

# CHALLENGAIR 850

## Forced Air Dryer Instruction Manual

Please read all instructions before operating your dryer. Keep for future reference.

**Congratulations** on your purchase of the Double K Challengair 850/850-XL Forced Air Dryer. The Double K Challengair 850 and 850-XL Dryers produce high velocity warm air under pressure to make your grooming tasks easier. Your new dryer is designed to provide long, reliable service.

The **850** and **850-XL** are available in both stand and portable models. The stand model is equipped with a grooming arm for use during table drying. The **850-XL** model produces 15% more air than the **850**. Both the 850 and the 850-XL are available with a variable speed option for greater air flow control.

A warranty card is included with your dryer and should be filled out completely and mailed to Double K Industries within 30 days of the purchase date of your dryer to validate your warranty. It is also important to retain your sales receipt as proof of purchase should service ever be needed.

Your 850/850-XL Challengair Dryer has brush type motors (Both the 850 and 850-XL have two motors). It is important that the brushes be changed when they become worn down to prevent damage to your dryer motors (Brushes are a maintenance procedure and are not covered under warranty). We suggest checking the motor brushes after every 600 hours of dryer use. Please see section on "Brush Changing" in this manual for instructions.

### Important Safeguards

DO NOT TURN ON DRYER WITH OUT FIRST HOLDING THE DRYER HOSE as the air volume from the dryer can cause the hose to move and swirl and may cause injury.

1. Do not leave dryer unattended while in use. Check animal often during drying.
2. Unplug unit when not in use.
3. Do not use extension cords with dryer.
4. Do not expose dryer to rain or water.
5. Do not use or store where it can fall or be pulled into tub or sink or standing water. If dryer falls into water... UNPLUG IT... DO NOT REACH INTO THE WATER!
6. Do not unplug unit by pulling on cord.
7. Do not operate while standing in or near water.
8. Unplug unit before attempting any service or maintenance.
9. Do not direct air toward eyes.
10. Keep loose clothing, jewelry and hair away from dryer openings.
11. Keep filters clean. Hair build-up limits air intake and may damage motor.
12. Plug only into a properly grounded receptacle. Always make sure the amperage of the electrical outlet is sufficient for the amperage rating of the product. (Read further into manual for amperage rating of this product)
13. Do not use this product for anything other than its intended use.
14. Do not attempt to perform any service or maintenance not outlined in this manual. Contact Double K Industries or Authorized Service Center if additional service is needed. Do not block dryer intake or put into dryer openings.

**A NOTE ABOUT HEAT:** Your Challengair 850/850-XL dryer has no heating element. The Challengair produces heat by a "flow-thru" motor system meaning the air is pushed through the motor and is warmed by the natural heat of the motor that occurs during use. This means greater electrical savings and efficiency for you and that the dryer will reach maximum heat after about 3-5 minutes of use. Obviously the greater the ambient temperature, the warmer the air from the dryer.

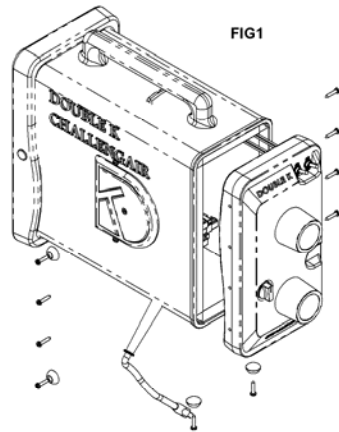


FIG1

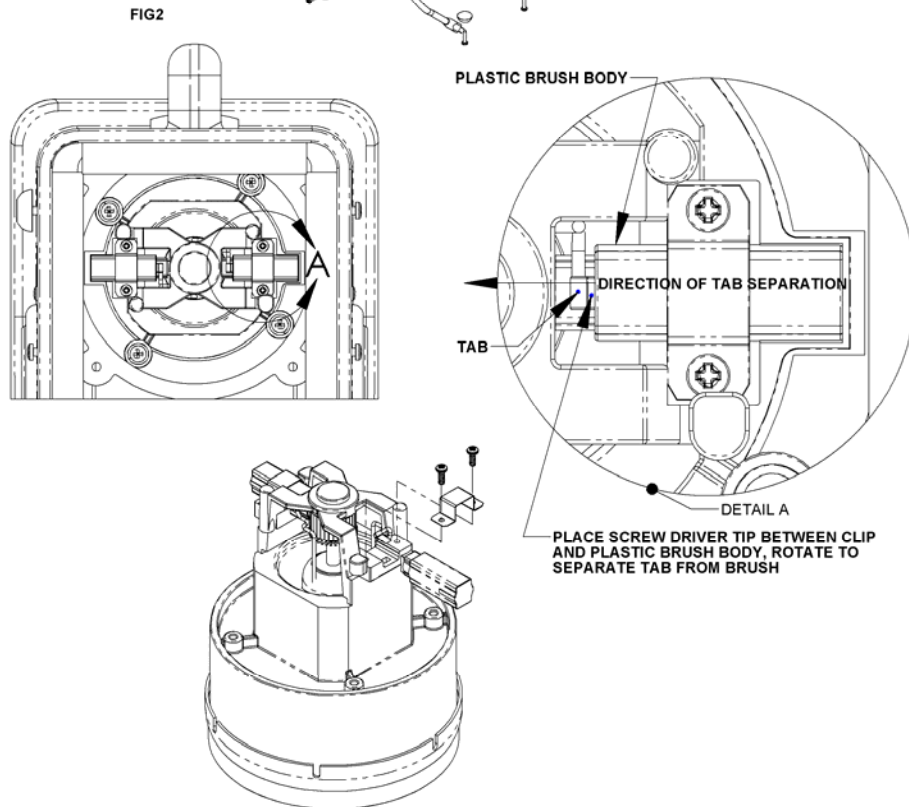


FIG2

PLASTIC BRUSH BODY

TAB

DIRECTION OF TAB SEPARATION

DETAIL A

PLACE SCREW DRIVER TIP BETWEEN CLIP AND PLASTIC BRUSH BODY. ROTATE TO SEPARATE TAB FROM BRUSH

### Specifications:

Model 850  
 Voltage – 115

Model 850-XL  
 Voltage - 115

Model 850-230v  
 Voltage - 230

Amps -12.98  
Watts -1493  
Air Volume - 204 CFM  
(Combined Motor Specs)

Amps - 17.72  
Watts - 2038  
Air Volume - 240 CFM  
(Combined Motor Specs)

Amps - 10.32  
Watts - 2374  
Air Volume - 240 CFM  
(Combined Motor Specs)

#### Operation- Switches and Controls:

**1. Standard Speed-** The standard two speed unit has two toggle switches. Each switch operates one of the two motors in your dryer. You may use just one motor for low air or turn on both switches for high air volume. "On" is in the up position and "Off" is down.

**2. Variable Speed-** This unit has a dial speed control and a three position toggle switch . Center position of the toggle switch is "Off". The down position of the switch is full power, the up position of the toggle switch activates the variable speed control knob which allows the dryer to run at lower air volumes by turning the knob "counter-clockwise" and higher by turning "clockwise."

**To Control Lower Air Outlet:** Turn the black control knob counter-clockwise to close the lower outlet and clockwise to open the outlet.

**\*NOTE:** The upper outlet is open at all times.

**\*\* NOTE:** Stand Dryers Only... If you wish to do only hose drying with the highest possible air flow, the arm extension on the upper air outlet may be removed by loosening the black thumb nuts at the base of the arm. A hose may then be used in the upper air outlet with the bottom outlet turned off.

#### STAND MODEL ASSEMBLY

Your dryer is packaged in two boxes. Your boxes include: Box 1: The dryer body. Box 2: Stand base with casters, Y-bar, stand assembly, two 6' twist-on hoses, one arm extension, one air diffuser, 3 nozzles, 2 hose to cage attachments with tie-wrap fasteners and two hose adapters. To assemble your dryer, first attach the Y- of the Y-bar between the washers on the knob post. The Y-bar slot has a slight angle to it and should be positioned pointing toward the front of the dryer. Make sure the electrical cord exits toward the back of the dryer and the back of the Y-bar. Re-tighten knobs to hold dryer at desired angle. Attach the arm extension to the dryer body by loosening the finger nuts around the upper air outlet on the dryer body. Align the holes in the arm extension with the bolts in the dryer face. Tighten finger nuts securely for a snug fit.

#### Assembly of Stand

The stand tube assembly is pre-assembled and wrapped in paper. The stand tube assembly is compressed and held in position by the center clamp. Loosen the handle on the clamp and allow the spring to extend the tube assembly. Place the end of the larger outer tube down into the center of the stand base. Twist and push down firmly. Lift the dryer head assembly, and position over the assembled stand and slide the tube of the Y-bar into the upper stand tube. With clamping handle still loose, raise or lower dryer to desired height and tighten stand adjustment handle as explained in the next paragraph.

**Stand height Adjustment and dryer angle adjustment:** Your dryer has "ratchet" type adjustment handles on the stand and the dryer. To tighten an adjustment handle, turn the handle clockwise as far as is comfortable. As necessary, for additional tightening, pull the handle out to disengage the "ratchet" and while keeping the handle pulled out, turn the handle counter-clockwise to a suitable position for continued tightening . Release the handle to engage the "ratchet" again and repeat these procedures until the adjustment handle is tight. Reverse the turning direction of these actions to loosen an adjustment handle. **NOZZLE:** The nozzle at the end of the extension arm may be rotated to change the direction of the airflow. Simply rotate nozzle to the desired direction .

**Dryer Stand:** Your dryer stand has two locking casters to keep the dryer from rolling inadvertently. To lock wheels, press down the small tab on the locking casters. To unlock, lift up on tab . For long life and smoother operation, avoid rolling casters through cut hair that has fallen on the floor.

#### PORTABLE MODEL

Your Portable 850 should include: One 6' twist-on hose (two with dual outlet dryers), one air diffuser, 3 nozzles, 2 hose to cage attachments with tie-wrap fasteners (4 with dual outlet dryers) and one hose adapter (two with dual outlet dryers)

#### ACCESSORIES AND ATTACHMENTS

Your dryer is equipped with twist-on hoses and nozzles. To attach hoses to dryer place hose into air outlet and twist "counter-clockwise". To attach nozzles to hose, twist the nozzles "counter-clockwise".

**Cage Diffuser Attachment:** This attachment is used for diffused air into the animal's cage. To attach the hose to the diffuser, attach the hose adapter to the hose by twisting it counter-clockwise. Then insert the adapter into the hose to cage attachment.

**Hose To Cage Attachments:** These attachments are used to attach the hose to the cage for forced air drying in the cage. Use the plastic tie-wraps to hook the round attachments to the cages. Be sure

to cut off the excess tie-wrap material after attaching to cages. Place the hose adapter on the end of the hose by twisting counter-clockwise and then place the adapter into the hose to cage attachment.

#### MAINTENANCE- Brushes

Your 850/850-XL dryer has a brush-type motor. The brushes should be checked for wear after approximately 600 hours of use. If the carbon brush is worn shorter than ¼ inch, the brushes should be replaced. Brushes may be ordered from Double K Industries or an authorized service center. Please be sure to specify whether your dryer is an 850 or 850-XL as the brushes are slightly different from one another.

**To Check and/or Replace brushes:** (a) Unplug electrical cord from wall outlet. (b) Detach your front plate by loosening the fastening screws. (See Fig. 1). (c) Remove front plate and set aside (motors and brushes are now visible and accessible). (d) Remove tab from brush assembly using a flat blade screwdriver to push it out of the brush housing. (See fig. 2) (e) Loosen and remove the two screws in the brush bracket and remove brush. (f) Insert new brush assembly in place and replace brush holding bracket by replacing and tightening the two screws. (g) Insert the brush tab into the cavity of the new brush. (h) Replace dryer front plate and securely tighten all fastening screws.

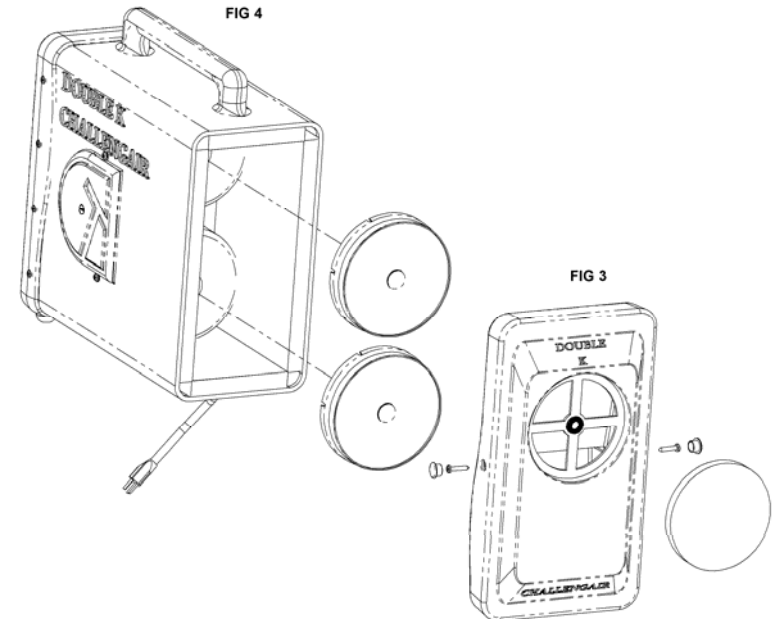
#### Filter Cleaning

The filters of the 850/850-XL Challengair Forced Air Dryer should be kept clean. If these become heavily coated with hair and/or dirt, it could reduce the air output of your dryer and cause damage to the motor. Never operate the dryer without filters in place.

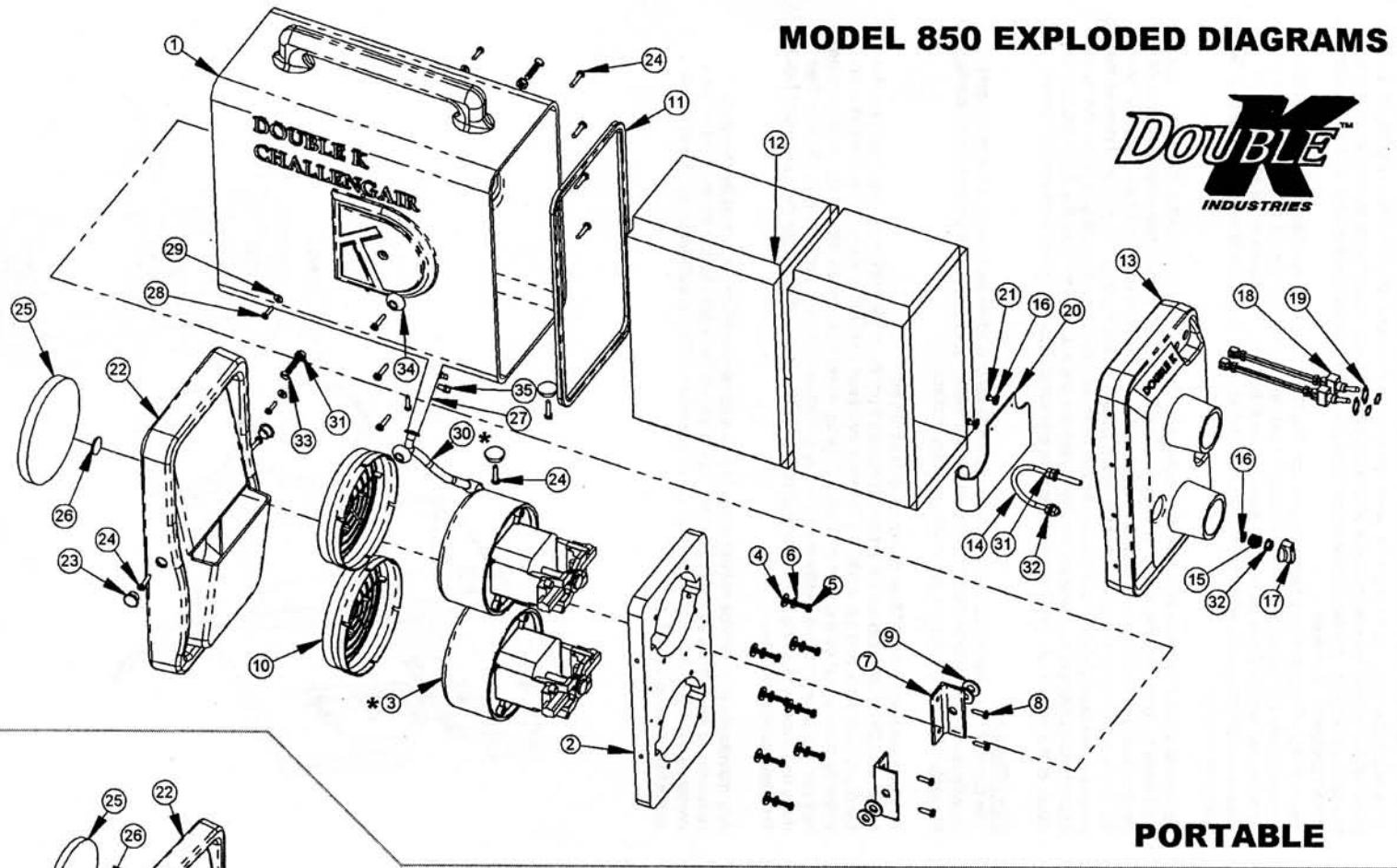
To clean the back external filter of the 850/850-XL dryer:

(a) Unplug Dryer (b) Remove the fastening screws from the dryer back plate. (see fig.3) (c) Remove the dryer back plate and set aside. (d) Remove individual motor filter discs on the back of each motor by turning and pulling filter off motor. (See fig. 4) (e) Clean motor filter discs by vacuuming off hair and dirt or wash filters gently in cool water and allow to air dry completely. (f) Replace filter discs on motor by pushing in place and turning to secure. (g) Replace dryer back plate and replace fastening screws securely.

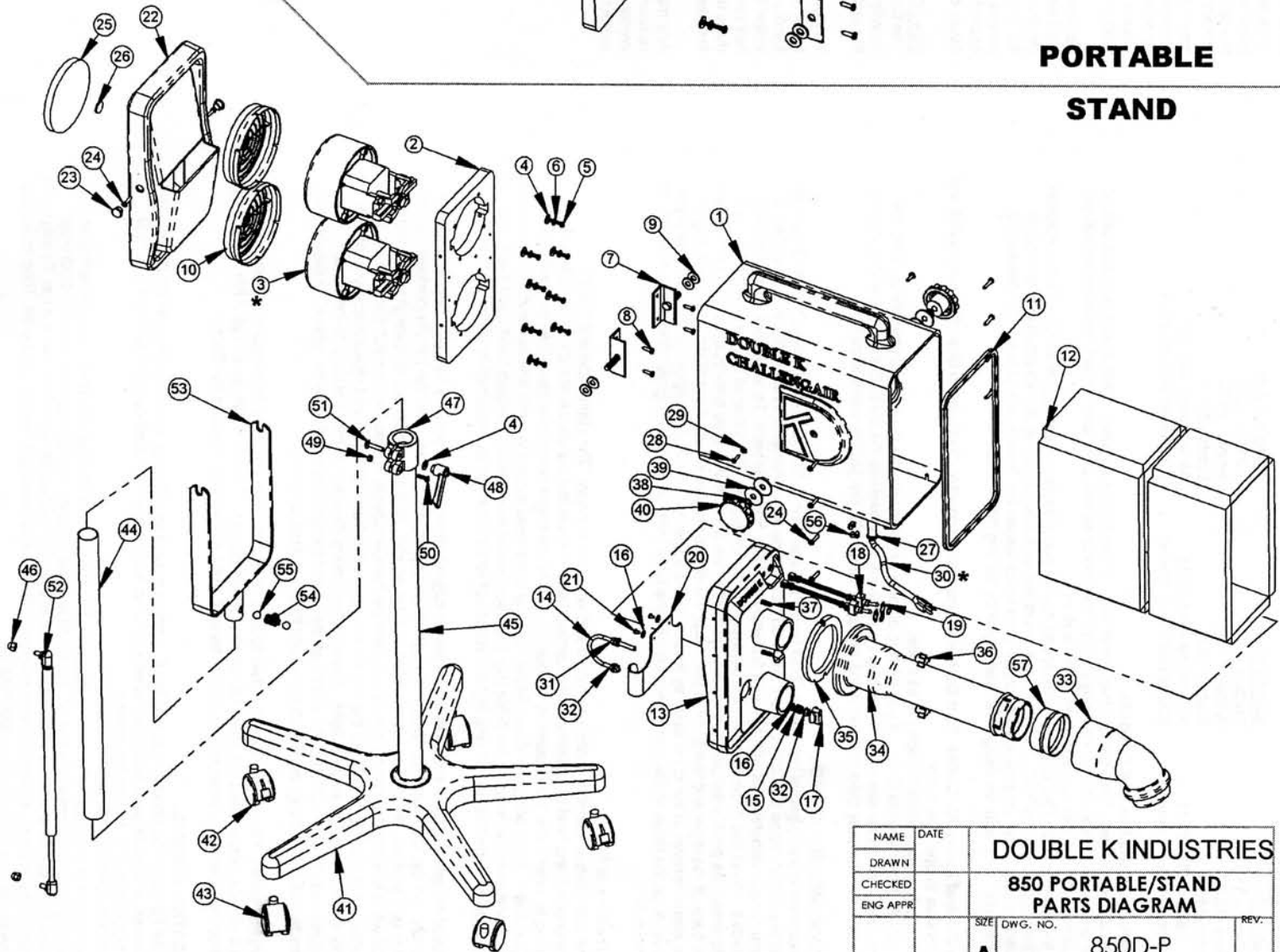
Any maintenance or service not explained in this manual should be performed by **Double K Industries** or an authorized service center. Call **Double K Industries** for the name of the service center nearest you. All warranty service must be performed by an authorized service center to protect your warranty status.



# MODEL 850 EXPLODED DIAGRAMS



## PORTABLE STAND



NAME	DATE	DOUBLE K INDUSTRIES	
DRAWN		850 PORTABLE/STAND	
CHECKED		PARTS DIAGRAM	
ENG APPR		SIZE	REV.
		A	850D-P
		SCALE: 1/8	SHEET 1 OF 2

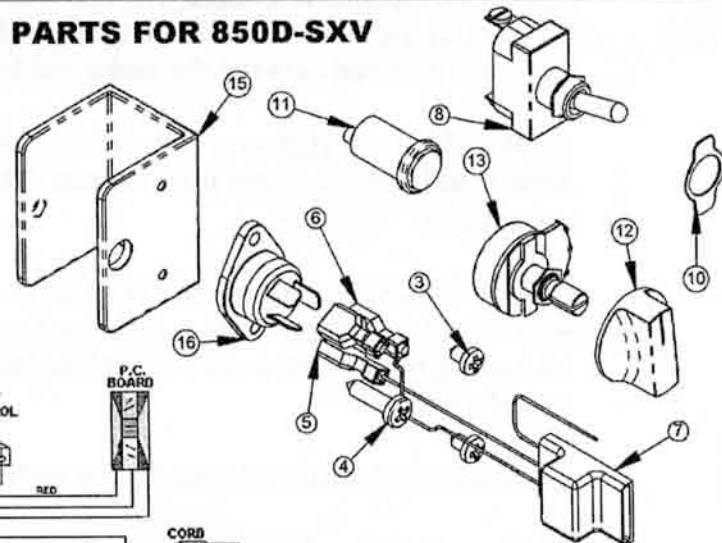
## PARTS LIST 850D-SX WITH STAND

## PARTS LIST 850D-PX

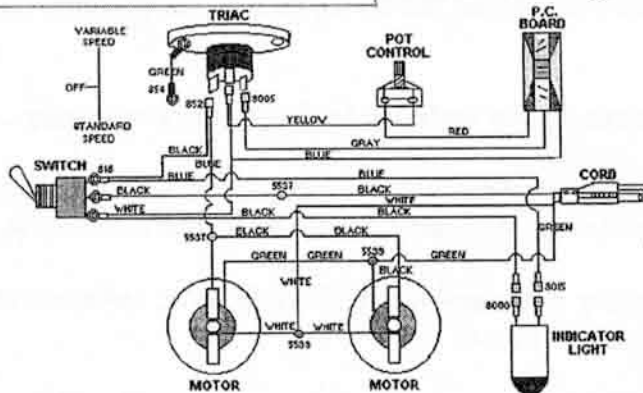
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	812S	850 MOTOR HOUSING	1
2	855	MOTOR MOUNT 850	1
3	819	MOTOR UNIVERSAL SINGLE STAGE 120 V	2
4	10031	WASHER 1/4 SAE FLAT PLTD	9
5	832	SCREW #10-32X 1-1/4 PHP	8
6	967	WASHER 1/4 INCH SPLIT LOCK	8
7	882	ANGLE 1/8 X 1 1/4 X 1 1/4 STEEL	2
8	5514	SCREW 10-24 X3/4 SMS	4
9	846	WASHER 5/16 USS FLAT PLTD	4
10	868	INTAKE AIR FILTER	2
11	813A	GASKET 41" 850 FRONT HOUSING	1
12	840	FOAM, 850 SOUND PROOFING KIT	1
13	888S	850 FACE PLATE, STAND	1
14	847	UBOLT 1/4-20 2.0 ID	1
15	841	STEEL COMPRESSION SPRING	1
16	842	WASHER #10 USS FLAT	3
17	5509	KNOB SWITCH BLACK	1
18	851	SWITCH TOGGLE 2 POS 20A 125V, (SW ASSY 851A)	2
19	523	FACE PLATE ON/OFF	2
20	898	NEOPRENE COVER	1
21	443	MODIFIED SCREW #8 x 3/8 SHT METAL PHP	2
22	800	850 BACKPLATE	1
23	413	855 HOUSING PLUG	2
24	5544	SCREW 10-24 X 1 SMS	12
25	817	FILTER INTAKE 5.8 DIA.	1
26	5538	VELCRO, MVA 8 BLACK VELSTICK	1
27	571	CORD RELIEF PROTECTOR	1
28	843	SCREW #8 x 3/4 SHT METAL PHP	5
29	9028	WASHER #8 SAE FLAT PLATED	4
30	881-1	ASSY CORDSET W/TIE 120V 14 FT	1
31	835	NUT 1/4-20 UNC KEPS LOCKING	1
32	5506	NUT 1/4-20 UNCHEX SERRATED FL	4
33	890	NOZZLE DIRECTIONAL	1
34	892	ARM EXTENSION	1
35	807	GASKET ARM EXTENTION	1
36	555	KNOB 3 AREM BLK 1/4-20 UNC 2B	2
37	801	SCREW 1/4-20 X7/8 HH	2
38	803	WASHER 3/8 INCH SPLIT LOCK	2
39	899	WASHER 1.37 OD X .375 X .95T	4
40	849	KNOB round fluted rim 3/8-16	2
41	9023	STAND BASE 25" 5 LEG	1
42	9022	CASTER LOCKING 50mm NYLON	2
43	9021	CASTER 50mm BLACK	3
44	838	TUBE 1-3/8 OD X 24" LONG .049 WALL	1
45	9020	TUBE 1-5/8 OD X 30" LONG .049 WALL	1
46	808	NUT ACORN 5/16-18 UNC ZINC PLATED	2
47	7003	CLAMP TUBE STAND ADJUSTMENT SLEEVE	1
48	7033	HANDLE LEVER ADJUSTABLE 1/4-20 UNC	1
49	5531	NUT #10-32 UNF NYLON INSERT	1
50	7019	SCREW #10-32 X 3/4 PHP	1
51	7015	BOLT CARRIAGE 1/4-20 X 1-1/4 LONG	1
52	830-1	SPRING GAS 36" LIFT-O-MAT	1
53	887	MOUNTING FORK 850 Y BAR	1
54	7048	SPRING COMPRESSION	1
55	7047	BALL 1/2" CHROMED STEEL	2
56	877	QUICK TIEWRAP	2
57	7046A	ARM EXT. SLEEVE	1

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31	835	NUT 1/4-20 UNC KEPS LOCKING	3
32	5506	NUT 1/4-20 UNCHEX SERRATED FL	4
33	871	SCREW 1/4-20 X 1 1/4 FHSL	2
34	893	RUBBER FOOT	4
35	877	QUICK TIEWRAP	2
ITEM3	403	230V CORD BRITAIN	
ITEM3	405	230V CORD EUROPEAN	
ITEM3	408	230V CORD AUSTRALIA	
ITEM 30	805-1	MOTOR 230V/50HZ	
ITEM 30	886	MOTOR REGULAR 110V	

## PARTS FOR 850D-SXV

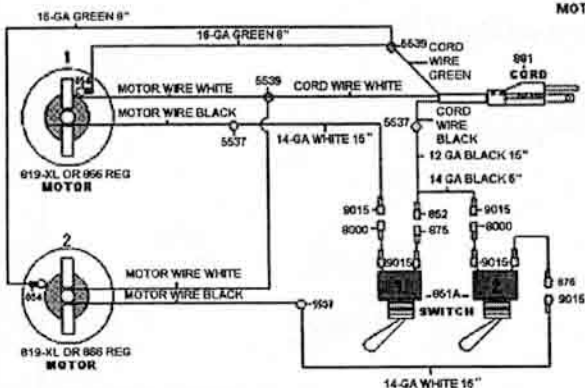


## WIRING DIAGRAM VARIABLE SPEED



## PARTS LIST 850D-SXV

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
3	845	SCREW #8 x 3/8 SHT METAL PHP	2
4	5514	SCREW 10-24 X3/4 SMS	1
5	9015	TERMINAL 1/4 16-14 GA. F	1
6	852	TERMINAL 1/4 12-1 GA. F	2
7	641	PCB W/CONNECTOR	1
8	814	SWITCH TOGGLE 2 POS 20A 125V	1
10	523	FACE PLATE ON/OFF	1
11	834	LIGHT INDICATOR 125V, 1/3 WATT	1
12	5509	KNOB SWITCH BLACK	1
13	634	RHEOSTAT, SPEED CONTROL, 850	1
15	865	U CHANNEL 1.5 X 1.5 X 1	1
16	640	TRIAC	1



**DOUBLE**  
INDUSTRIES, INC.

## WIRING DIAGRAM STANDARD SPEED

NAME	DATE	DOUBLE K INDUSTRIES	
DRAWN		850 PORTABLE/STAND PARTS LIST	
CHECKED		SIZE DWG. NO.	REV.
ENG APPR		A	850D-P
		SCALE: 1:2	SHEET 2 OF 2