




# SERVICE MANUAL



The Kirby Co., Div. of   
Cleveland, Ohio





# INDEX

collectingdust.com

THE A B C'S OF GOOD KIRBY SERVICE

SECTION

FOREWORD

A

collectingdust.com

DEPARTMENT OPERATION

B

PARTS AND ORDERING PROCEDURE

collectingdust.com C

collectingdust.com

KIRBY SERVICE BY SECTIONS

MOTOR GROUP

1

collectingdust.com

NOZZLE GROUP

2

collectingdust.com

HANDLE GROUP

3

EMTOR AND BAG GROUP

4

CORD GROUP

5

ATTACHMENT GROUP PARTS

6

collectingdust.com

POWER POLISHER GROUP

collectingdust.com 7

HANDI-BUTLER GROUP

8

FLEXIBLE SHAFT GROUP

9

collectingdust.com  
SURFACE NOZZLE GROUP, SPECIAL AND  
OBSOLETE PARTS, AND TOOLS

10

collectingdust.com

collectingdust.com

ust.com

collectingdust.com  
collectingdust.com

collectinadust.com

collectinadust.com



collectingdust.com



collectingdust.com

collectingdust.com

collectingdust.com  
**THE IMPORTANCE**  
of  
**GOOD SERVICE**

collectingdust.com

collectingdust.com

**FOREWORD**

*The purpose of this Service Manual is:*

- (1) To assist Kirby Distributors in the building and operation of a Service Department which will be able to make all necessary repairs required on Kirby equipment from the most minor to a complete overhaul with factory quality standards prevailing.
- (2) To reacquaint Kirby Distributors and their people with the various Kirby Guarantees and the rights and privileges of the customer under these guarantees.
- (3) To lead the Distributor to increased profits by building up his clientele of "Boosters for Kirby".

*The selection of your Service Department Personnel:*

- (1) The Distributor, in the interest of organizing an efficient and successful sales organization, should select a capable, dependable and trustworthy man as a service manager.
- (2) Considering the vast number of Kirbys in the field today it is difficult to visualize any area of the country in which a profitable service operation could not function.
- (3) In the interest of a successful organization, the activities of the service manager should be limited to service and conversely those of the sales department to sales. In this manner you will eliminate any questions a customer may have regarding the type of consideration given to her service call.

If this manual is of assistance to you to the degree we anticipate, then we will consider the time, money and effort well spent.

*Arvid H. Edmann*  
Service Manager

collectingdust.com

collectingdust.com





## KIRBY WARRANTIES

collectingdust.com

The Kirby guarantees and warranties are designed specifically for the protection only of the original purchaser of Kirby equipment. They cannot be applied to second-hand equipment or that which had not been obtained as new from an authorized Kirby representative.

The Kirby warranties are null and void if the serial nameplate is altered, defaced or removed from the machine. Also, evidence of unauthorized repairs or tampering resulting in damage to the unit or causing extra, unnecessary service requirements, shall eliminate the Kirby in question from the warranties.

When a service representative or the customer has any questions arising from circumstances not covered above, they should address such matters directly to the factory service department in Cleveland.

collectingdust.com

### *The One Year Warranty*

Equipment requiring replacement during the first year of operation as a result of defective material or workmanship should be adjusted through the service department of the distributor responsible for the sale. As stated in the instruction book, this warranty does not include a no charge service call at a customer's home and the availability of such a call is entirely at the discretion of the distributor involved. Should it be necessary for the customer or the distributor to send a particular part to the factory service department for adjustment, then the transportation charges involved must be the responsibility of the distributor or the customer. In all cases there must be unmistakable evidence that there is a defect in material or workmanship or free replacement should not be made.

collectingdust.com

Equipment judged defective by the distributor and replaced gratis to his customer, should be forwarded to the factory for examination and replacement where warranted. While the factory cannot consider replacement of obviously broken or damaged articles, you may be assured that every consideration will be given to the possibility of making a no charge replacement of the items returned. In-warranty replacement of equipment is, in most cases, dependent upon more than the "judgment" of a service representative. Records are maintained at the factory service department of the dates of all engineering modifications and changes effecting the various components of the Kirby. These records determine the eligibility of a part in question for qualification in the in-warranty program.

### *General Service Insurance (Factory Rebuild Guarantee)*

The Factory Rebuild Guarantee as stated in the Guarantee and Instruction book for each model of Kirby is not only the responsibility of the company but also the distributor. Under the terms of this warranty, the original purchaser is entitled to whatever repairs or replacements may be required as a result of normal fair wear and tear. It is quite understandable and relatively easy to explain to the customer that the Rebuild Guarantee is not an insurance program against breakage or loss but rather a program to provide service at a minimum cost to cover the effects of normal fair wear and tear. It should be pointed out to the customer at the time a unit is deposited at your service department for repairs that the replacement of lost, missing or broken parts can only be made at a cost in excess of the basic rebuild charge.

collectingdust.com





The cost of service under the terms of the Factory Rebuild Guarantee varies with the model of Kirby involved. The table below shows the basic maximum charge for repairs made at our factory and the maximum charge for the rebuilding service when performed by the distributor.

MODEL	FACTORY COST	DISTRIBUTOR COST
Model C Kirby thru Model 4C	\$ 10.00	\$ 15.00
Model 505 Kirby thru 511	\$ 12.50	\$ 17.50
Model 512 Kirby thru 515	\$ 12.50	\$ 17.50
Model 516 Kirby thru 519	\$ 17.50	\$ 22.50
Model 560 thru VII	\$ 22.50	\$ 27.50
Model D50 thru #267705	\$ 27.50	\$ 32.50
Model D50 #267706 thru D80	\$ 32.50	\$ 37.50
Classic 1CR (all)	\$ 37.50	\$ 42.50

collectingdust.com

The Factory rebuild service is designed to include repairs or replacement of all equipment which had been included in the original purchase. There are no exceptions or limitations to the extent of repairs. If the distributor cannot see his way clear to extend service to this extent, then he should suggest to his customer that the Kirby be sent to the factory in Cleveland for repairs.

The repair costs quoted for factory service naturally do not include transportation and such additional charges must be the responsibility of the customer. In the case of the distributor's rebuild charge, the transportation is theoretically included in the increased cost figures. The rebuild prices listed above and in the instruction book DO NOT include SERVICE CALL FEES for a call made at a customer's home or other special services.

To prevent any misunderstanding with your customers, the necessity for any additional charge over the basic rebuild cost should be clearly set forth when the Kirby is presented to you for repairs. At this time, the company policy as set forth above as well as any other reasons you may have for increased costs, may be explained to the customer who then may authorize or refuse the required repairs. This preexplanation of all charges will very definitely increase the efficiency of your service department by eliminating the misunderstandings and disagreements associated with unquoted, high repair costs. This will also help eliminate storage problems resulting from the customer's inability to pay for the repairs when presented with a relatively high statement of costs when attempting to pick up the repaired unit.

Many of the distributors choose to avoid the low profit feature of rebuilding Kirbys locally. If this should also be your desire, then most certainly you are encouraged to join them in taking advantage of the facilities of your factory service department for rebuilding Kirbys for your customers. Of course, the factory service department is also available for whatever repairs you may wish to authorize on a straight charge for parts plus labor basis. To clarify this matter, the following service bulletin was issued effective December 1, 1955.





A SERVICE BULLETIN OF PRIME IMPORTANCE  
TO ALL DISTRIBUTORS & AREA DISTRIBUTORS

Effective December 1, 1955

All Kirbys sent to us for rebuilding under the terms of the Kirby Service Insurance Guarantee, when rebuilt, will be returned DIRECT TO THE CUSTOMER'S HOME from the factory. Whenever you send in a Kirby for rebuilding under the terms of the Service Insurance Guarantee, be sure the CORRECT name and address of the owner are included, in order that the rebuilt Kirby reaches the proper destination with the least possible delay.

When we return the customer's rebuilt Kirby to her, we will send it C.O.D. at the factory guarantee rebuilt price, plus transportation charges. Therefore, we suggest that the customer's Kirby be sent to us for rebuilding by sent transportation charges collect, so the incoming transportation charges can be added to the C.O.D. charge we make to the customer. Naturally, then, you will make no charge to the customer, since we will bill her for all charges. Motor freight charges are usually based on cwt and anything weighing less than one hundred pounds is charged at the minimum cost of one hundred pounds. Railway Express charges, on the other hand, are based on the actual weight. Therefore, we further suggest that customers' Kirbys be returned to us by Railway Express collect rather than motor freight. In order to ensure that exact transportation charges are added to each rebuilt, please ship each Kirby separately. Do not include extraneous parts not belonging to the customer.

A notice will be sent to you the same day the rebuilt Kirby is returned to the owner, stating we have rebuilt the customer's Kirby in accordance with the terms of the Service Insurance Guarantee. Many leads for the sale of new Kirbys should result from a prompt follow-up by one of your dealers.

The original name tag will be replaced on all units rebuilt with a special name plate reading:



to enable us to have an effective check on all factory rebuilds out in the field.

Some few distributors send traded, demonstrated or reverted Kirbys to us for reconditioning and rebuilding. These, of course, do not come under the terms of the Service Insurance Guarantee.

Neither, perhaps, would you want them tagged "REBUILT". Therefore, if you do from time to time send us Kirbys not owned by a customer, but rather by you or one of your dealers or sub-dealers, be sure to tell us. We will not tag them "REBUILT".

The cost for such rebuilding, or reconditioning, will be based on the list price of parts involved, less your usual discount, plus actual cost of labor.

THE SCOTT & FETZER COMPANY  
Service Department



Coverage of Loss by Fire

All claims for Service under the terms of the "Coverage of Loss by Fire Guarantee" must be presented directly to the Scott & Fetzer Company in Cleveland in accordance with the instructions contained in the guarantee and instruction book. The Kirby distributor is not to replace material lost or damaged by fire as the company will not recognize such claim settlements. The distributor may assist the customer in the preparation of a claim and it is for this reason we review below the two methods of presenting a Fire Claim.

(a) Whenever possible the fire damaged remains should be returned to the factory. A letter of instructions covering such a shipment should include the following information:

- (1) The date and residence at time of purchase.
  - (2) The name of the Kirby distributor from whom the unit was purchased.
  - (3) A listing of those items which may not be included in the shipment as a result of the customer's inability to salvage the same from the fire area.
- It is not necessary to have this statement notarized as the fire-damaged remains are evidence in themselves of the loss experienced.

(b) When, as a result of fire, the remains of the Kirby equipment are not available, then a statement should be prepared containing the following information:

- (1) The Model and Serial number as well as the name of the distributor from whom the unit was purchased.
  - (2) The date of such purchase and residence at the time of purchase.
  - (3) The extent of Kirby equipment involved in the claim (the customer is entitled to include in his claim all Kirby equipment which had been included in the original purchase).
  - (4) A statement outlining the circumstances under which fire loss was experienced.
  - (5) A statement to the effect that this is an initial claim and has not been presented at any previous date to either a Kirby distributor or our company in Cleveland.
- This statement must then be notarized and submitted to the factory.

Time Limit on Fire Claims

Beginning with the 519 Model of Kirby, a 90-day limitation has been included in all fire guarantees and all claims on such units must be submitted to our factory within this 90-day period in order to be honored. This limitation is not retroactive and therefore, earlier model units will not be affected. However, they will be screened very thoroughly when received at our factory.

Return Shipment of Fire Processed or Replaced Equipment

As with the Factory Rebuilt Guarantees, the return shipment of serviced or replaced fire claim equipment must be made directly to the residence of the customer involved. If such return is not possible as a result of fire loss, we will be willing to delay the return shipment for a period not to exceed 90 days without incurring additional costs in the form of storage charges. It is our opinion that such a delay will permit the reestablishment of a customer in a permanent residence where the possession of his Kirby will prove advantageous.





The Cost of Replacement Under The "Fire Guarantee"

The cost of repair or replacement under the fire guarantee also varies with the model of Kirby involved. The following schedule outlines these charges, however, as with the rebuild prices, transportation costs are not included.

MODEL	FIRE SERVICE COST
Model 2C thru 4C	\$10.00
Model 505 thru 515	\$12.50
Model 516 thru #238001	\$17.50 (includes All Accessories)
Model 516 #238001 thru Model 519:	
Upright Unit	\$17.50
Attachment Set	5.00
Power Polisher	7.00
Handi Butler	8.00
Flexible Shaft	5.00
Surface Nozzle	3.00
Model 560, 561, 562, and Sanitronic VII	
Upright Unit	\$22.00
Attachment Set w/Surface Nozzle	8.00
Power Polisher	7.00
Handi Butler w/Flexible Shaft	13.00
Handi Waxer	2.00
Model D50 #A100000 thru #D267705 (2/1/67)	
Upright Unit	\$27.50
Attachment Set w/Surface Nozzle	8.00
Power Polisher	7.00
Handi Butler w/Flexible Shaft	13.00
Rug Renovator	13.00
Roll O Waxer	10.00
Model D50 #D267706 thru end of D50 'D' Series Upright Unit (All other costs same as above)	\$32.50
Model D80 - SAME AS LATE D50 SERIES	
Model 1CR CLASSIC	
Upright Unit	\$37.50
Attachment Set w/Surface Nozzle	8.00
Miracle Head (Polisher)	7.00
Handi Butler w/Flexible Shaft	13.00
Rug Renovator	13.00
Miracle Waxer	7.00



### DEPARTMENT OPERATION

#### Management Suggestions

The physical layout of your service department will depend largely on the size and shape of the space available. However, regardless of the layout, such things as cleanliness, orderliness (a place for everything--everything in its place), and proper handling of necessary paper work are very important.

\* \* \* \* \*

A good service department should be partitioned off from the rest of the office so as to exclude the casual trespasser. A dutch-type door with a shelf topping the bottom half is quite universally used.

\* \* \* \* \*

A "work schedule or planning" board separated into the days of the week should be provided, so that the amount of work and the promised completion date of each job can be ascertained at a glance. Businesslike handling and scheduling of service work is invaluable in building good will and future sales.

\* \* \* \* \*

A packing and wrapping table, equipped with wrapping paper and a gummed tape dispenser would be convenient. A storage space for reserve supplies of repacking papers should be adjacent to this table.

\* \* \* \* \*

A printed memorandum form should be supplied for service calls, re-demonstration notices-- anything pertaining to the work to be done by the service department. On this form there should be a space for the name of the person to whom the note is directed, the subject or type of work to be done, the date of the note, the name and address of the customer, space for detailed instructions, and, finally, a space for the signature of the person making the note.

\* \* \* \* \*

A telephone should be convenient to this department.

\* \* \* \* \*

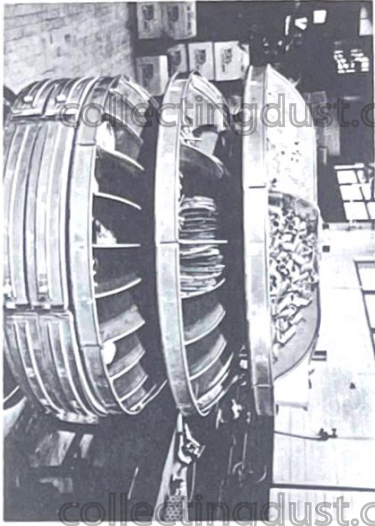
Bright but glareless light should be supplied. Poor lighting adds strain to the working conditions. Naturally, proper ventilation and heating conditions should prevail. Courtesy should characterize all contacts.





## 2. Shop Arrangement.

The pictures below show a layout of a model service department in which all parts are readily accessible with a minimum of lost motion.



A roto bin provides for convenient, readily accessible storage of small parts. It is manufactured by Frick-Gallagher Mfg. Co., Wellston, Ohio.

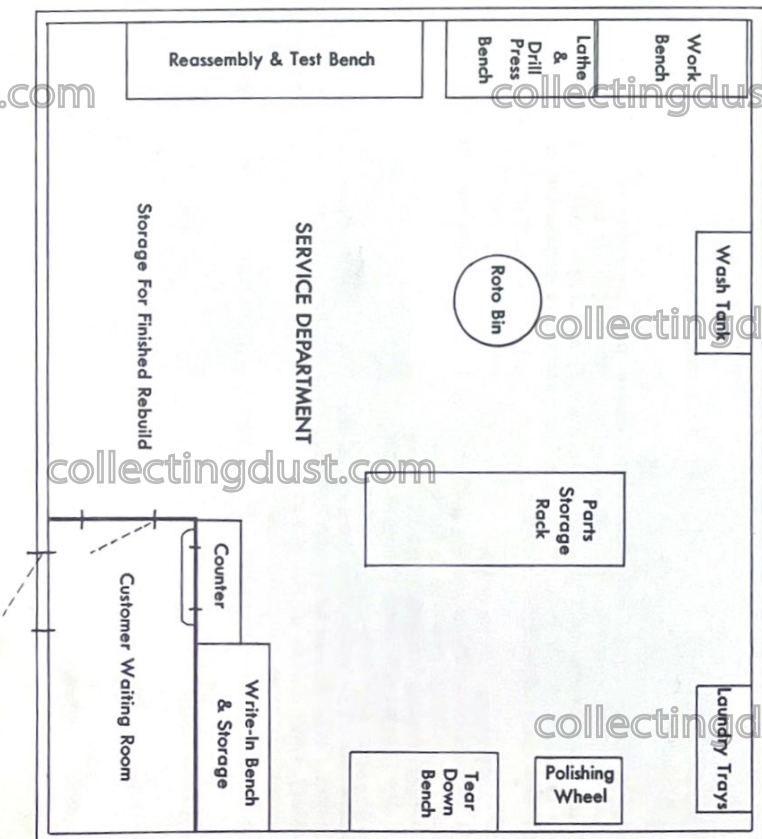


Storage bins for parts too large for the roto bins can be constructed by a local carpenter or handy man to fit the requirements and the available space.



## 3. Department Layout

The accompanying sketch shows what we believe to be the ideal floor plan for a service department. The diagrammed area is approximately 15 feet square; however, the principal of flow of work material, as expressed in this diagram, can be incorporated under modified area circumstances. This area has been planned on the assumption that you will be performing the factory rebuild service on a major overhaul on a straight charge plus labor basis. If it is not your intent to enter into extensive repairs, then perhaps a mere storage bin and a combination service counter and workbench would be sufficient.



## 4. Tools and Special Tools

With the exception of the few special Kirby tools as outlined on the current parts price list, all necessary tools may be purchased locally at a hardware dealer of your choice. A list of those items which would be considered as standard tools consist of the following:



Sturdy Bench Vise to open 4" or more  
 Quick Heating Soldering Iron  
 Ball Peen Hammers, size 8 oz.  
 Screwdriver - 5/16" blade  
 Screwdriver - 1/4" blade  
 Screwdriver - 7/32" blade  
 Pliers - Heavy duty combination - 6" long

Pliers - Electricians' diagonal cutting pliers - 5" long  
 Pliers - Needle nose - 8" long  
 Chisel Steel - 3/8" blade  
 Round Rattail File - 8" long  
 1/4" Pillar File - #4 grade - 6" long

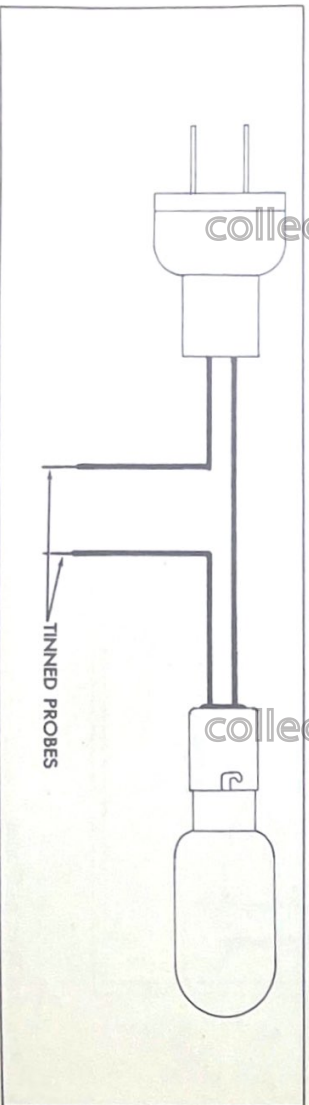
\* \* \* \* \*

A most important Service Department tool is a Test Lamp which you can construct yourself. A very satisfactory Test Lamp can be made from a Model 505 through 515 Headlight Socket and Wire (A1082S). To prepare this tool, you should first connect the exposed ends of the wire leads to an Attachment Male Plug (F1923). Next you should tin or solder the stripped-off area of the longer wire. After tinning, cut the wire in the center of the tinned area, thus producing two probes which will not fray during use.

The test lamp you have constructed in accordance with the above directions may be used with comparative safety in a great variety of situations. When plugged into an electrical outlet or extension cord only one probe will be HOT. The amount of current used as a testing charge will be limited to the wattage of the bulb in the test lamp socket. A partial list of the test lamp applications would include the following:

- To check continuity of cords
- To check foot switch or safety switch
- To check for 'Dead' grounds in the motor
- To check for an 'Open' field
- To check miscellaneous wiring defects

Alligator clamps may be attached to the ends of the probe wires if desired. When alligator clamps are used however, they should be properly sheathed in an insulating sleeve to prevent handling the bare terminals.

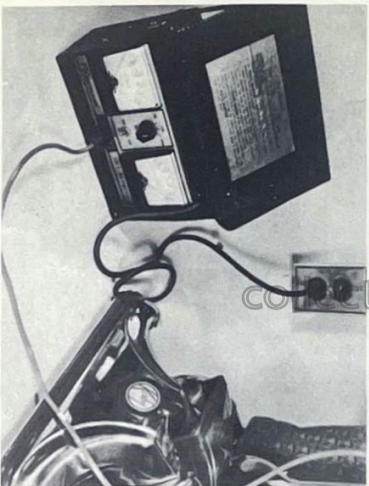


Test Lamp Diagram

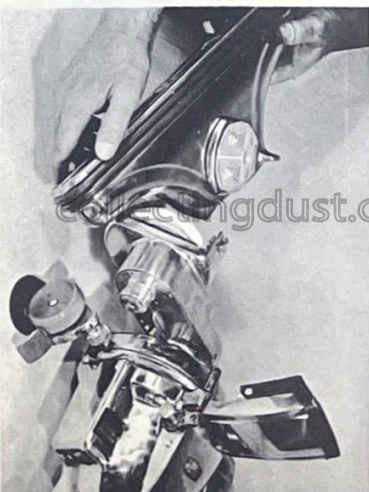
For a new distributor, the Handi Butler attachment will suffice as a satisfactory polisher for touching up the minor scuffs and scratches of demonstrator units, thus placing them in satisfactory condition for resale. If very deep scratches are presented, then we suggest that a very fine grade of emery cloth be used before polishing is attempted on the Handi Butler. As a matter of fact, a handy tool can be made by wrapping this fine emery cloth around a flat file or a 12" rule, fastening it at either end with a heavy rubber band.

Still another most important tool in every service shop should be a combination 'Watt-Voltage Meter'. Specification sheets are available from the factory on all meters issued and by running the motor on the Watt Voltage Meter you can determine whether it is operating efficiently. In the event of faulty operation, you can precisely pinpoint the cause.

This testing equipment, while more refined than normal visual or sound observation as outlined on Table 1, Page 1-10, is not designed to displace the accepted procedures but rather to be applied in conjunction with the instructions on the troubleshooting chart. A description of the proper interpretation to apply to information received from this testing equipment would consist of the following:



A very acceptable piece of equipment in the Watt Voltage field is the Robin Aire Product illustrated.



Handi Butler Used as a Polisher

- (a) HIGH WATTAGE - If the wattage consumption is approximately two times the normal prescribed rating, it is reasonable to assume that the armature is defective.
  - (b) EXTRA HIGH WATTAGE - If the wattage consumption is two to three times the normal wattage rating for the type of motor tested then it is reasonable to assume that the field requires replacement.
- If the motor had run for any length of time with a shorted field, then there is also a good possibility that the armature will have become affected and even after the field replacement has been made then a very close recheck of the armature should be made.
- Information concerning the availability of the above or other suitable watt volt meter equipment is available from the factory. Also, the specification listings of motor ratings is available as a separate insert for the reason that additions and improvements will result in changes of specifications.





### PARTS AND ORDERING PROCEDURE

Every distributor and service agency should maintain a minimum stock of expendable items as well as a limited stock of casting parts if practical. A listing of such minimum inventory is available from the factory in Cleveland. Due to frequent changes, it is not practical to reproduce this listing in this publication. If you desire more information on this matter, please write directly to your Factory Service Department.

Regardless of the inventory you may carry, there will be a time when you will run out of a particular item. To help prevent this condition, we would suggest that you determine from your experience, or from our suggested list, a minimum stock of each item used. Then, as your daily activity lowers the reserve in any stock bin to the minimum figure, you may make the necessary notation to reorder this item from the factory.

Every effort will be made on the part of your factory service department to expedite the processing of the parts orders you send to us. A properly negotiated parts order, whether it be for two items or a hundred, will not create a problem when received at the factory. The importance of clearly and distinctly designating the items required cannot be overemphasized. Your attention is invited to the following bulletin #6032 dated August 16, 1960 which deals specifically with the procedure you should follow when ordering parts from the factory. Please help us help you by following this directive.

#### SERVICE BULLETIN

August 16, 1960

#### SUBJECT: Parts Ordering Procedure

All available Kirby Service Parts are listed on the current Parts Price List. Association of these parts to the appropriate section may be made by referring to the Parts Picture Series or its supplements.

Use the PARTS PRICE LIST (SP55) when ordering six (6) or more items. If you wish you can extend the charges in the appropriate column and compute the exact value of your order. Many Distributors remit in advance (CWO Terms) and thus save many dollars in unnecessary C.O.D. fees.

When less than six (6) items are required, the PURCHASE ORDER FORM (SP56) should be used. To save time, you may use only the S&F Part Code Numbers. The use of the Code numbers will also be advantageous when ordering by wire or phone.

Whenever possible, parts orders are shipped via Parcel Post. However, when weight and size limitations are exceeded, then Rail Express or Truck shipments are made. Insurance costs and minimum rates on split shipments make processing of more than one carton per invoice via Parcel Post impractical.

Bulletin # 6032

Service Manager

From time to time certain parts of the Kirby may be discontinued or superseded by improved items of production. When this condition exists, then a modifying bulletin will be circulated for the benefit of service departments in the field.



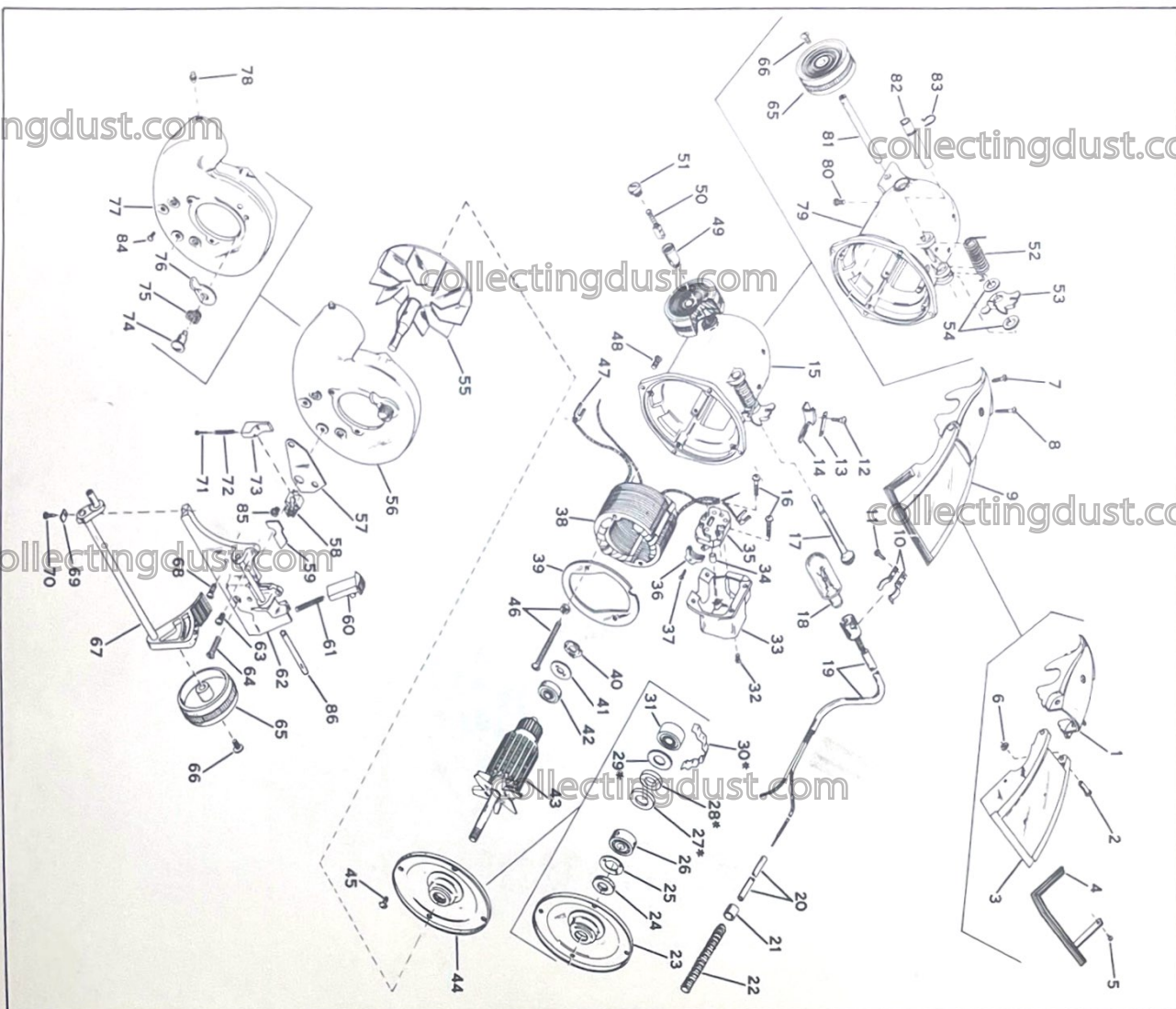


Figure 1-1. Motor group, exploded view. (Model 505 through 512)



1-1. ILLUSTRATED PARTS LIST.

The exploded view illustrations and the indexed legends which follow provide identification of the parts and give the proper relationships of associated parts as aimed to overhauling the motor assemblies.

Index No.	Part No.	Part Name	Quantity
1-1-1	A1630	Headlight Cap Rear Casting	1
-2	A1631	Headlight Cap Hinge Rivet	2
-3	A1600	Headlight Cap Front Casting (Includes Items 4 and 5)	1
-4	A1619	Headlight Cap Bumper	1
-5	A1545	Headlight Bumper Rivet	2
-6	A1632	Headlight Cap Hinge Washer	2
-7	A1641	Headlight Cap Short Screw	1
-8	A1640	Headlight Cap Long Screw	1
-9	A1600S	Headlight Cap Complete	1
-10	A1610	Headlight Socket Chip	2
-11	A1021L	Lamp Socket Screw	2
-12	A1197	Handle Lock Screw	2
-13	A1196	Handle Lock Spring	1
-14	A1195	Handle Lock	1
-15	A1000S	Motor Housing Section	1
-16	A1121	Foot Switch Holding Screw	2
-17	A1660	Handle Fork Pin	1
-18	A1650	Headlight Bulb, 110 volt	1
-19	A1651	Headlight Bulb, 32 volt	1
-20	A1082S	Headlight Socket and Wire	1
-21	A1141	Safety Switch Wire Plastic Tube	1
-22	A1142	Safety Switch Rubber Grommet	1
-23	A1140	Safety Switch Wire Housing	1
-24	A1174	Front Bearing Plate Only	1
-25	A1164	Front Bearing Felt Washer	1
-26	A1170	Front Bearing Thrust Washer	1
-27	A1160	Front Bearing Only	1
-28*	A1171	Front Bearing Felt Retainer Cup	1
-29*	A1164	Front Bearing Felt Washer	1
-30*	A1172	Front Bearing Thrust Washer	1
-31	A1160	Front Bearing Corrugated Strip	1
-32	A1123	Foot Switch Housing Screw	4
-33	A1120	Foot Switch Housing	1
-34	A1132	Foot Switch Insulating Tube	1
-35	A1100	Foot Switch	1
-36	A1101	Foot Switch Knob	1
-37	A1102	Foot Switch Knob Screw	1
-38	A1039W	Field (12065)	1
-39	A1047	Field Battle Paper	1
-40	A1156	Rear Bearing Finger Spring	1
-41	A1157	Rear Bearing Grease Retainer Washer	1
-42	A1155	Rear Bearing	1
-43	A1149W	Armature (12062)	1

\*Service parts only for old type front bearing plate.



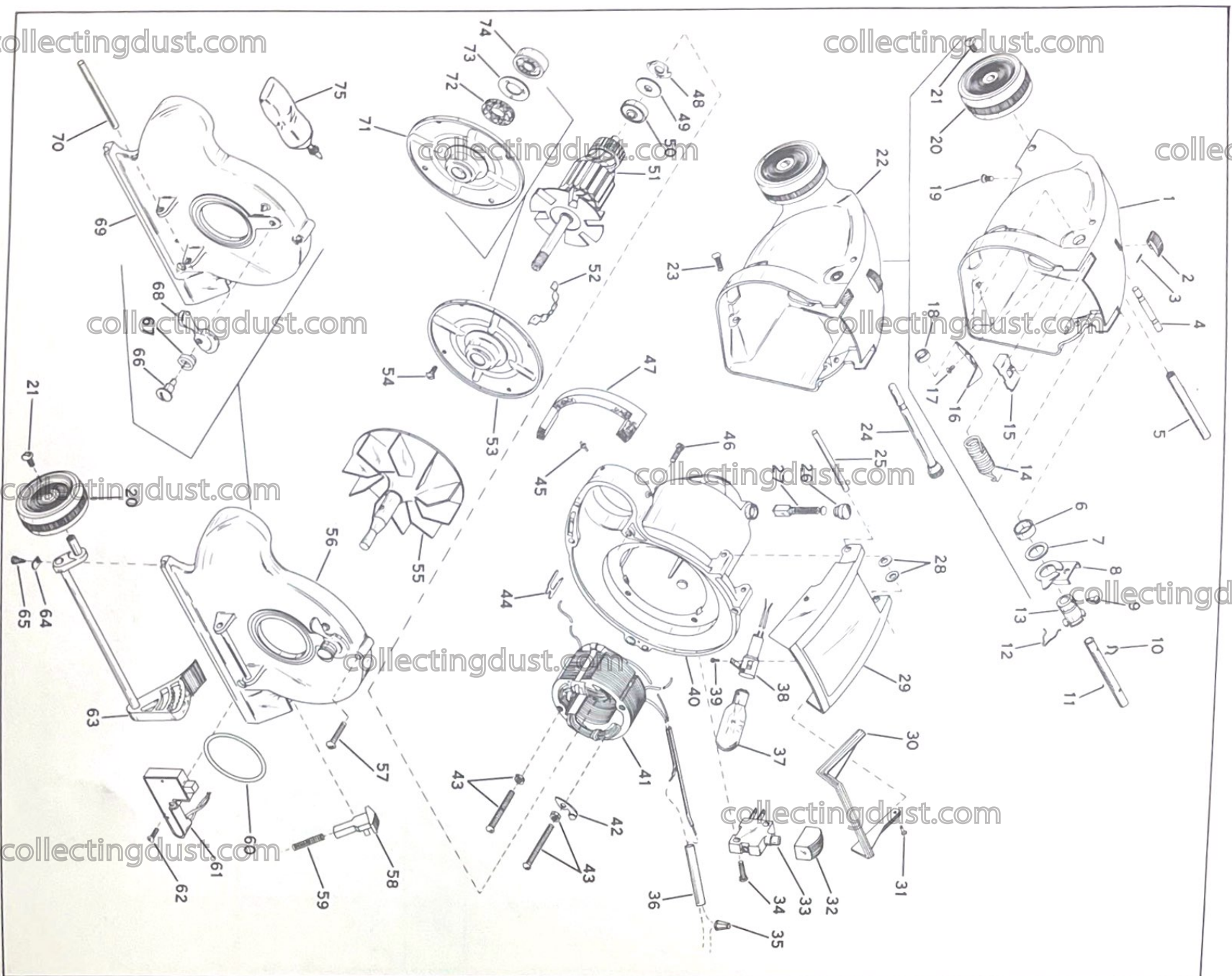


Figure 1-3. Motor group, exploded view. (Model 516 through 518)

INDEX NO.	PART NO.	PART NAME	MODEL OR QUANTITY
1-1	A136657	Housing Shell Casting	1
2	A136662	Handle Lock Button	1
3	A136856	Handle Lock Button - Brown	562/
4	A136956	Handle Lock Retainer Pin	1
5	A102056	Handle Lock Shaft	1
6	A135856	Rear Wheel Shaft	1
7	A137456	Housing Shell Bushing LH Large	1
8	A137556	Handle Fork Fiber Washer	1
9	A137356	Handle Fork Spring Yoke	1
10	A1005	Handle Fork Spring Screw	1
11	A137156	Handle Fork Spring Clip	1
12	A136356	Handle Fork Spring Shaft	1
13	A137256	Handle Fork Spring Bushing Clip	1
14	A137056	Handle Fork Spring Bushing	1
15	A136756	Handle Lock Button Spring	1
16	A137656	Handle Fork Spring Spreader	1
17	A137756	Handle Fork Spring Spreader Screw	1
18	A135956	Housing Shell Bushing RH Small	1
19	A1021R	Rear Wheel Shaft Screw	1
20	A132056	Wheel, Grey	4
21	A132062	Wheel - Brown	562/
22	A1321	Wheel Screw	4
23	A135556S	Housing Shell Section	1
24	A138456	Housing Shell Assembly Screw	3
25	A137856	Handle Fork Pin	1
26	A163156	Headlight Cap Hinge Pin	1
27	A1181	Commutator Brush Cap	2
28	A1180	Commutator Carbon Brush, 110 volt	2
29	A1183	Commutator Carbon Brush, 32 volt	2
30	A1632	Headlight Cap Hinge Washer	2
31	A160056S	Headlight Cap Complete (Includes items 30 & 31)	1
32	A160062S	Headlight Cap Complete	562/
33	A161956	Headlight Cap Bumper	1
34	A161962	Headlight Cap Bumper	562/
35	A1545	Headlight Bumper Rivet	2
36	A138556S	Foot Switch Button	1
37	A138562S	Foot Switch Button	562/
	A1105	Foot Switch	1
	A1125	Foot Switch Holding Screw	2
	A134556	Safety Switch Wire Connector	1
	A109356	Field Wire Insulating Tubing	1
	A1650	Headlight Bulb, 110 volt	1





NOTE

"The parts of Models 519, 560, 561, 562, and SVII are same as Model 516 except for those parts shown in figure 1-4"

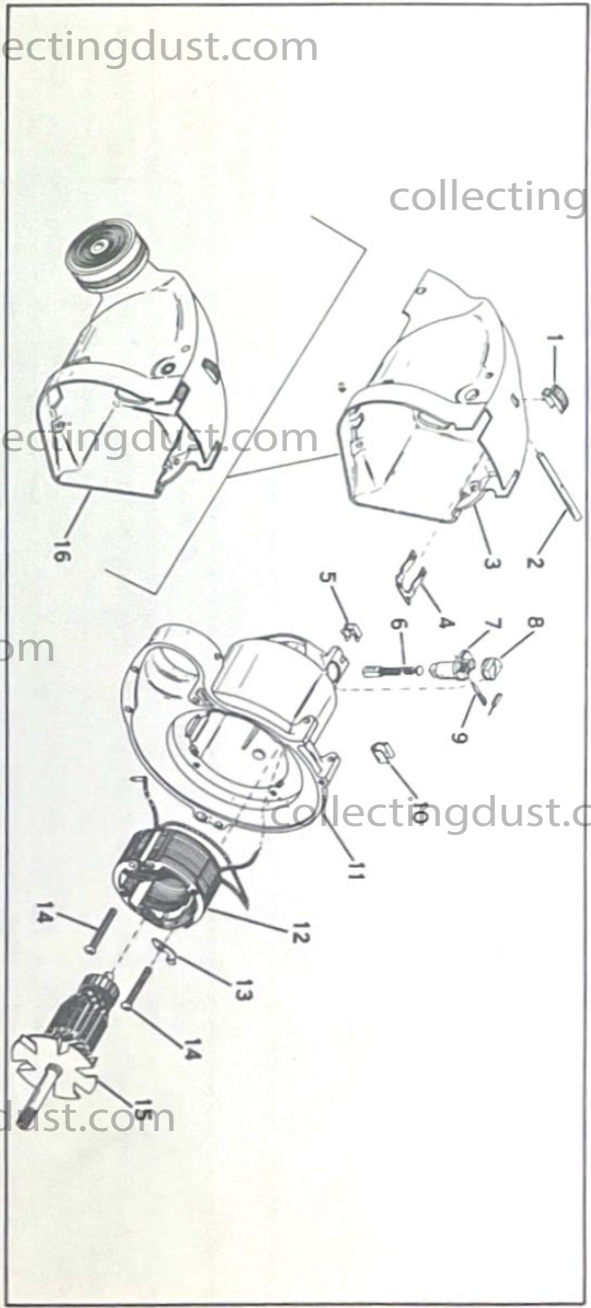


Figure 1-4. Motor group parts which are peculiar to models 519 through 580.

INDEX NO.	PART NO.	PART NAME	MODEL OR QUANTITY
1-3-38	A1651	Headlight Bulb, 32 volt	1
39	A108256	Headlight Socket and Wire	1
40	A102157	Headlight Socket Screw	1
41	A100059S	Motor Housing Casting	1
	A1039W	Field (12065)	1
	A1039	Field (See Motor Chart, Page 1-19)	562/
1-3-42	A108456	Headlight Wire Tubing Clamp	1
43	A1046	Field Screw and Nut	2
44	A1045	Field Terminal U-Clip	2
45	A100656	Motor Conducting Pin	3
46	A134765	Motor Housing Screw, 5/8 inch	4
47	A119256	Motor Housing Vent Rubber	1
48	A1156	Rear Bearing Finger Spring	1
49	A1157	Rear Bearing Grease Retainer Washer	1
50	A1155	Rear Bearing	1
51	A1149W	Armature (12062)	1
52	A1149	Armature (See Motor Chart, Page 1-19)	562/
53	A117256	Field Bearing Corrugated Strip	1
54	A116856S	Front Bearing Plate Complete	1
55	A1167	Front Bearing Plate Screw	4
56	A119056S	Fan and Pulley	1
57	A120056S	Fan Housing Assembly	1
58	A134656	Fan Housing Screw, 1 1/8 inch	1
59	A133056	Ratchet Lock	1
60	A1331	Ratchet Lock Spring	1
61	A122062	Nozzle Seal O-Ring Rubber	1
62	A134356	Nozzle Seal "O" Ring Rubber	1
63	A134456	Safety Switch	1
64	A131656S	Safety Switch Attaching Screw	1
65	A1340	Front Wheel Bracket Shaft Only	1
66	A134157	Front Shaft Clamp	2
67	A1211	Front Shaft Clamp Screw	2
68	A1212	Nozzle Lock Spring	1
69	A121056	Nozzle Lock	1
70	A121656	Fan Housing Casting	1
71	A116656	Nozzle Attaching Shaft	1
72	A116456	Front Bearing Plate Only	1
73	A116556	Front Bearing Felt Washer	1
74	A1160	Front Bearing Thrust Washer	1
75	A134856	Front Bearing Only	1
		Fan Housing Sealer Cement	1

Index No.	Part No.	Part Name	Quantity
1-4-1	A136659	Handle Lock Button	1
-2	A136959	Handle Lock Shaft	1
-3	A136759	Housing Shell	1
-4	A106859	Handle Lock Spring	1
-5	A1180	Commutator Brush Retainer Clip	2
-6	A1183	Commutator Carbon Brush, 110 volt	2
-7	A107259S	Commutator Brush Holder Section	2
-8	A107159	Commutator Brush Holder Cover	2
-9	A104559	Field Terminal Clip	2
-10	A163259	Spring Clip	1
-11	A100059S	Motor Housing Casting	1
-12	A103959E	Field (5BA45FN1) Model 519/( ) *	1
	A103959W	Field (12065) Model 518/519	1
	A103969W	Field (12247) Model 560/( ) *	1
-13	A108456	Headlight Wire Tubing Clamp	1
-14	A104659	Field Screw E (Short)	2
	A104859	Field Screw W (Long)	2
-15	A114959E	Armature, (5BA45FN1) Model 519/( ) *	1
	A114960W	Armature, (12245) Model 560/( ) *	1
-16	A135556S	Housing Shell Section	1

\*\*Consult current armature and field listing (page 1-19)\*\*





### SERVICE INSTRUCTIONS

1-2. CHECKING MOTOR UNIT. Remove the floor nozzle, handle, sump motor and bag from the motor unit to be tested. Install a suction coupler and a cord which has been tested and found in good working order on the motor unit.

The trouble shooting chart which follows lists the more frequent causes of various troubles and refers to the proper section of this manual where the appropriate repair instructions are to be found.

MOTOR RUNS IMPROPERLY		Models	
Trouble	Probable Cause	Remedy	Models
Motor smokes after short period of operation	Defective armature	Replace armature	Par. 1-9 Par. 1-19
Motor runs slow with little suction or power	Defective armature Dirty or defective brushes	Replace armature Check brushes	Par. 1-9 Par. 1-7 Par. 1-19 Par. 1-17
Motor runs fast or overheats	Defective field Blocked ventilating air inlet	Replace field Clean ventilating inlet	Par. 1-9 Par. 1-19
Motor vibrates	Broken fan	Replace fan	Par. 1-9 Par. 1-19
Motor noisy, clicking or grating sound	Defective bearing Defective fan	Replace bearing Replace fan	Par. 1-9 Par. 1-19
MOTOR DOES NOT RUN			
		Models	
Trouble	Probable Cause	Remedy	Models
Motor blows fuses, sparks when touching metal ground such as radiator or water pipes	Grounded motor	Return unit to factory for repair and testing on special equipment	505/515 516/560
Motor dead, and headlight dead	Defective foot switch Defective cord	Replace foot switch Check cord	Par. 1-4 or 1-5 Sec. V Par. 1-14 Sec. V

Table I. Trouble Shooting Chart



HANDLE			
Trouble	Probable Cause	Remedy	Models
Motor dead, and headlight lights	Defective safety switch Defective brushes Loose or broken field lead	Replace safety switch Replace brushes Check field	Par. 1-6 Par. 1-7 Par. 1-9 Par. 1-17 Par. 1-19
Motor starts and stops	Defective brushes Defective cord Defective safety switch Defective field or armature	Replace brushes Check cord Check safety switch Check field and armature	Par. 1-7 Sec. V Par. 1-6 Par. 1-9 Par. 1-17 Sec. V Par. 1-15 Par. 1-19
Handle will not stay in upright position	Weak or broken handle spring	Replace handle spring	Par. 1-12 Par. 1-22

Table I. Trouble Shooting Chart (Cont.)

### 1-3. HEADLIGHT (Models 505 through 515)

#### a. Removal.

(1) Pull the headlight socket from the clips (10, fig. 1-1) in the headlight cap front casting (3); depress and turn the bulb (16) counterclockwise to remove it from the socket.

(2) Remove the screws (7 and 8) that secure the headlight cap to the motor housing (15); remove the assembled headlight cap (9).

#### b. Inspection and replacement.

(1) Test the bulb in the socket of a unit known to be in good working order; replace the bulb if it is inoperative.

(2) If the socket clips are broken or distorted, remove the two screws (11) that secure them to the headlight cap front casting. Install new clips in the same position as the old ones and secure with the two screws.

(3) If the headlight cap bumper (4) is torn or excessively worn, drill out the two rivets

(5) that secure it to the front casting; remove the old bumper and install a new one. Be sure to have the casting resting firmly on a work bench when upsetting the rivets to avoid cracking the casting.

(4) If either the headlight cap front casting or rear casting (1) is cracked or broken, drill out and remove the two rivets (2) and washers (6) that attach the parts. Replace the broken part. Position the washers between the front casting and rear casting; align the holes and secure with two new rivets.

(5) Inspect the headlight socket and wire (19) for burned condition, frayed leads, or grounds. To check for grounds, connect the test lamp (see page xi) to an electrical outlet, hold one probe on the exterior of the socket, and touch the other probe to each of the inner terminals in turn; the test lamp should not light. Replace the socket and wire if defective. It is necessary to disassemble the motor unit as directed in Section V to replace the headlight socket and wire.



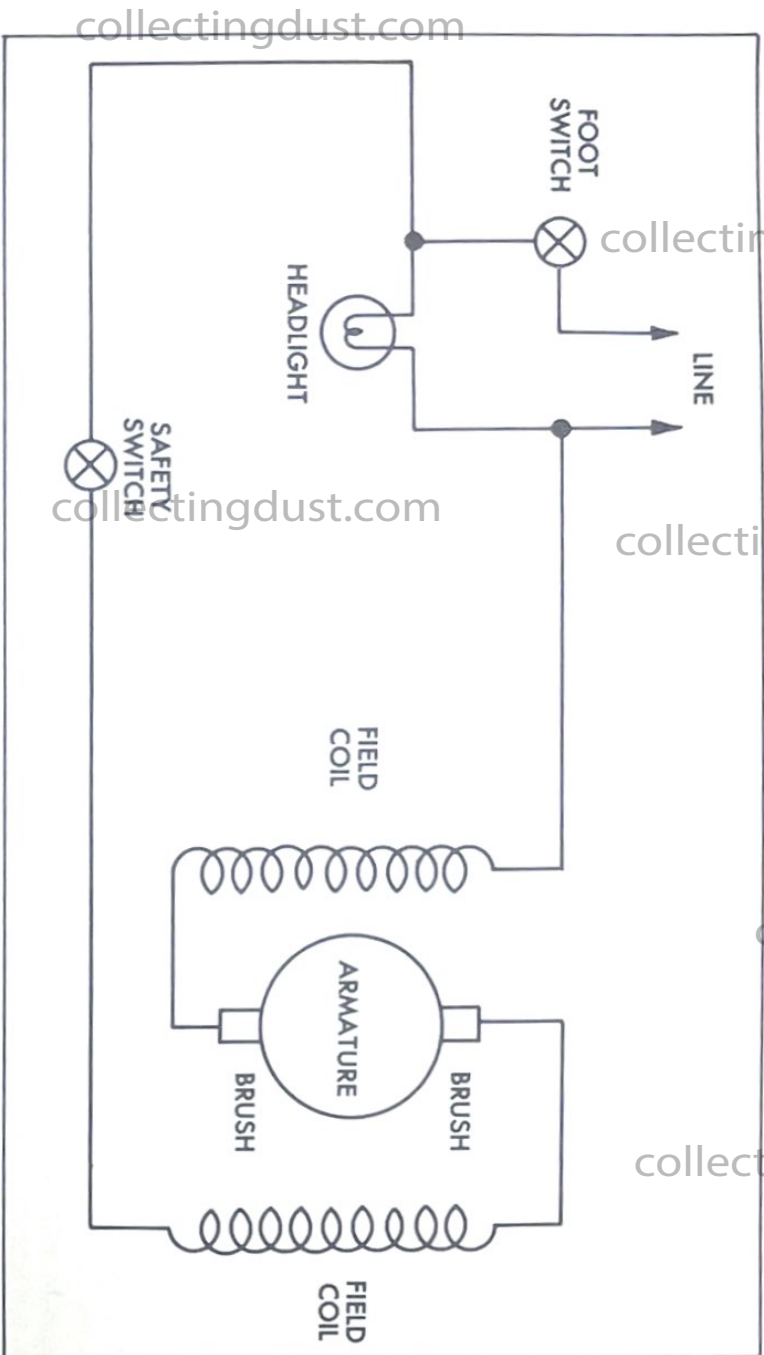


Figure 1-5. Wiring diagram, Model 505/515

c. Installation.

(1) Position the assembled headlight cap on the motor housing so that the holes are aligned with the stamped holes of housing; secure with the shorter screw (7) in the rear hole and the longer screw (8) in the front hole.

(2) Align the prongs of the bulb (18) with the socket; depress and turn the bulb to install it in the socket. Engage the headlight socket with the clips in the headlight cap.

1-4. FOOT SWITCH TEST AND REPLACEMENT (Models 505 through 512)

a. Removal.

(1) Remove the four screws (32, fig. 1-1) that secure the foot switch housing (33) to the motor housing as shown in figure 1-6.

(2) Turn the switch housing to the side so that the two screws (16, fig. 1-1) that secure the switch can be removed; remove the two screws, switch housing, and remove the insulating tube (34) from the switch.

b. Inspection and test.

(1) Inspect the switch for loose leads at the terminals, burned connectors, and for missing or broken spring that could cause loss of snap action.

(2) Connect the test lamp (see page xi) to an electrical outlet. Check the switch for



Figure 1-6. Removing foot switch housing

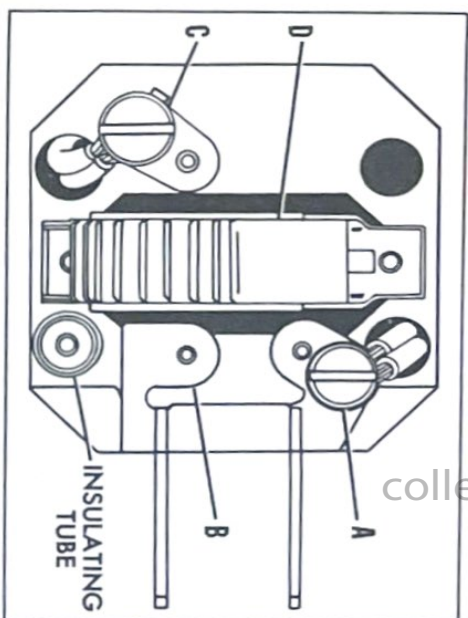


Figure 1-7. Foot switch and connections (Model 505/512)

proper operation by touching one probe of a test lamp to the connector prong (B, fig. 1-7) and the other probe to the switch terminal "C". With the switch closed (knob toward terminal "C"), the test lamp should light; with the switch open there should be no light.

(3) With the switch closed, check the foot switch for grounds by touching one probe of the test lamp to the switch knob "D" and the other probe first to terminal "A" and then to terminal "C". If the test lamp lights, it indicates the switch is grounded.

c. Replacement. If the switch is broken,



Figure 1-8. Positioning insulating tube on foot switch

grounded, or otherwise defective, replace it as follows:

(1) Disconnect the leads from the terminals; tag the leads with an indication of their positions.

(2) Clean the wires if dirty. Bend the longer lead from the headlight at the place where the insulation has been removed and insert it through the hole of the foot switch adjacent to terminal "C" as shown in figure 1-7. Connect the bare section of wire to the terminal.

(3) Insert the short lead from the field and the remaining headlight lead through the hole adjacent to terminal "A"; connect the leads to the terminal. Check that the connections agree with the wiring diagram, figure 1-5.

(4) Remove the screw (37, fig. 1-1) that secures the knob (36) to the old switch; pull the knob from the switch.

(5) Push the knob into place on the new switch shaft so that the hole is aligned; secure with the screw.

d. Installation.

(1) Insert the two screws (16) from the back of the switch; position the insulating tube

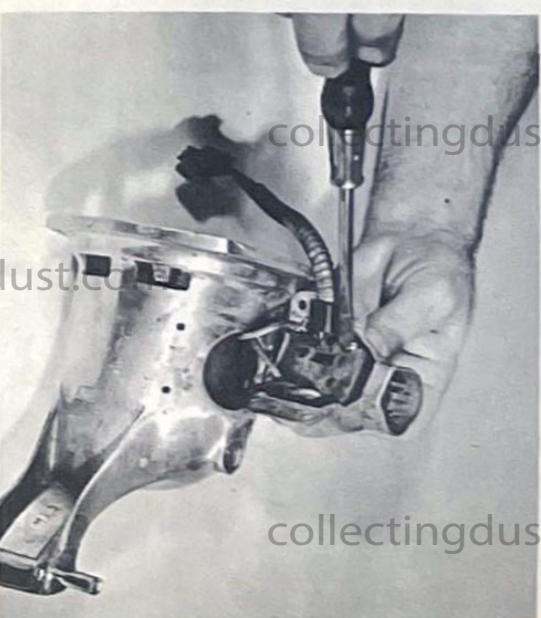


Figure 1-9. Installing foot switch in housing





Figure 1-12. Removing commutator brush caps

(2) Inspect the armature commutator through the opening of the brush holder for roughness or excessively dirty condition. If the armature is rough or dirty it will have to be removed as directed in paragraph 1-9 for cleaning or replacement.

(3) If only one carbon brush is burned, while the other remains shiny and smooth, you may suspect the cause of this condition to be an accumulation of dust or lint in the commutator area. The armature will in most cases be good.

(4) If both carbon brushes are burned, you should then look for an "open" or defective armature.

c. Installation.

(1) Align the concave of the carbon brush (50) with the armature and insert into the brush holder (49).

(2) Position the brush cap (51) over the spring of the carbon brush; screw the brush cap into the brush holder.

1-8. MOTOR UNIT MAJOR OVERHAUL (Models 505 through 515). The following three paragraphs give the necessary instructions for complete disassembly, inspection, and rebuilding of the motor unit. It may not be necessary



Figure 1-13. Removing fan housing screws

In all cases to completely disassemble the unit in order to replace the defective components and repair the motor unit. Follow the disassembly steps which are necessary and then refer to the proper inspection and reassembly steps required to restore the unit to good working order.

1-9. DISASSEMBLY (Models 505 through 515)

a. Remove the four screws (48, fig. 1-11) that secure the assembled fan housing and front wheel bracket to the motor housing assembly (15) as shown in figure 1-13; move the fan housing to the side.

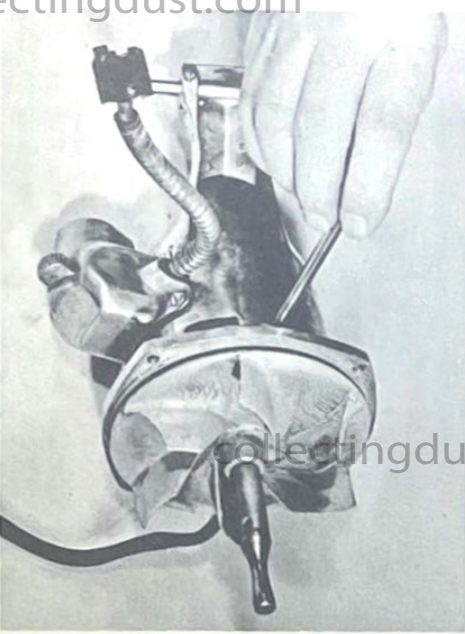


Figure 1-14. Holding armature for fan removal

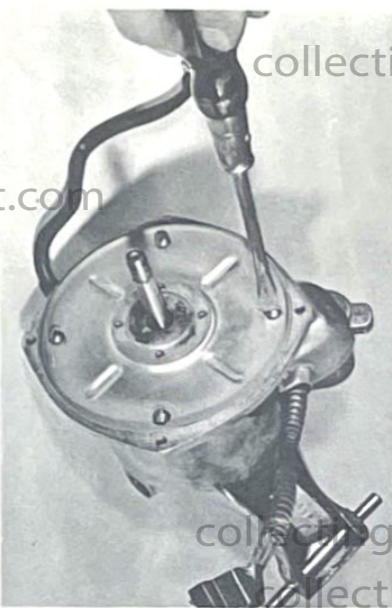


Figure 1-15. Removing front bearing plate screws

b. Insert a fan locking pin (T104) or an ice pick through the ventilating hole on the bottom of the motor housing and through the hole of the armature shaft as shown in figure 1-14 to hold the armature from turning.

c. While holding the armature, turn the fan and pulley (55, fig. 1-11) clockwise to remove it from the left hand threads of the armature shaft.

d. Remove the two carbon brushes from the holders as directed in paragraph 1-7a.

e. Remove the four screws (45) that secure the front bearing plate assembly (44) to the motor housing as shown in figure 1-15; remove the assembled front bearing plate and bearing.

NOTE

On all models 3C through 511 to serial number 383346 there is no provision for relubrication of the front bearing. The bearing and bearing plate must be replaced if defective. Beginning with model 511, serial number 383347, the front bearing can be removed from the bearing plate as directed below.

f. Use thumb pressure or, if necessary, use a screwdriver to push the front bearing (26, fig. 1-1) from the front bearing plate; remove the bearing, thrust washer (25 or 29), felt washer (24 or 28), and, if used, retainer cup (27) and corrugated strip (30).



Figure 1-16. Removing rear bearing from armature

g. Lift the armature (43) from the field. The rear bearing (42) should come out with the armature, and the grease retainer washer (41) may stick to the rear bearing. If it does not come out with the rear bearing, remove the grease retainer washer and rear bearing finger spring (40) from the end of the armature bore, using a hooked wire.

h. Remove the rear bearing from the armature, using a rear bearing pulper (SP125) as shown in figure 1-16.

i. If the field (38, fig. 1-1) must be removed, it is first necessary to remove the foot switch

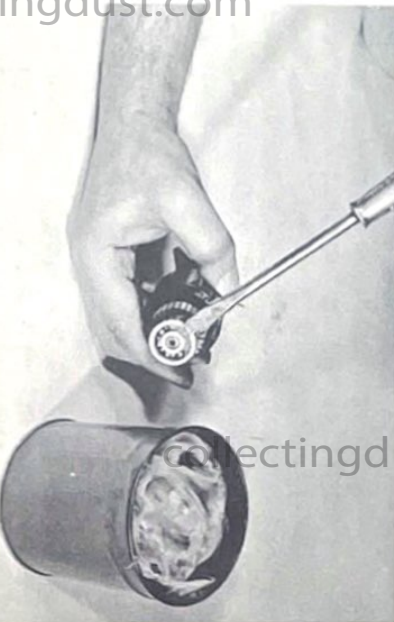


Figure 1-17. Repacking bearing with grease





FIELDS	S&F PARTS CODE	CODE STAMPED ON FIELD	USE TO REPLACE FIELDS #	MAY BE USED WITH ARMATURES #
	A10399W	12065	11321 10531 12065	11320 10530 12062
	A103959W	12065 (Includes New Type Terminal Clips)	Q2065	12062
	A103959E	SBA45FN1	SBA45FN1	SBA45FN1
	A103960W	12247	12247	12245
	A103962E	SBA45DN35	SBA45DN35	SBA45DN35
	A103964W	13044	Q3044	13042

All other motors NOT listed above have been discontinued. See Service Bulletin on reverse side. Match replacement Armature and Field sets to this list, or select a complete replacement motor from corresponding code numbers.

Figure 1-20. Armature and field identification chart (cont).

through the opening where the foot switch is mounted as shown in figure 1-21.

b. Insert the leads from the headlight socket and wire (19, fig. 1-1) through the hole of the motor housing in front of the handle spring and around the field and out the hole for the foot switch until the headlight socket protrudes about seven inches from the motor housing.

c. Install a nut all the way on each of the long screws (46) that attaches the field. Position the field baffle (39) and start each of the screws through the field and into the motor housing but do not tighten.

d. If removed, install the two brush holders (49) so that the slots will be horizontal with the motor in a level position as shown in figure 1-22. This is important to obtain proper brush seating on the commutator and to facilitate

installation of the field terminal U-clips. Tighten the two screws that secure the field just snug while holding the brush holders all the way in and properly aligned. Tighten the nuts to secure the field.

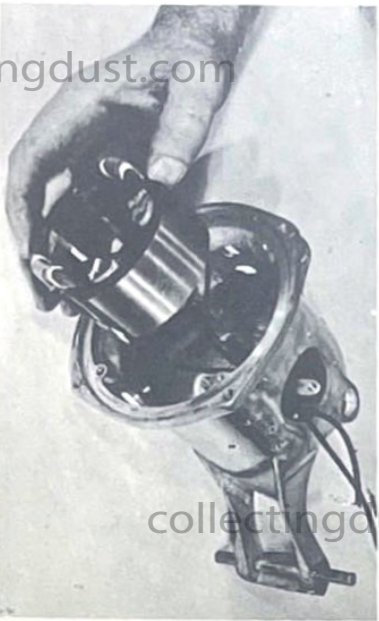


Figure 1-21. Installing field in motor housing.



Figure 1-22. Installing brush holders in motor housing

e. Install the field terminal U-clips on the slots of the brush holders. Make sure that the leads are positioned so they will not rub on the armature.

f. Connect the leads to the terminals and install the foot switch as directed in paragraph 1-4c and d or 1-5c and d.

g. Position the rear bearing finger spring (40, fig. 1-1) with flat side inward and the



Figure 1-23. Installing rear bearing on armature

grease retainer washer (41) in the hole at the rear of the motor housing.

h. Position the rear bearing (42) with the open side away from the armature on the commutator end of the armature shaft. Drive into place, using a discarded fan pulley and hammer as shown in figure 1-23. Be sure that the bearing has been packed with fresh lubricant.

i. Install the assembled armature and bearing through the field into the motor housing. Make sure that the wires from the field are not in the way to cause interference with the armature.

j. Position the felt washer (24, fig. 1-1) and the thrust washer (25) with the bent tabs toward the felt washer in the front bearing plate (23). Make sure that the front bearing (26) has been packed with special high consistency grease and that the open side of the bearing is toward the thrust washer; push the front bearing firmly into place in the bearing plate as shown in figure 1-24. In models where used, or if the bearing is not a tight fit in the bearing plate, install a corrugated strip (30, fig. 1-1) in the bearing plate, so that the notch engages the slot of the bearing plate, before pushing the bearing into place.



Figure 1-24. Installing front bearing in bearing plate

k. Install the assembled front bearing plate and bearing, with the bearing inward as shown in figure 1-25, over the armature shaft and





Figure 1-25. Installing front bearing plate

align with the holes of the motor housing; secure with the four screws (45, fig. 1-1). Check that the armature rotates freely in the field. If there is any interference, remove the front bearing plate and check that the field is secure and that there are no field leads preventing the field from seating properly in the motor housing. When the reason for interference has been corrected, reinstall the assembled front bearing plate and bearing.

1. Insert a fan locking pin or an ice pick through the ventilating hole of the housing and the hole in the armature shaft to hold the armature from turning as shown in figure 1-14; install the fan and pulley (55, fig. 1-1) by turning in a counterclockwise direction until snug.

m. Install the commutator brushes as directed in paragraph 1-7e.

n. Install the safety switch as directed in paragraph 1-6c.

o. Position the assembled safety switch, fan housing, and front wheel bracket on the motor housing; secure with the four screws (46). Check that the fan rotates in the housing without any interference.

p. Check the motor unit for proper operation as directed in paragraph 1-2.

1-12. HANDLE SPRING REPLACEMENT (Models 505 through 515). The tools required are a



Figure 1-26. Tools required for handle spring replacement

hammer, screwdriver, spring crank, and tapered pin as shown in figure 1-26. The spring crank and tapered pin are available as spring tool set (SP124).

2. Disassembly.

(1) Remove the headlight socket from the clips in the headlight cap. Remove the two screws (7 and 8, fig. 1-1) that secure the assembled headlight cap to the motor housing; remove the headlight cap.

(2) Remove the handle fork pin (17) and the spring clip (83).



Figure 1-27. Driving out spring shaft



Figure 1-28. Removing handle spring

(3) From the side opposite the handle fork spring plate (53), drive the spring shaft (82) about three-fourths of the way through the handle spring (52) as shown in figure 1-27, using the special tapered pin.

(4) Place a rag over the handle spring as shown in figure 1-28 to avoid injury; withdraw the tapered pin and remove the spring.

(5) File the crimped end of the spring shaft smooth. Withdraw the spring shaft and remove the spring plate (53, fig. 1-1) and two washers (54).



Figure 1-29. Installing spring shaft and handle spring



Figure 1-30. Winding tension into handle spring

b. Reassembly.

(1) Position the straight end of the handle spring (52) in the hole beside the single lug on the motor housing.

(2) Install the spring shaft (82), with the slot outward as shown in figure 1-29, through the single lug of the motor housing and through about three or four turns of the handle spring. If installed too far it will be impossible to wind the tension into the spring.

(3) Position the spring crank on the spring as shown in figure 1-30 and wind one turn of tension into the spring.

(4) Hold the spring crank securely and install the tapered pin as shown in figure 1-31,



Figure 1-31. Using tapered pin as guide for spring shaft



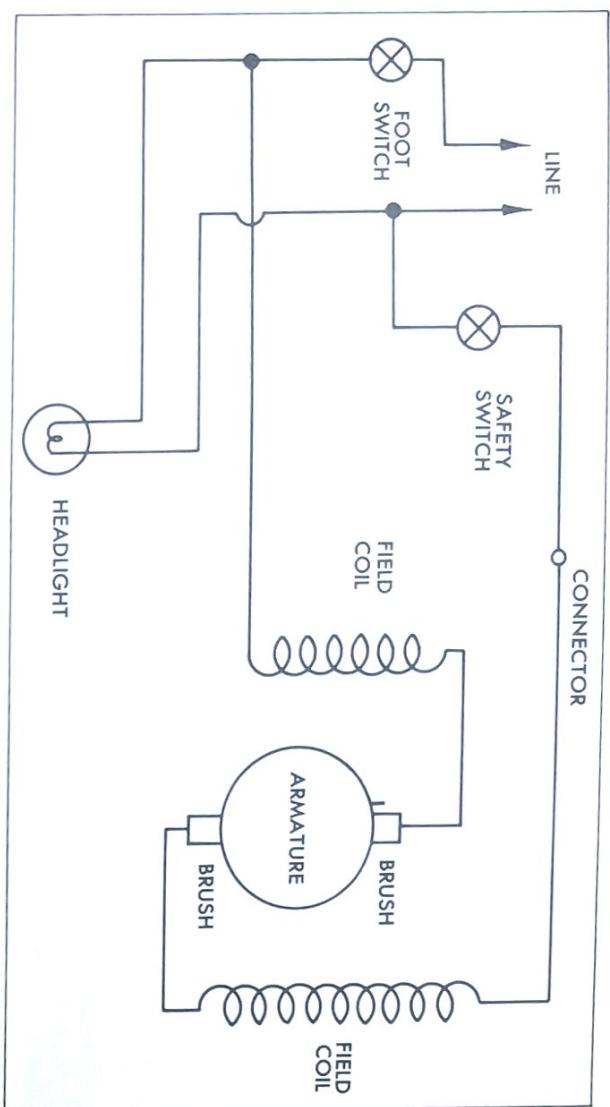


Figure 1-39. Wiring Diagram (Models 516/ ) \*

(3) Remove the two screws (34, fig. 1-3) that secure the foot switch to the motor housing.

b. Inspection, test, and replacement. Inspect and test the foot switch in the same manner as directed in paragraph 1-5b. If the foot switch is defective, disconnect the leads, taking note of their respective positions. One headlight lead and one field lead should be connected to the terminal at the bottom of the foot switch (see fig. 1-38); the remaining headlight lead and one lead from the safety switch should be connected to the terminal at the side of the foot switch.

#### Installation.

(1) Position the foot switch with the connectors toward the rear on the motor housing; secure with the two screws (34, fig. 1-3).

(2) Position the housing shell section (22) over the motor housing casting; secure with the three screws (23).

(3) Install the foot switch button (32) by

aligning it with the hole of the housing shell and pushing it into place on the foot switch.

(4) Connect the cord to the motor unit and check for proper operation.

#### 1-15. SAFETY SWITCH (Models 516 through ) \*

##### a. Removal.

(1) Remove the foot switch as directed in paragraph 1-14a.

(2) Unscrew the wire connector (35, fig. 1-3) that connects the safety switch lead to the field lead; disconnect the leads.

(3) Loosen the bottom terminal screw on the foot switch; disconnect the safety switch lead and the headlight lead.

(4) Remove the screw (62) that secures the safety switch (61) to the fan housing (56); remove the safety switch.

\* For current models.



#### b. Inspection and test.

(1) Inspect the leads for damaged insulation. Check that switch button moves all the way out when released.

(2) Connect a test lamp (see page xi) to the two leads of the safety switch; there should be no light with the switch button released. There should be light when the switch button is pressed down.

(3) Replace the safety switch if it or the leads are damaged, or if it does not operate properly.

#### c. Installation.

(1) Position the safety switch (61) on the fan housing (56) so that the leads extend through the hole of the fan housing and motor housing; secure with the screw (62).

(2) Connect one lead from the safety switch and one lead from the headlight to the bottom terminal of the foot switch.

(3) Connect the remaining lead from the safety switch to the free lead from the field; screw the wire connector (35) in place over the leads.

(4) Install the foot switch as directed in paragraph 1-14c.

#### 1-16. HEADLIGHT (Models 516 through ) \*

2. Headlight bulb replacement. Depress and turn the headlight bulb (37, fig. 1-3) to remove it from the socket. Test the bulb in the socket of a unit known to be in good working order; replace the bulb if inoperative. Align the prongs of the headlight bulb with the socket; depress and turn the bulb to install it into the socket.

#### b. Headlight socket and wire replacement.

(1) Remove the screw (39) that secures the headlight socket and wire (38) to the headlight cap as shown in figure 1-40.

(2) Disassemble the motor unit as directed in paragraph 1-19a through j.

(3) Disconnect the leads from the terminals of the foot switch.

(4) Remove the headlight socket and wire from the motor housing as directed in paragraph 1-19m(2).

(5) Install the new socket and wire so that the plastic insulating sleeve protects the leads where they extend through the motor housing and so that the sleeve is pushed back to prevent interference with the armature fan; secure the socket to the headlight cap with the screw (39, fig. 1-3).

(6) Reassemble the parts to the motor housing as directed in paragraph 1-21.

(7) Connect the leads to the foot switch as directed in paragraph 1-14b; install the foot switch as directed in paragraph 1-14c.

(8) If replacement of the headlight socket only is indicated, this can be accomplished by unsoldering the lamp contact points in the base of the socket as shown in figure 1-41. Discard the old socket and attach a new or serviceable replacement socket to the leads.

#### c. Headlight cap repair or replacement.

(1) Remove the screw (39, fig. 1-3) that secures the headlight socket to the headlight cap (29).



Figure 1-40. Removing headlight socket screw

\* For current models.





Figure 1-41. Unsoldering headlight wires from socket

(2) Remove the foot switch button and remove the housing shell from the motor housing as directed in paragraph 1-14a(1) and (2).

(3) Carefully examine the headlight cap pin (25) and you will note that one end is smooth and the other end is grooved; using a small punch drive the pin from the smooth end (exchange side) of the motor housing casting as shown in figure 1-42. Remove the headlight cap and the two washers (28, fig. 1-3).

(4) If the headlight cap bumper (30) is torn or excessively worn, drill out the two

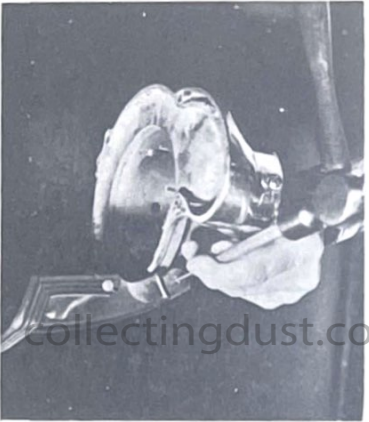


Figure 1-42. Removing headlight cap pin

rivets (31) that secure it to the headlight cap; remove the bumper and install a new one. Install the new rivets with the heads outward and be sure to have the headlight cap resting firmly on the workbench when upsetting the rivets to avoid cracking the casting.

(5) Position the headlight cap with a spring washer (28) on each side between it and the motor housing and aligned with the hole; install the headlight cap pin (25) with the grooved end outward from the side opposite the exhaust opening.

(6) Install the housing shell and foot switch button as directed in paragraph 1-14c(2) and (3).

(7) Secure the headlight socket to the headlight cap with the screw (39) (see figure 1-40).

1-17. MOTOR BRUSH INSPECTION AND REPLACEMENT (Models 516 through )\*

a. Models 516 through 518.

(1) Remove the foot switch button (32, fig. 1-3) by pulling up on it.



Figure 1-43. Removing commutator brush caps and brushes

\* For current models.

(2) Remove the three screws (23) that secure the housing shell section (22) to the motor housing casting (40); remove the housing shell by pulling straight back.

(3) Unscrew the commutator brush cap (26) and remove the carbon brush (27) from each of the brush holders as shown in figure 1-43.

(4) Inspect the carbon brushes and commutator as directed in paragraph 1-7b; if the armature is rough or dirty, remove it as directed in paragraph 1-19 for cleaning or replacement.

(5) Align the concave of the carbon brush (27, fig. 1-3) with the armature and insert into the brush holder.

(6) Position the brush cap (26) over the brush spring and screw the cap into the brush holder.

(7) Align the housing shell section with the motor housing casting; secure with the three screws (23).

(8) Align the foot switch button with the housing shell and the foot switch; push the foot switch button into place.

b. Models 519 through ( )\*.

(1) Remove the foot switch button and the shell housing as directed in a(1) and (2) above.

(2) Pull the brush holder cover (8, fig. 1-4) from the brush holder (7). Straighten the field terminal clip (9) and remove it from the slot of the brush holder. Lift the brush (6) from each brush holder.

(3) Remove the retainer clip (5) that secures the brush holder to the motor housing casting (11); remove the brush holder.

(4) Inspect the carbon brushes and commutator as directed in paragraph 1-7b. Replace the brush holders if cracked or damaged.

(5) Position the brush holders on the motor housing casting; secure in place with the retaining clips (5).

\* For current models.

(6) Align the concave of the carbon brush (6) with the armature and insert into the brush holder.

(7) Press the spring of the carbon brush down into the brush holder and insert the field terminal clip (9) through the slots of the brush holder. Bend up the end to secure in place and push the brush holder cover (8) into place.

(8) Install the housing shell and the foot switch button as directed in a(7) and (8) above.

1-18. MOTOR UNIT MAJOR OVERHAUL (Models 516 through )\* The following three paragraphs give the necessary instructions for complete disassembly, inspection, and rebuilding of the motor unit. Follow the disassembly steps which are necessary and then refer to the proper inspection and reassembly steps required to restore the unit to good working order.

1-19. DISASSEMBLY (Models 516 through )\*

a. Remove the foot switch button (32, fig. 1-3) by pulling it up; remove the three screws (23) that secure the housing shell section (22) to the motor housing as shown in figure 1-37. Remove the housing shell by pulling straight back.

b. Loosen the bottom terminal screw (see figure 1-38) of the foot switch and disconnect the safety switch lead and the headlight lead.

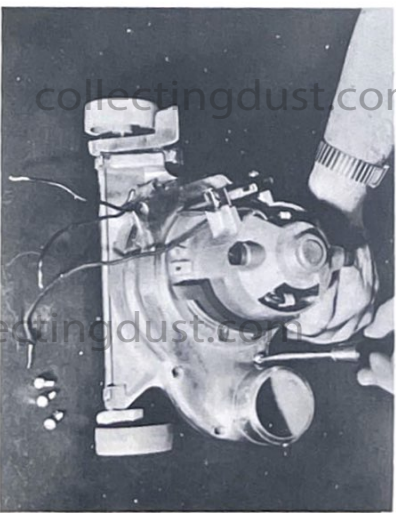


Figure 1-44. Removing rear fan housing screws.





Figure 1-45. Separating fan housing from the motor housing.

c. Remove the wire connector (35, fig. 1-3) that secures the remaining safety switch lead to the field lead; disconnect the leads.

d. Remove the four screws (46) as shown in figure 1-44 and the one longer screw (37, fig. 1-3) in front under the headlight cap; that secure the fan housing (36) to the motor housing casting (40).

e. Separate the fan housing from the motor housing by inserting a blunt instrument, such as a screwdriver, through the rear opening and prying it. A sharp rap with your hand as shown in figure 1-43 to break the adhesive seal.



Figure 1-46. Removing front shaft clamps.



Figure 1-47. Removing wheel bracket shaft from fan housing.

f. Disassemble the fan housing as follows:  
(1) Remove the screw (62, fig. 1-3) that secures the safety switch to the fan housing; remove the safety switch.

(2) Move the toe touch control to the No. 7 position. Remove the two screws (63) and front shaft clamps (64), as shown in figure 1-46; that secure the assembled front wheels and bracket shaft to the fan housing—fill the end of the shaft opposite the toe touch control out first as shown in figure 1-47 and drive the shaft toward the toe touch control; to release the ratchet lock (58, fig. 1-3) and spring (59).

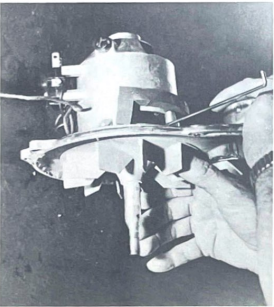


Figure 1-48. Removing fan and pulley from the armature.



collecting

ing dust com



colle

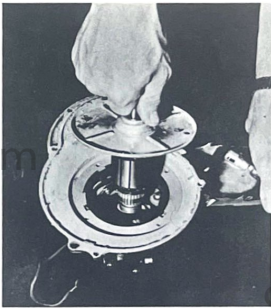


Figure 1-49. Removing armature and bearings from the motor housing.

(3) If worn or damaged, pull the seal O-ring (60) from the groove of the fan housing.

(4) If the nozzle lock (68) is damaged, center punch and drill out end of the screw (66); remove the screw, spring (67), and nozzle lock.

e. Insert a fan locking pin (T104) or an ice pick through the ventilating hole of the motor housing and through the hole in the armature shaft to hold the armature from turning as shown in figure 1-49; then the fan and pulley (65, fig. 1-3) in a clockwise direction to remove the fan and threads of the armature shaft.

h. Remove the commutator brushes as directed in paragraph 1-17a or b.

i. Remove the four screws (54) that secure the front bearing plate assembly (53) to the motor housing.

j. Remove the assembled front bearing plate, armature (51), and bearings by pulling on the armature shaft as shown in figure 1-48. This is a tight fit and considerable effort may be required. Remove the grease retainer washer (49, fig. 1-3), which sometimes sticks to the rear bearing, and the bearing finger spring (48) from the motor housing.



collecting

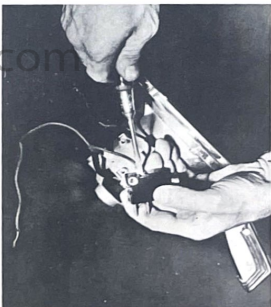


Figure 1-50. Removing leads from side terminal of foot switch.

k. Pull the assembled front bearing plate and bearing from the armature shaft. Use thumb pressure to remove the front bearing (74) from the front bearing plate (71); remove the thrust washer (73), felt washer (72), and corrugated strip (52) from the front bearing plate.

l. If necessary to remove the rear bearing (50) hold the armature, use the special rear bearing puller (SP125) as shown in figure 1-16.



Figure 1-51. Removing headlight wires from motor housing.



colle

ctus.com





Figure 1-57. Installing seal O-ring on fan housing

outward, on the commutator end of the armature shaft, using a hammer and discarded fan pulley to drive it into place as shown in figure 1-23.

e. Position the assembled armature and rear bearing into the motor housing through the field so that the rear bearing seats in the bore against the grease-retaining washer; make sure that there will be no interference between the armature and field leads.

f. Position the felt washer (72, fig. 1-3) in the front bearing plate (71); install the thrust washer (73) with the bent tabs against the felt washer. After cleaning and repacking with special high consistency grease, position the front bearing (74) on the front bearing plate so the open side is toward the thrust washer; press the front bearing firmly into place as shown in figure 1-24. In models where used, or if the bearing is not a tight fit in the bearing plate, install a corrugated strip (52, fig. 1-3) so that the notch engages with slot in bearing well of bearing plate before installing the front bearing.

g. Position the assembled front bearing plate and bearing over the armature shaft and align with the holes of the motor housing casting; secure with the four screws (54, fig. 1-3) as shown in figure 1-56.

h. Install the commutator brushes as directed in paragraph 1-17a(5) and (6) or 1-17b(5) through (7).

i. Insert a fan locking pin (T104) or an ice pick through the ventilating hole of the motor housing and through the hole of the armature shaft to hold the armature from turning (see figure 1-14); turn the fan and pulley (55, fig. 1-3) in a counterclockwise direction until secure on the armature shaft.

j. Assemble the fan housing as follows:

(1) Position the nozzle lock (68) and spring (67) on the fan housing (69); secure with the screw (66). Rivet over the inside end of the screw to prevent it from loosening in the fan housing.

(2) Clean out the groove of the fan housing. Use a good grade of rubber cement to secure the seal O-ring (60) in the groove as shown in figure 1-57.

(3) Position the spring (59, fig. 1-3) in the hole of the ratchet lock (58). Hold the ratchet lock and spring in the slot at the side of the fan housing with the teeth outward; position the front wheel bracket shaft (63) to engage the teeth of the ratchet lock and the slot at the bottom of the fan housing. Secure with the two clamps (64) and screws (65).

k. Carefully scrape any old cement from the sealing surfaces of the fan housing and the motor housing casting. Apply the special fan housing sealer cement (A1334856), which we can supply, to the rim of the fan housing as shown in figure 1-58. Position the fan housing on the motor housing so that the alignment pins enter the holes; secure with the four screws (46, fig. 1-3) installed from the rear, and the one screw (57), installed from the front, which is below the headlight cap.

l. Install the safety switch as directed in paragraph 1-15c.

m. Position the housing shell section (22) on the assembled motor housing and fan housing; secure with the three screws (23) (see figure 1-37).

n. Align the foot switch button (32, fig. 1-3) with the opening in the housing shell and the foot switch and push into place.



Figure 1-58. Applying sealer cement to rim of fan housing

o. Check the motor unit for proper operation as directed in paragraph 1-2.

#### 1-22. HANDLE SPRING REPLACEMENT (Models 516 through \*)

a. Disassembly.

(1) Remove the housing shell as directed in paragraph 1-19a.

(2) If the spring is not broken, it is first necessary to relieve the tension from the handle spring. Remove the spring bushing clip (12, fig. 1-3). Engage the pin of the spring tool (SP123) with one of the slots on the outer surface of the spring bushing (13) as shown in figure 1-59. Hold tension on the spring tool and pry the bushing to the side far enough to allow the spring yoke (8, fig. 1-3) to be disengaged from the spring bushing; turn the spring tool to relieve the tension.

(3) Remove the screw (9) from the spring bushing as shown in figure 1-60 and remove the spring clip (10, fig. 1-3) from the spring shaft.

(4) Pull the spring bushing, spring yoke,

\* For current models.



Figure 1-59. Using handle spring tool (SP123)

fiber washer (7), spring shaft (11), and handle spring (14) from the housing shell (1).

(5) Remove the screw (17) and the spring spreader (16) from the housing shell.

(6) If the bushings (6 or 18) are damaged or excessively worn, press them from the housing shell. Be sure that the housing shell is properly supported to prevent cracking or breaking it.

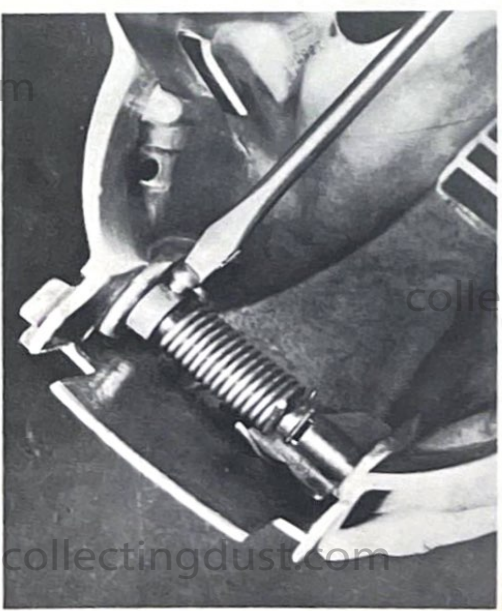


Figure 1-60. Removing screw from spring bushing





(7) If any of the handle lock parts require replacement, the handle lock should be disassembled at this time as directed in paragraph 1-23.

b. Inspect the parts for cracks, distortion, or excessive wear. Replace all unserviceable parts.

c. Reassembly.

(1) Position the spring spreader (16) in the housing shell (1); secure with the screw (17).

(2) If the bushings (6 and 18) were removed, press new bushings into place so that they are flush with the outside edge of the housing shell.

(3) Slide the spring shaft (11) into the spring shaft bushing (13) as shown in figure 1-61 so that the screw holes are aligned one over the other.

(4) Position the spring yoke (8, fig. 1-3) and fiber washer (7) on the assembled spring shaft and bushing as shown in figure 1-62.

(5) Position the handle spring (14, fig. 1-3) in the housing shell so that it is aligned with the spring shaft bore and the straight end is on the side toward the small bushing; insert the spring shaft and assembled parts through the large bushing and through the spring.

(6) Check that the screw holes of bushing and spring shaft are still in alignment; install



Figure 1-61. Installing bushing on spring shaft



Figure 1-62. Installing yoke and washer on spring shaft

the shouldered screw (9) (see figure 1-60). Hook the looped end of the handle spring on the shouldered screw.

(7) Engage the pin of the spring tool (SP123) with one of the slots on the outer surface of the pushing as shown in figure 1-59. Rotate the bushing until the lip of the spring yoke can be engaged in the second or third slot of the bushing. This is determined by the amount of tension desired. Push the bushing all the way in and lock in place by installing the spring bushing clip (12, fig. 1-3) inside the housing shell.

(8) Install the spring clip (10) on the spring shaft so that the flat side of the clip is in the slot of the spring shaft.

(9) Install the housing shell and foot switch button as directed in paragraph 1-21m and n.

1-23. HANDLE LOCK REPLACEMENT (Models 516 through ) \*

a. Models 516 through 518.

(1) Disassemble the handle spring as directed in paragraph 1-22a.

(2) Use long-nose pliers to pull the retaining pin (3, fig. 1-3) from the handle lock button (2) as shown in figure 1-63; remove the handle lock button.

\* For current models.

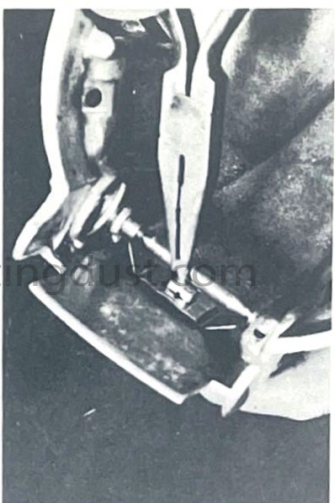


Figure 1-63. Removing handle lock button pin

(3) Remove the lock button spring (15, fig. 1-3) and slide the lock shaft (4) out of the housing shell.

(4) Replace any broken or defective parts.

(5) Slide the lock shaft (4) into the housing shell so that the end with the greater length from the recess to the end is toward the side of the housing shell which has the opening for the foot switch.

(6) Position the lock button spring (15) so that the ends engage the recesses of the lock shaft and the hole is aligned with the opening for the handle lock button.

(7) Insert the handle lock button (2) through the housing shell and lock button spring; press down on the spring with a screw driver and insert the retaining pin (3) through the handle lock button.

(8) Check that the lock shaft moves without excessive binding and that it extends out on the side toward the switch button hole.

(9) Reassemble the handle spring as directed in paragraph 1-22c.

b. Models 519 through ( ) \*

(1) Remove the housing shell and foot switch button as directed in paragraph 1-19a.

\* For current models.

(2) Remove the handle lock spring (4, fig. 1-4) by inserting a screwdriver under the handle spring and pulling the handle lock spring out.

(3) Move the handle lock button (1) to align with the hole and remove it from the housing shell (3); slide the handle lock shaft (2) from the hole of the housing shell.

(4) Replace any broken or defective parts.

(5) Insert the handle lock shaft (2) into the hole of the housing shell so that the flat end is toward the opening for the foot switch button and the small hole in the shaft is toward the opening for the handle lock button.

(6) Install the handle lock button (1) through the top of the housing shell so that the pin engages the hole of the handle lock shaft. With the dimpled depressions toward the housing shell as shown in fig. 1-64, slide the handle lock spring (4, fig. 1-4) through the lock button to retain it.

(7) Check that the handle lock shaft moves without excessive binding and that it extends out of the housing shell on the side toward the foot switch button hole.

(8) Install the housing shell and foot switch button as directed in paragraph 1-21m and n.



Figure 1-64. Installing handle lock spring





## 1-24 FIELD COIL INSTALLATION - MODEL 519 AND NEWER

The changeover to the external attaching of the field terminal clips to the carbon brush holder has created a bit of a problem when confronted with complete motor replacement. To facilitate installation of the field and eliminate the possibility of reversed motor operation, we invite your attention to figures 1-65 and 1-66.

1. Position the field and wires as in figure 1-65
2. Insert field into motor casting in the same related position as in figure 1-66
3. Field clip wires will flow to the left as indicated and attach to commutator brush holders. (If you reverse these field leads, you will also reverse the rotation of the motor).

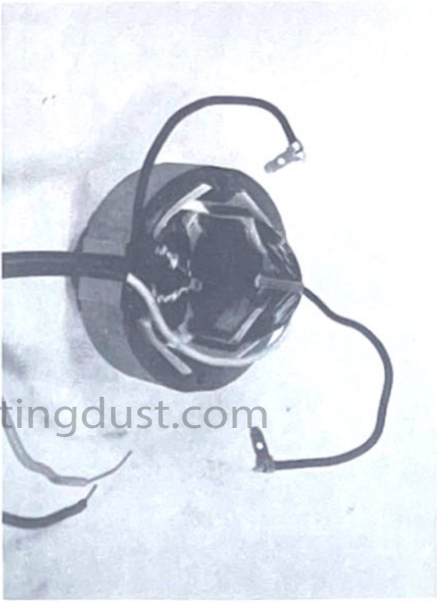


Fig. 1-65

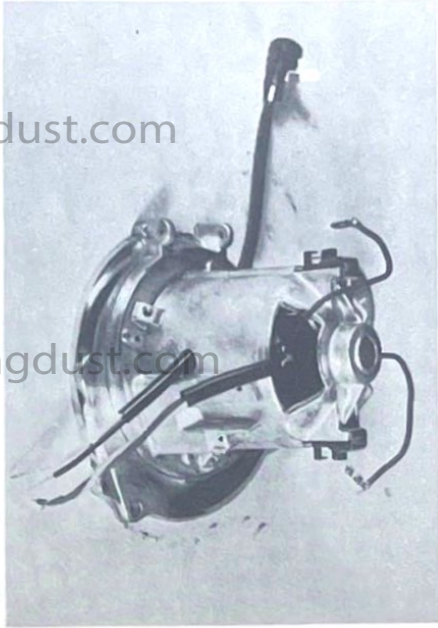


Fig. 1-66



## SECTION 2 NOZZLE GROUP

### INDEX

Paragraph		Page
2-1	Illustrated parts list . . . . .	2-2
2-2	Nozzle and brush adjustments . . . . .	2-5
2-3	Brush replacement . . . . .	2-6
2-4	Belt lifter replacement . . . . .	2-7
2-5	Rug plate replacement . . . . .	2-8
2-6	Belt lifter repair (560) . . . . .	2-8





2-1. ILLUSTRATED PARTS LIST

The exploded view illustrations and the indexed legends which follow provide identification of the nozzle group parts and give the proper relationships of associated parts as needed to repairing the nozzle assemblies.

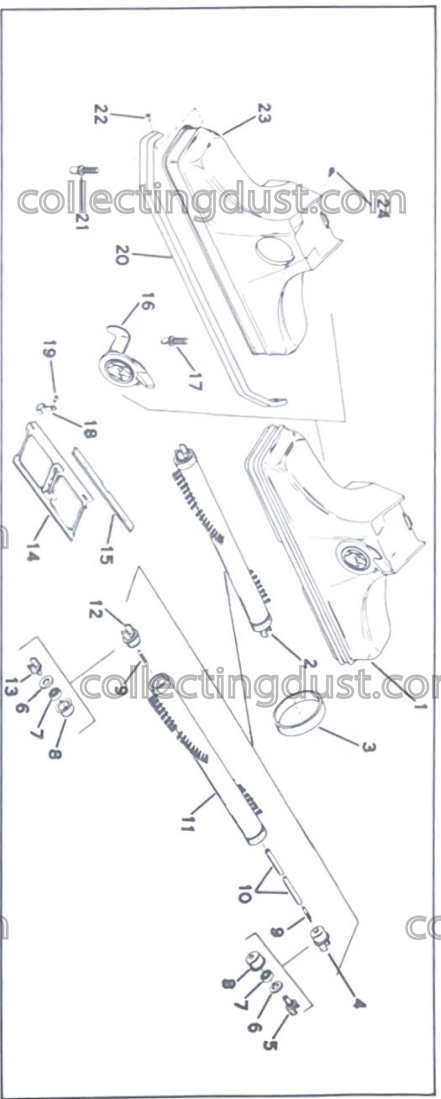


Figure 2-1. Nozzle Group (Model 505/512)

Index No.	Part No.	Part Name	Quantity
2-1-1	B1400S	Nozzle Complete, Less Brush	1
-2	B1400G	Nozzle Complete w/Brush and Belt	1
-3	B1482S	Floor Brush Complete	1
-4	B1590	Belt	1
-5	B1521S	Brush End Complete, Large	1
-6	B1521	Brush Yoke (Large)	1
-7	B1524	Brush Bearing Felt Washer	2
-8	B1522	Brush Bearing	2
-9	B1523	Brush Bearing Cup	2
-10	B1501	Brush Shaft Groove Pin	2
-11	B1500	Brush Shaft	1
-12	B1482	Floor Brush Shell Only	1
-13	B1520S	Brush End Complete, Small	1
-14	B1520	Brush Yoke (Small)	1
-15	B1420S	Rug Plate (Includes 2 of item 15)	1
-16	B1422	Rug Plate Felt Strip	2
-17	B144356S	Belt Lifter	1
-18	B1461S	Brush Adjusting Screw (Large)	1
-19	B1423	Rug Plate Hinge	2
-20	B1864	Rug Plate Hinge Rivet	2
-21	B1401	Nozzle Bumper (Replace with B1404)	1
-22	B1463S	Brush Adjusting Screw (Small)	1
-23	B1402	Rivet (Replace with B1405 and B1408)	2
-24	B1430	Nozzle Casting	1
-24	B1430	Belt Lifter Stop Screw	1

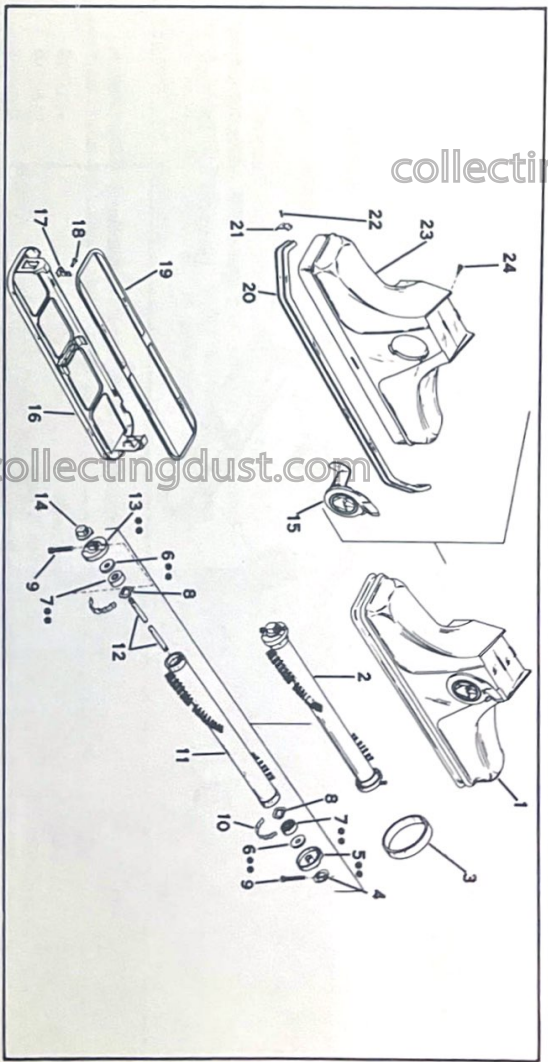


Figure 2-2. Nozzle Group (Models 513 through 515)

Index No.	Part No.	Part Name	Quantity
2-2-1	B1403S	Nozzle Complete Less Brush	1
-2	B1403G	Nozzle Complete w/Brush and Belt	1
-3	B1551S	Floor Brush Complete (*)	1
-4	B1590	Belt	1
-5	B1539	Brush End Plastic Cap (Small) (*)	1
-6	**	Brush End (Small)	1
-7	**	Brush Bearing Felt Washer	1
-8	B1534	Brush Bearing Wave Washer (*)	1
-9	B1543	Brush Bearing	2
-10	B1541	Brush Adjusting Screw 1 inch (Model 513 only)	2
-11	B1533	Brush Adjusting Screw 1-3/8 inch (Models 514/515)	2
-12	B1551	Brush Bearing Corrugated Strip (*)	2
-13	**	Floor Brush Shell Only (*)	1
-14	B1540	Brush Shaft	1
-15	B144356S	Brush End (Large)	1
-16	B154456S	Brush End Plastic Cap (Large) (*)	1
-17	B1547	Belt Lifter	1
-18	B1545	Rug Plate (Includes item 19)	1
-19	B1548	Rug Plate Hinge (*)	2
-20	B1404	Rug Plate Hinge Rivet (*)	2
-21	B1405	Nozzle Bumper End Rivet (*)	1
-22	B1408	Nozzle Bumper End Rivet (*)	2
-23	**	Nozzle Casting	1
-24	B1430	Belt Lifter Stop Screw	1

(\*) For current models.  
 \*\* These parts are not available for service.





**SERVICE INSTRUCTIONS**

**2-2. NOZZLE AND BRUSH ADJUSTMENTS**

a. Inspect nozzle and adjust as follows:

(1) Inspect the nozzle to be sure that the two lugs that fit over the nozzle attaching shaft are not broken or badly distorted. These lugs cannot be repaired; if defective, the nozzle must be replaced.

(2) Install the nozzle on the motor unit and lock in place with the nozzle lock.

(3) With nozzle in position, test for loose fit by placing one hand at each end as shown in figure 2-4; check if the nozzle can be rocked back and forth. If the nozzle can be moved, it will allow air to leak. Tap the casting at a point above the notch with a small blunt chisel as shown in figure 2-5 to tighten.

(4) With the nozzle installed as in (2) above, set the unit on a flat surface; push down on both ends of the nozzle to determine if it lies flat on the surface along its entire length. If one side is higher, remove the



Figure 2-5. Tap casting as indicated to tighten or level

nozzle and tap the opposite side of the nozzle casting as shown in figure 2-5 to level it.

**b. Brush adjustment (Models 505 through 512)**

(1) Make sure that the large brush adjusting screw (17, fig. 2-1) is correctly installed in the end of the nozzle toward the foot switch of the motor housing.

**NOTE**

If the brush is incorrectly installed the belt will ride on the bristles and damage the brush.

(2) Place a straightedge across the nozzle opening as shown in figure 2-6 and press it down firmly against the nozzle casting to determine how far the bristles of the brush protrude. The proper setting is for the bristles to protrude 1/16 inch below the mouth of the nozzle.

(3) Turn the adjusting screws counterclockwise to raise the brush or clockwise to lower

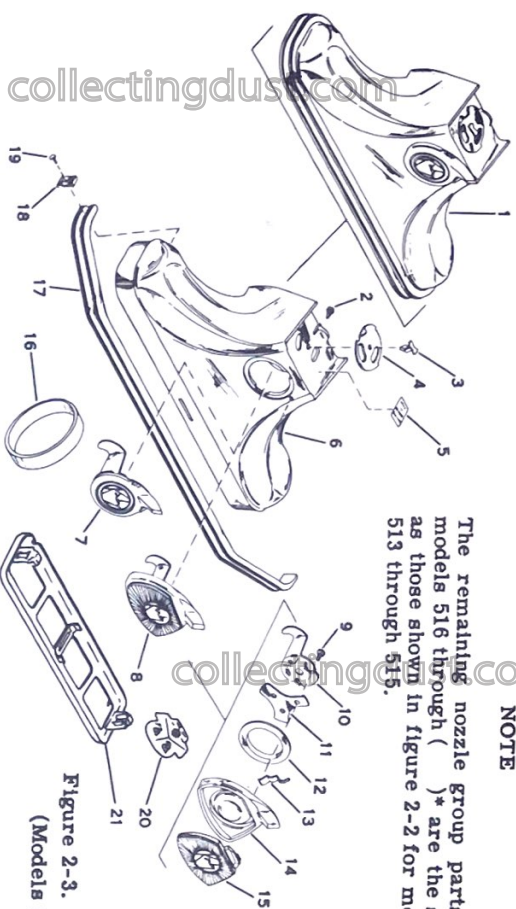


Figure 2-3. Nozzle Group (Models 516 through 519)

**NOTE**  
The remaining nozzle group parts for models 516 through ( ) \* are the same as those shown in figure 2-2 for models 513 through 515.

Index No.	Part No.	Part Name	Quantity	Models
*2-3-1	B159556S	Nozzle Complete Less Brush.....	1	516/519
	B159556G	Nozzle Complete w/Brush & Belt.....	1	516/519
	B159560 S	Nozzle Complete Less Brush.....	1	560/561
	B159560G	Nozzle Complete w/Brush & Belt.....	1	560/561
	B159562S	Nozzle Complete Less Brush.....	1	562/( )*
	B159562G	Nozzle Complete w/Brush & Belt.....	1	562/( )*
	B1430	Belt Lifter Stop Screw.....	1	505/519
	B143060	Belt Lifter Stop Screw.....	1	560/( )*
	B143256	Air Adjusting Plate Fastener.....	1	516/( )*
	B143156	Air Adjusting Plate.....	1	516/( )*
	B143356	Air Adjusting Label.....	1	516/( )*
	B144356S	Nozzle Casting.....	1	505/519
	B144360S	Belt Lifter.....	1	560/561
	B144362S	Belt Lifter Complete.....	1	562/( )*
	B134157	Belt Lifter Complete (Sanitronic).....	1	560/( )*
	B144260	Belt Lifter Cap Hook.....	3	560/561
	B144262	Belt Lifter Cap Hook.....	1	562/( )*
	B144160	Belt Lifter Cap Spring.....	1	560/561
	B144162	Belt Lifter Cap Spring.....	1	562/( )*
	B145460	Belt Lifter Cap Bearing.....	1	562/( )*
	B145462	Belt Lifter Cap Bearing.....	1	560/( )*
B145560	Belt Lifter Cap Insert Clip.....	1	560/561	
B144060	Belt Lifter Cap Casting.....	1	562/( )*	
B144062	Belt Lifter Cap Casting.....	1	560/561	
B145260	Belt Lifter Cap Insert Plastic (Sanitronic).....	1	562/( )*	
B145262	Belt Lifter Cap Insert Plastic (Sanitronic).....	1	513/561	
B159056	Belt.....	1	513/( )*	
B1404	Nozzle Bumper Red.....	1	513/( )*	
B140462	Nozzle Bumper Brown.....	1	562/( )*	
B1405	Nozzle Bumper End Clamp.....	2	513/( )*	
B1408	Rivet.....	2	513/( )*	
B144960	Belt Lifter Label.....	1	560/561	
B144962	Belt Lifter Label.....	1	562/( )*	
B154456S	Rug Plate with Plastic Gasket.....	1	516/( )*	



Figure 2-4. Checking nozzle for looseness



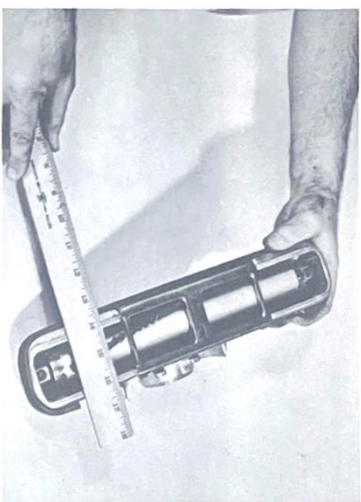


Figure 2-6. Checking nozzle brush protrusion

the brush. Check and adjust at each end of the nozzle to secure the proper adjustment. A new brush should be installed when the bristles are worn too short to make further adjustment practical.

c. Brush adjustment (Models 513 through 514)

(1) Place a straightedge across the nozzle opening to determine the protrusion of the brush bristles as shown in figure 2-6. The proper setting is for the bristles to protrude 1/16 inch below the mouth of the nozzle.

(2) Turn the adjusting screws clockwise to raise the brush or counterclockwise to lower the brush. Check and adjust the brush at each end of the nozzle to secure the proper adjustment. A new brush should be installed when the old one is worn too short to make adjustment practical.

2-3. BRUSH REPLACEMENT

a. Brush replacement (Models 505 through 512)

(1) Pull on the rug plate (14, fig. 2-1) to unfasten the clip that secures it at the front of the nozzle (23); turn the rug plate out of the way.

\* For current models

(2) Pull the brush assembly (2) from the rubber bushings of the adjusting screws (17 and 21) and remove from the nozzle. Remove the belt (3) from the brush.

(3) Support the end of the brush with a spacer that has a larger inside diameter than the outside diameter of the bearing cup (11). Drive the brush shaft groove pin (9) through the brush yoke (5 or 13) at the opposite end of the brush, using a small diameter punch; remove the assembled brush end, shaft, and groove pins from the brush shell (11). Pry the remaining brush end from the brush shell. Examine the parts; if all are serviceable, install on the new brush shell as directed in steps (5) and (6) below.

(4) If the brush yokes or brush bearings (7) are damaged, remove the yoke, brush bearing, and felt washer (6) from the bearing cups (8) and replace the defective parts or replace with a complete brush end.

(5) Install the large brush end on the end of the brush shell that has the group with six tufts of bristles. Install a grooved pin (9) on each end of the brush shaft (10).

(6) Position the assembled brush shaft and pins, so that it aligns with the hole of the large brush yoke on the brush shell. Align the yoke of the small brush end with the yoke of the large brush end and the brush shell; press the parts together. Check that the brush rotates on the shaft without binding.

(7) If the brush adjusting screws (17 and 21) are damaged, remove them from the nozzle casting (23).

(8) If the adjusting screws will not turn freely in the casting, use a 1/4 inch-28 thread tap (available at your local hardware store) to clean the threads of the casting.

(9) Install the large brush adjusting screw (17) into the hole of the nozzle casting that is on the foot switch side when the nozzle is installed on the motor unit and the small brush adjusting screw (21) into the hole on the opposite side.

(10) Position the belt (3) over the brush and align the brush with the adjusting screws;

push firmly into place. Close the rug plate and adjust the brush as directed in paragraph 2-2b.

b. Brush replacement (Models 513 through 514)\*

(1) Pull the front edge of the rug plate (16, fig. 2-2) to open. Pry the ends of the rug plate open far enough to remove the brush assembly (2, fig. 6); remove the brush assembly and belt (3).

(2) Remove the adjustment screw (9) from each of the brush ends (5 and 13). Remove the small plastic cap (4) and large plastic cap (14). Pull the assembled brush end, felt washer (6), and bearing (7) from one end of the shaft (12); pull the shaft and remaining brush end from the brush shell (11). Remove the two wave washers (8) and corrugated strips (10) from the brush shell.

(3) Inspect the parts for damage or the bearing for improper operation. If the bearings or ends are damaged, replace the complete brush. If the bearings are good, repack with grease.

(4) Position a corrugated strip (10) and wave washer (8) on each end of the new brush shell (11). Install the assembled small brush end (5), felt washer (6), and bearing (7) on the end of the brush shell that has the group with six tufts of bristles.

(5) Install the large plastic cap (14) on the assembled large brush end (13), felt washer (6) and bearing (7). Push the brush shaft (12) into the large brush end, so that the holes are aligned and install the adjustment screw (9).

NOTE

The adjustment screws used on model 513 are one inch in length; on models 514 through ( ) \* they are 1-3/8 inches in length.

(6) Install the assembled large brush end and brush shaft through the brush shell and turn the shaft to obtain the proper alignment with the small brush end already installed. Position the small plastic cap (4) over the

brush end and secure the parts with the remaining adjustment screw installed from the same side as the one in the large brush end. It may be necessary to hold pressure against the parts to overcome the tension of the bearing wave washers and obtain proper engagement of the threads.

(7) Position the belt (3) over the assembled brush. Align the brush with the proper ends of the rug plate and so the heads of the screws are downward; pry the ends of the rug plate open far enough to install the brush. Close the brush plate and adjust the brush as directed in paragraph 2-2c.

2-4. BELT LIFTER REPLACEMENT

a. Remove the belt lifter stop screw (2, fig. 2-3) through the hole at the back of the nozzle as shown in figure 2-7.

b. Rotate the belt lifter (7 or 8, fig. 2-3) to align the flanges with the slots of the nozzle casting (6); remove the belt lifter.

c. Disassemble the Model 560 ( ) \* belt lifter by removing the three screws (9); remove the hook (10), spring (11), and bearing (12). Pull the clip (13) from the cap casting (14) and push out the plastic insert (15). Reassemble in the reverse order, taking care that the flanged side of the bearing is toward

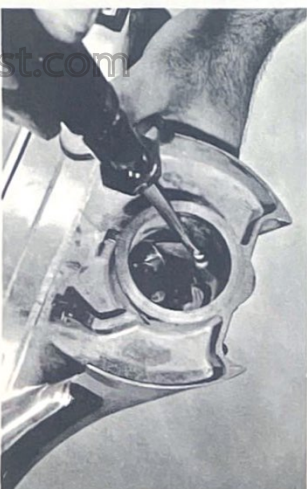


Figure 2-7. Removing belt lifter stop screw

\* For current models.







collectingdust.com

collectingdust.com

collectingdust.com



collectingdust.com

### 3-1. ILLUSTRATED PARTS LIST

The exploded view illustration and the indexed legend which follows provides identification of the handle group parts and give the proper relationships of associated parts as an aid to repairing the handle assemblies.

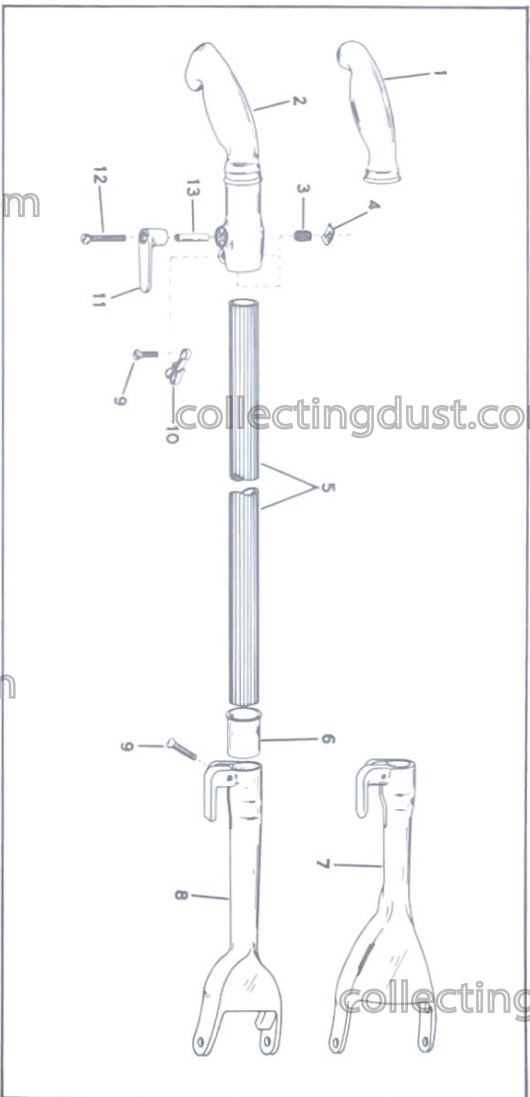


Figure 3-1. Handle Group, exploded view

INDEX NO.	PART NO.	NAME	MODEL
3-1-1	D1712	Grip, Plastic Only Red . . . . .	505/513
	D171254	Grip, Plastic Only Red . . . . .	514/561
	D171262	Grip, Plastic Only Brown . . . . .	562/ ( ) *
	D17227S	Handle Grip Complete (Red) . . . . .	505/561
	D172762S	Handle Grip Complete (Brown) . . . . .	562/ ( ) *
	D1706	Cord Swivel Hook Spring . . . . .	513/ ( ) *
	D1708	Cord Swivel Hook Nut . . . . .	513/ ( ) *
	D170058	Handle Tube . . . . .	505/ ( ) *
	D172159	Handle Tube Regulator Cup . . . . .	505/ ( ) *
	D1725S	(Replaces D1721 and D1722)	505/515
	D172556S	Handle Fork . . . . .	516/ ( ) *
	D1714	Handle Sleeve or Fork Screw . . . . .	505/ ( ) *
	D171357	Bag Loop Hook . . . . .	505/ ( ) *
D1717	Cord Swivel Hook . . . . .	513/ ( ) *	
D1709	Cord Swivel Hook Screw . . . . .	513/ ( ) *	
D1707	Cord Swivel Hook Tube . . . . .	513/ ( ) *	
D1795G	Handle Complete . . . . .	505/515	
D179556G	Handle Complete . . . . .	516/ ( ) *	

( ) \* For current models

### SERVICE INSTRUCTIONS

#### 3-2. HANDLE GRIP COVERING REPLACEMENT (Models 505 through 513)

- Remove the worn grip covering by slicing longitudinally with a sharp knife.
- Apply a small amount of rubber cement to the end of the grip casting; quickly slide the new handle grip plastic (1, fig. 3-1) into position.

#### NOTE

If this operation is not performed quickly, the grip may stick part way on so that it can not be installed fully nor easily removed.

#### 3-3. CORD SWIVEL HOOK REPAIR OR REPLACEMENT (Model 513 through ) \*

- Loosen the screw (9) that secures the handle grip assembly to the handle tube (5); slide the grip assembly from the end of the handle tube.
- Use a long nose pliers to hold the swivel hook nut (4) and remove the screw (12) as shown in figure 3-2; remove the cord swivel hook (11, fig. 3-1), nut (4), spring (3), and tube (13).
- Inspect the parts for cracks or damage; replace unserviceable parts.
- Position the screw (12) and tube (13) on the cord swivel hook (11). Insert the screw part way into the handle grip (2) and position the spring (3) over the end of the screw; use a long nose pliers to hold the nut (4) inside the handle grip aligned with the screw, and secure the parts.



Figure 3-2. Removing cord swivel hook

- Install the handle grip assembly on the tube (5) and secure by tightening the screw (9).

#### 3-4. HANDLE FORK REPLACEMENT

- Loosen the screw (9, fig. 3-1) that secures the handle fork (7 or 8) to the tube (5); remove the handle fork and handle tube insulator cup (6).
  - Install the handle tube insulator cup (6) on the handle tube (5); position the handle fork (7 or 8) so that the cord hook is aligned with the cord swivel hook of the handle grip (2).
- NOTE**
- The proper installation of the handle tube insulator cup is important as it is provided to protect the user from electrical shocks resulting from a grounded motor.
- Taking care that the insulator cup is not dislodged, slide the handle fork on the handle tube; secure by tightening the screw (9).

\* For current models





**SECTION 4  
REPAIR GROUP**

**INDEX**

Paragraph		Page
4-1	Illustrated parts list . . . . .	4-2
4-2	Bag replacement . . . . .	4-3
4-3	Sani entor repair . . . . .	4-3

collectingdust.com

collectingdust.com

collectingdust.com  
collectingdust.com

collectingdust.com

collectingdust.com

collectingdust.com

collectingdust.com

collectingdust.com

collectingdust.com  
collectingdust.com

collectingdust.com

collectingdust.com

collectingdust.com

collectingdust.com

collectingdust.com

collectingdust.com



4-1. ILLUSTRATED PARTS LIST

The exploded view illustrations and the indexed legends which follow provide identification of the emtor and bag group parts and give the proper relationships of associated parts as an aid to repairing the emtor assemblies.

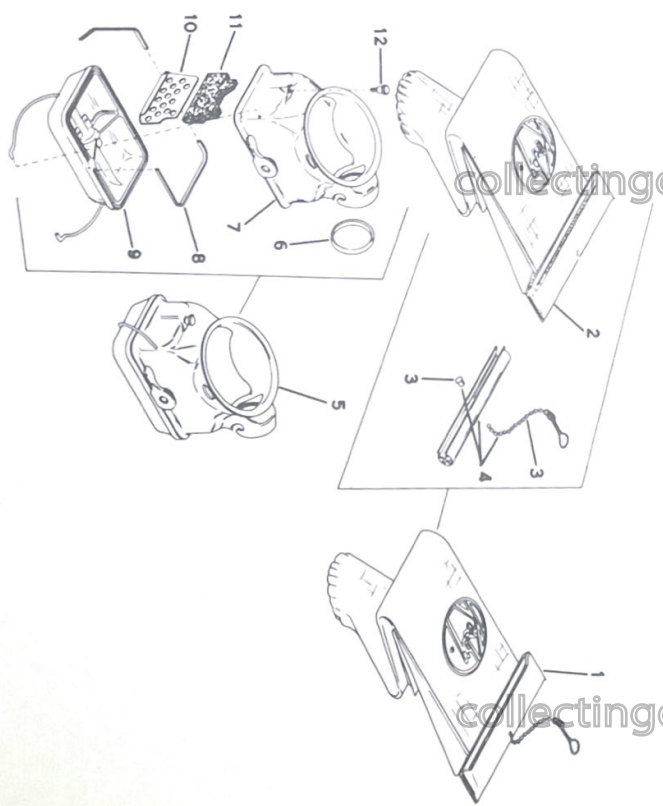


Figure 4-1. Emtor Group, exploded view (Models 505/561)

INDEX NO.	PART NO.	NAME	MODEL
4-1-1	E1900588	Bag Complete . . . . .	505/561
2	E190058	Bag Cloth . . . . .	505/561
3	E1913	Bag Chain & Loop . . . . .	505/561
4	E1912S	Bag Clamp w/chain . . . . .	505/561
5	E1799G	Emtor Comp. Less Bag . . . . .	505/515
6	E1880	Emtor Round Rubber Gasket . . . . .	505/515
7	E1799S	Emtor Upper Casting . . . . .	505/515
8	E1861	Emtor Bottom Felt Gasket . . . . .	505/561
9	E1860S	Emtor Bottom Plastic Comp. Gray . . . . .	505/561
10	E1820	Emtor Sweet Air Felt . . . . .	505/561
11	E182159	Emtor Sweet Air, Felt . . . . .	505/561
12	E182361	Emtor Thumb Screw . . . . .	505/561

( ) \* For current models

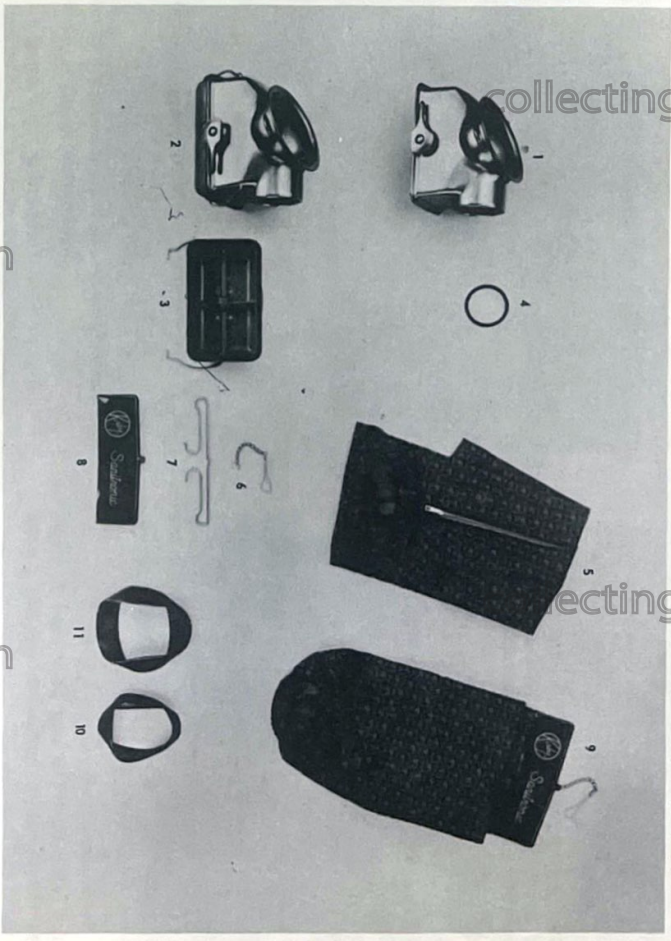


Figure 4-2 of 516 to ( ) \* Emtor Parts

INDEX NO.	PART NO.	NAME	MODEL
4-2-1	E180062S	Emtor Upper Casting . . . . .	516/ ( ) *
2	E189562G	Emtor Complete Less Bag . . . . .	516/ ( ) *
3	E1860S	Emtor Bottom Gray . . . . .	505/561
4	E186062S	Emtor Bottom Brown . . . . .	562/ ( ) *
5	E188056	Emtor Round Rubber Gasket . . . . .	516/ ( ) *
6	E190062	Bag Cloth . . . . .	562/ ( ) *
7	E191362	Bag Chain & Loop Only . . . . .	562/ ( ) *
8	E191762	Bag Top Formed Wires . . . . .	562/ ( ) *
9	E191862	Bag Top Cover Plastic . . . . .	562/ ( ) *
10	E190062G	Bag Complete . . . . .	505/561
11	E1916	Bag Plastic Guard Red . . . . .	505/561
	E191662	Bag Plastic Guard Brown . . . . .	562/ ( ) *

( ) \* For current models





## SERVICE INSTRUCTIONS

### 4-2. BAG REPLACEMENT

- Remove the emtor from the motor unit.
- Hold the emtor securely and start one edge of the bag elastic over the emtor flange and remove the bag from the emtor upper casting (7, fig. 4-1).
- Roll the top edge of the bag flap over the bag clamp (4).
- Slide the assembled bag clamp and chain from the bag.
- To replace the chain and loop (3), press the chain end through the clamp and disengage the chain from the chain end. To install the chain and loop, put the chain through the top of the clamp (4); engage the chain with the chain end and pull the chain end securely into the hole of the clamp.
- Make sure that the bag is folded so center folds meet; slide the assembled bag clamp and chain on the bag (2).



Figure 4-3. Installing bag on sani emtor

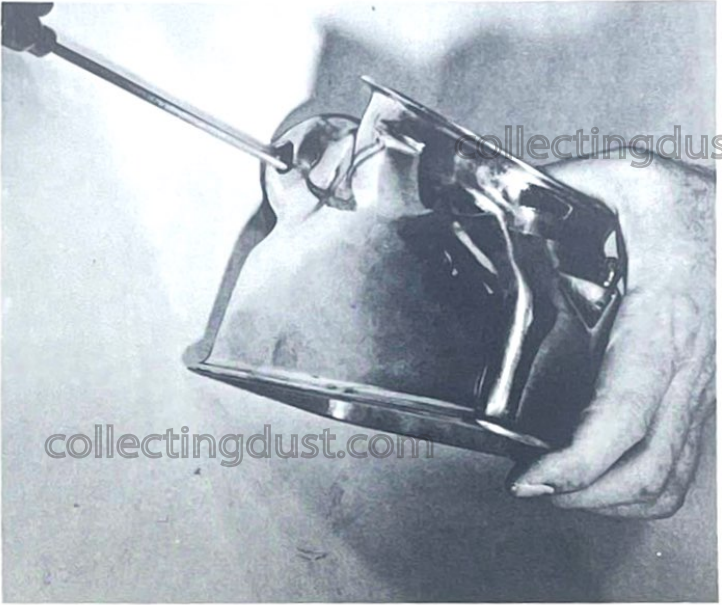


Figure 4-4. Deepening notches of emtor casting

- Insert the chain through the slit and fold the flap over the bag clamp.
- Rest the emtor against the edge of workbench, using the body as a support to allow the use of both hands. Stretch the bag over the emtor flange as shown in figure 4-3.

### 4-3. SANI EMTOR REPAIR

- Emtor bottom plastic tray replacement.

- Release the tray clamp; disengage the ends of the tray support from the emtor upper casting and remove the bottom plastic tray (9 fig. 4-1).
- If only the felt gasket (8) is worn, pull it from the groove of the plastic tray (9).



Clean the groove and cement a new felt gasket in place.

- Position the bottom plastic tray so that the side with the small offset is toward the clamp on the emtor upper casting; engage the two ends of the support into the holes of the upper casting.

- Repair of loose emtor (Models 505 through 515).

- Remove the emtor gasket (6, fig. 4-1) from the upper casting (7).

- If the ears of the casting are worn, deepen the notches with a small round file as shown in figure 4-4.

- Use rubber cement to secure a new emtor gasket in the opening of the upper casting.

- Check if the emtor will now hold securely on the motor unit. If emtor is still too loose, it must be replaced.

- Emtor gasket replacement (Models 516 through 517\*)

- Adjustment for loose-fitting bottom tray

- Remove bottom tray as in (a) above
- Cradle bottom tray in both hands with bail wire upright as shown in figure 4-6

- Bend upright extensions of bail wire in toward each other approximately 1 inch by hand pressure only.

- Exercise care when re-attaching tray to upper casting to insert only one end of bail first and spread remaining end only enough to

\* For current models.



Figure 4-5. Installing gasket in sani emtor



Figure 4-6 Cradle - bottom tray

snap it home into upper casting.

### General Dust Leakage

Complaints concerning dust odor or leakage can stem from:

- Bag agitation, possibly from bumping it into furniture etc. while motor is running.
- Loose or tipped bottom tray. Felt gasket in joining face of bottom tray must be brushed clean to assure proper seal.

- Remove the emtor gasket (3, fig. 4-2) from the emtor casting (3).

- Cement the new gasket in the emtor sleeve as shown in figure 4-5.





**SECTION 5  
CORD GROUP PARTS  
INDEX**

Paragraph	Page
5-1 Cord . . . . .	5-2

**NOTE**  
The illustration and indexed legend which follow provide identification of the cord group parts.

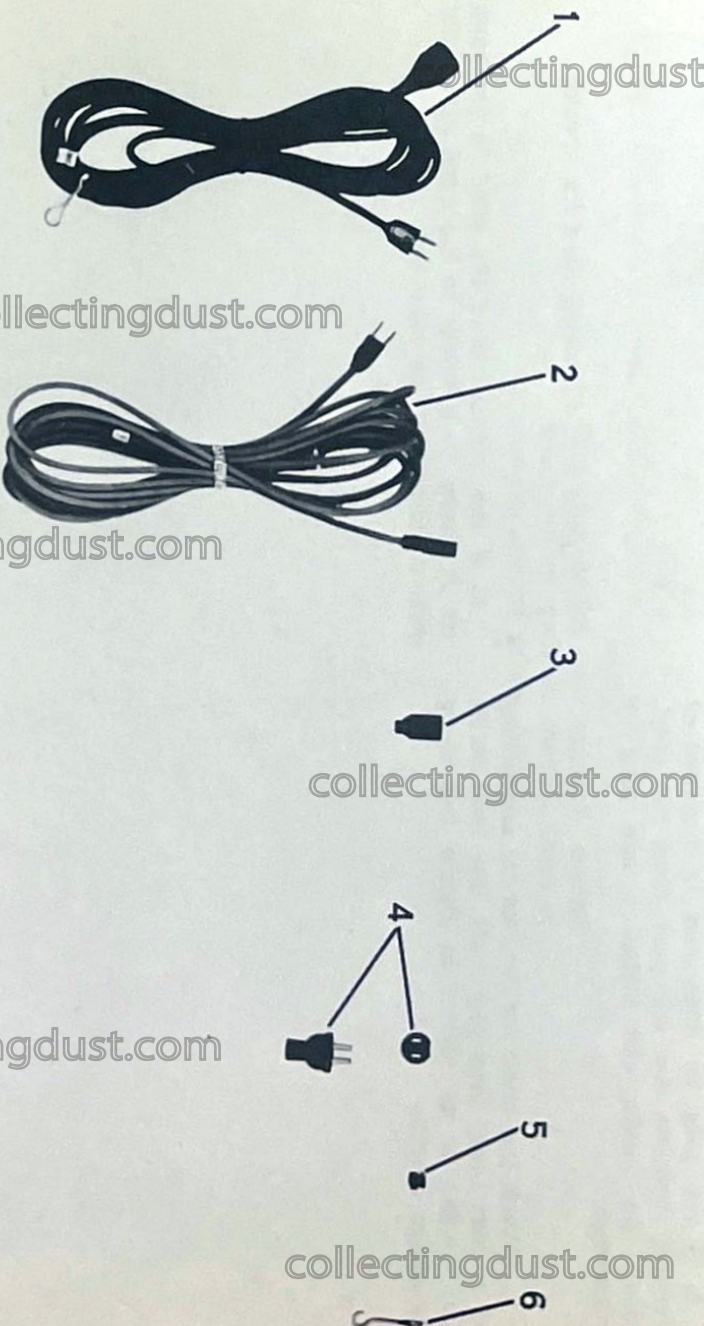


Figure 5-1. Cord Group Parts

INDEX NO.	PART NO.	PART NAME	MODELS
5-1-1	F1920S	Cord Set . . . . .	505/515
2	F192059S	Cord Set, Grey . . . . .	516/561
	F192062S	Cord Set, Brown . . . . .	562/ ( )*
3	F1925	Cord Connector, Flat . . . . .	505/ ( )*
4	F1923	Attachment Male Plug . . . . .	505/ ( )*
5	F1922	Cord Rubber Grommet . . . . .	505/ ( )*
6	F1921	Cord Wire Loop . . . . .	505/ ( )*

( ) \* For current models





### SERVICE INSTRUCTIONS

5-1. CORD. Failure of the unit to operate can be caused by interruption of the circuit in the cord between the wall outlet and the motor unit.

- a. Inspect the cord for cuts, defective insulation, damaged or loose plug or connector.
- b. If the plug or connector is damaged or burned, remove the old part from the cord, clean the leads, and install a new plug or connector.

c. Check the cord for breaks by connecting to a test lamp (see page xi) and wall outlet and flexing it as shown in figure 5-2 along its entire length.



Figure 5-2. Checking cord for breaks

d. If the insulation of the cord is damaged or if there is a break in the cord wires, the entire cord should be replaced.



### SECTION 6 ATTACHMENT GROUP PARTS

**NOTE**  
The illustration and indexed legend which follow provide identification of the attachment group parts.





collectingdust.com

collectingdust.com

Index No.	Part No.	Part Name	Quantity	Models
6-1-31	G188056	Blower Connection Gasket . . . . .	1	516/( )*
-32	G21825	Duster Brush Complete, Red . . . . .	1	505/561
	G218262S	Duster Brush Complete, Brown. . . . .	1	562/( )*
	G2201	Duster Brush Bristle Ring . . . . .	1	505/( )*
-33	G2182	Duster Brush Back, Red. . . . .	1	505/561
	G218262	Duster Brush Back, Brown . . . . .	1	562/( )*
	G223456	Hose Locking Nut Ferrule. . . . .	1	505/( )*
	G223256S	Hose Locking Nut Assembly, Red. . . . .	1	505/561
	G223262S	Hose Locking Nut Assembly, Brown . . . . .	1	562/562
	G223356	Hose Tube Swivel Assembly. . . . .	1	505/( )*
	G226057	Radiator Tool w/o Brush, Red. . . . .	1	505/561
	G226062	Radiator Tool w/o Brush, Brown . . . . .	1	562/( )*
	G226057S	Radiator Tool with Brush . . . . .	1	505/561
	G226062S	Radiator Tool with Brush . . . . .	1	562/( )*
	G226157	Radiator Tool Brush . . . . .	1	505/( )*
	G25125	Spray Gun Valve Stem . . . . .	1	505/560
	G223563	Hose SB Connection Sleeve. . . . .	1	VII/( )*
	G25205	Suds 'O' Gun Cap. . . . .	1	505/560
	G2522	Suds 'O' Gun Cloth Screen . . . . .	1	505/560
	G2508	Spray Gun Gasket. . . . .	1	505/( )*
	G2510	Spray Gun Jar . . . . .	1	VIII/( )*
	G211063S	Suction Blower Connection . . . . .	1	VII/( )*
	G222063S	Crystalator Complete. . . . .	1	VII/( )*
	G222063	Crystalator Body with Slide. . . . .	1	VII/( )*
	G222163	Crystalator Cover. . . . .	1	VII/( )*
	G223663S	Hose Complete. . . . .	1	VII/( )*
	G223863	Seal Ring Gasket S.B.C. . . . .	1	VIII/( )*
	G250061G	Spray Gun Complete, Red. . . . .	1	505/561
	G250062G	Spray Gun Complete, Brown. . . . .	1	562/( )*
	G250061S	Spray Gun Top with Sudser, Red. . . . .	1	505/561
	G250062S	Spray Gun Top with Sudser, Brown . . . . .	1	562/( )*
	G250561	Spray Gun Extension Tube Set . . . . .	1	561/( )*
	G250961	Spray Gun Gasket. . . . .	1	561/( )*
	G252061S	Suds 'O' Gun Cap, Red . . . . .	1	561/561
	G252062S	Suds 'O' Gun Cap, Brown . . . . .	1	562/( )*
	G252261	Suds 'O' Gun Cloth Screen, Red. . . . .	1	561/561
	G252262	Suds 'O' Gun Cloth Screen, Brown . . . . .	1	562/( )*

( ) \* For current models

com

ngdust.com

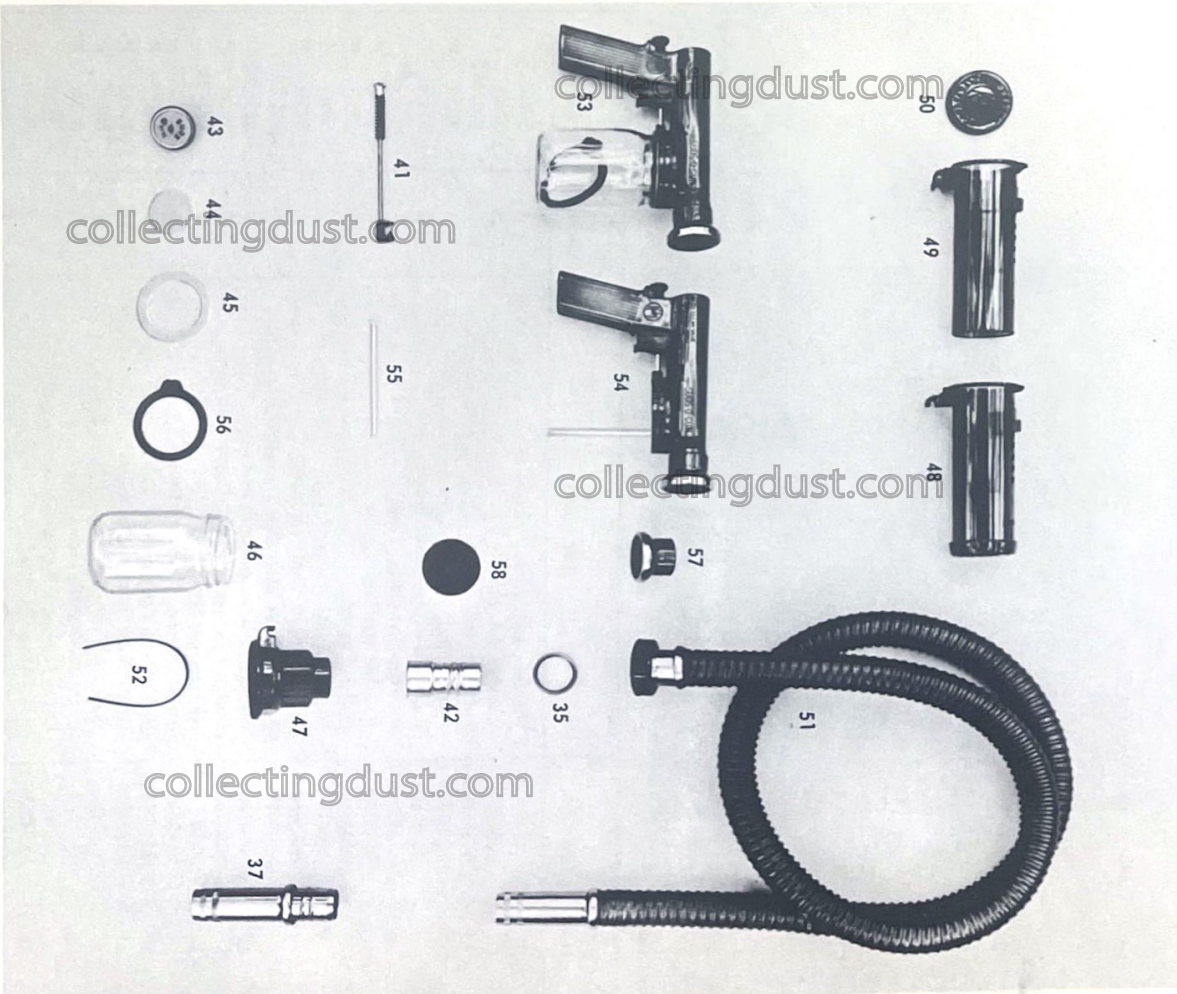
collectingdust.com

collectingdust.com

ngdust.com

collectingdust.com

co



collectingdust.com

collectingdust.com

collectingdust.com

collectingdust.com

collectingdust.com

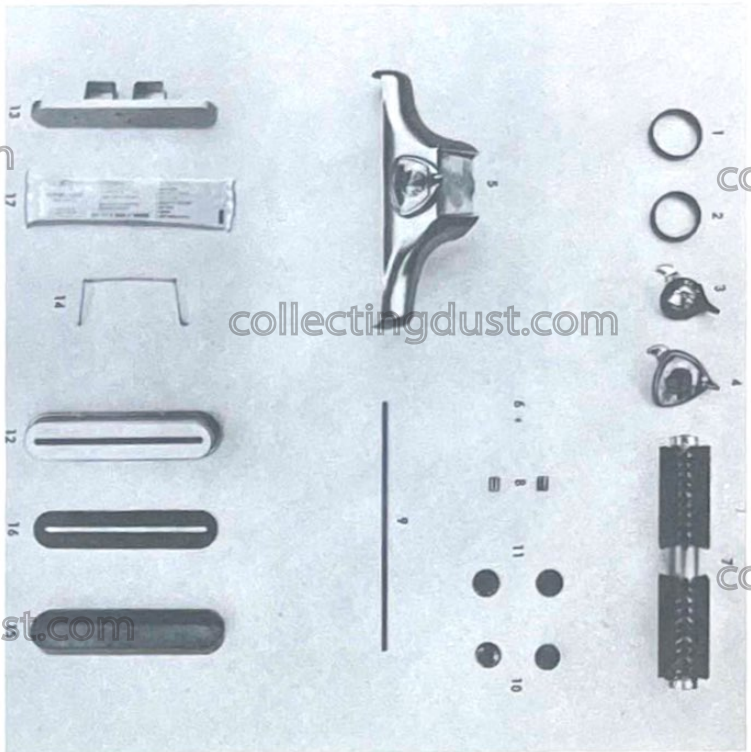
collectingdust.com

com





**SECTION 7  
POWER POLISHER GROUP**



**Figure 7-1.  
Polariser Group Parts**

Index No.	Part No.	Part Name	Quantity	Models
7-1-1	H1590	Polisher Belt.....	1	505/515
2	H301262	Polisher Belt.....	1	516/( )*
3	H144356S	Polisher Belt Lifter.....	1	505/561
4	H144362S	Polisher Belt Lifter.....	1	562/( )*
5	H300062S	Polisher Complete Less Brush.....	1	562/( )*
6	H1430	Polisher Belt Lifter Screw.....	1	505/560
7	H143060	Polisher Belt Lifter Screw.....	1	561/( )*
8	H3009	Polisher Brush.....	1	505/( )*
9	H3011	Polisher Brush.....	2	505/( )*
10	H3020	Polisher Brush Shaft (T Threaded).....	1	505/( )*
11	H302156S	Polisher Brush Shaft (Not Threaded).....	1	561/562
12	H302162S	Polisher Bumper w/Screw, Red.....	2	505/560
13	H302161	Polisher Bumper w/Screw, Brown.....	2	562/( )*
14	H302162	Polisher Bumper (Snap-On) Red.....	2	561/561
15	H310061	Polisher Bumper (Snap-On) Brown.....	2	562/562
16	H310061S	Handi Waxer Body.....	1	561/( )*
17	H310161S	Handi Waxer Pressure Plate.....	1	561/( )*
	H310461	Wire Clip Handi Waxer.....	1	561/( )*
	H310662	Cover For Handi Waxer.....	1	562/( )*
	H310661	Cover For Handi Waxer.....	1	561/561
	H310761	Handi Waxer Felt Pad.....	1	561/( )*
	H315261	Handi Waxer Cartridge 1/2 lb.....	1	561/( )*
		Available only in Case Lots - 24 lbs.)		

( ) \* For current models

7-1



**SECTION 8  
HANDI-BUTLER GROUP**

**NOTE**  
The illustration and indexed legend which follow provide identification of the handi-butler group parts.

8-1



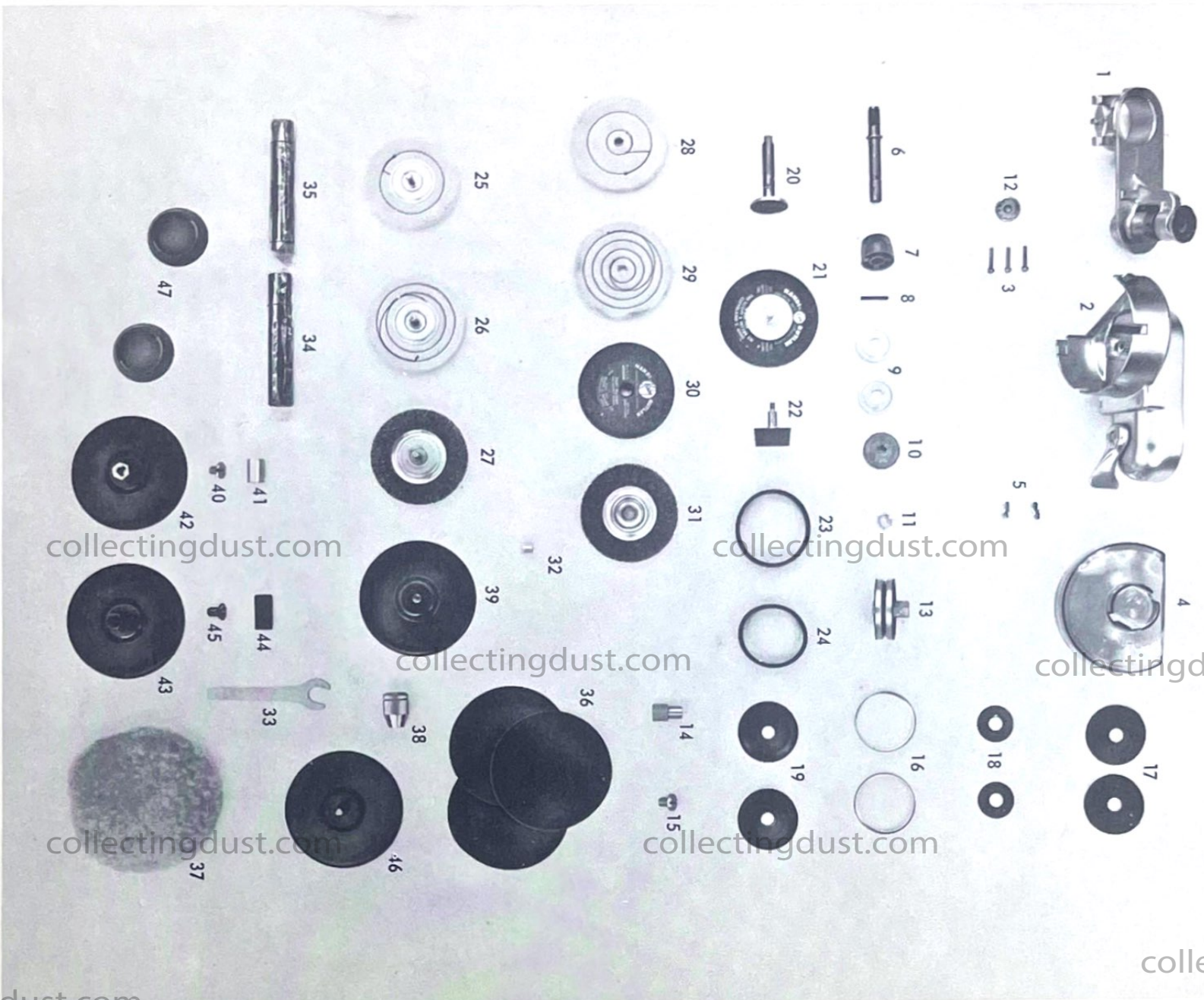


Figure 8-1. Handi-Butler, Exploded View

Index No.	Part No.	Part Name	Quantity	Models
8-1-1	K400062S	HB Frame Casting.....	1	516/( )*
2	K404059S	HB Body Casting.....	1	516/( )*
3	K4080	HB Assembly Screw 1 inch.....	3	516/( )*
4	K409258	HB Wheel Guard Cover.....	1	518A/518A
	K409259	HB Wheel Guard Cover.....	1	519/561
	K409262	HB Wheel Guard Cover.....	1	562/( )*
5	K4093	HB Wheel Guard Cover Clip.....	2	505/518
	K409358	HB Wheel Guard Cover Clip.....	2	518A/( )*
6	K402058S	HB Jack Shaft Spindle.....	1	518A/561
7	K402458	HB Jack Shaft Pulley.....	1	518A/( )*
8	K4027	HB Pulley Lock Pin.....	1	505/( )*
9	K4022	HB Jack Shaft Wheel Washer.....	2	505/561
10	K4023	HB Knurled Nut.....	1	505/518
11	K413558	HB Nut, LH.....	1	518A/561
12	K402558	HB Jack Shaft End Cover.....	1	518A/( )*
13	K413058G	HB Knife Sharpener Comp.....	1	518A/561
14	K413458	HB K. S. Extension Hub.....	1	518A/561
15	K413658	HB K. S. Assembly Screw.....	1	518A/561
16	K413258	HB K. S. Abrasive Clamp Ring.....	2	518A/561
17	K413358	HB K. S. Abrasive Disk.....	2	518A/561
18	K413158	HB K. S. Flat Settle Washer.....	2	518A/561
19	K413058	HB K. S. Rubber Wheel.....	2	518A/561
20	K402362S	HB Jack Shaft Spindle.....	1	562/( )*
21	K416062S	HB Grinding Wheel.....	1	562/( )*
22	K413062S	HB Knife Sharpener Complete.....	1	562/( )*
23	K405058	HB Belt.....	1	518A/( )*
24	K1590	HB Belt.....	1	505/518
25	K420062S	HB Flannel Buff Soft.....	1	562/( )*
26	K422062S	HB Sewed Sheeting Buff Hard.....	1	562/( )*
27	K418062S	HB Wire Wheel.....	1	562/( )*
28	K4200	HB Flannel Buff Soft.....	1	505/561
29	K4220	HB Sewed Sheeting Buff Hard.....	1	505/561
30	K4160	HB Grinding Wheel.....	1	505/561
31	K4180	HB Wire Wheel.....	1	505/561
32	K416158	HB Nylon Spindle Bushing.....	1	518A/518A
33	K419058	HB Wrench.....	1	518A/( )*
34	K4240	HB Polishing Stick Coarse.....	1	505/( )*
35	K4260	HB Polishing Stick Fine.....	1	505/( )*
36	K412662	HB Sand Paper - Set of 3 - Adh.....	1	505/( )*
37	K4140	HB Lams Wool Pad.....	1	505/( )*
38	K427062	HB Drill Chuck.....	1	562/( )*
39	K412058	HB Rubber Disk Only.....	1	518A/561
40	K412558	HB Standing Clamp Screw.....	1	518A/561
41	K412158	HB Jack Shaft Adaptor LH.....	1	505/561
42	K412158G	HB Rubber Disk Assembly LH.....	1	505/561
43	K412058S	HB Rubber Disk Assembly RH.....	1	505/561
44	K412858	HB Flex Shaft Adapter RH 3/8".....	1	518A/518A
45	K412860	HB Flex Shaft Adapter RH 1/2".....	1	519/561
46	K412958	HB Adapter Screw RH 3/8".....	1	516/518
47	K412062S	HB Rubber Disc Assembly.....	1	562/( )*
	K428058	HB Wheel Cup Stand.....	2	505/561
	K428062	HB Wheel Cup Stand.....	2	562/( )*





**SECTION 9  
FLEXIBLE SHAFT GROUP**

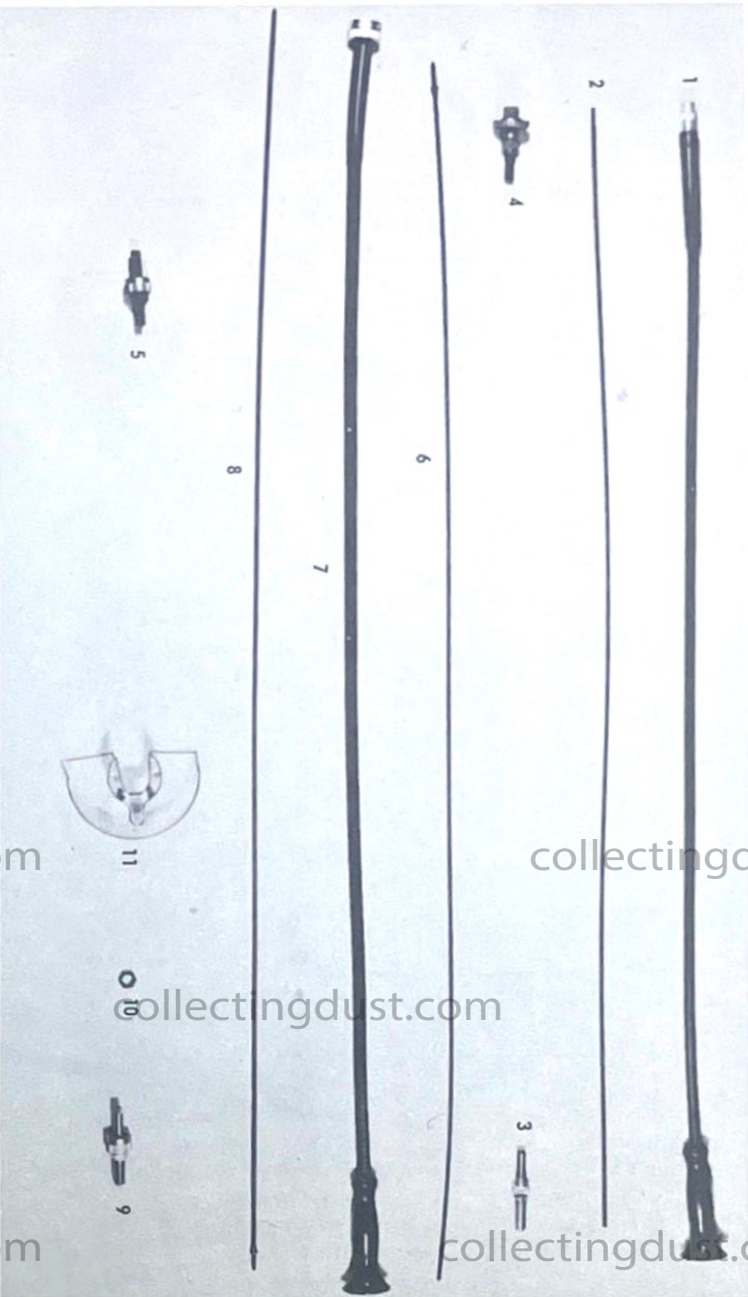


Figure 9-1. Flexible Shaft Group Parts

INDEX NO.	PART NO.	PART NAME	MODELS
9-1-1	M4173	Flex Shaft Casing w/Handle	513/518
2	M4174	Flex Shaft Inner Core	513/518
3	M4175	Flex Shaft Spindle	513/518
4	M4176	Flex Shaft Motor Coupling	513/518
5	M417858	Flex Shaft Spindle - Dark	518A/A
6	M417458	Flex Shaft Core - Indent Cup	518A/A
7	M417660	Flex Shaft Casing - Red	519/561
8	M417662	Flex Shaft Casing - Brown	562/ ( )*
9	M417460	Flex Shaft Core	519/ ( )*
10	M417560	Flex Shaft Spindle, 1/2 inch	519/ ( )*
11	M418160	Flex Shaft Nut, 1/2 inch, RH	519/ ( )*
	M416560S	Flex Shaft Shroud	519/61

( )\* For current models



**SECTION 10  
SURFACE NOZZLE GROUP,  
SPECIAL AND OBSOLETE PARTS, AND TOOLS**

**NOTE**  
The illustration and indexed legend which follow provide identification of the surface nozzle group parts, special and obsolete parts, and tools.

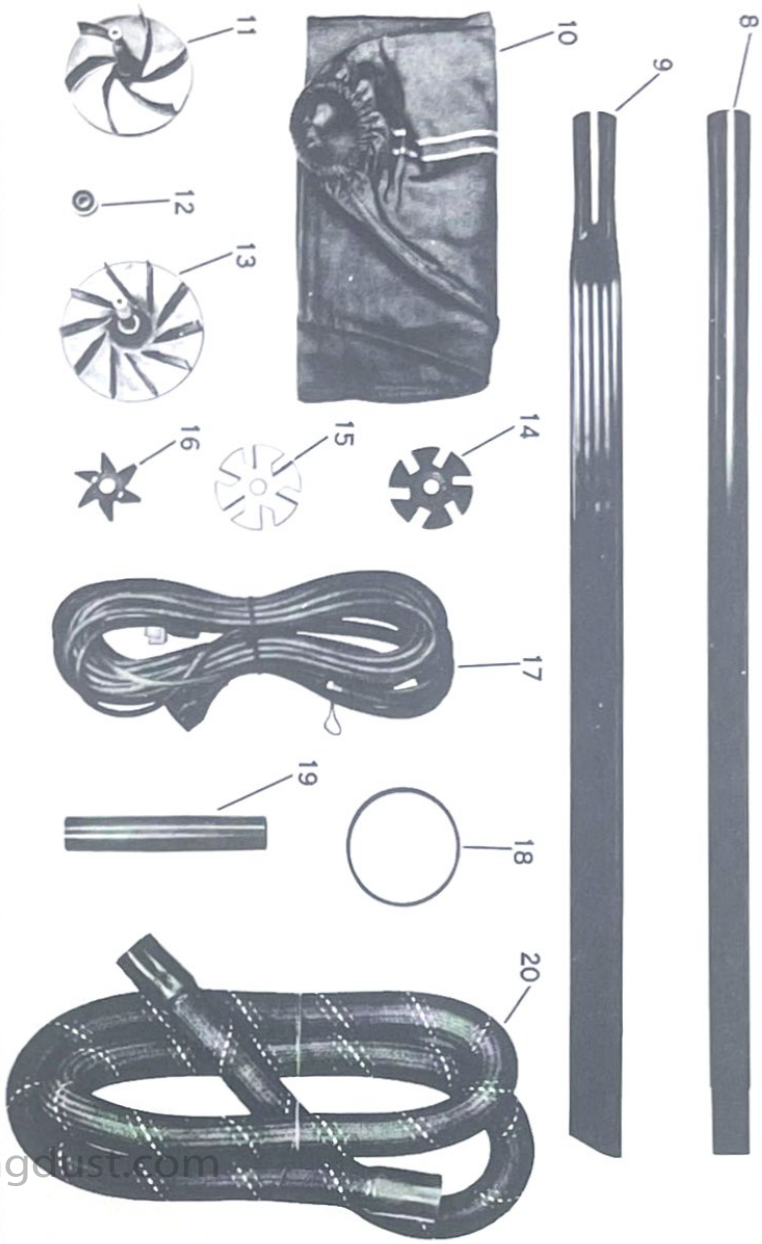




Surface Nozzle



Special And Obsolete Parts



Tools

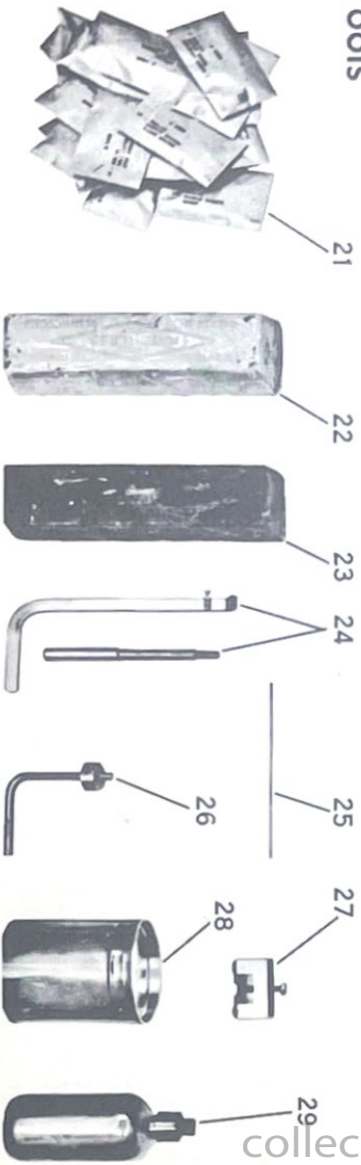


Figure 10-1. Surface nozzle group, special and obsolete parts, and tools

INDEX NO.	PART NO.	PART NAME	MODELS
10-1-1	N219758S	Surface Nozzle-Complete w/o Elbow - Red	518/561
2	N219762S	Surface Nozzle Complete w/o Elbow - Brown	562/ ( ) *
	N227557S	Surface Nozzle-Elbow Only - Red	518/561
	N227562S	Surface Nozzle Elbow Only - Brown	562/ ( ) *
3	Deleted	Deleted	
4	Deleted	Deleted	
5	N219058	Surface Nozzle Body Less Brush - Red	518/561
	N219062	Surface Nozzle Body Less Brush - Brown	562/ ( ) *
	N219658S	Surface Nozzle Brush	518/561
6	N219662S	Surface Nozzle Brush	562/ ( ) *
7	Deleted	Deleted	
8	S2245	Long Straight Extension Tube, 36 inch	
9	S2265	Long Radiator Tool, 36 inch	
10	S1905	Bag Cloth	2C
11	S1187	Fan and Pulley	2C
12	S1161	Front Bearing	2C
13	S1188	Fan and Pulley	3C
14	S1148	Armature Vent Fan, W	
15	S1147	Armature Vent Fan, E	
16	S1146	Armature Vent Fan, WL	
17	S1926	50 Foot Cord	
18	S3030	Polisher Belt (Large)	505/505
19	S2249	Plastic 6 inch Tube	2C
20	S2229	Hose	2C
21	T128	Small Screw Assortment	
22	T101	White Diamond Polishing Compound	
23	T102	Tripoli Polishing Compound	
24	T124	515 or Earlier Spring Tools	
25	T104	Fan Locking Pin	
26	T123	516 or Newer Spring Tool ( ) *	
27	T125	Rear Bearing Puller	
28	T105	One Pound Can Beating Grease	
29	T106	Bottle Plastic Cement	
	T103	Whiting or Dusting Powder	

( ) \* For current models



















# B-GROUP

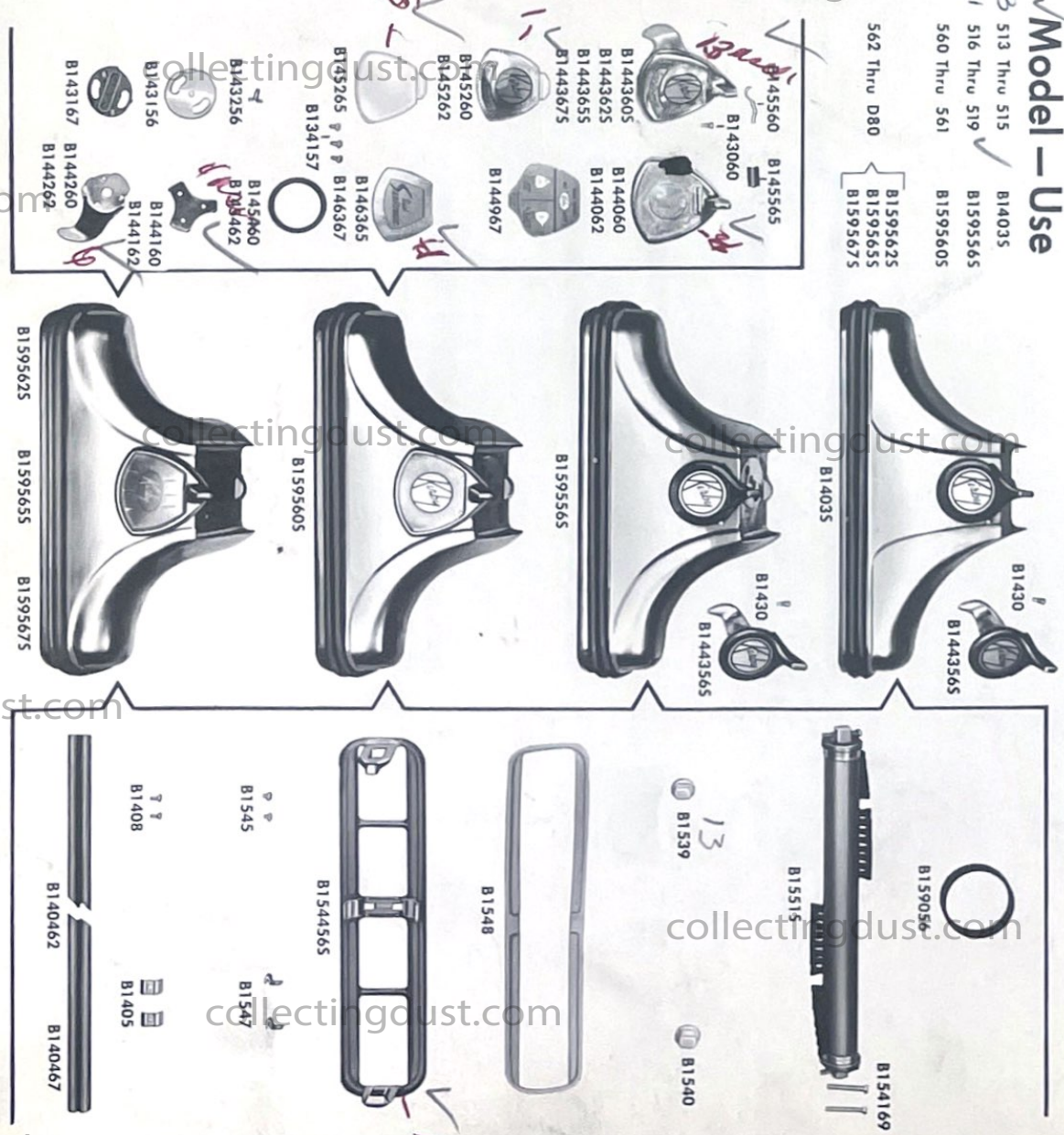
## Model 505 Thru 512

For Complete Replacement Use  
Part No. B14095



### Model - Use

- 513 Thru 515 B14035
- 516 Thru 519 B1595565
- 560 Thru 561 B1595605
- 562 Thru D80 B1595625, B1595655, B1595675

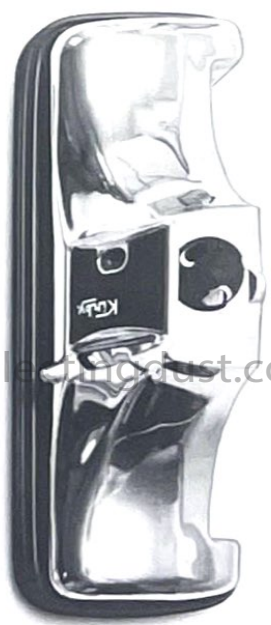




# B-GROUP

## Model-Classic ICR

*2 Puller Complete*



B1595705



B143169

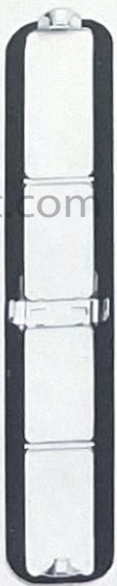


B140469

B154769

B1864

T T  
B140869



B154469S



B144069

B134756 B144869



B154869



B146369



B145369



B144269



B155169S

B154169

B1539



B159056

B1540

THE PARTS IN THIS GROUP MAKE UP BELTLIFTER REPAIR KIT - T110

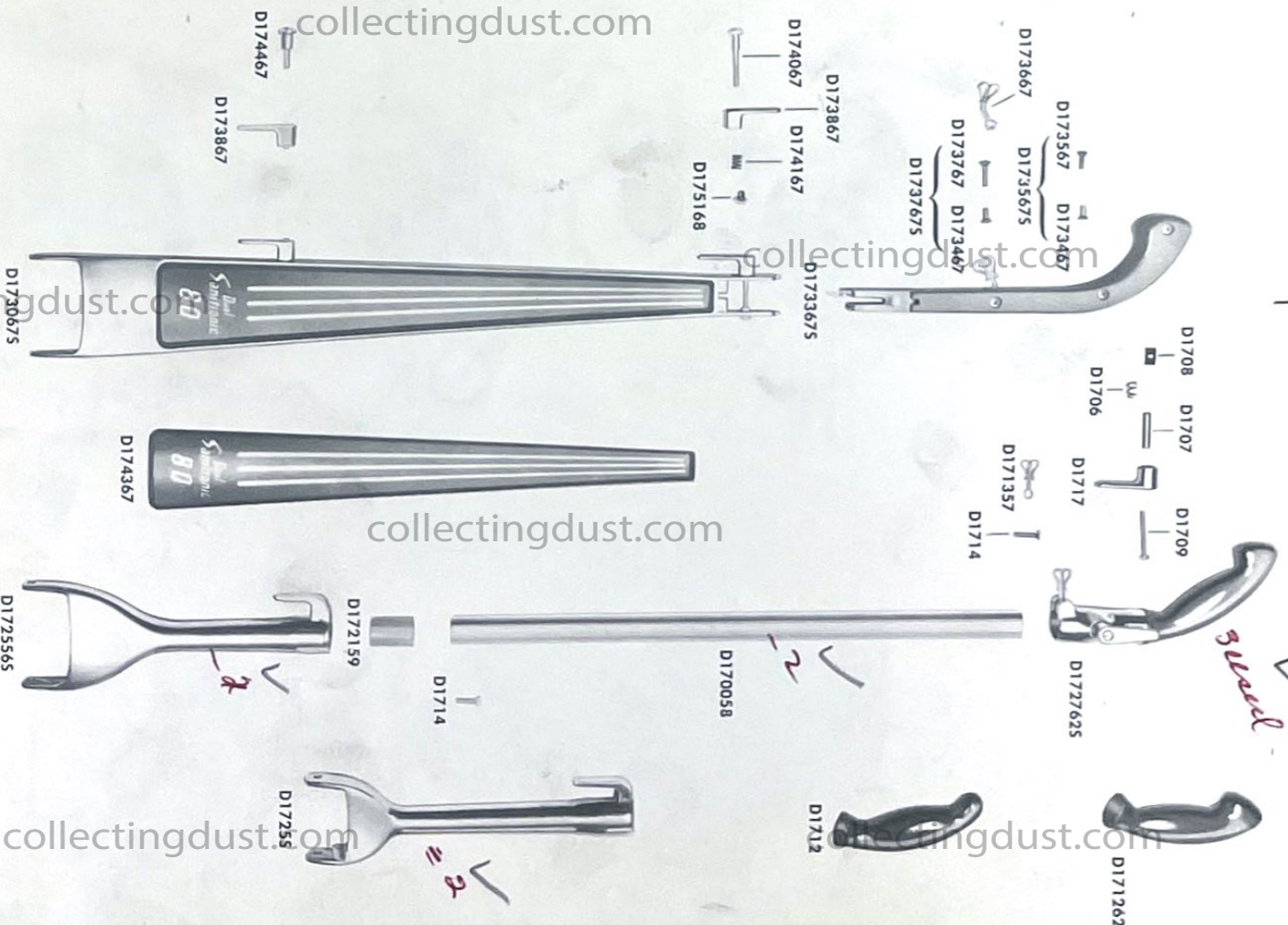
B145469	B145969
B134756	B144169
B144869	B146369



# D & F-GROUP

Model D80

Model 505 Thru D50



*Steel*

*2*

*49 + 2 Boxes*

Model 505 Thru 515

Model 516 Thru D80 & CLASSIC



F19205



F1923



F1922



F1925



F1920625  
F1920675  
F1920695



**E-GROUP**

**505 Thru 561**



E1900585

CLOTH ONLY  
E190058



E191725

E19113

**562 Thru D80**



E1900655 — E1900675



E191362

E191865 — E191867

E191762



E17995

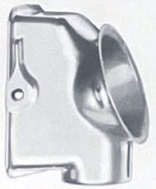


E1800



E191662

E182361



E1800625



E188056



E188056



E1860675



E1861



E1800625



E191662 — E191667



E1860625 — E1860675



# D & E-GROUP

## Model-Classic ICR



E191869



E191362



E191762



(COMPLETE BAG E190069)  
E190069



E191669



E180069S



E186069S



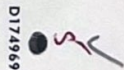
E188056



E186169



D174569



D174969



D174369



D173069S



D173369S  
SWIVEL HOOK AND  
BAG LEOP PARTS  
SAME AS MODEL D80

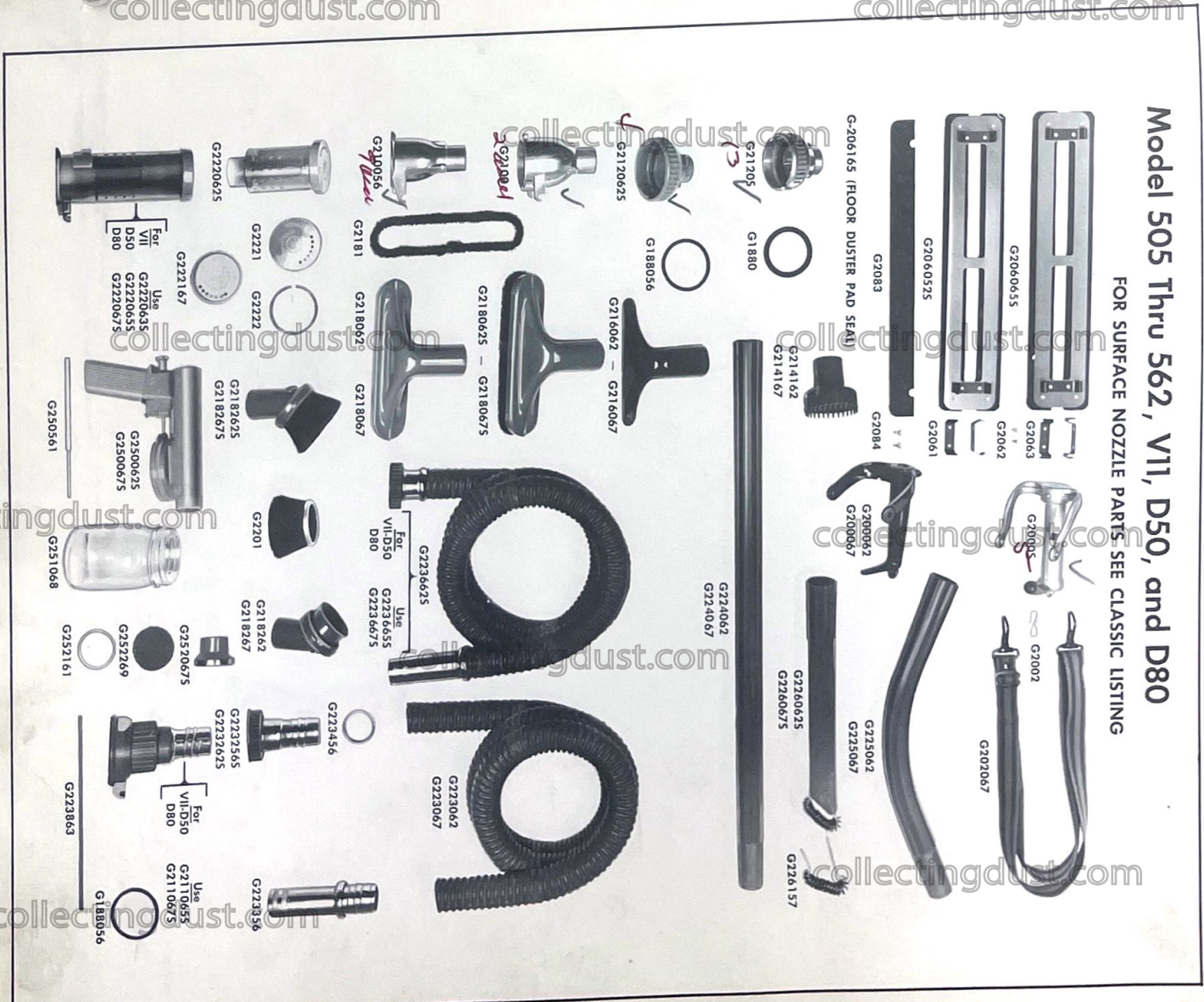
PRINTED IN U.S.A.



# G-GROUP

Model 505 Thru 562, VII, D50, and D80

FOR SURFACE NOZZLE PARTS. SEE CLASSIC LISTING



collectingdust.com

collectingdust.com

collectingdust.com

collectingdust.com

collectingdust.com

collectingdust.com

collectingdust.com

collectingdust.com

collectingdust.com

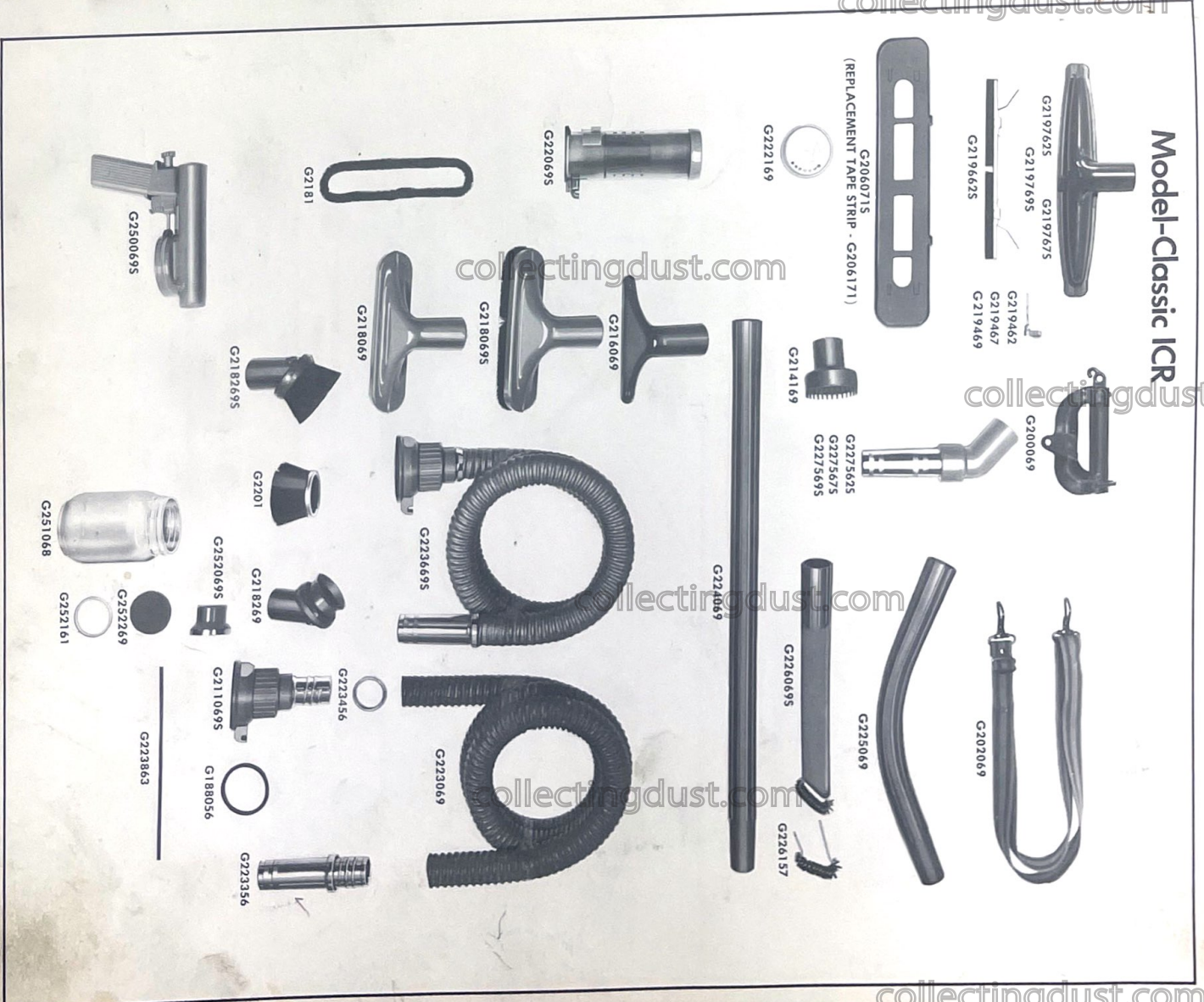
collectingdust.com

PRINTED IN U.S.A.



# G-GROUP

## Model-Classic ICR





collectingdust.com

collectingdust.com

collectingdust.com

collectingdust.com

collectingdust.com

collectingdust.com

collectingdust.com

dust.com

collectingdust.com

collectingdust.com

collectingdust.com

collect

collectingdust.com

ectingdust.com

collectingdust.com

collectingdust.com

collectin

# H-GROUP

## Miracle Head Polisher



H3000695

H302369

BRUSH AND SHAFT PARTS SAME AS BELOW

## Power Polisher

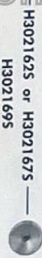


H3000625  
H3000655  
H3000675



H3009655

30

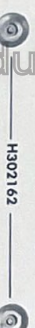


H3021625 or H3021675

H3021695



H3020



H302162



H302062

## Handi-Waxer



H310461



H310761



H310667  
H310669



H315261



H1443565

B1430



H1390



H1443625

B143060



H1443655  
H1443675

B143060



H301265

PRINTED IN U.S.A.

JUNE, 1972



collectingdust.com

collectingdust.com

collectingdust.com

collectingdust.com

collectingdust.com

collectingdust.com

collectingdust.com

collectingdust.com

collectingdust.com

collectingdust.com

collectingdust.com

collectingdust.com

PRINTED IN U.S.A.

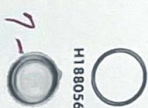
collectingdust.com

### Rug Renovator

# H-GROUP



H306769C



H188056

H308969



5137

H306264

H306364  
H306367  
H306369

H305968



H3031645  
H3031695  
(CLASSIC — H3032695)

H307364

H307569

H307665



H308769



H305864

H306164



H3043655  
H3043675  
H3043695

*Steel 'New' camp*



H305467  
H305469



H301262



H3080645  
H3080675  
H3080695

H305267  
H305269

collectingdust.com

collectingdust.com

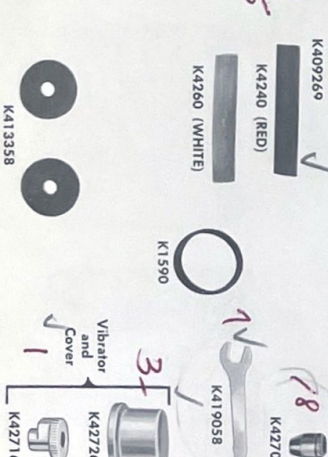
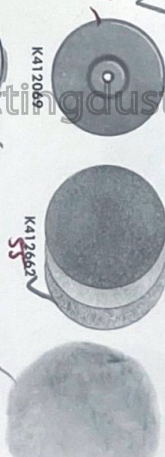
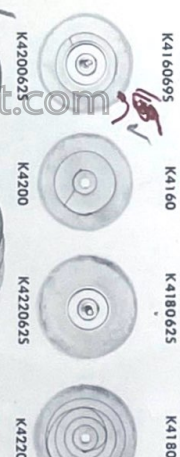


# K-GROUP

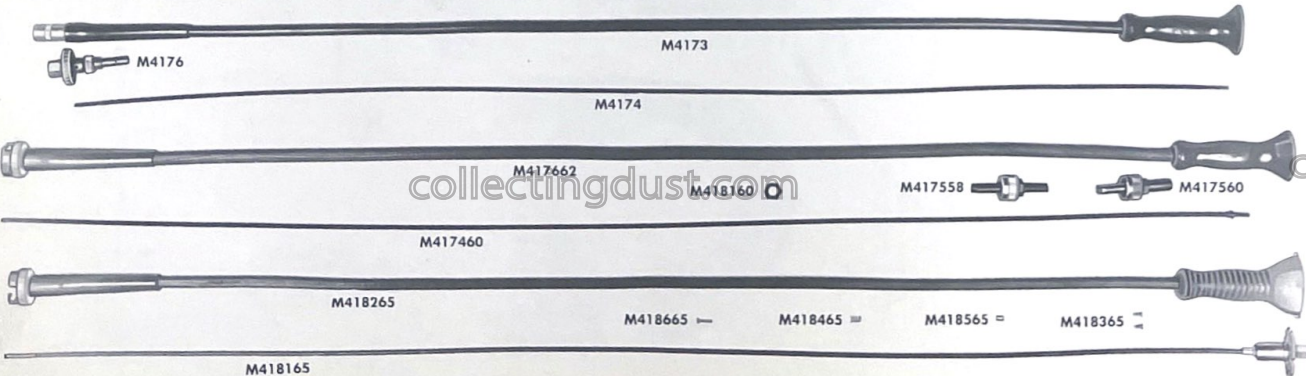
## Handi-Butler



- K4027
- K402558
- K402458
- K4023625
- K4080
- K409358
- M4130625



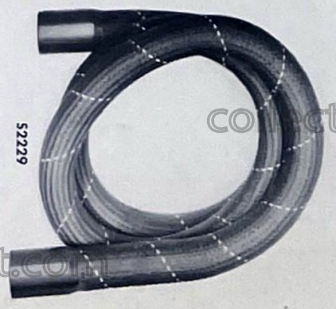
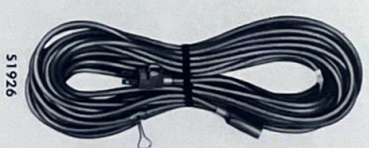
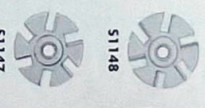
## Flexible Shaft



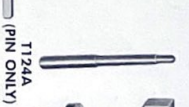
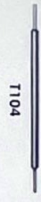


# S & T-GROUP

## Special and Tools



3 WIRE  
ADAPTER SET  
Cord — 5192568  
Ground Plate — 51110



✓ 8-T 110  
3-T 110 Classic



PARTS DESCRIPTION AND MODEL DESIGNATION FORM  
A — MOTOR GROUP

CODE NO.	DESCRIPTION	CODE NO.	DESCRIPTION
A10005	505/15 Motor Housing Section	A109467	D80/80 Saf. Swt. Wire Insulator
A100063S	516/D80 Motor Housing Casting	A1100	505/12 Foot Smt.
A100070S	1CR/1CR Motor Housing Casting	A1101	505/12 Foot Smt. Knob
A100073S	1CB/ Motor Housing Casting w/Seals	A1102	505/12 Foot Smt. Knob Screw
A1001	505/15 Handle Fork Spring	A1103	513/15 Foot Smt. Button
A100173	1CB/ Motor Bell Housing Plastic	A1104	513/15 Foot Smt. Button Spring
A1002	505/15 Handle Fork Spring Shaft	A110563	513/D80 Foot Smt.
A100273	1CB/ Bell Housing Assemb. Screw	A110566	D80/1CR Foot Smt. Press Lock
A1003	505/15 Handle Fork Spring Plate	A110573	1CB/ Foot Switch
A1004	505/15 Handle Fork Spring Washer	A110673	1CB/ Foot Smt. Screw (Top)
A1005	505/ Handle Fork Spring Clip	A110773	1CB/ Foot Smt. Screw (Bottom)
A100656	516/ Emtor Connecting Pin	A110873	1CB/ Hdlt. Socket Lead Wire
A100773	1CB/ Ft. Bearing Seal Retainer	A110973	1CR/1CR Sw. Wire Black w/Term
A100873	1CB/ Ft. Bearing Seal Retainer	A111173	1CB/ Brush Leadwire w/Clip
A1020	505/15 Rear Wheel Shaft	A111173	1CB/ Foot Switch Clip
A102056	516/D80 Rear Wheel Shaft	A111273	1CB/ Foot Switch Scuff Plate
A102069	1CR/ Rear Wheel Shaft	A111373	1CB/ H. L. Lead Tubing Orange
A1021R	505/D80 Rear Wheel Shaft Screw	A111573	1CB/ Br. Lead Tubing Black Sm.
A1021L	505/516 Lamp Socket Screw	A111673	1CB/ H. L. Tubing White—Long
A1021F	505/516 Front Shaft Clamp Screw	A111773	1CB/ MTR Tubing White—Short
A102157	1CR/1CR Lamp Socket Screw	A111873	1CB/ SS Tubing Black—Large
A102168	1CB/ Hdlt. Cap Lens Screw	A1120	505/12 Foot Switch Housing
A102269	1CR Rear Wheel Shaft Screw	A1121	505/12 Foot Switch Holding Screw
A1039A	505/518 Field C-20457 w/U Term	A1122	505/12 Foot Switch Insulating Tube
A103959A	519/519 Field C-20457 w/Flag Term	A1123	505/15 Swt. Housing Screw
A103960A	560/V11 Field 1335-1	A1124	513/15 Foot Smt. Housing
A103967A	D50/D80 Field 1332-1A Press Lock Switch	A1125	513/D80 Foot Smt. Holding Screw
A103969A	1CR/1CR Field 20212	A112569	1CR/1CR Foot Smt. Holding Screw
A103973A	1CB/ Field-Omega	A112669	1CR/1CR Foot Smt. Mfg. Plate w/Arm
A104270A	1CR/1CR Field 220 Volt 2 Speed C-20425	A112769	1CR/1CR Foot Smt. Mfg. Plate
A104369S	1CR/1CR Field Term Lead Wire w/Clip	A1130S	505/15 Safety Swt. Base
A104465S	D50/D80 Field Term Lead Wire and Clip	A1134	505/15 SAF SW Terminal Screw
A104559	519/D80 Field Term Clip	A1140	505/15 SAF SW Wire Housing
A1046	505/518 Field Screw and Nut	A1141	505/15 SAF SW Wire/Plastic Tube
A104659	519/D80 Field Screw	A1142	505/15 SAF SW Rubber Grommet
A104669	1CR/1CR Field Screw	A114959A	505/519 Armature 20456
A104673	1CB/ Field Screw	A114960A	560/V11 Armature 1962-1
A104773	1CB/ Field Screw Nut	A114967A	D/50/D80 Armature 1959-1A
A1047	505/515 Field Baffle Paper	A114969A	1CR/1CR Armature 20211
A106859	519/ Comm. Brush Retainer Clip	A114973A	1CB/ Armature
A106969	1CR/1CR Snap Bushing	A115167	D80/1CR Hdlt. Harness Stud
A107159	519/D80 Comm. Brush Holder Cover	A115270A	1CR/1CR Armature 220 Volt B-20426-2-SP.
A107173	1CB/ Carbon Brush Cap	A1155	505/1CR Rear Bearing
A107259S	519/D80 Comm. Brush Holder Section	A115573	1CB/ Rear Bearing
A107269S	1CR/ Comm. Brush Holder Section	A1156	505/1CR RR Bearing Finger Spring
A1082S	505/515 Hdlt. Socket and Wire	A115673	1CB/ Rear Bearing Finger Spring
A108268	516/1CR Hdlt. Socket w/Wire	A1157	505/1CR RR Bearing Grease RE Washer
A108456	516/D80 Hdlt. Wire Tubing Clamp	A1160	505/1CR Front Bearing Only
A108973	1CB/ Hdlt. Lens and Socket	A116073	1CB/ Front Bearing
A109073	1CB/ Hdlt. Guard Wire Cover	A1164	505/15 Front Bearing Fat Washer
A109273	1CB/ Hdlt. Bulb	A116456	516/1CR Front Bearing Fat Washer
A109356	505/V11 Field Wire Insul. Tubing	A116556	516/1CR Front Bearing Thrust Washer
A109367	D80/80 Field Wire Tubing Short	A116656	516/1CR Front Bearing Plate Only



**PARTS DESCRIPTION AND MODEL DESIGNATION FORM**  
**A — MOTOR GROUP (Cont'd)**

CODE NO.	DESCRIPTION	CODE NO.	DESCRIPTION
A1167	505/1CR Front Bearing Plate Screw	A134365	D50/1CR Dual Safety Switch
A1168565	516/1CR Front Bearing Plate Comp	A134373	1CB/ Safety Switch
A1170	505/15 Front Bearing Thrust Washer	A134456	516/1CR SAF SW Attaching Screw
A1174	505/15 Front Bearing Plate Only	A134556	516/V11 SAF SW Wire Connector
A1174S	505/15 Front Bearing Plate Comp	A134656	516/1CR Fan Hsg. to Mr. Hsg. Screw
A118067	505/D80 Comm. Carbon Brush	A134673	1CB/ Fan Case to Motor Setcrew
A118069	1CR/ Comm. Carbon Brush	A134756	516/ Fan Hsg. to Mr. Hsg. Screw
A1181	505/18 Comm. Brush Cap	A134856	516/ Fan Housing Sealer Cement
A1189S	505/15 Fan Complete	A1351	A1350 SAF SW Slide
A119056S	516/ Fan Complete	A1351	505/15 SAF SW Insulator Small
A119268	516/D80 Motor Hsg. Vent Seal Thick	A135169	1CR/ Fan Hsg. to Mr. Hsg. Screw
A119269	1CR/1CR Motor Hsg. Vent Seal	A1352	505/15 SAF SW Insulator Large
A119273	1CB/ Vent Seal Sponge	A1353	505/15 SAF SW Slide Spring
A119368	D80/D80 Motor Hsg. Vent Seal Thin	A135373	1CB/ Safety SW Screw Sleeve
A119369	1CR/1CR Vent Seal Board Backing	A1354	505/15 SAF SW Slide Spring Rivet
A119373	1CB/ Vent Seal Back	A135473	1CB/ Safety SW Screw
A1195	505/15 Handle Lock	A135556S	516/D80 Motor Housing Shell
A1196	505/15 Handle Lock Spring	A135569S	1CR/1CR Motor Housing Shell
A1197	505/15 Handle Lock Screw	A135573S	1CB/ Motor Housing Shell
A1200S	505/15 Fan Case	A135860	516/ Housing Shell Bushing LH Large
A120065S	516/V11 Fan Case	A135960	516/ Housing Shell Bushing RH Small
A120065S	D50/80 Fan Case	A1360	505/15 Ft. Whl. Bracket Screw
A120070S	1CR/1CR Fan Case Square Horn	A1361	505/15 Ft. Whl. Bracket Screw
A120073S	1CB/ Fan Case	A1362	505/15 Ft. Whl. Bracket Screw
A1210	505/15 Nozzle Lock	A136367	516/1CR Hand Fork Bushing Clip
A121056	516/ Nozzle Lock	A136373	1CB/ Hand Fork Bushing Clip
A1211	505/ Nozzle Lock Screw	A136662	516/D50 Handle Lock Button Tail
A121656	505/ Nozzle Lock Spring	A136667	D80/D80 Handle Lock Button Green
A122056	516/62 Nozzle Seal O-Ring Rubber	A136669	1CR/1CR Handle Lock Button Brown
A122058	V11/ Nozzle Seal O-Ring	A136759	1CB/ Handle Lock Button
A1280	505/15 Fan Hsg. to Mr. Hsg. Screw	A136956	516/ Handle Lock Spring
A1300S	505/15 Frt. Whl. Brkt. Casting	A136959	519/ Handle Lock Shaft
A1310S	505/15 Frt. Whl. Brkt. Shaft Only	A137067	516/1CR Handle Fork Spring
A131656S	516/D80 Frt. Whl. Brkt. Shaft Only	A137073	516/1CR Handle Fork Spring
A131669S	1CR/1CR Frt. Whl. Brkt. Shaft Only	A137156	516/73CR Handle Fork Spring Shaft
A131673S	1CB/ Frt. Whl. Brkt. Shaft	A137256	1CB/ Handle Fork Spring Shaft
A131969	1CR/1CR Front Wheel Brown	A137273	516/1CR Handle Fork Spring Bushing
A132062	1CB/ Front Wheel	A137273	1CB/ Handle Fork Spring Bushing
A132067	D80/D80 Wheel Tan	A137356	516/1CR Handle Fork Spring Screw
A132069	1CR/1CR Wheel Green	A137373	1CB/ Handle Fork Spring Screw
A132069	1CB/ Rear Wheel Brown	A137456	516/7 Handle Fork Spring Washer
A132073	1CB/ Rear Wheel	A137556	516/7 Handle Fork Spring Yoke
A1321	505/ Wheel Screw	A137556	516/V11 Handle Fork Spring Spreader
A1330	505/15 Ratchet Lock	A137756	516/V11 Handle Fork Spring Spreader Screw
A133056	516/D80 Ratchet Lock	A137856	516/ Handle Fork Pin
A133069	1CR/1CR Ratchet Lock	A137973	1CB/ Handle Fork Oil Lite Brg.
A133073	1CB/ Ratchet Lock	A138456	516/D80 Housing Shell Assy. Screw
A1331	505/ Ratchet Lock Spring	A138470	1CR/ Housing Shell Assy. Screw
A1340	505/V11 Front Shaft Clamp	A138562S	516/D50 Foot Smt. Button Tan
A134073	D50/ Front Shaft Clamp	A138567S	D80/D80 Foot Smt. Button Green
A134157	516/D80 Front Shaft Clamp Screw	A138569	1CR/1CR Foot Smt. Lever
A134356	516/V11 Safety Switch	A1545	505/D80 Hdt. Bumper Rivet

**PARTS DESCRIPTION AND MODEL DESIGNATION FORM**  
**A — MOTOR GROUP (Cont'd)**

CODE NO.	DESCRIPTION	CODE NO.	DESCRIPTION
A1600	505/15 Hdt. Cap Comp.	A1630	505/15 Hdt. Cap Rear Casting
A1600S	505/15 Hdt. Cap Comp.	A163156	516/ Hdt. Cap Hinge Pin
A160062S	516/D50 Hdt. Cap Comp.	A1632	505/18 Hdt. Cap Hinge Washer
A160067S	D80/D80 Hdt. Cap Comp.	A163259	519/ Hdt. Cap Hinge Spring
A160069S	1CR/1CR Hdt. Cap Fr. Sec.	A1640	505/15 Hdt. Cap Screw Long
A160073S	1CB/ Hdt. Cap	A1641	505/15 Hdt. Cap Screw Short
A1610	505/15 Lamp Socket Clip	A1650	505/1CR Bulb 110 Volt
A1619	505/15 Hdt. Trim	A1652	505/1CR 220 Volt Hdt. Bulb
A161962	516/D50 Hdt. Trim	A1660	505/15 Handle Fork Pin
A161967	D80/D80 Hdt. Trim	A1681	505/D80 Name Plate Drive Screw
A161969	1CR/1CR Hdt. Trim		
A161973	1CB/ Hdt. Trim		

**NOZZLE GROUP**

B134157	560/D80 Belt Lifter Assy. Screw	B145469	1CR/ Belt Lifter Bearing
B134756	1CR/ Belt Lifter Assy. Screw	B145560	560/V11 Belt Lifter Cap Insert Clip
B1402	505/512 Nozz. Bumper Rivet	B145565	D50/D80 Belt Lifter Cap Insert Clip
B1403S	505/515 Nozz. Comp. Less Brush	B145869	1CR/ Spacer Washer Thin
B140462	505/D50 Nozz. Trim	B145969	1CR/ Spacer Washer Thick
B140467	D80/D80 Nozz. Trim	B1461S	505/512 Brush Adl. Screw Large
B140469	1CR/1CR Nozz. Trim	B1463S	505/512 Brush Adl. Screw Small
B140473	1CB/ Nozzle Trim	B14636S	D50/D50 Belt Lifter Cap Insert Label
B1405	505/D80 Nozz. Trim End Clamp	B146367	D80/D80 Belt Lifter Cap Insert Label
B1408	513/D80 Nozz. Trim End Rivet	B146369	1CR/1CR Belt Lifter Front Label
B140869	1CR/ Nozz. Bumper End Rivet	B146373	1CB/ Belt Lifter Front Label
B1420S	505/512 Rug Plate w/Felt Strip	B1482S	505/12 Floor Brush Complete
B1423	505/512 Rug Plate Hinge	B152773	1CB/ Rug Plate Retainer Clip
B1430	505/519 Belt Lifter Stop Screw	B1543	513/513 Brush Adl. Screw 1"
B143060	560/D80 Belt Lifter Stop Screw	B154469S	513/D80 Rug Plate w/Gasket
B143069	1CR/ Belt Lifter Stop Rivet	B154473S	1CB/ Rug Plate w/Gasket
B143169	1CR/1CR Nozz. Air Adl. Plate	B1545	513/D80 Rug Plate Hinge Rivet
B143173	1CB/ Nozz. Air Adl. Plate	B1547	513/D80 Rug Plate Hinge
B144060	560/561 Belt Lifter Cap Casting	B154769	1CR/ Rug Plate Hinge
B144062	562/D80 Belt Lifter Cap Casting	B1548	513/D80 Rug Plate Plastic Gasket
B144069	1CR/ Belt Lifter Cap Casting	B154869	1CR/ Rug Plate Gasket
B144160	560/561 Belt Lifter Cap Spring	B1551S	513/D80 Brush Complete
B144162	562/D80 Belt Lifter Cap Spring	B155169S	1CR/ Floor Brush Comp.
B144169	1CR/ Belt Lifter Wave Washer	B1590	505/15 Belt
B144260	560/561 Belt Lifter Cap Hook	B159056	516/ Belt
B144262	562/D80 Belt Lifter Cap Hook	B159556S	516/19 Nozz. Comp. Less Brush
B144373	1CR/ Belt Lifter Hook	B159560S	560/561 Nozz. Comp. Less Brush
B144375	505/519 Belt Lifter	B159562S	562/V11 Nozz. Comp. Less Brush
B144360S	560/61 Belt Lifter Complete	B159565S	D50/D50 Nozz. Comp. Less Brush
B144362S	562/V11 Belt Lifter Complete	B159567S	D80/D80 Nozz. Comp. Less Brush
B144365S	D80/D50 Belt Lifter Complete	B159570S	1CR/1CR Nozz. Comp. Less Brush
B144367S	D80/D80 Belt Lifter Complete	B159573S	1CB/ Nozz. Comp. Less Brush
B144669	1CR/ Belt Lifter Assy. Nut	B1864	505/512 Rug Plate Hinge Rivet
B144967	560/D80 Belt Lifter Cover Label	B340173	1CB/ Shag King Time
B145265	D50/D80 Belt Lifter Cap Insert Plastic	B341173	1CB/ Shag King Bumper w/Screw
B145369	1CR/ Belt Lifter Indicating Label	B342173	1CB/ Shag King Adjustment Arm
B145460	560/61 Belt Lifter Cap Bearing Ring		
B145462	562/D80 Belt Lifter Cap Bearing Ring		



**PARTS DESCRIPTION AND MODEL DESIGNATION FORM**  
**D — HANDLE GROUP**

CODE NO.	DESCRIPTION	CODE NO.	DESCRIPTION
D170058	505/D50 Handle Tube	D173467	D80/ Bag Loop Screw Nut
D1706	513/D50 Cord Swivel Hook Spring	D173567	D80/ Handle Grip Screw
D1707	513/D50 Cord Swivel Hook Tube	D173667	D80/1CR Bag Loop Hook
D1708	513/D50 Cord Swivel Hook Nut	D173673	1CB/ Bag Loop Hook
D1709	513/D50 Cord Swivel Hook Screw	D173767	D80/ Bag Loop Hook Screw
D1712	505/513 Handle Grip Plastic	D173867	D80/ Cord Hook Swivel
D171262	513/D50 Handle Grip Plastic	D174067	D80/ Cord Hook Swivel Screw
D171357	517/D50 Bag Loop Hook	D174167	D80/ Cord Hook Swivel Screw Spring
D1714	505/D50 Handle Sleeve or Fork Screw	D174367	D80/D80 Handle Fork Label
D1717	513/D50 Cord Swivel Hook	D174369	1CR/1CR Handle Fork Label
D172159	519/D50 Handle Tube Insulator	D174373	1CB/ Handle Fork Label
D17255	505/15 Handle Fork	D174467	D50/ Cord Hook Shoulder Screw
D172556S	516/D50 Handle Fork	D174567	D50/D80 Handle Fork Rear Insert
D172762S	562/D50 Handle Grip Comp.	D174569	1CR/1CR Handle Back Insert
D173067S	D80/D80 Handle Fork Comp.	D174573	1CB/ Handle Back Insert
D173069S	1CR/1CR Handle Fork Comp.	D174969	1CR/1CR Handle Back Insert Screw
D173073S	1CB/ Handle Fork Comp.	D174973	1CB/ Handle Back Insert Screw
D173367S	D80/D80 Handle Grip Comp.	D175168	D80/ Cord Hook Swivel Screw Nut
D173369S	1CR/1CR Handle Grip Comp.	D175273	1CB/ Cord Retainer
D173373S	1CB/ Handle Grip Comp.		

**EMTOR GROUP**

E1799S	505/15 Emtor Upper Casting	E190069	1CR/1CR Bag Cloth
E180062S	516/D80 Emtor Upper Casting	E190069S	1CR/1CR Bag Complete
E180069S	1CR/ Emtor Upper Casting	E190073	1CB/ Bag Cloth
E182361	505/61 Emtor Sweet Air Plug	E190073S	1CB/ Bag Complete
E186062S	505/D50 Emtor Bottom Tray	E1912S	505/561 Bag Clamp w/Chain and Loop
E186067S	D80/D80 Emtor Bottom Tray	E1913	505/561 Bag Chain and Loop Only
E186069S	1CR/1CR Emtor Bottom Tray	E191362	562/1CR Bag Chain and Loop Only
E186073S	1CB/ Emtor Bottom Tray	E191662	505/D50 Bag Plastic Guard
E1861	505/D80 Emtor Bottom Felt Gasket	E191667	D80/D80 Bag Plastic Guard
E186169	1CR/ Emtor Bottom Rubber Gasket	E191669	1CR/1CR Bag Plastic Guard
E1880	505/15 Emtor Round Rubber Gasket	E191673	1CB/ Bag Plastic Guard
E188056	516/ Emtor Round Rubber Gasket	E191762	562/ Bag Top Formed Wire
E190058	505/61 Bag Cloth	E191865	562/D50 Bag Top Cover
E190058S	505/61 Bag Complete	E191867	D80/D80 Bag Top Cover
E190065	562/D50 Bag Cloth	E191869	1CR/1CR Bag Top Cover
E190065S	562/D50 Bag Complete	E191873	1CB/ Bag Top Cover
E190067	D80/D80 Bag Cloth	E192173	1CB/ Bag Top Cover Loop
E190067S	D80/D80 Bag Complete	E275073	1CB/ Odorific Deodorizer

**F — CORD GROUP**

F1920S	505/515 Cord (Round End) 24 Ft.	F192073S	1CB/ Cord 24 Ft.
F192062S	516/D50 Cord 24 Ft.	F1923	505/ Attachment Male Plug
F192067S	D80/D80 Cord 24 Ft.	F1925	516/ Cord Connector Flat
F192069S	1CR/1CR Cord 24 Ft.		

**G — ATTACHMENT AND SURF. NOZZ. GROUP**

G1880	505/15 Blower Conn. Gasket	G200069	1CR/1CR Lifter Grip
G188056	516/ Blower Conn. Gasket	G200073	1CB/ Lifter Grip
G2000S	505/15 Lifter Grip	G2002	505/V11 Lifter Grip S Hook
G200062	516/D50 Lifter Grip	G202067	505/D80 Shoulder Strap
G200067	D80/D80 Lifter Grip	G202069	1CR/ Shoulder Strap

**PARTS DESCRIPTION AND MODEL DESIGNATION FORM**  
**G — ATTACHMENT AND SURF. NOZZ. GROUP (Cont'd)**

G202073	1CB/ Shoulder Strap	G222063S	V11/V11 Crystallator Comp. 1 Speed
G206052S	505/512 Floor Duster Pad Comp.	G222065S	D50/D50 Crystallator Comp. 2 Speed
G206065S	513/D80 Floor Duster Pad Comp.	G222067S	D80/D80 Crystallator Comp. 2 Speed
G206069S	1CR/ Floor Duster Pad Comp.	G222069S	1CR/1CR Crystallator Comp.
G2061	505/512 Floor Duster Pad Clip	G222073S	1CB/ Crystallator Comp.
G206165	D50/D80 Floor Duster Pad Seal	G2221	505/62 Crystallator Body Cover
G206169	1CR/ Floor Duster Pad Seal	G222163	V11/D50 Crystallator Cover
G2062	505/D80 Floor Duster Pad Clip Rivet	G222167	D80/D80 Crystallator Cover
G2063	513/D80 Floor Duster Pad Clip	G222169	1CR/1CR Crystallator Cover
G2083	505/D80 Floor Duster Pad Felt Strip	G222173	1CB/ Crystallator Cover
G208369	1CR/ Floor Duster Pad Felt Strip	G2222	505/62 Crystallator Cap Wave Washer
G2084	505/D80 Floor Duster Pad Felt Rivet	G223062	505/D50 Hose Less Fittings
G2100	505/15 Suction Connection	G223067	D80/D80 Hose Less Fittings
G210056	516/62 Suction Connection	G223069	1CR/1CR Hose Less Fittings
G211065S	V11/D50 Suction Blower Conn.	G223073	1CB/ Hose Less Fittings
G211067S	D80/D80 Suction Blower Conn.	G223262S	562/62 Hose Locking Nut Assy.
G211069S	1CR/1CR Suction Blower Conn.	G223356	505/1CR Hose Tube Swivel Assy.
G211073S	1CB/ Suction Blower Conn.	G223373	1CB/ Hose Tube Swivel Assembly
G2120S	505/15 Blower Conn.	G223456	505/ Hose Locking Nut Ferrule
G212062S	516/62 Blower Conn.	G223563	V11/ Hose Locking Sleeve
G214162	562/D50 Massage Cup	G223662S	562/62 Hose Comp.
G214167	D80/D80 Massage Cup	G223665S	V11/D50 Hose Comp. w/SBC
G214169	1CR/1CR Massage Cup	G223667S	D80/D80 Hose Comp.
G216062	1CB/ Massage Cup	G223669S	1CR/ Hose Comp.
G216067	505/D50 Utility Air Nozz.	G223673S	1CB/ Hose Comp.
G216069	D80/D80 Utility Air Nozz.	G223863	V11/ Seal Ring Strip Gasket
G216073	1CB/ Utility Air Nozz.	G224067	505/D50 Ext. Wand Straight
G218062S	562/D50 Upholstery Brush Comp.	G224069	D80/D80 Ext. Wand Straight
G218067S	D80/D80 Upholstery Brush Comp.	G224073	1CB/ Ext. Wand Straight
G218069S	1CR/1CR Upholstery Brush Comp.	G225062	505/D50 Ext. Wand Curved
G218073S	1CB/ Upholstery Brush Comp.	G225067	D80/D80 Ext. Wand Curved
G218062	562/D50 Upholstery Brush Back	G225069	1CR/1CR Ext. Wand Curved
G218067	D80/D80 Upholstery Brush Back	G225073	1CB/ Ext. Wand Curved
G218069	1CR/1CR Upholstery Brush Back	G226062S	505/D50 Radiator Tool w/Brush
G218073	1CB/ Upholstery Brush Back	G226067S	D80/D80 Radiator Tool w/Brush
G2181	505/ Upholstery Brush Strip	G226069S	1CR/1CR Radiator Tool w/Brush
G218262S	562/D50 Duster Brush Comp.	G226073S	1CB/ Radiator Tool w/Brush
G218267S	D80/D80 Duster Brush Comp.	G226157	505/ Radiator Tool Brush
G218269S	1CR/1CR Duster Brush Comp.	G227562S	518/D50 Surface Nozz. Elbow Only
G218273S	1CB/ Duster Brush Comp.	G227567S	D80/D80 Surface Nozz. Elbow Only
G218262	D62/D50 Duster Brush Back	G227569S	1CR/1CR Surface Nozz. Elbow Only
G218267	D80/D80 Duster Brush Back	G227573S	1CB/ Surface Nozz. Elbow Only
G218269	1CR/1CR Duster Brush Back	G250062S	505/D50 Spray Gun Top Less Jar
G218273	1CB/ Duster Brush Back	G250067S	D80/D80 Spray Gun Top Less Jar
G219462	562/D50 Surface Nozz. Brush Cam	G250069S	1CR/1CR Spray Gun Top Less Jar
G219467	D80/D80 Surface Nozz. Brush Cam	G250073S	1CB/ Spray Gun Top Less Jar
G219469	1CR/1CR Surface Nozz. Brush Cam	G250561	505/ Spray Gun Extension Tube Set
G219473	1CB/ Surface Nozz. Brush Cam	G251068	505/ Spray Gun Jar Plastic
G219662S	518/ Surface Nozz. Brush	G252062S	561/D50 Suds O Gun Cap
G219762S	518/D50 Surface Nozz. Less Elbow	G252067S	D80/D80 Suds O Gun Cap
G219767S	D80/D80 Surface Nozz. Less Elbow	G252069S	1CR/1CR Suds O Gun Cap
G219769S	1CR/1CR Surface Nozz. Less Elbow	G252073S	D50/ Suds O Gun Screen Retainer
G219773S	1CB/ Surface Nozz. Less Elbow	G252269	562/ Suds O Gun Cloth Screen
G2201	505/ Duster Brush Bristle Ring		



**PARTS DESCRIPTION AND MODEL DESIGNATION FORM**  
**POLISHER-RENOVATOR-WAXER GROUP**

CODE NO.	DESCRIPTION	CODE NO.	DESCRIPTION
H144356S	505/61 Polisher Belt/Filter	H306164	D50/ Rug Renov. Brush Axle
H144362S	562/V11 Polisher Belt/Filter	H306264	D50/ Rug Renov. Bumper Screw
H144365S	D50/D50 Polisher Belt/Filter	H306364	D50/D50 Rug Renov. Bumper
H144367S	D80/D80 Polisher Belt/Filter	H306367	D80/D80 Rug Renov. Bumper
H1590	505/15 Polisher Belt	H306369	1CR/ Rug Renov. Bumper
H300062S	516/V11 Polisher Comp. Less Brush	H306373	1CR/ Rug Renov. Bumper
H300065S	D50/D50 Polisher Comp. Less Brush	H306796G	D50/ Rug Renov. Tank Comp.
H300067S	D80/D80 Polisher Comp. Less Brush	H306773G	1CR/ Rug Renov. Tank Comp.
H300069S	1CR/1CR Polisher Casting w/Belt/Filter	H307564	D50/ Rug Renov. Filter Sponge
H300073S	1CR/ Polisher Casting w/Belt/Filter	H307569	D50/ Rug Renov. Sigs Screen
H300965S	505/ Polisher Brush w/Bearing	H307665	D50/ Rug Renov. Sigs Retainer
H301262	516/ Polisher/Renovator Belt	H308067S	D80/D80 Rug Renov. Hose
H3020	505/ Polisher Brush Shaft Threaded	H308069S	1CR/1CR Rug Renov. Hose
H302162S	505/D50 Polisher Bumper w/Screw	H308073S	1CR/ Rug Renov. Hose
H302167S	D80/D80 Polisher Bumper w/Screw	H308769	D50/ Rug Renov. Protector Pad
H302169S	1CR/1CR Polisher Bumper w/Screw	H308969	D50/1CR Rug Renov. Tank Cup
H302173S	1CR/ Polisher Bumper w/Screw	H308973	1CR/ Rug Renov. Tank Cap
H302369	1CR/1CR Polisher Belt/Filter Label	H315261	561/ Handl Wax Cartridge 1 Lb.
H302373	1CR/ Polisher Belt/Filter Label	H320171S	1CR/1CR Mir Wax Body Less Roller
H303164S	D50/D80 Rug Renov. Casting w/Belt/Filter	H320173S	1CR/ Mir Wax Body Less Roller
H303269S	1CR/1CR Rug Renov. Casting w/Belt/Filter	H320671S	1CR/ Mir Wax Handle Top Sect.
H303273S	1CR/1CR Rug Renov. Casting w/Belt/Filter	H320673S	1CR/ Mir Wax Handle Top Sect.
H303969	1CR/1CR Rug Renov. Belt/Filter Label	H320771	1CR/ Mir Wax Handle Mid. Sect.
H303973	1CR/ Rug Renov. Belt/Filter Label	H320871S	1CR/ Mir Wax Handle Bottom Sect.
H304365S	D50/D50 Rug Renov. Tray Less Brush	H321071S	1CR/ Mir Wax Caps — Set of 4
H304367S	D80/D80 Rug Renov. Tray Less Brush	H321671S	1CR/ Mir Wax Roller Comp.
H304369S	1CR/1CR Rug Renov. Tray Less Brush	H321673S	1CR/ Mir Wax Roller Comp.
H304373S	1CR/ Rug Renov. Tray Less Brush	H321771S	1CR/ Mir Wax Roller Snap End
H305273	1CR/ Rug Renov. Belt Baffle Strip	H322071	1CR/ Mir Wax Roller Fixed End
H305269	D50/1CR Rug Renov. Belt Baffle Strip	H322171S	1CR/ Mir Wax Storage Tube Comp.
H305469	1CR/1CR Rug Renov. Suds Leveler	H322173S	1CR/ Mir Wax Storage Tube
H305473	1CR/ Rug Renov. Suds Leveler	H322271	1CR/ Mir Wax Valve Label
H305864	D50/ Rug Renov. Brush	H323467	D80/ Roll Wax Cartridge 1 Lb. Min. 6
H305968	D50/ Rug Renov. Brush Bearing	H323473	1CR/ Mir Wax 12 Oz. Bottle (Min. 24)

**HANDI BUTLER AND FLEX SHAFT GROUP**

K1590	505/18 HB Belt	K414073	505/ Lamb Wool Pad
K400065S	D50/1CR HB Frame Casting	K4160	505/61 HB Grinding Wheel
K402362S	562/ HB Jack Shaft Spindle	K416069S	562/ HB Grinding Wheel
K402458	518A/ Jack Shaft Pulley	K4180	505/61 HB Wire Wheel
K402558	518A/ HB Jack Shaft End Cover	K418062S	562/ HB Wire Wheel
K4027	505/ HB Pulley Lock Pin	K4200	505/61 HB Flannel Buff Soft
K404059S	518A/ HB Body Casting	K420062S	562/ HB Flannel Buff Soft
K405058	518A/ HB Belt	K4220	505/61 HB Sewed Sheeting Buff Hard
K4080	505/ HB Assembly Screw	K422062S	562/ HB Sewed Sheeting Buff Hard
K4081	505/18 HB Assembly Screw	K4240	505/ HB Polishing Stick Coarse
K409262	562/D50 HB Wheel Guard Cover	K4260	505/ HB Polishing Stick Fine
K409269	1CR/ HB Wheel Guard Cover	K427062	D80/ Drill Chuck
K409358	518A/ HB Wheel Guard Cover Clip	K427169	1CR/ HB Swedish Massage Weight
K412069	562/1CR HB Rubber Disc	K427269	1CR/ HB Swedish Massage Cover
K412073	1CR/ HB Rubber Disc	M4173	513/18 Flex Shaft Casing w/Handle
K412662	562/ HB Sand Paper Set of 3 Adhesives	M4174	513/18 Flex Shaft Inner Core
K413062S	562/ HB Knife Sharpener Comp.	M41760	518A/V11 Flex Shaft Core

**PARTS DESCRIPTION AND MODEL DESIGNATION FORM**  
**HANDI BUTLER AND FLEX SHAFT GROUP (Cont'd)**

CODE NO.	DESCRIPTION	CODE NO.	DESCRIPTION
M417558	518A/18A Flex Shaft Spindle	M418265	D50/ Flex Shaft Casing
M417560	519/V11 Flex Shaft Spindle	M418365	D50/ Flex Shaft Assembly Screws
M4176	513/18 Flex Shaft Motor Coupling	M418465	D50/ Flex Shaft Stop Lock Spring
M417662	518A/V11 Flex Shaft Casing	M418565	D50/ Flex Shaft Stop Lock Tip
M418160	519/V11 Flex Shaft Nut	M418665	D50/ Flex Shaft Stop Lock Screw
M418165	D50/ Shaft Inner Core w/Spindle		

**S-T-SPECIAL OBSOLETE AND TOOLS GROUP**

S137	Inst. Suds - 24 - 12 - Oz. Cont.	S2265	Long Radiator Tool 36
S137.1	Inst. Suds - 12 1 Qt. Cont.	S275173P	Scuttle 12 Oz. 24 Per Case
S137.4	Inst. Suds - 4 - Gal. Cont.	S275173Q	Scuttle 32 Oz. 12 Per Case
S137.5	Inst. Suds - 5 Gal. Drum w/Spigot	S3030	505/505 Polisher Belt Large
S137.15	Inst. Suds - 15 Gal. Drum w/Spigot	T101	White Diamond Pol. Compound
S137.55	Inst. Suds - 55 Gal. Drum w/Spigot	T102	Trippol Polishing Compound
S163-2	Stainless Knives - 48 Per Case	T104	Fan Locking Pin
S164	Homemakers Cutlery Set 48 Per Case	T105	1 Can Bearing Grease 1 Lb.
S1110	Three Wire Ground Plate	T106	Bottle Plastic Cement
S1147	Armature Vent Fan OT	T107	Headlight Socket Repair Kit
S1148	Armature Vent Fan E or W	T108	Safety Switch Insulating Shim
S1149	Armature Vent Fan—Omega	T109	Commutator Brush Stone
S1161	2C Front Bearing	T110	1CR/Belt Lifter Repair Kit
S1187	2C Fan and Pulley	T123	516 or Newer Spring Tool
S1188	3C Fan and Pulley	T124	505 or Earlier Spring Tool
S1905	2C Bag Cloth	T124A	505/15 Spring Drift Pin Only
S191963	Contri. Bag Guard	T125	Rear Bearing Puller
S192568	Three-Wire Cord	T128	Small Part and Screw Assortment
S2229	50 Foot Cord	T130	Fan Locking Tool—Omega
T103	Whiting or Dusting Powder 1 Lb.		

**SP—PACKAGING MATERIAL**

SP200	Kirby Carton	SP204A	Rug Renov. Carton Shell Only
SP200A	Master Carton	SP204B	Rug Renov. Carton Insert
SP200B	Kirby Carton Flat	SP206	Miracle Waxer Carton Comp.
SP201	Attachment Carton	SP207	505/505 Paper Bag Handle Fork
SP203	HB Carton Complete	SP208	Poly Bag Large
SP203A	HB Carton Shell Only	SP209	Poly Bag Large
SP203C	HB Tool Carton	SP210	Cellulose Wadding Light Cover
SP203D	Flex Shaft Sleeve	SP212	Poly Handle Grip Bag
SP204	Rug Renov. Carton Comp.		