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Operations & Maintenance Manual



BLOWER MOTORS & AIR OPERATED JUMBO VACS

MODEL NO.

90569, 90573, 94155, 94655, 95000, 95942, 95990, 95991, 95992, 95993,
98088, 98450, 98800, 98801, 98850, 98896, 98900

Effective 11/21/2005

NOTES

This illustrated parts book covers:

MODEL	98800	98801	98900	95000	98088	94155	94655	95942	
VOLTS	115	230	115	N/A	N/A	N/A	N/A	N/A	
SERIES	H	H	H	-	-	-	-	-	
MODEL	95991	95992	95993	98450	98850	90573	90569	95990	98088
VOLTS	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SERIES	-	-	B	B	-	-	-	B	-

All specifications are subject to change without notice.

TABLE OF CONTENTS

Warranty Information	4
Safety Instructions	5
Grounding Instructions.....	6
Blower Motor Assembly (98800/98801/98900)	7-8
Internal Filter Air Vac (95990/95991).....	9
External Filter Air Vac (95993/95992).....	10
Jumbo Cover Assembly (95000)	11
External Vac Liquid Shut-Off (90573).....	12
Internal Quad Air Vac (98450)	13-14
External Quad Air Vac (98451).....	15-16
Tank Cover (98850).....	17
Jumbo Cover Liquid Shutoff (90569).....	18
Adapter Cover (94155)	19
Add-A-Tank (94655)	19
Tank Dolly Assembly (98088).....	20
55-Gallon drum Complete (95452)	20
Jumbo Vac Versatile Extras.....	21

Long-term buyer protection warranties

Tornado® Standard Warranty Program*	
<p>Warranties do not cover components subject to normal wear or abuse and misuse, and have other limitations not specified here. For full details, contact your Authorized Tornado Distributor, Service Center, or the Tornado Technical Service Department.</p> <p>Tornado sales and service representatives are not authorized to waive or alter the terms of this warranty, or to increase the obligations of Tornado under the warranty.</p>	<p>10 Years: <i>All plastic tanks and rotationally-molded bodies^{1) 2)}</i></p>
	<p>2 Year: <i>Parts on all Tornado and Tornado/Karcher cleaning equipment^{1) 2) 3)}</i></p>
	<p>1 Year: <i>Labor on all Tornado and Tornado/Karcher cleaning equipment²⁾</i></p>
	<p>1 Year: <i>Warranty on batteries and chargers, one year pro-rated.</i></p> <p>** 6 Month Warranty on Gel Batteries</p> <p>All battery warranties are handled by the battery manufacturer, please call customer service for more information.</p>

Thank you for choosing Tornado products. We are proud to offer the most complete line of commercial and industrial cleaning equipment in the industry. Our reputation for quality, innovation and durability is unsurpassed.

* Effective January 1st, 2005. Terms subject to change without notice.

- 1) Windshear™ Blower-Dryer, Insulation Blowers, T191, T201, T12/1, CV 30, CV 38, CW 50, CW 100, Pro PAC Vacs, Duo-Upright Carpetkeepers™, Gas & Electric Pressure Washers, and all chargers are warranted for 1 (one) year for both parts and labor.
- 2) Warranties on all riding sweepers including the ICC1, KM 100/100 R, KMR 1250, and KMR 1700 are 24 months parts/6 months labor OR 1000 hours of operation, whichever comes first. Warranties on the 75/140 & 90/140 are 24 months parts/12 months' labor OR 1,000 hours of operation whichever comes first.
- 3) All non-wear item parts purchased after warranty expiration are warranted for 90 days.
- 4) Warranty starts from the date of sale to the consumer or, at Tornado's discretion, 6 months after dealer purchased the unit from Tornado, whichever comes first.

Note: Tornado, The Latest Dirt, Floorkeeper, Carpetkeeper, Carpetrinser, Carpetrinser/Dryer, Headmaster, Taskforce, PAC-VAC, T-Lite, Glazer, Windshear, Max-Vac, CV 30, CV 38, and Trot-Mop are trademarks of Tornado Industries.

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Chicago, IL 60706

NOTE: WHEN USING ANY ELECTRICAL APPLIANCE, BASIC PRECAUTIONS SHOULD ALWAYS BE FOLLOWED.

WARNING: To reduce the risk of fire, electric shock or injury:

Do not leave appliance when plugged in. Unplug from outlet when not in use and before servicing. Turn off all controls before unplugging. To unplug, grasp the plug, not the cord.

Before attempting any maintenance or adjustment, disconnect air lines. Turn off all controls and air supply at the drop before disconnecting air lines.

To avoid electric shock, do not expose to rain – store indoors.

Do not allow to be used as a toy. Use caution near children.

Use only as described in this manual. Use only manufacturer's recommended attachments.

If appliance is not working as it should, has been dropped, damaged, left outdoors, or dropped into water, return it to a service center.

Do not pull or carry by cord, use cord as a handle, or pull cord around sharp edges or corners. Do not run appliance over cord. Keep cord away from heated surfaces. Do not handle plug or appliance with wet hands.

Do not put any object into openings. Do not use with any opening blocked; keep free of dust, lint, hair and anything that may reduce air flow.

Do not pick up anything that is burning or smoking, such as cigarettes, matches, or hot ashes. Do not use to pick up any flammable or combustible liquids such as gasoline or use in areas where they may be present.

Use extra care when cleaning on stairs.

Do not use without dust bag and/or filters in place. ALWAYS REPLACE WORN OR TORN EXTERNAL FILTERS IMMEDIATELY to prevent possible injury due to flying object.

NEVER OPERATE UNIT WITH INTAKE UNGUARDED. Keep hair, loose clothing, fingers, and all parts of body away from openings and moving parts. Strong suction can pull fingers or clothing into dangerous blades/or moving parts.

ALWAYS POINT THE EXHAUST PORT IN A SAFE DIRECTION AND WEAR SAFETY GLASSES WHEN IN THE VICINITY OF THIS UNIT. Air leaves the blower at a high velocity.

When the unit is hand held, HOLD FIRMLY WHEN STARTING. High starting torque will cause unit to jerk and may cause injury or damage.

Before operating your TORNADO Equipment, make sure the voltage and current used are the same as indicated on the nameplate.

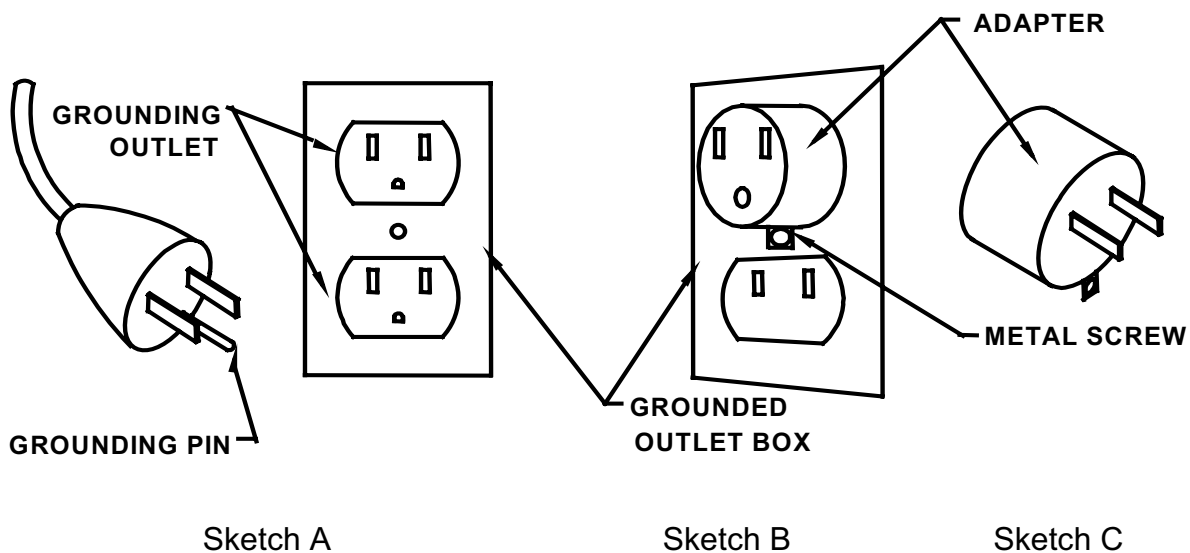
SAVE THESE INSTRUCTIONS

GROUNDING INSTRUCTIONS

This appliance must be grounded. If it should malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This appliance is equipped with a cord having an equipment-grounding conductor and grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

DANGER – Improper connection of the equipment-grounding conductor can result in electric shock. Check with qualified electrician or service person if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with the appliance—if it will not fit the outlet, have a proper outlet installed by a qualified electrician.

This appliance is for use on a nominal 120-volt circuit, and has a grounding plug that looks like the plug illustrated in sketch A. A temporary adapter that looks like the adapter illustrated in sketches B and C may be used to connect this plug to a 2-pole receptacle as shown in sketch B if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet (sketch A) can be installed by a qualified electrician. The green colored rigid ear, lug, or the like extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box cover. Whenever the adapter is used, it must be held in place by a metal screw.

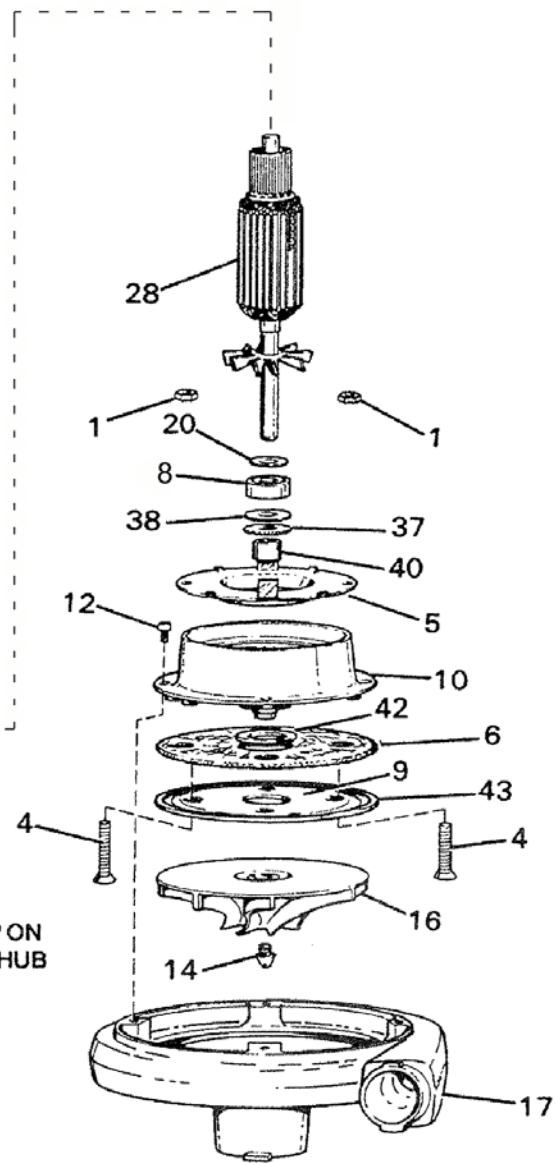
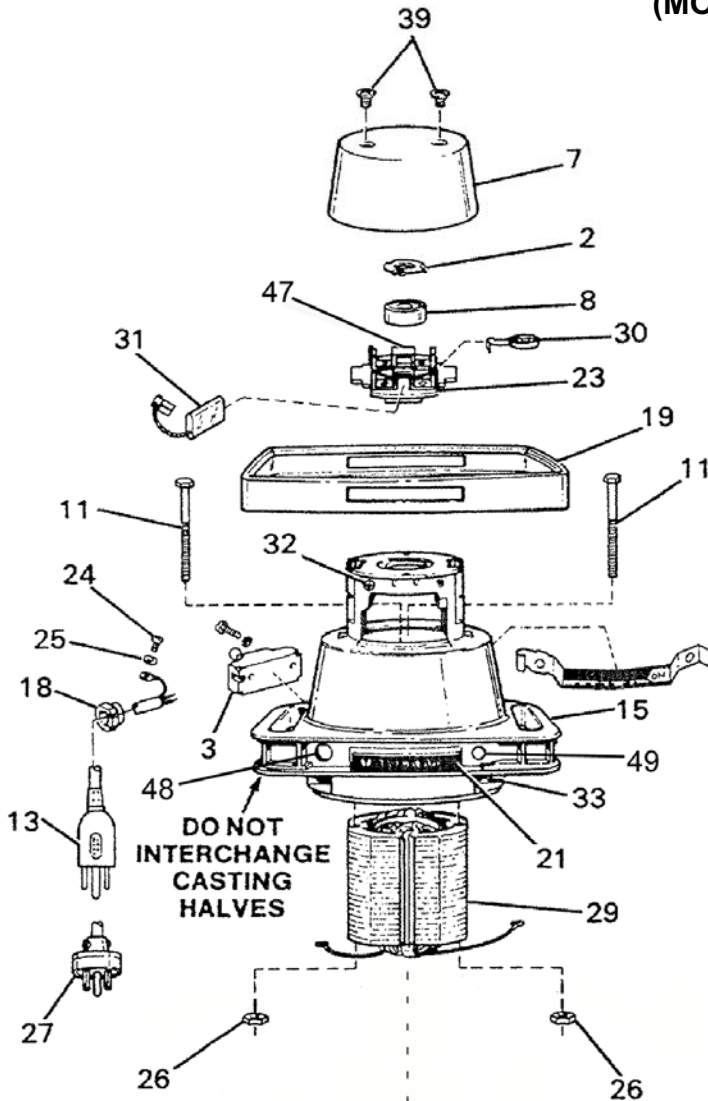


EXTENSION CORDS

Use only three-wire extension cords which have 3-prong grounding-type plug caps and three-pole receptacles that accept the appliance's plug. Extension cords should be the equivalent or a size heavier than the input cord. Replace or repair damaged cords.

BLOWER MOTOR ASSEMBLY

(MODELS 98800 / 98801 / 98900)



TO MOUNT MOTOR UNIT TO VACUUM TANK COVER:

Place unit intake neck into locking collar and turn 90 degrees clockwise.

MAINTENANCE OF MOTOR UNIT:

Damage to an armature invariably is caused by permitting carbon brushes to become worn to less than 1/4 inch in length. To prevent this occurrence, inspect brushes after 200 hours operation and frequently thereafter, replacing when necessary. Failure to do so will nullify our warranty.

To inspect brushes, unplug cord, remove top cover by removing screws and release brush spring, pull brushes out and check.

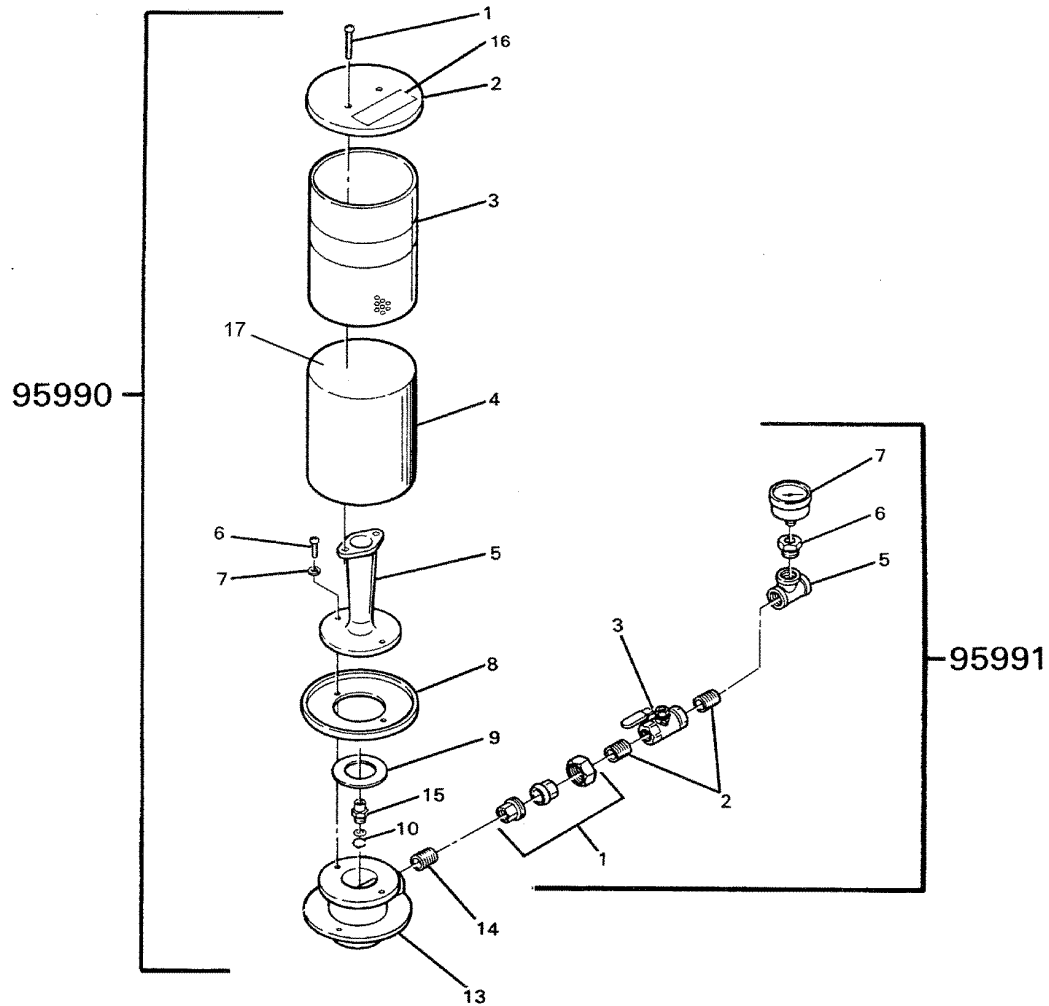
NO OTHER MAINTENANCE OF MOTOR SHOULD BE ATTEMPTED DURING FIRST YEAR AFTER PURCHASE (SEE WARRANTY).

PARTS LIST**1-1/2 HP BLOWER MOTORS (98800 / 98801)**

ITEM	PART NO.	QTY.	DESCRIPTION
1	7533	4	Nut-Hex
2	7858	1	Spring-Finger
3	8516	1	Switch
4	11276	4	Screw
5	11268	1	Cooling Fan Baffle
6	11269	1	Pad, Fiberglass
7	12436	1	Cover Top
8	11236	2	Bearing
9	11274	1	Pan Chamber Plate
10	12604	1	Cover Plate
11	11275	2	Screw-Hex
12	11240	4	Screw-Phil
13	11241	1	Cable (115V)
	19944	1	Cable (230V)
14	11242	1	Fan Spinner
15	11243	1	Motor Housing ASM
16	12605	1	Fan
17	12641	1	Fan Chamber
18	11252	1	Strain Relief Bushing
19	11253	1	Bumper
20	14322	1	Washer
21	11900	1	Nameplate
23	11278	1	Brush Card Holder A/S (115V)
24	7534	3	Screw-Phil
25	1713	1	Washer
26	10892	2	Nut-Hex. Lock
27	8220	1	Plug (115V)
	2563	1	Plug (230V)
28	11270	1	Armature Blower 115V
	11272	1	Armature Blower 230V
29	11271	1	Field Blower 115V
	11273	1	Field Blower 230V
30	11249	2	Spring-Spiral Brush
31	11486	2	Carbon Brush 115V
	11780	2	Carbon Brush 230V
32	11245	2	Screw
33	11244	4	Screw
34	940	1	Nut
35	5773	1	Nut
36	11570	2	Brushspg & Damper
37	12602	1	Washer
38	12603	1	Split Washer
39	12439	2	Screw
40	12601	1	Spacer
42	11555	1	Gasket
43	11562	1	Gasket
46	13022	2	Pad-Brush Card
47	11250	2	Brush Holder
48	4054	2	Plug-Lock (H/S) #10
49	14624	2	Plug-Hole (Zinc) 1/2 Dia
*	14412	1	Label-Warning
*	16224	1	Label-Warning
*	11415	2	U-clip

PARTS LIST**2-1/4 HP BLOWER MOTORS (98900)**

ITEM	PART NO.	QTY.	DESCRIPTION
1	7533	4	Nut-Hex
2	7858	1	Spring-Finger
3	8516	1	Switch
4	11197	4	Screw
5	11198	1	Cooling Fan Baffle
6	11199	1	Pad, Fiberglass
7	12436	1	Cover Top
8	11236	2	Bearing
9	11237	1	Fan Chamber Plate
10	12644	1	Cover Plate
11	11239	2	Screw-Hex
12	11240	4	Screw-Phil
13	11241	1	Cable (115V)
14	11242	1	Fan Spinner
15	11243	1	Motor Housing ASM
16	12692	1	Fan
17	12642	1	Fan Chamber
18	11252	1	Strain Relief Bushing
19	11253	1	Bumper
20	14322	1	Washer
21	11900	1	Nameplate
23	11278	1	Brush Card Holder A/S
24	7534	3	Screw-Phil
25	1713	1	Washer
26	10892	2	Nut-Hex. Lock
27	8220	1	Plug (115V)
28	11255	1	Armature Blower 115V
29	11256	1	Field Blower 115V
30	11249	2	Spring-Spiral Brush
31	11251	2	Carbon Brush 115V
32	11245	2	Screw
33	11244	4	Screw
34	940	1	Nut
35	5773	1	Nut
36	11570	2	Brushspg & Damper
37	12602	1	Washer
38	12603	1	Split Washer
39	12439	2	Screw
40	12601	1	Spacer
42	11555	1	Gasket
43	11563	1	Gasket
46	13022	2	Pad-Brush Card
47	11250	2	Brush Holder
*	14412	1	Label-Warning
*	16264	1	Label-Warning
*	11415	2	U-Clip



PARTS LIST
INTERNAL FILTER AIR VAC (95990)

ITEM	QTY.	PART NO.	DESCRIPTION
1	2	01979	SCREW
2	1	04928	MUFFLER COVER
3	1	15967	MUFFLER SHELL
4	1	95054	SILENCER
5	1	05723	NOZZLE
6	2	02038	SCREW
7	2	01574	LOCKWASHER
8	1	04927	MUFFLER BASE
9	1	05724	GASKET
10	3	02481	"O" RING
13	1	11407	BASE
14	1	05730	NIPPLE
15	1	04982	JET (3/16 DIA.)
	1	04983	JET (7/32 DIA.)
	1	04984	JET (1/4 DIA.)
16	1	16511	WARNING LABEL
17	1	03008	FILTER

PARTS LIST
CONNECTOR ASSY. SINGLE HEAD (95991)

ITEM	QTY.	PART NO.	DESCRIPTION
1	1	06384	JOINT- UNION
2	2	05730	PIPE-NIPPLE
3	1	04985	VALVE
5	1	05731	PIPE -TEE
6	1	05733	PIPE-BUSHING
7	1	05732	AIR PRESSURE GAUGE

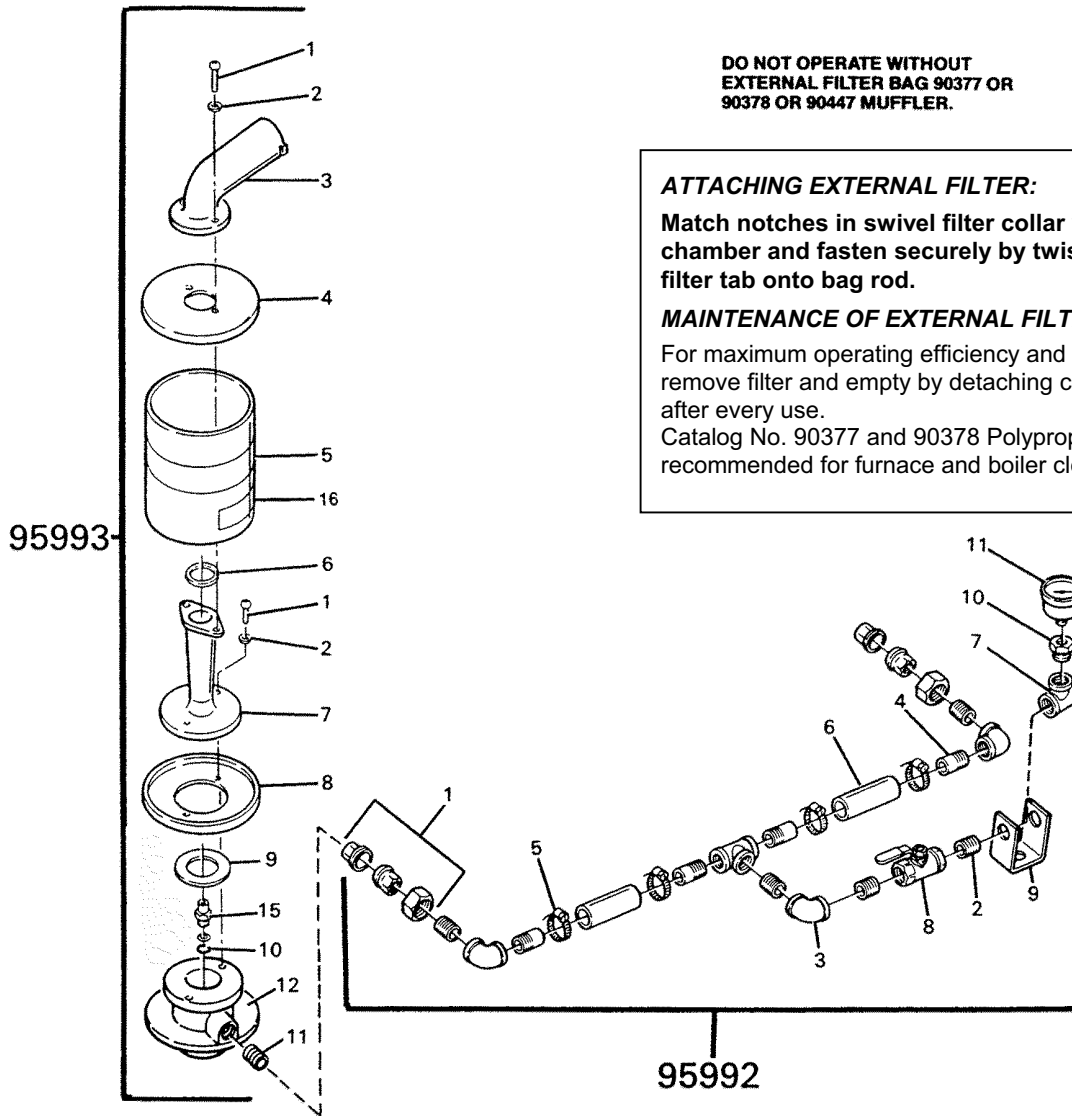
**DO NOT OPERATE WITHOUT
EXTERNAL FILTER BAG 90377 OR
90378 OR 90447 MUFFLER.**

ATTACHING EXTERNAL FILTER:

Match notches in swivel filter collar with lugs on fan chamber and fasten securely by twisting to right. Attach filter tab onto bag rod.

MAINTENANCE OF EXTERNAL FILTER:

For maximum operating efficiency and to insure longer wear, remove filter and empty by detaching clamp at bottom of filter after every use.
Catalog No. 90377 and 90378 Polypropylene filters are recommended for furnace and boiler cleaning operations.



**PARTS LIST
EXTERNAL FILTER AIR VAC (95993)**

ITEM	QTY.	PART NO.	DESCRIPTION
1	4	02038	SCREW
2	4	01574	WASHER
3	1	05734	ELBOW CONNECTION
4	1	05735	MUFFLER COVER
5	1	05736	MUFFLER SHELL
6	1	05737	GASKET
7	1	05723	NOZZLE
8	1	04927	MUFFLER BASE
9	1	05724	GASKET
10	3	02481	RING-O
11	1	05730	PIPE-NIPPLE
12	1	11407	BASE
15	1	04982	JET (3/16)
	1	04983	JET (7/32)
	1	04984	JET (1/4)
16	1	16510	LABEL- WARNING

**PARTS LIST
CONNECTOR ASSY. DOUBLEHEAD (95992)**

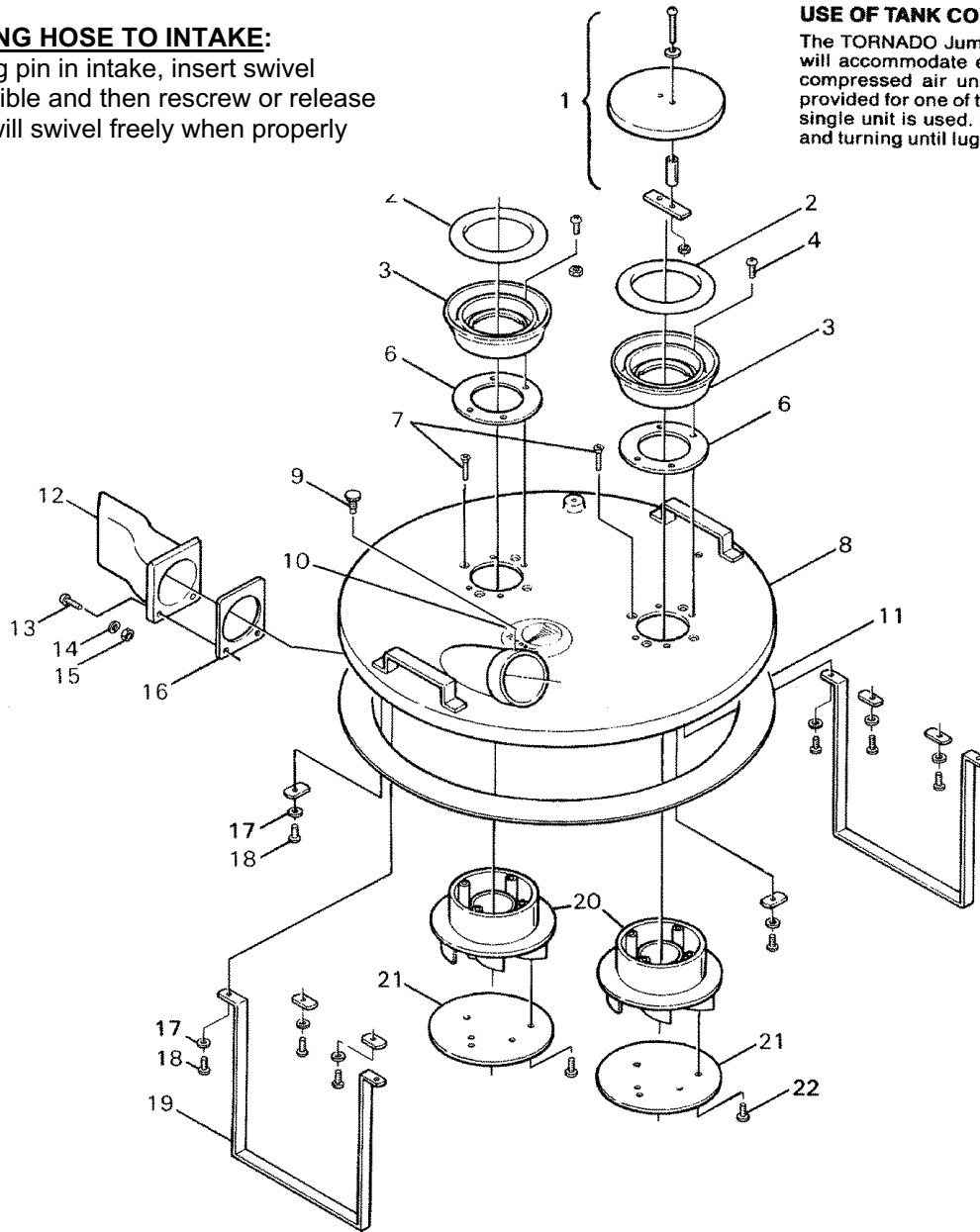
ITEM	QTY.	PART NO.	DESCRIPTION
1	2	06384	JOINT-UNION
2	5	05730	PIPE-NIPPLE
3	3	05729	FITTING-IRON ELBOW
4	4	05726	FITTING-GALV. ADAPTOR
5	4	05727	CLAMP
6	2	11561	HOSE
7	2	05731	PIPE-TEE
8	1	04985	VALVE
9	1	15163	BRACKET
10	1	05733	PIPE-BUSHING
11	1	05732	AIR PRESSURE GAGE

CONNECTING HOSE TO INTAKE:

Unscrew or lift locking pin in intake, insert swivel sleeve as far as possible and then rescrew or release locking pin. Sleeve will swivel freely when properly connected.

USE OF TANK COVER PLUG

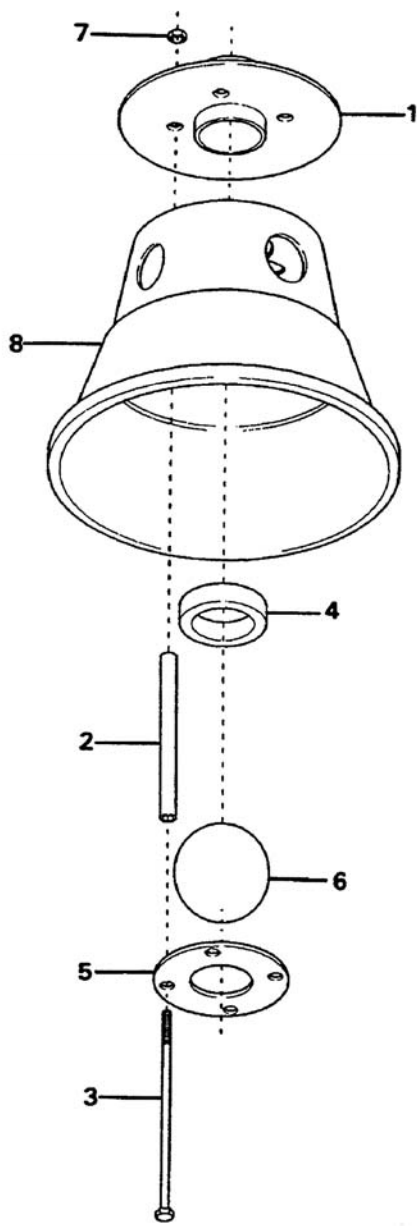
The TORNADO Jumbo Conversion Cover will accommodate either 1 or 2 motor or compressed air units. A plug (14395) is provided for one of the unit collars when a single unit is used. It is used by inserting and turning until lugs lock into place.



**PARTS LIST
JUMBO COVER ASSY. (95000)**

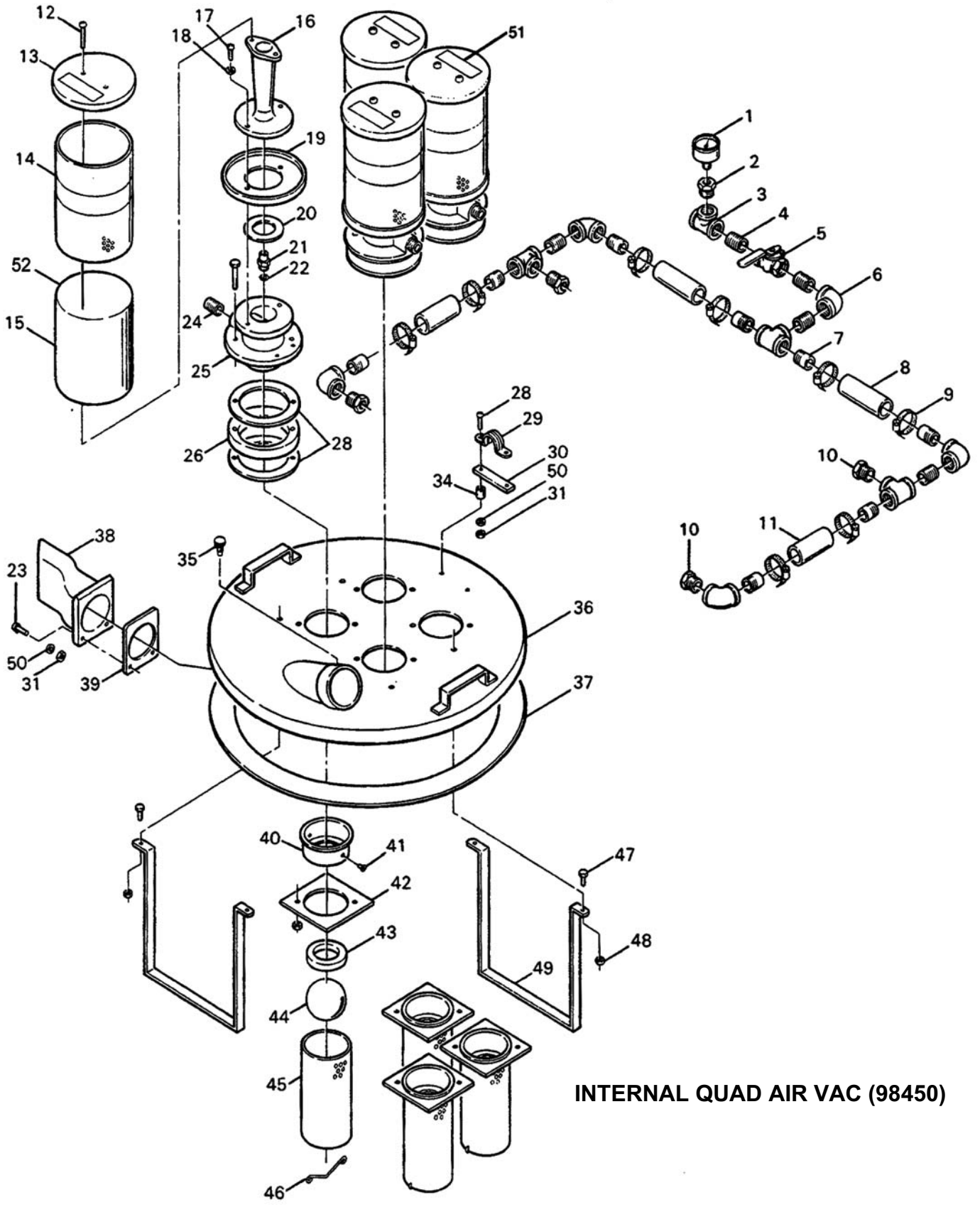
ITEM	QTY.	PART NO.	DESCRIPTION	ITEM	QTY.	PART NO.	DESCRIPTION
1	1	14395	TANK COVER PLUG ASSY.	13	2	02038	SCREW-PHIL. RND HD MACH
2	2	08004	GASKET	14	2	01574	WASHER- LOCK
3	2	14415	ADAPTER	15	2	01497	NUT-FINISHED HEX
4	8	17792	SCREW-TCT (F) PAN HEAD	16	1	04908	GASKET, FLANGE
6	2	11386	GASKET	17	10	00851	WASHER- PLAIN 1/4"
7	8	11394	SCREW-PHIL. FLAT HD TAPT	18	10	00086	SCREW-PHIL. RND HD MACH
8	1	13832	TANK COVER	19	2	04997	STAND
9	1	08057	THUMB SCREW-JUMBO TOOL	20	2	11358	GUIDE-INTAKE
10	1	07648	NAMEPLATE	21	2	12300	PLATE
11	1	17131	GASKET-TANK COVER	22	6	11390	SCREW- T.C.T. PAN HEAD
12	1	90442	DEFLECTOR				

NOTE:
FOR LIQUID PICK-UP OPERATION:
 All Tornado Vacuum Cleaners covered by this manual are constructed for picking up water or other solutions without any adjustments. Liquid shutoffs are available 90573 or 90569.



PARTS LIST
EXTERNAL VAC LIQUID SHUTOFF (90573)

<u>ITEM</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	14731	TOP PLATE & TUBE S/A
2	4	14732	SPACER
3	4	14733	SCREW-HEX HD CAP
4	1	02247	GASKET
5	1	14735	BOTTOM PLATE
6	1	15517	FLOAT-BALL
7	4	07533	NUT-HEX. LOCK
8	1	15614	SUDS PAN



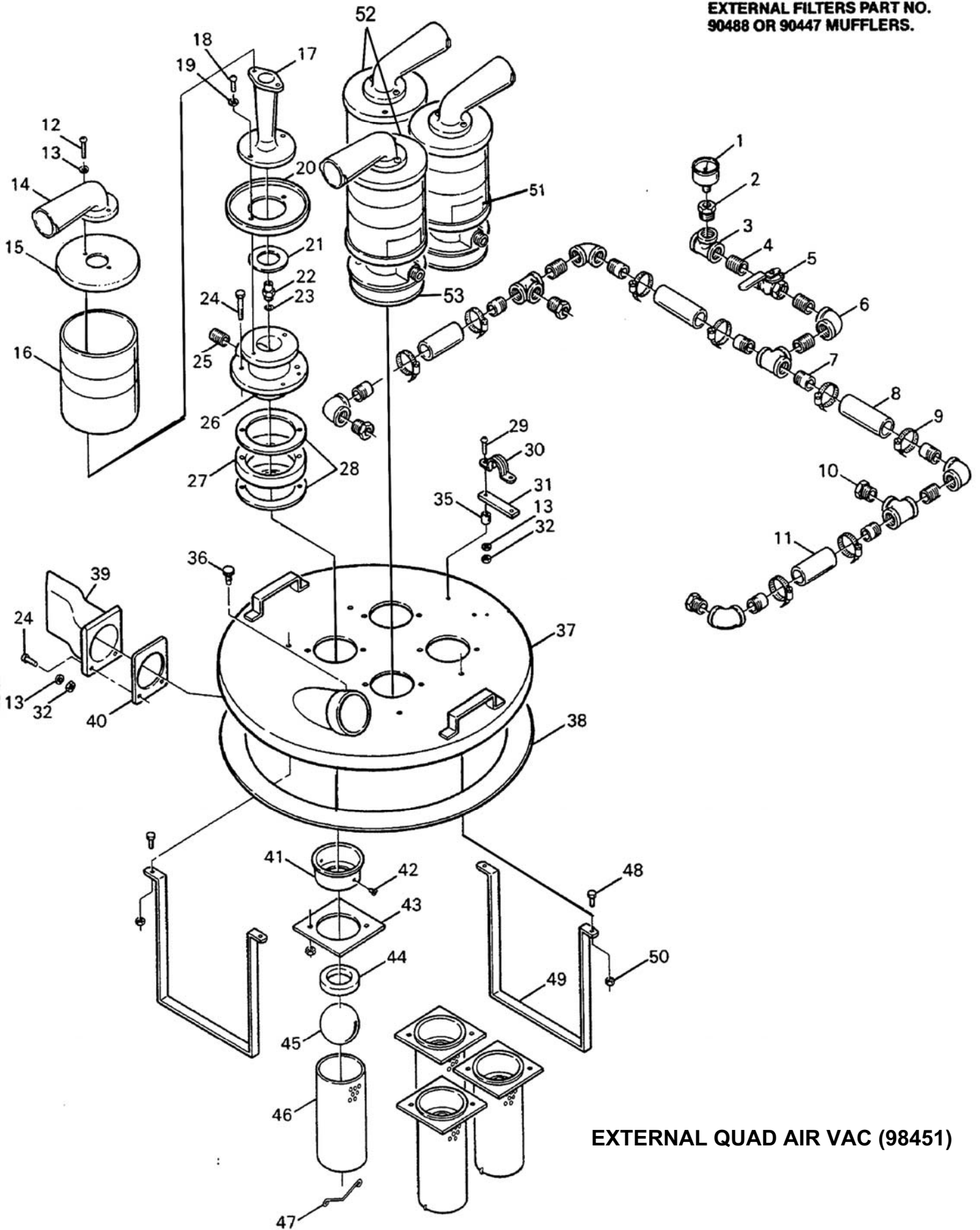
INTERNAL QUAD AIR VAC (98450)

PARTS LIST
INTERNAL QUAD AIR VAC (98450)

<u>ITEM</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	05732	AIR PRESSURE GAGE
2	1	11327	FITTING-GALV. BUSHING
3	4	11323	PIPE-TEE
4	5	11325	FITTING-GALV. ADAPTOR
5	1	11326	VALVE-BALL
6	5	11324	FITTING-IRON ELBOW
7	8	11365	ADAPTOR-MALE
8	2	80592	HOSE-GP BLACK
9	8	05727	CLAMP
10	4	11322	FITTING-GALV. BUSHING
11	2	80592	HOSE-GP BLACK
12	8	01979	SCREW
13	4	04928	MUFFLER COVER
14	4	15967	MUFFLER SHELL
15	4	95054	SILENCER
16	4	05723	NOZZLE
17	8	12812	SCREW
18	8	01589	NUT
19	4	04927	MUFFLER BASE
20	4	05724	GASKET
21	4	04984	JET (1/4)
22	4	02481	RING-O
23	10	02038	SCREW
24	4	32475	PIPE-NIPPLE ½ NPT TAPER
25	4	11317	BASE
26	4	14331	MOUNTING PLATE
27	8	11329	GASKET
28	2	01978	SCREW
29	1	11328	STRAP
30	1	14330	SUPPORT RISER
31	2	01497	NUT
34	2	03144	SPACER
35	1	08057	THUMB SCREW
36	1	14329	QUAD TANK COVER
37	1	17131	GASKET-TANK COVER
38	1	90442	DEFLECTOR
39	1	04908	GASKET, FLANGE
40	4	11331	FLANGE
41	8	05043	RIVET-BLADE
42	4	14407	MOUNTING PLATE
43	4	02706	GASKET
44	4	15517	FLOAT
45	4	06428	CAGE
46	4	06430	TIE WIRE
47	4	02047	SCREW
48	4	07533	NUT
49	2	04997	STAND
50	6	01574	WASHER
51	4	16511	LABEL-WARNING
52	4	03008	FILTER

Recommended air line for Quad Internal operation 1" I.D.

WARNING
DO NOT OPERATE WITHOUT
EXTERNAL FILTERS PART NO.
90488 OR 90447 MUFFLERS.

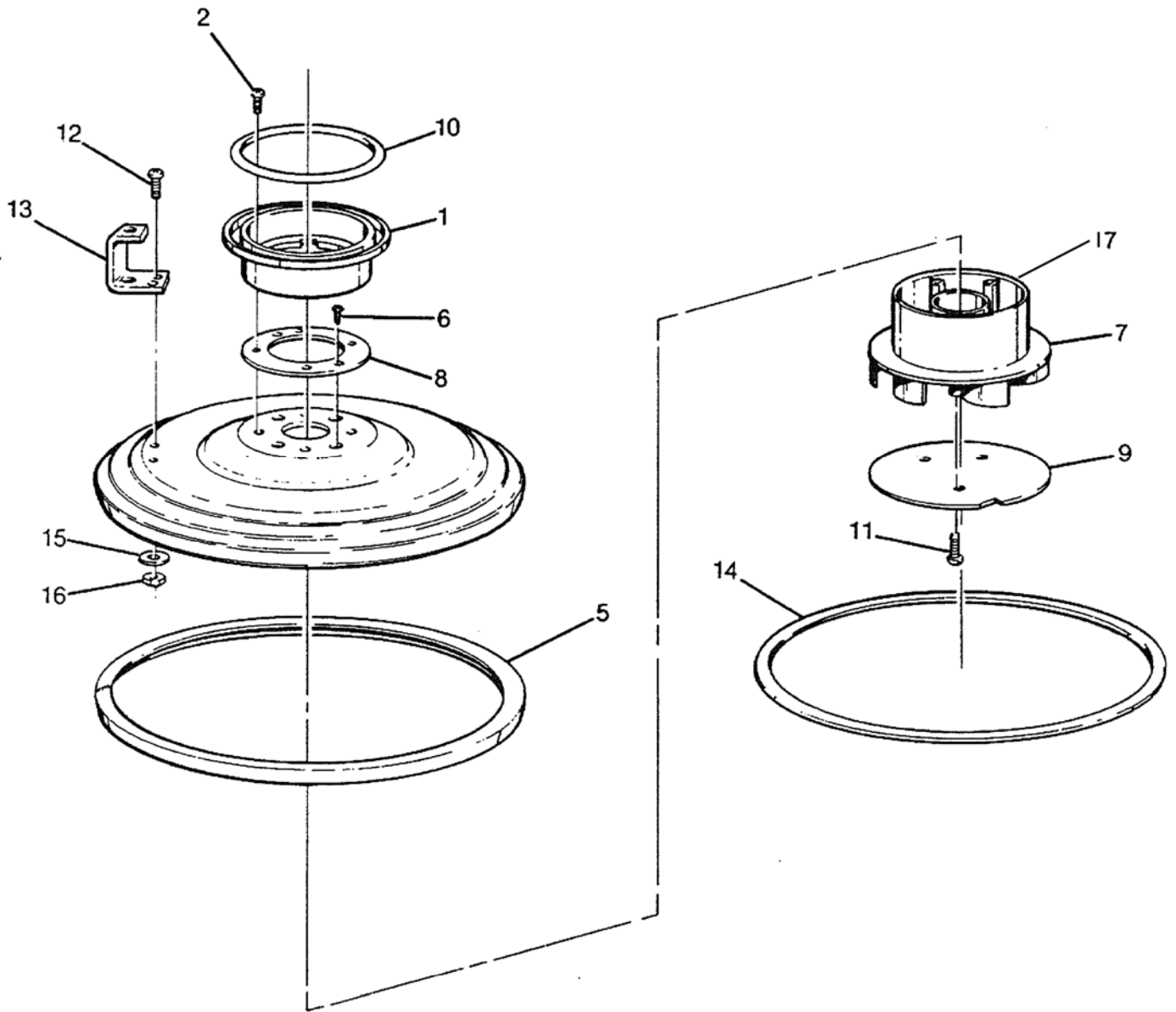


EXTERNAL QUAD AIR VAC (98451)

PARTS LIST
EXTERNAL QUAD AIR VAC (98451)

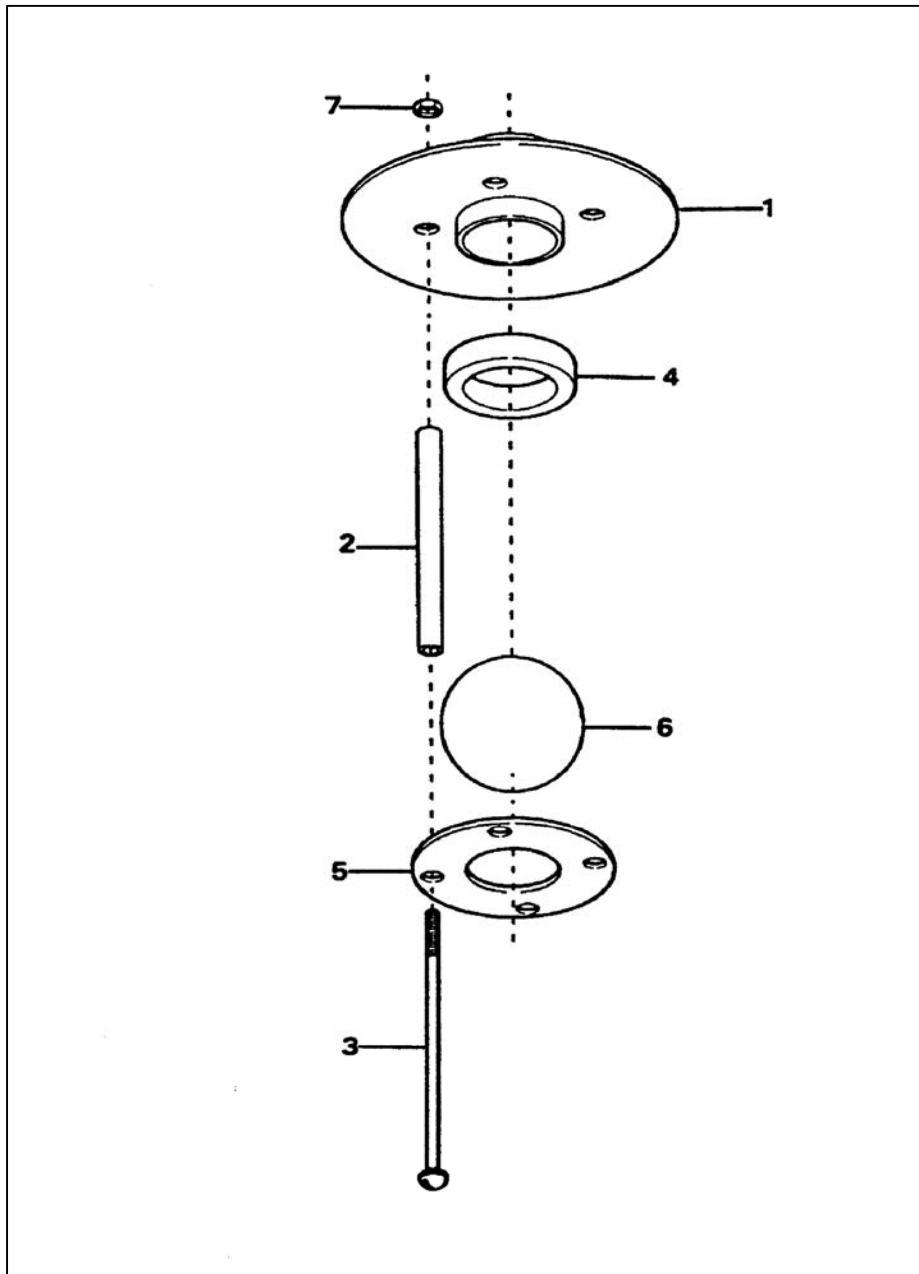
<u>ITEM</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	05732	AIR PRESSURE GAGE
2	1	11327	FITTING-GALV. BUSHING
3	4	11323	PIPE-TEE
4	5	11325	FITTING-GALV. ADAPTOR
5	1	11326	VALVE-BALL
6	5	11324	FITTING-IRON ELBOW
7	8	11365	ADAPTOR-MALE
8	2	80592	HOSE - GP BLACK
9	8	05727	CLAMP
10	4	11322	FITTING GALV. BUSHING
11	2	80592	HOSE - GP BLACK
12	8	02038	SCREW-PHIL. RND HD MACH
13	20	01574	WASHER-LOCK
14	4	05734	ELBOW CONNECTION
15	2	05735	MUFFLER COVER
16	4	05736	MUFFLER SHELL (AIR VACS)
17	4	05723	NOZZLE
18	8	02038	SCREW
19	8	01589	NUT-FINISHED HEX
20	2	04927	MUFFLER BASE
21	4	05724	GASKET
22	2	04984	JET (1/4)
	2	04982	JET .187 ORIF.
	2	04983	JET (7/32)
23	4	02481	RING-O
24	8	12812	SCREW-HEX HD CAP
25	4	32475	PIPE-NIPPLE ½ NPT TAPER
26	4	11317	BASE
27	4	14331	MOUNTING PLATE
28	8	11329	GASKET
29	2	01978	SCREW-PHIL. RND HD MACH
30	1	11328	STRAP
31	1	14330	SUPPORT RISER
32	2	01497	NUT-FINISHED HEX
35	2	03144	SPACER
36	1	08057	THUMB SCREW- JUMBO TOOL
37	1	14329	QUAD TANK COVER
38	1	17131	GASKET- TANK COVER
39	1	90442	DEFLECTOR
40	1	04908	GASKET, FLANGE
41	4	11331	FLANGE
42	8	05043	RIVET- BLIND
43	4	14407	MOUNTING PLATE
44	4	02706	GASKET
45	4	15517	FLOAT-BALL
46	4	06428	CAGE
47	4	06430	TIE WIRE
48	4	02047	SCREW-HEX HD MACH
49	4	07533	NUT-HEX. LOCK
50	2	04997	STAND
51	4	16510	LABEL- WARNING
52	2	11576	MUFFLER COVER
53	2	11577	MUFFLER BASE
*	4	05737	GASKET

Recommended air line for Quad Internal operation 1" I.D.



PARTS LIST
TANK COVER (98850)

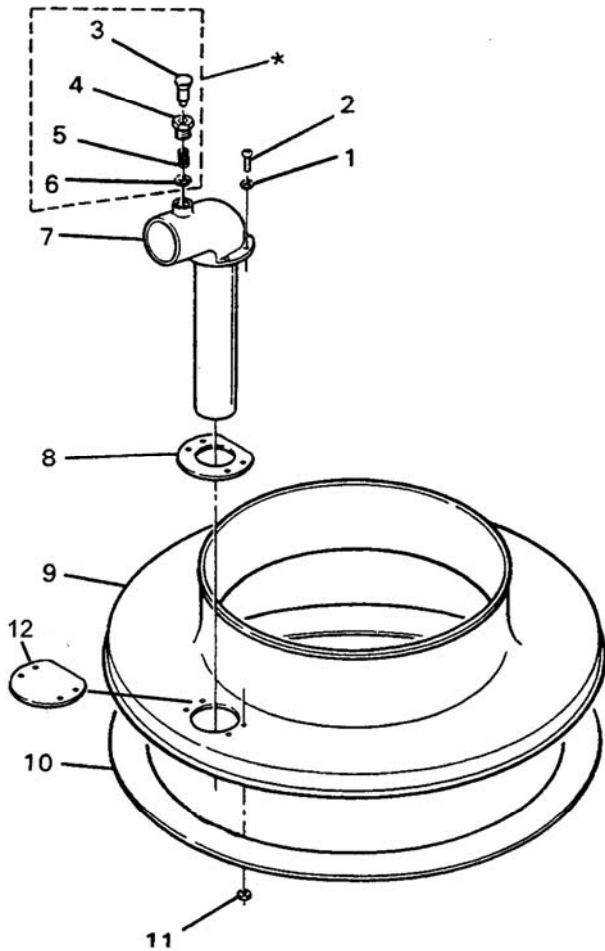
<u>ITEM</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	90480	ADAPTOR ASSY.
2	4	02053	SCREW
3	4	06188	NUT - WELD
5	1	11700	BUMPER
6	4	11394	SCREW
7	1	11358	INTAKE GUIDE
8	1	11386	GASKET
9	1	12300	PLATE
10	1	08004	GASKET
11	3	11390	SCREW
12	2	00086	SCREW
13	1	11414	BRACKET
14	1	11356	GASKET
15	2	07741	SEALING WASHER
16	2	07533	NUT - HEX
17	1	80564	GASKET PRESS-SENSITIVE



PARTS LIST

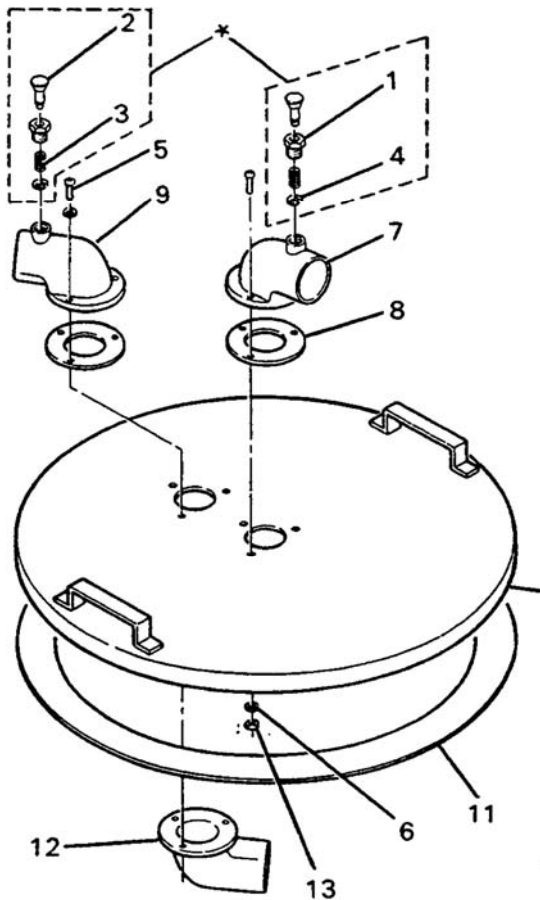
JUMBO COVER LIQUID SHUTOFF (90569)

<u>ITEM</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	14731	TOP PLATE & TUBE
2	4	14732	SPACER
3	4	14733	SCREW-HEX HD CAP
4	1	02247	GASKET
5	1	14735	BOTTOM PLATE
6	1	15517	FLOAT-BALL
7	4	07533	NUT-HEX. LOCK



PARTS LIST
ADAPTOR COVER - 94155 (See Left)

ITEM	QTY.	PART NO.	DESCRIPTION
1	4	01713	WASHER-LOCK
2	4	12896	SCREW-PHIL. RND HD.
3	1	08016	PIN
4	1	08015	NUT - HEX
5	1	08017	SPRING
6	1	08018	RING-RETAINING EXT.
7	1	14558	INTAKE WELD ASSY.
8	1	14554	GASKET-INTAKE
9	1	14553	ADAPTER COVER
10	1	17131	GASKET- TANK COVER
11	4	01604	NUT-FINISHED HEX
12	1	17537	COVER PLATE
*	1	08080	LOCK COMPLETE



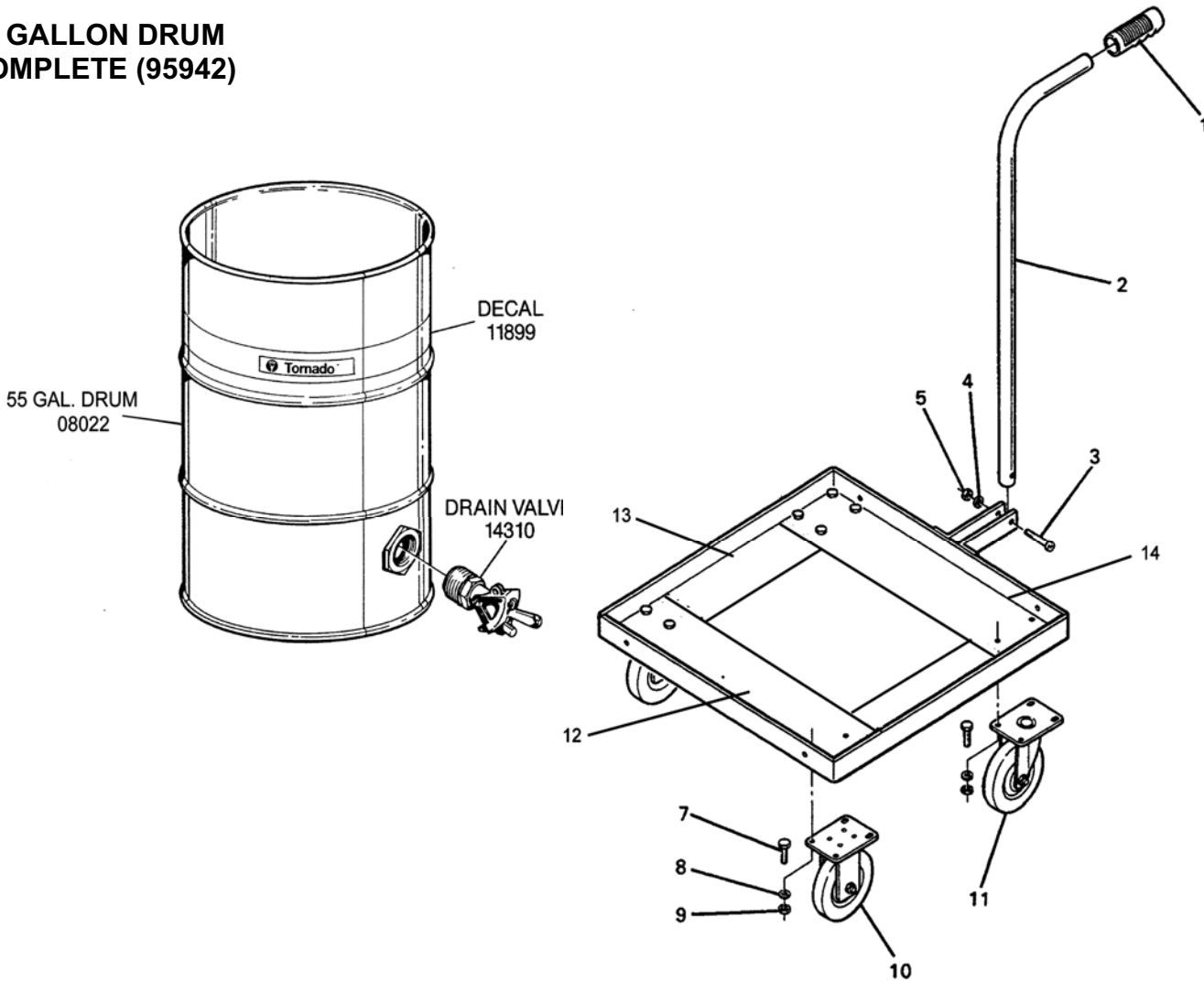
PARTS LIST
ADD-A-TANK - 94655 (See Left)

ITEM	QTY.	PART NO.	DESCRIPTION
1	2	08015	NUT-HEX
2	2	08016	PIN
3	2	08017	SPRING
4	2	08018	RING-RETAINING EXT.
5	2	01995	SCREW-PHIL. PAN HD.
6	3	01713	WASHER-LOCK
7	1	04657	INTAKE
8	2	04660	GASKET
9	1	04656	INTAKE
10	1	14638	TANK COVER S/A
11	1	17131	GASKET
12	1	04658	DEFLECTOR
13	3	01604	NUT-FINISHED HEX
*	1	08080	LOCK COMPLETE

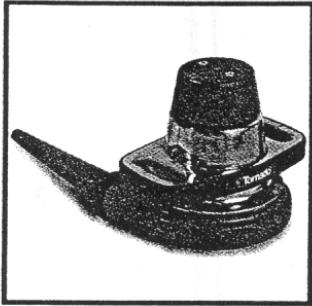
PARTS LIST
TANK DOLLY ASSY. (98088)

ITEM	QTY	PART #	DESCRIPTION
1	1	10001	HANDLEGRIP
2	1	08078	DOLLY HANDLE
3	1	08079	BOLT
4	1	03218	WASHER
5	1	17130	NUT
7	16	02109	SCREW - HEX
8	16	01577	WASHER
9	16	01589	NUT - HEX
10	2	07995	5" CASTER, RIGID
11	2	07994	5" CASTER, SWIVEL
12	1	17199	JUMBO DOLLY RAIL
13	2	17200	JUMBO DOLLY SIDE RAIL
14	1	17201	JUMBO DOLLY FRT. RAIL

**55 GALLON DRUM
COMPLETE (95942)**

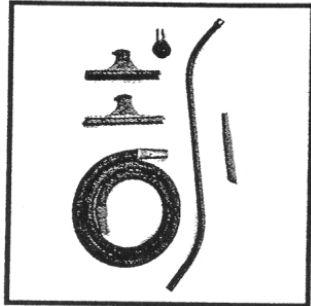


Jumbo Vac Versatile Extras



Taskforce Powerheads

For use on Jumbo Vacs or as portable vacs and blowers. 50' safety cord: 2.25 h.p. model: **#98900**. 1.5 h.p. model: **#98800**. Rubber Blowing Nozzle: **#90010**.



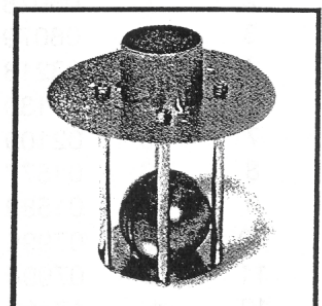
1.5" Deluxe Attachment Set

Wet/Dry. Has a double-curved wand. 14" Squeegee Tool, 14" Fibre-Shoe Tool, 3" Dusting Tool, 18" Round Nozzle, and 15' Poly Hose with swivel sleeve. **#90660**. For Jumbo Cover and hose cuff #5133.



Powerhead Silencer

Reduces the sound level of electric and air powerheads. **#90550**. **Muffler**. Fits on powerhead or attaches to silencer for even quieter operation. Eliminates need for an external filter in wet pick-up work. **#90447**.



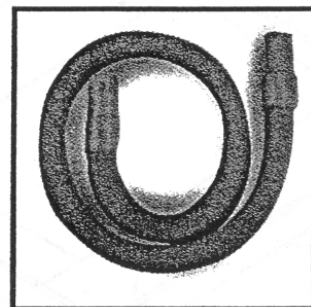
Liquid Shut-Off

Prevents liquid overflow and possible powerhead damage. Attaches to Jumbo cover. Automatically shuts off the vacuum power when liquid reaches overflow level. One required for each powerhead. **#90569**.



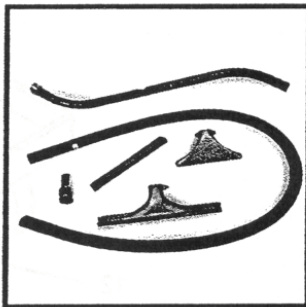
Add-A-Tank Cover

Turns a 55-gallon roll-top drum into a primary separator for both wet and dry recovery. Accepts 1.5" or 2" hoses. Clog-proof intake and exhaust chutes. Usable with any Tornado® tank vac. **#94655**.



Portable Accessories

1.5" x 5' vinyl hose: **#90521**.



2" Deluxe Attachment Set

For Wet/Dry pickup. Includes a double-curved Wand, 22" Squeegee Floor Tool, 12" Gulper Floor Tool, 18" Round Nozzle, 10' Polyethylene Hose, and Hose Connector for Jumbo Cover. **#90633**.



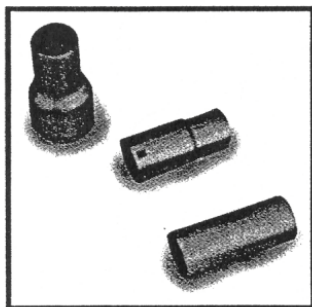
2" Hose Selection

Neoprene Hoses. Wire-reinforced. Static conductive.

- 10' x 2": **#90311**
- 15' x 2": **#90566**
- 25' x 2": **#90421**

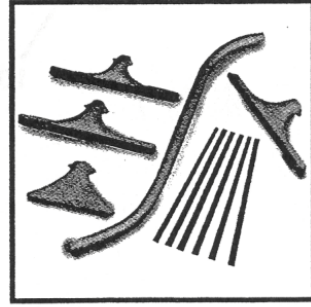
Polyethylene Hose. Lightweight, Flexible.

- 10' x 2": **#90312**



2" Hose Connectors

- A. For Jumbo Cover: **#90332**
- B. For Tank Vacs, Adapter Cover, or Add-A-Tank Cover: **#90316**
- C. Connects two hoses: **#90313**



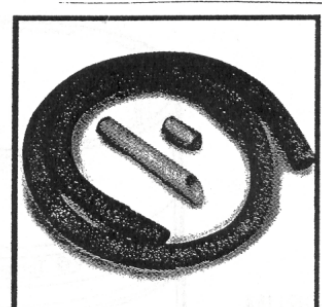
2" Deluxe Floor Tools

- A. 4.5" Wand: **#90327**
- B. 22" Squeegee Tool: **#90317**
- C. 22" Tool w/Brush: **#90318**
- D. 22" Tool w/Fibre Shoes: **#90319**
- E. 12" Gulper Tool: **#90320**
- F. Neoprene Squeegee Replacement Blades (6): **#18372**
- G. Gum Rubber Squeegee Replacement Set: (Not pictured) **#90323**



2" Deluxe Hand Tools

- A. Gulper Hand Tool: **#90322**
- B. 15" Crevice Tool: **#90360**
- C. 18" Round Nozzle: **#90444**



3" Deluxe Attachments

- A. 15' x 3" Neoprene Hose. Wire-reinforced. No Sleeve. **#90463**
- B. 3" Hose Connector for Jumbo Cover or two hoses: **#90333**
- C. 18" Round Nozzle: **#90363**