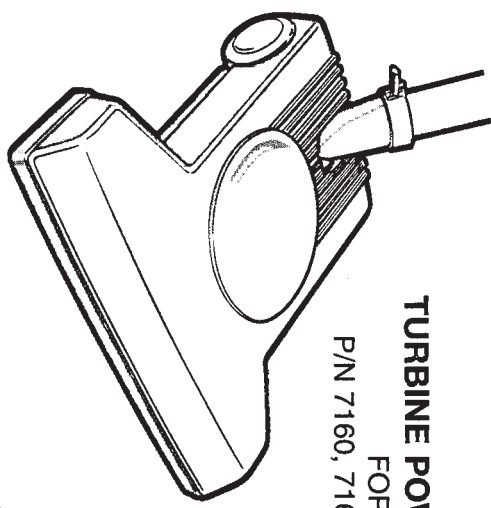
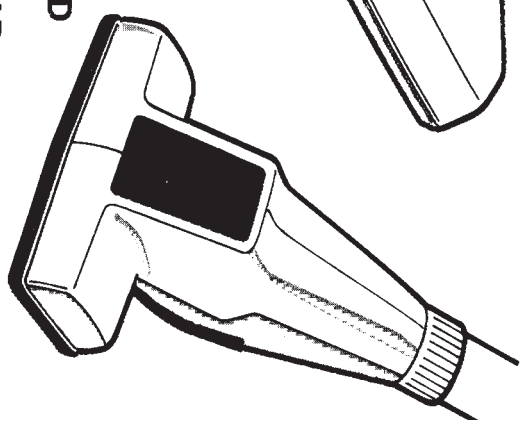


# INSTRUCTION MANUAL

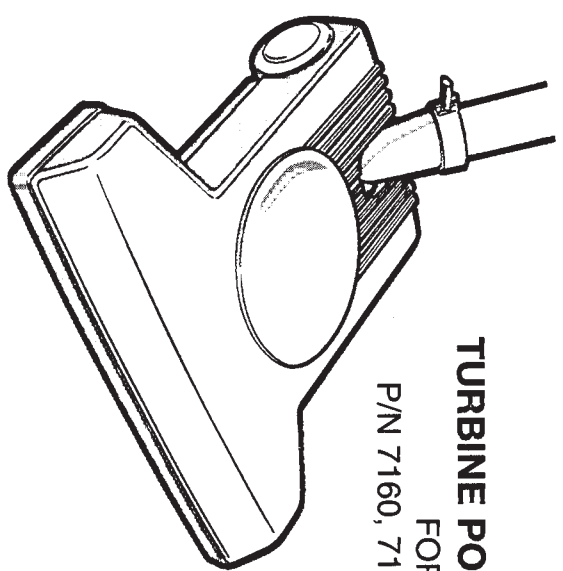
## ROUTINE CARE AND MAINTENANCE



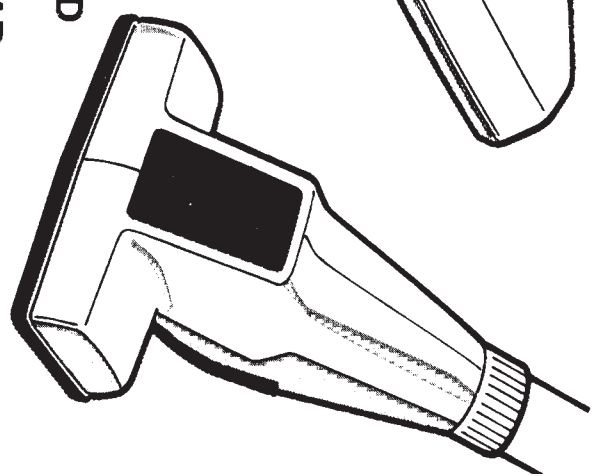
**TURBINE POWERHEAD**  
FOR  
P/N 7160, 7161 & 7210



**HAND HELD  
TURBINE  
POWERHEAD**  
FOR  
P/N 6970, 6971, 6972



**TURBINE POWERHEAD**  
FOR  
P/N 7160, 7161 & 7210



**HAND HELD  
TURBINE  
POWERHEAD**  
FOR  
P/N 6970, 6971, 6972

These Turbine Powerheads have been carefully designed and manufactured for long life, reliable performance and convenient cleaning. They are designed to do most of the cleaning work for you. They move easily and do not require downward pressure for thorough cleaning. As with any tool with moving parts, caution must be exercised while using these Turbine Powerheads. Please read and save this Instruction Manual.

## SAFETY PRECAUTIONS

1. Keep hair, hands and feet away from rotating brush while the Turbine Powerhead is running.
2. Remember that Turbine Powerheads operate when ever they are connected to a running vacuum. If children are present, make sure to turn vacuum system off when leaving Powerhead unit unattended.
3. Do not attempt to service or unclog tool while unit is running.
4. Avoid picking up water or spilled liquids with a Turbine Powerhead. The vacuum system is designed for dry pick-up only.

## INSTRUCTION FOR TURBINE POWERHEAD

### (A) ATTACHING THE TURBINE POWERHEAD

To attach your metal wand, simply twist into Powerhead elbow until it fits snugly. The built-in locking mechanism will prevent the wand from coming loose from your Powerhead while in use. To detach wand, depress tab on side of elbow and twist wand free. (See Fig. 1)

The wand can be locked in an upright position by pushing it forward until the lock is engaged. (See Fig. 2). This locked position is convenient for storage and for lifting of the Powerhead. To release wand from the vertical locked position, gently place foot on Powerhead, grasp wand and pull back firmly.

### (B) OPERATING PROCEDURES

FIG. 1

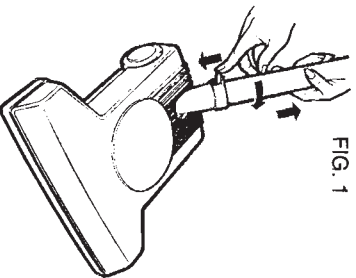
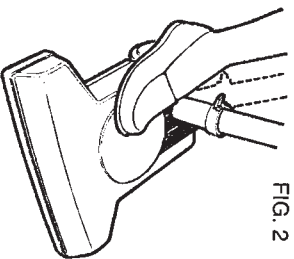


FIG. 2

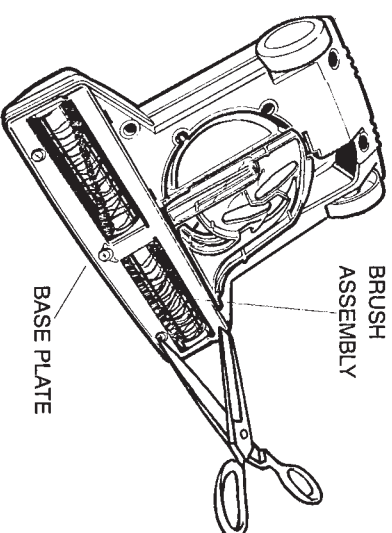


Your Turbine Powerhead has no on/off switch. Whenever it is attached to an operating vacuum system, it will be running. No adjustments to the tool are necessary for different types of carpeting.

**To insure maximum efficiency of the Turbine Powerhead, make sure that any filters, bags and cleaning hoses in your vacuum system are clean and free of blockage.**

### (C) CLEANING THE BRUSH ASSEMBLY

FIG. 3



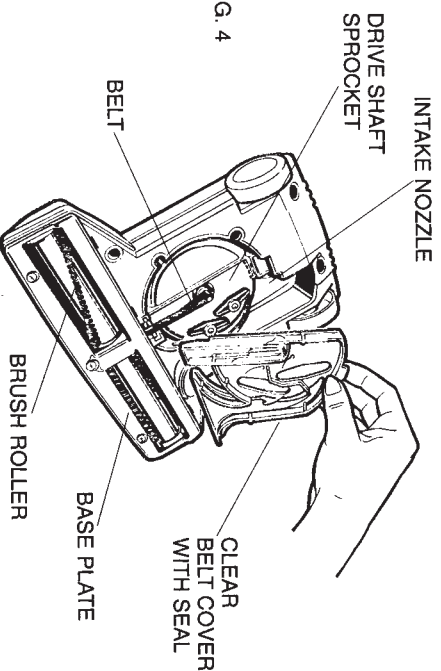
Thread, string, carpet fiber, fuzz, and pet hair occasionally become wound around the brush assembly. These items should be routinely removed to keep the brush assembly clean and to maintain efficiency.

1. Disconnect the powerhead from the hose and wands. Be sure parts have stopped spinning before working on the turbine powerhead.
2. Turn the powerhead over (Fig. 3).
3. Strings and other entangled items can be removed by unwinding them by hand or carefully cutting with scissors.

### (D) CLEANING THE INTAKE NOZZLE

If the turbine nozzle becomes obstructed:

FIG. 4



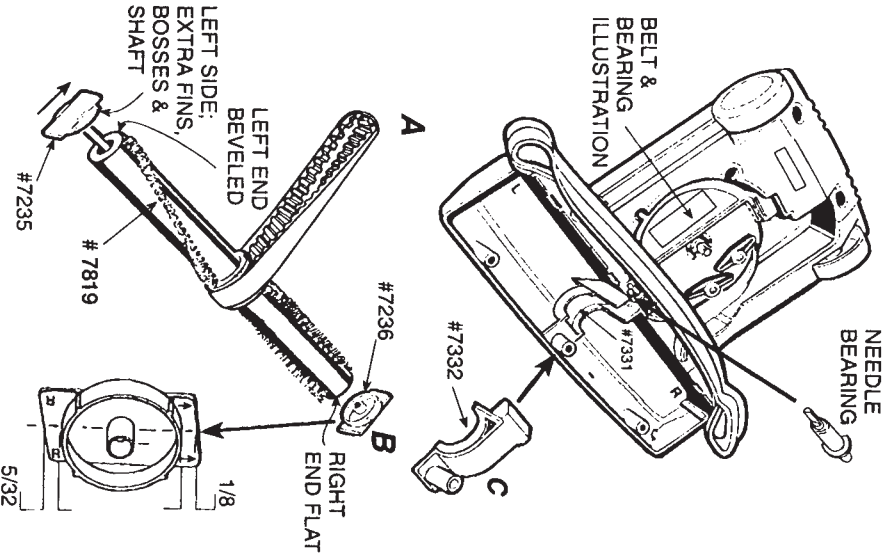
1. Turn off the vacuum system and disconnect the powerhead from the wand.
2. Turn the powerhead over and remove the clear belt cover, by first rotating the two latches counter clockwise until they align with the openings in the belt cover. Lift the belt cover out from under the base plate (Fig. 4).

- Remove debris from the intake and turbine. Rotate the brush roller to ensure the system is clear. Make sure the red seal on the belt cover and mating surfaces are free from dirt particles before reassembling. Check that the belt teeth are engaged with the turbine drive shaft sprocket. Check belt condition and position on sprocket and on brush roller.
- Reassemble the belt cover to the unit: insert the front of the belt cover under the base plate edge and press belt cover onto housing. Rotate the two latches clockwise until they lock in place. **IMPORTANT: Check that a proper seal is made. Unit performance is dependent on a proper seal.**

### (E) REPLACING THE TURBINE BELT AND CLEANING THE NEEDLE BEARING

The Replacement Belt must be installed correctly to ensure optimum performance. The turbine belt twists 90° to the right as shown (Fig. 5A).

FIG. 5



4

- BELT (A)**
- Belt should twist 90° to right -see illustration on housing

#### BELT SHROUDS (C)

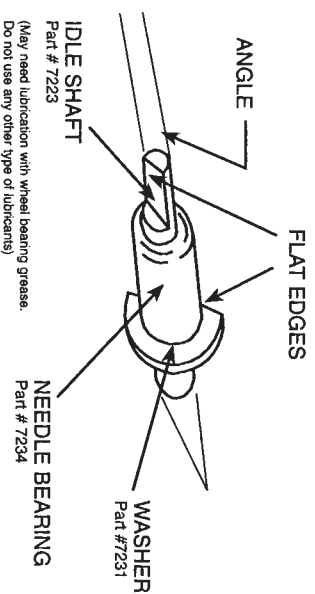
- Upper and Lower Shrouds
- Prevents belt contamination
- Designed to fit around sprocket & protect the drive belt

#### SHAFT SUPPORT (B)

- Shaft Support is 1/32" off center
- When installing new belt -Arrows on both shaft supports must point to rear wheels.
- Left & Right positions are marked on the shaft supports and in the housing.

- Follow instructions 1 & 2 under cleaning the intake nozzle on page 3.
- Remove the three screws holding the metal baseplate, pull the baseplate off, and remove the lower belt shroud. Pull the bumper up (Fig. 5).
- Removing the brush roller and shaft supports- It is important to reinsert the shaft supports in the correct direction. There is an arrow on each shaft support that points to the back of the housing when inserted correctly. To easily identify the correct position for reinsertion, mark the top of the shaft supports with a permanent marker or nail polish. Pull the brush roller out – the shaft supports will come with it.
- Slide the belt off the turbine sprocket and off the brush roller.
- Optional: Remove the needle bearing and clear any dust, hair or debris from the needle bearing cavity. To reinsert needle bearing, see illustration below:

FIG. 6



The needle bearing seats at an angle. The flat side of the washer goes to the rear. The flat side of the idler shaft goes to the front. Be sure the needle bearing is reinserted as shown to ensure proper operation. (Fig. 6)

- Place new belt on turbine sprocket and slide over brush roller. Be sure belt is properly twisted to the right as shown in the illustration (Fig. 5A).
- Place brush roller and shaft supports back into housing. Push bumper back onto housing (Fig. 5B).
- Place metal base plate onto housing and reinsert three screws.

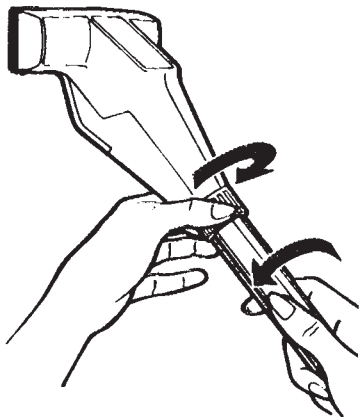
5

## INSTRUCTION FOR HAND HELD TURBINE POWERHEAD

### (A) ATTACHING THE HAND HELD TURBINE POWERHEAD

To attach your metal wand and/or curved hose handle simply twist into hand brush neck until it fits snugly. (See Fig. 1). To detach wand or curved hose handle, simply hold neck of Hand Held Powerhead and pull apart with a twisting motion.

FIG. 7



### (B) OPERATING PROCEDURES

Your hand held Turbine Powerhead has no on/off switch. Whenever it is attached to an operating vacuum system, it will be running.

### (C) CLEANING BRUSH

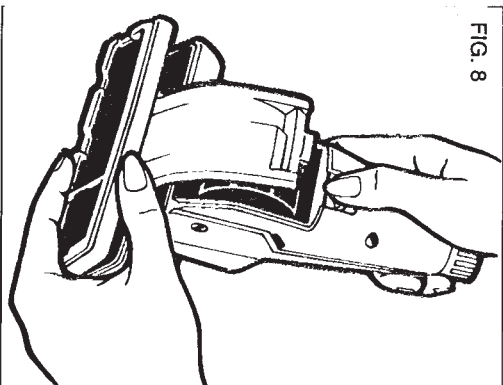
Turn off vacuum system and disconnect Powerhead Brush. Threads, string, carpet fiber, fuzz, etc. can wrap around the cleaning brush. These should be removed by unwinding them by hand or carefully cutting with scissors. (Note: base plate should be removed to clean properly). Keeping the cleaning brush clean will maintain efficiency of Powerhead Brush.

### (D) CLEANING INTAKE NOZZLE

If turbine or intake nozzle become obstructed:

1. Turn off vacuum system and disconnect Powerhead.
2. Remove base plate by first sliding the base plate latch toward the back of the brush. Next, pull the rear of the plate away from the housing and slide forward to disengage front locking tabs. (See Fig. 3).
3. Remove debris from intake port and/or turbine.

FIG. 8



4. Reassemble by inserting the tabs on the front of the base plate into the slots in the base housing, then secure the back of the base plate with the latch.

### (E) BELT REPLACEMENT

Remove base plate and belt cover (right side of Powerhead) by removing screw. (See Fig. 4). Next, remove belt from pulley (may help to turn cleaning brush backwards slightly). (See Fig. 5)

Pull belt and brush assembly out and replace belt. Before replacing base plate and belt cover, make sure a "2" is showing at both ends of brush

FIG. 9

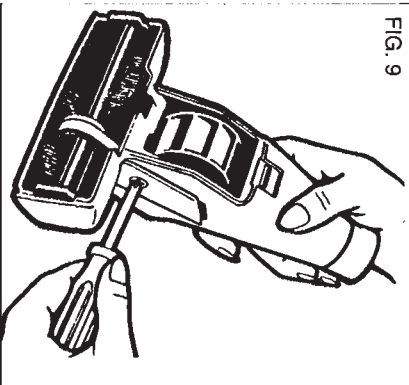
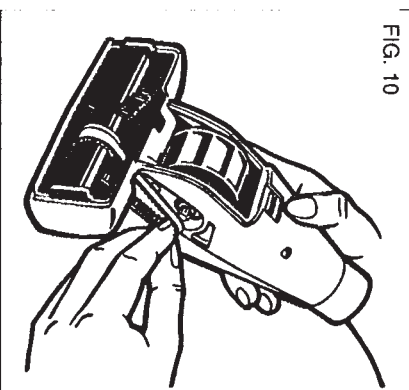


FIG. 10



assembly (this number is stamped right on the bearing housing.) (See Fig. 6). Make sure also that no brush bristles are caught between the belt and brush roll gear. If brush bristles are worn, see BRUSH ROLLER ADJUSTMENT.

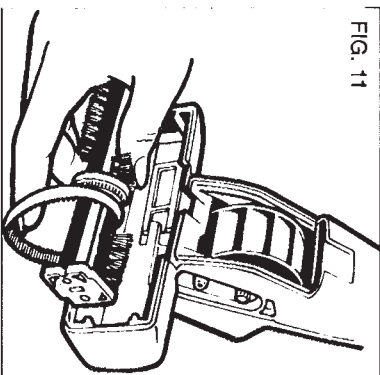
### (F) BRUSH ROLLER ADJUSTMENT

To adjust brush to compensate for bristle wear, remove base plate. Next, remove the belt cover by removing the screw. Finally, remove the belt from the pulley (it may help to turn cleaning brush backwards slightly). Pull the brush assembly out. Turn brush assembly over and reinsert so that number "1" is showing at both ends. (See Fig. 6).

Note: The brush roll comes from the factory with a "2" showing at both ends of the brush roll assembly.

Before replacing base plate and belt cover, make sure no brush bristles are caught between the belt and the brush roller gear.

FIG. 11



## OTHER REPAIRS

For repairs or service beyond those described above, please contact your servicing distributor or dealer.

## LIMITED WARRANTY

H-P PRODUCTS, INC., warrants that the turbine powerhead and the hand held turbine powerhead, when used for household purposes, pursuant to Seller's instructions, will be free from defects in materials and workmanship for a period of one year from the date of the initial consumer purchase. H-P PRODUCTS, INC. warrants that the turbine powerhead or the hand held turbine powerhead, when used in a commercial application pursuant to Seller's instructions, will be free from defects in materials and workmanship for a period of ninety (90) days from the date of the initial consumer purchase. This warranty is limited to the replacement of defective parts and any costs of shipping shall be incurred by the purchaser. THIS WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED, OR STATUTORY, AND H-P PRODUCTS, INC. SPECIFICALLY DISCLAIMS RESPONSIBILITY FOR CONSEQUENTIAL AND INCIDENTAL DAMAGES, AND LIMITS THE IMPLIED WARRANTY OF MERCHANTABILITY TO THE PERIOD OF EFFECTIVENESS OF THIS EXPRESS WARRANTY. H-P PRODUCTS, INC., Louisville, Ohio 44641 U.S.A.

## TROUBLE SHOOTING TURBINE POWERHEADS CAUTION

Moving parts – disconnect from vacuum system before servicing unit

### PROBLEMS

1. TURBINE RUNS SLOW
2. BRUSH MAKES KNOCKING NOISE
3. BRUSH BOUNCES IN USE
4. BRUSH HARD TO PUSH

### POWERHEAD INSTRUCTION MANUAL

1. CHECK BOTTOM PLATE
2. CHECK BELT AND TENSION
3. CHECK BEATER BRUSH
4. CHECK ALL INTAKE AREAS FOR OBSTRUCTIONS AND BRUSH ROTATION DIRECTION

	FLOOR BRUSH	HAND BRUSH
PAGE/PAR.	4/(E)	6/(C)/D)
PAGE/PAR.	4/(E)	7/(E)
PAGE/PAR.	3/(C)	6/(C)
PAGE/PAR.	3/(D)/(E)	6/(D)/(E)

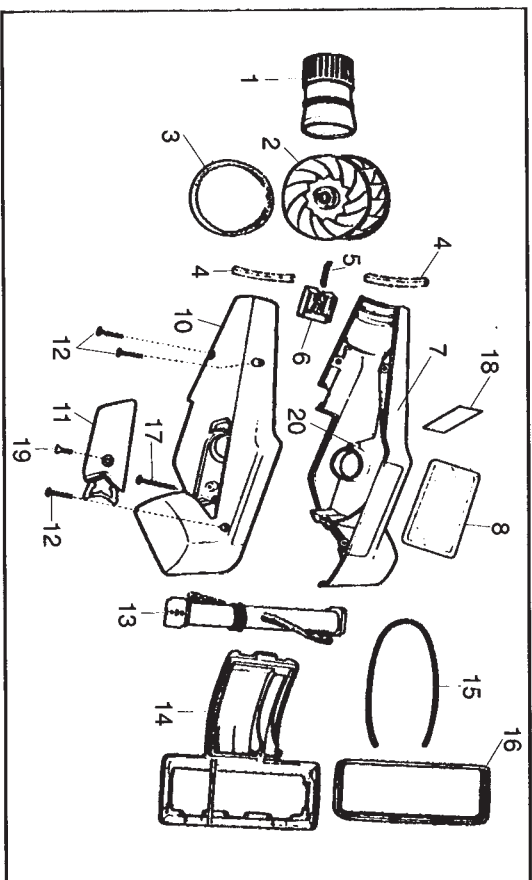
### CENTRAL VACUUM CLEANER SYSTEMS

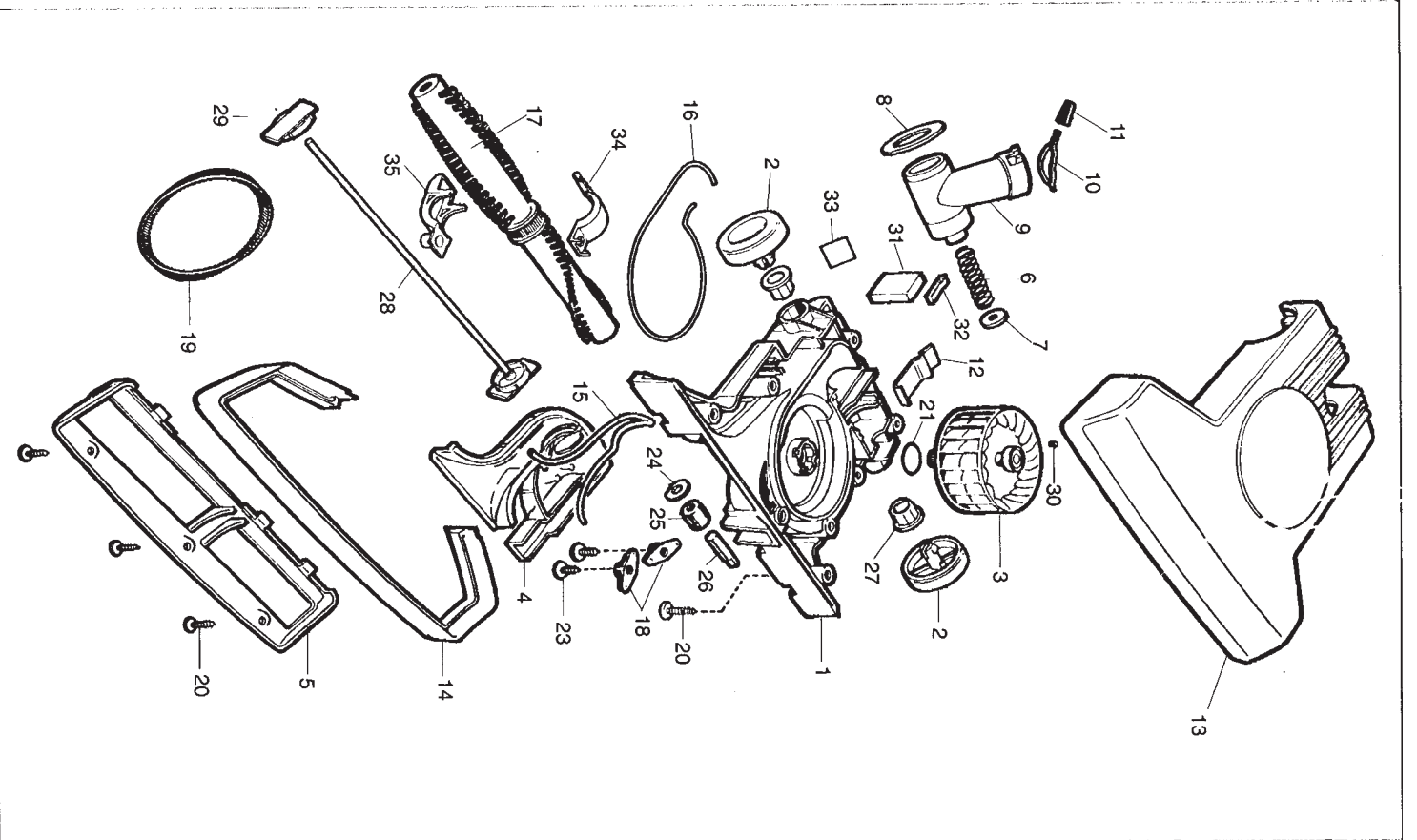
- |  |  |
|--|--|
| NON-BAG MODEL                                | BAG MODEL                              |
| 1. CHECK DIRT RECEPTACLE                     | 1. CHECK PAPER BAG                     |
| 2. CHECK GUARD SCREEN                        | 2. CHECK CLOTH BAG                     |
| 3. CHECK ALL FILTER SCREENS                  | 3. CHECK AIR FILTERS                   |
| 4. CHECK HOSES FOR AIR LEAKS OR OBSTRUCTIONS | 4. CHECK HOSES FOR AIR OR OBSTRUCTIONS |

READ INSTRUCTION MANUAL PROCEDURES

## HAND HELD TURBINE POWERHEAD

Item No.	Description	
1	Swivel	6321-2
2	Sub Assembly Turbine and Shaft	6322
3	Belt	6323
4	Swivel Seal (2 req.)	6324
5	Latch Spring	6325
6	Latch	6326-2
7	Housing, Assy. Half	6780-2
8	Label	7054-2
10	Sub Assy. Housing, Half/Belt Side	6757-2
11	Belt Cover	6330-2
12	Screw 6-9 x .750 (3 req.)	6331
13	Brush Assembly	6332
14	Base Plate with Gasket and Bumper	6755-2
15	Gasket (Avail. only with #6755)	6334
16	Bumper	6335-2
17	Screw 6-19 x 1.2 (1 req.)	6336
18	Caution Label	7240
19	Screw 6-19 x .500 (1 req.)	6339
20	Rubber Plug	7237





**Turbine Powerhead**

Item	Part Description	7160	7161	7210
1	Lower Housing	7820	7211-01	7211-02
2	Wheel (2)	7821	7212-01	7212-02
3	SA Turbine	7213	SAME	SAME
4	Belt Cover	7214	SAME	SAME
5	Base Plate	7215	SAME	SAME
6	Compr. Spring	5958	SAME	SAME
7	Washer	5974	SAME	SAME
8	Washer, Elbow Seal	5971	SAME	SAME
9	Elbow	7216-02	SAME	SAME
10	Spring, Wand	5966	SAME	SAME
11	Retainer/Cap	7217-02	SAME	SAME
12	Spring, Latch	7218	SAME	SAME
13	SA Tophousing	7221	SAME	SAME
14	Bumper	7822	7222-02	7222-01
15	Seal (Large)	7223	SAME	SAME
16	Seal (Small)	7224	SAME	SAME
17	SA Brush Turboflex II			
18	Chevron	7819	SAME	SAME
19	T Latch (2)	7226	SAME	SAME
20	Belt	7227	SAME	SAME
21	Screw (Base/Lwr Housing)(12)	7228	SAME	SAME
22	O-Ring	7229	SAME	SAME
23	Screw, T Latch (2)	7230	SAME	SAME
24	D-Washer	7231	SAME	SAME
25	Bearing, Needle	7234	SAME	SAME
26	Idle Shaft	7233	SAME	SAME
27	Sleeve, Flange (2)	7232	SAME	SAME
28	SA Shaft Supt	7235	SAME	SAME
29	RT Shaft Supt	7236	SAME	SAME
30	Rubber Plug	7237	SAME	SAME
31	Ballast WT (2)	7238	SAME	SAME
32	Foam Pad (2)	7239	SAME	SAME
33	Caution Label	7240	SAME	SAME
34	Shroud, Belt, Upper	7331	SAME	SAME
35	Shroud, Belt, Lower	7332	SAME	SAME
	Instr. Manual	HVS 825	SAME	SAME
	Not Shown			
	Wheel washer(2)	7818	SAME	SAME

**Turbocat TL2000 Ultra TP210**

**Part Number**

Revised April 1997  
Valid from unit date code 9714