUEEGEE BLADE LOCK	20
14	PV02.038	SCREW,M10 X 35	8
15	PG05.10300	MICROSWITCH	2
16	PV02.09503	SCREW,M4 X 30	4
17	PV09.002	WSHR, 4X9X1	12
18	PV13.002	NUT--#4	4
19	PV13.006	NUT--M8,HEX,NYLOC	9
20	PF03.54500	BRACKET	1
21	PA12.00900	JACK--SQUEEGEE TILT	1
22	PF04.16300	SCREW	1
23	PV02.06700	SCR--4X16	4
24	PV11.002	WASHER,M4 X 12	4
25	PD00.04200	WHEEL--SQUEEGEE GUARD	2
26	PF03.54200	PLATE--SQUEEGEE TILT	1
27	PV02.11110	SCREW,M10 X 35	1
28	PV14.007	RING,RETAINING--E 10	2
29	PE04.08500	SPRING	1
30	PF04.16200	SCREW	1
31	PE02.65200	KNOB	1
32	PF03.54400	PLATE	1
33	PV02.002	SCR,6X12,HEX HED	2
34	PV11.004	WSHR, LK #6	2
35	PV13.004	NUT--#6,HEX	2
36	PV09.05603	WASHER,M10 X 30	3
37	PF03.54300	SUPPORT--SQUEEGEE MOUNT	1
38	PV02.022	SCREW,M10 X20	2
39	PL02.14800	KNOB--SQUEEGEE CLAMP DOWN	2
40	PV13.021	OBS,REPLACED BY PV04.03700	2
41	PL02.14500	KNOB--SQUEEGEE TILT	1
42	PF03.59500	SQUEEGEE--CASTING	1
43	PF03.59600	PLATE--SQUEEGEE FRONT	1
44	PH02.28900	RUBBER--SQUEEGEE, FRONT	1
45	PH02.29300	RUBBER--SQUEEGEE,REAR	1
46	PF03.59700	PLATE--SQUEEGEE,REAR	1
47	PV09.022	WSHR--6X18X2	28

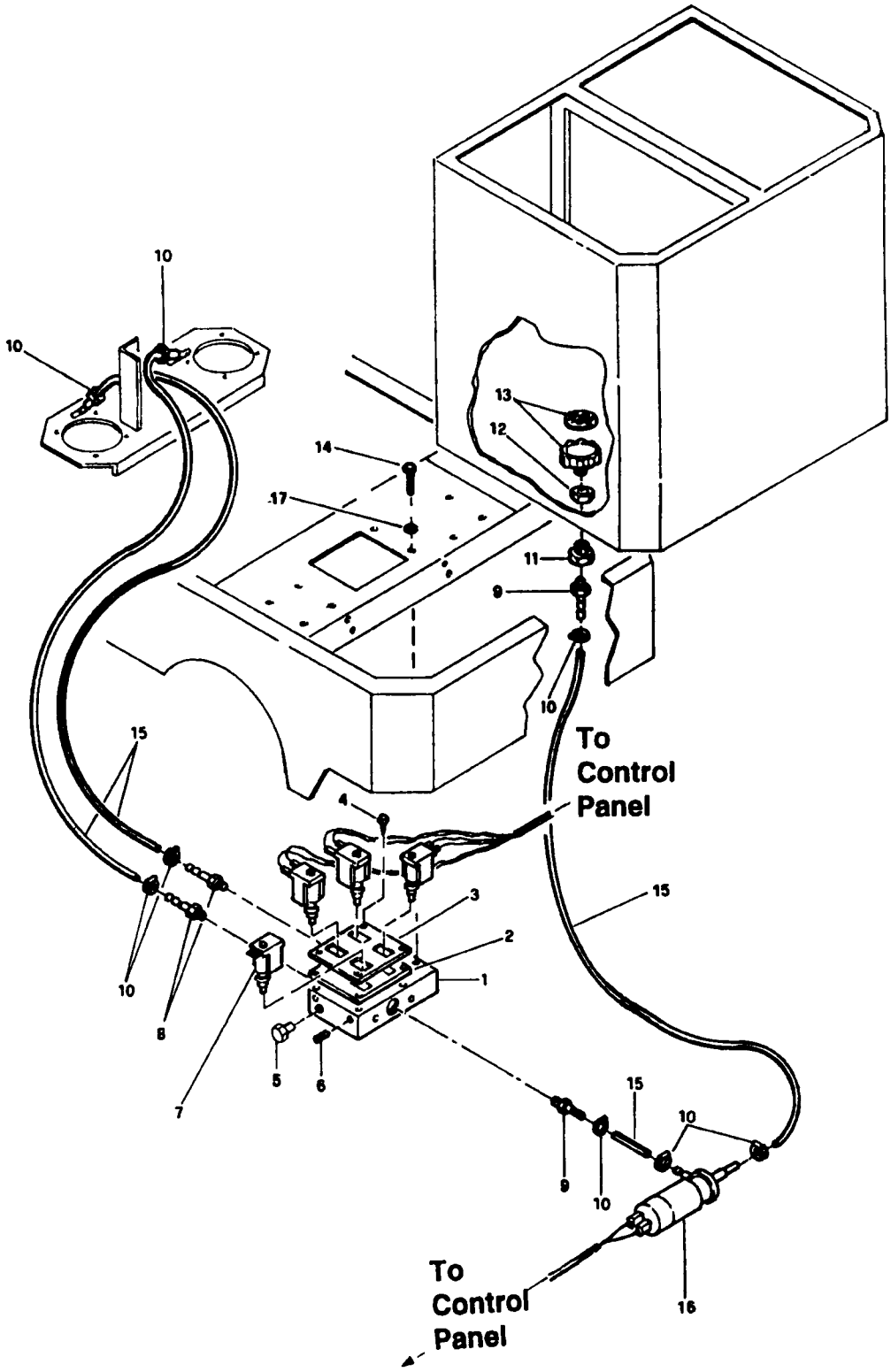
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FIGURE K

TECH MANUAL--KA33BR,RIDER,FIGK

SEQ NO	COMPONENT	DESCRIPTION	QUANTITY PER ASSM
01	PE02.85400	BLOCK--WATER VALVES	1
02	PF03.58100	PLATE--WATER VALVES, BOTTOM	1
03	PF03.58200	PLATE--WATER VALVES, TOP	1
04	PV05.00703	SCREW,M3 9 X 13	4
05	PM03.051	CAP--1/4''GAS	1
06	PV08.01602	DOWEL--M8 X 10	4
07	PG02.12400	ELECTROVALVE	4
08	PM03.002	PIPE HOLDER--1/4''GAS	2
09	PM03.22900	PIPE HOLDER--1/2''	2
10	PV20.02200	CLAMP--M10 X 16	8
11	PM03.24900	REDUCER--	1
12	PV13.07120	NUT,3/4''GAS	1
13	PR4DA0L021	FILTER--ELECTROVALVE	1
14	PV02.11210	SCREW,M4 X 50	2
15	PRDIA0H050	TUBE--WATER PUMP	1
16	PA03.08500	PUMP--WATER SUPPLY	1
17	PV09.002	WSHR, 4X9X1	2

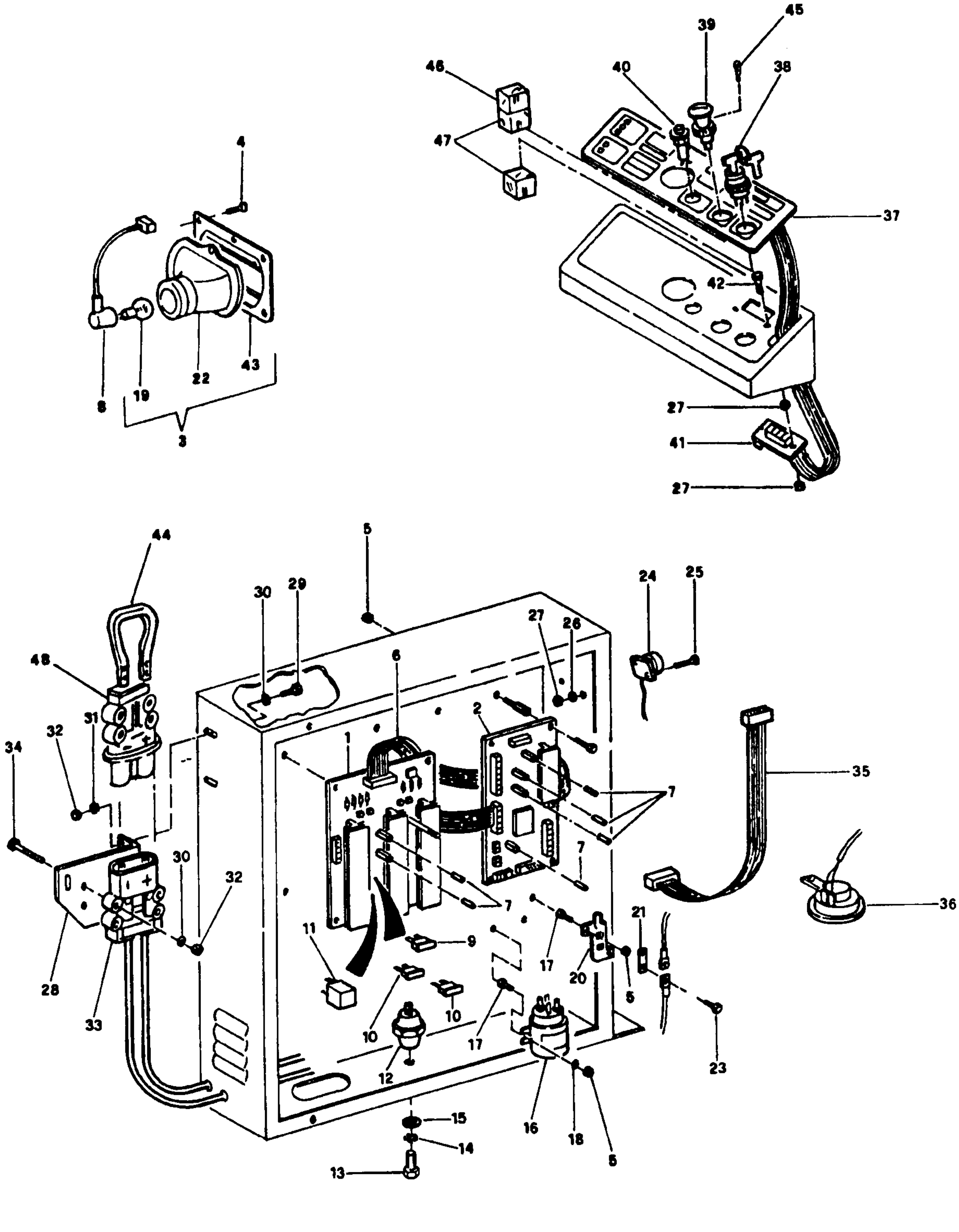
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FIGURE L

TECH MANUAL--KA33BR,RIDER,FIGL

SEQ NO	COMPONENT	DESCRIPTION	QUANTITY PER ASSM
01	PG02.11800	CARD--MAIN CONTROLLER	1
02	PG02.11900	CARD--SECONDARY CONTROLLER	1
03	PG06.03900	HEADLIGHT ASM COMPL--24V,50W	2
04	PV03.03703	SCREW,M5 X 16	8
05	PV13.002	NUT--#4	12
06	PG12.00200	CONTACT--20 POLES	1
07	PG11.07000	FUSE--5A	6
08	PG13.07000	HARNESS--	2
09	PG11.05700	FUSE--15 AMP (PANEL)	1
10	PG11.04900	FUSE--30A	2
11	PG02.12100	RELAY	2
12	PG02.12200	KEY SWITCH	1
13	PV02.012	SCR--8X16	1
14	PV11.005	WASHER,M8	1
15	PV09.020	WSHR, 8X24X2	1
16	PG02.11700	ELECTROMAGNETIC SWITCH	1
17	PV03.04502	SCREW,M4 X 16	4
18	PV09.002	WSHR, 4X9X1	4
19	PG11.02700	LAMP,24V	2
20	PG11.05000	FUSE HOLDER--	1
21	PG11.04500	FUSE--80 AMP	1
22	PG06.02200	HEADLIGHTS	2
23	PV02.023	SCREW--M5 X 12	2
24	PG09.00300	HORN	1
25	PV01.03100	SCREW,M3 X 12	2
26	PV09.001	WSHR	2
27	PV13.06200	NUT--#3	6
28	PF03.54900	BRACKET--CONNECTOR MOUNT	1
29	PV02.003	SCR--6X16,HEX HD	2
30	PV09.004	WSHR--#6	10
31	PV11.004	WSHR, LK #6	2
32	PV13.004	NUT--#6,HEX	4
33	PG03.08300	PLUG	1
34	PV02.07800	SCREW,M6 X 50	4
35	PG12.00100	CONTACT--26 POLES	1
36	PG09.002	HORN,24VDC--RIDER SWEEPER	1
37	PP00.13000	PANEL--OPERATOR CONTROL	1
38	PG05.10100	KEY switch with keys	1
39	PG05.10200	PUSH BUTTON SWITCH, SAFETY	1
40	PG05.08200	PUSH BUTTON--	1
41	PG02.12000	CARD--CONTROL PANEL	1
42	PV03.06200	SCREW,M3 X 20	2
43	PL03.02600	GRILL--HEADLIGHT	2
44	PL02.14600	HANDLE--CONNECTOR PLUG	1
45	PG11.06800	LAMP--36W	1
46	PG03.08000	CONTACT--SAFETY SWITCH	1
47	PG03.08100	CONTACT--KEY SWITCH	2
48	PG03.08200	PIN	2

THE KENT LIMITED WARRANTY

Your Kent equipment which has been manufactured, tested, and inspected in accordance with carefully specified engineering requirements, is warranted to be free from defects in material and workmanship This warranty is, however, subject to the following qualifications, conditions, and limitations which are set forth to provide you and all users of the equipment with information concerning the duration, extent, availability, and applicability of the Kent limited warranty, the procedure to be taken to obtain it's performance, and other information concerning the Kent warranty policy

The Kent Limited Warranty is extended to the original end user as follows

Automatic scrubber vacs (excluding the KA33BR) and all battery operated burnishers carry a three year parts replacement and one year labor warranty Batteries are warranted on a prorated basis for one year Battery chargers are warranted by the manufacturer for one year Propane engines are warranted by the manufacturer for a period of two years (one year on the valve train) for Briggs & Stratton engines, and 3 years on Onan engines
Replacement parts are covered for the remainder of the machines warranty or 90 days, whichever is longer
All sweepers, all pressure washers, all propane burnishers, and the KA33BR have a one year parts and labor warranty
Poly components carry a ten year replacement warranty with one year service labor This warranty will not cover damage attributable to the following
Improper, unreasonable or negligent use or abuse of the equipment
Use of the equipment with hot water (over 130 deg F , 54 deg C)
"Warpage", "Creepage", or "Distortion" of the part so long as the same does not interfere with normal operation
Abrasions or punctures of the equipment

The start date of the warranty coverage shall be the date the machine was shipped from the factory, or with proof of purchase, the purchase date of the original end user The start date of the warranty shall not exceed one year from the date that the unit leaves the factory

Parts of Kent Equipment not covered by the Kent Limited Warranty

Certain parts of Kent Equipment require replacement in the ordinary course of use due to normal wear by reason of their characteristics These are normal wear items such as cords, squeegee blades, belts, gaskets, bumpers, carbon brushes, filters, hoses, bags, pad holders, brushes etc

Exceptions and Exclusions from Warranty

Defects, malfunctions, failure, or damage of the equipment caused by improper care, unreasonable or negligent use or abuse of the equipment are excluded from this warranty If repair is done to the equipment by anyone other than those designated as authorized to perform such work without having obtained factory authorization in writing, the Kent Company at it's sole option, may determine that this warranty will not apply and that reimbursement for such repair will not be made because of the failure to comply with such factory instructions

Procedure to be taken to obtain performance of warranty repair

To secure repair of the equipment or any warranted parts under this warranty, the following procedure must be taken The inoperative equipment or warranted parts together with satisfactory evidence of the purchase date, must be delivered, with shipping and delivery charges prepaid, to one of the following
The dealer from whom purchased
Any Kent distributor's service department in the United States
Any Kent authorized service station in the united states
If you are unable to locate any of the foregoing, you may write or otherwise communicate with The Kent Company for instructions before repair service is performed by anyone else In such event, The Kent Company will provide either the location of a Kent authorised service department or other factory instructions In the event that no local service department is available, Kent at it's discretion will repair or replace the part or equipment at the factory, the products will be returned to the owner freight prepaid No warranty will be honored without proof of purchase, the model number, and serial number if applicable

Replacement

In the event of a defect, malfunction, or failure of your Kent equipment or any warranted part to conform with this warranty, The Kent Company may, at it's sole option and own expense, replace the equipment or any warranted part with another new identical or reasonably equivalent model or part in lieu of repairing the defect

No refund of purchase price

The Kent Company will not, as a matter of it's warranty policy, refund the customer's purchase price

Warranty registration

Your Kent Company distributor from whom you purchased your equipment is responsible for the registration of your warranty with the factory We ask that you cooperate with your distributor in supplying the necessary information on the warranty card so that we may better serve you Any information or questions that you may have concerning your Kent equipment or this warranty may likewise be secured from the factory This warranty gives you specific legal rights, and you may also have other rights which vary from state to state