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#218 LARGE MULTI-SPEED BLOWER & FILTER BOX KIT

INSTALLATION INSTRUCTIONS

PARTS LIST			
#218 LARGE MULTI-SPEED BLOWER & FILTER BOX KIT			
KEY#	DESCRIPTION	PART #	QUANTITY
-	Blower with Motor, 4-speed (in box)	636110010	1
-	Blower Mounting Brackets (1-R, 1-L)	63611002	1 PR
Part # 38002:			
-	Bottom Base Plate	56660405	1
-	Mounting Angle – Long	56660406	1
-	Mounting Angle – Short	56660407	2
-	Side Panel Assembly	56660401	2
-	Top Panel	56660404	1
Part # 38001:			
-	Flange Nut, 1/4"	FLN14	4
-	Hex Bolt, 1/4" x 3/4"	HB1434	4
-	Flat Washer, 1/4"	FW14	4
-	Wire Nut, Small	62630802	4
-	Screw, #12 x 3/4" self drilling/self-tapping	TK1234	24
-	Screw, #12 x 1/2"	SCT #1212	16
-	Fan Hole Cover Plate	55670604	1
-	Conduit Connector, 90 °	62670202	1
-	Instructions	66700019	1
-	Carton, Accessory (22 x 22 x 4)	69680218	1
-	Carton Label, Filter Box	65810218	1
-	7" Poly tubing, – 10" long (1 ft)	69690007	1
-	Fiberglass Air Filter (20 x 20 x 1)	Not included in kit-purchase at home improvement store	1

CAUTION: 

Disconnect all electrical power to DAKA furnace before proceeding with installation. Shut off electric supply at main breaker box before removing original blower on DAKA furnace. With all electrical power disconnected to DAKA fan control and blower, proceed to Step 1.

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INSTALLATION

1. Remove cover plate and disconnect wiring in junction box connected to original blower on back of DAKA furnace.
2. Using a $\frac{5}{16}$ " nut driver or $\frac{5}{16}$ " socket with ratchet, remove the four (4) screws that hold the original blower onto the back of the DAKA furnace. With original blower removed, fasten the new fan hole cover plate over original blower hole, reusing the same four (4) screws that held the original blower in place. See FIG. 1.

Figure 1



3. Using four (4) each $\frac{1}{4}$ " x $\frac{3}{4}$ " hex bolts, four (4) $\frac{1}{4}$ " flat washers, and four (4) each $\frac{1}{4}$ " flange nuts, attach blower mounting brackets to bottom base plate. NOTE: There is one (1) right and one (1) left blower mounting bracket. Make sure to position them on bottom base plate as shown in FIG. 2. Run mounting bolts and washers down from top with nut under bottom base plate. *Do not tighten bolts yet.*

Figure 2



— INSTRUCTIONS —

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4. Use four (4) each #12 x 3/4" self-drilling/self-tapping screws to attach blower mounting brackets to blower. NOTE: These types of screws do not require drilling a pilot hole. Use a power drill with a 3/8" hex nut driver bit. Locate pre-existing holes in brackets & side of blower housing. See FIG. 3.

Figure 3

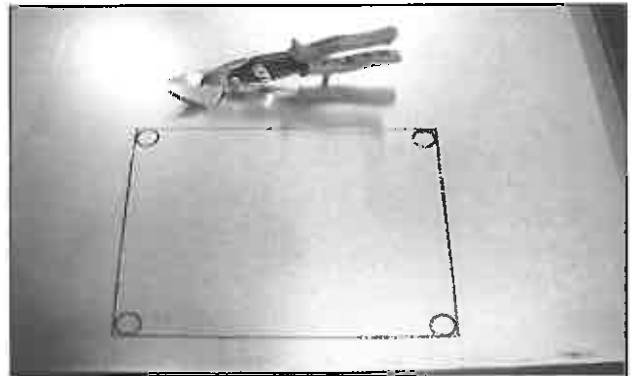


5. Position blower assembly in desired position on side of furnace. Center blower assembly front to back. See FIG. 4. Using the blower's outlet as a template, trace around the blower outlet with a black permanent marker, marking location of hole to be cut into air jacket panel in next step. See FIG. 5.

Figure 4



Figure 5

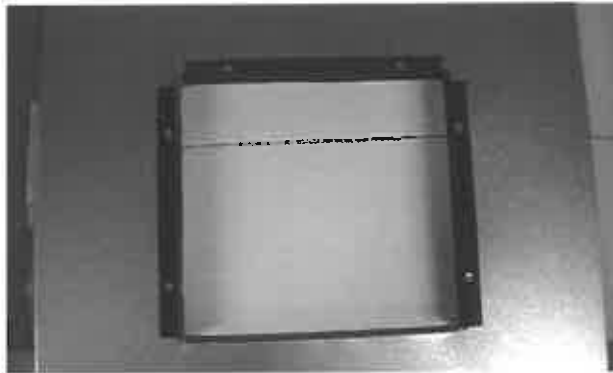


6. Cut opening in side of air jacket panel. Lay air jacket panel on flat level work table. Use a large diameter hole saw to drill a hole in each corner of marked location. See FIG. 5. Use tin snips to finish hole. NOTE: Blower outlet will extend inside opening so make sure to cut along inside of lines.
7. Before mounting angles to air jacket panel, make sure blower outlet fits in hole that you just cut in side panel. Fasten air jacket mounting angles to side air jacket panel using six (6) 12 x 3/4" self-drilling/self-tapping screws. NOTE: These types of screws do not require drilling a pilot hole. Use a power drill with a 3/8" hex nut driver bit. Flush edge of mounting angles with opening to allow blower housing outlet to slide into opening. See FIG. 6.

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Figure 6



8. Place air jacket side panel back onto furnace. Position blower assembly up next to furnace. Insert blower outlet into new opening in air jacket. Blower outlet should extend approximately 1" inside of air jacket. With bottom base plate pushed up tight against furnace, install four (4) #12 x 1/2" self drilling TEK screws through air jacket mounting angles and into blower housing. You will be drilling screws in housing – 2 screws per mounting angle.

Figure 7



9. Remove the four (4) screws that hold the blower housing to the blower mounting brackets. These screws were previously installed in Step 4. Reference FIG. 3. With screws removed, slide the bottom base plate out from under blower. Blower housing will now be temporarily supported by air jacket mounting angles. NOTE: Removal of the bottom base plate is because the filter box attaches directly to it in the next step.

Figure 8



— INSTRUCTIONS —

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10. Set bottom plate on edge. See FIG. 9. Attach filter box side panels to bottom base plate.

Figure 9



11. Attach top panel to side panels of filter box. See FIG. 10.

Figure 10



12. Slide the assembled filter box back under the blower housing that is mounted to the air jacket side panel. Use four (4) each #12 x 3/4" self-drilling/self-tapping screws to mount blower housing assembly to blower mounting plates. (See FIG. 11 & FIG. 12). These are the same screws used in Step. 4. With these screws attached, the blower housing will now be supported by both the air jacket mounting angles & blower mounting brackets. This is necessary to properly secure the blower in place.

Figure 11



Figure 12

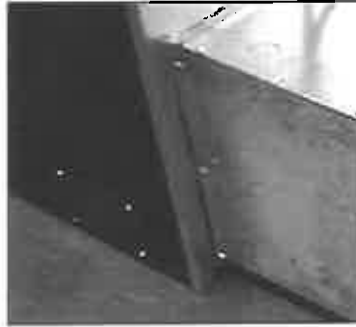


— INSTRUCTIONS —

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13. Attach filter box assembly to the furnace air jacket panel using eight (8) 12 x ½ self-drilling/self-tapping screws. See FIG. 13.

Figure 13



CAUTION:

Disconnect all electrical power to DAKA furnace before proceeding.

14. Install wiring from blower motor using the existing wiring. Remove top panel of filter box. Using the existing wiring supplied with furnace, located the flex conduit with 2 blue wires coming down from the fan control located on the side of DAKA furnace. Install 90° conduit connector on end of flex conduit. Insert the 2 blue wires through hole in top of filter box cover. Place conduit connector nut over blue wires. Secure connector to filter box top. Attach 1 blue wire to the common purple wire. The other blue wire in the flex conduit gets attached to either the black, yellow, orange or red wire depending on desired fan speed (See FIG. 14 WIRING DIAGRAM). With the 2 blue wires hooked up, make sure to place wire nuts on all other single wires not being used. Install top portion of 90° conduit connector to hold flexible conduit securely in place. All wire nut connectors should be located inside the filter box (See FIG. 15).

Figure 14

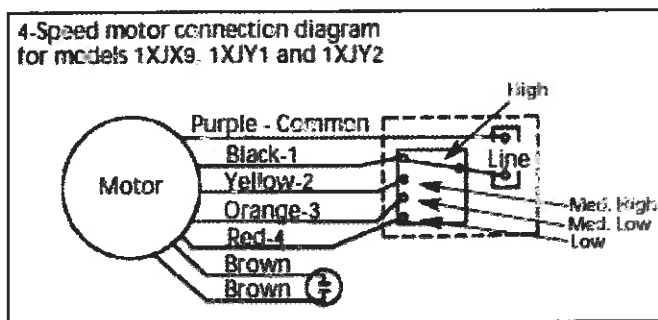


Figure 15



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.

Dayton® Direct-Drive Blowers

Description

Dayton direct-drive blowers are specifically engineered for air-conditioning, heating and ventilating systems where the blower is mounted within a cabinet or plenum chamber. To minimize vibration, 4-point reinforced mounting brackets have been equipped with rubber isolators. Blowers can be mounted in four variable discharge positions. All motors are permanent split capacitor type (with appropriate capacitor attached) with automatic reset thermal protection.

Dimensions

Model	Wheel Diameter x Width	A	B	C	D	E	F	G	H	I
1XJX7	9 ⁷ / ₁₆ x 7 ³ / ₁₆	12 ⁹ / ₁₆	6 ¹ / ₈	3/4	12 ³ / ₄	7 ¹³ / ₁₆	7 ¹ / ₈	9 ³ / ₄	9 ¹ / ₈	6 ¹⁹ / ₃₂
1XJX8	9 ⁷ / ₁₆ x 9 ⁷ / ₁₆	15	7 ⁷ / ₃₂	1 ⁹ / ₁₆	15 ⁹ / ₃₂	10 ¹ / ₄	8 ⁹ / ₁₆	12 ⁵ / ₁₆	11 ¹³ / ₁₆	6 ¹ / ₂
1XJX9	9 ⁷ / ₁₆ x 9 ⁷ / ₁₆	15	7 ⁷ / ₃₂	1 ⁹ / ₁₆	15 ⁹ / ₃₂	10 ¹ / ₄	8 ⁹ / ₁₆	12 ⁵ / ₁₆	11 ¹³ / ₁₆	6 ¹ / ₂
1XJY1	11 x 7 ¹³ / ₁₆	16 ⁹ / ₁₆	7 ⁷ / ₈	1 ⁹ / ₃₂	17 ⁵ / ₁₆	11 ³ / ₈	9 ⁵ / ₈	11 ¹ / ₂	10 ¹ / ₂	6
1XJY2	11 x 10 ⁹ / ₁₆	16 ⁹ / ₁₆	7 ⁷ / ₈	1 ⁹ / ₃₂	17 ⁵ / ₁₆	11 ³ / ₈	9 ⁵ / ₈	14 ¹ / ₁₆	13 ¹ / ₁₆	6
1XJY3	13 x 9 ¹ / ₂	19 ⁹ / ₃₂	8 ⁷ / ₈	1 ⁵ / ₈	20 ⁵ / ₁₆	13 ³ / ₈	11 ⁹ / ₁₆	13 ⁵ / ₁₆	12 ³ / ₁₆	8 ¹¹ / ₁₆
1XJY4	13 x 9 ¹ / ₂	19 ⁹ / ₃₂	9 ¹ / ₁₆	1 ⁵ / ₈	20 ⁵ / ₁₆	13 ³ / ₈	11 ⁹ / ₁₆	13 ⁵ / ₁₆	12 ³ / ₁₆	8 ⁵ / ₁₆

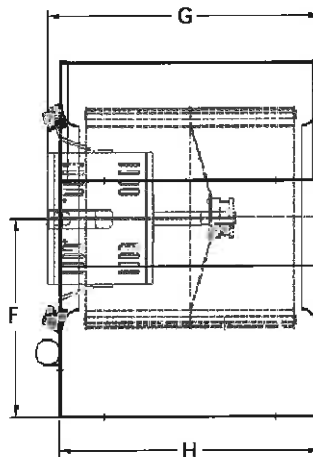
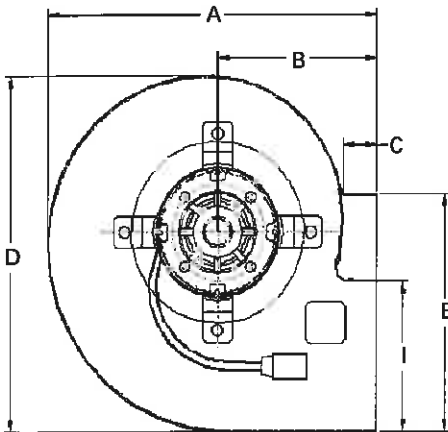


Figure 1 - Dimensions

General Safety Information

WARNING Disconnect power source before installing or servicing. Failure to disconnect power source can result in fire, shock or serious injury.

1. Blower should be installed and serviced by a qualified technician only.
2. Follow all local electrical and safety codes, as well as the National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA) in the United States.

Unpacking

1. Inspect unit for any damage that may have occurred during transit.
2. Shipping damage claim must be filed with carrier.
3. Insure that blower wheel spins freely before installation.

Motor Component Recognition



3. Motor must be securely and adequately grounded. This can be accomplished by wiring with a grounded, metal-clad raceway system by using a separate ground wire connected to the bare metal of the motor frame, or other suitable means.
4. Always disconnect power source before working on or near a motor or its connected load. Lock it in the open position and tag to prevent unexpected application of power.
5. In accordance with OSHA requirements, guarding is required if blower is mounted less than 7 feet above floor or where workers have access.
6. Be careful when touching the exterior of an operating motor; it may be hot enough to cause injury. With modern motors, this condition is normal as they are built to operate at higher temperatures.

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Dayton® Direct-Drive Blowers

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General Safety Information (Continued)

▲ CAUTION *Do not touch motor. It may be hot enough to cause injury.*

7. Protect power cable from coming into contact with sharp objects.
8. Do not kink power cable and never allow cable to come in contact with oil, grease, hot surfaces or chemicals.
9. Make certain that the power source conforms to the requirements of your equipment.

▲ WARNING *Do not use in a flammable or explosive atmosphere.*

Installation

1. Attach the housing supports (ordered separately) to the housing in the desired discharge position.

▲ CAUTION *For safety, a lockable disconnect switch should be located near blower so power can be positively disconnected while installing or servicing the fan.*

▲ WARNING *Blower frame and motor must be electrically grounded to a suitable electrical ground such as a grounded metallic raceway or ground wire system. Be sure the motor to housing ground wire is secure.*

2. Wiring connections:

- a. For Models 1XJX7 and 1XJX8 connect the two leads to the appropriate power source.
- b. For Models 1XJX9, 1XJY1, 1XJY2, 1XJY3 and 1XJY4, refer to Figure 2, page 3 for wiring.

NOTE: The purple lead in the wiring diagrams must always be used as one of the electrical connections. All leads not used must be "dead ended" (taped off).

3. Unit is ready for operation.

Operation

After the blower is installed and all duct work is re-attached, measure the current input to the motor and compare with the nameplate rating of the motor (See "Specifications and Performance") to determine if the motor is operating under safe load conditions.

▲ CAUTION *Make certain that the blower is operating within the static pressure limits shown in the "Specification and Performance" chart; if not, motor overload will result.*

Maintenance

▲ WARNING *Do not depend on any switch as the sole means of disconnecting power when installing or servicing the fan. If the power disconnect is out-of-sight, lock it in the open position and tag to prevent application of power. Failure to do so may result in fatal electrical shock.*

LUBRICATION

The motor bearings are permanently lubricated ball-bearings.

Specifications and Performance

Model	Wheel Dia.	Wheel Width	CFM Air Delivery @ RPM Shown							No. of Speeds	Motor RPM	HP	Volts 60 Hz	Full Load Amps
			.300" SP	.400" SP	.500" SP	.600" SP	.700" SP	.800" SP	.900" SP					
1XJX7	9 ⁷ / ₁₆ "	7 ³ / ₁₆ "	1009	1005	1001	929	838	692	-	1	1070	1/6	115	3.7
1XJX8	9 ⁷ / ₁₆ "	9 ⁷ / ₁₆ "	1457	1340	1319	1301	1230	1117	715	1	986	1/4	115	4.9
1XJX9	9 ⁷ / ₁₆ "	9 ⁷ / ₁₆ "	1638	1610	1545	1457	1358	1225	1050	4	1085	1/3	115	6.9
	9 ⁷ / ₁₆ "	9 ⁷ / ₁₆ "	1516	1496	1437	1373	1320	1139	926	4	1040	1/3	115	6.9
	9 ⁷ / ₁₆ "	9 ⁷ / ₁₆ "	1368	1310	1280	1256	1185	1052	826	4	937	1/3	115	6.9
	9 ⁷ / ₁₆ "	9 ⁷ / ₁₆ "	1132	1101	1083	1046	1012	896	813	4	858	1/3	115	6.9

Models 1XJX7 thru 1XJX9, and 1XJY1 thru 1XJY4

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Specifications and Performance (Continued)

Model	Wheel Dia.	Wheel Width	CFM Air Delivery @ RPM Shown							No. of Speeds	Motor RPM	HP	Volts 60 Hz	Full Load Amps
			.800" SP	.900" SP	1.000" SP	1.100" SP	1.200" SP	1.250" SP	1.300" SP					
1XJY1	11"	7 ¹³ / ₁₆ "	1857	1751	1654	1521	1188	938	-	4	1060	1/2	115	9.0
	11"	7 ¹³ / ₁₆ "	1706	1632	1546	1381	1033	863	-	4	1035	1/2	115	9.0
	11"	7 ¹³ / ₁₆ "	1524	1458	1393	1208	925	841	-	4	989	1/2	115	9.0
	11"	7 ¹³ / ₁₆ "	1327	1279	1162	1049	846	622	-	4	946	1/2	115	9.0
1XJY2	11"	10 ⁹ / ₁₆ "	-	2016	1864	1704	1399	1217	1171	4	1100	3/4	115	9.0
	11"	10 ⁹ / ₁₆ "	-	1925	1776	1589	1255	1184	1122	4	1080	3/4	115	9.0
	11"	10 ⁹ / ₁₆ "	-	1745	1636	1430	1209	1128	1074	4	1050	3/4	115	9.0
	11"	10 ⁹ / ₁₆ "	-	1587	1474	1345	1152	1110	880	4	1027	3/4	115	9.0

Model	Wheel Dia.	Wheel Width	CFM Air Delivery @ RPM Shown							No. of Speeds	Motor RPM	HP	Volts 60 Hz	Full Load Amps
			1.200" SP	1.300" SP	1.400" SP	1.500" SP	1.600" SP	1.700" SP	1.800" SP					
1XJY3	13"	9 ¹ / ₂ "	2701	2522	2373	2231	2057	1851	1655	3	1097	1	115	15.3
	13"	9 ¹ / ₂ "	2480	2373	2218	2084	1910	1696	1384	3	1070	1	115	15.3
	13"	9 ¹ / ₂ "	2248	2143	2032	1890	1685	1498	-	3	1038	1	115	15.3
1XJY4	13"	9 ¹ / ₂ "	2553	2465	2316	2149	1957	1671	1416	3	1086	1	230/208	7.2/6.9
	13"	9 ¹ / ₂ "	2472	2401	2282	2116	1925	1680	1334	3	1062	1	230/208	7.2/6.9
	13"	9 ¹ / ₂ "	2255	2204	2078	1959	1707	1333	-	3	1039	1	230/208	7.2/6.9

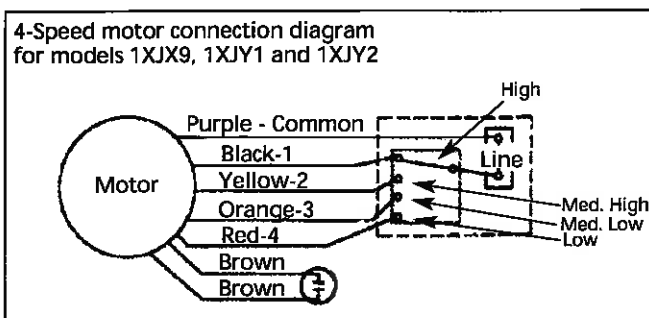
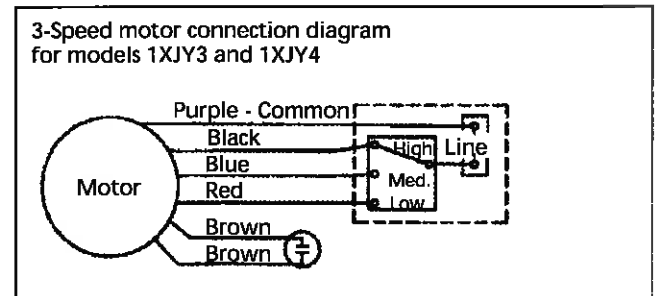
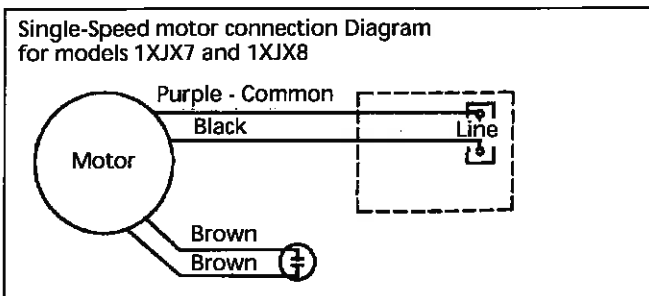


Figure 2 - Wiring Diagrams



For Repair Parts, call 1-800-323-0620

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

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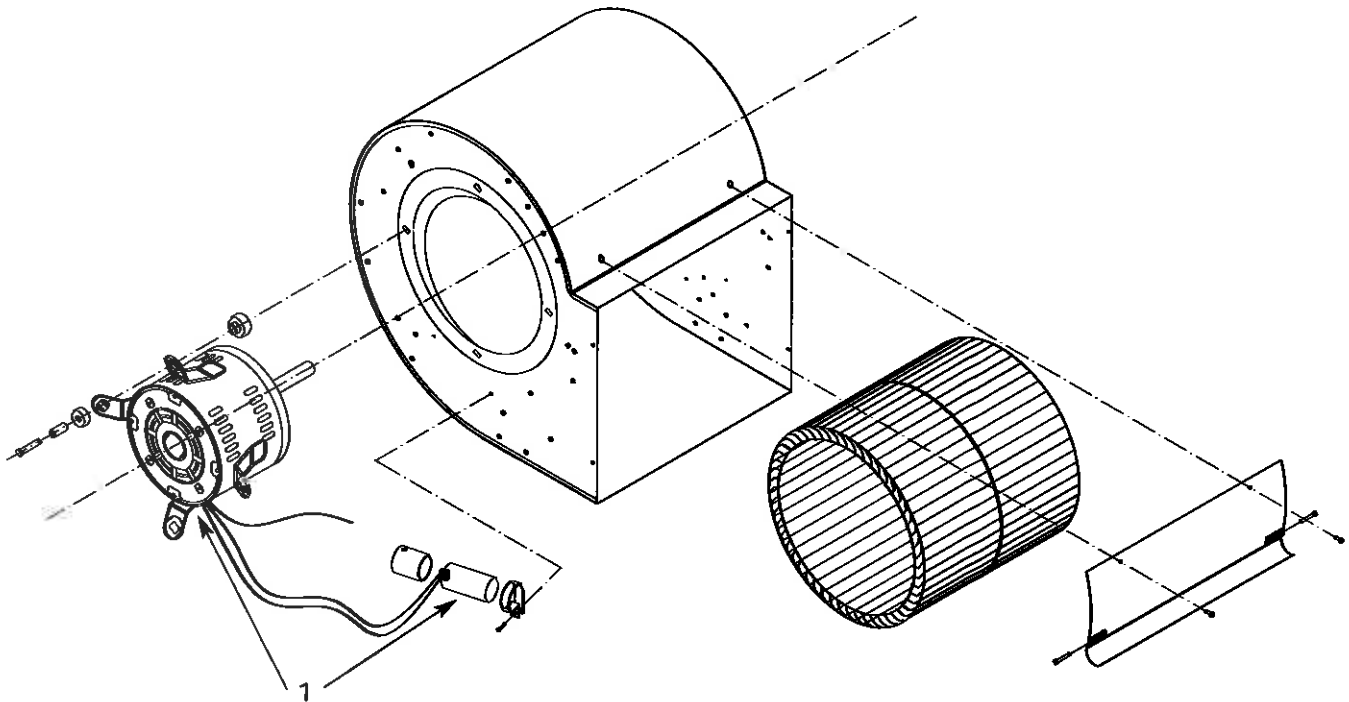


Figure 3 - Repair Parts Illustration for Direct-Drive Blowers

Repair Parts List for Direct-Drive Blowers

Ref. No.	Description	Part Number for Models:						Quantity	
		1XJX7	1XJX8	1XJX9	1XJY1	1XJY2	1XJY3		1XJY4
1	Motor with capacitor	2JFF9	2JFF3	2JFF5	2JFF6	2JFF4	2JFF8	2JFF7	1

Models 1XJX7 thru 1XJX9, and 1XJY1 thru 1XJY4

Troubleshooting Chart

Symptom	Possible Cause(s)	Corrective Action
Excessive noise	<ol style="list-style-type: none"> 1. Blower wheel striking housing 2. Foreign material inside housing 3. Loose or leaking duct work 	<ol style="list-style-type: none"> 1. Realign 2. Clean 3. Repair and/or secure properly
Insufficient air flow	<ol style="list-style-type: none"> 1. Motor speed inadequate 2. Leaks in duct work 3. Shutters and/or registers closed 4. Obstruction in system 	<ol style="list-style-type: none"> 1. Make speed adjustment 2. Repair 3. Open 4. Remove
Too much air flow	<ol style="list-style-type: none"> 1. Motor speed too fast (multi-speed units only) 2. Registers or grilles not installed 3. Insufficient static pressure 	<ol style="list-style-type: none"> 1. Lower speed 2. Install to match system requirements 3. Check your static pressure calculations and correct system accordingly
Unit fails to operate	<ol style="list-style-type: none"> 1. Blown fuse or open circuit breaker 2. Defective motor/motor capacitor 	<ol style="list-style-type: none"> 1. Replace fuse or reset circuit breaker 2. Replace

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Dayton® Direct-Drive Blowers

LIMITED WARRANTY

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