



# Electronic Service Manuals

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Phone (517) 484-9312 or (800) 331-3339 MI, OH, IN only  
2011 N. High St. -- Lansing, Michigan -- 48906  
Fax: (517) 484-9836  
Email: [CustServ@Michco.com](mailto:CustServ@Michco.com)  
Web site: [www.Michco.Com](http://www.Michco.Com)  
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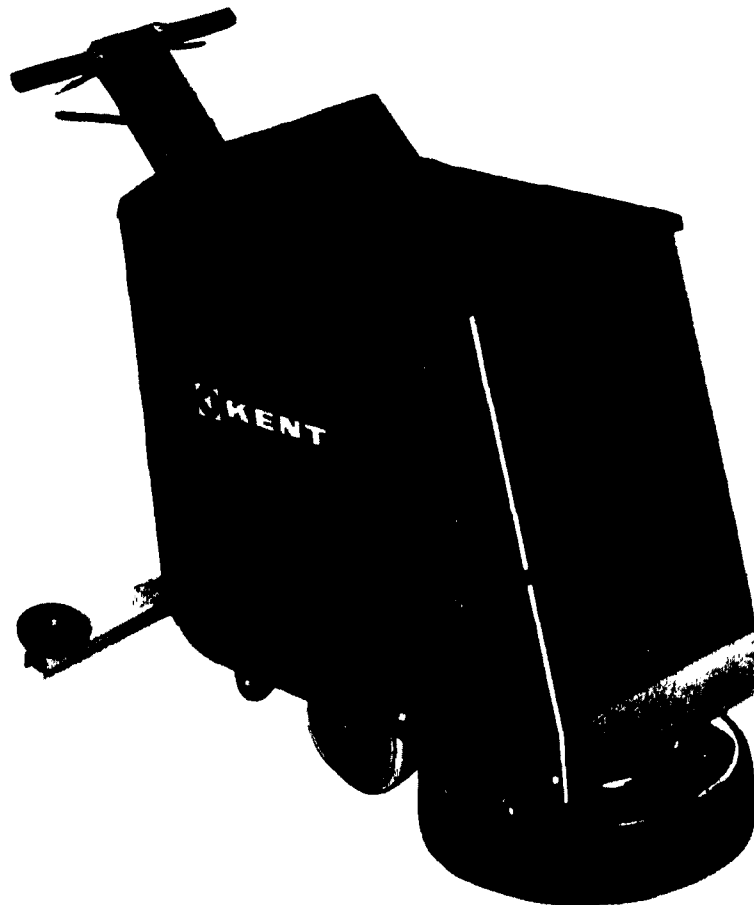
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# KENT



## **AUTOMATIC SCRUBBERVAC**

MODEL:

**KA-170B**

**KA-171B**

**OPERATING,  
MAINTENANCE  
INSTRUCTIONS  
& ILLUSTRATED  
PARTS LIST**

**THE KENT COMPANY**  
2310 INDUSTRIAL PARKWAY  
P.O. BOX 1665  
ELKHART, IN 46515  
TELEX: 258331 KENT CO EKR  
FAX: 219-295-8610  
WATS: 800-334-1083 (OUTSIDE INDIANA)  
219-293-8661

JULY 1990

# MACHINE SPECIFICATIONS:

CONTROLS _____	Manually operated illuminated rocker switches for BRUSH, WATER and VACUUM within easy reach from operator's position (KA-170B).
CONTROLS _____	Manually operated illuminated rocker switches for BRUSH and VACUUM.
CONTROLS _____	Manually operated water control valve (KA-171B).
PROPULSION _____	Forward motion assisted thru brush motor.
VACUUM MOTOR _____	24V, 3/4HP, 2-stage bypass type.
BRUSH DRIVE MOTOR _____	24V, 1/2HP, 1200RPM Permanent Magnet type. 10:1 gear reduction drive to brush.
HANDLE _____	"T" style for positive control of machine movement. Also contains dual brush motor triggers, safety switch interlock and squeegee lift handle.
BRUSH _____	Single 17" (43.2cm) offset to right side, shower feed type.
SCRUBBING WIDTH _____	17" (43.2cm)
BRUSH PRESSURE _____	95 lbs. (43.1kg)
TANKS _____	6.6 gal. (25.5L) capacity each, high density, molded seamless linear polyethylene.
BATTERIES _____	Two heavy-duty deep cycle type, 12V, 125AH series connected.
SQUEEGEE _____	29" (73.7cm) wide swinger type with gum rubber blades, straight with bumper wheels, adjustable height.
WHEELS _____	Two 8" (20.3cm) dia. polyurethane wheels - center. Two 3-1/2" (8.9cm) dia. polyurethane swivels - rear.
SOLUTION FEED _____	Electric valve flow control onto shower feed brush (KA-170B). Manual valve flow control onto shower feed brush (KA-171B).
FRAME _____	All welded steel, 11 ga. (0.3cm) thick plate.
OUTER SHELL _____	All exterior panels 16 ga. (0.2cm) brushed stainless steel.
BRUSH COVER _____	Chrome plated steel with rubber bumper wheel and splash guard.
BATTERY CHARGER _____	Exterior - 20 Amp, 24V.
LENGTH (OVERALL) _____	42" (106.7cm)
HEIGHT (OVERALL) _____	38" (96.5cm)
WIDTH (BODY) _____	14" (35.6cm)
WIDTH (SQUEEGEE) _____	29" (73.7cm)
WEIGHT (MACH. W/BATT.) _____	370 lbs. (167.8kg)
WEIGHT (CHARGER) _____	22 lbs. (9.9kg)
SHIPPING WEIGHT (TOTAL) _____	476 lbs. (215.9kg)

<b>THE KENT CO.</b>		
ELKHART, INDIANA USA		
SERIAL NO		MODEL
VOLTS	PHASE	Hz
MOTOR 1	A.M.P.	H.P.
MOTOR 2	A.M.P.	H.P.

The model, type and serial number are indicated on the data plate. For prompt and complete information, always refer to these numbers when inquiring about service.

WRITE THE MODEL AND SERIAL NUMBER OF YOUR UNIT IN THE SPACE PROVIDED.	
REFER TO THE DATA PLATE ON UNIT.	
MODEL#	SERIAL#
RETAIN THIS OWNER'S MANUAL FOR FUTURE REFERENCE.	

## AUTOMATIC SCRUBBER ACCESSORIES

PADHOLDER _____	20358
STRIP PAD-16" BLACK _____	15656
SCRUB PAD -16" GREEN _____	15657
POLISH PAD-16" BUFF _____	15658
SCRUB BRUSH-SHWR FEED _____	20360
POLISH BRUSH _____	20182
NYLON BRUSH-SHWR FEED _____	20225
STEEL WIRE BRUSH - SHWR FEED _____	20362
KEN-GRIT BRUSH-SHWR _____	20363
MICROSTAT FILTER KIT _____	38303
BATTERY:	
-----WET _____	25782
-----DRY _____	25789
CHARGERS:	
-----120V 60HZ _____	31367
KEYLOCK SWITCH _____	39373

## INTRODUCTION

Your automatic has been especially engineered and manufactured to give the maximum in performance during scrubbing of large area floors.

With careful maintenance according to the instructions outlined in the following pages, a high standard of operation throughout its use will be insured.

Carefully inspect all components to insure that there is no concealed freight damage. If such damage is discovered, file a "CONCEALED DAMAGE REPORT" immediately with the delivering carrier.

The contents of this manual are based on the latest product information available at the time of publication. The right is reserved to make changes at any time without notice in materials, equipment, price, color, specifications and models.

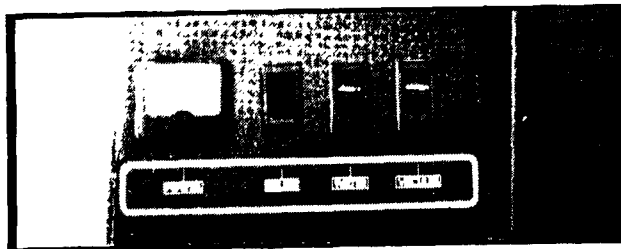


**CAUTION**

**IMPORTANT SAFEGUARDS:** ACCIDENTS DUE TO MISUSE CAN ONLY BE PREVENTED BY THOSE USING THE MACHINE. TO GUARD AGAINST INJURY, BASIC SAFETY PRECAUTIONS AS SHOWN IN THIS MANUAL MUST BE OBSERVED. READ AND FOLLOW ALL SAFETY INSTRUCTIONS.

## CONTROL PANEL

1. **BATTERY METER:** The needle must be within the GREEN area for efficient operation.
2. **BRUSH SWITCH:** Red light indicates power is available to the brush motor through the handle trigger control.
3. **WATER SWITCH:** Red light shows that water is flowing (HI or LO) onto shower feed brush. To stop flow, turn switch OFF (CENTER position of rocker) (KA-170B).
3. **WATER CONTROL:** Manual water flow control onto shower feed brush (KA-171B).
4. **VACUUM SWITCH:** Red light is ON when vacuum motor is running.

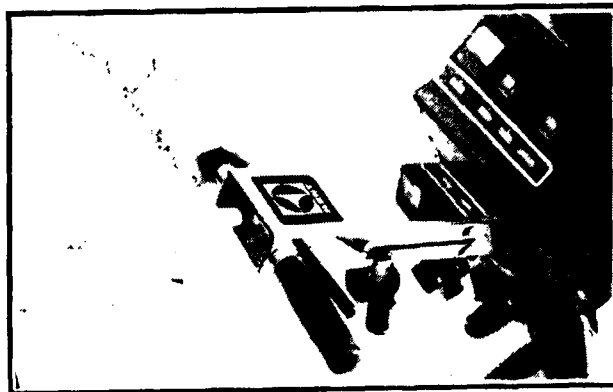


## MOTOR PROTECTION

There is one circuit breaker located on the front left side of the machine. This circuit breaker protects the brush drive motor by shutting it OFF in the event that it becomes overloaded during operation. If the brush motor does not come ON during operation, check to see if the circuit breaker button has popped out. If so, wait a few moments for the brush motor to cool down then push the button in and continue operation.

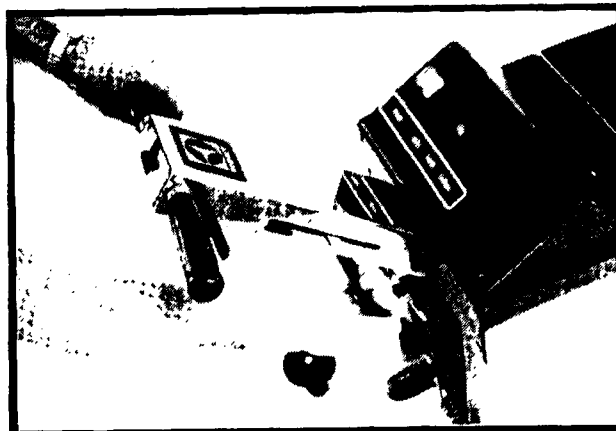
## MOVEMENT CONTROL

To move the machine in a forward direction, first turn the POWER switch ON. In the center of the handle is a black plastic interlock knob. Push the knob forward and squeeze either trigger to start the brush motor. Once the brush motor is running, you can release the interlock knob. To stop the motor, simply release both triggers. With the brush motor running, begin to manually move the machine forward. Brush rotation assists in moving machine and will reduce operator effort to a minimum. Use the "T" bar handles for turning and directional control.



## SQUEEGEE OPERATION

On the right side of the operator's handle is located a squeegee lift bar. Pulling the bar toward the handle grips



will raise the squeegee. Place the bar in the detent to hold the squeegee in an UP position. Move the bar out of the detent and forward to lower the squeegee to the floor.

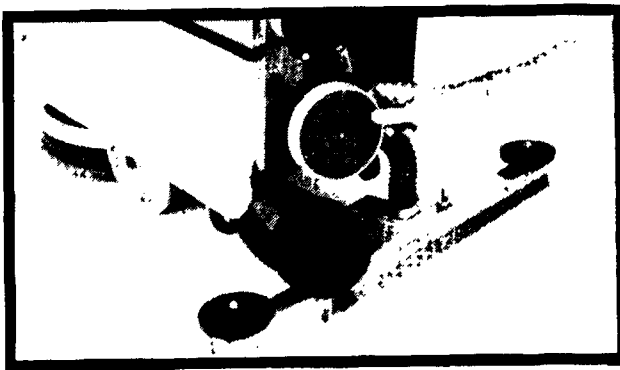
This automatic is equipped with a squeegee which is capable of swinging 7 inches to either side of the machine. This permits picking up water on a turn because the squeegee will follow the pattern of the brush. When up against a wall, the squeegee will ride tight to it until the machine pulls away. Should the squeegee encounter an obstruction, it will shift laterally until the obstruction is passed.

## VACUUM MOTOR & LINT FILTER



The vacuum motor and lint filter are located at the rear of the machine just below the recovery tank dump valve. The lint filter must be cleaned on a regular basis (see MAINTENANCE SCHEDULE). It is important to keep this filter clean to protect the vacuum motor and provide maximum water pickup performance. Proceed as follows:

1. Unscrew the two long threaded hex retainer nuts.
2. Remove the round metal cover with the black vacuum hose attached by pulling straight out.
3. Pull the round plastic lint filter off of the vacuum motor housing.
4. Thoroughly clean and dry the foam filter element.



Warm water and soap can be used.

5. Replace the filter and parts in the reverse order. DO NOT USE A WRENCH TO TIGHTEN THE HEX RETAINER NUTS.

## MICROSTAT FILTER

(Optional) Package of 12 (Part No. 38303)

Installation:

1. Remove the two hex retaining nuts and the round metal cover from the front of the vacuum motor.
2. If needed, clean the lint filter.
3. With the lint filter in place over the vacuum motor, place a Microstat Filter over the face of the lint filter and reinstall the round metal cover. Secure with the retainer nuts.
4. Replace the Microstat Filter every week under heavy use.

## SCRUBBING OPERATIONS

To apply solution to the floor, scrub and immediately recover the liquid and soil, the following sequence of operations is needed:

1. Press the POWER switch "ON."
2. Turn the VACUUM switch "ON."
3. Lower the squeegee.
4. Turn the WATER CONTROL "ON."
5. Move the handle interlock switch forward and squeeze one or both of the triggers to start the brush motor turning.
6. Move the machine in a straight forward path across the floor to be cleaned.

## TURNS IN THE NORMAL SCRUBBING PATTERN

In order to reduce an overabundance of solution during operation on sharp turns:

- (A) Turn the WATER "OFF" six (6) feet before the turn.
  - (B) Return the WATER to "ON" in the middle of the turn.
- The machine can be easily controlled and maneuvered with one hand leaving the other hand free to manipulate the WATER switch.

## TO DUMP SOLUTION

1. Position the machine so that the dump valve (located at the back of the recovery tank) is over a floor drain or



bucket.

2. Tip the machine back in its park position.
3. While standing to the side, SLOWLY pull up on the "T" handle of the valve. The more the valve is opened, the faster the solution will dump.
4. After the tank is empty, close the valve by pushing the handle all the way in.

## **MACHINE CARE**

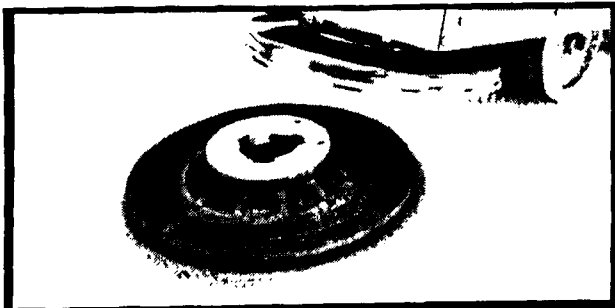
**Please read and follow the daily maintenance schedule located ON THE UNDERSIDE OF THE LID OVER THE BATTERY COMPARTMENT.**

At the end of the day's operation, the machine should be completely cleaned and prepared for the next shift's operations. Careful maintenance will insure effective performance throughout a long period of service.

1. Unscrew and remove the round access plate on the back of the recovery tank and completely rinse the tank with clean water. If this is done at the end of each day's use, there will not be a buildup of sludge and soil on the inside surface of the polyethylene tank.
2. Rinse the solution tank by turning the WATER switch "ON" with the front of the machine over a floor drain. Pour fresh water into the tank and let it run out under the brush cover. This will clean solution out of the tank and prevent buildup of residue from evaporation.
3. Do not allow the machine to rest on the brush or pad for extended periods of time. This could possibly cause the brush or pad to take an undesirable seat and could discolor the floor due to trapped solution. Place the machine back in its park position when not in use.
4. For storage at the end of each day, clean the outside surfaces and open the front top lid for access to the batteries. Inspect the batteries for proper liquid level and connect the battery charger (see BATTERY CHARGING section).

## **INSTALLING THE BRUSH OR PAD HOLDER**

This machine comes equipped with a pad holder designed to use a 16" diameter pad. Different pads are available for a variety of applications (see inside front cover of this manual for descriptions and part numbers). The pad holder is secured in place with a standard



clutch plate arrangement. With the POWER switch "OFF" and the machine tipped back, grasp the holder from underneath and give a quick clockwise rotation motion. This will disengage the clutch drive plates and allow the pad holder to be removed. Peel off the old pad and center a new pad against the facing. Reinstall the pad holder.

Brushes for this machine are listed by description and part number at the front of this manual and are all installed and removed the same way as the above described pad holder.

Brushes for this machine are listed by description and part number at the front of this manual and are all installed and removed the same way as the above described pad holder.

## **SOLUTION AND RECOVERY TANKS**

The fresh solution and recovery tanks are located side by side at the back of the machine and are made of Linear Polyethylene. The right tank is for fresh solution and has an access lid on top next to the control panel. This lid is hinged forward. When properly opened, the lid will be in a vertical self-holding position. DO NOT force the lid open any further than a vertical position. This can break the lid, control panel or rivets. When filling the solution tank, pour into the opening with care so as to not slosh liquid over the machine. Mix solution according to the manufacturer's directions for the particular chemical and application.

The recovery tank is equipped with a built-in automatic shutoff for vacuum motor protection. When the dirty water level reaches a maximum depth in the tank, the vacuum motor will stop running. When the tank is emptied, the shut off float switch will be reset for continuing operation.

NOTE: DO NOT USE HOT WATER (OVER 125 DEG. F/51 DEG. C) IN EITHER TANK

## **MAINTENANCE**

### **INSTRUCTIONS**

A sound preventative maintenance program will insure long, reliable and effective performance from your machine. It is strongly recommended that responsibility for the machine be assigned to a reliable individual in your organization.

#### **DAILY**

1. Clean and flush fresh and recovery solution tanks.
2. Clean lint filter on vacuum motor.
3. Wipe squeegee blades and machine wheels clean.
4. Wipe clean all interior and exterior surfaces.
5. Check battery water level and clean tops with damp cloth, connect battery charger.
6. Charge batteries.

7. Check squeegee pickup tube for obstruction.  
**WEEKLY**

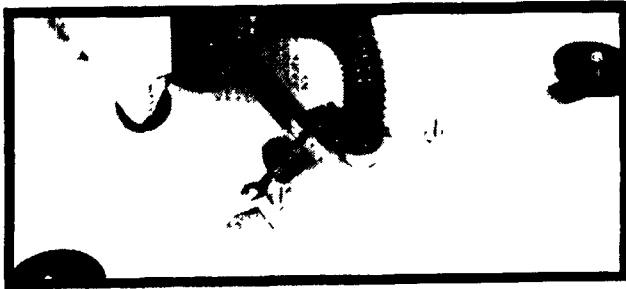
1. Replace Microstat Filter (where applicable).
2. Lubricate main wheels.

**SIX MONTHS**

1. Inspect vacuum motor carbon brushes - replace if worn to 3/8" (10mm) length or less.
2. Inspect brush drive motor carbon brushes - replace if worn to 3/4" (19mm) length or less.

## ADJUSTMENTS

The squeegee assembly has been designed with a height adjustment screw. Located just in front of the pickup hose, this hex head screw is used to raise or lower the height of the squeegee from the floor surface. If the setting is too low, the rubber blades will be flared out excessively and water pick up will be poor. If the squeegee is set too high, the blades will not be held firmly to the floor surface, resulting in missed areas of solution and poor pickup.



A threaded eye bolt attaches the lift cable to the squeegee drag bar. Using the nuts on the eye bolt, the lift cable can be adjusted so that when the squeegee is down for normal operation, there will be no tension on the cable. When the squeegee handle is up and the machine tipped back for park or transport, the blades should be up off of the floor surface.

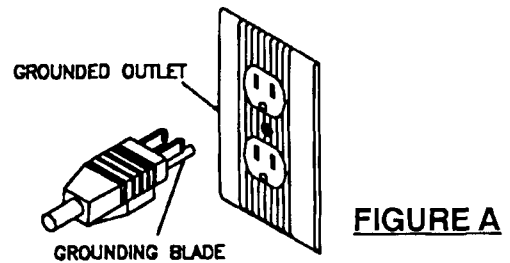
**NOTE:** This machine can be used to clean up standing water without scrubbing the floor. Simply lower the squeegee, turn the VACUUM switch "ON" and tip the machine back on its transport casters. You can now easily move across the floor picking up the water. When the recovery tank is full, the vacuum motor will automatically shut off.

## BATTERY CHARGING

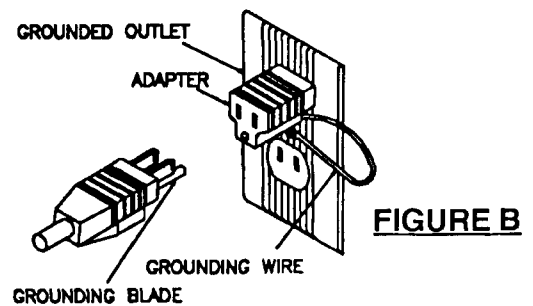
### GROUNDING INSTRUCTIONS

The charger should be grounded while in use to protect the operator from electrical shock. The charger is equipped with a suitable three-conductor cord for a 3-prong grounding type receptacle. The green (or green/yellow) conductor in the cord is the grounding wire. Never connect the green (or green/yellow) to a live terminal. If your unit is for use on less than 150 volts, it

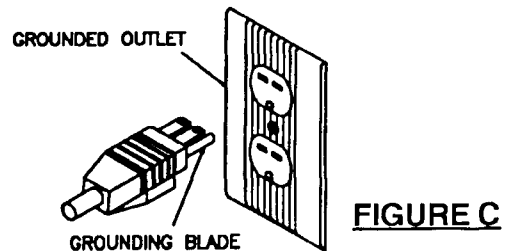
has a plug that looks like Figure A. If it is for use on 150 to 250 volts, it has a plug that looks like Figure C. An adapter, Figure B, is available for connecting Figure A plugs to 2-prong outlets. The green (or green/yellow) grounding wire extending from the adapter must be



**FIGURE A**



**FIGURE B**



**FIGURE C**

connected to a permanent ground (such as to a properly grounded outlet box). No adapter is available for Figure C plugs.

Use only three-wire extension cords which have 3-prong grounding type plugs and 3-prong receptacles that accept the appliance's plug. Replace or repair damaged cords.

The battery charger is manually controlled and will drop and hold a finish rate of 2-3 amps for the remainder of the timer cycle. The initial charge rate depends upon the battery condition and can be up to 20 amps DC. During charging, the battery terminal voltage will rise and the charging current will fall. For maximum performance and battery life, IT IS IMPORTANT THAT THE BATTERIES NOT BE OVERCHARGED OR UNDERCHARGED. As a general guideline for setting the timer, use 2-1/2 hours of charging for each one hour of machine operation. For example, if the machine has been used for 4 hours during the day, set the timer for 10

hours.

To operate the charger:

1. During charging, the machine must be set level. DO NOT tip the machine back in its park position for charging.
2. Lift the lid on the machine for access to the charging plug located inside the front cover next to the batteries.
3. Firmly connect the charger's plug into the machine's plug. These connectors are polarized and can plug together in only one way.
4. Plug the charger's power cord into a normal grounded electrical outlet and turn the timer to the calculated time setting.
5. To shut the charger "OFF", FIRST TURN THE TIMER TO THE "OFF" POSITION AND UNPLUG THE POWER CORD. THEN UNPLUG THE CHARGER CABLE FROM THE MACHINE.

Hydrogen gas is formed when the batteries are being charged. This gas is highly explosive; therefore, when charging the batteries keep the lid fully open and avoid any open flame or electric sparks near the batteries. This includes connecting or disconnecting charger with the timer "ON" To avoid accumulation of gas, be sure the batteries receive good air circulation while being charged.



**CAUTION**

## **BATTERY CARE**

Battery care determines the life span and efficiency of the units. Therefore, for the longest possible useful life from these batteries, the following procedure should be followed:

1. Keep battery solution (electrolyte) level up in cells. Check daily - if cells need water, use only distilled or approved water.
2. Keep batteries fully charged.
3. Keep batteries and connections clean. When necessary, clean with baking soda solution, attach wires and coat terminals with grease to retard corrosion.

### **SERVICE AND BATTERY GUARANTEE APPLYING TO SCRUBBER-VAC BATTERIES**

**SERVICE GUARANTEE:** If a battery becomes unserviceable in normal use within 90 days of purchase, the purchaser is entitled to a new battery of a comparable size and type, without charge, or to the necessary repairs, without charge for either labor or materials, at the option of the manufacturer. Transportation, recharges, or the use of rental batteries are not classed as repairs and the battery owner is expected to pay for such services, if required.

**ADJUSTMENT POLICY:** If a battery becomes unserviceable in normal use after the expiration of the service guarantee, it will be repaired or replaced with another battery of a comparable size and type to the original purchaser, on a pro-rated price basis, in exchange for the unserviceable battery, the purchaser paying only for the service received, plus transportation charges.

**LIMITATIONS:** Failure in service due to fire, wreckage, explosion, freezing, abuse or neglect, use of battery "dopes", or the use of a battery of a group size smaller than of the battery used as original equipment is not covered by the Service & Battery Guarantee. The Service & Battery Guarantee will not apply if battery has been opened or repaired or manufacturer's identification markings has been obliterated before presentation for adjustment or if battery has broken case or cover or if battery is discharged.

### **SCALE FOR PRO-RATING AFTER 90 DAYS**

Months Operation    Price

Months Guarantee x 1 = Exchange Price

All batteries are guaranteed for twelve (12) months from date of receipt (Subject to change without notice).

## **IN-LINE WATER FILTER**

**(KA-170B)**

An in-line water filter is installed between the solution supply tank and the electrically operated water valve. Access to this filter is provided under the left front corner of the machine below the circuit breaker reset button. If during operation the flow of solution becomes slow or stops, check the filter for blockage. Tip the machine back in its park position and empty the solution tank. While reaching underneath the front panel, unscrew the filter's plastic cap and remove the cap and filter screen. Clear the screen of captured materials and reinstall the screen and cap. Tighten the cap securely so that there are no water leaks.

## **CLEAN WATER TANK FILTER**

**(KA-171)**

A screen filter is installed in the inlet opening in the clean water tank intended to filter out any large contaminants inadvertently poured into this tank. Clean screen regularly.

## SERVICE DIAGNOSIS - TROUBLE SHOOTING CHECKLIST

### PROBLEM

### CORRECTION

#### BRUSH DRIVE MOTOR WILL NOT START

1. Power switch faulty.
2. Loose wire.
3. Battery condition low.
4. Circuit breaker tripped.

1. Replace switch.
2. Reconnect wire.
3. Check voltmeter and charge batteries
4. Reset by pushing in on breaker button.

#### MACHINE STREAKING A CLEANED FLOOR

1. Foreign materials lodged under squeegee blades.
2. Insufficient water flow to brush or pad.
3. Worn squeegee blades.
4. Worn brush or pad.
5. Improper squeegee height adjustment.

1. Rinse and clean squeegee blades
2. Clean solution tank and check solenoid valve behind brush motor.
3. Replace squeegee blades.
4. Replace brush or pad.
5. (See ADJUSTMENTS section).

#### VACUUM SUCTION BLOCKED

1. Clogged pick-up tube.
2. Lint filter dirty.
3. Air leaks around vac motor.
4. Clogging in hose entering recovery tank.

1. Remove obstructions.
2. Clean lint filter.
3. Check for good seal between vac motor, lint filter and cover can.
4. Remove hose and clean out clog.

#### SHORT OPERATING TIME

1. Battery charge condition very low.
2. Corroded wires or connectors.
3. Defective battery.

1. Recharge batteries fully before operating
2. Clean thoroughly.
3. Test individual cells and replace defective battery.

#### WATER WILL NOT FLOW

1. Low solution supply.
2. Defective WATER switch. (KA-170B)
3. Clogged solenoid valve. (KA-170B)
4. Loose wire. (KA-170B)
5. Dirty in-line water filter. (KA-170B)

1. Refill solution tank.
2. Replace switch.
3. Unplug, remove and clean solenoid valve located behind brush motor.
4. Reconnect.
5. Unscrew the filter cap and carefully remove the filter screen for cleaning. Replace and tighten securely

#### MACHINE PULLS TO ONE SIDE

1. Wheel dragging.

1. Replace or lubricate wheel.

#### SQUEEGEE LEVER DOES NOT PICK UP

1. Squeegee cable broken.
2. Squeegee height requires adjustment.

1. Replace cable.
2. (See ADJUSTMENTS section)

#### CHARGER WILL NOT CHARGE

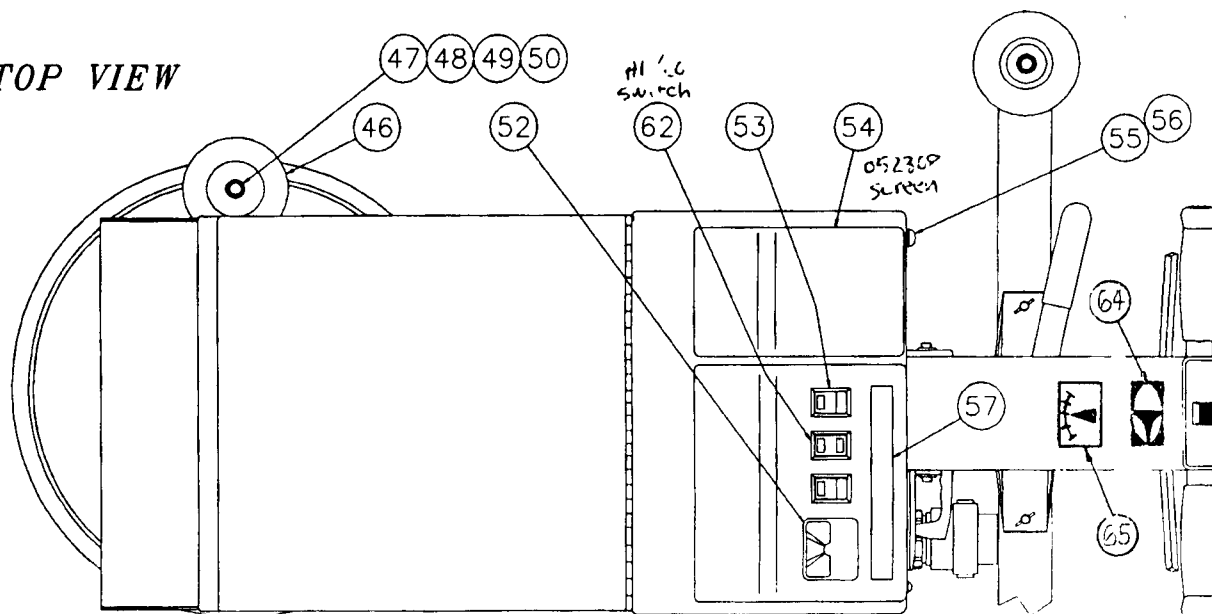
1. AC or DC cables not connected.
2. Fuse defective.
3. Defective battery.

1. Plug in cables.
2. Replace fuse.
3. Identify and replace battery.

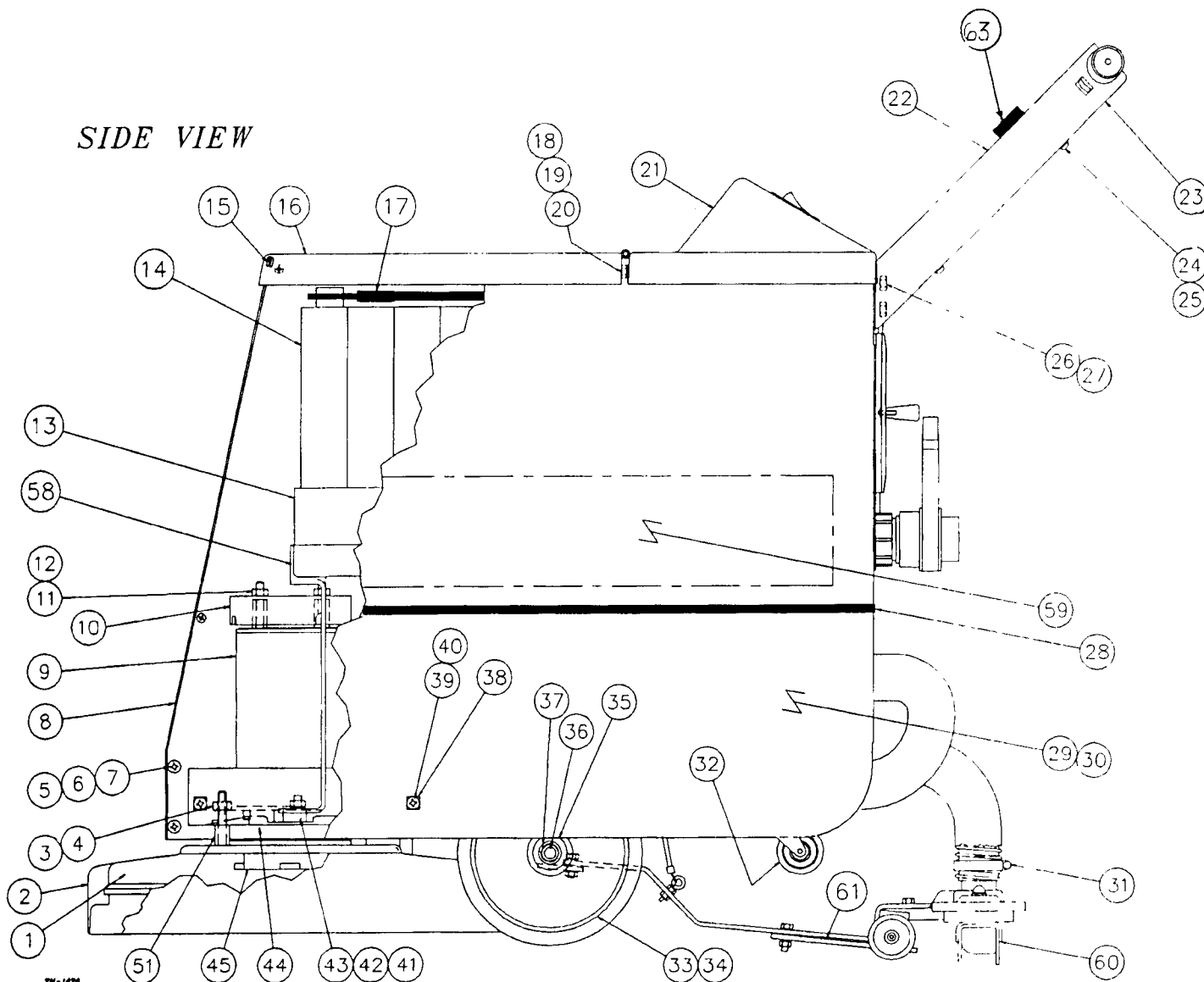
**ILLUSTRATED  
PARTS  
LIST**

# KA-170 / KA-171B AUTOMATIC FLOOR SCRUBBER

TOP VIEW



SIDE VIEW

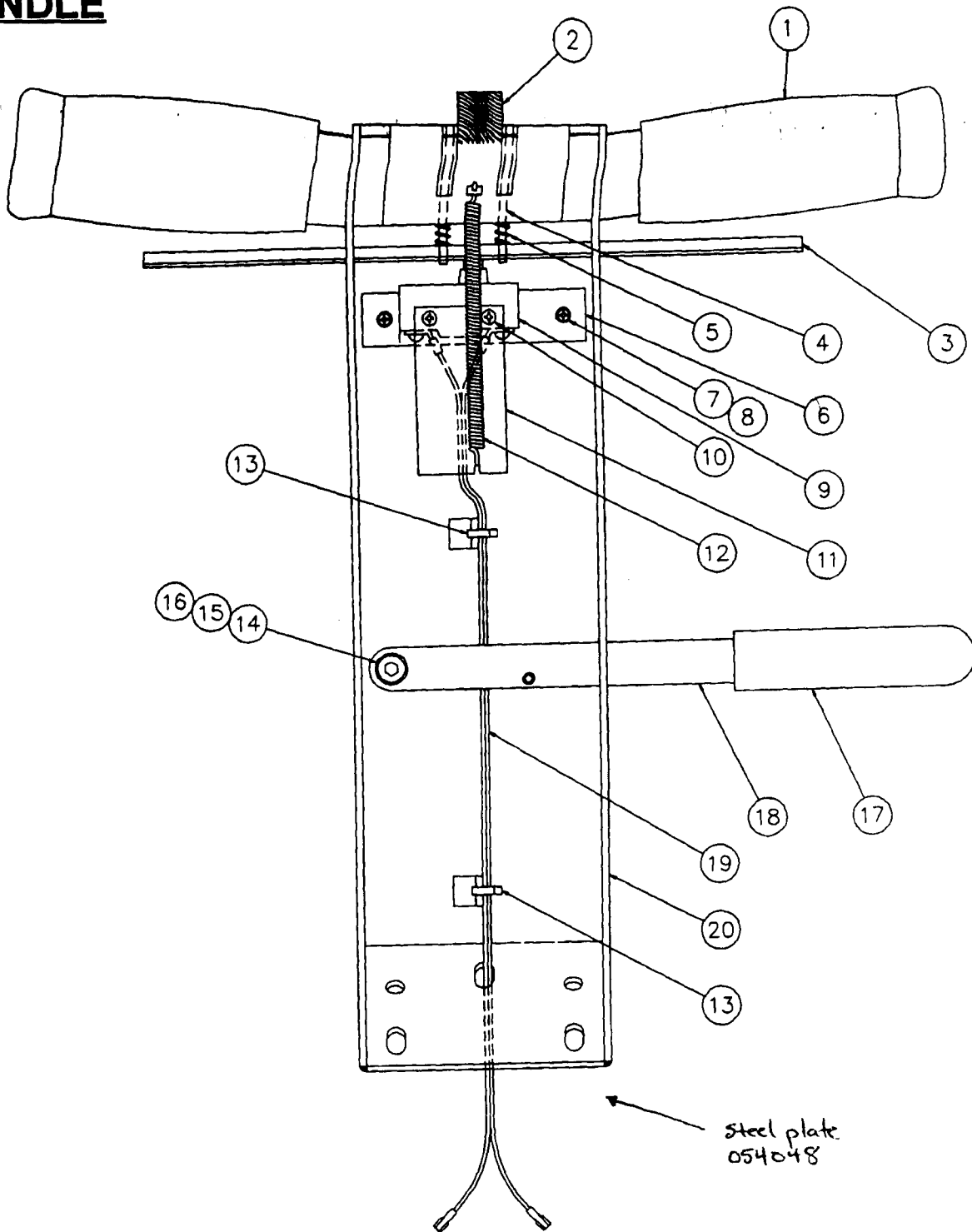


TV-1070

DET	PART NO.	DESCRIPTION	QUANT
	026965	BATTERY--PKG OF 2,WET,125AH	1
	026969	BATTERY--PKG OF 2,DRY,125AH	1
	031356	CHARGER,BAT--24 VDC,100V,50 CY	1
	031357	CHARGER,BAT--24 VDC,230V,50 CY	1
	031367	CHARGER,BAT--24VDC,115/60	1
1	053728	BRUSH COVER--17.0 CHROME	1
2	053729	BUMPER,VINYL--BLACK,15.75DIA	1
3	003349	NUT,HEX--.312-18,ZN PLT	4
4	004212	WSHR LK .326ID.586OD.078TSPLT	4
5	002248	SCR MACH RD HD .250-20X.750L	4
6	004254	WSHR LK .267ID.510OD.028T EXT	4
7	005591	NUT,SELF RETAINING--.250-20	4
8	053704	PLATE,STL--FORMED,FRT COVER	1
9	024328	MTR,DC--24V, 50HP,1200RPM	1
10	053294	COVER,MOTOR--MACHINED,KA-201	1
11	003349	NUT,HEX--.312-18,ZN PLT	2
12	053293	WASHER,SEALING--.312 DIA,KA201	2
13	053712	TRAY,BATTERY--MACHINED	1
14	025782	BATTERY--12V,125AH,WET	2
15	054140	WEAR STRIP--SIDE PANEL,12.0L	1
16	034366	ASM,HINGE&LID--KA-170B	1
17	025274	ASM,WIRE-- 6GA,BLK,14.0L,RINGS	1
18	002248	SCR MACH RD HD 250-20X.750L	2
19	004254	WSHR LK .267ID.510OD.028T EXT	2
20	005373	WSHR FLT .281ID.625OD.062T STL	2
21	054086	COVER,CONTROL PANEL--KA-170B	1
21	054670	COVER,CONTROL PANEL--KA-171B	1
22	034296	WDMT,HANDLE--17INCH,AUTOMATIC1	1
22	034517	WDMT,HANDLE--KA-171B	1
23	054044	PLATE,STL--3 93X14.50,FORMED	1
24	005456	SCR MACH PAN HD 10-24X.500L	4
25	004253	WSHR LK .204ID.410OD 025T EXT	4
26	002253	SCR CAP HEX HD .250-20X.750L	4
27	002278	WSHR LK .262ID.489OD.062TSPLT	4
28	098478	TAPE,VINYL--W/ADHESIVE 1 SIDE	1
29	053662	PLATE,STL--FORM,25.0X30.25 LH	1
30	053661	PLATE,STL--FORM,25.0X30.25,RH	1

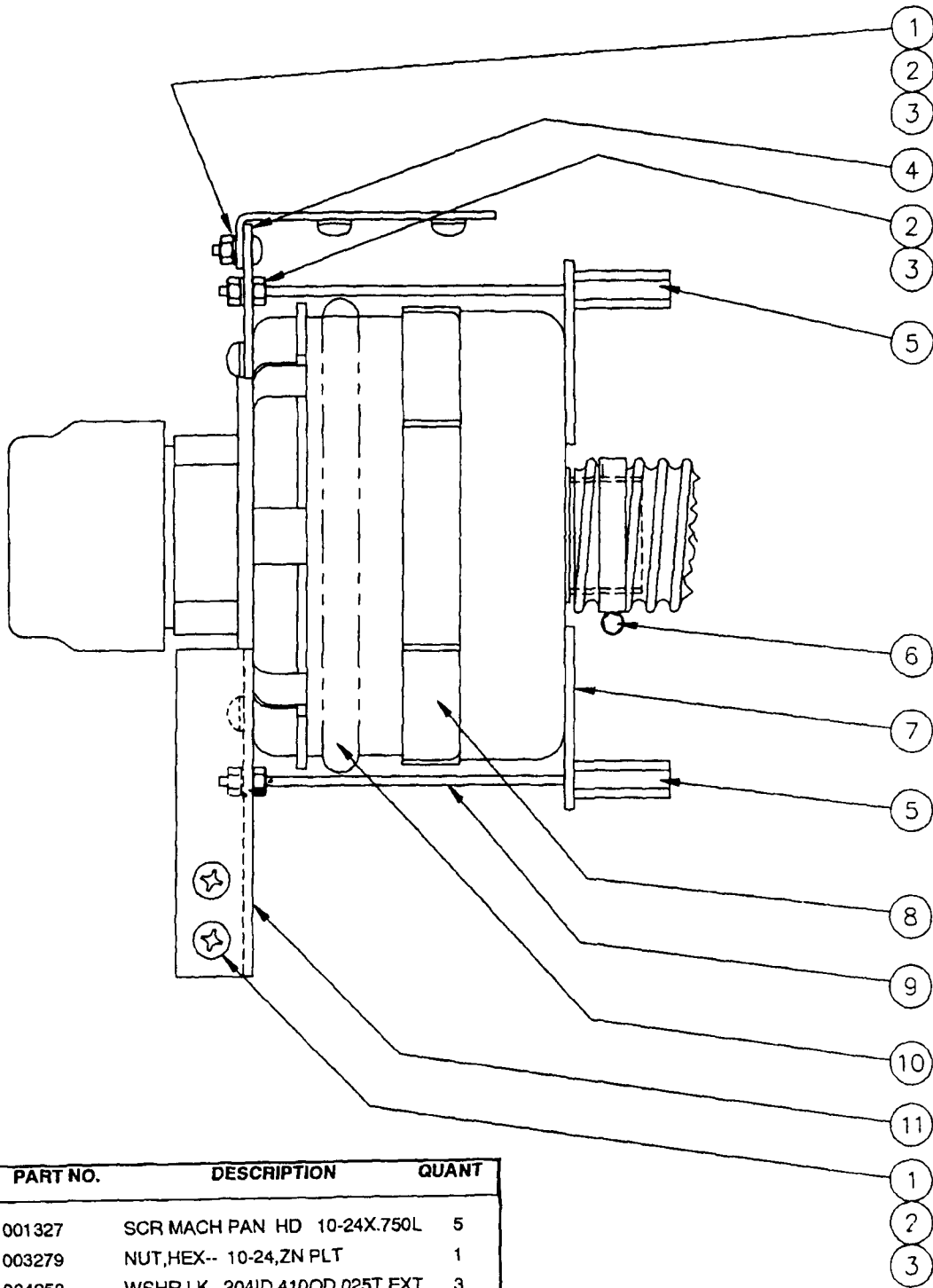
DET	PART NO.	DESCRIPTION	QUANT
31	049999	CLAMP,HOSE--2 25 MAX DIA,WORM	1
32	E49042	CASTER--2 50DIA, 437 STEM	2
33	052751	WHEEL,RUBBER--8 00 DIA,1 62W	2
34	009926	GREASE,SILICONE--WHITE	
35	004507	WSHR FLT 812D1 50OD 125 STL	2
36	053671	ROD,STL--AXLE, 750DIA X14 50L	1
37	054136	RING,RTNG--EXT, 75SHAFT, 062	2
38	005591	NUT,SELF RETAINING-- 250-20	4
39	002248	SCR MACH RD HD .250-20X 750L	4
40	004254	WSHR LK .267ID 510OD 028T EXT	4
41	003349	NUT,HEX--.312-18,ZN PLT	2
42	004212	WSHR LK .326ID 586OD 078TSPLT	2
43	003243	SCR CAP HEX HD 312-18X 625L	2
44	034133	WDMT,MAIN FRAME--17INCH AUTO	1
45	034151	ASM,GEAR UNIT--10 1	1
46	053720	WHEEL--4 00DIA, 438BORE, 688HB	1
47	003245	SCR CAP HEX HD .312-18X 875L	1
48	004212	WSHR LK 326ID 586OD 078TSPLT	1
49	004218	WSHR FLT .344ID 750OD 060T STL	1
50	053699	SPACER,STL-- 312X 437, 43L	1
51	051418	SPACER,STL-- 375X 625, 875L	4
52	026448	VOLTMETER	1
53	026960	SWITCH,RKR--DPST,6A,125V,LITE	2
	<i>54 057308</i>	<i>Screen</i>	
54	034298	ASM,COVER--SOL TANK,KA170B	1
55	002357	SCR MACH PAN HD .250-20X 625L	4
56	004254	WSHR LK .267ID 510OD 028T EXT	4
57	054106	LABEL,IDENT--CONT PANEL,KA-170	1
57	054672	LABEL,INSTR--CONT PANEL,KA-171	1
58	034149	WDMT,FRAME--BATTERY	1
59	052651	LABEL,IDENT--KENT,AUTO,5 25X20	2
60	034138	ASM,SQUEEGE--17INCH,AUTO	1
61	034323	ASM,SQUEEGEE BAR AND CAP	1
62	025812	ASM,SWITCH--RKR,DPDT,KA-170B	1
	<i>63 2548</i>		
63	<del>009130</del>	ASM,WATER CONTROL <i>cable</i>	1
63	046008	KNOB-WATER CONTROL	1
64	053909	LABEL,IDENT--3 00X3 00,KENT	1
65	054651	LABEL,INSTR--WATER CONTROL	1

# HANDLE



DET PART NO.	DESCRIPTION	QUANT	DET PART NO.	DESCRIPTION	QUANT
1 047418	HANDLE-GRIP	2	11 054042	BAR,STL--.119X1.50X2.75	1
2 050588	SAFETY SWITCH	1	12 048785	SPRING,EXT .250D 2.00L .026WD	1
3 050274	TRIGGER--FLOOR MACHINE	1	13 047085	STRAP,TIE,ELEC-- 5.50L,NYLON	2
4 005467	PIN,ROLL--.125 DIA,1.750L	2	14 054099	SPRING,COMP .085D 1.75L .081W	1
5 046648	SPRING,COMP .344D .687L .032WD	2	15 004221	WSHR FLT .344ID1.00OD.036T STL	2
6 054041	BAR,STL--.12X1.00X3.75L	1	16 002446	SCH SHLDR SOC HD .25-20X.37L	1
7 E49896	WSHR FLT .192ID.406OD.025T STL	2	17 054100	SLEEVE,VINYL--.12X 75X4.0L,BLK	1
8 001283	SCR MACH RD HD 10-24X.375L	2	18 054043	BAR,STL--.18X.75X9.50L	1
9 026412	SWITCH-PUSH--SPDT,21A,120-240V	1	19 025784	ASM,WIRE--18GA,ORG,18.00L	2
10 001312	SCR TPG C RD HD 6-32X1.00L	2	20 034296	WDMT,HANDLE--17INCH,AUTO	1

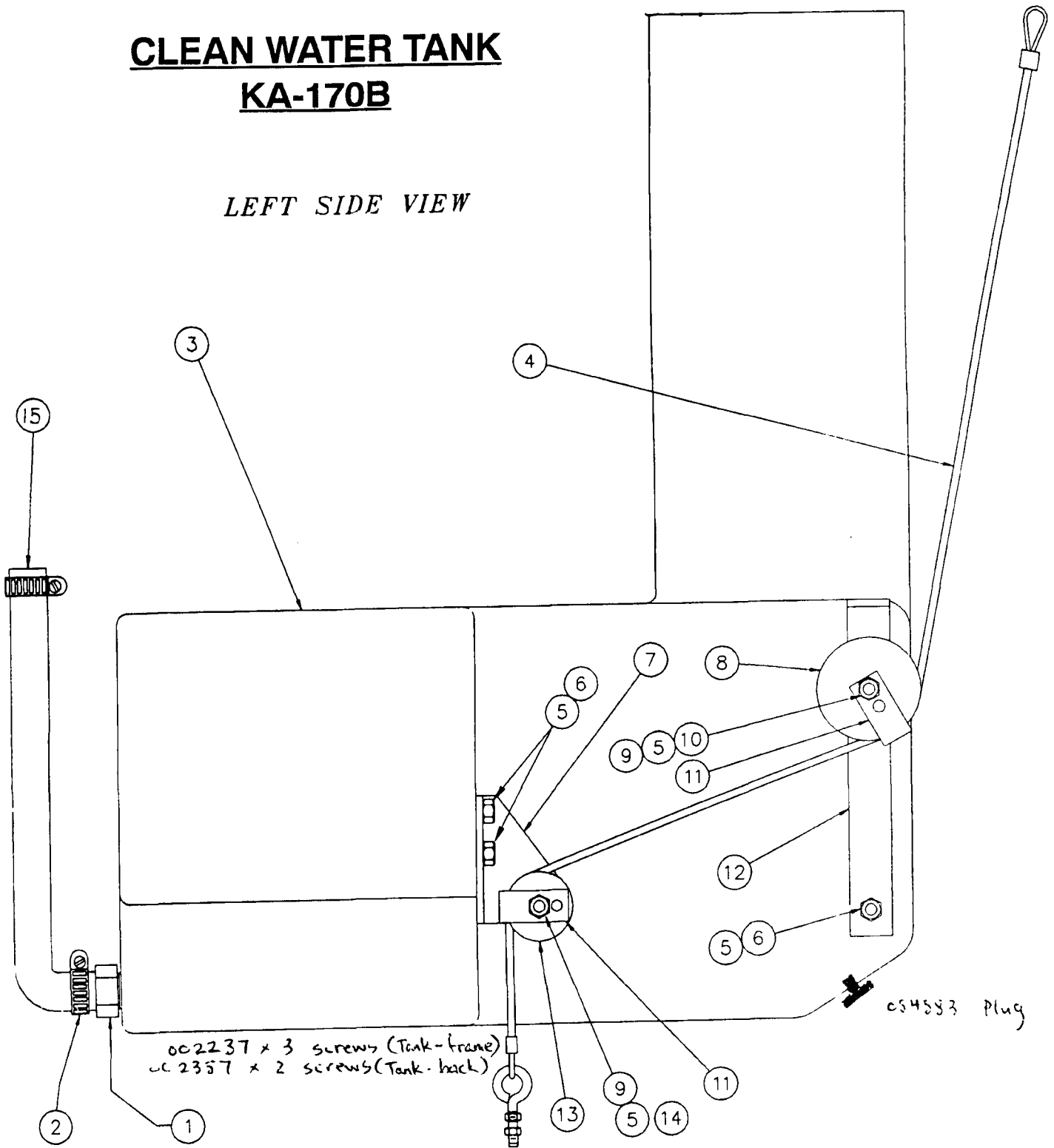
# VACUUM MOTOR ASSEMBLY



DET	PART NO.	DESCRIPTION	QUANT
1	001327	SCR MACH PAN HD 10-24X.750L	5
2	003279	NUT,HEX-- 10-24,ZN PLT	1
3	004253	WSHR LK .204ID.410OD.025T EXT	3
4	054023	BAR,STL--.12X.75X2.00L	1
5	053666	STAND OFF--THRD,10-24X1.25L HX	2
6	049999	CLAMP,HOSE--2 25 MAX DIA,WORM	1
7	034146	WDMT,VAC MTR COVER	1
8	053693	OBS,REPLACED BY 046817 Filter	1
9	053690	ROD,STL,THD--10-24X5.25 L	2
10	096773	MTR,VAC--24V,BYP,2 STG,PD	1
11	054022	ANGLE,STL--1.00X1.00X4.25L	1

# CLEAN WATER TANK KA-170B

LEFT SIDE VIEW

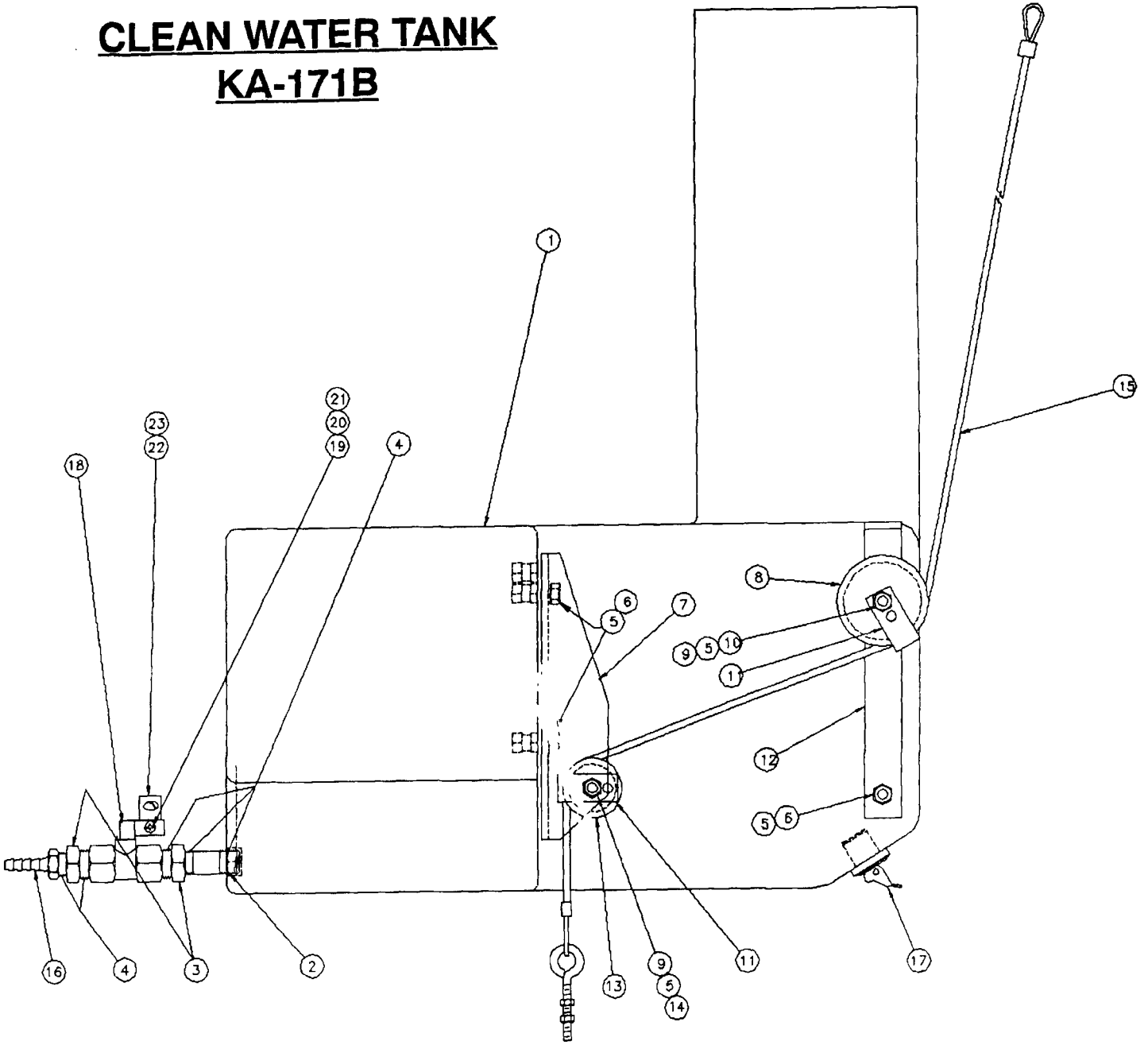


DET PART NO.	DESCRIPTION	QUANT
1 052983	ADAPTER--1/4 NPT, .375 HOSE	2
2 051581	CLAMP,HOSE--.625 MAX DIA,WORM	1
3 034241	TANK,SOLUTION--MACH.,R/S 53640	1
4 053658	WIRE ROPE--.09DX34.5L,EYE	1
5 002278	WSHR LK .262ID 489OD.062TSPLT	5
6 002243	SCR CAP HEX HD 250-20X.625L	3
7 039506	BAR,STL--FORMED,1 5X2.0X3.0L	1
8 048174	PULLEY,CABLE--2.50OD, 378 BORE	1

DET PART NO.	DESCRIPTION	QUANT
9 048177	SPACER,STL--.253X 374, 530L,Z	2
10 002256	SCR CAP HEX HD 250-20X1 00L	1
11 048176	GUARD-PULLEY	2
12 053747	BAR,STL--FORMED,1 2X1 0X8 0L	1
13 053300	PULLEY,CABLE--1 62 OD, 375 ID	1
14 002253	SCR CAP HEX HD 250-20X 750L	1
15 054293	TUBE,VINYL-- 375X 625,6 5L	1
039507	Hyunaga cable kit	

# CLEAN WATER TANK

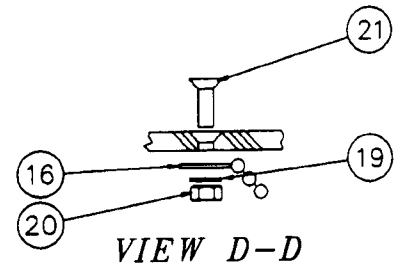
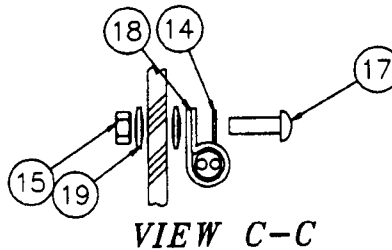
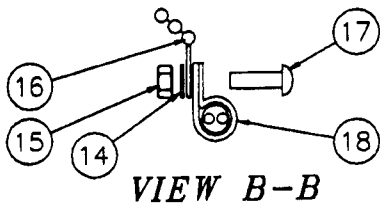
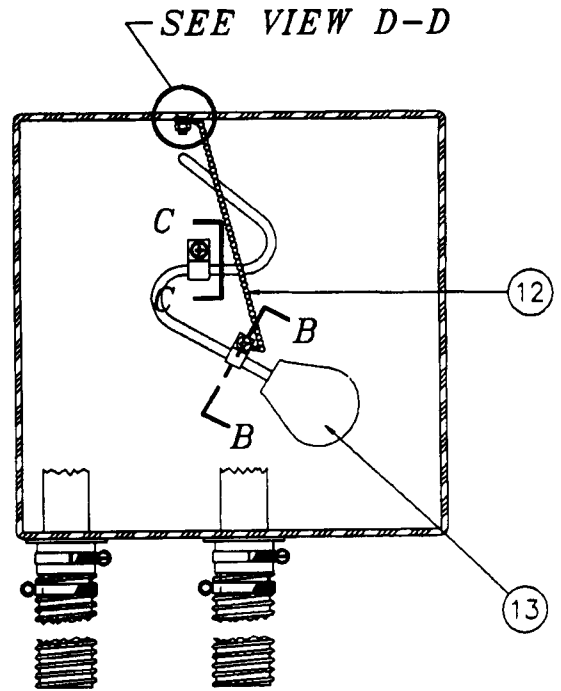
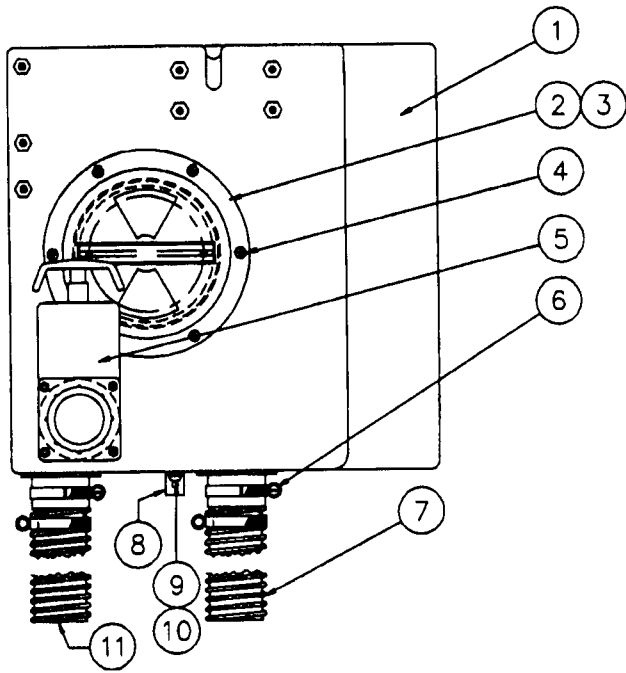
## KA-171B



DET	PART NO.	DESCRIPTION	QUANT
1	053641	TANK,SOLUTION--MACH ,R/S 53640	1
2	040129	NIPPLE,PIPE- $3/8$ CLOSE	1
3	006104	BSHG,PIPE- $1/2 \times 3/8$ IPT	2
4	009941	SEALANT,PIPE--WIT TEFLO	
5	002278	WSHR LK 262ID 489OD.062TSPLT	5
6	002247	SCR MACH RD HD 250-20X 625L	3
7	053688	BAR,STL--FORMED,1 5X2 0X3 0L	1
8	048174	PULLEY,CABLE--2.50OD, 378 BORE	1
9	048177	SPACE STL-- 253X 374, 530L,Z	2
10	002269	SCR CAP HEX HD .250-20X1 25L	1
11	048176	GUARD PULLEY	2
12	053747	BAR,STL--FORMED,1 2X1 0X8 0L	1

DET	PART NO.	DESCRIPTION	QUANT
13	053300	PULLEY,CABLE--1 62 OD, 375 ID	1
14	002254	SCR CAP HEX HD 250-20X 875L	1
15	053658	WIRE ROPE--.09DX34 5L,EYE	1
16	052483	ADPTR,PP-HS- $3/8 \times 3/8$ 3RS	1
17	054583	PLUG,EXPANSION-- 75DIA,SNAPTIE	1
18	049391	WATER VALVE	1
19	003279	NUT,HEX-- 10-24,ZN PLT	1
20	001292	SCR MACH RD HD 10-24X 500L	1
21	005297	WSHR LK 200ID 334OD 047TSPLT	1
22	044826	CONNECTOR-WATER VALVE CABLE	1
23	049435	LEVER-WATER VALVE	1

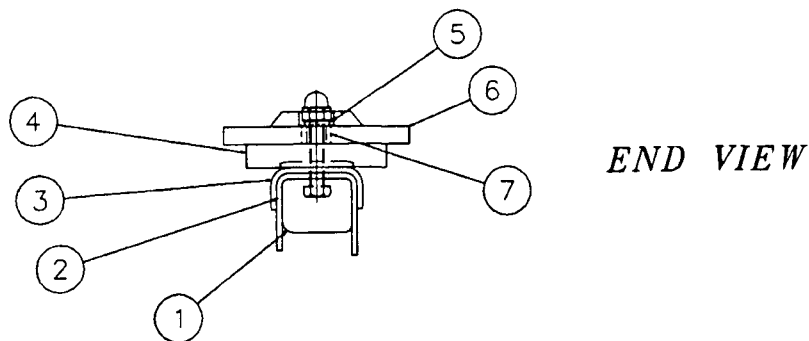
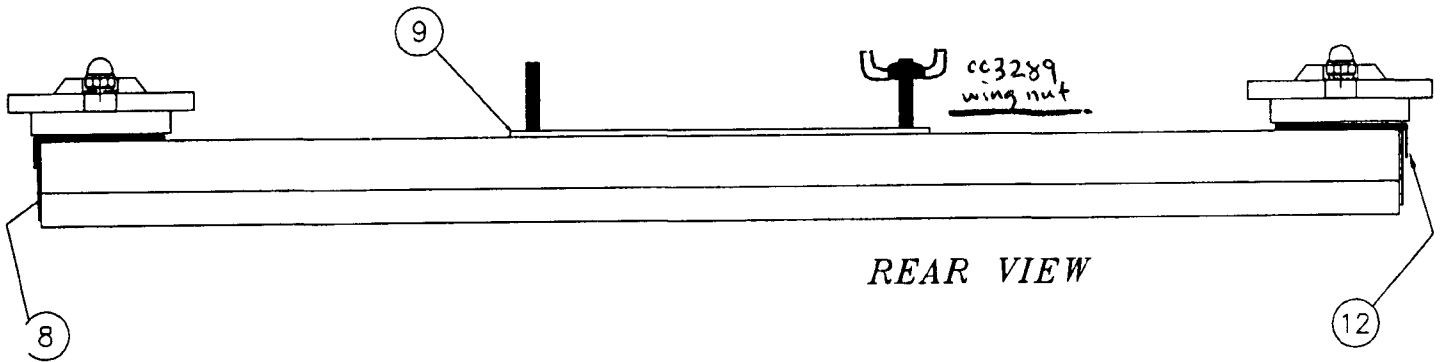
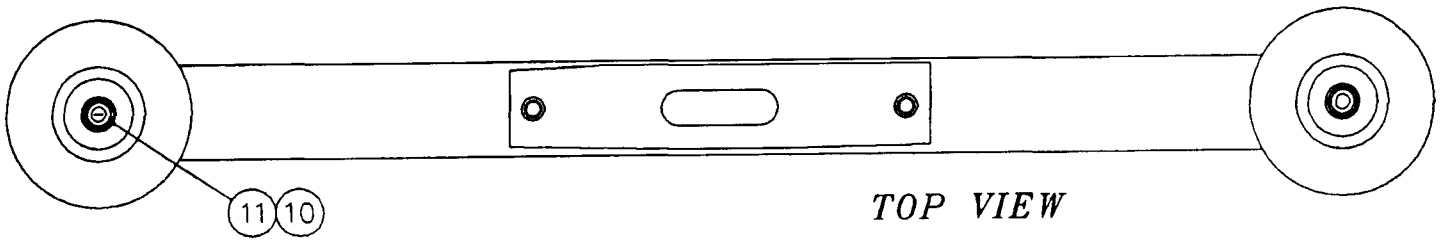
# RECOVERY TANK



DET	PART NO.	DESCRIPTION	QUANT
1	054046 053643	TANK,RECOVERY--MACH.17IN.	1
2	034154	ASM,ACCESS PLATE--W/HANDLE	1
3	053633	GASKET,FOAM--NEOPRENE	1
4	001487	SCR,TPG,F,FL,HD,8BX.625L	6
5	034293	ASM,VALVE--SLIDE W/FITTING	1
6	049999	CLAMP,HOSE--2.25 MAX DIA,WORM	4
7	053714	HOSE,VINYL--1.5ID,26.0L,BLK	1
8	054021	BAR,STL--FORMED,12X.62X3.0L	1
9	001273	SCR MACH RD HD 10-32X.500L	2
10	005297	WSHR LK .200ID.334OD.047TSPLT	2
11	053713	HOSE,VINYL--1.5ID,20.0L,BLK	1

DET	PART NO.	DESCRIPTION	QUANT
12	050355	CHAIN,BALL-- 3.50 LONG	1
13	026947	SWITCH,TILT--MERCURY	1
14	004253	WSHR LK .204ID.410OD 025T EXT	2
15	003279	NUT,HEX-- 10-24,ZN PLT	2
16	048023	END CONNECTOR	2
17	001295	SCR MACH RD HD 10-24X 625L	2
18	051466	CLAMP,LOOP--.297 CLOSED I D.	2
19	224074	WSHR SEAL .203ID SS	2
20	003278	NUT,HEX-- 10-32,ZN PLT	1
21	223082	SCR MACH FLAT HD 10-32X.750L	1

# SQUEEGEE ASSEMBLY



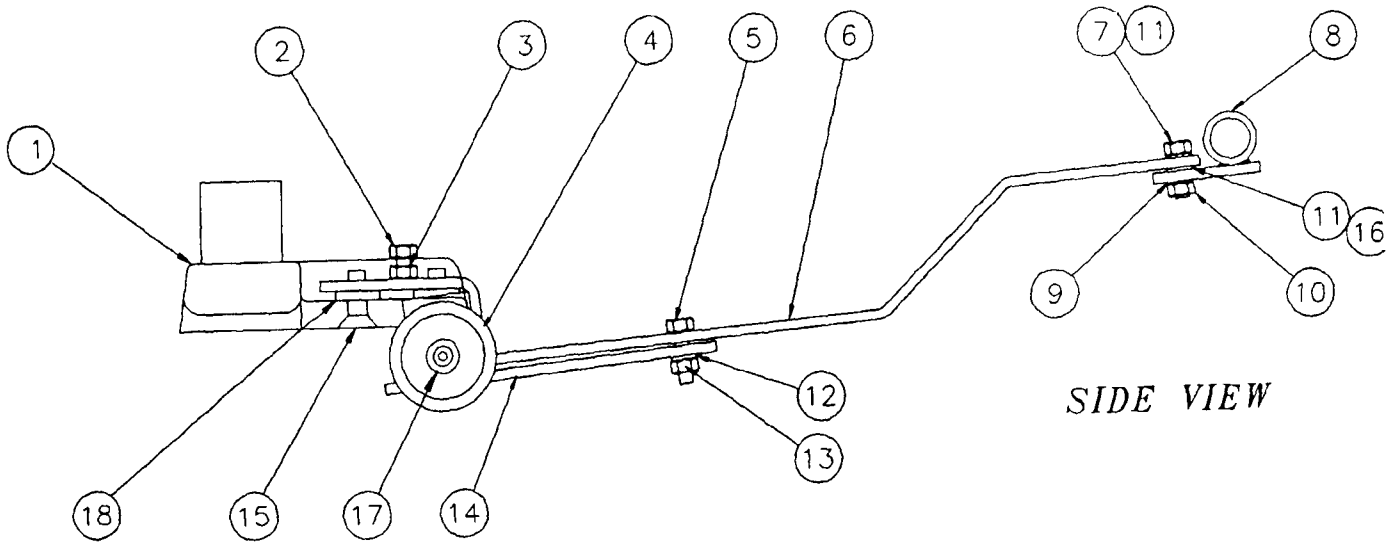
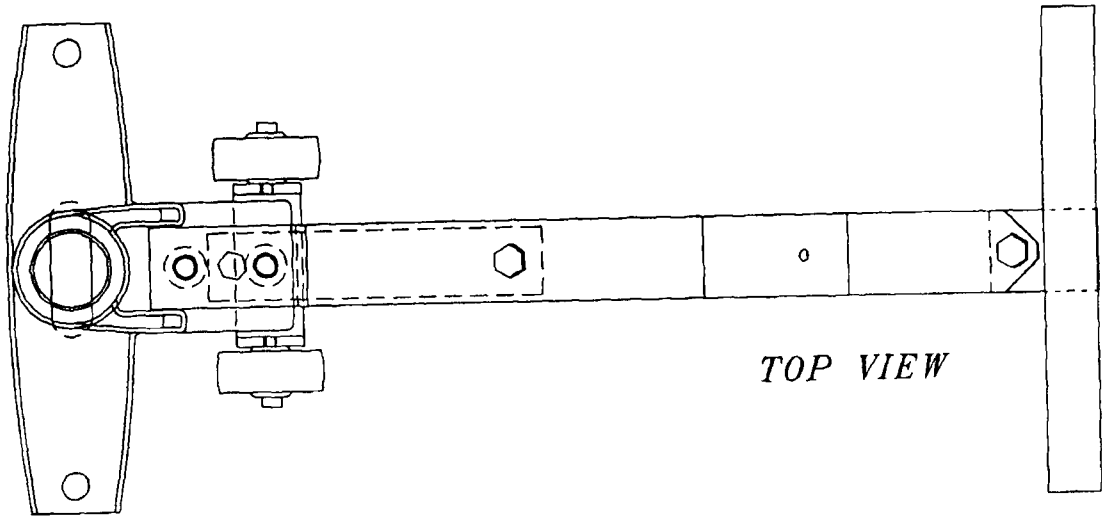
DET	PART NO.	DESCRIPTION	QUANT
1	053676	CASTING,COMP--SQUEEGE,17IN	1
2	053664	SQUEEGEE BLADE--	1
3	053668	BRACKET,SQUEEGEE--	1
4	053665	WEIGHT,STL--.50X2.75DIA	2
5	004218	WSHR FLT .344ID.750OD.060T STL	2
6	053720	WHEEL--4.00DIA,.438BORE,.688HB	2

DET	PART NO.	DESCRIPTION	QUANT
7	049430	SPACER,STL--.272X.380,.380L,Z	2
8	054342	END CAP,MYLAR--KA-170B	1
9	053656	GASKET,SQUEEGEE--.12X9.0 L	1
10	005232	NUT,ACORN--.312-18,CHROME	2
11	004212	WSHR LK .326ID 586OD 078TSPLT	2
12	054414	CAP,END--SQUEEGEE,ALUM	1

2 039431

16 9 003284

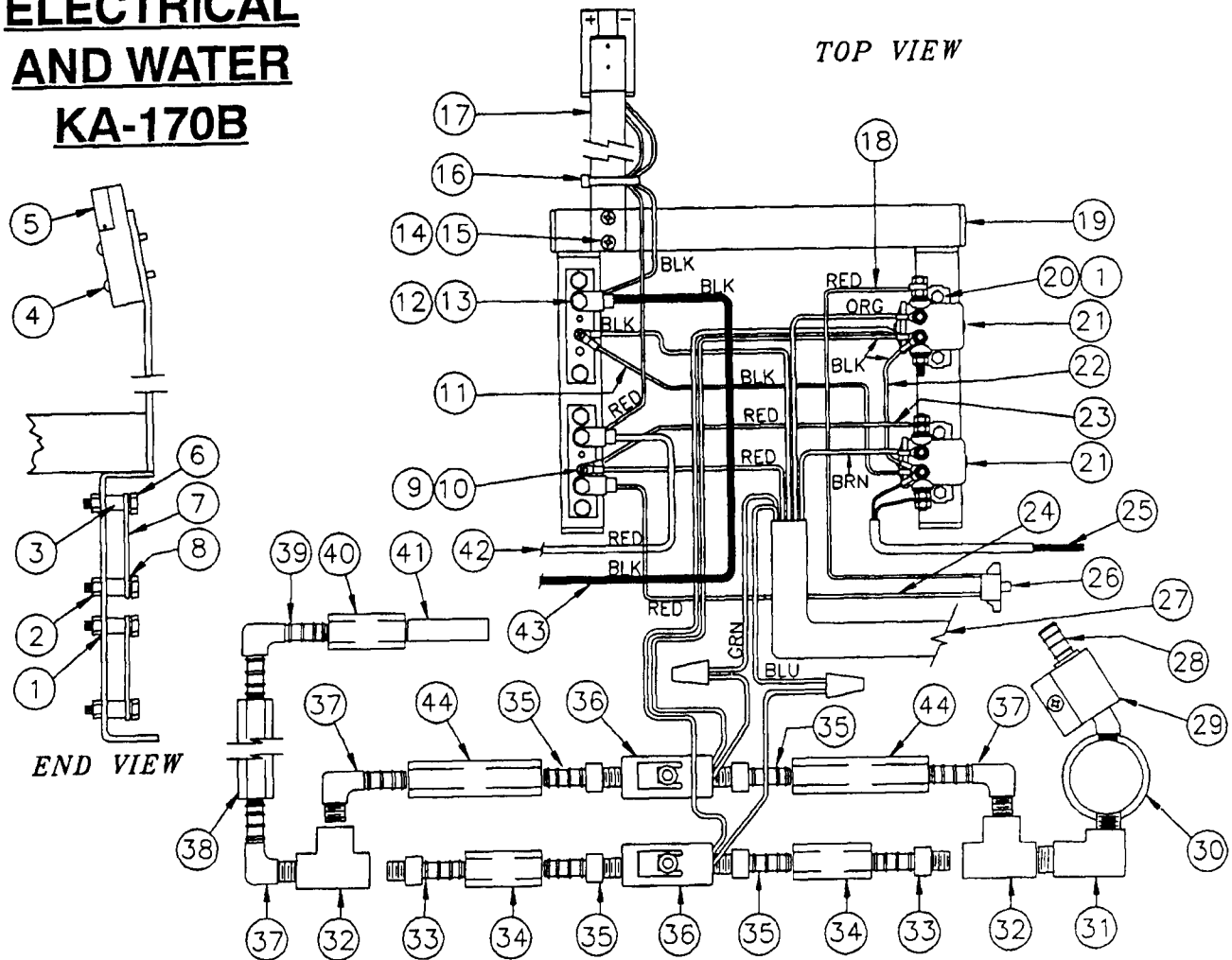
# SQUEEGEE BAR AND WHEELS



DET	PART NO.	DESCRIPTION	QUANT
1	053667	CASTING,MACH--R/S97372 NOZZLE	1
2	003417	SCR CAP SOC HD .375-16X2.00L	1
3	003293	NUT,HEX--.375-16,ZN PLT	1
4	053689	WHEEL,2.00DIA,.25BORE,.984HB	2
5	003244	SCR CAP HEX HD .312-18X.750L	1
6	034141	WDMT,SQUEEGEE BAR--	1
7	002254	SCR CAP HEX HD .250-20X.875L	1
8	034137	WDMT,SHAFT--PIVOT	1
9	004210	WSHR FLT .281ID.625OD.036T STL	1

DET	PART NO.	DESCRIPTION	QUANT
10	222258	NUT,HEX--.250-20,SS	1
11	224075	WSHR FLT .265ID 687OD SS	2
12	004212	WSHR LK .326ID 586OD 078TSPLT	1
13	003349	NUT,HEX--.312-18,ZN PLT	1
14	034144	ASM,SLIDE--WDMT & WHEELS	1
15	001466	SCR MACH FLAT HD 375-16X1 00L	2
16	009926	GREASE,SILICONE--WHITE	
17	002441	SCR,SHLDR SOC HD--10-24X1 00S	2
18	0003050870	WSHR FLT 375ID 875OD 187T STL	2

# ELECTRICAL AND WATER KA-170B

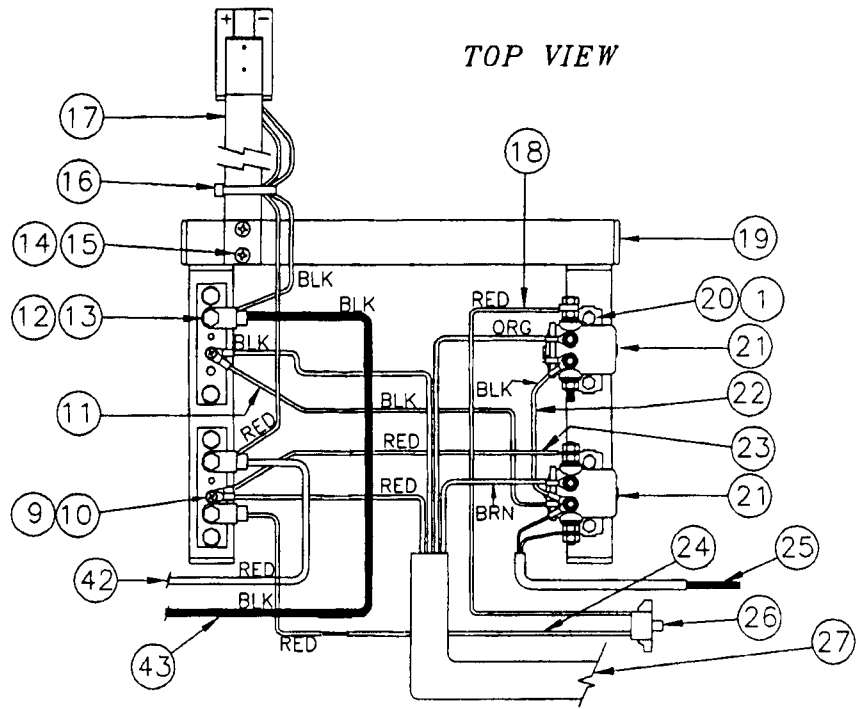
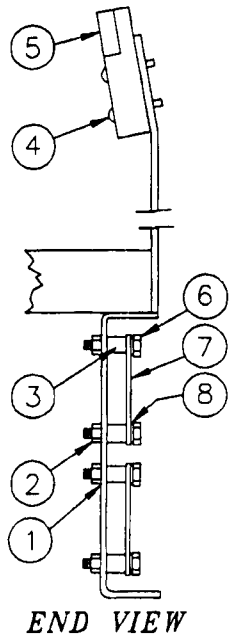


DET	PART NO.	DESCRIPTION	QUANT
1	002278	WSHR LK .262ID.489OD.062TSPLT	8
2	003283	NUT,HEX-- 250-20,ZN PLT	4
3	048268	SPACER,PLSTC--.500X.625 ,.500L	4
4	001244	SCR MACH RD HD 6-32X.750L	2
5	033053	ASM,SUB--CHARGER,PLUG	1
6	002267	SCR CAP HEX HD .250-20X1.50L	4
7	048269	BAR,STL--.187X.750X 4 00 LONG	2
8	004369	WSHR SHLDR.250ID.562OD.120T,NY	4
9	001283	SCR MACH RD HD 10-24X.375L	2
10	005297	WSHR LK .200ID.334OD.047TSPLT	2
11	025361	ASM,WIRE--16GA,BLK,15.0L,RINGS	1
12	003242	SCR CAP HEX HD .312-18X.500L	3
13	004212	WSHR LK 326ID.586OD.078TSPLT	3
14	001283	SCR MACH RD HD 10-24X.375L	2
15	005297	WSHR LK .200ID.334OD.047TSPLT	2
16	047085	STRAP,TIE,ELEC-- 5.50L,NYLON	1
17	053672	BAR,STL--FORMED,.18X1 25X12.8L	1
18	026944	ASM,WIRE--6GA,RED,18 0L,RINGS	1
19	034149	WDMT,FRAME--BATTERY,17INCH	1
20	002237	SCR CAP HEX HD .250-20X 500L	4
21	026450	SOLENOID	2
22	026943	ASM,WIRE--16GA,BLK,6.0L,RINGS	1

DET	PART NO.	DESCRIPTION	QUANT
23	025810	ASM,WIRE--16G,RED,20.0, 31X.19	1
24	026944	ASM,WIRE--6GA,RED,18 0L,RINGS	1
25	026942	ASM,WIRE--2COND,16GA,BRN	1
26	026651	CIRCUIT BREAKER--30 AMP,THRM	1
27	026941	ASM,WIRE--5COND,18GA,64 0L	1
28	006126	ADPTR,PP-HS--1/4 IPTX3/8HS,BRS	1
29	052739	CLAMP,LOOP--COLUMN, 900 DIA	1
30	054274	FILTER,WATER--IN-LINE, 25MNPT	1
31	050199	ELBOW,PIPE--1/4 MPTX1/4IPT	1
32	053908	TEE,PIPE--.25 IPT,BRONZE	2
33	052983	ADAPTER--1/4 NPT, .375 HOSE	2
34	054267	TUBE,VINYL--.37X.62X2.00L	2
35	054292	ADAPTER--1/8NPTX 375 HOSE,BRS	4
36	053744	VALVE,SOLENOID--24VDC,MOD	2
37	006137	ELBOW,PIPE--.25 MPTX 375,PVC	3
38	054294	TUBE,VINYL-- 375X 625,9 75L	1
39	046946	ELBOW,HOSE--3/8X3/8,PLSTC	1
40	051016	TUBE,VINYL-- 375X 625, 2 00L	1
41	053749	TUBE,COPPER-- 37ODX2 50L	1
42	026945	ASM,WIRE--6GA,RED,30 0L,RINGS	1
43	025253	ASM,WIRE-- 6GA,BLK,25 0L,RINGS	1
44	054369	TUBE,VINYL-- 37X.62X2 75L	2

# ELECTRICAL

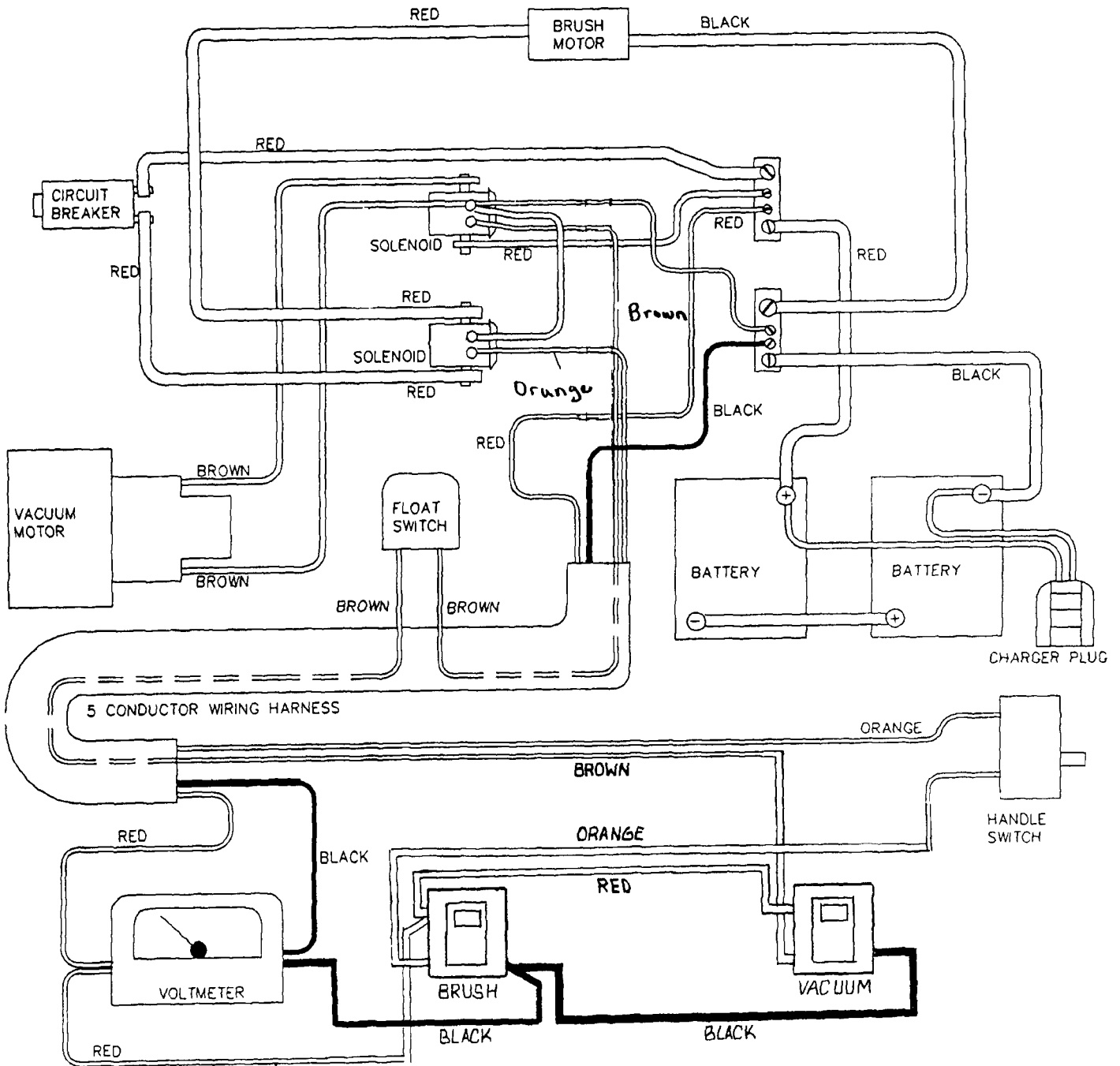
## KA-171B



DET	PART NO.	DESCRIPTION	QUANT
1	002278	WSHR LK .262ID.489OD.062TSPLT	8
2	003283	NUT,HEX--.250-20,ZN PLT	4
3	048268	SPACER,PLSTC--.500X.625,.500L	4
4	001244	SCR MACH RD HD 6-32X.750L	2
5	033053	ASM,SUB--CHARGER,PLUG	1
6	002267	SCR CAP HEX HD .250-20X1.50L	4
7	048269	BAR,STL--.187X.750X 4.00 LONG	2
8	004369	WSHR SHLDR.250ID.562OD.120T,NY	4
9	001283	SCR MACH RD HD 10-24X.375L	2
10	005297	WSHR LK .200ID.334OD.047TSPLT	2
11	025361	ASM,WIRE--16GA,BLK,15.0L,RINGS	1
12	003242	SCR CAP HEX HD .312-18X.500L	3
13	004212	WSHR LK .326ID.586OD.078TSPLT	3
14	001283	SCR MACH RD HD 10-24X.375L	2
15	005297	WSHR LK .200ID.334OD.047TSPLT	2

DET	PART NO.	DESCRIPTION	QUANT
16	047085	STRAP,TIE,ELEC-- 5.50L,NYLON	1
17	053672	BAR,STL--FORMED, 18X1.25X12.8L	1
18	026944	ASM,WIRE--6GA,RED,18.0L,RINGS	1
19	034149	WDMT,FRAME--BATTERY,17INCH	1
20	002237	SCR CAP HEX HD .250-20X.500L	4
21	026450	SOLENOID	2
22	026943	ASM,WIRE--16GA,BLK,6.0L,RINGS	1
23	025810	ASM,WIRE--16G,RED,20 0, 31X 19	1
24	026944	ASM,WIRE--6GA,RED,18 0L,RINGS	1
25	026942	ASM,WIRE--2COND,16GA,BRN	1
26	026651	CIRCUIT BREAKER--30 AMP,THRM	1
27	026998	ASM,WIRE--5 CNDCT,18GA,INS TER	1
42	026945	ASM,WIRE--6GA,RED,30 0L,RINGS	1
43	025253	ASM,WIRE-- 6GA,BLK,25 0L,RINGS	1

# WIRING DIAGRAM KA-171B



## 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 Kent Equipment with information concerning the duration, extent, availability, and applicability of this Kent Limited Warranty, the procedure to be taken to obtain its performance, and other information concerning the Kent Warranty policy

### DURATION OF WARRANTY AND TO WHOM EXTENDED

This warranty extends for a period of one year from the date of the original purchase of the Kent Equipment by the original purchaser

### PARTS OF KENT EQUIPMENT NOT COVERED BY 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, gaskets, switches, bumpers, carbon brushes, handle grips, bags, hoses, bearings, etc

### EXCEPTIONS AND EXCLUSIONS FROM WARRANTY

This equipment is required to be used on electric current as indicated on the data plate. Otherwise damage, defects, malfunctions or other failures of the equipment arising from use on electric current not as indicated are excepted and excluded from this warranty

Defects, malfunctions, failure or damage of the equipment caused by improper, unreasonable or negligent use or abuse while in the possession of the purchaser are likewise excluded from this warranty

If repair is done on your equipment by anyone other than those below designated as authorized to perform such work without first having obtained factory instructions, The Kent Company, at its 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 specified instructions

Briggs & Stratton Corporation engines are guaranteed by Briggs & Stratton Corporation for a period of one year. Parts and service are available only through Briggs & Stratton Corporation servicing dealers

Honda Engines are guaranteed by American Honda Motor Co., Inc. for a period of one year. Parts and service are available only through Honda servicing dealers

Motor Appliance Corp. guarantees all Mac Battery Chargers to be free from defects in material or workmanship for a period of one year from date of manufacture. The nearest Mac authorized Service Facility should be contacted for service assistance

### FIVE YEAR POLY COMPONENT WARRANTY

Your Kent rotational molded polyethylene parts have been manufactured, tested and inspected in accordance with carefully specified engineering requirements and are warranted to be free from defects in material and workmanship

This warranty extends for a period of five (5) years from the date of the original purchase of the Kent equipment by the original purchaser

This warranty will not cover damage attributable to the following

- (1) Improper, unreasonable or negligent use or abuse of the equipment
- (2) Use of the equipment with hot water or high temperature above 130° Fahrenheit (54° Centigrade)
- (3) "Warping", "creepage", or "distortion" of part so long as the same does not interfere with normal operation
- (4) Abrasions or punctures of the equipment

### PROCEDURE TO BE TAKEN TO OBTAIN PERFORMANCE OF WARRANTY

**REPAIRS** - To secure repair of the equipment or any warranted parts under this warranty, the following procedure should 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

- (1) The Dealer from whom purchased
- (2) Any Kent Distributor's Service Department in the United States
- (3) 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 closely available Kent Distributor Service Department or Kent Authorized Service Station or other factory instructions

Upon compliance with the above procedure, all warranted defects will be repaired, at no additional charge or cost to the customer, and the repaired product returned to the customer, with all shipping and delivery charges prepaid

In following the procedures above set forth, PLEASE MAKE CERTAIN to state the Kent model, type and serial number as shown on the data plate of the equipment

**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 its 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 its warranty policy, refund the customer's purchase price

### WARRANTY REGISTRATION CARD FOR YOUR KENT EQUIPMENT AND REQUESTS FOR INFORMATION

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 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

THE KENT COMPANY - P O BOX 1665-ELKHART, INDIANA 46515