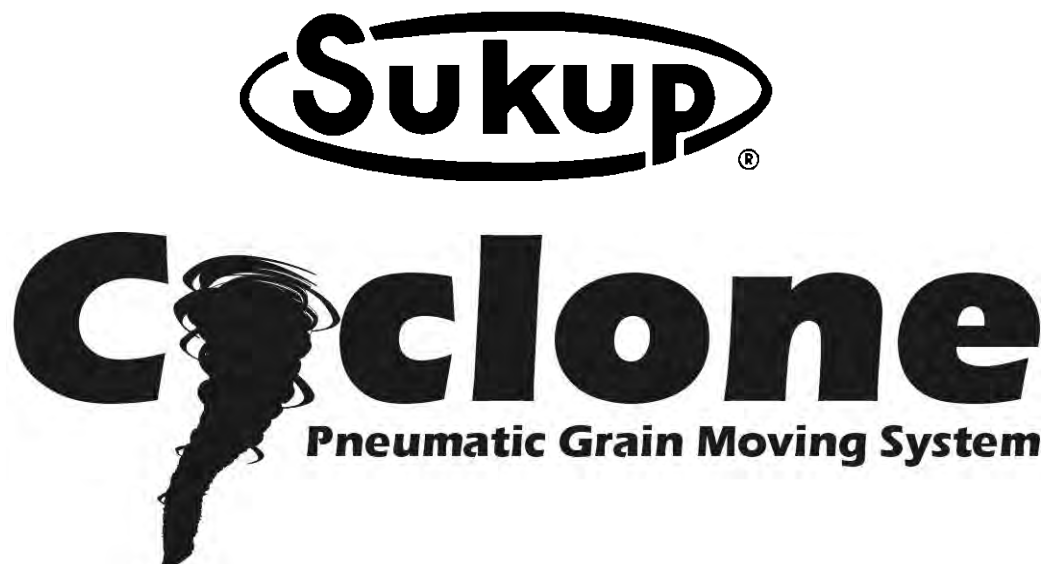




With PLC, Dynamic Bleed Valve & Optional VFD

Installation & Operation Manual

4", 5" & 6" Systems

Sukup Manufacturing Co.

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<u>DATE</u>	<u>REVISIONS</u>	<u>PAGE</u>
08/17/2020	Added note on valve & tee assy. J7552 -----	22
	Updated wiring decal L0735 -----	42-43
08/06/2020	Updated power box installation instructions -----	21-22
	Added enlargements of power box wiring decals -----	43-44
07/29/2020	Added power box wiring diagram decal locations -----	42
	Added drawing & part # of bottom wall mounting bracket for distribution valve-----	66
	Added part numbers for camlock assys.-----	73

Introduction & Table of Contents

Introduction

This product was carefully designed to give years of dependable service and was manufactured with the finest materials available. This manual includes information relating to safety, installation and operation, and should be read thoroughly prior to installation.

Receiving and Inspection

Carefully inspect shipment as soon as it is received for any damage. Verify that quantity of parts and/or packages received corresponds to quantity shown on packing slip. Report any damage or shortage to delivery carrier as soon as possible. Sukup Manufacturing Co.'s responsibility for damage to equipment ended with acceptance by delivery carrier. Refer to bill of lading. Save all paperwork and documentation furnished with the stir delay system.

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GRAIN HANDLING & MATERIAL HANDLING LIMITED WARRANTY

SUKUP MANUFACTURING CO. (Sukup) warrants to original retail purchaser that within time limits set forth, new equipment shall be free from defects in material and workmanship. A part will not be considered defective if it substantially fulfills performance specifications, such as cosmetic (appearance) issues that will not affect life of product. Should any part prove defective within the warranty period, the part will be replaced without charge F.O.B. Sukup Manufacturing Co., Sheffield, Iowa USA or Distribution Centers - Arcola, Illinois; Aurora, Nebraska; Defiance, Ohio; Jonesboro, Arkansas; Cameron, Missouri; Watertown, South Dakota. To obtain warranty, a copy of original invoice is required, see reverse side.

THE FOREGOING LIMITED WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES OF MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE AND OF ANY OTHER TYPE, WHETHER EXPRESS OR IMPLIED. Sukup neither assumes nor authorizes anyone to assume for it any other obligation or liability in connection with said part, and will not be liable for incidental or consequential damages. **THE REMEDIES STATED HEREIN SHALL BE THE EXCLUSIVE REMEDIES AVAILABLE UNDER THIS LIMITED WARRANTY.**

Sukup reserves the right to change specifications, add improvements or discontinue manufacture of any of its equipment without notice or obligation to purchasers of its equipment. This warranty gives you specific legal rights. You may also have other rights which vary according to state or province.

WARRANTY EXCLUSIONS - Labor, transportation, or any cost related to a service call is not provided by Sukup. This Limited Warranty does not apply to damage resulting from misuse, neglect, normal wear, accident or improper installation or maintenance. **ITEMS NOT MANUFACTURED BY SUKUP (e.g. tires, belts, motors) ARE COVERED UNDER WARRANTIES OF THEIR RESPECTIVE MANUFACTURERS AND ARE EXCLUDED FROM COVERAGE UNDER THE SUKUP WARRANTY.** Since the stirring down augers are so critical to the successful operation of the stirring machine, Sukup Manufacturing Co. will not warranty any machines unless they are equipped with Sukup down augers. **SUKUP MANUFACTURING CO. MAKES NO WARRANTY, EXPRESS OR IMPLIED, WITH RESPECT TO DOWN AUGERS LONGER THAN 20', INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY AND WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.**

Upon taking delivery of product, purchaser (dealer and/or end user) assumes responsibility for proper storage of all materials. Proper storage includes dry, temperature and humidity controlled facilities, which eliminate the potential of moisture, including condensation, from causing white rust and/or corrosion of any sort. Warranty does not extend to defects, damage or cosmetic (appearance) issues caused by improper storage, handling or erection.

BASIC WARRANTY - All Sukup manufactured products are warranted for one year from date of purchase. Part(s) must be returned to Sukup within 30 days in event of failure.

EXTENDED STIRRING MACHINE WARRANTY - Sukup warrants stirring machines for two years from date of purchase.

EXTENDED STIRRING AUGER WARRANTY - Sukup warrants stirring down augers for two years from date of purchase. Must return top 18" of down auger to obtain credit.

EXTENDED FAN WARRANTY - Sukup warrants fans for two years from date of purchase.

EXTENDED HEATER CIRCUIT BOARD WARRANTY - Sukup warrants heater circuit boards for three years from date of purchase.

EXTENDED MATERIAL HANDLING WARRANTY - Sukup warrants Material Handling, excluding structural support systems, for two years from date of purchase.

REPLACEMENT PARTS WARRANTY PERIOD - Sukup warrants replacement parts (e.g. belts, sensors, rotating contacts, gearmotors, switches) purchased from Sukup for one (1) full drying season following purchase.

ELECTRIC MOTOR WARRANTY - The manufacturers of electric motors warranty their motors through authorized service centers for a 2 year period from motor date code. Contact motor manufacturer for nearest location. If motor warranty is refused by a service center based upon date of manufacture, use the following procedure: Have motor repair shop fill out warranty report form as if they were providing warranty service. State on report reason for refusal. Send report, motor nameplate, and proof of purchase date (invoice from Sukup and invoice for your customer) to Sukup. If electric motor warranty is not satisfactorily handled by motor service center, contact Sukup for assistance. Sukup will attempt to obtain warranty from motor manufacturer, any credit obtained will be passed on. Warranty may also be obtained by returning motor to Sukup Manufacturing Co. or Distribution Centers with prior authorization. **NOTE:** Sukup will not be responsible for unauthorized motor replacement or repair. Labor for removal of motor from fan not included.

WARRANTY CERTIFICATION - Warranty registration card should be mailed within one month of product delivery to certify warranty coverage.

UNAPPROVED PARTS OR MODIFICATION - All obligations of Sukup under this warranty are terminated if unapproved parts such as stirring augers longer than 20' are used, or if equipment is modified or altered in any way not approved by Sukup.



Read manual before installing or using product. Failure to follow instructions and safety precautions in manual can result in death or serious injury. Keep manual in a safe location for future reference.



On safety decals, this symbol and the signal words Danger, Warning, Caution and Notice draw your attention to important instructions regarding safety. They indicate potential hazards and levels of intensity.



RED - DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



ORANGE - WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



YELLOW - CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

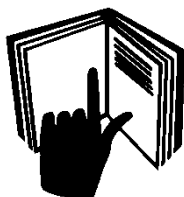


BLUE - NOTICE alerts you to practices unrelated to personal injury, such as messages related to property damage.

IMPORTANT: To prevent serious injury or death to you or your family, it is essential that safety decals are clearly visible, in good condition, and applied to the appropriate equipment.

FOLLOW MANUAL & SAFETY DECAL MESSAGES

Carefully read this manual and all safety decals on your equipment. Safety decals must be kept in good condition. Replace missing or damaged safety decals by contacting Sukup Manufacturing Co. via mail at PO Box 677, Sheffield, Iowa USA, 50475; by phone at 641-892-4222; or by e-mail at info@sukup.com.



It is the responsibility of the owner/operator to know what specific requirements, precautions, and work hazards exist. It is also the responsibility of the owner/operator to inform anyone operating or working in the area of this equipment of hazards and safety precautions that need to be taken to avoid personal injury or death. Always keep children away from bins and vehicles with flowing grain.

Make no unauthorized modifications to machine. Modifications may endanger function and/or safety of unit. Keep unit in good working condition. Keep shields in place. Replace worn or missing shields free of charge by contacting Sukup Manufacturing Co.

GRAIN BIN SAFETY

When entering a bin, owners/operators are responsible for following site-specific confined space entry procedures. OSHA's confined space entry procedures (29CFR 1910.146) can be found at www.osha.gov.

If you must enter bin for repair or maintenance:

- Use a safety harness, safety line and respirator
- Station another person outside of bin
- Avoid the center of the bin
- Wear appropriate personal protective equipment
- Keep clear of all augers and moving parts



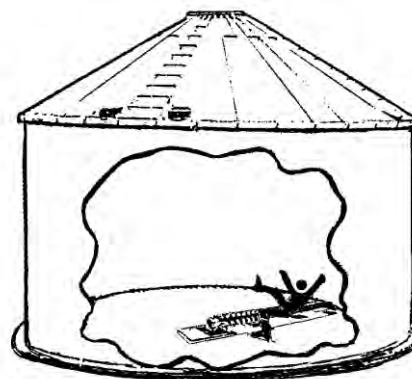
DANGER: Never enter bin unless all power is locked out and another person is present.



Rotating augers can kill or dismember!

NEVER enter bin when augers are running!

When bin is nearly empty, sweep auger will travel at an increasingly fast speed. Keep away from sweep and sump augers to avoid entanglement.



Failure to follow precautions above will result in death or serious injury.



DANGER: Flowing grain will trap and suffocate. If you enter a bin of flowing grain you can be completely submerged in grain in about 8 seconds.



Failure to heed this warning will result in death or serious injury.

Safety

To avoid electric shock or electrocution, all equipment must be properly wired and grounded according to electrical codes. Have unit wired by qualified electrician.



Have an electrician install a main power disconnect switch capable of being locked only in OFF position. Mark disconnect clearly as to equipment it operates.

Always lock out main power disconnect switch whenever equipment is not in use.

WARNING: When servicing equipment, never enter bin unless all power is locked out and another person is present. Automatic equipment can start at any time. Always LOCK OUT all power and always check with voltage meter before servicing.

Service Disconnect



Frequently inspect all mechanical and electrical components. Repair and/or replace worn parts. Be sure all electrical wires are in good condition.

Failure to do so could result in death or serious injury.

NOTE: Refer to OSHA's typical minimal lockout procedures (29CFR 1910.147 App A) at www.osha.gov to establish a written plan for your work site.



WARNING: KEEP CLEAR OF ALL MOVING PARTS.

Keep people (ESPECIALLY YOUTH) away from equipment, particularly during operation.



Keep away from all moving parts. Keep all shields in place. **SHUT OFF AND LOCK OUT** all power before servicing.

Failure to follow precautions above could result in death or serious injury.

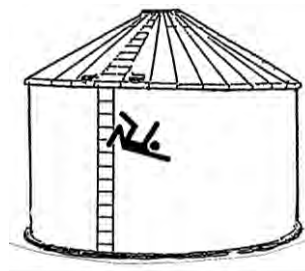


WARNING: Tubing or surface may be hot!

DO NOT TOUCH. Failure to heed this warning may cause serious burns.



WARNING: Metal is slippery when wet. To avoid falls, never carry items if climbing on bin. Maintain secure hand and foothold if climbing on bin. Failure to do so could result in death or serious injury.



CAUTION: Metal edges are sharp. To avoid injury, wear protective clothing and handle equipment and parts with care.

Failure to do so may result in minor or moderate injury.

PERSONAL PROTECTIVE EQUIPMENT



Refer to OSHA 1910.132 (Personal Prot. Equip.)

Owners/Operators are responsible for developing site-specific personal protective equipment standards. OSHA's personal protective equipment standards (29CFR 1910.132) can be found at www.osha.gov.

EMERGENCIES – KNOW WHAT TO DO

Have emergency numbers and written directions to work site readily available in case of emergency. An area for emergency phone numbers to be recorded is provided below and at end of this manual.

Ambulance • Fire • Police: 9-1-1

Bin rescue team: _____

Emergency medical squad: _____

Address of work site: _____

Directions to work site: _____

Cyclone Safety Decal Placement

Cyclone safety decals are mounted at the factory. Yearly and prior to equipment use, ensure that all decals and shields are in legible condition and in place according to these instructions. Replace missing or damaged safety decals or shields free of charge by contacting Sukup Manufacturing Co. by mail at Box 677, Sheffield, Iowa 50475; by phone at 641-892-4222; or by e-mail at info@sukup.com.

If decal replacement is necessary, follow steps below.

NOTE: If suggested placement areas are not clearly visible, place safety decals in a more suitable location. NEVER cover up any existing safety decals.

Ensure areas of placement for decals are free from grease, oil and dirt. Remove backing from decal and place in proper position.

1. **Decal L0281 – WARNING:** To avoid serious injury or death:
Decal is mounted on the shield.



2. **Decal L0271 – DANGER:** Shield Missing. Do not operate!
Decal is mounted under the shield.



3. **Decal L0284 – WARNING:** Keep Away From All Moving Parts.
Decal is mounted on the shield.



4. **Decal L0258A – DANGER:** Do not enter this bin!
Decal is mounted on the control box door.

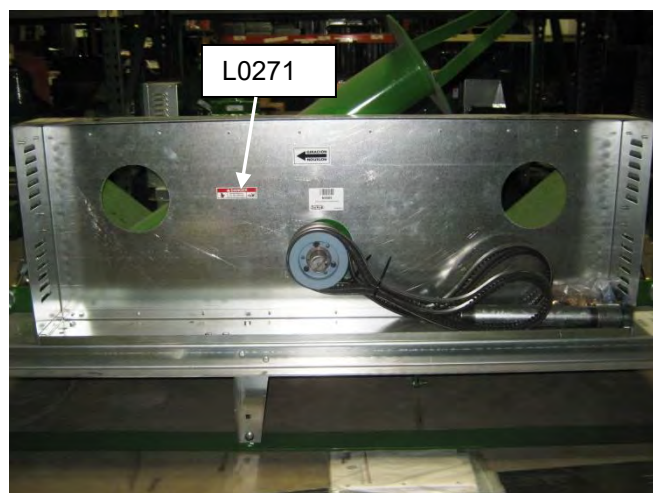
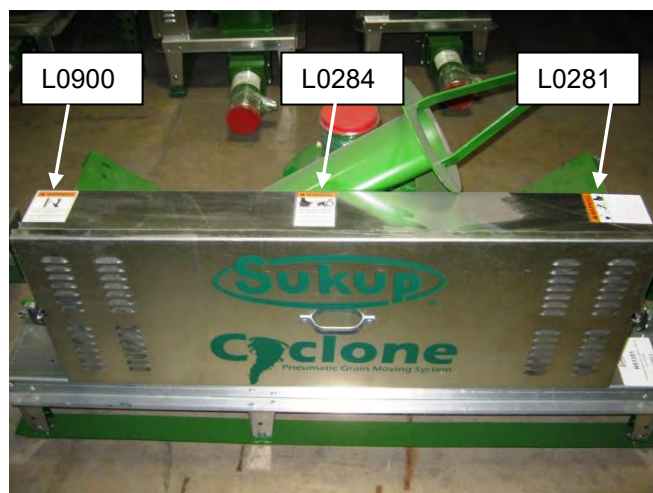
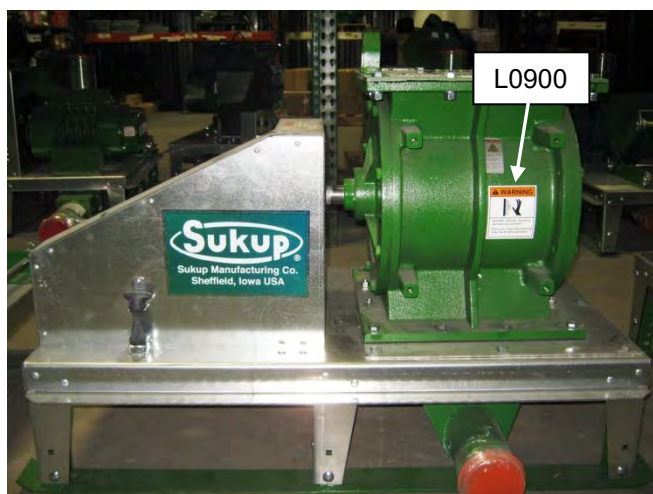


5. **Decal L0900 – WARNING:** Do not touch!
Decal is mounted where tubing or surface may be hot.



Safety

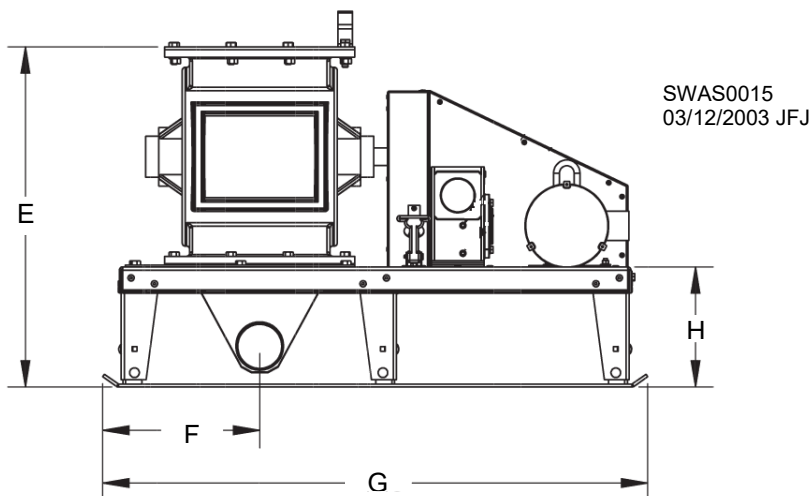
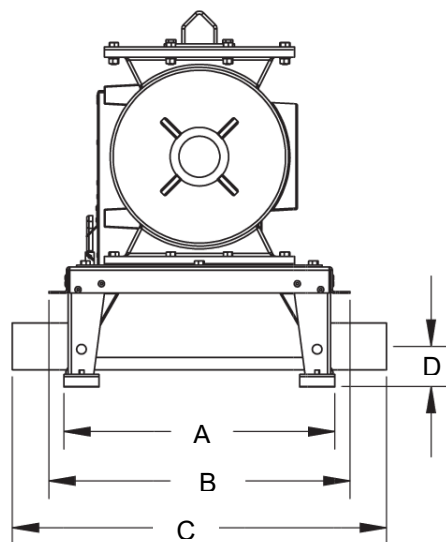
Locations and part numbers of Sukup safety decals listed on previous page are shown below. Replacements for damaged decals are available from Sukup. Decals not identified by part number are supplied by airlock manufacturer.



Dimensions

Dimensions

Fig. 1 & Table 1 show dimensions of airlock assy., in inches. Fig. 2 & Table 2 show blower.



SWAS0015
03/12/2003 JFJ

Fig. 1 & Table 1 – Airlock assy. dims.

	4" TUBE	5" TUBE	6" TUBE
A	23.2	23.2	26.4
B	25.75	25.8	29
C	32	34.7	39.4
D	3.4	3	3.6
E	29	31.6	36.4
F	13.4	11.3	15.3
G	46.6	46.6	53.6
H	10.25	10.3	12

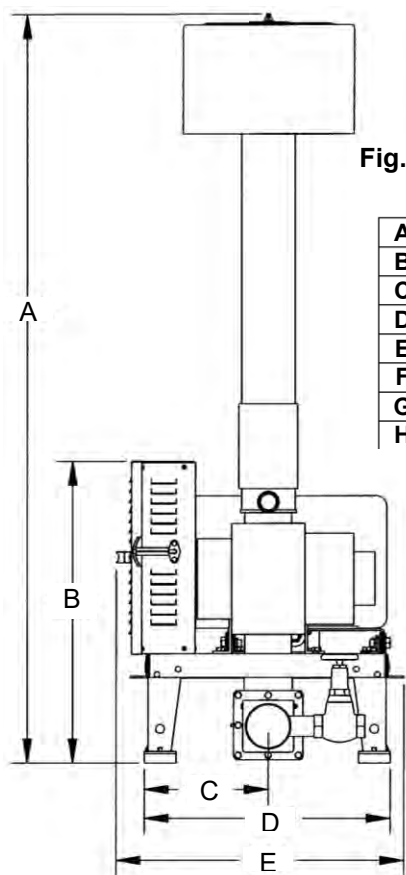
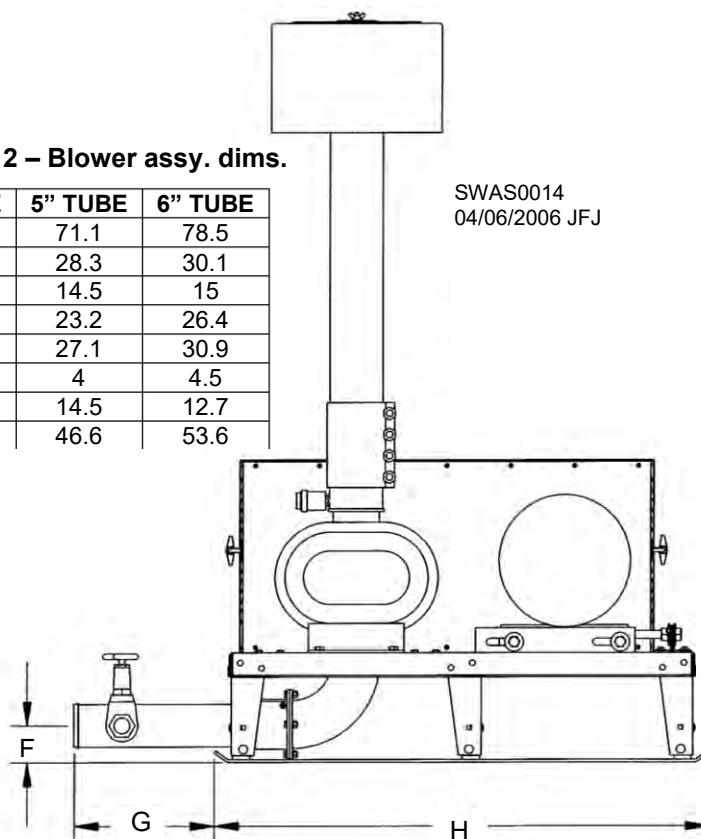


Fig. 2 & Table 2 – Blower assy. dims.

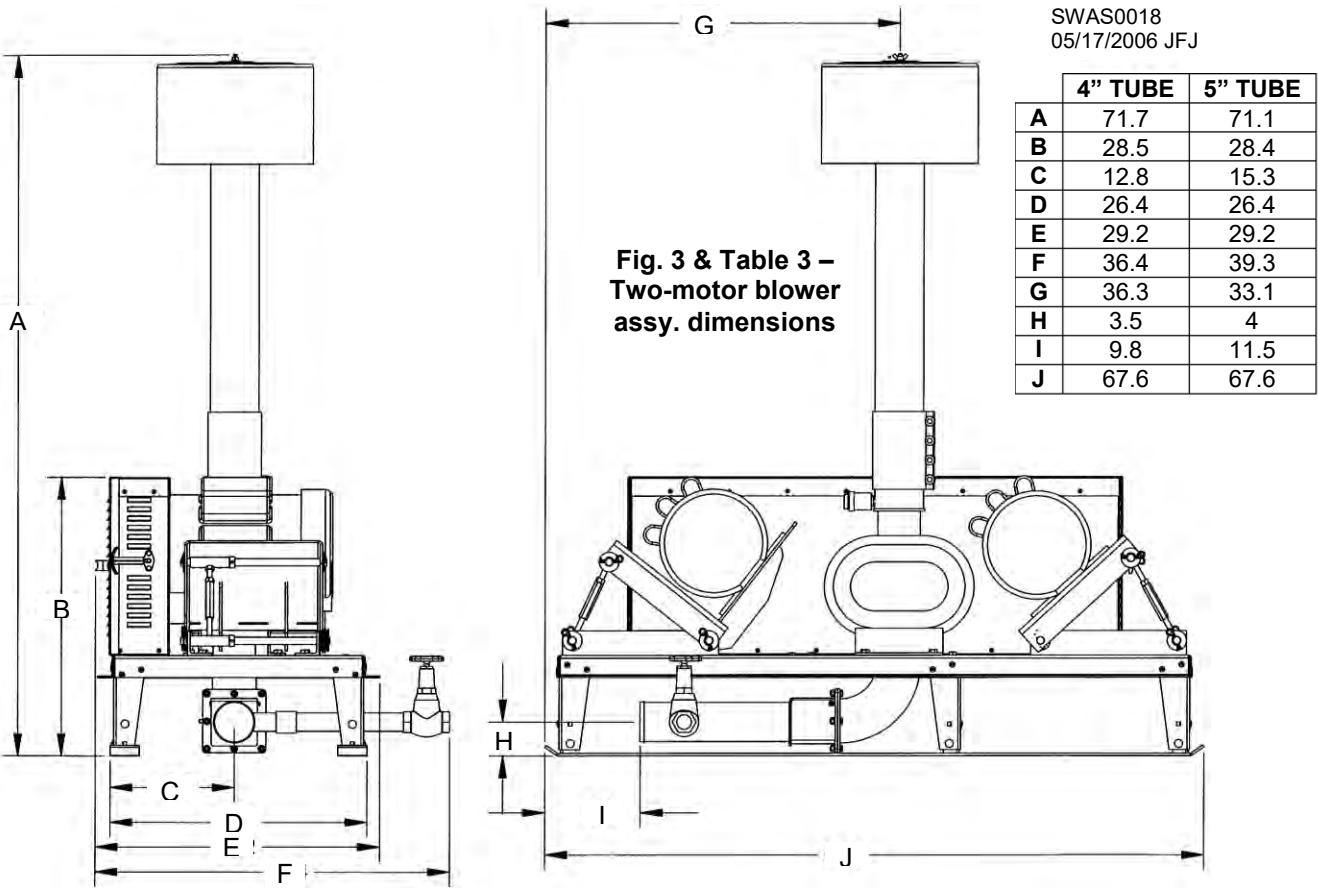
	4" TUBE	5" TUBE	6" TUBE
A	70.3	71.1	78.5
B	28.3	28.3	30.1
C	11.7	14.5	15
D	23.2	23.2	26.4
E	27.1	27.1	30.9
F	3.5	4	4.5
G	13.2	14.5	12.7
H	46.6	46.6	53.6

SWAS0014
04/06/2006 JFJ



Dimensions

Fig. 3 & Table 3 show dimensions of two-motor blower assembly, in inches.



Dimensions

Fig. 5 shows dimensions, in inches of seven-valve distributor assy. (N56641B) for 4" dia. tube.

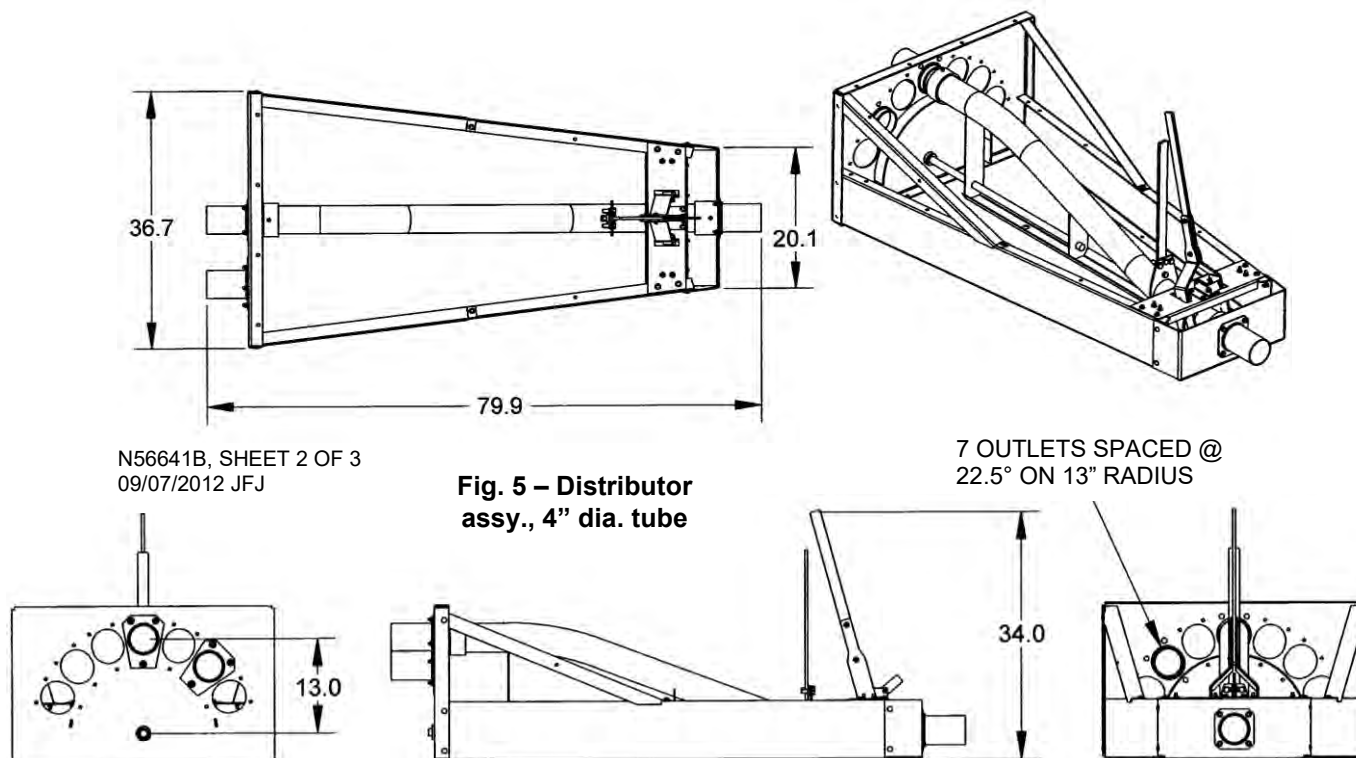
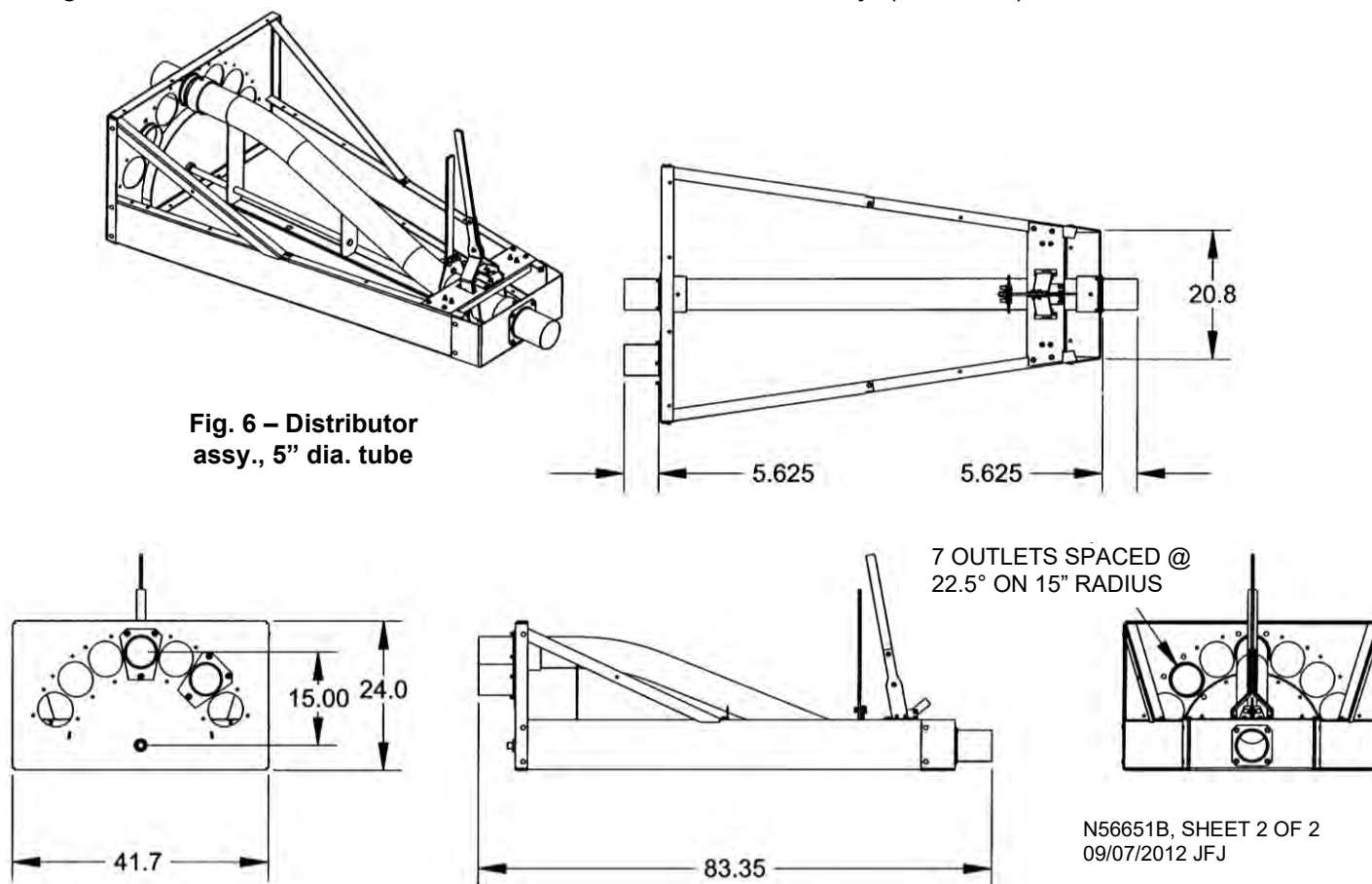
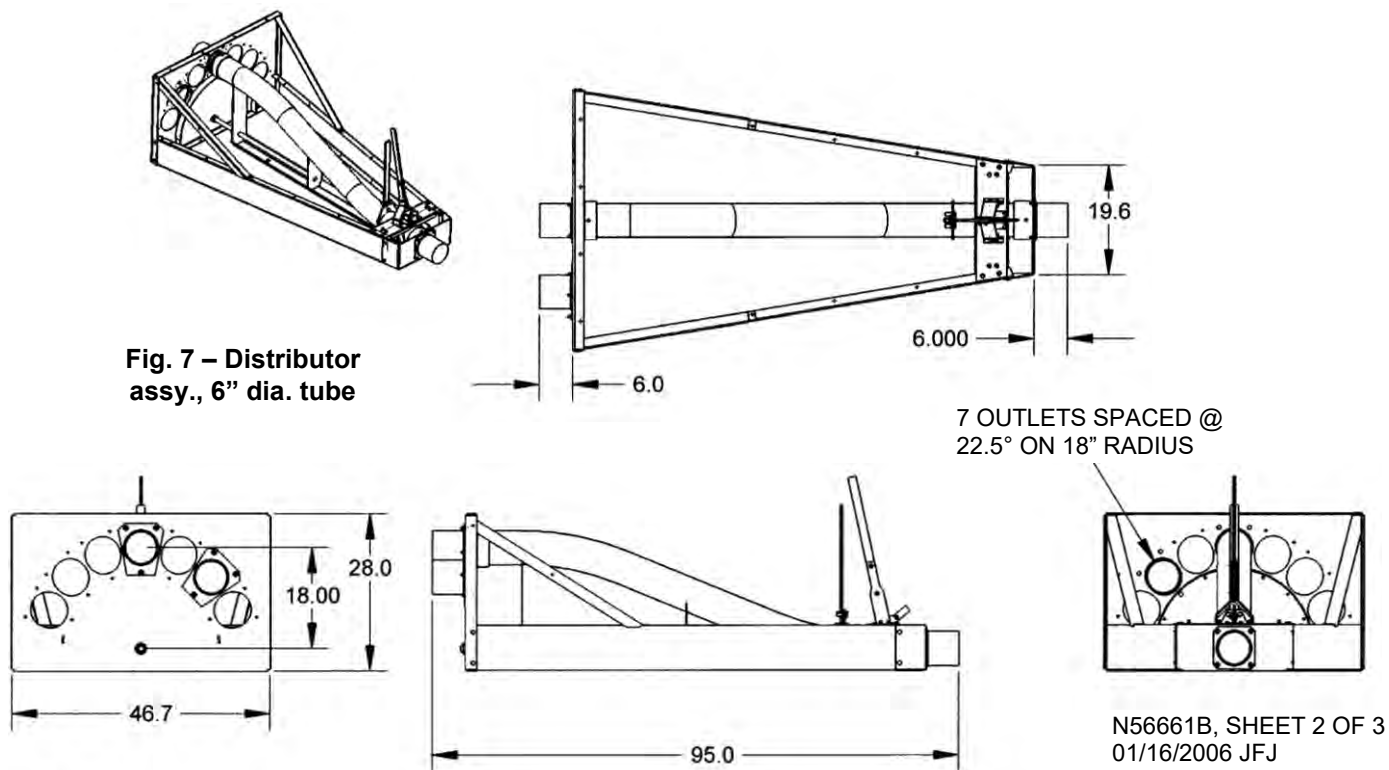


Fig. 6 shows dimensions, in inches of seven-valve distributor assy. (N56651B) for 5" dia. tube.



Dimensions

Fig. 7 shows dimensions, in inches of seven-valve distributor assy. (N56661B) for 6" dia. tube.



Component Identification

Power Box Component Identification

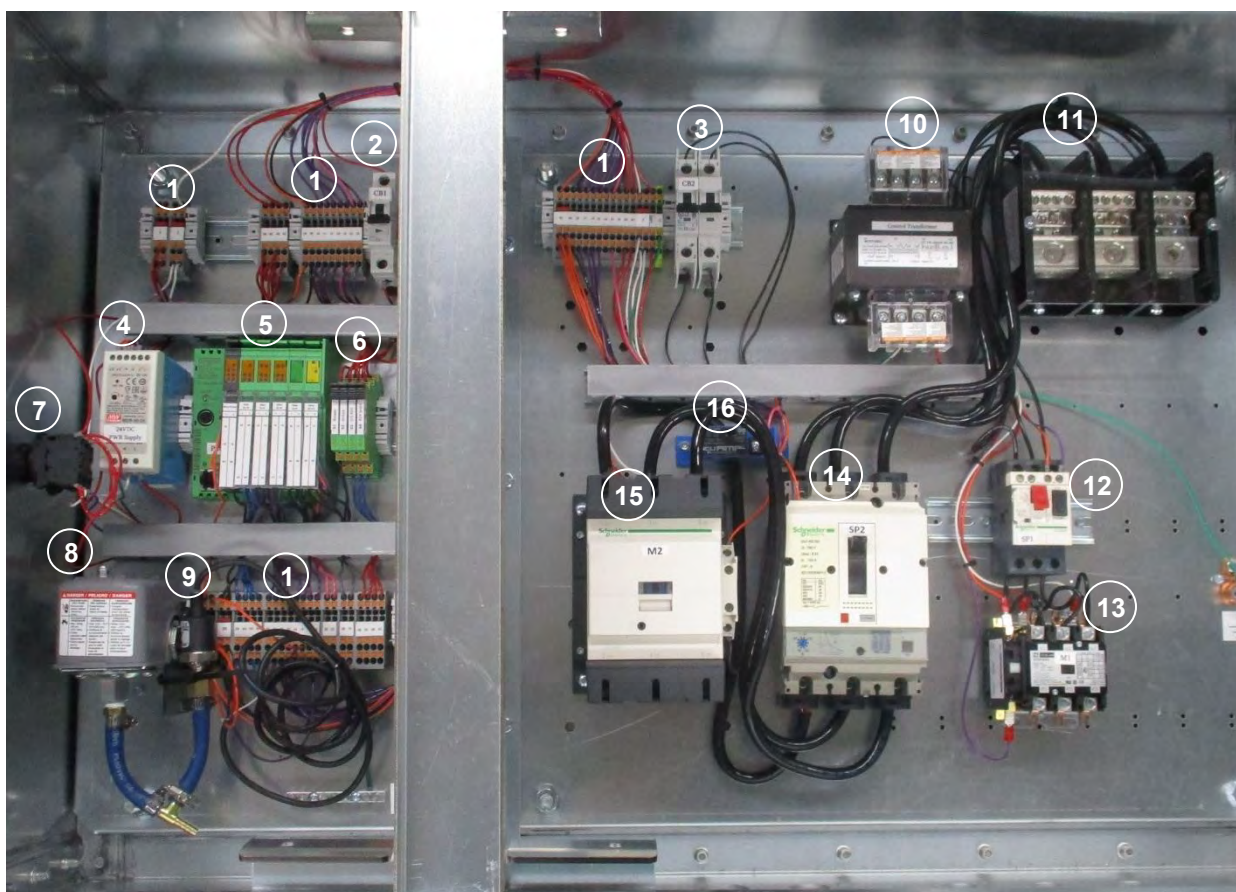


Image 1 – Power box components for single-blower unit (prior to completion of wiring)

- | | |
|-------------------------------------|-------------------------------|
| 1. Terminals | 9. Air pressure transducer |
| 2. Secondary side circuit breaker | 10. Control transformer |
| 3. Primary side circuit breaker | 11. Power distribution block |
| 4. 24 VDC Power supply | 12. Airlock starter protector |
| 5. Programmable logic control (PLC) | 13. Airlock contactor |
| 6. Relays | 14. Blower starter protector |
| 7. Emergency Stop switch | 15. Blower contactor* |
| 8. High air pressure switch | 16. Current transducer** |

*Depending on air system, blower contactor could be line start (shown), soft start or variable-frequency drive.

**Used on line-start and soft-start systems.

IMPORTANT: During initial setup, it is highly recommended that ALL main power wiring connections be inspected for security and tight connections. Wires are tightened at factory; but connections should be checked after transport.

NOTICE: All power boxes use 24VDC control voltage to minimize EM noise inside of box. AC/DC separation is key to reducing EMI inside of panel. High-voltage components are on right side of box; low-voltage on left. When installing, make sure to practice good wire maintenance to assure quality operation.

Component Identification

Accessory Component Identification

Fig. 8 and Table 4 identify accessories commonly used on pneumatic grain moving systems.

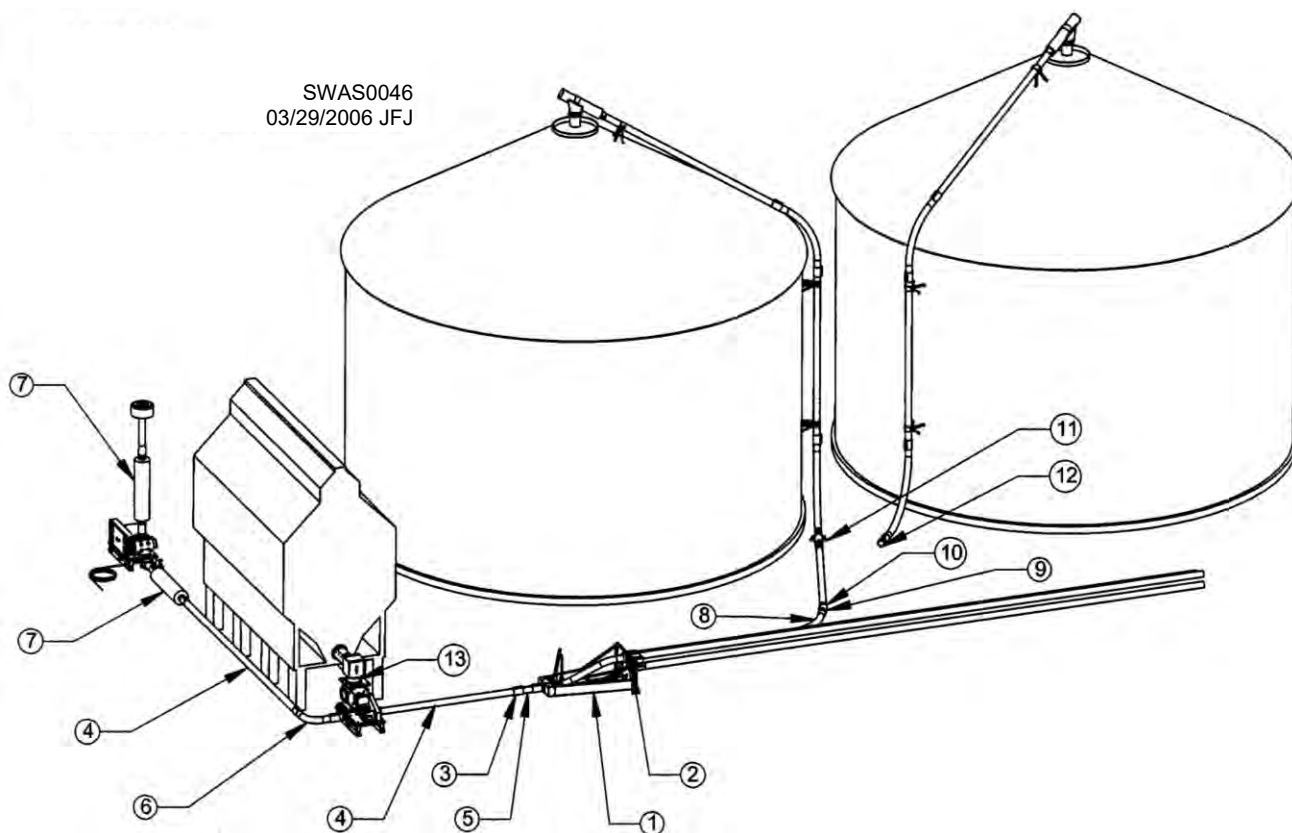


Fig. 8 & Table 4 – Air system accessories

REF. #	DESCRIPTION	4" PART #	5" PART #	6" PART #
1	Distribution Valve, 7-Way	N56641B	N56651B	N56661B
2	Outlet Adaptor	N5644B	N56591B	N5679B
3	Compression Coupler	J7482	J7522	J7560
4	Galvanized Tubing, 20 ft Long	K2892	K2934	N5696
4	Galvanized Tubing, 40 ft Long	K2894	K2933	N5698
5	Sight Glass	N5448	N5548	N5648
6	11 Ga. Galvanized (close radius) 90° Elbow	J74801	J75201	J7576
7	Silencer, Inlet or Outlet	N5412	N5512	N5612
8	11 Ga. Galvanized 60° Elbow	J7481	J7521	J7577
9	Flex -hose	K5249	K5253	K5256
10	Clamp, Flex-hose	J7494	J7544	J7545
11	Telescoping Female Camlock	N5589	N5590	N5690
12	Male Camlock	J7490	J7540	J7563
13	Dryer Adaptor Kit	N5570	N5570	N5570

Air System Capacities

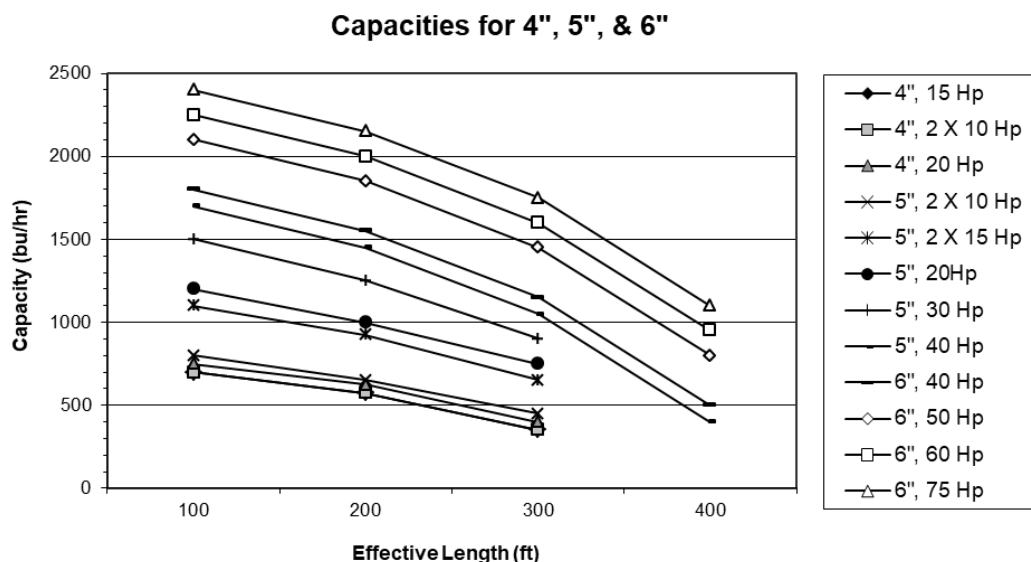
Air system capacities shown in Table 5 are **estimates** based on tube diameter, motor horsepower and effective length of system. Actual capacity may vary depending on condition of grain (test weight, moisture content, grain temperature, kernel shape, etc.), ambient temperature and humidity, as well as layout of system.

Effective length of a system is determined by adding horizontal length to twice the vertical rise, plus allowing 20 extra feet for each elbow.

SYSTEM	BU/HR 100 FT	BU/HR 200 FT	BU/HR 300 FT	BU/HR 400 FT
4", 15hp	700	575	350	---
4", 2 x 10hp	700	575	350	---
4", 20hp	750	625	400	---
5", 2 x 10hp	800	650	450	---
5", 2 x 15hp	1100	925	650	---
5", 20hp	1200	1000	750	---
5", 30hp	1500	1250	900	---
5", 40hp	1700	1450	1050	400
6", 40hp	1800	1550	1150	500
6", 50hp	2100	1850	1450	800
6", 60hp	2250	2000	1600	950
6", 75hp	2400	2150	1750	1100

Table 5 – Capacities by tube size, motor horsepower & effective length of air system

Chart below illustrates drop-off in capacity as length of air system increases.



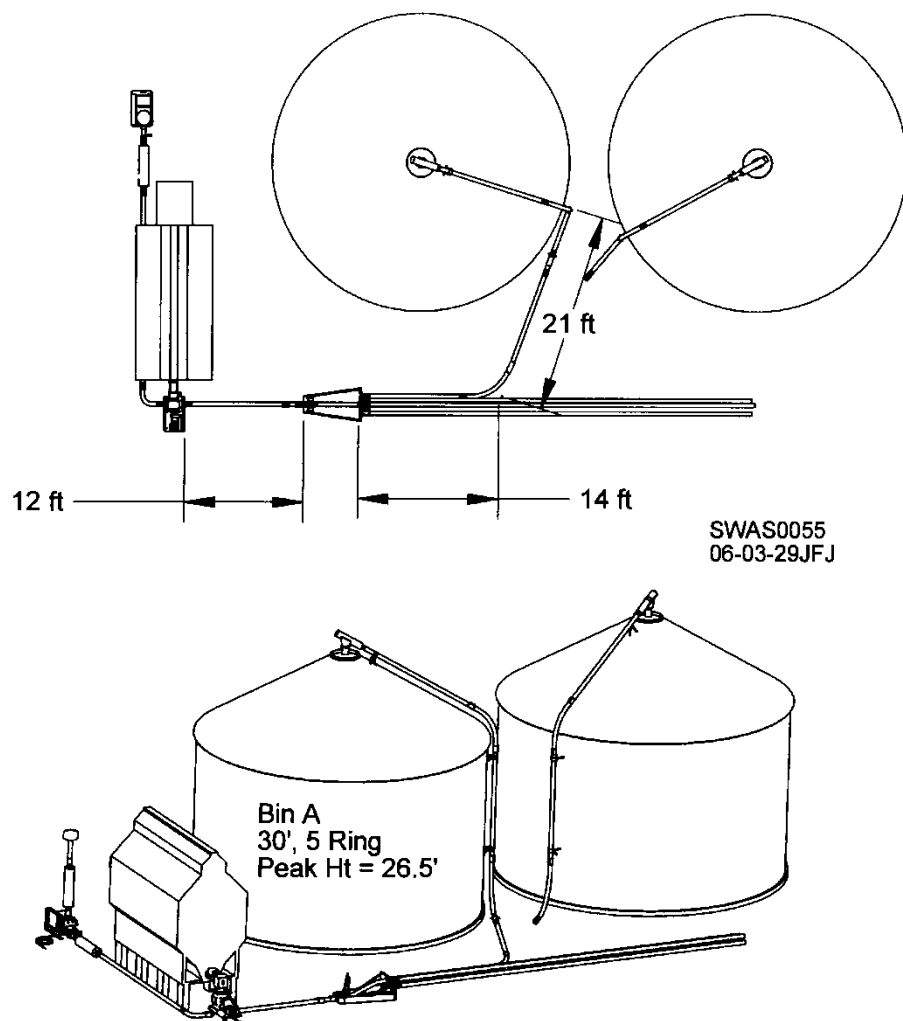
See Table 6 for airlock part number & specifications.

System	Airlock Part #	Size	Displacement Bu/rev	Speed Rpm	Capacity Bu/hr
4", Xhp	J7514	12"	0.49	29.33	862
5", 20hp & 30hp	J7512	14"	0.812	29.33	1429
5", 40hp	J7512	14"	0.812	41.56	2025
6", 40hp & 50hp	J7510	16"	1.246	29.33	2196
6", 60hp & 75hp	J7510	16"	1.246	41.56	3107

Table 6 – Specifications by tube size, motor horsepower & effective length of air system

Calculating Effective Length of Air System

See Fig. 9 to calculate effective length of air system.



EFFECTIVE LENGTH FACTORS:

EACH 90 DEGREE ELBOW	= 20 FT
EACH 60 DEGREE ELBOW	= 20 FT
EACH 45 DEGREE ELBOW	= 20 FT
EACH 30 DEGREE ELBOW	= 20 FT
EACH DISTRIBUTION VALVE	= 20 FT
EACH HORIZONTAL FOOT	= 1 FT
EACH VERTICAL FOOT	= 2 FT

EXAMPLE:

Effective Length for Bin A

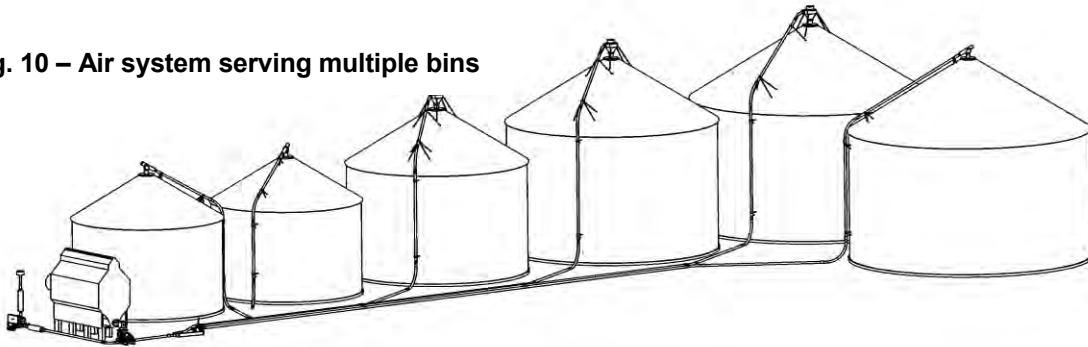
12 ft from airlock
20 ft for Distribution Valve
14 ft from Valve
20 ft for 60 degree elbow
21 ft for tube from elbow
20 ft for 90 degree elbow
53 ft (26.5 x 2) for bin height
20 ft for 60 degree elbow
15 ft for bin radius

Total effective length = 195 ft

Fig. 9 – Top and side views of bins and dryer

Air System Layout

Fig. 10 – Air system serving multiple bins



A fused disconnect or equivalent must be provided for incoming power supply to meet National Electric Code. Consult a qualified electrician for local code requirements.

Place airlock in position to receive grain. Grain can move in either direction through airlock transition to allow blower to be placed on either side in most convenient location.

Connect blower outlet with airlock transition inlet using a piece of galvanized tube and either compression couplers or short pieces of hose with hose clamps. **NOTE:** Blower can be placed up to 50 feet away from airlock to minimize noise and provide a clean air source. Blower inlet and filter can also be remotely located to provide clean air. Consult Sukup Manufacturing Co. for distances exceeding 50 feet.

Blower can be placed in an enclosure to minimize noise, but be sure to provide adequate cooling ventilation for both blower and motor.

To allow grain to reach conveying velocity, at least 10 feet of straight tube is required at airlock transition outlet before first elbow is installed. Keep at least 8 feet of straight length between elbows to maintain conveying velocity.

A sight glass can be installed just before first elbow to provide an indication of grain velocity.

Use galvanized tube and elbows wherever possible. Rubber hose slows grain movement, has high wear characteristics and tends to transmit more noise than a steel tube. (A good use for rubber hose is a short piece used to connect tubing that needs to be directed to several other tubes arranged in a manifold.)

Do not use plastic tubing for air systems. Static electricity can build up and become dangerous.

Use compression couplings to connect steel tubing. Ends must be cut square and butted tightly together to prevent exposed edges from causing grain damage.

Avoid routing tubing underground. If it is necessary to go under a driveway or other obstacle, then a 45-degree offset should be used for both entering and leaving the buried tubing. Condensation can make inside of buried tubing “sticky” and grain capacities may initially be less than expected until tubing has been polished and warmed up.

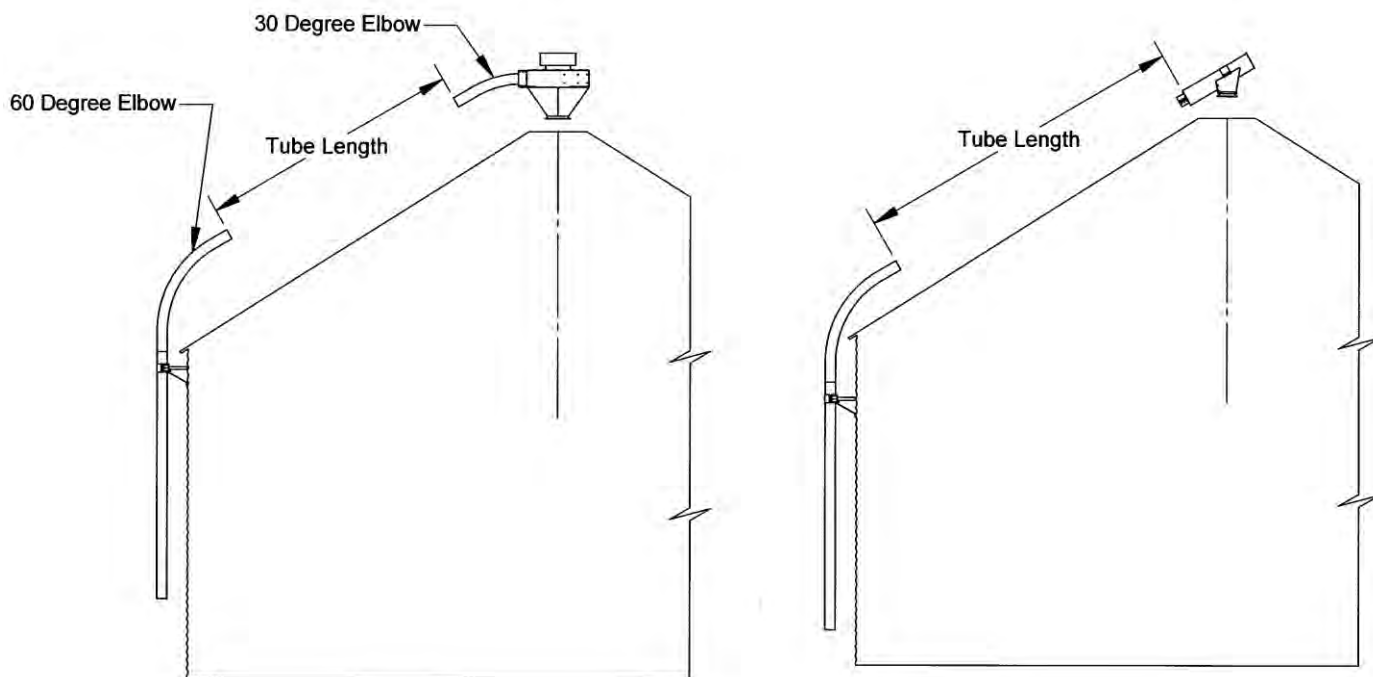
Use a truss kit to support tubing when distance exceeds 20 ft. and (2) kits for spans of over 40 ft. Use a solid length of tube for any span (40-ft lengths are available).

Avoid long inclines of tubing when possible. Air systems can move grain vertically more efficiently than up inclines.

Pre-Installation Information

Use either a deadhead or a cyclone at end of tubing to drop grain out of air stream. See Fig. 11 to determine roof tube lengths required for installing cyclones or deadheads on storage bins.

NOTE: When installing a Sukup cyclone it is important that tube not extend more than 1/2" on inside. A length in excess of 1/2" can cause higher-than-desired grain velocities upon impact and therefore result in premature wear of liners in cyclone. It is important to check liners at regular intervals and to replace them prior to wear-through.



SWAS0036
07/11/2003 JFJ

System Size	Tube Length
4 Inch Cyclone	(Bin Radius minus 71 Inches) X 1.155
4 Inch Deadhead	(Bin Radius minus 34 Inches) X 1.155
5 Inch Cyclone	(Bin Radius minus 76 Inches) X 1.155
5 Inch Deadhead	(Bin Radius minus 38 Inches) X 1.155
6 Inch Cyclone	(Bin Radius minus 76 Inches) X 1.155
6 Inch Deadhead	(Bin Radius minus 41 Inches) X 1.155

Example: 48 Ft dia bin with a 5 inch cyclone
Bin Radius = 24 ft x 12 = 288 in
Tube Length = (288 - 76) X 1.155 = 244.86 inches

Fig. 11 – Calculating cyclone & deadhead roof tube length

A silencer may be installed on either inlet or outlet of blower to reduce noise level. Attach silencer to blower with a compression coupler.

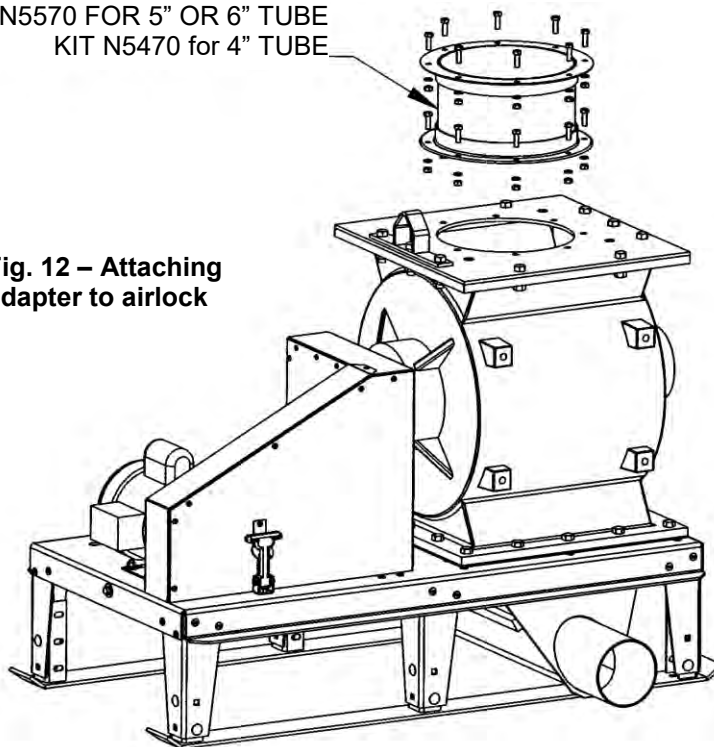
Airlock Set-Up

Remove shipping cover from top of airlock and ensure there is no foreign material in airlock body.

Attach adaptor to airlock as shown in Fig. 12 using hardware provided. Use Kit N5570 for 5" or 6" system, or Kit N5470 for 4" system. Cut 10" diameter tube as needed to fit under dryer discharge.

KIT N5570 FOR 5" OR 6" TUBE
KIT N5470 for 4" TUBE

**Fig. 12 – Attaching
adaptor to airlock**



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Mount airlock motor with carriage bolts provided in adjusting plate. Attach drive pulley on motor shaft and align it with pulley on gearbox. Place V-belt that is supplied with airlock over motor pulley and tighten belt by using threaded bolt on end of airlock stand. After belt is tensioned, tighten motor mounting hardware to secure motor.

Motor should be wired to turn clockwise (as viewed looking at end of shaft). This will turn airlock vanes into rubber wiper to prevent vanes from shearing kernels of grain. Check rotation of airlock to ensure it matches with rotation tag on airlock.

Bottom transition is factory-attach to airlock so that it is perpendicular with airlock stand as shown in Fig. 12. Transition can be removed and turned 90 degrees if needed. **NOTE:** Skids that are bolted to legs of galvanized stand will have to be removed before transition can be rotated.

Blower Set-Up

As viewed looking at blower shaft, Duroflow blowers rotate counterclockwise, and Sutorbilt blowers rotate clockwise.

Blower stands are assembled at factory with blower pulley and belts assembled to blowers. Two belts are used to drive blower on units with 10hp, 15hp or 20hp motor; 30hp units use three belts; 40hp units use four belts; 50hp and 60hp units use five belts; 75hp units use six belts.

Attach motor to mounting plate. See applicable drawing on next page.

Attach 8.95-inch diameter motor pulley to motor shaft using proper QD style bushing. Align motor pulley with blower pulley using a straight edge to ensure good belt alignment.

Single-motor units:

Loosen 5/8" bolts and slide motor forward until belts can be placed over motor pulley. Use 3/4" tightener bolt on end of stand to tension belts until they have 3/8" deflection under 10 pounds of pressure per belt. Tighten 5/8" bolts to secure motor.

Two- motor units:

Adjust tightening turnbuckle under each motor until belts can be placed over motor pulley. All two-motor units use two belts per motor. Ensure motor pulleys are in line with blower pulley.

Use turnbuckle to tension belts on each side of blower. Final adjustment of belt tensioning should be done when system is under load. Check amperage of each motor and adjust belt tensioning until each motor is pulling equally.

Use a compression coupler to attach air filter stack to blower inlet. **NOTE:** Air filter can be located as far as 50 ft. away from blower to provide cleaner air.

Blower manufacturer's manual is placed inside belt shield. See manual for proper lubrication. Blowers are filled with oil at factory. Check oil level in both Duroflow and Sutorbilt blowers by using sight glass on end of blower. Add oil as needed (Sukup J3200 – 1 quart; J3201 – 5 gallon). This is oil recommended in both Sutorbilt and Duroflow manuals. Sutorbilt blower oil capacity is 1-1/8 qt. and Duroflow blower capacity is 1-3/4 qts.

Attach air restriction gauge into threaded hole in blower inlet.

Attach air filter and pre-filter to top of filter stack (6" blower unit uses two stacked filters). Cover filter with filter can and secure with a sealing washer and wingnut.

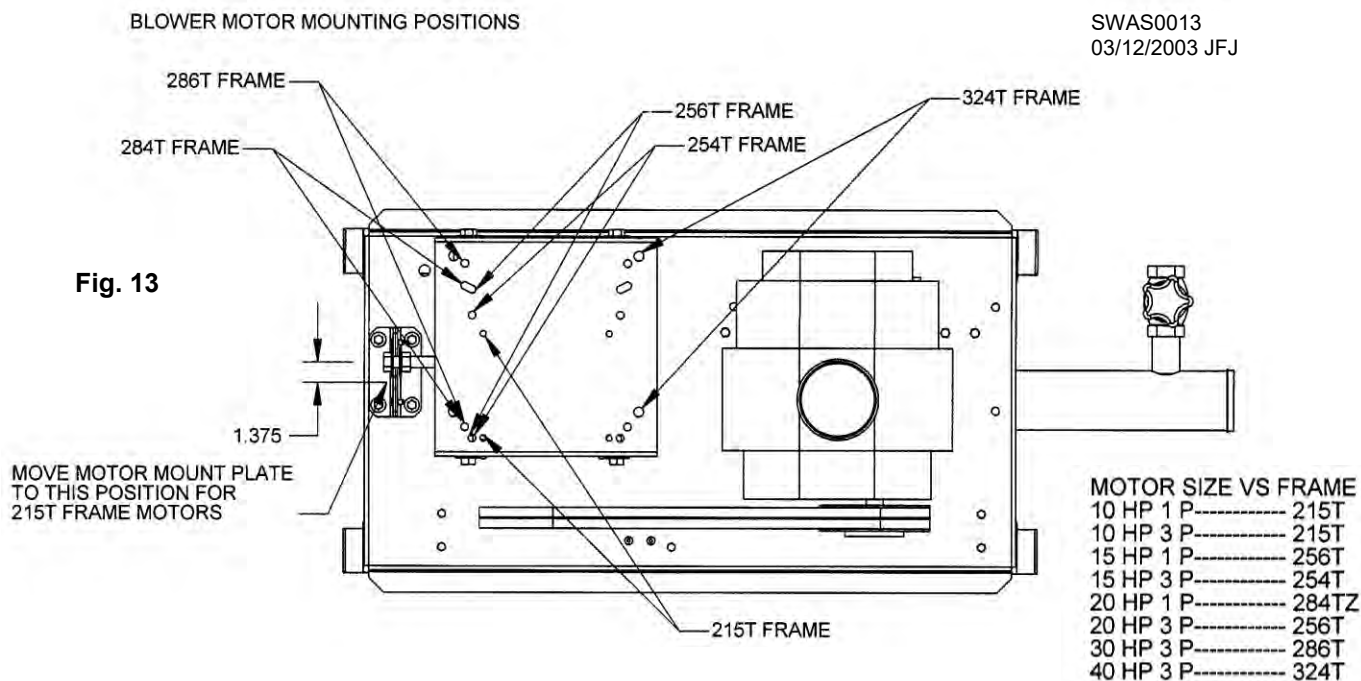
Attach one end of 1/4" rubber hose (shipped in control box) to barbed fitting on side of blower outlet; other end is already attached to pressure switch in control box.

Tight-radius elbows are available to route air to airlock. Use short pieces of hose or compression couplers to attach tube from blower to airlock.

Silencers are available for both inlet and outlet of blower. These can be mounted directly to blower inlet and/or outlet if used.

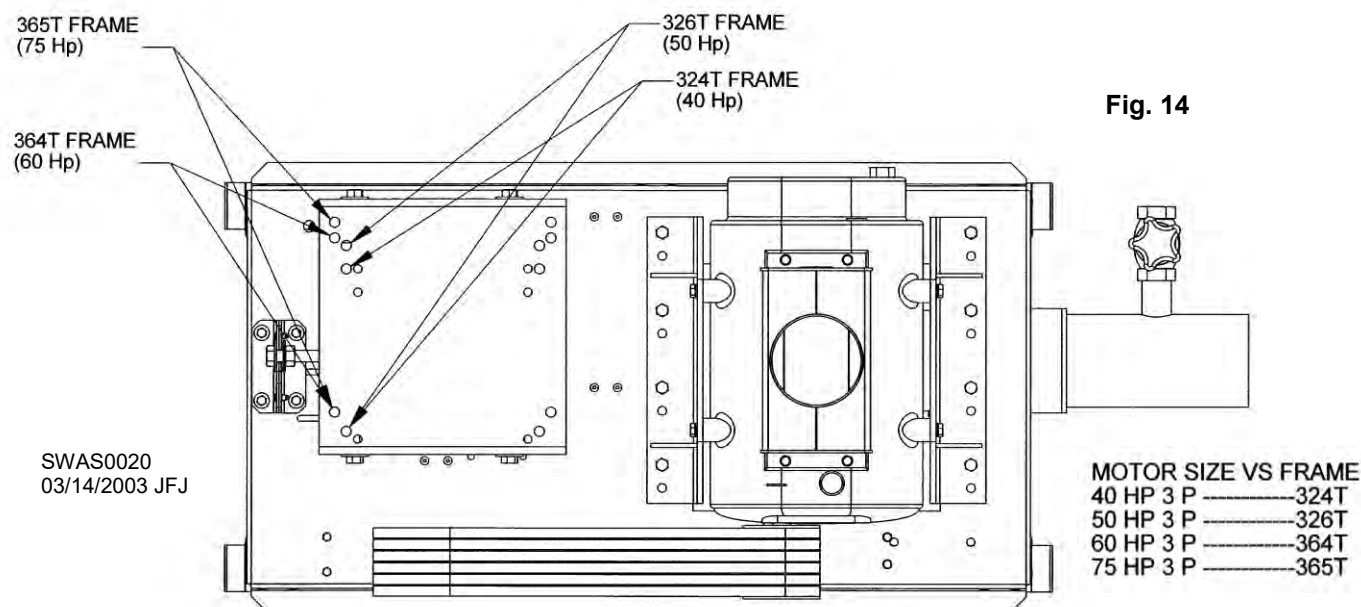
4" & 5" Blower Motor Mounting Positions

SWAS0013
03/12/2003 JFJ



6" Blower Motor Mounting Positions

Fig. 14



Power Box, Control Panel & DBV Installation

Attach power box to a sturdy stand using mounting studs on back of box and C-channels (not provided).

Attach air pressure hose to blower as shown in Image 3 using clamp provided. Insert other end through bottom of power box using watertight fitting. Clamp hose to nozzle shown in Image 4.

If air system will not be controlled by QuadraTouch Pro dryer console, a control panel must be installed. Image 5 shows control panel. Connect Ethernet cable from back of touch panel (N23476) to bottom of power box so it will link with cable shown in Image 4. If controlling air system via dryer with QuadraTouch Pro, connect Ethernet cable from air system control panel to Ethernet switch in dryer's main power box.



Image 2 – Power box display

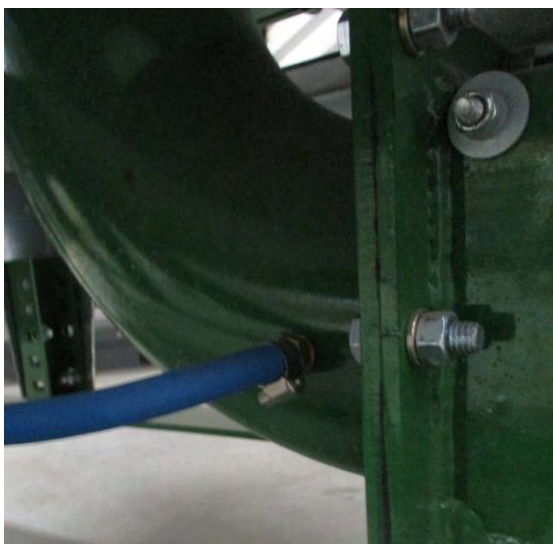


Image 3 – Air pressure hose connected to blower outlet



Image 4 – Air hose nozzle in power box



Image 5 – Control panel (N23476)

Installation



Image 6 –Dynamic bleed valve

If not done already, connect wires from dynamic bleed valve actuator to wires from conduit (See Image 6) according to wiring diagram on Page 41.

Ensure power box is wired according to applicable wiring decal(s) on inside of door(s). See decal(s) on Pages 42-44.

Plug power box into electrical service.

Plug in and turn on control panel or QuadraTouch Pro console and navigate to Air System 1. Press Enter. See Software Manual beginning on Page 30.

In Settings:

- Enter amperage using Service Factor Amps (FLA x SF) found on motor nameplate.
- Enter desired air pressure. Start at 3 psi.
Remember, higher pressure equals lower grain velocity. Set pressure to ensure system will not plug.
- Enter voltage of electrical service.



Image 7– Loosening butterfly valve collar

To calibrate dynamic bleed valve, go to Manual Operation. Make sure DBV is set at 0%.

Loosen collar on butterfly valve stem so that stem can be rotated manually. See Image 7.

Use screwdriver to turn stem to 0%. See Images 8 and 9.

Retighten collar on butterfly valve stem.

IMPORTANT: New PLC-based system eliminates need for velocity compensating valve and surge tank. Remove them from original air system if present.



Image 8 – Setting valve to 0% open



Image 9 –Dynamic bleed valve set at 0%

NOTE: Valve and tee assembly (J7552) supplied with Sukup air systems can be installed and used with dynamic bleed valve.

Mounting Distributor to Bin Wall

If applicable, see Fig. 15 for mounting distributor to bin wall.

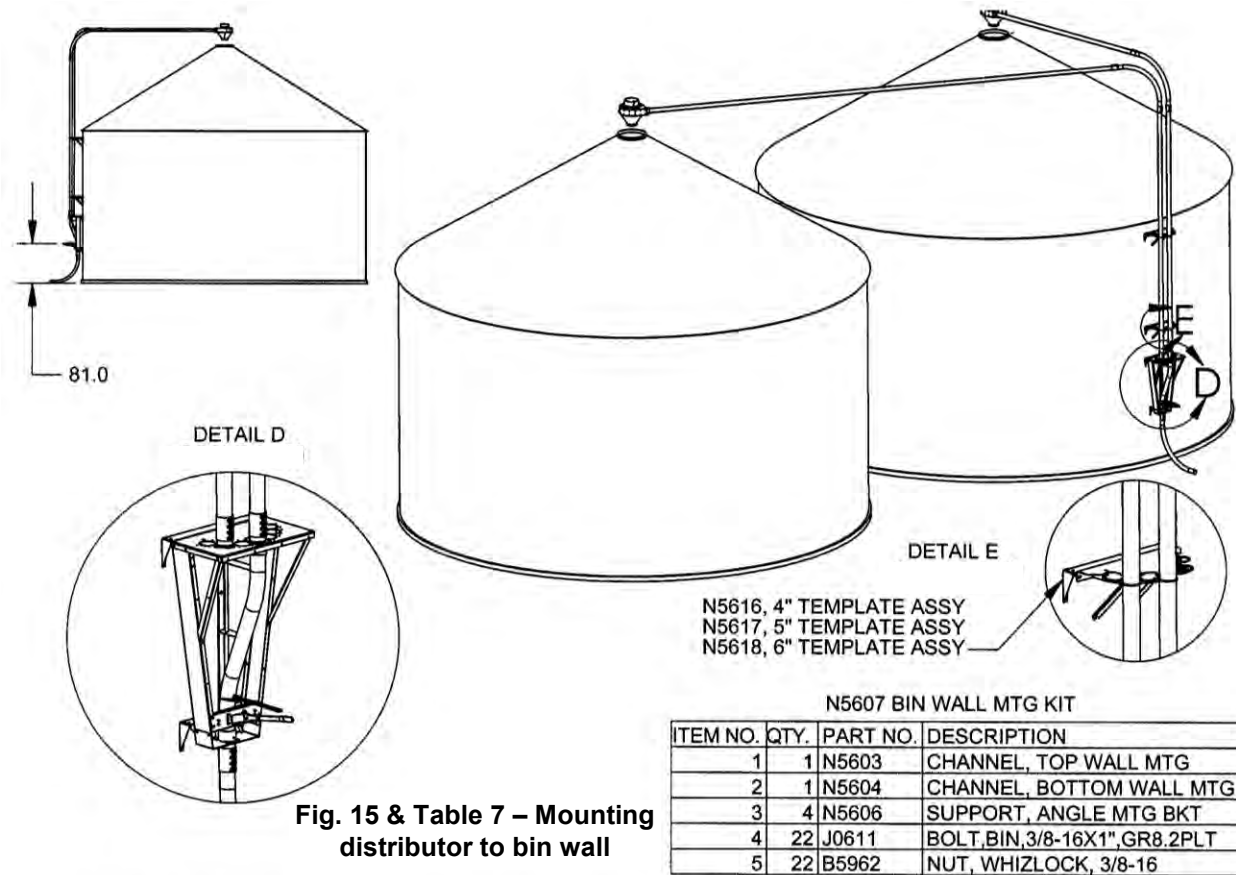
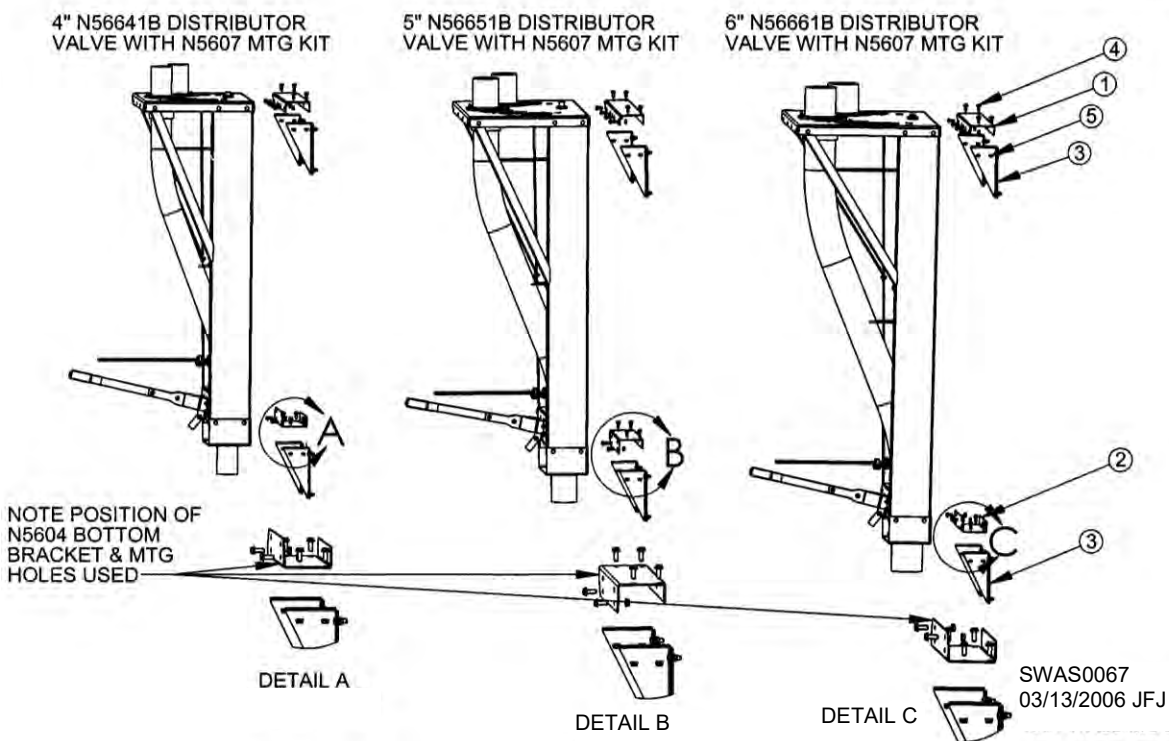


Fig. 15 & Table 7 – Mounting distributor to bin wall



Installation

Attaching Fill Auger

If applicable, see Fig. 16 and Table 8 to attach fill auger to air system. Attach swivel assembly to airlock, then attach flexible connecting belt to inside of angle ring, cutting as needed to fit.

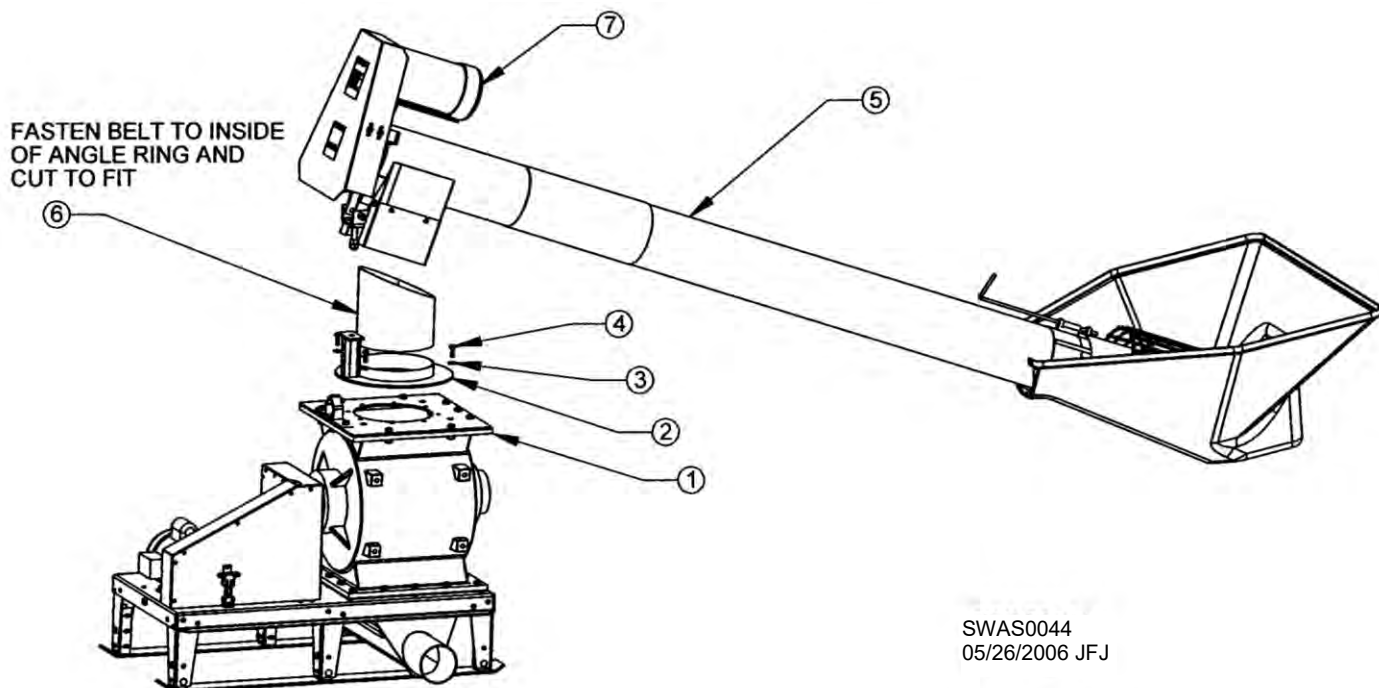


Fig. 16 & Table 8 – Fill auger attachment parts

REF. #	DESCRIPTION	QTY.	PART #
1	Airlock Assembly, 4"	1	N5100
	Airlock Assembly, 5"	1	N51051
	Airlock Assembly, 6"	1	N5605
2	Swivel, Weldment, 5" & 6"	1	N5557
	Swivel, Weldment, 4"	1	N5457
3	Washer, Flat, 3/8, PLT	4	J1117
4	Bolt, 5/16-18, 1.25	4	J0555
5	Fill Auger, 8" x 8 FT	1	G7108
	Fill Auger, 8" x 10 FT	1	G7109
6	Flexible Connecting Belt	1	K7500-36
7	Motor, 2 HP, 1 PH	1	H7125
	Motor, 2 HP, 3 PH	1	H2475
8	Pulley, 2.75 OD, .875 ID, A GRV	1	J0295

Connection kit numbers are N5465 for 4" tube and N5565 for 5" & 6"

Operation

IMPORTANT: Emergency Stop Button is located on left side of main control box. Red light on button will come on as soon as incoming power is supplied to control box. Motors will turn off immediately if button is pressed. Light will turn off when “E-Stop” button is pushed.

Prior to first run of blower and airlock motors, check rotation of shafts.

IMPORTANT: Read all steps before proceeding.



WARNING: Lock out power before performing any adjustment. Contact with moving parts could cause death or serious injury.

1. Go to Manual Control page on touch screen. See Software Manual.
2. Start blower motor by pressing “Start”, then immediately press E-Stop button on bottom left of screen to stop motor and prevent Off Delay timer from running.
3. Check rotation while shaft is slowing down.
 - a. See Image 10 for rotation sticker location. **NOTE:** Duroflow blowers rotate counterclockwise and Sutorbilt blowers rotate clockwise.
4. After checking/adjusting rotation, press E-Stop button on bottom left of screen, then press Reset E-Stop.
5. Start airlock motor by pressing “Start”.
 - a. Check shaft rotation while motor it is running. **NOTE:** Airlock has a grain sheer protection plate to prevent shearing of grain by airlock vanes. Motor should be wired to turn clockwise (as viewed looking at end of shaft). This will turn airlock vanes into rubber wiper. Check rotation of airlock to ensure it matches with rotation tag on airlock. See Image 11.
6. Click “Stop” on airlock control and fix rotation if required.

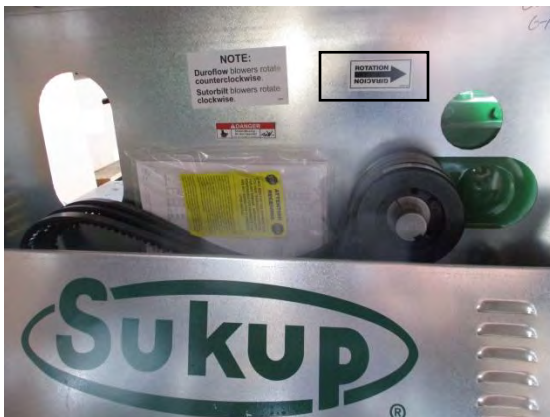


Image 10 – Blower rotation sticker location
(Rotation depends on blower type)



Image 11 – Airlock rotation
tag location

Operation

Air system can be operated manually or automatically using Dynamic Bleed Valve (DBV). System can also be operated manually or automatically using optional Variable Frequency Drive (VFD). No matter which method is used, be aware of quality of grain that is entering and leaving air system. **Any pneumatic system can cause damage unless care is taken to minimize velocity of grain as it travels through tubing to storage.** Excessive grain velocity causes grain damage. Grain velocity decreases as air pressure in system increases, so a system should be adjusted to run with as much line pressure as possible.

Manual Operation

1. Adjust feed rate until blower motor is running at full load (Match displayed amperage with amperage rating on motor nameplate).
2. If feed rate cannot be adjusted, then air pressure can be increased (and grain slowed) by opening Dynamic Bleed Valve or by reducing motor speed using VFD. Whichever method is used, it should be done very slowly:
 - a. Open DBV a small amount or lower VFD frequency a small amount. Wait for system to respond to the change before making another adjustment.
 - b. Monitor pressure readout on control panel. Pressure should increase slightly after each adjustment.
 - c. Continue opening DBV or lowering VFD frequency until grain starts to “surge” through tubing. At this point, close DBV 5% or increase frequency on VFD by 3-5Hz (or 5%). This should be an optimum setting for this feed rate and tubing layout.
3. If an airlock is being fed by a continuous-flow dryer that is discharging grain at differing rates, then DBV or VFD should be set to provide enough air for the highest discharge rate to avoid plugging. **A rule of thumb is to always have at least 3 psi of line pressure when dryer is discharging at a low rate.**

IMPORTANT: After DBV or VFD has been adjusted, check quality of grain being discharged by air system.

4. Monitor air filter restriction indicator located at blower inlet. Clean out both outer pre-filter and element or replace them to ensure an unrestricted air supply to blower.
5. Monitor operating pressure. Pressure lower than 2 or 3 psi is an indication that grain velocity is too fast and that damage may be occurring. Check quality of grain in storage bins if low operating pressures are used.

NOTE: Decreasing amount of air in system by opening DBV or by slowing motor using VFD will slow grain down and cause system pressure to increase.

NOTE: Typical operating pressures should be from 3 to 8 psi depending on blower motor horsepower and size of system.

Automatic Operation using DBV or VFD

1. Set Pressure Setpoint on Auto Control Mode screen. This should be done very slowly.
 - a. To increase speed of grain, lower the pressure setpoint.
 - b. To decrease speed of grain, raise the pressure setpoint.

PLC will automatically control DBV or VFD in order to maintain set pressure.

IMPORTANT: After pressure setpoint has been adjusted, check quality of grain being discharged by air system and adjust as necessary.

See Steps 4 and 5 and subsequent notes above.

Maintenance

Maintenance



WARNING: Lock out power before performing any maintenance or service inspections. Contact with moving parts could cause death or serious injury.

Manufacturers' manuals for both airlock and gearbox are located inside of airlock belt shield. Use these manuals for proper maintenance and lubrication of gearbox and airlock.

Airlock and blower are machined with very high tolerances for the most efficient operation; therefore, clearance between moving parts is very small and susceptible to rust and corrosion. For this reason it is **extremely important** not to expose them to corrosive environments and to lubricate them when not in use.

In-Season Maintenance

Do not expose inside of airlock to moisture. Even a small amount of rust on inside of airlock can prevent it from turning. Airlock is shipped with a light coating of oil on vanes. Reapply another coat of oil and cover with a waterproof enclosure if unit will not be used in immediate future.

Oil levels in blowers should be checked at sight glass on side of blower housing. See Page 19 for blower oil capacities. Use Sukup Manufacturing Co. oil, J3200 (qt size) or J3201 (5 gallon size) if required.

Sutorbilt blowers require grease every 500 hours; Duroflow blowers and airlocks do not have grease fittings.

Table below shows airlock gearbox lubricant based on ambient temperature of operation.

GEARBOX LUBRICATION		
Ambient Temperature	15°F to 60°F	50°F to 125°F
SAE Gear Lubricant	#140	#250

Lubricate all inside machined surfaces on blower and airlock with a light oil such as WD-40, or an engine fogging oil if machine is used and shut down for a couple days. It is good preventive maintenance to do this every time air system is shut down. If using an aerosol can, simply spray in top of airlock while rotating. Remove filter cover and spray down intake tube of blower.

End of Season/Winterizing Procedures

Airlock and blower contain high-precision parts that require strict maintenance for off-season storage. Even moderate rust and corrosion can reduce lifespan and efficiency of equipment and may cause severe damage.

NOTICE: To protect against corrosion, airlock and blower should be removed immediately after final use and stored in dry building. Coat interior of blower and airlock with motor oil (or an aerosol rust inhibitor such as Evinrude-Johnson Storage Fogging Oil or CRC Storage & Lube). Rotate vanes by hand while coating to ensure coverage, then seal openings so that moist air cannot condense on metal components.

NOTE: Light spray lubricants such as WD-40 do not provide enough protection for long-term storage.

Tubing on ground should be disconnected and stored off of ground. Use seal caps (Part J7559 for 4", J7557 for 5", J7561 for 6").

Ensure adequate drainage to prevent ANY components of system from becoming submerged in water.

Operate airlock and blower BRIEFLY once a month when not in use to help keep parts lubricated. Re-apply fogging oil as required to maintain protection of internal surfaces.

Troubleshooting

Manual Tube Clean-out (Unplugging) Procedure

1. Clear applicable faults (Overloads if tripped)
2. Go to Manual Operation
3. Set DBV to 100% open.
4. Set VFD (if equipped) to Maximum Hertz or 100%
5. Start blower
6. Slowly close DBV.
 - a. Be mindful of Motor Full Load amps and try not to trip motor overload. It is OK to stay at full load amps to allow some grain to flow out of tube.



CAUTION: Stand clear of airstream at bleed valve until grain in tube begins to clear tube of grain. Contact with high-velocity air and/or debris may result in minor or moderate injury.

7. If this procedure does not unplug tube, tube will have to be taken apart and cleaned manually.

Blower Overload – This light will be on only when blower overload has tripped.

1. Reset Blower Overload.
2. Reset System.
3. Check Blower motor current.
4. Lower the feed rate to airlock if excessive current.

Airlock Overload – This light will be on only when airlock overload has tripped.

1. Reset Airlock Overload.
2. Reset System.
3. Check Airlock motor current.

High-Pressure Shut-off Switch

Located at bottom left of control box (See Image 1), high-pressure shut-off switch is factory-set to shut system down when operating pressures exceed 12-13 psi. Switch can be adjusted by removing cover of switch and turning nut on adjustment screw. Turn nut counterclockwise to lower pressure limit and clockwise to increase limit. Do not set pressure limit above 15 psi.

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DEADHEAD MOUNTING ACCESSORIES

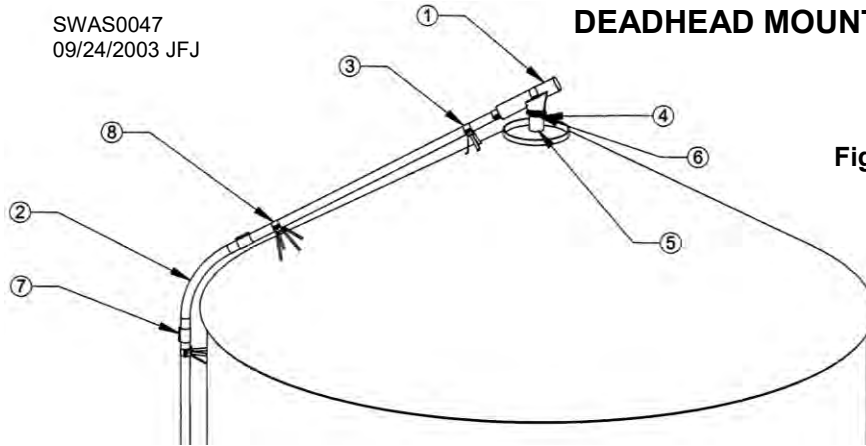


Fig. 17 & Table 9 – Cyclone mounting accessories

REF. #	DESCRIPTION	4" PART #	5" PART #	6" PART #
1	Deadhead Assembly	N5460	N5560	N5660
2	11 Ga. Galvanized 60° Elbow	J7481	J7521	J7577
3	Sidewall Mounting Bracket	N5494	N5594	N5694
4	Flange Ring	J6600	J6605	J6610
5	Flex Tubing	K2936	K3001	K3102
6	Clamp, Flange Quick Connect	J6585	J6586	J6587
7	Compression Coupler	J7482	J7522	J7560
8	Quadpod Support Bracket, 30-45" legs	N5436	N5536	F4806

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09/24/2003 JFJ

CYCLONE MOUNTING ACCESSORIES

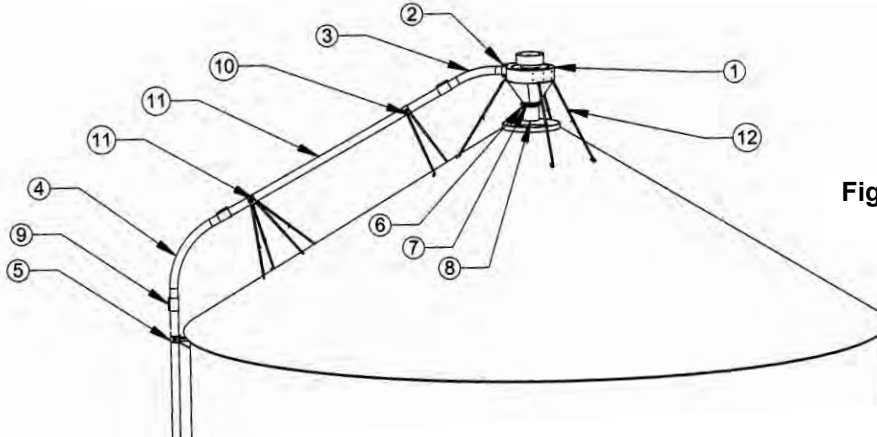


Fig. 18 & Table 10 – Cyclone mounting accessories

REF. #	DESCRIPTION	4" PART #	5" PART #	6" PART #
1	Cyclone Assembly	N5504	N5504	N5504
2	Tube Adaptor	N5402	N5502	N5602
3	11 Ga. Galvanized 30° Elbow	J7483	J7523	J7578
4	11 Ga. Galvanized 60° Elbow	J7481	J7521	J7577
5	Sidewall Mounting Bracket	N5494	N5594	N5694
6	Flange Ring, 10"	J6610	J6610	J6610
7	Flex Tubing, 10"	K3102	K3102	K3102
8	Clamp, Flange Quick Connect, 10"	J6587	J6587	J6587
9	Compression Coupler	J7482	J7522	J7560
10	Bipod Support Bracket, 30-45" Legs	N5427	N5527	E5800
11	Quadpod Spt. Bracket, 30-45" Legs	N5436	N5536	F4806
12	Cyclone Mounting Kit (4 legs)	N5530	N5530	N5530

Software Manual

Sukup Automation Solutions™

Cyclone™ Air System



Touching main page will bring up “Connected Air Systems” page. Each panel is capable of running five air systems from one display.

Select desired system. Manual Control page will appear.

Manual Mode



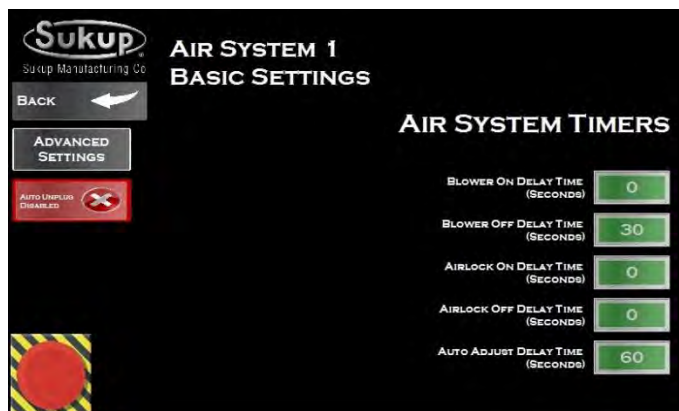
Manual Mode enables independent control of each part of the air system. VFD (if equipped) can run at whatever speed is desired. Dynamic Bleed Valve (DBV) controls how much air is blown through the tube. DBV automatically increases or decreases air pressure by oscillating its control valve.

At lower right of screen, real-time pressure and current usage of air system are displayed.



On left side of screen is a link to Settings page. On top right of page is a shortcut to Automatic Control.

Settings

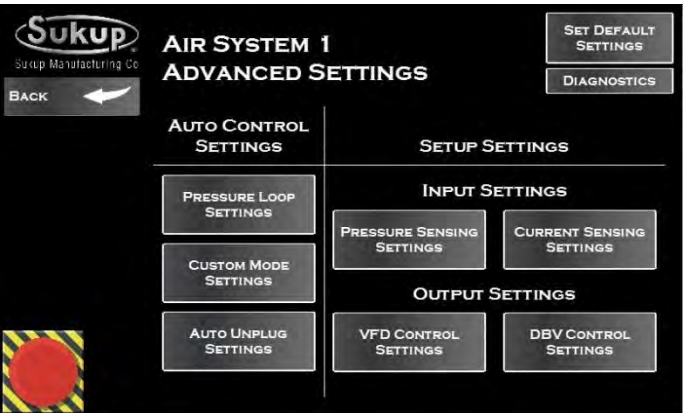


Settings menu shows basic timers that are typically used. Blower Off Delay has a factory-set 30-second delay to clear tube after grain discharge into air system has stopped.

There is also an Auto Adjust Delay Timer. It sets the amount of time that system will run at 100% capacity before trying to automatically use DBV or VFD to maintain a specified air pressure.

Auto Unplug can be enabled on this page as well.

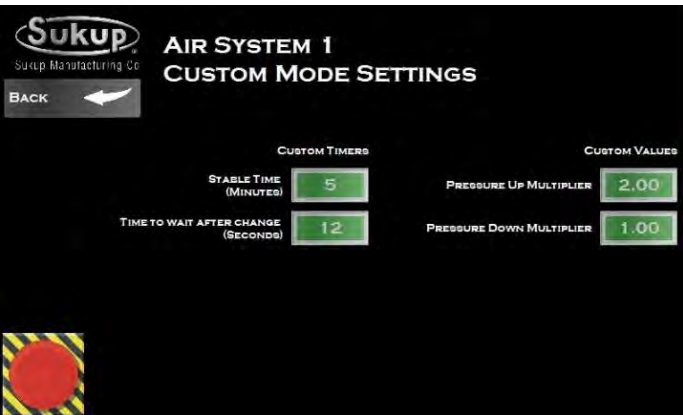
Advanced Settings



This page is accessed by touching Advanced Settings button (shown on previous screen). Loop settings are on left, and sensor settings on right.



Loop Settings are shown on screen at left. Do not change any of these settings without help from a Sukup dealer or from Sukup Manufacturing Co. Basically, these settings change the way that the system reacts to controlling pressure in Automatic Mode.



Auto Unplug Settings

Sukup
Sukup Manufacturing Co.

**AIR SYSTEM 1
AUTO UNPLUG SETTINGS**

BACK

UNPLUG TIMERS

FULL CURRENT RUN TIME (SECONDS)

OSCILLATE TIME (SECONDS)

UNPLUG VALUES

DBV UNPLUG START POSITION

UNPLUG PRESSURE

OSCILLATE OPEN AMOUNT

OSCILLATE CLOSE AMOUNT

DO NOT CHANGE THESE VALUES UNLESS YOU HAVE BEEN INSTRUCTED BY SUKUP MANUFACTURING PERSONNEL. CHANGING THESE VALUES CAN DRAMATICALLY CHANGE THE WAY YOUR AUTO UNPLUG FEATURE WORKS AND MAY CAUSE DAMAGE TO YOUR AIR SYSTEM.

Auto Unplug feature allows air system to automatically clear a plug should one occur. Dynamic bleed valve forces more and more air into system, increasing pressure while making sure not to overload the motor. Settings can be changed to make unplug feature more or less aggressive.

Sukup
Sukup Manufacturing Co.

**AIR SYSTEM 1
PRESSURE SENSING SETTINGS**

BACK

SENSOR RANGE

PSI RANGE MIN PSI

PSI RANGE MAX PSI

CONTROL SIGNAL TYPE

VOLTAGE

SIGNAL RANGE MINIMUM VOLTAGE VDC

SIGNAL RANGE MAXIMUM VOLTAGE VDC

Pressure and Current Settings are shown in screens at left. Motor Full Load Amps settings must be entered for some of the automation features to work properly. Set this value using the FLA setting on blower motor.

Sukup
Sukup Manufacturing Co.

**AIR SYSTEM 1
CURRENT SENSING SETTINGS**

BACK

SENSOR RANGE

AMPS RANGE MIN AMPS

AMPS RANGE MAX AMPS

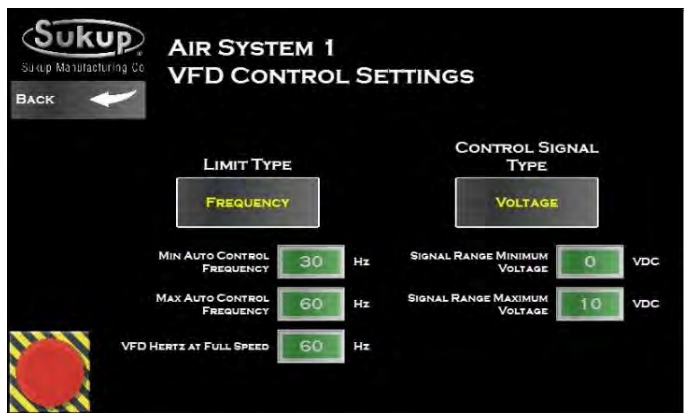
MOTOR FULL LOAD AMPS

CONTROL SIGNAL TYPE

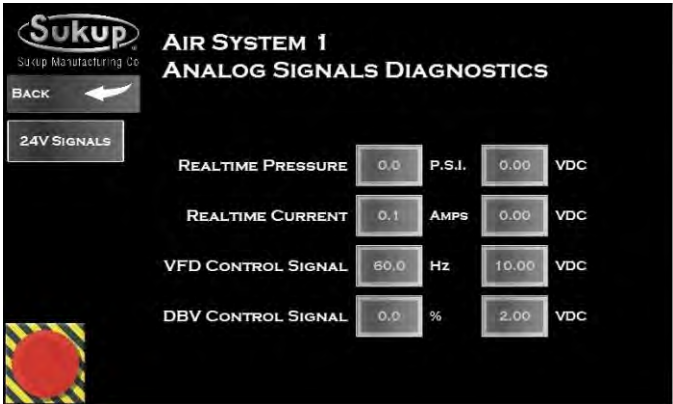
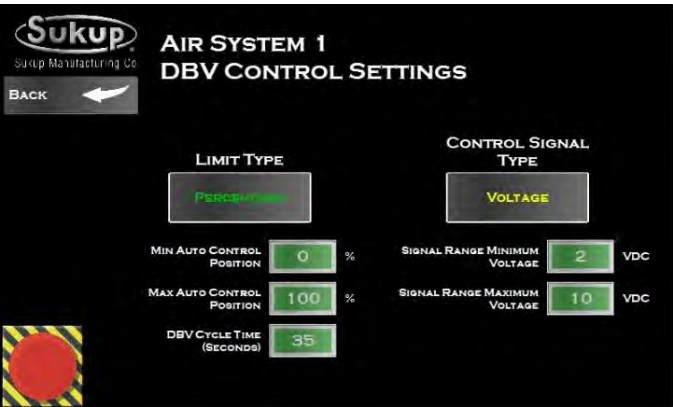
VOLTAGE

SIGNAL RANGE MINIMUM VOLTAGE VDC

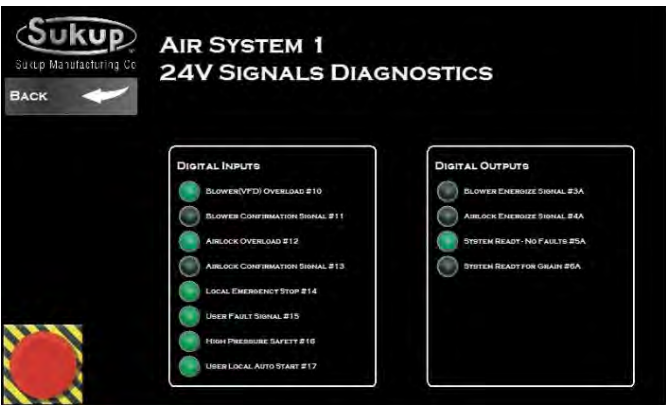
SIGNAL RANGE MAXIMUM VOLTAGE VDC



Control parameters for VFD (if so equipped) and DBV are shown at left. These are basic operating limits of these devices.



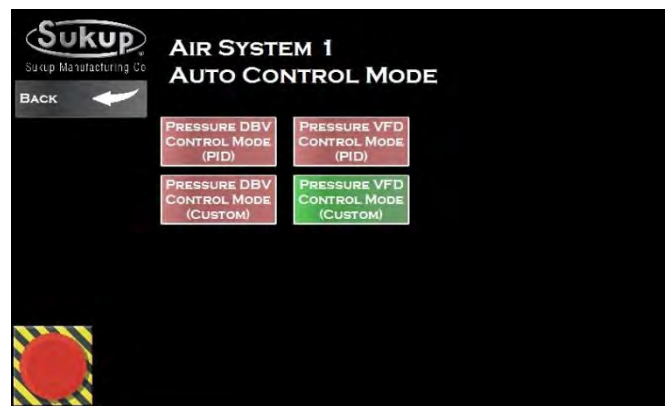
Touch Sukup Logo at upper left at any time to reach diagnostics pages. All system values such as real-time analog and digital statuses can be displayed.



Automatic Control



Automatic Control mode will allow user to specify operating pressure. PLC will control pressure using either VFD (if equipped) or DBV. Auto control type needs to be specified by user. Pressure DBV is default control type (PID) on all systems.



Screen at left will appear after touching Auto Control Type button. User can select a loop control. **IMPORTANT:** If system is not equipped with a VFD, do not select VFD as an option or DBV will automatically close and air system will run at 100% without changing.



Each air system is equipped with a DBV, which can be used to control system pressure by bleeding off a precise amount of air from control valve. If system is also equipped with a VFD, then DBV will not be used to control system pressure except during auto unplugging. VFD will be used to control blower speed, thus system pressure.

During operation, PLC is monitoring real-time current consumption of blower motor. This allows system to manage its feasible pressure limits. If a system pressure is selected that seems to be unreachable because of motor load, the system won't try to overload itself, which would likely result in a plug. Upon selection of any new pressure setpoint, the system will ramp itself to 100% and then wait for the user-selected Auto Adjust Delay time before decreasing VFD speed or opening DBV to start bleeding air from system.

When used with a QuadraTouch Pro dryer, air system will automatically start and come up to speed before dryer unload is allowed to operate.

Emergency Stop



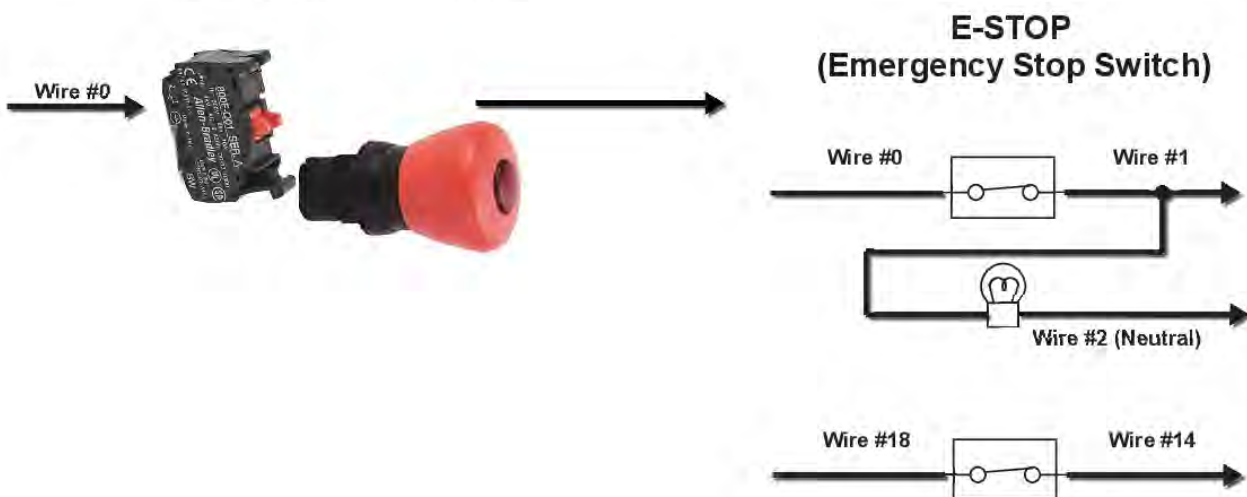
E-Stop button is located at bottom left of all screens. Touching it will shut down air system and send a signal to other Sukup Automation Solutions™ equipment to inform them of shutdown.

IMPORTANT: E-STOP button on side of control cabinet will interrupt all 120V control voltage, but will not interrupt DC control voltage, so PLC and touch panel will stay on.

Emergency Stop and System Control Switch Wiring



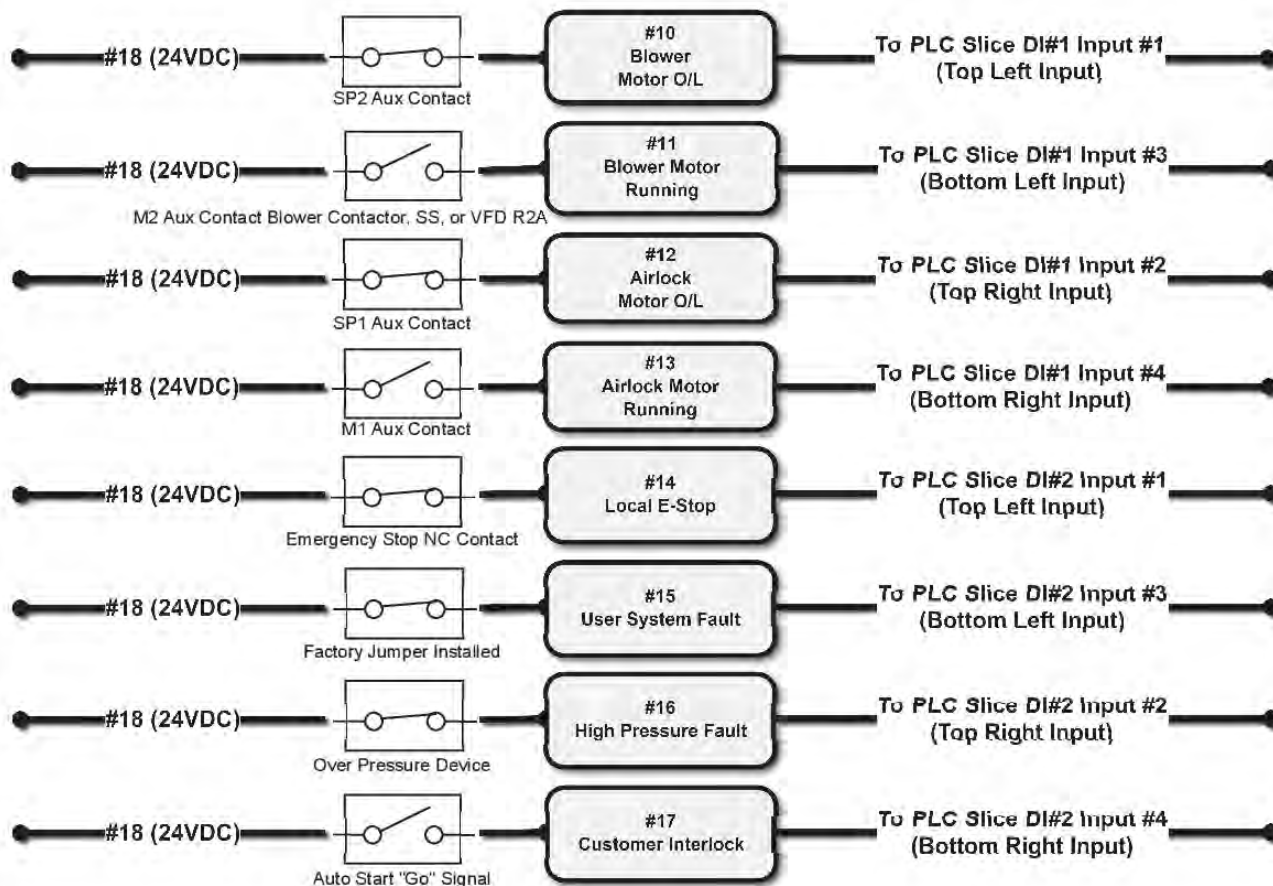
NOTE: 575VAC is Fused
Instead of 2 Pole breaker shown



Note: Emergency Stop interrupts 120VAC from control circuitry. DC Power Supply is still active when E-STOP (Emergency Stop Switch) is engaged. PLC logic is active during shutdown.

Title: Air System: Emergency Stop Circuit	
Author: SUKUP MFG CO - MRK	
Date: 03/19	Sheet: 110.6
Revision:	

Cyclone PLC Digital Inputs



Title: Cyclone Air System: Digital Inputs

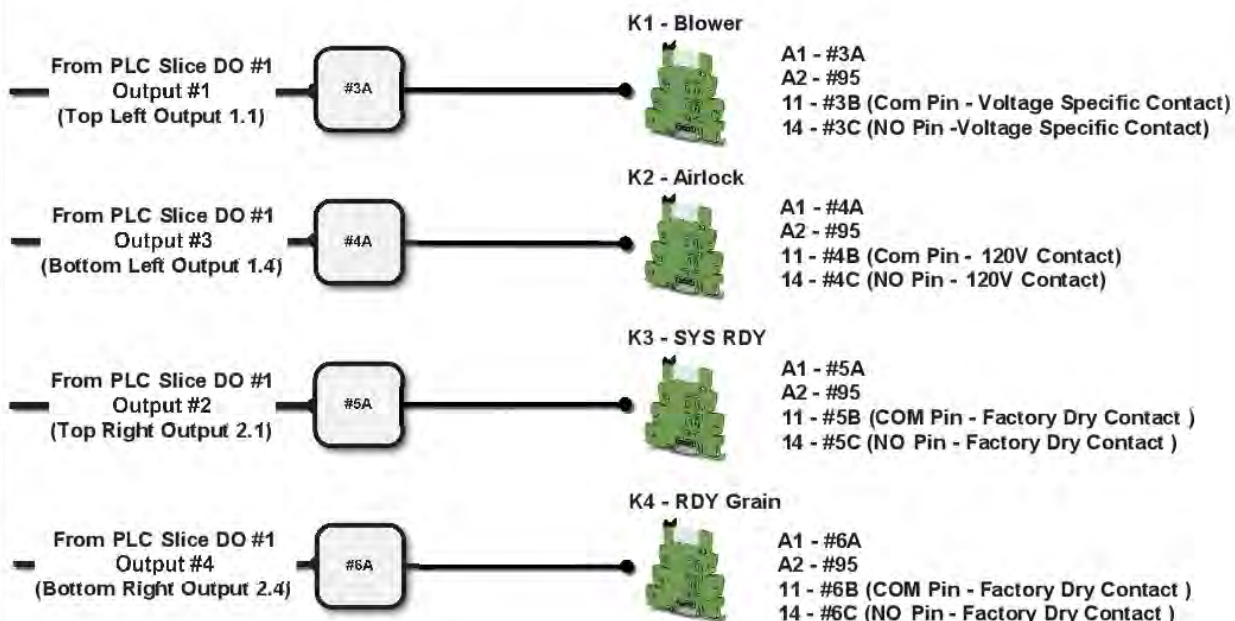
Author: SUKUP MFG CO - MRK

Date: 03/19

Sheet: 110.2

Revision:

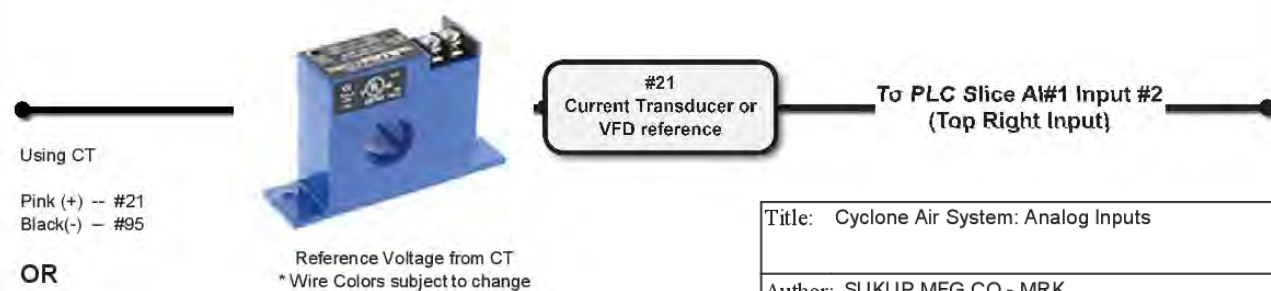
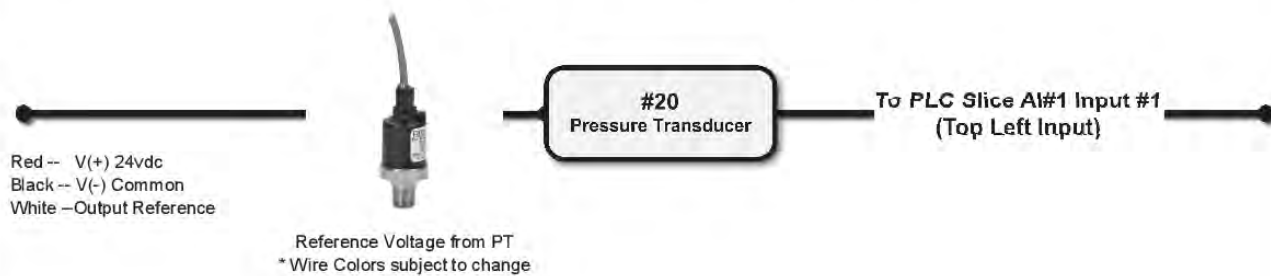
Cyclone PLC Relay Wiring Digital Outputs



The K1 relay is a part-specific voltage contact. If the blower uses a factory installed soft start or contactor for its starting method, the contact will utilize 120VAC for its voltage on #3B and #3C. However, if the blower is equipped with a VFD for its starting method, the contact will utilize 24vdc for its voltage on #3B and #3C.

Title: Cyclone Air System: PLC Relay Wiring Digital Outputs	
Author: SUKUP MFG CO - MRK	
Date: 3/19	Sheet: 110.1
Revision:	

Cyclone PLC Analog Inputs



Title: Cyclone Air System: Analog Inputs

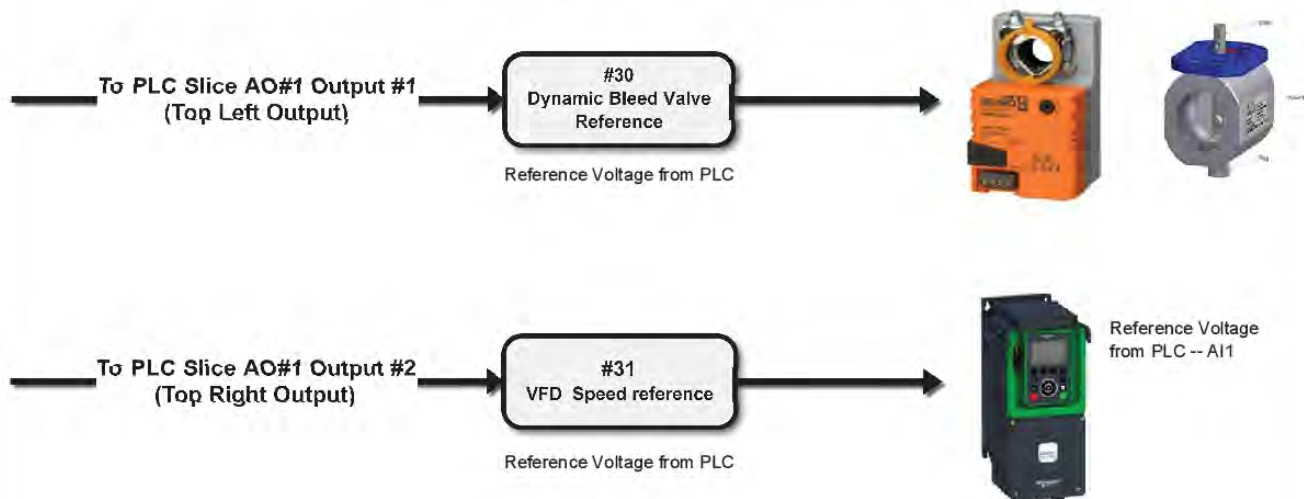
Author: SUKUP MFG CO - MRK

Date: 03/19

Sheet: 110.3

Revision:

Cyclone PLC Analog Outputs



Title: Cyclone Air System: Analog Outputs

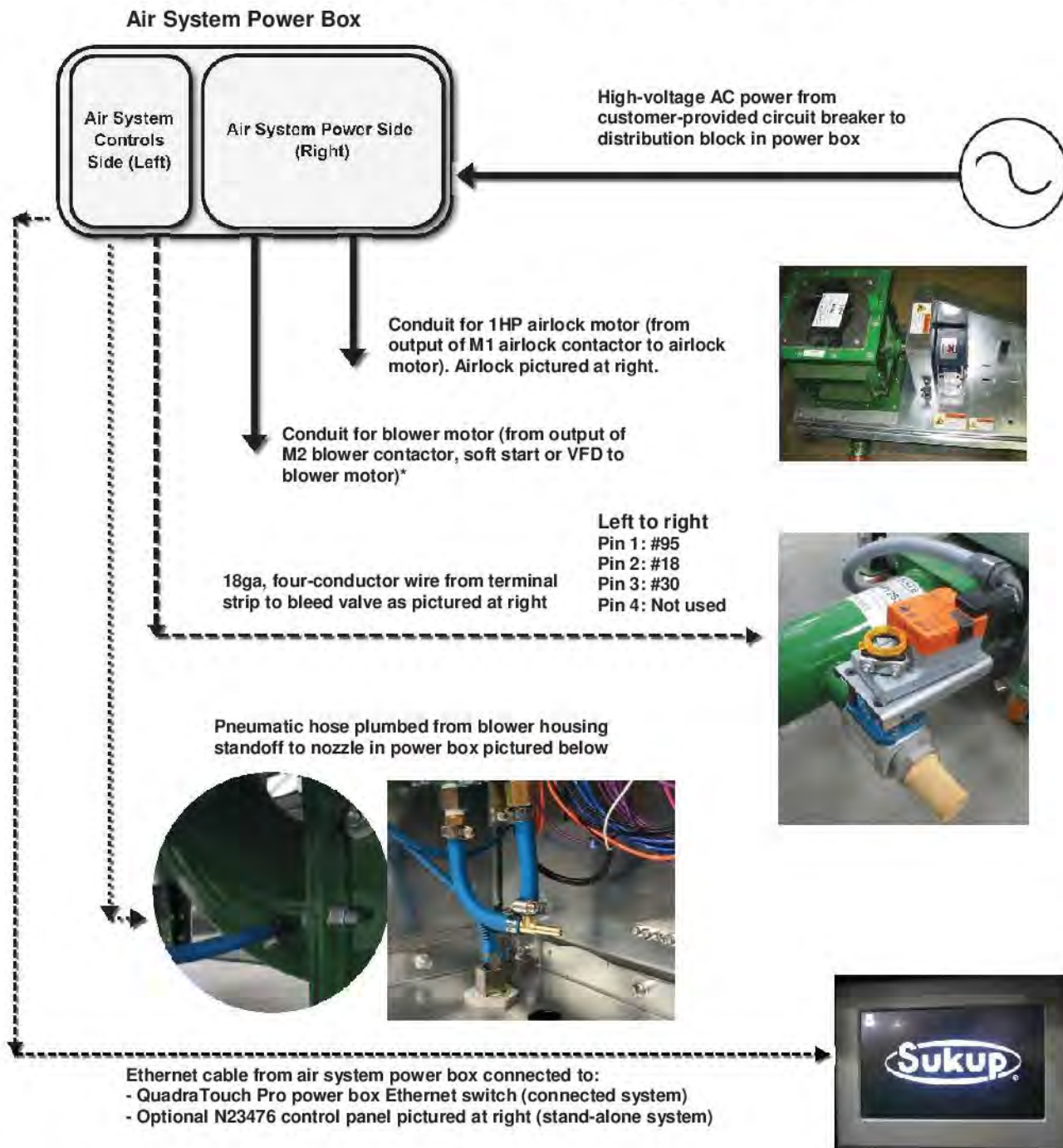
Author: SUKUP MFG CO - MRK

Date: 03/19

Sheet: 110.4

Revision:

Cyclone Air System Wiring Overview



*In some single-phase 230VAC systems, two blower motors are used. There are two breakers, two contactors and two motors for these systems. Either motor can be wired to either contactor.

Title: Cyclone Air System Wiring Overview

Author: SUKUP MFG CO - MRK

Date: 08/19

Sheet: 110.6

Revision:

Wiring Diagrams

Cyclone Power Box Wiring Decals

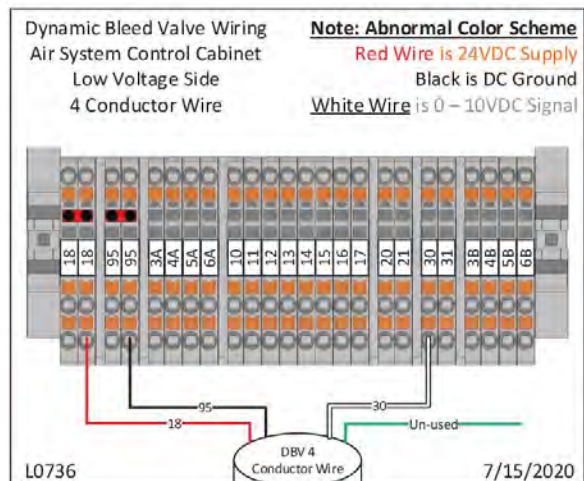
Cyclone wiring decals are mounted at factory. Yearly and prior to equipment use, ensure that all decals are in legible condition and in place according to these instructions. Replace missing or damaged decals free of charge by contacting Sukup Manufacturing Co. by mail at Box 677, Sheffield, Iowa 50475; by phone at 641-892-4222; or by e-mail at info@sukup.com.

If decal replacement is necessary, ensure areas of placement are clean. Remove backing from decal and apply to inside of door.

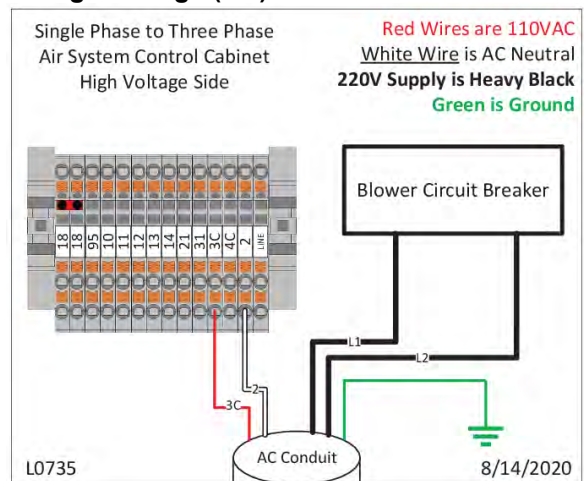
Decal 1 is for all power boxes. Decals 2-4 are only for those with single- to three-phase power converters.

Images 12-14 show decal locations. All go on inside of door. Decals 1 & 3 go inside left door. See Image 13. Decal 2 goes inside right door. See Image 14. Decal 4 goes inside door of single- to three-phase power converter box (Not shown).

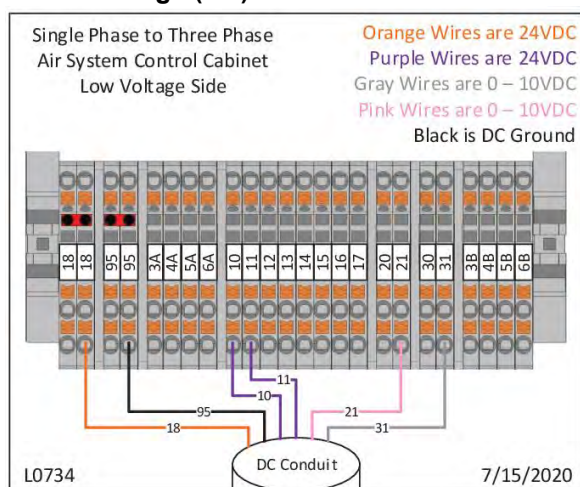
1. Decal L0736 – Dynamic Bleed Valve Wiring.



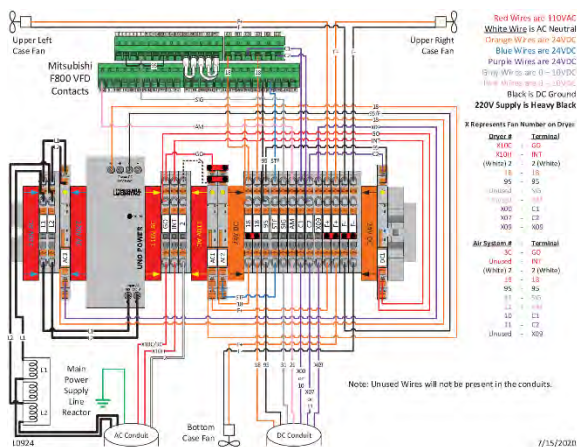
2. Decal L0735 – Single Phase to Three Phase, High Voltage (AC)



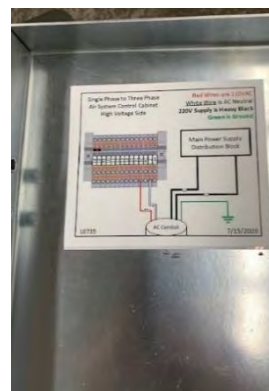
3. Decal L0374 – Single Phase to Three Phase, Low Voltage (DC)



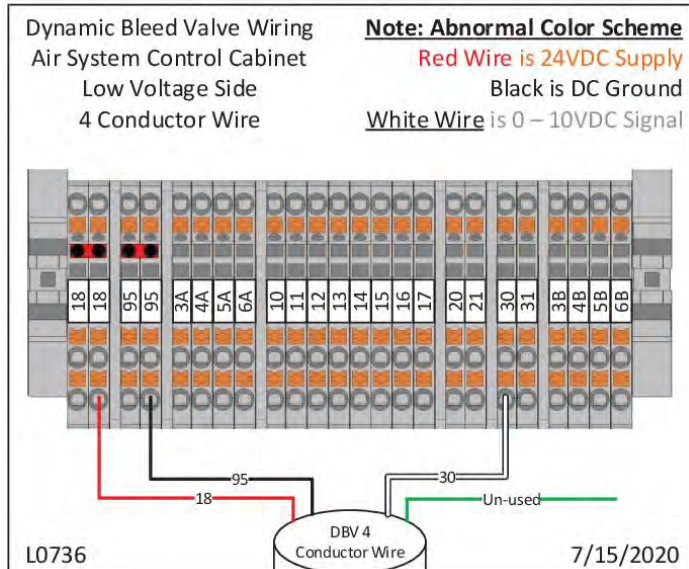
4. Decal L0924 – Single Phase to Three Phase Power Converter Wiring



Images 12-14 –
Power box wiring
decal locations
#1 & #3 at lower left;
#2 at lower right

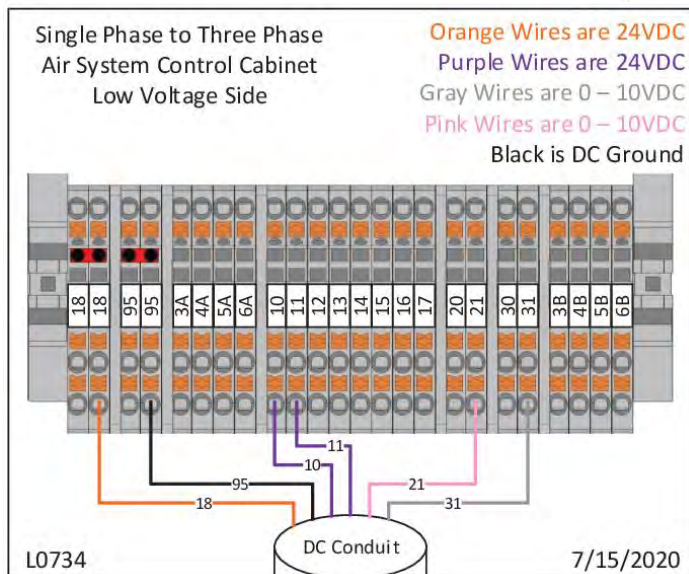
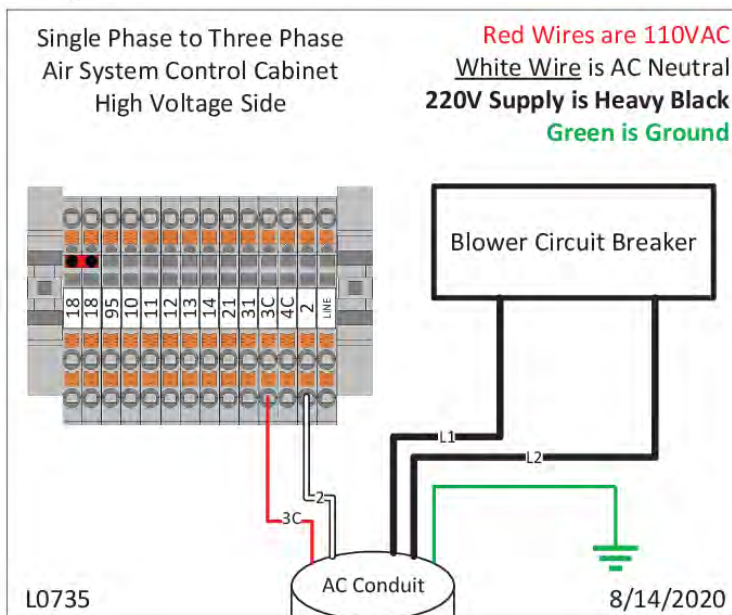


Wiring Diagrams



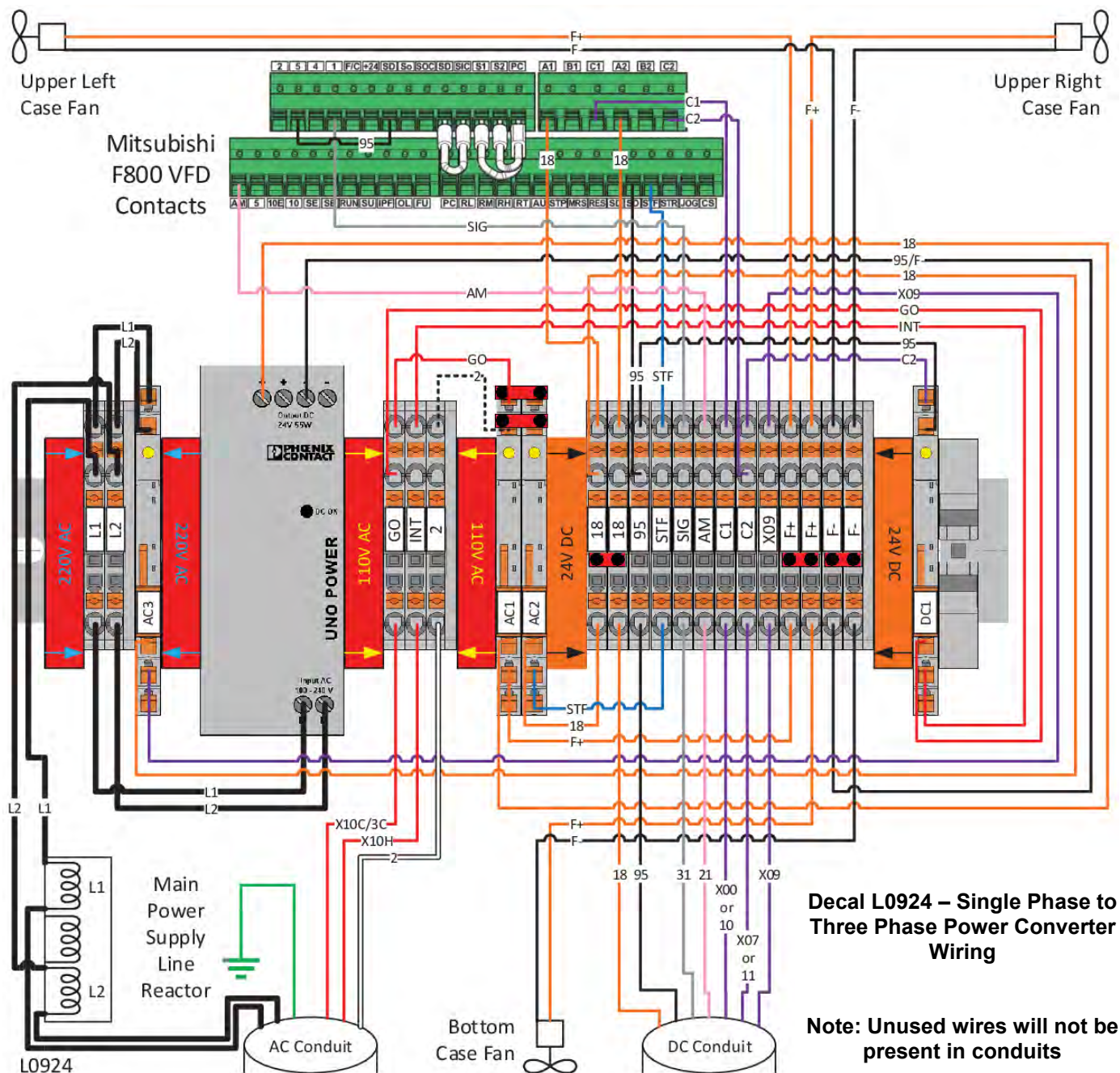
**Decal L0736 – Dynamic
Bleed Valve Wiring**

**Decal L0735 – Single- to
three-phase power converter,
High Voltage (AC)**



**Decal L0734 – Single
Phase to Three Phase,
Low Voltage (DC)**

Wiring Diagrams



Red Wires are 110VAC
 White Wire is AC Neutral
 Orange Wires are 24VDC
 Blue Wires are 24VDC
 Purple Wires are 24VDC
 Gray Wires are 0 – 10VDC
 Pink Wires are 0 – 10VDC
 Black is DC Ground
 220V Supply is Heavy Black

X Represents Fan Number on Dryer

Dryer #	Terminal
X10C	GO
X10H	INT
(White) 2	2 (White)
18	18
95	95
Unused	SIG
Unused	AM
X00	C1
X07	C2
X09	X09

Air System #	Terminal
3C	GO
Unused	INT
(White) 2	2 (White)
18	18
95	95
31	SIG
21	AM
10	C1
11	C2
Unused	X09

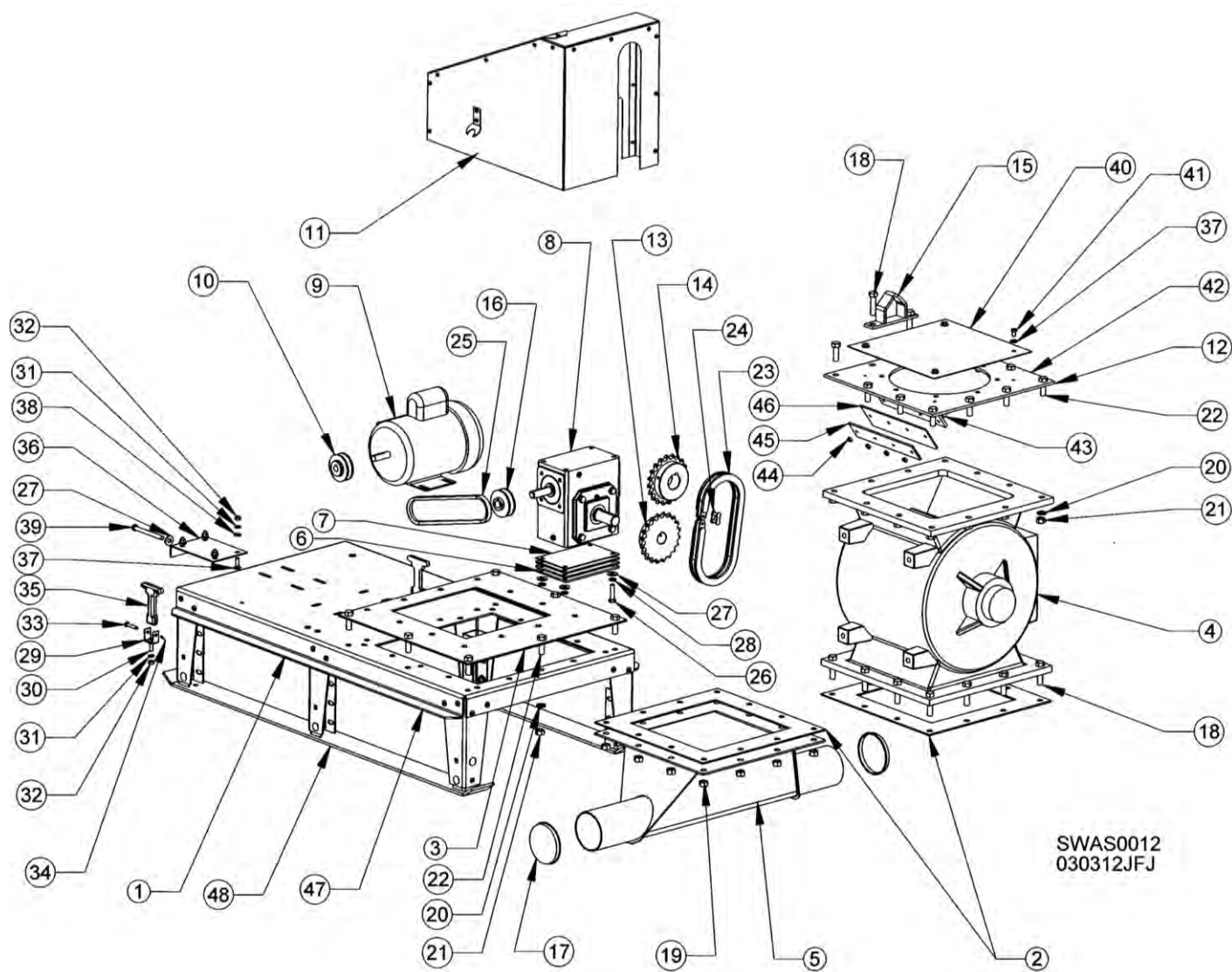
Electrical Requirements

See table below for electrical requirements based on electrical panel number. Panel number is found on white sticker inside of power box.

Panel #	Start Method	Panel Voltage	Phase	Blower Wire Ga	Blower HP	Blower Motor #1	Blower Motor #2	Airlock Wire Ga	Airlock Motor #	Blower #1 Amp Setting	Blower #2 Amp Setting	Airlock Amp Setting	Total Panel Amps
N121210	LS	230	1	8	10, 10	H5175	H5175	14	H1100	50.0	50.0	7.0	107
N121215	LS	230	1	6	15, 15	H5755	H5755	14	H1100	67.0	67.0	7.0	141
N321120	LS	230	3	6	20	H6800		14	H1150	55.2	0.0	3.2	58
N321130	LS	230	3	4	30	H7125		14	H1150	82.8	0.0	3.2	86
N321140	LS	230	3	2	40	H7175		14	H1150	120.0	0.0	3.2	123
N321150	LS	230	3	1	50	H7205		14	H1150	138.0	0.0	3.2	141
N322120	SS	230	3	6	20	H6800		14	H1150	55.2	0.0	3.2	58
N322130	SS	230	3	4	30	H7125		14	H1150	82.8	0.0	3.2	86
N322140	SS	230	3	2	40	H7175		14	H1150	120.0	0.0	3.2	123
N322150	SS	230	3	1	50	H7205		14	H1150	138.0	0.0	3.2	141
N323120	VFD	230	3	6	20	H6800		14	H1150	55.2	0.0	3.2	58
N323130	VFD	230	3	4	30	H7125		14	H1150	82.8	0.0	3.2	86
N323140	VFD	230	3	2	40	H7175		14	H1150	120.0	0.0	3.2	123
N323150	VFD	230	3	1	50	H7205		14	H1150	138.0	0.0	3.2	141
N323160	VFD	230	3	Flex1	60	H7260		14	H1150	159.9	0.0	3.2	163
N323175	VFD	230	3	Flex2	75	H7505		14	H1150	196.7	0.0	3.2	200
N341120	LS	460	3	10	20	H6800		14	H1150	27.6	0.0	1.6	29
N341130	LS	460	3	8	30	H7125		14	H1150	41.4	0.0	1.6	43
N341140	LS	460	3	6	40	H7175		14	H1150	60.0	0.0	1.6	62
N341150	LS	460	3	6	50	H7205		14	H1150	69.0	0.0	1.6	71
N341160	LS	460	3	4	60	H7260		14	H1150	79.9	0.0	1.6	81
N341175	LS	460	3	2	75	H7505		14	H1150	98.3	0.0	1.6	100
N342120	SS	460	3	10	20	H6800		14	H1150	27.6	0.0	1.6	29
N342130	SS	460	3	8	30	H7125		14	H1150	41.4	0.0	1.6	43
N342140	SS	460	3	6	40	H7175		14	H1150	60.0	0.0	1.6	62
N342150	SS	460	3	6	50	H7205		14	H1150	69.0	0.0	1.6	71
N342160	SS	460	3	4	60	H7260		14	H1150	79.9	0.0	1.6	81
N342175	SS	460	3	2	75	H7505		14	H1150	98.3	0.0	1.6	100
N343120	VFD	460	3	10	20	H6800		14	H1150	27.6	0.0	1.6	29
N343130	VFD	460	3	8	30	H7125		14	H1150	41.4	0.0	1.6	43
N343140	VFD	460	3	6	40	H7175		14	H1150	60.0	0.0	1.6	62
N343150	VFD	460	3	6	50	H7205		14	H1150	69.0	0.0	1.6	71
N343160	VFD	460	3	4	60	H7260		14	H1150	79.9	0.0	1.6	81
N343175	VFD	460	3	2	75	H7505		14	H1150	98.3	0.0	1.6	100

PARTS ASSEMBLIES

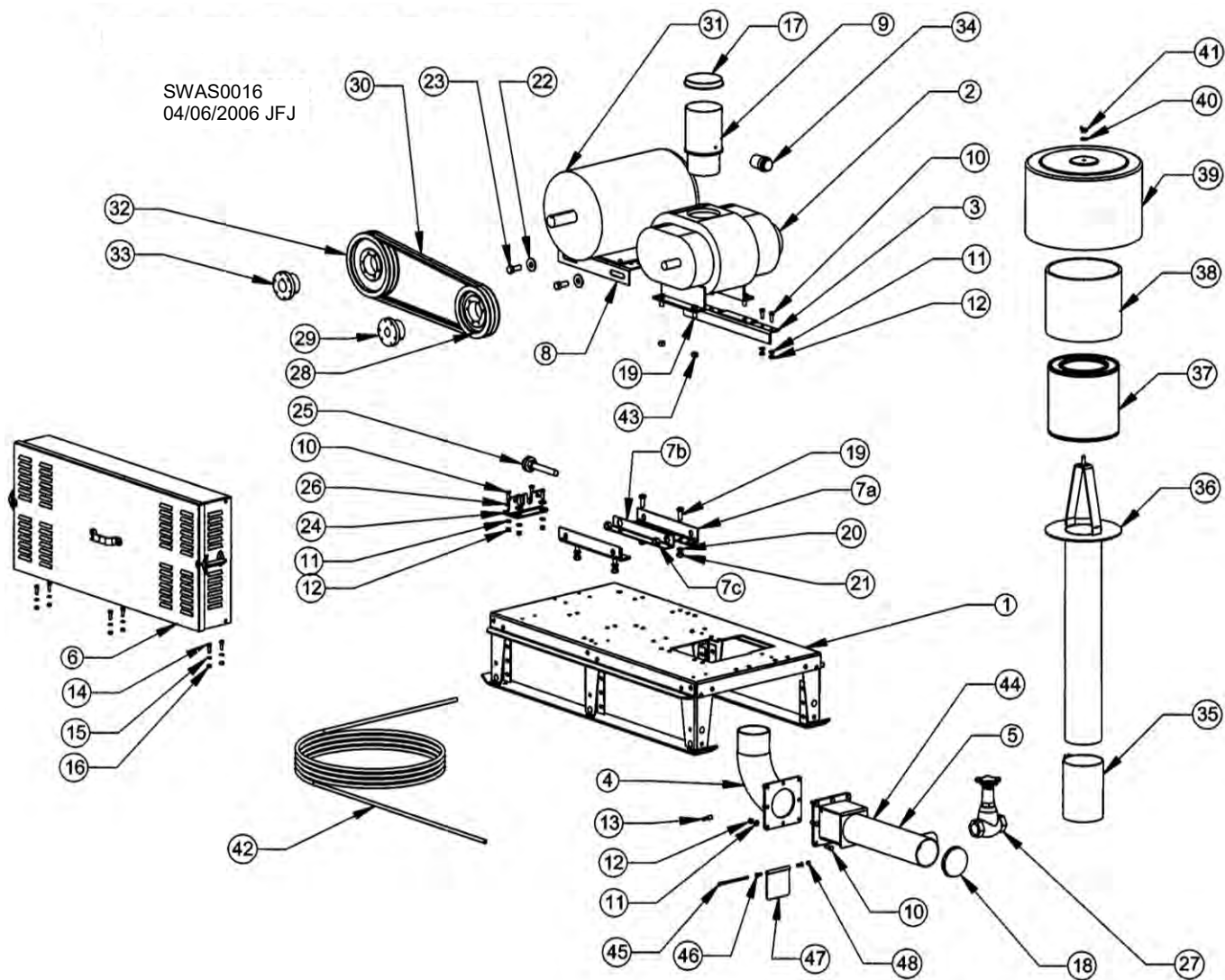
4" AIRLOCK (N5100)



4" AIRLOCK (N5100) PARTS

REF. #	DESCRIPTION	QTY.	PART #
1	Stand Assembly W/Skids - 4" & 5" Airlock	1	N5478
2	Gasket, 12" Airlock, Meyer (2per)	2	J7515
3	Plate Weldment, 4" Airlock Adapter	1	N5474
4	Airlock, 12" Meyer, W/ Gasket	1	J7514
5	Weldment, 4" Airlock Transition	1	N5440
6	Spacer, Reducer - 7Ga. Galvanized	3	N5419
7	Shim, Reducer	1	N54191
8	Gear reducer, 60:1	1	J3679
9	Motor, 1HP, 1PH Auger 1750 RPM	1	H1100
	Motor, 1HP, 3PH Auger 1750 RPM	1	H1150
10	Pulley, 2-3/4" OD x 5/8" Bore	1	J0293
11	Shield, Airlock	1	N5569
12	Top Plate Assembly, 4" Airlock	1	N5470
13	Sprocket, 60B20, 1.125 Bore	1	J16952
14	Sprocket, 60B20, 1-1/2" Bore	1	J16953
15	Weldment, 4" Airlock Lifting	1	N5442
16	Pulley, 2-3/4 OD x 3/4 ID, A-Groove	1	J02931
17	Cap, Plastic, 4"	2	J7559
18	Screw, 1/2 x 2 HHCS	14	J0737
19	Lock Nut, 1/2-13	12	J1042
20	Washer, Lock, 1/2, PLT	19	J1215
21	Nut, Hex, 1/2-13, PLT	19	J1040
22	Screw, 1/2-13, 1.75, PLT, Gr.5, HHCS	16	J0733
23	Chain, #60, 35 Links, 4" Airlock	1	N5429
24	Chain, Link, #60, Connector	1	J1775
25	Belt, AX26	1	J01681
26	Screw, 3/8-16, 1.50, GR5, HHCS	4	J0627
27	Washer, Flat, 3/8, PLT	5	J4447
28	Washer, Lock, 3/8, PLT	4	J1205
29	Bracket, Anchor	2	J23074
30	Screw, 5/16-18, 1 PLT, GR5, HHCS	2	J0527
31	Washer, Lock, 5/16, PLT, Split	6	J1200
32	Nut, Hex, 5/16-18, PLT	6	J1002
33	Pin, Picker, 1/4 x 1-1/2	2	J15443
34	Pin, Cotter, 3/32 x 1/2"	2	J1423
35	Latch, Strap Rubber	2	J23073
36	Plate, Motor Adjust Weldment	1	N5453
37	Bolt, 5/16-18, 1", Carriage	4	J0535
38	Washer, Flat, 5/16	4	J1111
39	Bolt, 3/8-16 x 4", PLTD, GR5 Full Thread	1	J0682
40	Plate, 4", Airlock Cover	1	N5443
41	Screw, 5/16-18 x 1/2, GR5	4	J0518
42	Plate, Top, 4" Weldment	1	N5468
43	Screw, 1/4-20-7/8", GR5	4	J0512
44	Nut, Lock, 1/4-20, PLT	4	J0992
45	Plate, Top, 4" Weldment	1	N5486
46	Wiper, 4" Airlock Vane	1	N5487
47	Stand, Huckbolt Assembly, Airlock	1	N5479
48	Skid, Leg Weldment	2	N5477

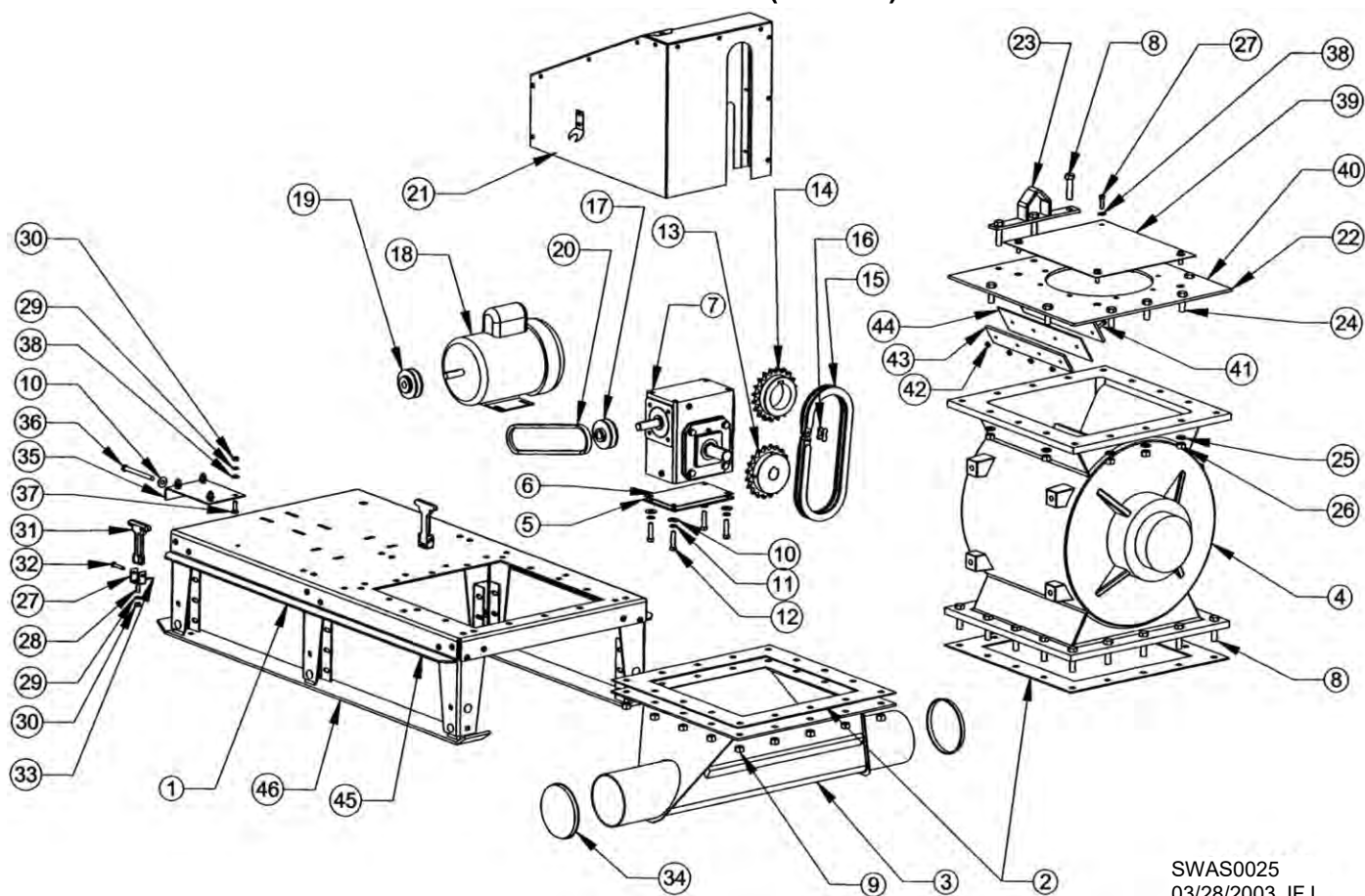
4" SUTORBILT BLOWER ASSEMBLY (N5121)



4' SUTORBILT BLOWER ASSEMBLY - N5121

REF. #	DESCRIPTION	10HP 1ph			10HP 3ph			15HP 1ph			15HP 3ph			20HP 1ph			20HP 3ph		
		QTY	COMP. #	QTY	COMP. #	QTY	COMP. #	QTY	COMP. #	QTY	COMP. #	QTY	COMP. #	QTY	COMP. #	QTY	COMP. #	QTY	COMP. #
1	Stand Assembly W/Skide-4" & 5" Blowers	1	N5475	1	N5475	1	N5475	1	N5475	1	N5475	1	N5475	1	N5475	1	N5475	1	N5475
2	Blower, PD Sutorbilt 5M	1	J7502	1	J7502	1	J7502	1	J7502	1	J7502	1	J7502	1	J7502	1	J7502	1	J7502
3	Support Weldment, Sutorbilt Blower	1	N5473	1	N5473	1	N5473	1	N5473	1	N5473	1	N5473	1	N5473	1	N5473	1	N5473
4	Weldment, Sutorbilt Blower	1	N5432	1	N5432	1	N5432	1	N5432	1	N5432	1	N5432	1	N5432	1	N5432	1	N5432
5	Outlet Assembly, 4" Blower	1	N5421	1	N5421	1	N5421	1	N5421	1	N5421	1	N5421	1	N5421	1	N5421	1	N5421
6	Shield, 4" & 5" Blower	1	N5467	1	N5467	1	N5467	1	N5467	1	N5467	1	N5467	1	N5467	1	N5467	1	N5467
7a	Motor Mount Angle	2	N5416	2	N5416	2	N5416	2	N5416	2	N5416	2	N5416	2	N5416	2	N5416	2	N5416
7b	Motor Mount, Nut Retainer, Angle	2	N5416-01	2	N5416-01	2	N5416-01	2	N5416-01	2	N5416-01	2	N5416-01	2	N5416-01	2	N5416-01	2	N5416-01
7c	Nut, Hex, 5/8"-11, PLT, Gr. 5	4	J1046	4	J1046	4	J1046	4	J1046	4	J1046	4	J1046	4	J1046	4	J1046	4	J1046
8	Weldment, Blower Motor Mount	1	N5415	1	N5415	1	N5415	1	N5415	1	N5415	1	N5415	1	N5415	1	N5415	1	N5415
9	Sutorbilt Intake Trans.	1	N5535	1	N5535	1	N5535	1	N5535	1	N5535	1	N5535	1	N5535	1	N5535	1	N5535
10	Screw, 3/8" - 16, 1, PLT	16	J0606	16	J0606	16	J0606	16	J0606	16	J0606	16	J0606	16	J0606	16	J0606	16	J0606
11	Washer, Lock, 3/8, PLT	16	J1205	16	J1205	16	J1205	16	J1205	16	J1205	16	J1205	16	J1205	16	J1205	16	J1205
12	Nut Hex, 3/8" - 16, PLT	16	J1020	16	J1020	16	J1020	16	J1020	16	J1020	16	J1020	16	J1020	16	J1020	16	J1020
13	Fitting 1/4" Hose Barb 1/4 MNPT	1	J7550	1	J7550	1	J7550	1	J7550	1	J7550	1	J7550	1	J7550	1	J7550	1	J7550
14	Screw, 5/16 - 18, 1, PLT, Gr. 5, HHCS	6	J0527	6	J0527	6	J0527	6	J0527	6	J0527	6	J0527	6	J0527	6	J0527	6	J0527
15	Washer, Lock, 5/16, PLT, Split	6	J1200	6	J1200	6	J1200	6	J1200	6	J1200	6	J1200	6	J1200	6	J1200	6	J1200
16	Nut Hex, 5/16 - 18, PLT	6	J1002	6	J1002	6	J1002	6	J1002	6	J1002	6	J1002	6	J1002	6	J1002	6	J1002
17	Cap, Plastic, 5"	1	J7557	1	J7557	1	J7557	1	J7557	1	J7557	1	J7557	1	J7557	1	J7557	1	J7557
18	Cap, Plastic, 4"	1	J7559	1	J7559	1	J7559	1	J7559	1	J7559	1	J7559	1	J7559	1	J7559	1	J7559
19	Screw, 1/2-13, 1.25, PLT	8	J0728	8	J0728	8	J0728	8	J0728	8	J0728	8	J0728	8	J0728	8	J0728	8	J0728
20	Washer, Lock, 1/2", PLT	4	J1215	4	J1215	4	J1215	4	J1215	4	J1215	4	J1215	4	J1215	4	J1215	4	J1215
21	Nut, Hex, 1/2-13, PLT	4	J1040	4	J1040	4	J1040	4	J1040	4	J1040	4	J1040	4	J1040	4	J1040	4	J1040
22	Washer, Flat, 5/8"	4	J1127	4	J1127	4	J1127	4	J1127	4	J1127	4	J1127	4	J1127	4	J1127	4	J1127
23	Screw, 5/8-11 x 1.5	4	J0781	4	J0781	4	J0781	4	J0781	4	J0781	4	J0781	4	J0781	4	J0781	4	J0781
24	Bolt, Mtr Tightener, Huckbolt Assembly	1	N5417	1	N5417	1	N5417	1	N5417	1	N5417	1	N5417	1	N5417	1	N5417	1	N5417
25	Bolt, Weldment, Motor Tightener	1	N5418	1	N5418	1	N5418	1	N5418	1	N5418	1	N5418	1	N5418	1	N5418	1	N5418
26	Washer, Flat, 3/8, PLT	4	J1117	4	J1117	4	J1117	4	J1117	4	J1117	4	J1117	4	J1117	4	J1117	4	J1117
27	Valve, Gate, 1-1/2" NPT	1	J7552	1	J7552	1	J7552	1	J7552	1	J7552	1	J7552	1	J7552	1	J7552	1	J7552
28	Pulley, Blower	1	J03494	1	J03494	1	J03494	1	J03494	1	J03494	1	J03494	1	J03494	1	J03494	1	J03494
29	Bushing, Blower	1	J04193	1	J04193	1	J04193	1	J04193	1	J04193	1	J04193	1	J04193	1	J04193	1	J04193
30	Belt, BX67	2	J0244	2	J0244	2	J0244	2	J0244	2	J0244	2	J0244	2	J0244	2	J0244	2	J0244
31	Motor	1	H6300	1	H6310	1	H6035	1	H6035	1	H6110	1	H6110	1	H6750	1	H6610	1	H6610
32	Pulley, Motor	1	J0358	1	J0358	1	J0358	1	J0358	1	J0358	1	J0358	1	J0358	1	J0358	1	J0358
33	Bushing, Motor	1	J04287	1	J04287	1	J04287	1	J04287	1	J04287	1	J04287	1	J04287	1	J04287	1	J04287
34	Filter Restriction Gauge	1	J7533	1	J7533	1	J7533	1	J7533	1	J7533	1	J7533	1	J7533	1	J7533	1	J7533
35	Coupler Compression	1	J7522	1	J7522	1	J7522	1	J7522	1	J7522	1	J7522	1	J7522	1	J7522	1	J7522
36	Tube Weldment, Airfilter Extension Prior 2005	1	N55291	1	N55291	1	N55291	1	N55291	1	N55291	1	N55291	1	N55291	1	N55291	1	N55291
37	Tube Weldment, Airfilter Extension 2005 & After	1	N55295	1	N55295	1	N55295	1	N55295	1	N55295	1	N55295	1	N55295	1	N55295	1	N55295
38	Filter Element, CCF6, Replacement Prior 2005	1	J7527	1	J7527	1	J7527	1	J7527	1	J7527	1	J7527	1	J7527	1	J7527	1	J7527
39	Filter Element, Solberg #244 2005 & After	1	J7582	1	J7582	1	J7582	1	J7582	1	J7582	1	J7582	1	J7582	1	J7582	1	J7582
40	Prefilter Sleeve, CCF 6 Filter, Prior 2005	1	J7526	1	J7526	1	J7526	1	J7526	1	J7526	1	J7526	1	J7526	1	J7526	1	J7526
41	Prefilter Sleeve, Solberg PF244 2005 & After	1	J7583	1	J7583	1	J7583	1	J7583	1	J7583	1	J7583	1	J7583	1	J7583	1	J7583
42	Filter w/Sleeve includes J7583 + J7582 2005 & After	1	J7584	1	J7584	1	J7584	1	J7584	1	J7584	1	J7584	1	J7584	1	J7584	1	J7584
43	Hood, Air Filter (Green) Prior 2005	1	N5350	1	N5350	1	N5350	1	N5350	1	N5350	1	N5350	1	N5350	1	N5350	1	N5350
44	Hood, Solberg Filter, Painted 2005 & Later	1	N53501	1	N53501	1	N53501	1	N53501	1	N53501	1	N53501	1	N53501	1	N53501	1	N53501
45	Hood, Air Filter (Green)	1	N5350	1	N5350	1	N5350	1	N5350	1	N5350	1	N5350	1	N5350	1	N5350	1	N5350
46	Washer, Neoprene, 3/8"	1	J1116	1	J1116	1	J1116	1	J1116	1	J1116	1	J1116	1	J1116	1	J1116	1	J1116
47	Nut, Wing, 3/8" - 16 PLT	1	J1022	1	J1022	1	J1022	1	J1022	1	J1022	1	J1022	1	J1022	1	J1022	1	J1022
48	Hose, Air, 1/4" ID	1	J7548	1	J7548	1	J7548	1	J7548	1	J7548	1	J7548	1	J7548	1	J7548	1	J7548
49	Lock Nut, 1/2 - 13	4	J1042	4	J1042	4	J1042	4	J1042	4	J1042	4	J1042	4	J1042	4	J1042	4	J1042
50	Outlet, 4" Blower Weldment	1	N5422	1	N5422	1	N5422	1	N5422	1	N5422	1	N5422	1	N5422	1	N5422	1	N5422
51	Screw, 1/4-20 x 5, PLT, Gr. 5	1	J05141	1	J05141	1	J05141	1	J05141	1	J05141	1	J05141	1	J05141	1	J05141	1	J05141
52	Washer, Shoulder-Nylon	2	J1230	2	J1230	2	J1230	2	J1230	2	J1230	2	J1230	2	J1230	2	J1230	2	J1230
53	Plate, Check Valve Weldment	1	N5423	1	N5423	1	N5423	1	N5423	1	N5423	1	N5423	1	N5423	1	N5423	1	N5423
54	Nut Lock, 1/4 - 20, PLT	1	J0992	1	J0992	1	J0992	1	J0992	1	J0992	1	J0992	1	J0992	1	J0992	1	J0992

5" AIRLOCK ASSY. (N51051)

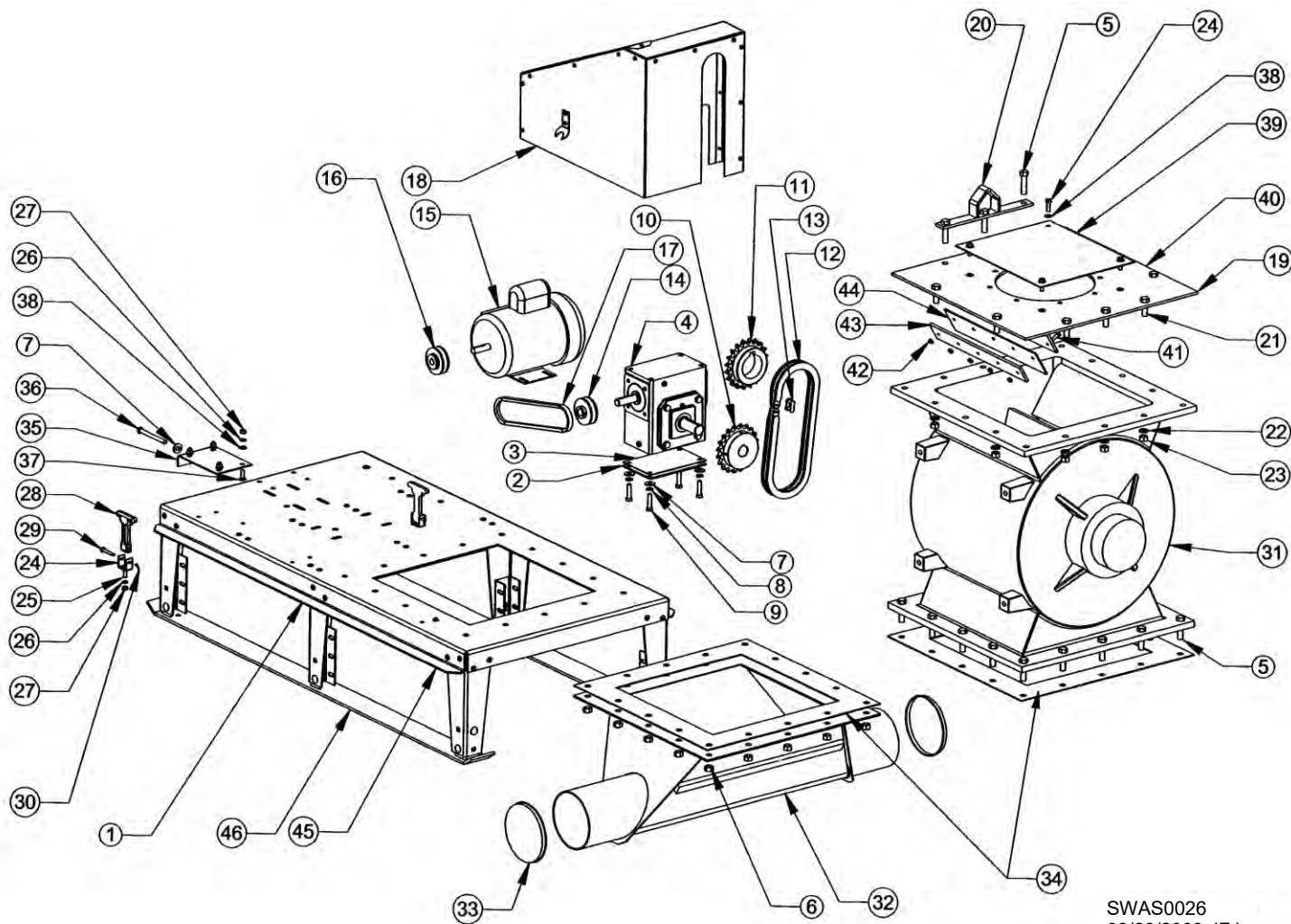


SWAS0025
03/28/2003 JFJ

5" AIRLOCK ASSY. (N51051)

REF. #	DESCRIPTION	QTY.	PART #
1	Stand Assembly W/Skids - 4" & 5"	1	N5478
2	Gasket, 14", Airlock Meyer	2	J7513
3	Transition, 5" Airlock, Weldment	1	N55401
4	Airlock, 14", Meyer, W/Gasket	1	J7512
5	Spacer, Reducer - Ga. Galvanized	1	N5419
6	Shim, Reducer	1	N54191
7	Gear reducer, 60:1	1	J3679
8	Screw, 1/2 x 2" HHCS	19	J0737
9	Lock Nut, 1/2" - 13	16	J1042
10	Washer, Flat, 3/8, PLT	5	J1117
11	Washer, Lock, 3/8, PLT	4	J1205
12	Screw, 3/8-16, 1.50, GR5, HHCS	4	J0627
13	Sprocket, 60B20, 1.125 Bore	1	J16952
14	Sprocket, 60BS20, Q1	1	J16951
15	Chain, #60, 30 links, 5" Airlock	1	N5430
16	Chain, Link, #60, Connector	1	J1775
17	Pulley, 2-3/4" OD x 3/4" ID, A-Groove	1	J02931
18	Motor, 1HP, 1ph, Auger, 1750RPM	1	H1100
19	Pulley, 2-3/4" OD x 5/8" Bore (for 20HP)	1	J0293
19	Pulley, 3-3/4" OD x 5/8" Bore (for 30 & 40 HP)	1	J0322
20	Belt, AX26	1	J01681
21	Shield, Airlock	1	N5569
22	Top Shear Plate & Cover	1	N5598
23	Lifting Weldment,	1	N5549
24	Screw, 1/2-13, 1.75, PLT, Gr.5, HHCS	7	J0733
25	Washer, Lock, 1/2, PLT	10	J1215
26	Nut, Hex, 1/2-13, PLT	10	J1040
27	Bracket, Anchor	2	J23074
28	Screw, 5/16-18, 1, PLT, GR5, HHCS	2	J0527
29	Washer, Lock, 5/16, PLT, Split	6	J1200
30	Nut, Hex, 5/16-18, PLT	6	J1002
31	Latch, Strap Rubber	2	J23073
32	Picker Pin, 1/4 x 1-1/2"	2	J15443
33	Cotter Pin, 3/32 x 1/2"	2	J1423
34	Cap, Plastic 5"	2	J7557
35	Plate, Motor Adjust Weldment	1	N5453
36	Bolt, 3/8"-16 X 4", PLTD, GR5 Full Thread	1	J0682
37	Bolt, 5/16-18, 1" Carriage	4	J0535
38	Washer, Flat, 5/16"	4	J1111
39	Plate, Cover	1	N5588
40	Vane Wiper Weldment, 5"	1	N5568
41	Screw, 1/4 - 20 x 1, PLT	4	J0508
42	Nut, 1/4-20, Lock, PLT	4	J0992
43	Wiper Holder	1	N5586
44	Vane Wiper	1	N5587
45	Stand, Huckbolt Assembly	1	N5479
46	Skid, Leg Weldment	1	N5477

6" AIRLOCK ASSY. (N5605)



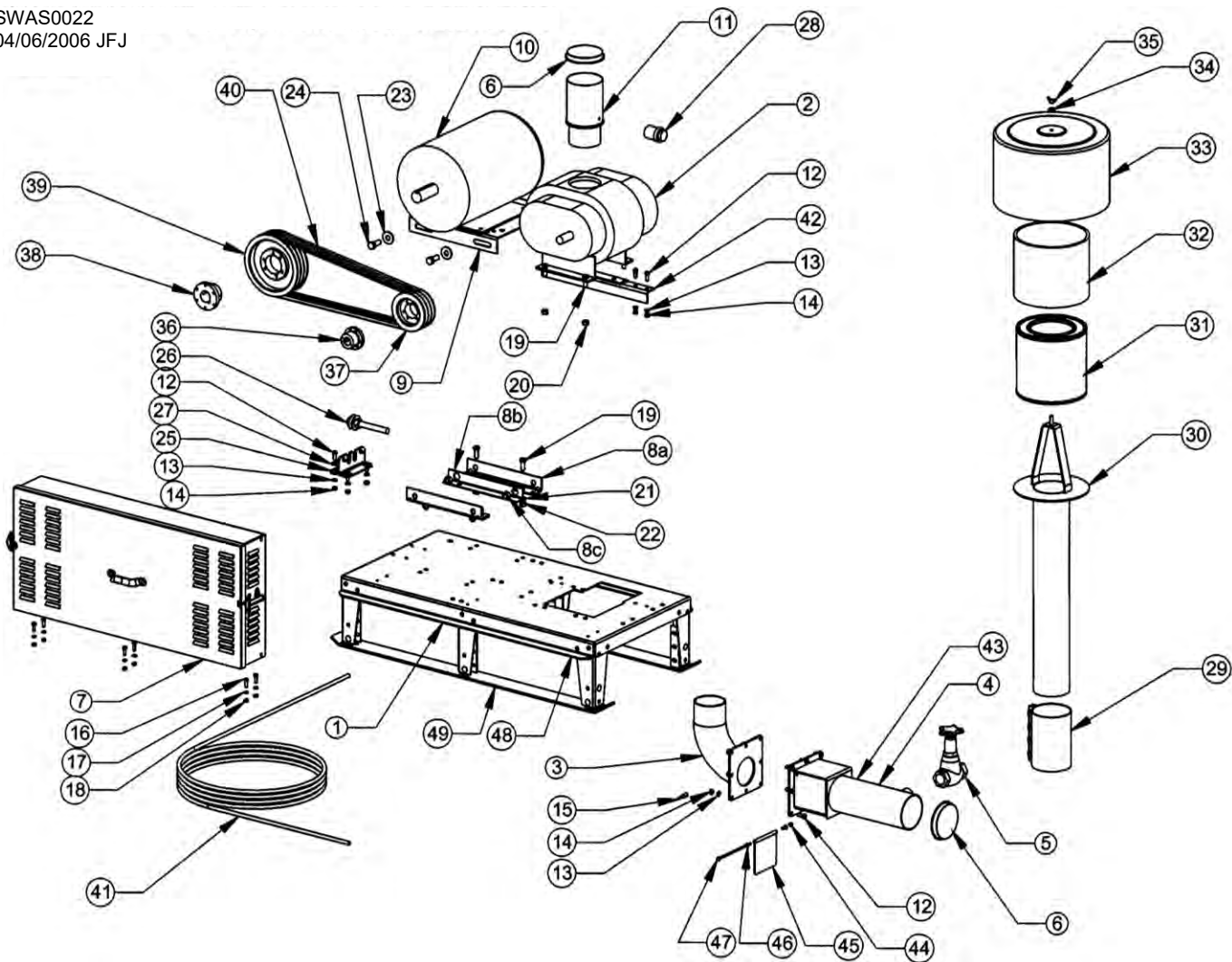
SWAS0026
03/28/2003 JFJ

6" AIRLOCK ASSY. (N5605)

REF. #	DESCRIPTION	QTY.	PART #
1	Stand Assembly W/Skids - 6"	1	N5650
2	Spacer, Reducer - 7 Ga. Galvanized	1	N5419
3	Shim, Reducer	1	N54191
4	Gear reducer, 60:1	1	J3679
5	Screw, 1/2 x 2 HHCS	19	J0737
6	Lock Nut, 1/2" - 13	16	J1042
7	Washer, Flat, 3/8, PLT	5	J1117
8	Washer, Lock, 3/8", PLT	4	J1205
9	Screw, 3/8 - 16, 1.50, GR5, HHCS	4	J0627
10	Sprocket, 60B20, 1.125 Bore	1	J16952
11	Sprocket 60BS20, Q1	1	J16951
12	Chain, #60, 43 Links, 6" Airlock	1	N5628
13	Chain, Link, #60, Connector	1	J1775
14	Pulley, 2-3/4 OD x 3/4 ID, A-Groove	1	J02931
15	Motor, 1HP, 1P, Auger 1750 RPM	1	H1100
16	Pulley, 2-3/4" OD x 5/8" Bore (For 40 & 50 HP)	1	J0293
16	Pulley, 3-3/4" OD x 5/8 Bore (For 60 & 75 HP)	1	J0322
17	Belt, AX 26	1	J01681
18	Shield, Airlock	1	N5569
19	Plate, 6" Top Shear & Cover Assembly	1	N5670
20	Lifting Weldment, 6" Airlock	1	N5649
21	Screw, 1/2-13, 1.75, PLT, Gr.5, HHCS	7	J0733
22	Washer, Lock, 1/2", PLT	10	J1215
23	Nut, Hex, 1/2-13, PLT	10	J1040
24	Bracket, Anchor	2	J23074
25	Screw, 5/16-18, 1, PLT, GR5. HHCS	2	J0527
26	Washer, Lock, 5/16, PLT, Split	6	J1200
27	Nut, Hex, 5/16-18, PLT	6	J1002
28	Latch, Strap Rubber	2	J23073
29	Pin, Picker, 1/4 x 1-3/4"	2	J1450
30	Pin, Cotter, 3/32 x 1/2"	2	J1423
31	Airlock, 16", Meyer, W/ Gasket	1	J7510
32	Transition, 6" Airlock Weldment	1	N5640
33	Cap, Plastic, 6"	2	J7561
34	Gasket, 16" Airlock	2	J7511
35	Plate, Motor Adjust Weldment	1	N5453
36	Bolt, 3/8-16 x 4", PLTD, GR5 Full Thread	1	J0682
37	Bolt, 5/16-18, 1", Carriage	4	J0535
38	Washer, Flat, 5/16"	4	J1111
39	Plate, Cover	1	N5588
40	Van Wiper Weldment	1	N5668
41	Screw, 1/4-20 x 1, PLT	5	J0508
42	Nut, 1/4 - 20 Lock, PLT	5	J0992
43	Bar, 6" Airlock Wiper Supt.	1	N5658
44	Vane Wiper, 6" Airlock	1	N5687
45	Stand, 6" Huckbolt Assembly	1	N5651
46	Skid, Leg Weldment	2	N5452

5" SUTORBILT BLOWER ASSY. (N51202 & N51203)

SWAS0022
04/06/2006 JFJ



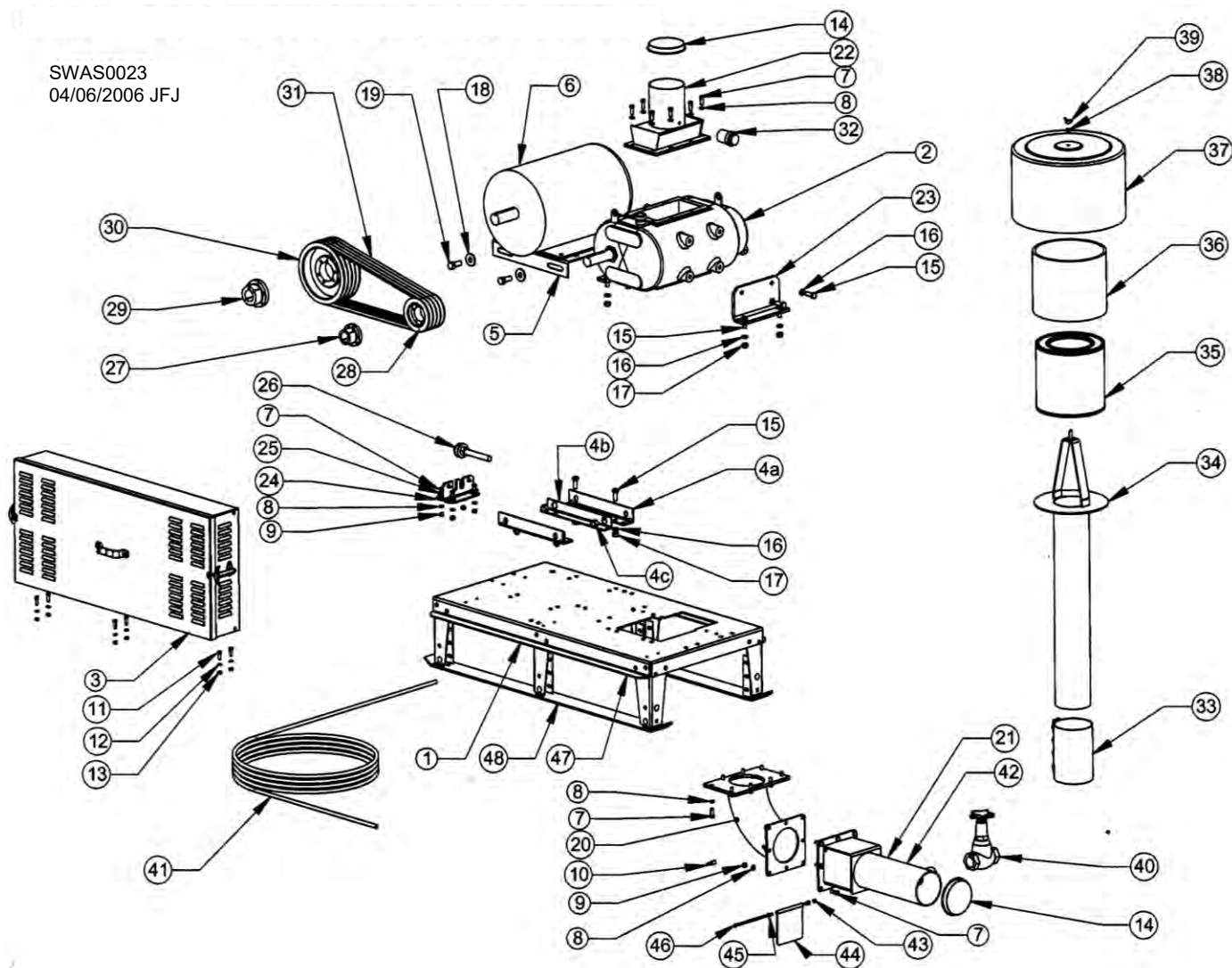
Parts Assemblies

5" SUTORBILT BLOWER ASSY. (N51202 & N51203)

REF. #	DESCRIPTION	20HP 1ph		20HP 3ph		30HP 3ph	
		QTY.	PART #	QTY.	PART #	QTY.	PART #
1	Stand Assembly W/Skids - 4" & 5" Blowers	1	N5475	1	N5475	1	N5475
2	Blower, PD, Sutorbilt 5M	1	J70502	1	J70502	1	J7502
3	Elbow, 5" Blower Weldment	1	N55321	1	N55321	1	N55321
4	Outlet, 5" Blower Assembly	1	N55211	1	N55211	1	N55211
5	Valve Gate, 1-1/2" NPT	1	J7552	1	J7552	1	J7552
6	Cap, Plastic, 5"	2	J7557	2	J7557	2	J7557
7	Shield, 4" & 5" Blower	1	N5467	1	N5467	1	N5467
8a	Motor Mount Angle	2	N5416	2	N5416	4	N5416
8b	Motor Mount, Nut Retainer, Angle	2	N5416-01	2	N5416-01	2	N5416-01
8c	Nut, Hex 5/8 - 11 PLT, GR5	4	J1046	4	J1046	4	J1046
9	Weldment, Blower Motor Mt	1	N5415	1	N5415	1	N5415
10	Motor	1	H6750	1	H6610	1	H7126
11	Sutorbilt Intake Trans.	1	N5535	1	N5535	1	N5535
12	Screw, 3/8-16, 1, PLT	16	J0606	16	J0606	16	J0606
13	Washer, Lock, 3/8, PLT	16	J1205	16	J1205	16	J1205
14	Nut, Hex, 3/8-16, PLT	16	J1020	16	J1020	16	J1020
15	Fitting 1/4" Hose Barb 1/4 MNPT	1	J7550	1	J7550	1	J7550
16	Screw, 5/16-18, 1, PLT, GR5 HHCS	6	J0527	6	J0527	6	J0527
17	Washer, Lock, 5/16", PLT, Split	6	J1200	6	J1200	6	J1200
18	Nut, Hex, 5/16-18, PLT	6	J1002	6	J1002	6	J1002
19	Screw, 1/2-13, 1.25, PLT	8	J0728	8	J0728	8	J0728
20	Lock Nut, 1/2"-13	4	J1042	4	J1042	4	J1042
21	Washer, Lock, 1/2", PLT	4	J1215	4	J1215	4	J1215
22	Nut, Hex, 1/2-13, PLT	4	J1040	4	J1040	4	J1040
23	Washer, Flat, 5/8"	4	J1127	4	J1127	4	J1127
24	Screw, 5/8-11 x 1.5	4	J0781	4	J0781	4	J0781
25	Brkt, Motor Tightener, Huckbolt Assembly	1	N5417	1	N5417	1	N5417
26	Bolt Weldment, Motor Tightener	1	M5418	1	M5418	1	M5418
27	Washer, Flat, 3/8", PLT	4	J1117	4	J1117	4	J1117
28	Filter Restriction Gauge	1	J7533	1	J7533	1	J7533
29	Coupler, Compression, 5", 4BH	1	J7522	1	J7522	1	J7522
30	Tube Weldment, Airfilter Extension Prior 2005	1	N55291	1	N55291	1	N55291
	Tube Weldment, Airfilter Extension 2005 & After	1	N55295	1	N55295	1	N55295
31	Filter Element, CCF6, Replacement Prior 2005	1	J7527	1	J7527	1	J7527
	Filter Element, Solberg #244 2005 & After	1	J7582	1	J7582	1	J7582
32	Prefilter Sleeve, CCF 6 Filter, Universal Prior 2005	1	J7526	1	J7526	1	J7526
	Prefilter Sleeve, Solberg PF244 2005 & After	1	J7583	1	J7583	1	J7583
	Filter w/Sleeve includes J7583 + J7582 2005 & After	1	J7584	1	J7584	1	J7584
33	Hood, Air Filter (Green) Prior 2005	1	N5350	1	N5350	1	N5350
	Hood, Solberg Filter, Painted 2005 & Later	1	N53501	1	N53501	1	N53501
34	Washer, Neoprene, 3/8"	1	J1116	1	J1116	1	J1116
35	Nut, Wing, 3/8-16PLT	1	J1022	1	J1022	1	J1022
36	Bushing, Blower	1	J04191	1	J04191	1	J04191
37	Pulley - Blower	1	J03396	1	J03396	1	J03399
38	Bushing, Motor	1	J04285	1	J04286	1	J04285
39	Pulley, Motor	1	J0358	1	J0358	1	J0356
40	Belt, BX67	2	J0244	2	J0244	3	J0244
41	Hose, Air, 1/4" ID	1	J7548	1	J7548	1	J7548
42	Support Weldment, Sutorbilt Blower	1	N5473	1	N5473	1	N5473
43	Outlet 5" Blower Weldment	1	N55221	1	N55221	1	N55221
44	Nut, 1/4-20, Lock, PLT	1	J0992	1	J0992	1	J0992
45	Plate, Check Valve Weldment	1	N55231	1	N55231	1	N55231
46	Washer, Shoulder, Nylon	2	J1230	2	J1230	2	J1230
47	Screw, 1/4-20 x 6, PLT	1	J05142	1	J05142	1	J05142
48	Stand, Huckbolt Assembly, Blower	1	N5476	1	N5476	1	N5476
49	Skid, Leg Weldment	2	N5477	2	N5477	2	N5477

5" DUROFLOW BLOWER ASSY. (N51252, N51253 & N51254)

SWAS0023
04/06/2006 JFJ



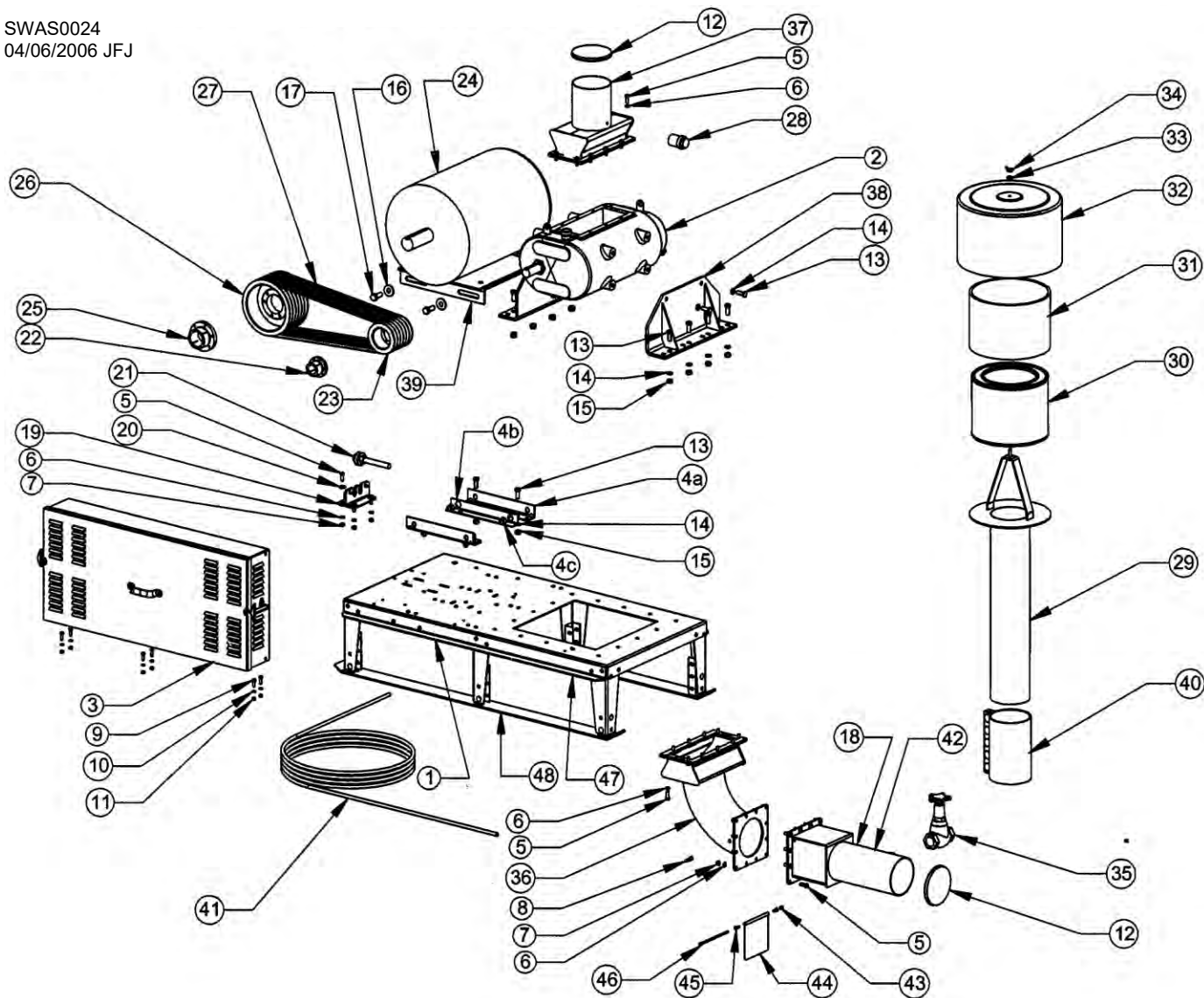
Parts Assemblies

5" DUROFLOW BLOWER ASSY. – N51252, N51253 & N51254

REF. #	DESCRIPTION	20HP 1ph		20HP 3ph		30HP 3ph		40HP 3ph	
		QTY	PART #	QTY	PART #	QTY	PART #	QTY	PART #
1	Stand Assembly W/Skids - 4" & 5" Blowers	1	N5475	1	N5475	1	N5475	1	N5475
2	Blower, PD, Duroflow, 4509	1	J7500	1	J7500	1	J7500	1	J7500
3	Shield, 4" & 5" Blower	1	N5467	1	N5467	1	N5467	1	N5467
4a	Motor Mount, Angle	2	N5416	2	N5416	2	N5516	2	N5516
4b	Motor Mount, Nut Retainer, Angle	2	N5416-01	2	N5416-01	2	N5416-01	2	N5416-01
4c	Nut, Hex, 5/8" - 11, PLT, GR5	4	J1046	4	J1046	4	J1046	4	J1046
5	Weldment, Blower, Motor MT	1	N5415	1	N5415	1	N5415	1	N5415
6	Motor, 30 HP	1	H6750	1	H6610	1	H7126	1	H7200
7	Screw, 3/8 - 16, 1, PLT	28	J0606	28	J0606	28	J0606	28	J0606
8	Washer, Lock, 3/8, PLT	28	J1205	28	J1205	28	J1205	28	J1205
9	Nut, Hex, 3/8-16, PLT	12	J1020	12	J1020	12	J1020	12	J1020
10	Fitting 1/4" Hose Barb 1/4 MNPT	1	J7550	1	J7550	1	J7550	1	J7550
11	Screw, 5/16-18, 1, PLT GR5, HHCS	6	J0527	6	J0527	6	J0527	6	J0527
12	Washer, Lock, 5/16, PLT, Split	6	J1200	6	J1200	6	J1200	6	J1200
13	Nut, Hex, 5/16-18, PLT	6	J1002	6	J1002	6	J1002	6	J1002
14	Cap, Plastic, 5"	2	J7557	2	J7557	2	J7557	2	J7557
15	Screw, 1/2-13, 1.25, PLT	12	J0728	12	J0728	12	J0728	12	J0728
16	Washer, Lock, 1/2, PLT	12	J1215	12	J1215	12	J1215	12	J1215
17	Nut, Hex, 1/2-13, PLT	8	J1040	8	J1040	8	J1040	8	J1040
18	Washer, Flat, 5/8"	4	J1127	4	J1127	4	J1127	4	J1127
19	Screw, 5/8 - 11 x 1.5	4	J0781	4	J0781	4	J0781	4	J0781
20	Elbow, 4509 Blower Weldment	1	N55311	1	N55311	1	N55311	1	N55311
21	Outlet, 5" Blower Assembly	1	N55211	1	N55211	1	N55211	1	N55211
22	Intake Transition, Duroflow	1	N5533	1	N5533	1	N5533	1	N5533
23	Support, 4509 Duroflow Blower	2	N55081	2	N55081	2	N55081	2	N55081
24	Brkt, Mtr Tightener, Huckbolt Assembly	1	N5417	1	N5417	1	N5417	1	N5417
25	Washer, Flat, 3/8, PLT	4	J1117	4	J1117	4	J1117	4	J1117
26	Bolt Weldment, Motor Tightener	1	N5418	1	N5418	1	N5418	1	N5418
27	Bushing, Blower	1	J04265	1	J04265	1	J04265	1	J04265
28	Pulley, Blower	1	J03397	1	J03397	1	J03395	1	J03394
29	Bushing, Motor	1	J04285	1	J04286	1	J04285	1	J0432
30	Pulley, Motor	1	J0358	1	J0358	1	J0356	1	J0357
31	Belt, BX57	2	J0236	2	J0236	3	J0236	4	J0236
32	Filter Restriction Gauge	1	J7533	1	J7533	1	J7533	1	J7533
33	Coupler, Compression, 5", 4BH	1	J7522	1	J7522	1	J7522	1	J7522
34	Tube Weldment, Airfilter Extension Prior 2005	1	N55291	1	N55291	1	N55291	1	N55291
	Tube Weldment, Airfilter Extension 2005 & After	1	N55295	1	N55295	1	N55295	1	N55295
35	Filter Element, CCF6, Replacement Prior 2005	1	J7527	1	J7527	1	J7527	1	J7527
	Filter Element, Solberg #244 2005 & After	1	J7582	1	J7582	1	J7582	1	J7582
36	Prefilter Sleeve, CCF 6 Filter, Universal Prior 2005	1	J7526	1	J7526	1	J7526	1	J7526
	Prefilter Sleeve, Solberg PF244 2005 & After	1	J7583	1	J7583	1	J7583	1	J7583
	Filter w/Sleeve includes J7583 + J7582 2005 & After	1	J7584	1	J7584	1	J7584	1	J7584
37	Hood, Air Filter (Green) Prior 2005	1	N5350	1	N5350	1	N5350	1	N5350
	Hood, Solberg Filter, Painted 2005 & Later	1	N53501	1	N53501	1	N53501	1	N53501
38	Washer, Neoprene, 3/8"	1	J1116	1	J1116	1	J1116	1	J1116
39	Nut, Wing, 3/8-16PLT	1	J1022	1	J1022	1	J1022	1	J1022
40	Valve, Gate, 1-1/2"NPT	1	J7552	1	J7552	1	J7552	1	J7552
41	Hose, Air, 1/4"ID	1	J7548	1	J7548	1	J7548	1	J7548
42	Outlet, 5" Blower Weldment	1	N55211	1	N55211	1	N55211	1	N55211
43	Nut, 1/4-20, Lock, PLT	1	J0992	1	J0992	1	J0992	1	J0992
44	Plate, Check Valve Weldment, 5"	1	N55231	1	N55231	1	N55231	1	N55231
45	Washer, Shoulder, Nylon	2	J1230	2	J1230	2	J1230	2	J1230
46	Screw, 1/4-20 x 6", PLT	1	J05142	1	J05142	1	J05142	1	J05142
47	Stand, Huckbolt Assembly, Blower	1	N5476	1	N5476	1	N5476	1	N5476
48	Skid, Leg Weldment	2	N5477	2	N5477	2	N5477	2	N5477

6" DUROFLOW BLOWER ASSY. (N5624, N5625 & N5626)

SWAS0024
04/06/2006 JFJ



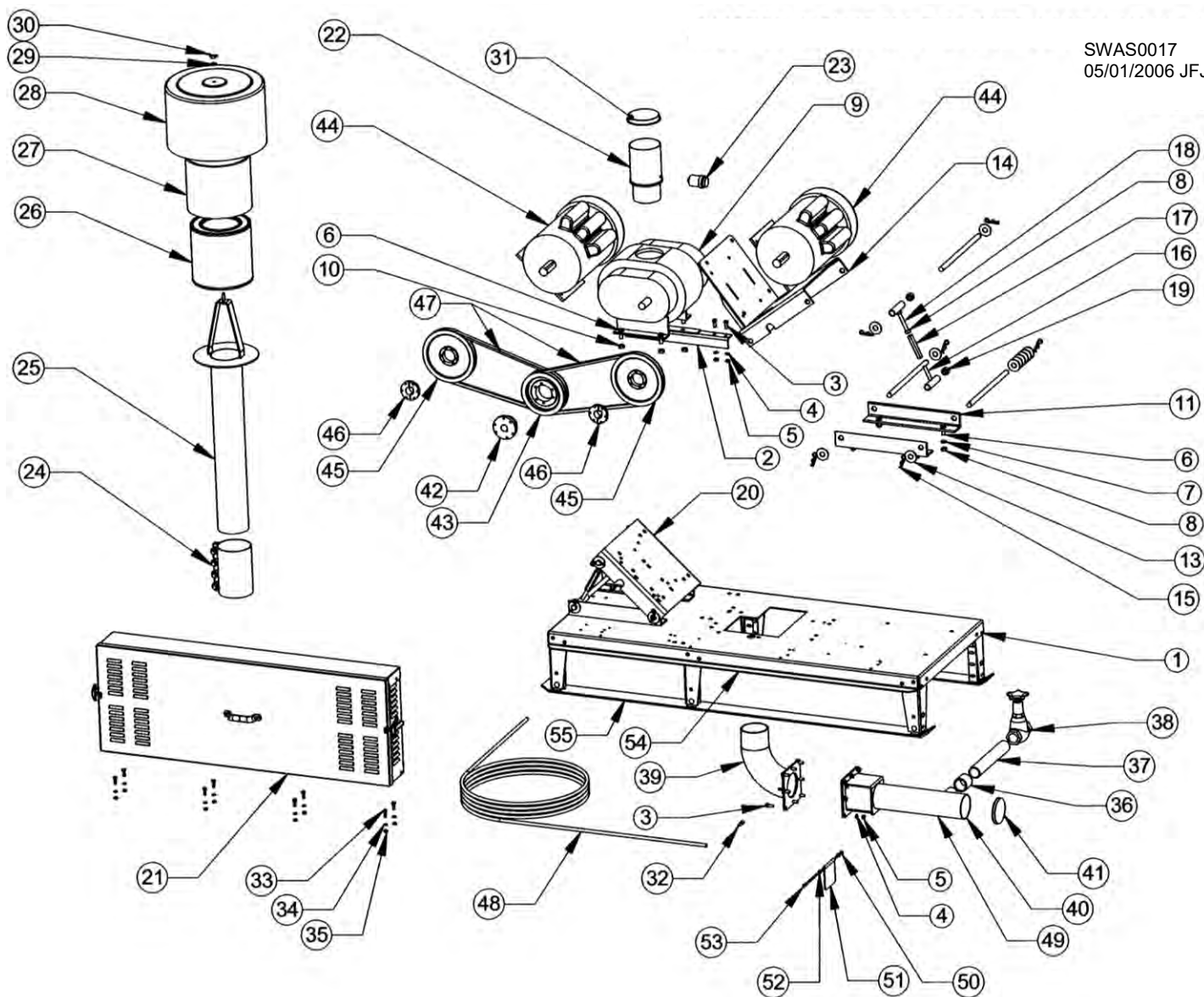
Parts Assemblies

6" DUROFLOW BLOWER ASSY. (N5624, N5625 & N5626)

REF. #	DESCRIPTION	40HP 3ph		50HP 3ph		60HP 3ph		75HP 3ph	
		QTY	PART #	QTY	PART #	QTY	PART #	QTY	PART #
1	Stand Assembly W/ Skids 6"	1	N5650	1	N5650	1	N5650	1	N5650
2	Blower, PD Duroflow, 4512	1	J7504	1	J7504	1	J7504	1	J7504
3	Shield, 4" & 5" Blower	1	N5467	1	N5467	1	N5467	1	N5467
4a	Motor Mount Angle	2	N5416	2	N5416	2	N5416	2	N5416
4b	Motor Mount, Nut Retainer, Angle	2	N5416-01	2	N5416-01	2	N5416-01	2	N5416-01
4c	Nut, Hex, 5/8" - 11 PLT GR5	4	J1046	4	J1046	4	J1046	4	J1046
5	Screw, 3/8-16, 1, PLT	36	J0606	36	J0606	36	J0606	36	J0606
6	Washer, Lock, 3/8, PLT	36	J1205	36	J1205	36	J1205	36	J1205
7	Nut, Hex, 3/8-16, PLT	16	J1020	16	J1020	16	J1020	16	J1020
8	Fitting 1/4" Hose Barb 1/4 MNPT	1	J7550	1	J7550	1	J7550	1	J7550
9	Screw, 5/16-18, 1, PLT, GR5 HHCS	6	J0527	6	J0527	6	J0527	6	J0527
10	Washer, Lock, 5/16, PLT, Split	6	J1200	6	J1200	6	J1200	6	J1200
11	Nut, Hex, 5/16-18, PLT	6	J1002	6	J1002	6	J1002	6	J1002
12	Cap, Plastic, 6"	2	J7561	2	J7561	2	J7561	2	J7561
13	Screw, 1/2-13, 1.25, PLT	16	J0728	16	J0728	16	J0728	16	J0728
14	Washer, Lock, 1/2, PLT	16	J1215	16	J1215	16	J1215	16	J1215
15	Nut, Hex, 1/2-13, PLT	12	J1040	12	J1040	12	J1040	12	J1040
16	Washer, Flat, 5/8"	4	J1127	4	J1127	4	J1127	4	J1127
17	Screw, 5/8-11 x 1.5	4	J0781	4	J0781	4	J0781	4	J0781
18	Outlet, 6" Blower Assembly	1	N5621	1	N5621	1	N5621	1	N5621
19	Brkt, Mtr Tightener, Huckbolt Assembly	1	N5417	1	N5417	1	N5417	1	N5417
20	Washer, Flat, 3/8, PLT	4	J1117	4	J1117	4	J1117	4	J1117
21	Bolt Weldment, Motor Tightener	1	N5418	1	N5418	1	N5418	1	N5418
22	Bushing, Blower	1	J04265	1	J04265	1	J04265	1	J04265
23	Pulley, Blower	1	J03394	1	J03362	1	J03362	1	J03363
24	Motor	1	H7200	1	H7250	1	H7260	1	H7275
25	Bushing, Motor	1	J0432	1	J0433	1	J04331	1	J04331
26	Pulley, Motor	1	J0357	1	J03561	1	J03561	1	J03562
27	Belt, BX63	4	J0239	5	J0239	5	J0239	6	J0239
28	Filter Restriction Gauge	1	J7533	1	J7533	1	J7533	1	J7533
29	Tube Weldment, 6" Airfilter Ext. Prior 2005	1	N5629	1	N5629	1	N5629	1	N5629
	Tube Solberg, Filter Ext Weld. 2005 & Later	1	N56296	1	N56296	1	N56296	1	N56296
30	Filter Element, CCF6, Prior 2005	2	J7527	2	J7527	2	J7527	2	J7527
	Element, Filter, Solberg #274 2005 & Later	1	J7585	1	J7585	1	J7585	1	J7585
31	Prefilter Sleeve, CCF 6 Filter, Prior 2005	2	J7526	2	J7526	2	J7526	2	J7526
	Prefilter Sleeve Solberg PF274, 2005 & Later	1	J7586	1	J7586	1	J7586	1	J7586
	Element Filter W/ Prefilter J7585 +J7586 =	1	J7587	1	J7587	1	J7587	1	J7587
32	Hood, Air Filter (Green) Prior 2005	1	N5630	1	N5630	1	N5630	1	N5630
	Hood, Filter, Painted, Solberg, 2005 & Later	1	N53501	1	N53501	1	N53501	1	N53501
33	Washer, Neoprene, 3/8"	1	J1116	1	J1116	1	J1116	1	J1116
34	Nut, Wing, 3/8 - 16PLT	1	J1022	1	J1022	1	J1022	1	J1022
35	Valve, Gate, 1-1/2" NPT	1	J7552	1	J7552	1	J7552	1	J7552
36	Elbow, 6" Blower Outlet Weldment	1	N5631	1	N5631	1	N5631	1	N5631
37	Inlet Weldment 4512 Blower	1	N5633	1	N5633	1	N5633	1	N5633
38	Support Weldment, 4512 Blower	2	N5608	2	N5608	2	N5608	2	N5608
39	Mount, 40-75 HP Motor, Weldment	1	N5615	1	N5615	1	N5615	1	N5615
40	Coupler, Compression, 6", 5 Bolt	1	J7560	1	J7560	1	J7560	1	J7560
41	Hose, Air, 1/4" ID	1	J7548	1	J7548	1	J7548	1	J7548
42	Outlet 6" Blower Weldment	1	N5622	1	N5622	1	N5622	1	N5622
43	Nut, 1/4-20, Lock, PLT	1	J0992	1	J0992	1	J0992	1	J0992
44	Plate, Check Valve Weldment	1	N5623	1	N5623	1	N5623	1	N5623
45	Washer, Shoulder, Nylon	2	J1230	2	J1230	2	J1230	2	J1230
46	Screw, 1/4-20 x 7, PLT	1	J05143	1	J05143	1	J05143	1	J05143
47	Stand, Huckbolt Assembly, 6"	1	N5651	1	N5651	1	N5651	1	N5651
48	Skid, Leg Weldment	2	N5452	2	N5452	2	N5452	2	N5452

2-MOTOR, 4" SUTORBILT BLOWER ASSY. (N51411)

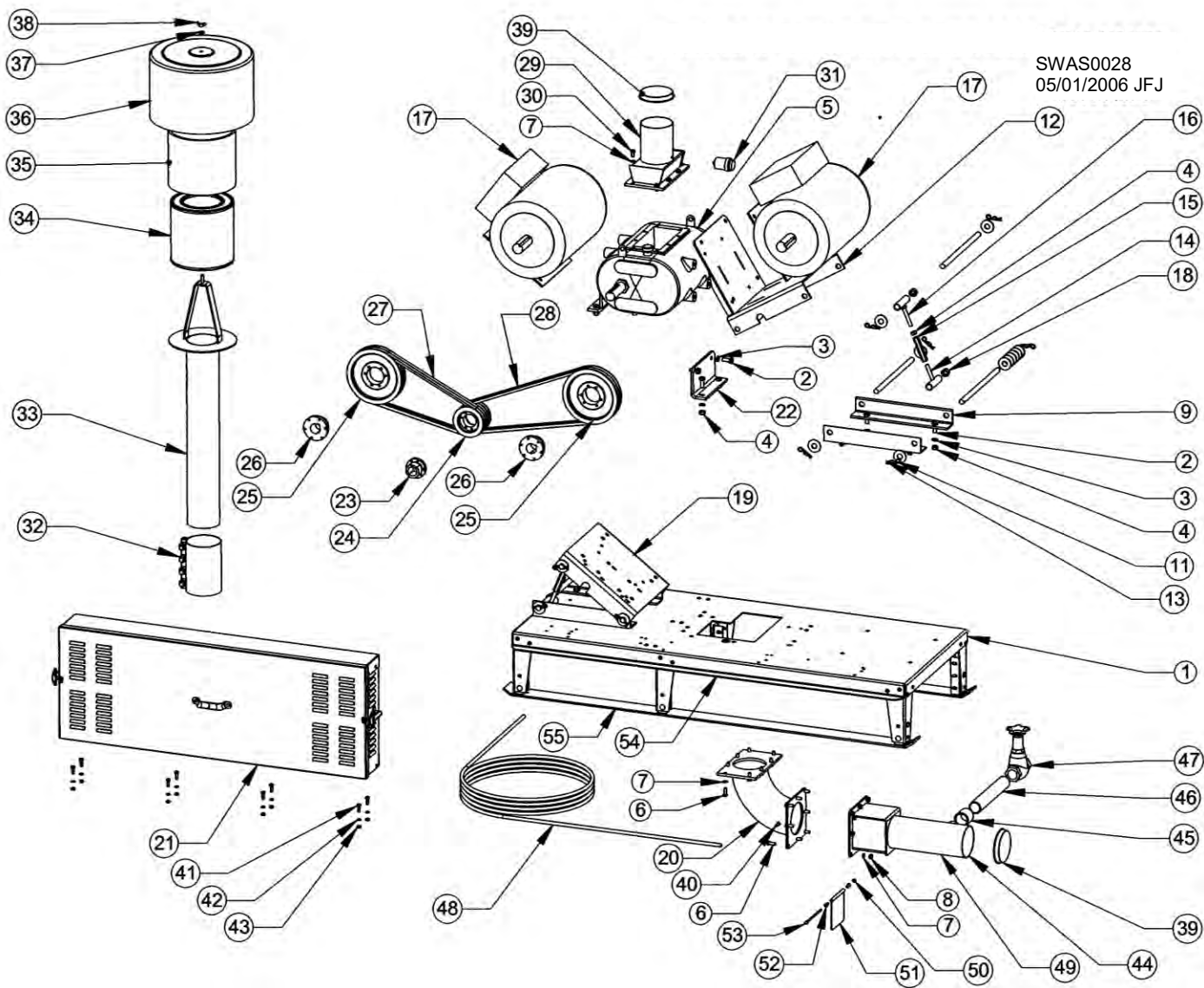
SWAS0017
05/01/2006 JFJ



2-MOTOR, 4" SUTORBILT BLOWER ASSY. (N51411)

REF. #	DESCRIPTION	QTY.	PART #
1	Stand, 2 Mtr Huckbolt Assembly W/Skids	1	N5481
2	Support Weldment, Sutorbilt Blower	1	N54801
3	Screw, 3/8-16, 1, PLT	10	J0606
4	Washer, Lock, 3/8, PLT	10	J1205
5	Nut, Hex, 3/8-16, PLT	10	J1020
6	Screw, 1/2-13, 1.25, PLT	13	J0728
7	Washer, Lock, 1/2, PLT	9	J1215
8	Net, Hex, 1/2-13, PLT	11	J1040
9	Blower, PD, Sutorbilt 5M	1	J7502
10	Nut, Lock, 1/2-13	4	J1042
11	Motor Mount Angle	4	N5581
12	Pivot Rod, Large, Plated	6	E57441
13	Washer Flat, 3/4"	22	J1130
14	Motor, Mount, Weldment - 2 Motor	1	N5150
15	Clip, Hair Pin, .120 x 2.50, 107 - 2--0	12	J5412
16	Pin Tube Weldment, LH	2	S7187
17	Nut, Coupling, 1/2" - 13, 4", RH/LH	2	J1037
18	Pin Tube Weldment, RD	2	S7185
19	Collar, Shaft, 3/4"	4	J1327
20	Motor Mount, Large, Hinge, New	1	E5765
21	Shield Assembly	1	N5585
22	Sutorbilt Intake Trans.	1	N5535
23	Filter Restriction Gauge	1	J7533
24	Coupler, Compression, 5", 4BH	1	J7522
25	Tube Weldment, Airfilter Extension Prior 2005	1	N55291
	Tube Weldment, Airfilter Extension 2005 & After	1	N55295
26	Filter Element, CCF6, Replacement Prior 2005	1	J7527
	Filter Element, Solberg #244 2005 & After	1	J7582
27	Prefilter Sleeve, CCF 6 Filter, Universal Prior 2005	1	J7526
	Prefilter Sleeve, Solberg PF244 2005 & After	1	J7583
	Filter w/Sleeve includes J7583 + J7582 2005 & After	1	J7584
28	Hood, Air Filter (Green) Prior 2005	1	N5350
	Hood, Solberg Filter, Painted 2005 & Later	1	N53501
29	Washer, Neoprene, 3/8"	1	J1116
30	Nut, Wing, 3/8 - 16 PLT	1	J1022
31	Cap, Plastic, 5"	1	J7557
32	Fitting 1/4", Hose Barb 1/4 MNPT	1	J7550
33	Screw, 5/16-18, 1, PLT, GR5, HHCS	8	J0527
34	Washer, Lock, 5/16, PLT, Split	8	J1200
35	Nut, Hex, 5/16-18, PLT	8	J1002
36	Coupling, 1-1/2" Galvanized Pipe	1	J2678
37	Nipple, 1.5 x 12", Sch40, Galvanized	1	J2439
38	Valve, Gate, 1-1/2" NPT	1	J7552
39	Weldment, Sutorbilt Blower Elbow	1	N5432
40	Outlet Assembly, 4" Blower	1	N5421
41	Cap, Plastic, 4"	1	J7559
42	Bushing, 1-1/8", SK	1	J04193
43	Pulley, 7.35OD, 2B70SK	1	J03494
44	Motor, 10HP, 1ph	2	H5300
45	Pulley, 8.95 OD, 1B86SDS	2	J0359
46	Bushing, 1-3/8", SDS	2	J04241
47	Belt, BX57	2	J0236
48	Hose, Air, 1/4" ID	1	J7548
49	Outlet, 4" Blower Weldment	1	N5422
50	Nut, Lock, 1/4-20, PLT	1	J0992
51	Plate, Check Valve Weldment	2	N5423
52	Washer-Shoulder Nylon	1	J1230
53	Screw, 1/4-20 x 5, PLT GR5	1	J05141
54	Stand, 2 MTR Huckbolt Assembly	2	N5480
55	Skid, 2 MTR Leg Weldment	1	N5482

2-MOTOR, 5" DUROFLOW BLOWER ASSY. (N51351)

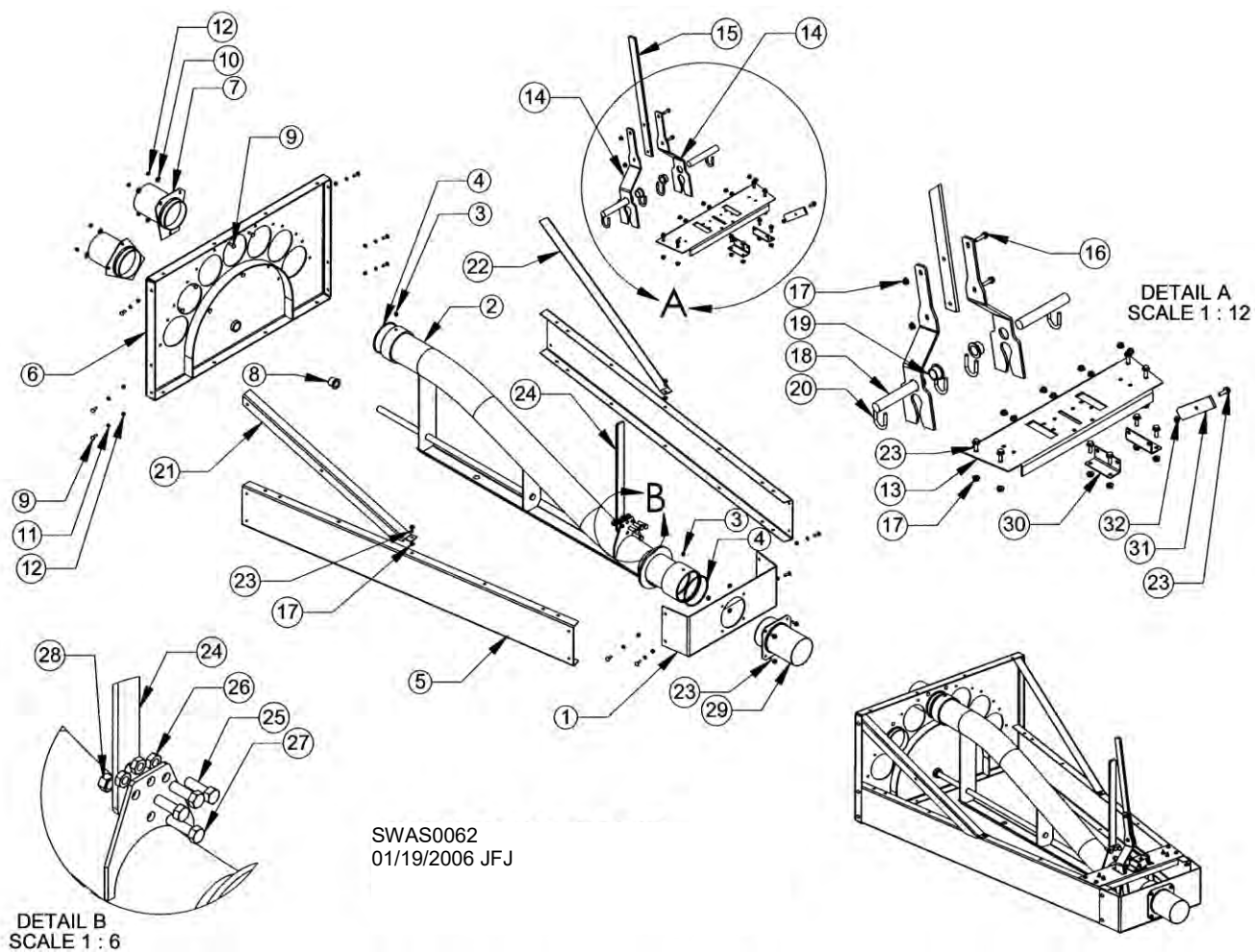


Parts Assemblies

2-MOTOR, 5" DUROFLOW BLOWER ASSY. (N51351)

REF. #	DESCRIPTION	10HP 1ph		15HP 1ph	
		QTY.	PART #	QTY.	PART #
1	Stand, 2 Motor Huckbolt Assembly W/ Skids	1	N5481	1	N5481
2	Screw, 1/2-13, 1.25, PLT	16	J0728	16	J0728
3	Washer, Lock, 1/2", PLT	16	J1215	16	J1215
4	Nut, Hex, 1/2-13, PLT	14	J1040	14	J1040
5	Blower, PD, Duroflow, 4509	1	J7500	1	J7500
6	Screw, 3/8-16, 1, PLT	16	J0606	16	J0606
7	Washer, Lock, 3/8, PLT	24	J1205	24	J1205
8	Nut, Hex, 3/8-16, PLT	8	J1020	8	J1020
9	Motor Mount Angle	4	N5581	4	N5581
10	Pivot Rod, Large, Plated	6	E57441	6	E57441
11	Washer Flat, 3/4"	22	J1130	22	J1130
12	Motor, Mount, Large, Weldment, 2Motor	1	N5150	1	N5150
13	Clip, Hair Pin, .120 x 2.50, 107-20	12	J5412	12	J5412
14	Pin Tube Weldment, LH	2	S7187	2	S7187
15	Nut Coupling, 1/2-13, 4", RH/LH	2	J1037	2	J1037
16	Pin Tube Weldment, RH	2	S7185	2	S7185
17	Motor	2	H5300	2	H6035
18	Collar, Shaft, 3/4"	4	J1327	4	J1327
19	Elbow, 4509 Blower Weldment	1	N55311	1	N55311
20	Motor Mount Large Hinge, New	1	E5765	1	E5765
21	Shield Assembly	1	N5585	1	N5585
22	Support, 4509 Duroflow Blower	2	N55081	2	N55081
23	Bushing, Blower	1	J04265	1	J04265
24	Pulley, Blower	1	J03394	1	J03394
25	Pulley, 8.95 OD, 2B86SK, Motor	2	J0358	2	J0358
26	Bushing, Motor	2	J04287	2	J04286
27	Belt, 10hp	2	J0227	-----	-----
	" "	2	J0236	-----	-----
28	Belt, 15hp	-----	-----	2	J0236
	" "	-----	-----	2	J0227
29	Intake Transition, Duroflow	1	N5533	1	N5533
30	Screw, 3/8-16, 3/4", PLT	8	J0605	8	J0605
31	Filter Restriction Gauge	1	J7533	1	J7533
32	Coupler, Compression, 5", 4BH	1	J7522	1	J7522
33	Tube Weldment, Airfilter Extension Prior 2005	1	N55291	1	N55291
	Tube Weldment, Airfilter Extension 2005 & After	1	N55295	1	N55295
34	Filter Element, CCF6, Replacement Prior 2005	1	J7527	1	J7527
	Filter Element, Solberg #244 2005 & After	1	J7582	1	J7582
35	Prefilter Sleeve, CCF 6 Filter, Universal Prior 2005	1	J7526	1	J7526
	Prefilter Sleeve, Solberg PF244 2005 & After	1	J7583	1	J7583
	Filter w/Sleeve includes J7583 + J7582 2005 & After	1	J7584	1	J7584
36	Hood, Air Filter (Green) Prior 2005	1	N5350	1	N5350
	Hood, Solberg Filter, Painted 2005 & Later	1	N53501	1	N53501
37	Washer, Neoprene, 3/8"	1	J1116	1	J1116
38	Nut, Wing, 3/8" - 16 PLT	1	J1022	1	J022
39	Cap, Plastic 5"	2	J7557	2	J7557
40	Fitting 1/4" Hose Barb 1/4	1	J7550	1	J7550
41	Screw, 5/16-18, 1, PLT, GR5, HHCS	8	J0527	8	J0527
42	Washer, Lock, 5/16, PLT, Split	8	J1200	8	J1200
43	Nut, Hex, 5/16-18, PLT	8	J1002	8	J1002
44	Outlet, 5" Blower Assembly	1	N55211	1	N55211
45	Coupling, 1-1/2" Galvanized, Pipe	1	J2678	1	J2678
46	Nipple, 1.5 x 12" SCH 40, Galvanized	1	J2439	1	J2439
47	Valve, Gate, 1-1/2: NPT	1	J7552	1	J7552
48	Hose, Air, 1/4" ID	1	J7548	1	J7548
49	Outlet, 5" Blower Weldment	1	N55221	1	N55221
50	Nut, 1/4-20, Lock, PLT	1	J0992	1	J0992
51	Plate, Check Valve Weldment	1	N55231	1	N55231
52	Washer, Shoulder, Nylon	2	J1230	2	J1230
53	Screw, 1/4-20 x 6, PLT	1	J05142	1	J05142
54	Stand, 2 Motor Huckbolt Assembly	1	N5480	1	N5480
55	Skid, 2 Motor Leg Weldment	2	N5482	2	N5482

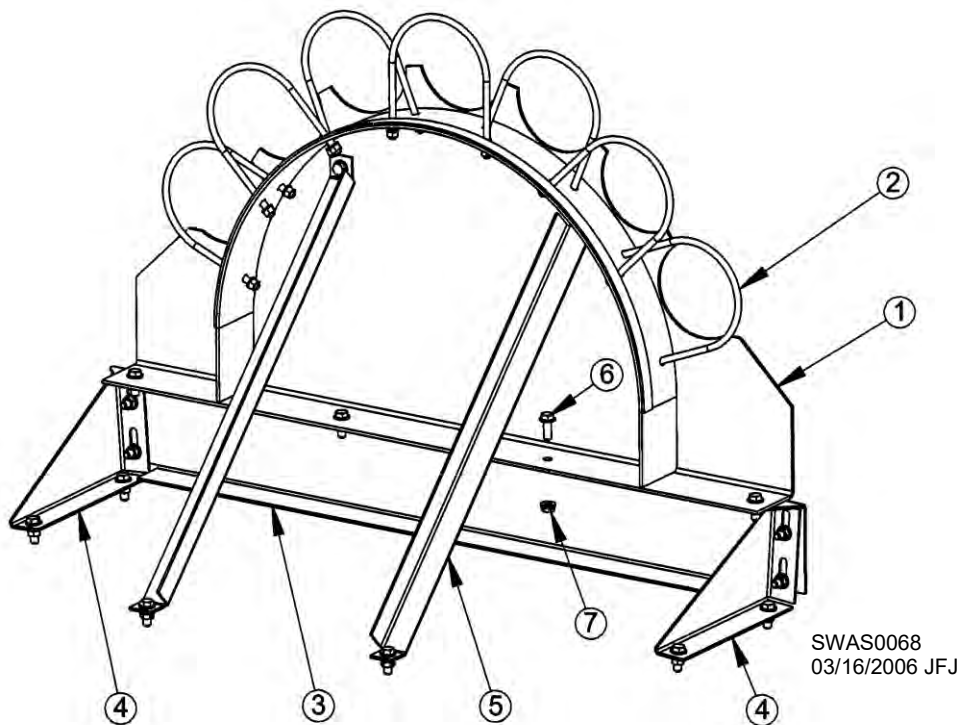
7-VALVE DISTRIBUTOR ASSY. FOR 4", 5" & 6"



7-VALVE DISTRIBUTOR ASSY. FOR 4", 5" & 6"

REF. #	DESCRIPTION	4"		5"		6"	
		N56641B		N56651B		N56661B	
		QTY.	PART #	QTY.	PART #	QTY.	PART #
1	Plate, Inlet, Dist, 7-Valve	1	N5645-03B	1	N56552-01B	1	N5675-03B
2	Offset Tube Weldment	1	N5646B	1	N5656B	1	N5676B
3	Zerk, Grease, 1/8-27 NPT, Straight	2	J36092	2	J36092	2	J36092
4	O-Ring, 3/16 x .378 x 1.25, Neoprene	2	J3554	2	J3557	2	J3555
5	Channel, Side, Dist Valve	2	N5642	2	N5652	2	N5672
6	Outlet Plate Weldment Dist. 7-Valve	1	N56381B	2	N56581B	2	N56781B
7	Outlet Weldment, Dist Valve	2	N5644B	2	N56591B	2	N5679B
8	Bushing, 1 x 1 .378 x 1.25, FLG Brass OL	1	J00811	1	J00811	1	J00811
9	Bolt, 5/16-18, 1", Carriage	16	J0535	16	J0535	16	J0535
10	Washer, Flat, 5/16"	6	J1111	6	J1111	6	J1111
11	Washer, Lock, 5/16, PLT, Split	16	J1200	16	J1200	16	J1200
12	Nut, Hex, 5/16-18, PLT	16	J1002	16	J1002	16	J1002
13	Plate, Pivot Support	1	N5645-04B	1	N5655-07B	1	N5675-04B
14	Lever, Engaging	2	N5655-08B	2	N5655-08B	2	N5655-08B
15	Lever, Fore & After	1	N5652-05B	1	N5652-05B	1	N5652-05B
16	Bolt, 5/16-18, 1.25, GR8.2, Washer	2	B5952	2	B5952	2	B5952
17	Nut, Whiz, 5/16-18	24	J1110	24	J1110	24	J1110
18	Shaft Pivot	2	N5655-09B	2	N5655-09B	2	N5655-09B
19	Bushing, #1 Shaft	2	J3500	2	J3500	2	J3500
20	U-Bolt, 5/16-18, 1- 1/16" ID, 1.75D	4	J0810	4	J0810	4	J0810
21	Brace, Front Face Support, LH	1	N5632-01B	1	N5652-01B	1	N5672-01B
22	Brace, Front Face Support, RH	1	N5632-02B	1	N5652-02B	1	N5672-02B
23	Bolt, 5/16-18, 1 Bin	15	J0537	15	J0537	15	J0537
24	Lever, Rotating	1	N5652-03B	1	N5652-03B	1	N5652-03B
25	Bolt, 1/2-13 x 1	3	J0725	3	J0725	3	J0725
26	Nut, Jam, 1/2-13, PLT, GR5	4	J10405	4	J10405	4	J10405
27	HHCS 1/2 - 13 x 1.75 GR5	1	J0733	1	J0733	1	J0733
28	Lock Nut, 1/2-13	1	J1042	1	J1042	1	J1042
29	Inlet Adaptor W/C, Dist Valve	1	N5645B	1	N56593	1	N5675B
30	Angle, Locking Pivot	2	N5652-06B	2	N5652-06B	2	N5652-06B
31	Arm, Stop	1	N5652-07B	1	N5652-07B	1	N5652-07B
32	Nut, Lock, 5/16-18, PLT	1	J1010	1	J1010	1	J1010

DISTRIBUTION VALVE TEMPLATE ASSY.



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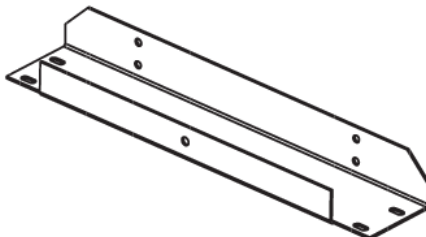
REF. #	DESCRIPTION	QTY.	PART #
1	Template, Plate Weldment, 4"	1	N5609
	Template, Plate Weldment, 5"	1	N5610
	Template, Plate Weldment, 6"	1	N5611
2	U-Bolt, 5/16-18, 4.19 ID x 6.50 Deep	7	J05204
	U-Bolt, 5/16-18, 5.19 ID x 6.50 Deep	7	J05205
	U-Bolt, 5/16-18, 6.19 ID x 6.50 Deep	7	J05206
3	Channel, Top Wall Mounting	1	N5603
4	Support, Angle Mounting Bracket	2	N5606
5	Brace, Angle Template	2	N5613
6	Bolt, Bin, 3/8-16 x 1", Gr., 2PLT	16	J0611
7	Nut, Whizlock, 3/8-16	16	B5962

4" Assy. – N5616

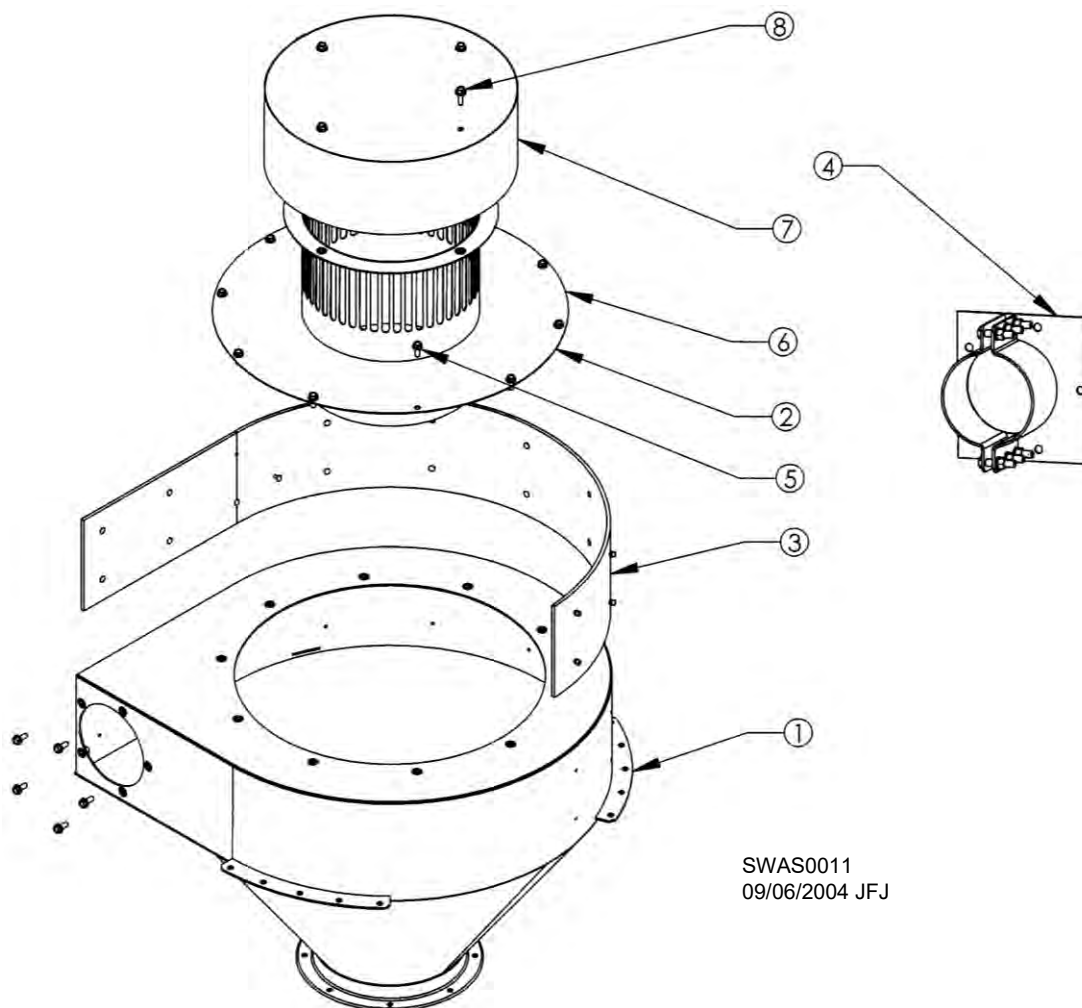
5" Assy. – N5617

6" Assy. – N5618

Wall mounting bottom channel, N5604

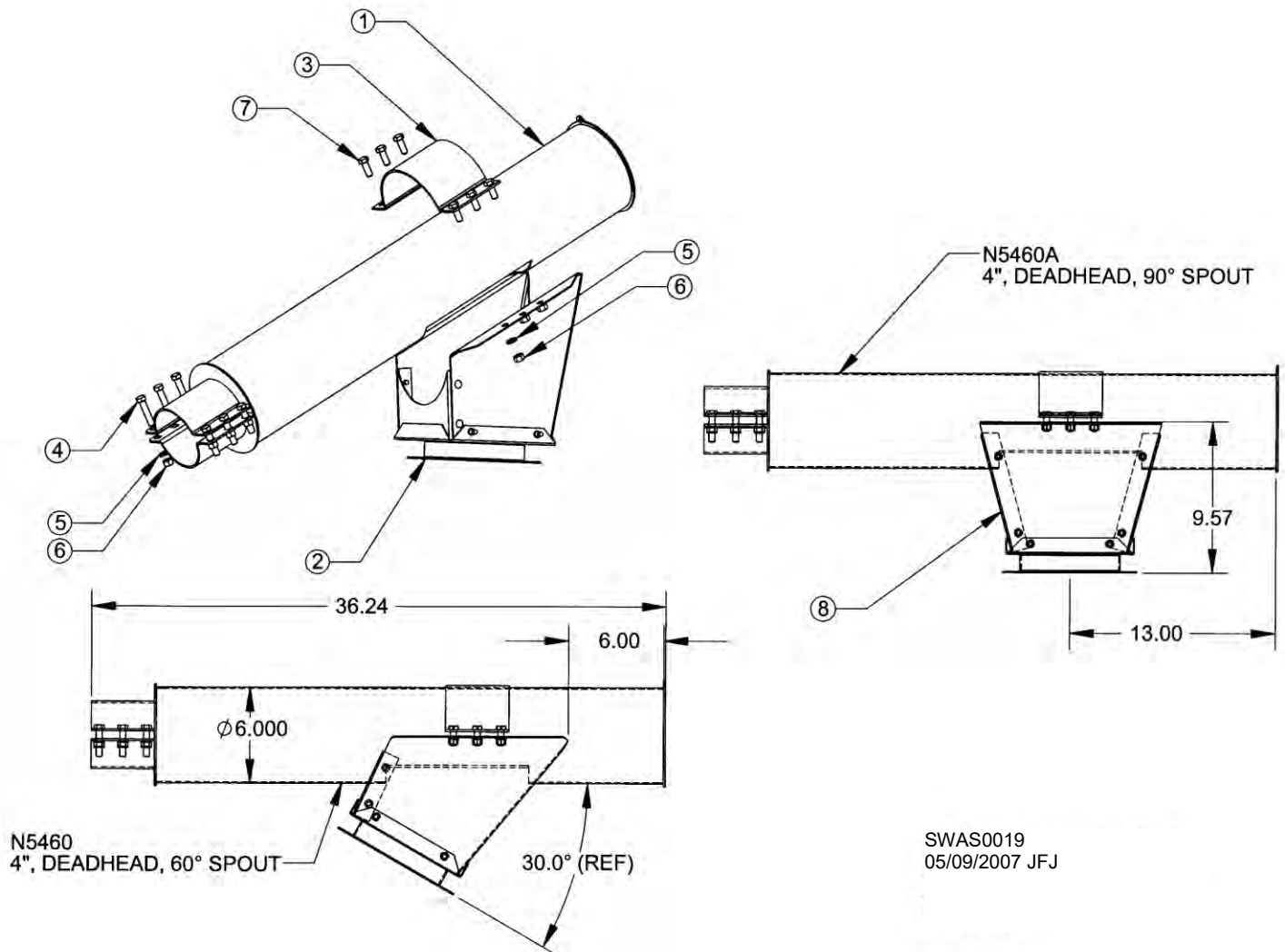


CYCLONE ASSEMBLY AND ADAPTORS – N5504



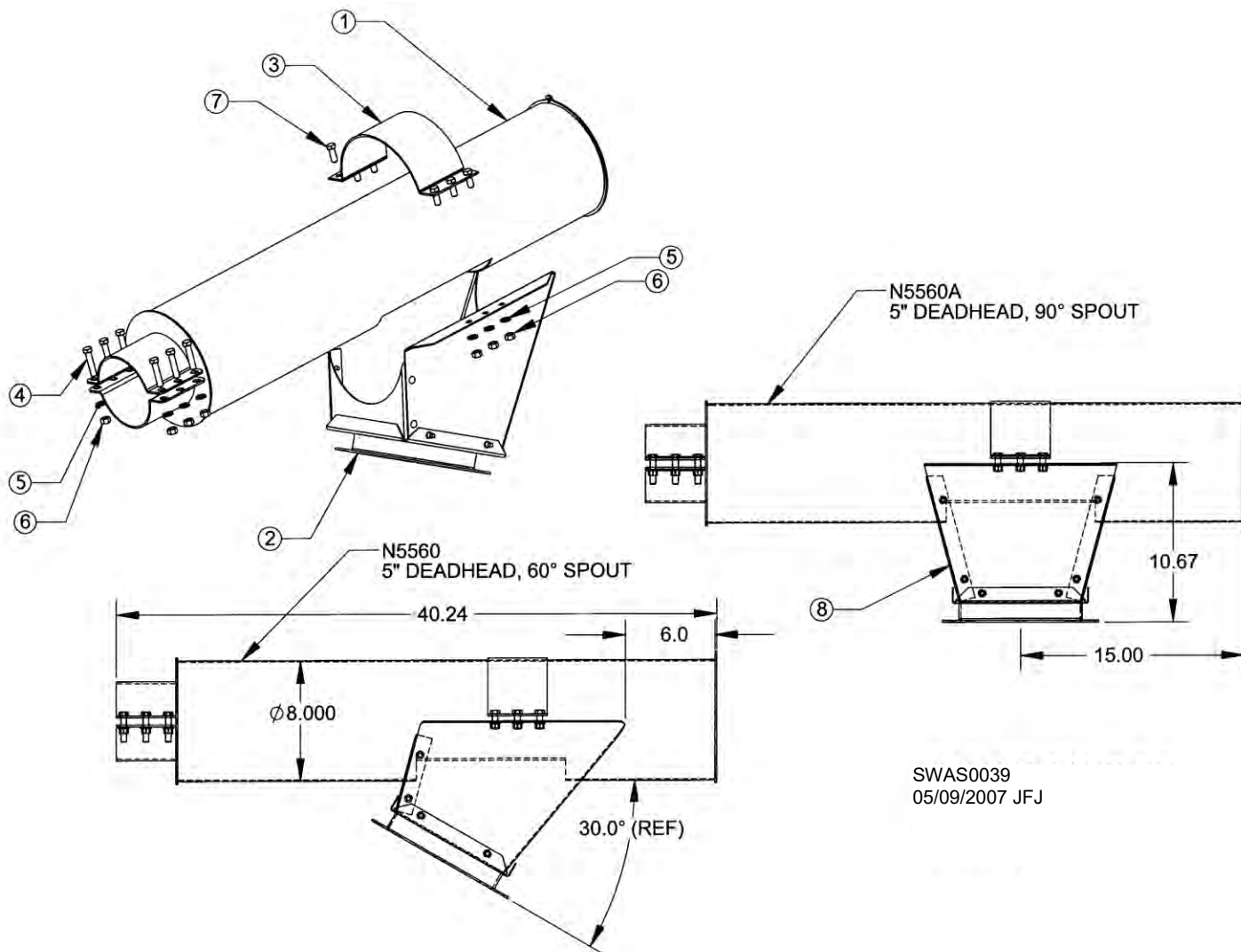
REF. #	DESCRIPTION	QTY.	PART #
1	Cyclone Weldment	1	N55001
2	Cap, Air Exhaust Weldment	1	N55011
3	Liner, Cyclone, 1/4" Thick	1	N5503A
4	Adapter 4" Tube Weldment	1	N5402
	Adapter 5" Tube Weldment	1	N5502
	Adapter 6" Tube Weldment	1	N5602
5	Bolt, 5/16-18 x 3/4" GR5, Hex Washer HD	15	J0536
6	Inlet Weldment	1	N55012
7	Rain Cap Weldment	1	N55013
8	Bolt 5/16 x 1 GR8.2 w/Neoprene Washer	4	B5902

4" DEADHEAD ASSEMBLY – N5460 & N5460A



REF. #	DESCRIPTION	QTY.	PART #
1	Deadhead Body Weldment, 4"	1	N54601
2	Chute Assembly, 4' Discharge	1	N5462
3	Band, Half, 6", Galvanized	1	F48291
4	Bolt, 3/8-16, 1.75, PLT, Tap	6	J0640
5	Washer, Lock, 3/8, PLT	12	J1205
6	Nut, Hex, 3/8-16, PLT	12	J1020
7	Screw, 3/8-16, 1, PLT	6	J0606
8	Spout Assembly, 4", 90°	1	N54621

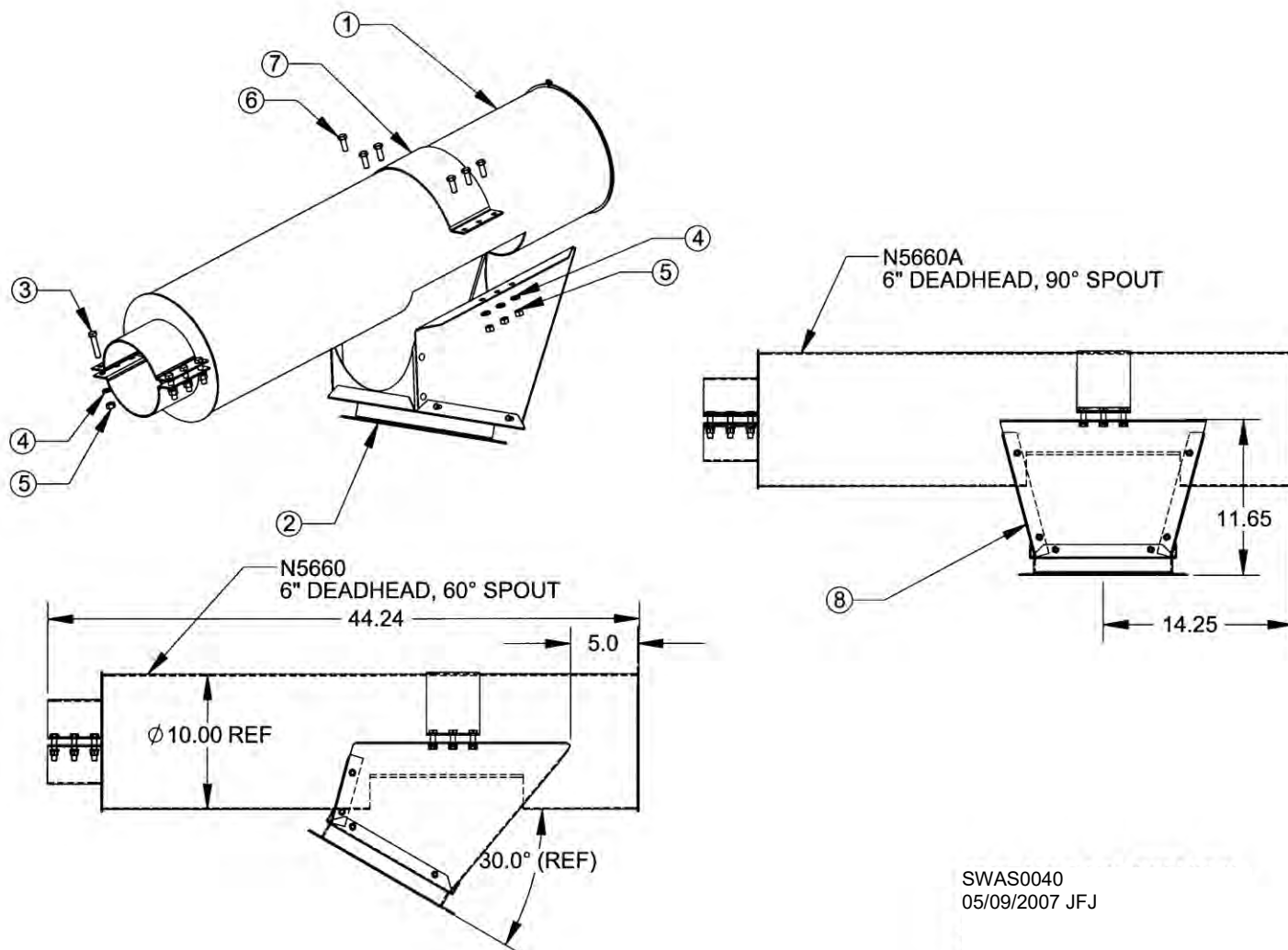
5" DEADHEAD ASSEMBLY – N5560 & N5560A



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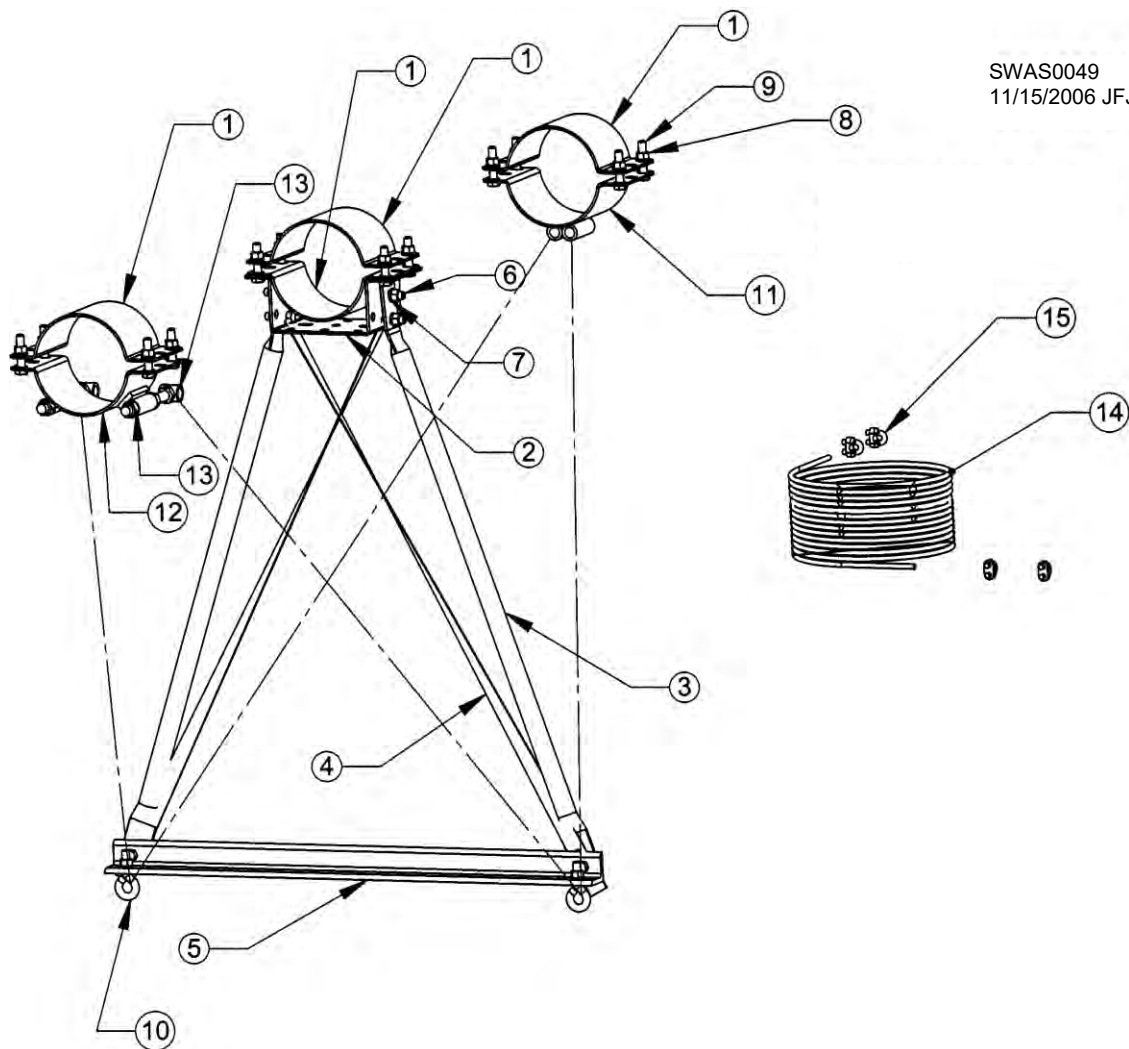
REF. #	DESCRIPTION	QTY.	PART #
1	Deadhead Body Weldment	1	N55601
2	Chute, Deadhead Discharge Assembly	1	N5562
3	Half Band, Galvanized, 8"	1	E57941
4	Bolt, 3/8-16, 1.75, PLT, Tap.	6	J0640
5	Washer, Lock, 3/8-16, PLT	12	J1205
6	Nut, Hex, 3/8-16, PLT	12	J1020
7	Screw, 3/8-16, 1, PLT	6	J0606
8	Spout Assembly, 5", 90°	1	N55621

6" DEADHEAD ASSEMBLY – N5660 & N5660A



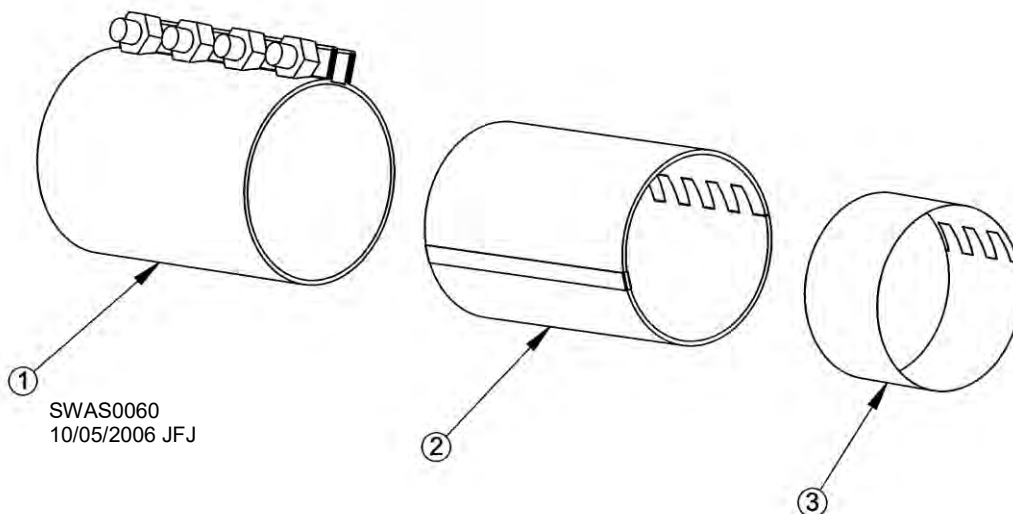
REF. #	DESCRIPTION	QTY.	PART #
1	Deadhead Body Weldment, 6"	1	N56601
2	Chute, 6" Deadhead Assembly	1	N5662
3	Bolt, 3/8"-16, 1.75, PLT, Tap	6	J0640
4	Washer, Lock 3/8", PLT	12	J1205
5	Nut, Hex, 3/8-16, PLT	12	J1020
6	Screw, 3/8-16, 1, PLT	6	J0606
7	Band, Half, 10", Galvanized	1	E57961
8	Spout Assembly, 6", 90°	1	N56621

CYCLONE TRUSS KITS **4" TUBE – N5437; 5" TUBE – N5537; 6" TUBE – F4814**



REF. #	DESCRIPTION	4" TUBE		5" TUBE		6" TUBE	
		QTY.	PART #	QTY.	PART #	QTY.	PART #
1	Band, Half, Galvanized	4	N5426	4	N5526	4	F48291
2	Bracket, Cable Truss	1	N5445	1	N5545	1	F4997-02
3	Truss, Cable, Leg	2	F4995-03	2	F4995-03	2	F4995-03
4	Brace, Cross, Truss	2	F4999-03	2	F4999-03	2	F4999-03
5	Bracket, Angle, Cable, Truss	1	F4995-01	1	F4995-01	1	F4995-01
6	Screw, 3/8-16, 1.25", PLT	6	J0616	6	J0616	6	J0616
7	Washer, Lock, 3/8, PLT	20	J1205	20	J1205	20	J1205
8	Nut, Hex, 3/8-16, PLT	22	J1020	22	J1020	22	J1020
9	Bolt, 3/8-16, 1.75", PLT, Tap	12	J0640	12	J0640	12	J0640
10	Eyebolt, 3/8-16, 1.25", 5/8 Eye	2	J0855	2	J0855	2	J0855
11	Band, Transfer, Cable	1	N5438	1	N5538	1	F4998
12	Band, Half, Transfer, For Adjustable Bolts	1	N5439	1	N5539	1	F4992
13	Adjustable Bolt, Truss Kits	2	F4880	2	F4880	2	F4880
14	Cable, 1/4", Galvanized - 83 Ft Long	1	J3290	1	J3290	1	J3290
15	Clamp, Cable, 1/4"	4	J3260	4	J3260	4	J3260

COMPRESSION COUPLER

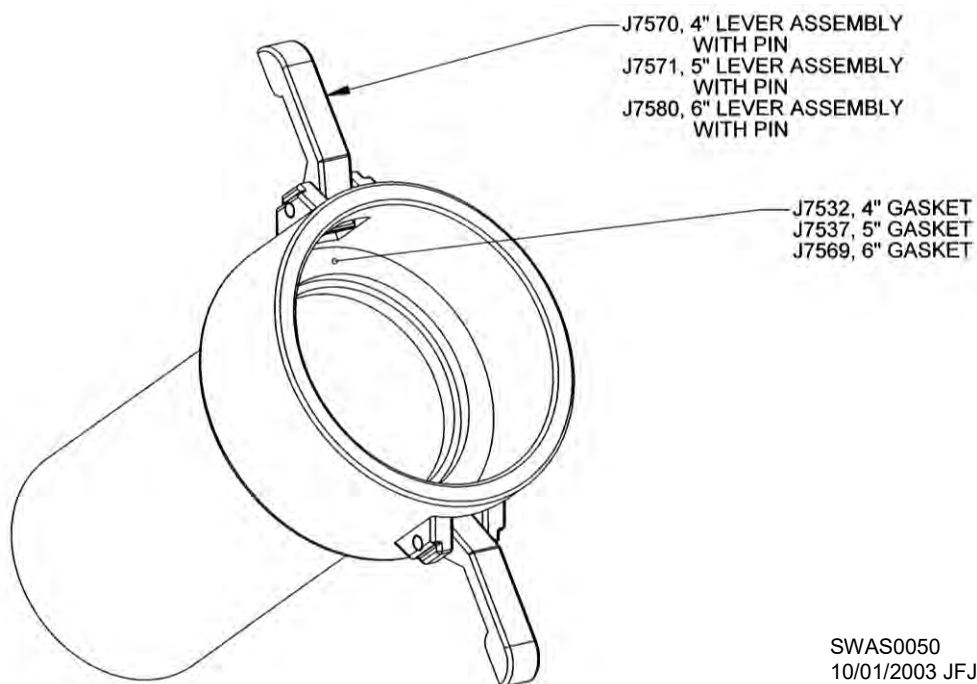


REF. #	DESCRIPTION	QTY.	PART #
1	4" Compression Coupler	1	J7482
	5" Compression Coupler	1	J7522
	6" Compression Coupler	1	J7560
2	Liner W/GRD Strip, 4" Compression Coupler	1	J7531
	Liner W/GRD Strip, 5" Compression Coupler	1	J7524
	Liner W/GRD Strip, 6" Compression Coupler	1	J7519
3	Gasket Protector, 4" Stainless Steel	1	J7593
	Gasket Protector, 5" Stainless Steel	1	J7594
	Gasket Protector, 6" Stainless Steel	1	J7595

FEMALE CAMLOCK ASSEMBLY PARTS

J7491 (for 4" tube stub), J7541 (5" tube stub) & J7564 (6" tube stub)

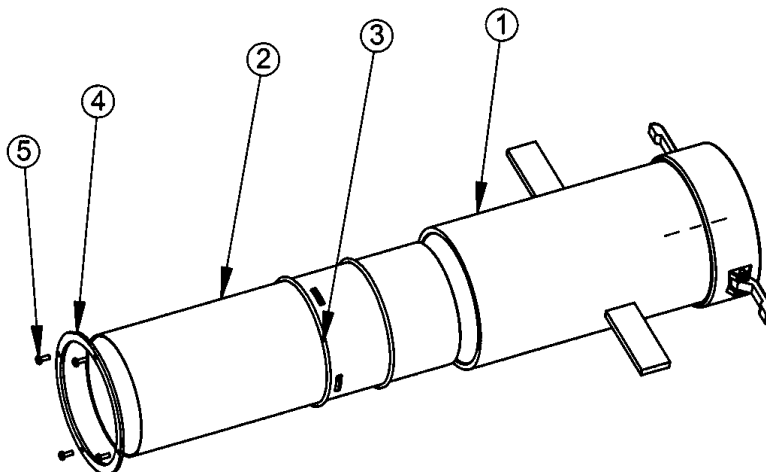
(See Page 13 for male camlock assy. part numbers)



SWAS0050
10/01/2003 JFJ

TELESCOPING FEMALE CAMLOCK ASSEMBLY

N5589 (4" tube), N5590 (5" tube) & N5690 (6" tube)

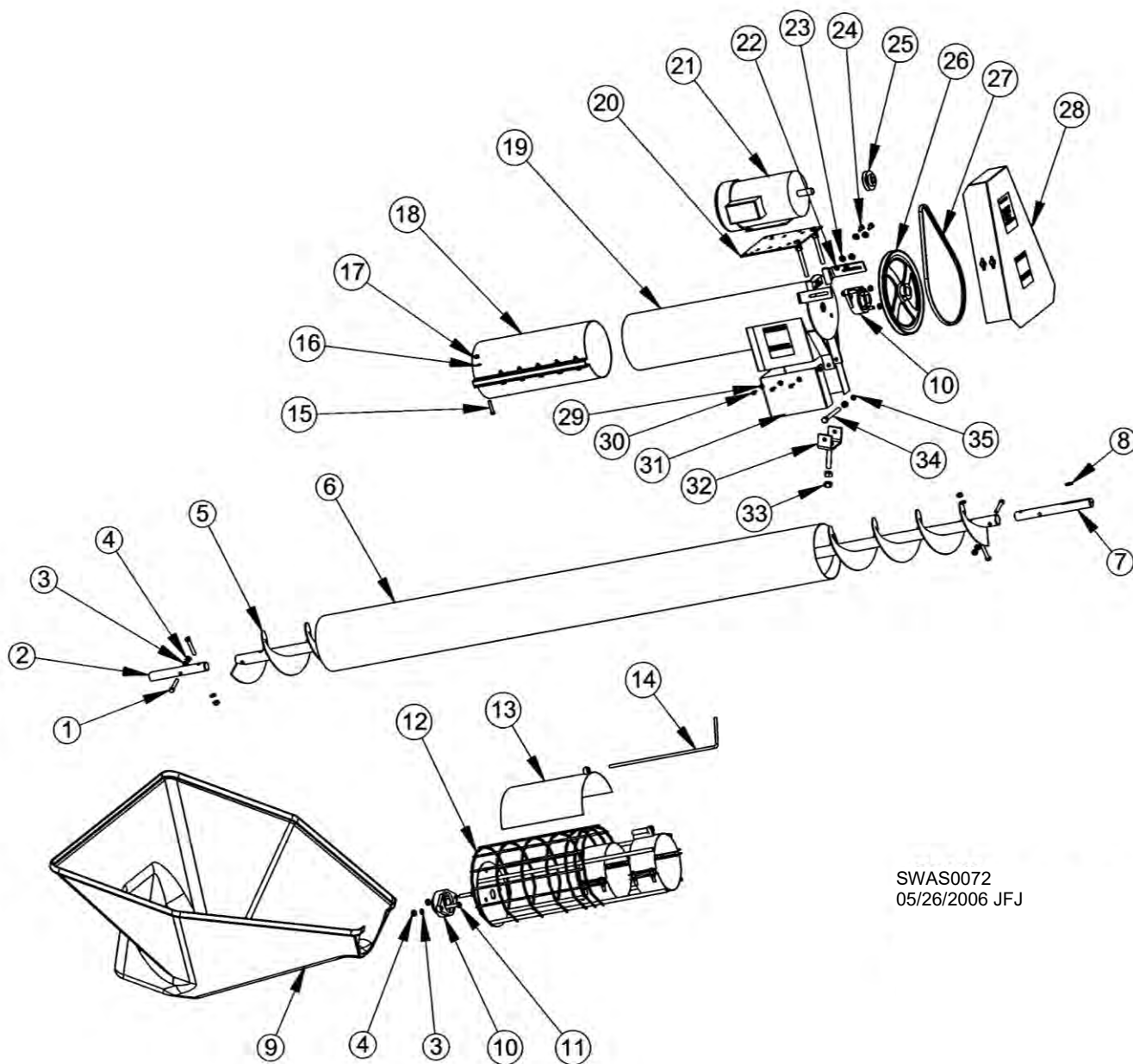


REF. #	DESCRIPTION	4" TUBE		5" TUBE		6" TUBE	
		QTY.	PART #	QTY.	PART #	QTY.	PART #
1	Tube Weldment, Camlock	1	N5491	1	N5591	1	N5691
2	Tube, Extension Weldment	1	N5492	1	N5592	1	N5692
3	O-Ring, 3/16" Cross Section	2	J3554	2	J3553	2	J3555
4	Ring, Retaining	1	N5493	1	N5593	1	N5693
5	Screw, #10-32, 1/2, SLT, PHMS	4	J0476	4	J0476	4	J0476

FILL AUGER

8" x 10' – G7109

8" x 8' – G7108

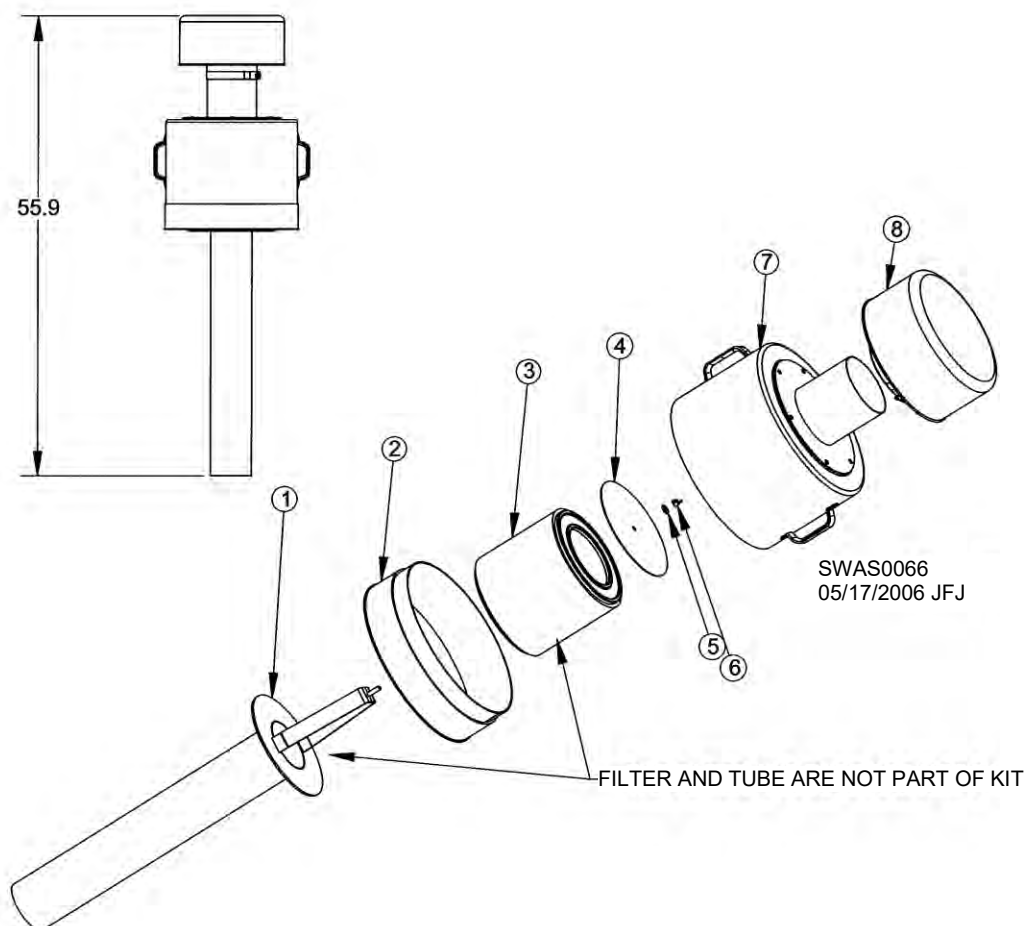


SWAS0072
05/26/2006 JFJ

FILL AUGER PARTS
8" x 10' – G7109
8" x 8' – G7108

REF. #	DESCRIPTION	QTY.	PART #
1	Screw, 7/16-14 x 2.5	4	J0720
2	Shaft, 1.25 x 9" LG	1	G73291
3	Lock washer, 7/16	8	J1210
4	Nut, 7/16-14	8	J1035
5	Auger, with Shafts, 8" x 10 FT Fill Auger	1	G7325
	Auger, with Shafts, 8" x 8 FT Fill Auger	1	G7629
6	Tube, 8" Dia x 80" LG, 8" x 10 FT Fill Auger	1	G7327
	Tube, 8" Dia x 56" LG, 8" x 8 FT Fill Auger	1	G7628
7	Shaft, 1.25" x 12.125" LG	1	E9751
8	Key, 1/4" SQ x 1" LG	1	E5915
9	Hopper, Plastic	1	J8030
10	Bearing, 1.25 FLG, HCFTS 207-20	2	J0010
11	Screw, 7/16-14 x 2	4	J0718
12	Inlet Guard, Hopper, 8"	1	G7341
13	Flow Control, 8" Hopper	1	G8333
14	Handle, Only, Flow Control	1	G8336
15	Screw, 3/8-16 x 1.75	6	J0640
16	Lockwasher, 3/8	6	J1205
17	Nut, 3/8-18	6	J1020
18	Sleeve, Connector, 8" x 18" LG	1	E5424
19	Powerhead, 8" Fill Auger	1	G7626
20	Motor Mount, Portable	1	E9016
21	Motor, 2 HP, 1 PH	1	H2175
	Motor, 2 HP, 3 PH	1	H2475
22	Nut, 5/16-18 Whiz Lock	4	J1110
23	Flat Washer, 5/16	8	J1111
24	Screw, 5/16-16 x 1.00, Hex Washer Head	4	J0537
25	Pulley, 2.75 OD, .875 ID, A GRV	1	J0295
26	Pulley, 12.0 OD, 1.25 ID, A GRV	1	J0388
27	Belt, A x 43	1	J0205
28	Shield, Fill Auger	1	G7351
29	Flat Washer, 1/4	10	J1105
30	Screw, 1/4-14 Self Drilling	10	J0501
31	Spout, Outlet, Rubber	1	G7344
32	Clevis, Fill Auger	1	G7324
33	Nut, 5/8-11	2	J1046
34	Screw, 1/2-13 x 5	1	J0760
35	Nut, 1/2-13	2	J1040

PRE-CLEANER ASSEMBLY - N5351



REF. #	DESCRIPTION	QTY.	PART #
1	Tube Weldment, Solberg Filter Extension	1	N55295
2	Base, Pre-Cleaner Weldment	1	N5354
3	Element W/Prefilter, Solberg #244P	1	J7584
4	Plate, Filter Top, 10" Diameter	1	N5355
5	Washer, Neoprene, 3/8"	1	J1116
6	Nut, Wing, 3/8-16 PLT	1	J1022
7	Hood Assembly W/Handles, 6" Pre-Cleaner Inlet	1	N5352
8	Pre-Cleaner, 6", Centri #EX-60	1	J7591

AIRLOCK REPLACEMENT PARTS**4" TUBE**

DESCRIPTION	PART #
Airlock, Meyer 12" (375 lbs.)	J7514
Bearing, Meyer Airlock, 12"	J75142
Seal, Airlock Shaft, 12"	J75143
Bearing Cap, Airlock, Blind End	J75144
Bearing Cap, Airlock, Drive End	J75145

5" TUBE

DESCRIPTION	PART #
Airlock, Meyer 14" (575 lbs.)	J7512
Bearing, Meyer Airlock, 14-16"	J75122
Seal, Airlock Shaft, 14-16"	J75123
Bearing Cap, Airlock, Blind End	J7516
Bearing Cap, Airlock, Drive End	J7517

6" TUBE

DESCRIPTION	PART #
Airlock, Meyer 16" (845 lbs.)	J7510
Bearing, Meyer Airlock, 14-16"	J75122
Seal, Airlock Shaft, 14-16"	J75123
Bearing Cap, Airlock, Blind End	J7516
Bearing Cap, Airlock, Drive End	J7517

Contact Information

Contact Information

Owner's manuals are available from Sukup and additional copies can be requested at the address, phone number, or e-mail address shown below. Please indicate manual number L1396 when requesting Cyclone Installation and Owner's Manual.

Sukup Dealer Information

Dealer name: _____
Address: _____
Cell phone: _____
Office phone: _____
Fax: _____

In Case of Emergency

Have emergency numbers and written directions to your location near a phone, and arrange and practice a safety plan.

Ambulance • Fire • Police: 9-1-1

Bin rescue team: _____

Local EMS team: _____

911 address of work site: _____

Directions to work site: _____



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