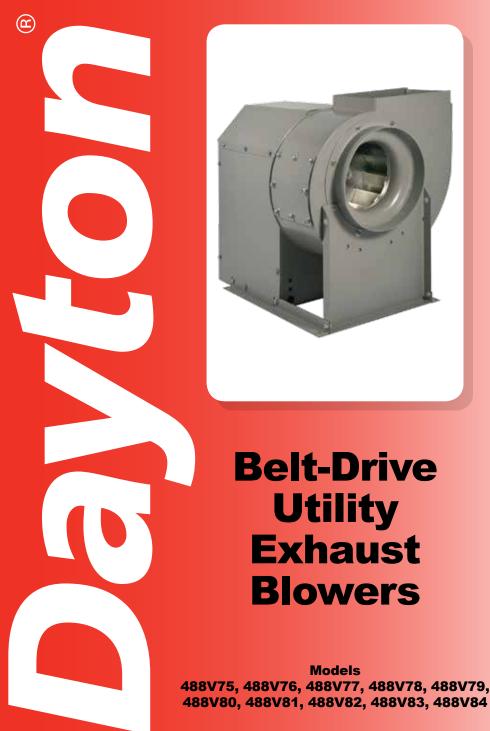
### **Operating Instructions & Parts Manual**



EN

PLEASE READ AND SAVE THESE INSTRUCTIONS. READ CAREFULLY BEFORE ATTEMPTING TO ASSEMBLE, INSTALL, OPERATE OR MAINTAIN THE PRODUCT DESCRIBED.

PROTECT YOURSELF AND OTHERS BY OBSERVING ALL SAFETY INFORMATION. FAILURE TO COMPLY WITH INSTRUCTIONS COULD RESULT IN PERSONAL INJURY AND/OR PROPERTY DAMAGE! RETAIN INSTRUCTIONS FOR FUTURE REFERENCE.

PLEASE REFER TO BACK COVER FOR INFORMATION REGARDING DAYTON'S WARRANTY AND OTHER IMPORTANT INFORMATION.

Model #: \_\_\_\_\_

Serial #: \_\_\_\_\_

Purch. Date:

Form 5S6729 / Printed in USA 04632 Version 3 6/2019 © 2018 Dayton Electric Manufacturing Co. All Rights Reserved



#### **BEFORE YOU BEGIN**

**A** WARNING qualified personnel.

Installation, troubleshooting and parts replacement are to be performed only by

guu.

#### **Electrical Requirements:**

• The motor voltage and ampere rating must be checked for compatibility with the electrical supply prior to final electrical connection. Supply wiring to the fan must be properly fused, and conform to local and national electrical codes.



#### Tools Needed:

- Drill
- Level
- Multimeter
- Tape Measure
- Lock-Out Tag-Out
- Hex Keys/Wrench

#### UNPACKING



#### Contents:

- Dayton<sup>®</sup> Utility Exhaust Belt-Drive Blower (1)
- Operating Instructions and Parts Manual (1)



#### Inspect:

- After unpacking unit, inspect carefully for any damage that may have occurred during transit. Check for loose, missing, or damaged parts. Shipping damage claim must be filed with carrier.
- Check all bolts, screws, set-screws, etc. for looseness that may have occurred during transit. Retighten as required. Rotate blower wheel by hand to be sure it turns freely.



See General Safety Instructions on page 2, and Cautions and Warnings as shown.

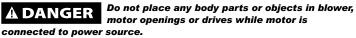


#### **GENERAL SAFETY INSTRUCTIONS**

Utility Exhaust Blowers are designed for commercial kitchen exhaust or industrial spark resistant applications requiring high volumes of air at high static pressures. Units are suitable for ducted exhaust, supply and returnair applications. All blowers are UL/CUL Listed Subject 762 (YZHW) and comply with all requirements set forth in NFPA 96 Standard for Ventilation Control and Fire Protection Commercial Cooking Operations. Hazardous Location Motors are offered for many single and three phase blower combinations.

NOTE: Blower is only permissible for UL 762 when mounted outside of the building, scroll must remain in upblast position for proper grease draining.

**ADANGER** Do not depend on any switch as the sole means of disconnecting power when installing or servicing the blower. Always disconnect, lock and tag power source before installing or servicing. Failure to disconnect power source can result in fire, shock or serious injury. Motor will restart without warning after thermal protector trips. Do not touch operating motor, it may be hot enough to cause injury.



A WARNING

Do not use this equipment in explosive atmospheres.

- Read and follow all instructions and cautionary markings. Make sure electrical power source conforms to requirements of equipment and local codes.
- 2. Blowers should be assembled, installed and serviced by a qualified technician. Have all electrical work performed by a qualified electrician.
- Follow all local electrical and safety codes in the United States, as well as the National Electrical Code (NEC) and National Fire Protection Agency (NFPA) where applicable. Follow the Canadian Electric Code (CEC) in Canada.
- 4. The rotation of the wheel is critical. It must be free to rotate without striking or rubbing any stationary objects.
- 5. Unit must be securely and adequately grounded.
- Do not spin blower wheel faster than max cataloged fan RPM. Adjustments to fan speed significantly affects motor load. If the blower RPM is changed, the motor current should be checked to make sure it is not exceeding the motor nameplate amps.
- Do not kink power cable or allow it to come in contact with sharp objects, oil, grease, hot surfaces or chemicals. Replace damaged cords immediately.
- 8. Make certain that the power source conforms to the requirements for the equipment.
- 9. Never open access door to a duct with the ventilator running.

2

MAINTENANCE



SPECIFICATIONS SAFETY

INSTALLATION ASSEMBLY /

OPERATION

TROUBLESHOOTING

MAINTENANCE REPAIR

SPECIFICATIONS
----------------

#### 488V75, 488V76, 488V77, 488V78, 488V79, 488V80, 488V81, 488V82, 488V83, 488V84 300°F

Outdoor (UL 762), Indoor (UL 705)

1H400 (2 pole, 115/230V, 2 HP max)

1H401 (3 pole, 230V, 7-1/2 HP max)

1H401 (3 pole, 460V, 10 HP max) 1H408 (2 pole, 115/230V, 2 HP max)

1H409 (3 pole, 230V, 7-1/2 HP max)

1H409 (3 pole, 460V, 10 HP max) UL/cUL 762, AMCA Air

Max. Inlet Temp.

Mounting Location

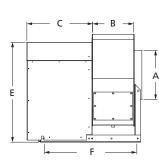
**Recommended NEMA 1** Disconnect Switch

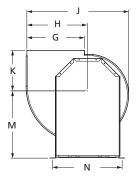
**Recommended NEMA 4 Disconnect Switch** 

Agency Compliance

#### **Dimensions (inches)**

	488V75 488V76	488V77	488V78	488V79	488V80	488V81	488V82	488V83	488V84
A	11	12-6/7	14-1/6	15-3/4	17-1/3	19-1/6	21	23-1/3	25-5/7
В	8-1/2	10	10-8/9	12	13-1/4	14-5/8	16	17-3/4	19-1/2
С	15-1/2	15-1/2	16-3/4	18-1/2	19-1/2	22	23-3/4	24	25
E	22-1/4	22-1/4	24-3/4	27-1/2	30	33-1/4	36-1/8	41-1/2	45-3/4
F	20-2/3	21-2/3	22-3/4	24-4/7	28-3/4	32-3/4	35-5/8	34-8/9	36-1/2
G	11-1/6	13	14-1/3	16	17-1/2	19-1/3	21-1/6	23-5/9	26
Н	11-1/2	13-1/3	14-3/5	16-1/5	17-3/4	19-4/7	21-2/5	23-3/4	26-1/9
J	20	23-2/7	25-5/9	28-2/7	31	34-1/5	37-3/8	41-1/2	45-5/9
К	10-2/3	11-4/5	12-3/5	13-5/9	14-1/2	15-3/5	16-3/4	18-1/6	19-3/5
М	15-1/8	15-1/8	16-5/8	18-1/2	20-3/8	22-3/8	24-1/2	28-3/4	31-1/2
Ν	16-1/9	16	17-2/3	20	22-1/3	23-3/8	25-5/8	28-1/4	31-1/2
Wheel Dia.	11-1/8	12-1/4	13-1/2	15	16-1/2	18-1/4	22-1/4	22-1/4	24-1/2
Shaft Dia.	3/4	1	1	1-1/5	1-1/5	1-1/5	1-4/9	1-4/9	1-4/9







MH12596 - For Exterior use only in UL 762 installations

Dayton Electric Mfg. Co. amca certifies that the blowers shown herein are licensed to bear the AMCA seal. The ratings shown are based on tests and

procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program.

Figure 1

SAFETY

ASSEMBLY

**OPERATION** 

TROUBLESHOOTING

Dayton

#### PERFORMANCE

<u>u</u>										
GETTING	Model	HP	RPM	Max BHP	CFM 0.25"	Air Deli 0.50"	very @ S 0.75"	tatic Pre 1.00"	essure S 2.00"	hown 3.00"
ច	488V75	1/4	1710	0.25	887	805	719	580	-	-
		1/3	1870	0.33	988	908	833	736	-	-
		1/2	2048	0.5	1097	1019	956	884	-	-
SNO		3/4	2246	0.6	1215	1146	1083	1022	568	-
SPECIFICATIONS		1	2581	0.9	1414	1357	1294	1243	982	-
i S	488V76	1/4	1400	0.15	899	777	633	-	-	-
CIF		1/4	1670	0.25	1125	1012	911	799	-	-
ШЧ		1/3	1833	0.33	1259	1149	1056	963	-	-
S		1/2	2103	0.5	1471	1374	1288	1208	741	-
		3/4	2408	0.75	1705	1629	1543	1470	1186	-
		1	2600	1	1851	1787	1703	1632	1369	952
z	488V77	1/3	1622	0.33	1593	1464	1320	1162	-	-
2		1/2	1863	0.5	1862	1756	1637	1511	673	-
		3/4	2132	0.75	2158	2071	1971	1866	1367	-
AL AL		1	2347	1	2393	2313	2229	2135	1724	1097
INSTALLATION		1-1/2	2687	1.5	2763	2692	2622	2546	2209	1814
≦		2	2957	2	3055	2989	2925	2862	2565	2234
	488V78	1/4	1258	0.25	1608	1411	1195	864	-	-
		1/3	1380	0.33	1797	1623	1432	1203	-	-
		1/2	1585	0.50	2105	1963	1807	1636	-	-
z		3/4	1814	0.75	2444	2330	2196	2058	1335	-
		1	1996	1.00	2710	2608	2493	2370	1811	-
RA N		1-1/2	2285	1.50	3132	3041	2951	2847	2399	1820
OPERATION		2	2515	2.00	3467	3382	3300	3215	2820	2377
0		3	2879	3.00	3992	3915	3843	3772	3446	3090
	488V79	1/3	1157	0.33	2038	1802	1537	1178	-	-
		1/2	1329	0.50	2398	2205	1991	1756	-	-
9		3/4	1521	0.75	2791	2633	2454	2265	1003	-
		1	1674	1.00	3100	2964	2805	2640	1818	-
ĕ		1-1/2	1917	1.50	3589	3469	3343	3203	2586	1648
L'		2	2110	2.00	3974	3863	3755	3633	3101	2433
BLESHOOTING		3	2415	3.00	4581	4481	4386	4291	3846	3350

MAINTENANCE / REPAIR Performance certified is for installation type B: Free inlet, Ducted outlet. Power rating (BHP) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The AMCA Certified ratings Seal applies to air performance ratings only.

Dayton

										ST
			Max		Air Deliv	very @ S	tatic Pre	essure S		STARTED
Model	HP	RPM	BHP	0.25"	0.50"	0.75"	1.00"	2.00"	3.00"	Ē
488V80	1/2	1134	0.50	2696	2439	2157	1820	-	-	Ŭ
	3/4	1298	0.75	3147	2936	2703	2449	-	-	
	1	1429	1.00	3501	3320	3111	2894	1664	-	S
	1-1/2 2	1635 1800	1.50 2.00	4054 4493	3900 4352	3729 4209	3546 4046	2713 3335	- 2338	PE
	2	1919	2.00				4046 4398			SAFETY / SPECIFICATIONS
	3 3	2060	2.42 3.00	4811 5184	4677 5057	4545 4935	4396 4808	3754 4220	2948 3558	
	5	2000	3.00 4.70	5164 6063	5057 5948	4935 5843	4000 5738	4220 5263	3556 4741	Y /
488V81	5 1/2	2393 957	4.70 0.50	3198	2920	2594	2103			SNG
400 0 0 1	3/4	957 1095	0.50	3729	2920 3497	3237	2933	-	-	
	3/ <del>4</del> 1	1206	1.00	4150	3944	3721	2933 3475	-	-	
	' 1-1/2	1380	1.50	4800	4625	4441	4244	- 3148	-	
	2	1519	2.00	4000 5314	4023 5160	4996	4823	3985	- 2445	N N
	3	1739	3.00	6126	5994	5853	<del>4020</del> 5710	5066	4169	SSI
	5	2062	5.00	7308	7197	7087	6967	6464	5891	E
488V82	3/4	940	0.75	4180	3878	3533	3077	-	-	ASSEMBLY / INSTALLATION
100102	1	1035	1.00	4657	4392	4096	3757	-	-	NN -
	1-1/2	1185	1.50	5400	5174	4933	4671	3088	_	
	2	1304	2.00	5982	5781	5573	5344	4154	_	
	3	1493	3.00	6902	6732	6550	6367	5501	4202	
	5	1770	5.00	8240	8098	7953	7799	7148	6360	0
	7-1/2	1900	6.18	8865	8733	8601	8459	7864	7191	OPERATION
488V83	3/4	787	0.75	4768	4358	3859	3150	-	-	RA
	1	866	1.00	5319	4958	4551	4032	-	-	TIO
	1-1/2	992	1.50	6187	5883	5554	5189	1756	-	ž
	2	1092	2.00	6865	6594	6307	5997	4198	-	
	3	1250	3.00	7928	7699	7457	7201	5967	3728	
	5	1482	5.00	9476	9287	9089	8885	7982	6795	ᅻ
488V84	1	750	1.00	6142	5634	5067	4333	-	-	õ
	1-1/2	859	1.50	7171	6731	6275	5771	-	-	BE
	2	945	2.00	7974	7574	7171	6742	4048	-	ĒS
	3	1082	3.00	9231	8889	8539	8186	6447	-	Ë
	5	1283	5.00	11058	10779	10485	10189	8937	7264	ŎŢ
	7-1/2	1468	7.49	12728	12486	12235	11978	10935	9755	TROUBLESHOOTING
	10	1550	8.81	13465	13236	13004	12760	11779	10704	

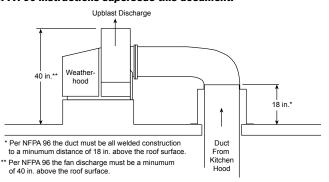
MAINTENANCE / REPAIR



#### INSTALLATION INSTRUCTIONS

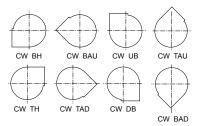
A WARNING

Installation, troubleshooting and parts replacement are to be performed only by qualified personnel. Consult and follow NFPA 96 recommendations. NFPA 96 instructions supersede this document.



#### Figure 2

This Dayton blower is assembled and shipped in the upblast position. If 1. another position is desired refer to Figure 3 (viewed from drive side) for optional discharge positions.



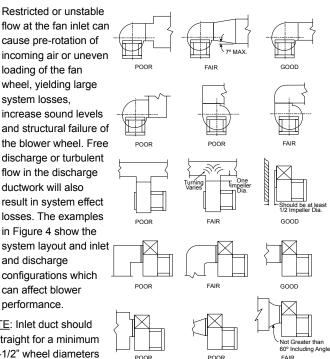
#### Figure 3

NOTE: For Top Angular Down, Downblast and Bottom Angular Down discharge positions, a portion of the frame angle must be removed.

NOTE: Changing the discharge position will relocate the access door and drain connection. NFPA 96 requires the drain connection be placed at the lowest point of the scroll to discard water and grease. Additionally, UL does not permit these blowers to be used in the downblast positions for kitchen or grease applications.

- a. To rotate the scroll you will have to remove a total of sixteen fasteners. Eight fasteners are located on the intake side and the other eight are located on the tall vertical support behind the weather hood
- Position the scroll in the desired position. Line up holes and b. refasten with the same bolts you previously removed.
- 2. Locate and prepare roof area for blower. Blower should be securely fastened to the roof deck, roof joist, or equipment supports through the mounting holes provided in the base angles. If equipment supports are being used they should be fastened to the roof as well.





NOTE: Inlet duct should be straight for a minimum of 2-1/2" wheel diameters prior to connecting to the blower.

3



- 4. Attach inlet duct to the inlet collar of the blower. NFPA 96 requires the inlet duct connection and duct to be fully welded in kitchen exhaust applications. Refer back to Figure 2 for minimum duct and blower discharge heights.
- 5. Replace access door using same bolts that were removed previously.

NOTE: The drain connection will no longer operate if housing is rotated to another position. In this case, leave the plug installed to minimize air loss.

- 6. Rotate the wheel by hand to ensure that it does not rub and rotates freely. Refer to Figures 5 and chart for proper overlap and radial gap dimensions.
  - Centering can be accomplished by loosening the inlet cone bolts a. to move the inlet cone or by loosening the bearings in order to move the shaft.
  - b. Wheel and inlet cone overlap can be adjusted by loosening the wheel hub set screws and moving the wheel to the desired position. Tighten all fasteners and set screws securely.

	Wheel D	liameter
	11-1/8 thru 16-1/2	18-1/4 thru 24-1/2
Overlap (inches)	1/4	15/32
Radial Gap (inches)	3/8	5/32



7

SAFETY /

SSEMBLY TALLATION

OPERATION



Wrong

Wrong

Right

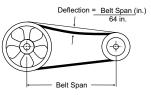
Figure 6

#### MOTOR AND PULLEY MOUNTING

Never adjust pitch of wheel blades in field. Blade **A** CAUTION pitch should only be changed by manufacturer.

NOTE: For UL/cUL Listed units, the motor used with this fan must be designated as such by Dayton<sup>®</sup>.

- Secure motor to plate (hardware by others). Holes will align when the 1. motor frame (shaft end) is flush with the edge of the motor plate. Refer to UL/cUL motor label attached to unit.
- 2. Mount pulleys on shafts and secure with set screw. Check pulleys for proper alignment, see Figure 6. Misaligned pulleys lead to excessive belt wear. vibration and noise.
- 3 Install the belt and adjust the tension to allow for 1/64" of deflection per inch of span when moderate thumb pressure is applied to the belt. Adjust belt using the motor plate adjusting brackets as shown in Figure 7. Too much tension will cause excess bearing wear and noise. Too little tension will cause slippage at startup and uneven wear.



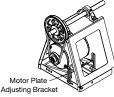


Figure 7

Figure 8

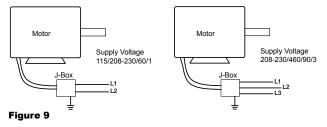
Adjust RPM to desired level using a variable pitch pulley. After 4. adjustment, motor amperage should be checked to avoid overloading of the motor.

#### **Electrical connection**

NOTE: Refer to motor nameplate for wiring procedures. Refer to switch manufacturer for installation and wiring procedures.

To reduce the risk of electrical shock - do not **A** WARNING connect to a circuit operating at more than 150V

- to ground.
- 1. Motor and fan must be securely grounded (bare metal) to a suitable electric ground, such as a grounded water pipe or ground wire system.
- 2. Wire motor for desired voltage per wiring diagram on motor or refer to Figure 9 for connection wiring diagram.



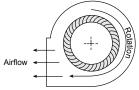
NSTALLATIO SSEMBL

8



#### **OPERATION**

- Before starting up or operating your new Dayton<sup>®</sup> blower, check all fasteners for tightness. In particular, check bearing set screws in wheel (and sheaves, if applicable). While in the OFF position, or before connecting the blower to power, turn the blower wheel by hand to be sure it is not striking the orifice or any obstacle.
- 2. Start the blower up and shut it off immediately to check rotation of the wheel with directional arrow in the motor compartment.
  - Rotation of the wheel is critical and incorrect rotation will result in reduced air performance, increased motor loading and possible motor burnout.
  - b. Remove access door.
  - c. Check wheel rotation by momentarily energizing the unit and note if rotation is in the same direction as the airflow at the outlet and conforms to the rotation decal affixed to the blower or refer to Figure 10.



#### Figure 10

- 4. When the blower is started, observe the operation and check for any unusual noises.
- With the system in full operation measure current input to the motor and compare with the nameplate rating to determine if the BHP is operating under safe load conditions.
- Adjust RPM to desired level using a variable pitch pulley. After adjustment, motor amperage should be checked to avoid overloading of the motor.

**IMPORTANT**: Adjust (tighten) belt tension after the first 24 hours of operation.

7. Keep inlets and approaches to blower clean and free from obstruction.

Dayton

#### **TROUBLESHOOTING GUIDE**

DNIT	Symptom	Possible Cause(s)	Corrective Action
GETTI	Blower inoperative	1. Electrical Supply	<ol> <li>Check fuses/circuit breakers. Check for switches off. Check for correct supply voltage.</li> </ol>
S		2. Drive	<ol> <li>Check for broken belts. Tighten loose pulleys.</li> </ol>
SAFETY / SPECIFICATIONS		3. Motor	3. Assure motor is correct horsepower and not tripping overload protector.
SAFE	Excessive noise or vibration	1. Wheel Rubbing Inlet	<ol> <li>Adjust wheel and/or inlet cone. Tighten wheel hub or bearing collars on shaft.</li> </ol>
SPE		2. V-Belt Drive	<ol> <li>Tighten sheaves on motor/fan shaft. Adjust belt tension. Align sheaves properly (see page 8). Replace worn belts or sheaves.</li> </ol>
NO		3. Bearings	<ol> <li>Replace defective bearing(s). Lubricate bearings. Tighten collars and fasteners.</li> </ol>
ASSEMBLY / NSTALLATION		4. Wheel Unbalance	4. Clean all dirt off wheel. Check wheel balance, rebalance in place if necessary.
ASSI	Insufficient airflow	1. Blower	<ol> <li>Check wheel for correct rotation. Increase fan speed.*</li> </ol>
		2. Duct System	2. See page 7, Figure 4.
	Too much airflow	1. Blower	<ol> <li>Re-size ductwork. Access door, filters, grills not installed.</li> </ol>
OPERATION		2. Duct System	<ol> <li>Change obstructions in system. Use correction factor to adjust for temperature/altitude. Re-size ductwork. Clean filters/coils. Adjust fan speed.*</li> </ol>
OPE	Static pressure incorrect	Duct system has more or less restriction than anticipated	Check rotation of wheel. Adjust fan speed.
Ð	Overheated bearings	1. Lubrication	<ol> <li>Check for excessive or insufficient grease in the bearing.</li> </ol>
<b>TROUBLESHOOTING</b>		2. Mechanical	<ol> <li>Replace damaged bearing. Relieve excessive belt tension. Align bearings. Check for bent shaft.</li> </ol>
DUBL	Motor overloads or overheats	1. Blower	<ol> <li>Check rotation of wheel. Reduce fan speed.</li> </ol>
TRG		2. Duct System	<ol> <li>Re-size ductwork. Check proper operation of face and bypass dampers. Check filters and access doors.</li> </ol>

\* Always check motor amps and compare to nameplate rating. Excessive fan speed may overload the motor and result in burnout.



#### MAINTENANCE

#### **A** WARNING

Disconnect and lockout power source before servicing.

**A** CAUTION

Uneven cleaning of the wheel will produce an out of balance condition that will cause

vibration in the fan.

- 1. Depending on the usage and severity of the contaminated air, a regularly scheduled inspection for cleaning the blower wheel, housing and surrounding areas should be established.
- 2. Check for unusual noises when blower is running.
- 3. Periodically inspect and tighten set-screws.
- 4. Periodically check belts for wear and tightness.

NOTE: When replacing belts use the same type as supplied with the unit.

NOTE: For belt replacement, loosen the motor mounting hardware to allow removal of the belt by hand.

**A** CAUTION

Do not force belts on or off. This may cause cords to break, leading to premature belt failure.

 All blower bearings are pre-lubricated. Keep bearings clean and well lubricated.

NOTE: Sealed pillow block bearings require no further lubrication.

Blower RPM		Bore (inches) 3/4 to 1-1/2	Blower RPM		Bore (inches) 3/4 to 1-1/2
To 250	12	12	1500	12	5
500	12	12	2000	12	3
750	12	9	2500	12	2
1000	12	7	3000	12	2
1250	12	6	3500	12	1
Number of Shots	4	8	Number of Shots	4	8

#### **Recommended Relubrication Frequency in Months**

- a. Lubricant should be added with the shaft rotating and until clean grease is seen purging from the bearing. The lubrication interval may be modified based on the condition of the purged grease.
- For conditions including high temperatures, moisture, dirt or excessive vibration, consult the factory for a specific lubrication interval for your application.
- c. Lubricant should be a high quality lithium complex grease conforming to NLGI Grade 2. Factory recommends Mobilux EP-2.
- d. The use of synthetic lubricants will increase lubrication intervals by approximately 3 times.
- 6. Follow motor manufacturer's instructions for motor lubrication.
- 7. For critical applications, a spare motor and belts should be available.

MAINTENANCE

REPAIR

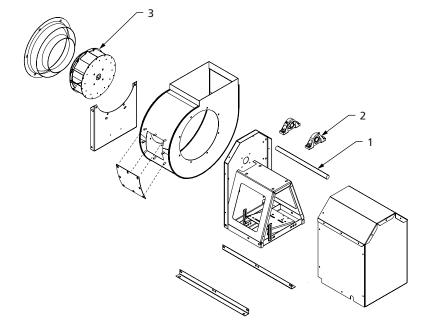


## REPAIR PARTS ILLUSTRATION FOR UTILITY EXHAUST BLOWERS

ASSEMBLY / INSTALLATION

**OPERATION** 

TROUBLESHOOTING



# For Repair Parts, call 1-800-Grainger 24 hours a day – 365 days a year

Please provide following information: -Model number -Serial number (if any) -Part description and number as shown in parts list

Ref. No.	Description	Part Number for Models: 488V76 488V78	r Models: 488V78	488V80	488V82	488V84	Quantity.
~	Shaft	21DT19	21DR22	493X37	493X39	493X40	+
7	Bearings	21DW66	21DT70	493X41	493X41	493X42	2
e	Wheel	493X58	493X50	493X52	493X54	493X56	-
Ref.		<b>Part Number for Models:</b>	r Models:				
No.	Description	488V75	488V77	488V79	488V81	488V83	Quantity.
<del>~</del>	Shaft	21DT19	493X35	493X36	493X38	493X40	7
7	Bearings	21DW66	21DT70	493X41	493X41	493X42	2
e	Wheel	493X57	493X49	493X51	493X53	493X55	-

**REPAIR PARTS LIST FOR UTILITY EXHAUST BLOWERS** 

**GETTING STARTED** 

SAFETY / SPECIFICATIONS

ASSEMBLY / INSTALLATION

OPERATION

TROUBLESHOOTING

MAINTENANCE / REPAIR

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#### Dayton Electric Mfg. Co., 100 Grainger Parkway, Lake Forest, IL 60045 U.S.A. or call +1-888-361-8649