

**Operating Instructions & Parts Manual**

**READ AND SAVE THESE INSTRUCTIONS**

**WARNING – TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:**

- A) Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer.
- B) Before servicing or cleaning unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.

**Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply could result in personal injury and/or property damage.**

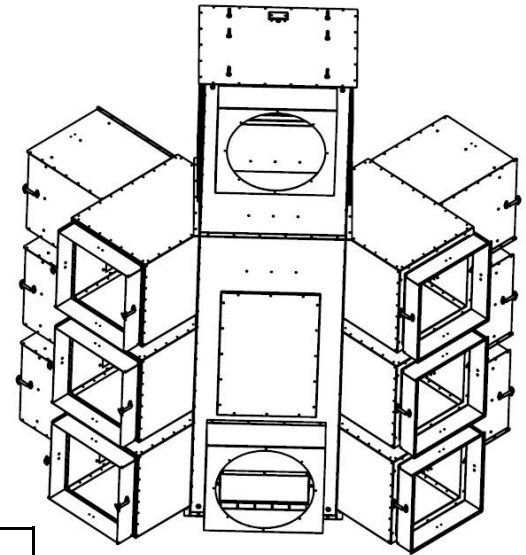
**AF-31243 SERIES AIR CLEANER**

**Description**

This 28,000 CFM Air Cleaner was designed for use as ambient air filtration where airborne particles are prevalent. The air cleaner consists of 12 intakes and two exhausts, two motors, two blowers, electrical components and a riveted sheet metal housing. These units are approx. 1,450 pounds, and cannot be handled or transported without the help of lifting tools. It is recommended that you consult a professional electrician prior to installing this product. If this Air Cleaner is to be used in an application that presents a potential fire hazard, a fire protection expert should be consulted.

**Unpacking**

The machine should be unpacked carefully. Check if the machine and components are consistent with those indicated in the Parts List. If any doubt arises or if parts appear to be missing, contact your dealer.



*Seen above: AF-31243 with transitions*

<b>Motor Options (two motors per unit)</b>				
<b>Specs are per each motor:</b>				
<b>MODEL NUMBER</b>	<b>VOLTAGE</b>	<b>HP</b>	<b>Hz</b>	<b>AMP DRAW</b>
AF-31243230	230V THREE PHASE	10 HP	60/50	27-25
AF-31243480	480V THREE PHASE	10 HP	60/50	12.5
AF-31243575	575V THREE PHASE	10 HP	60	11.2
<b>BLOWER:</b>				
<b>MODEL NUMBER</b>	<b>TYPE:</b>		<b>CFM:</b>	
(ALL)	FORWARD INCLINE		14,000	

**SOUND LEVEL:** 68 Db(A)

<b>APPROXIMATE WEIGHT</b>	
AF-31243	1,450 lbs

## Operation

Once installed using the above instructions, your AF-31243 air cleaner(s) can be operated with the flip of a switch. Because the AF-31243 series is designed as an “Air quality Maintenance” system, it is important that the units are turned on in the beginning of the shift and left on until the end of the shift. The reason the units need to remain on is because Air Cleaners train the air current throughout the entire area in order to ensure that all of the air is cycling through the filters. The process of training the air can take a while, but is usually about 30 minutes.

## Maintenance

Follow these precautions when performing maintenance on the motor or blower.

Turn off motor, and LOCK OUT electrical service to the unit.

LOCK OUT even when changing filters.

Change filters regularly to maintain optimum performance. If the performance of your air cleaners appears to be declining, try replacing the filters.

Be sure that replacement filters are always rated for the correct CFM and air flow.

### NOTE FOR INSTALLING BAG FILTERS:

**When installing fiberglass bag filters, MAKE SURE THAT NO FABRIC IS PINCHED BETWEEN THE HEADER AND FILTER FRAME.** Performance will decrease dramatically if bag filters are not properly installed. To ensure no fabric is pinched, place your fingers inside each cell, and gently move each bag cell side to side, freeing any fabric sandwiched between the header and filter frame.

### If the system requires maintenance exceeding filter change, read below...

Take the unit down and place it on a level surface that allows access to the access panels on each side of the Main Housing. **To access the motor, pulleys and belt:** Remove the door panel by removing (12) ¼-20x1-1/4” bolts from either the right or left access panel with a 3/8 socket.

Troubleshooting Chart		
Symptom	Possible Cause(s)	Corrective Action
Excessive belt noise	1. Belt is misaligned	1. Remove access panel. Follow instructions on page 9 to adjust belt placement. <b>For further instruction, visit our website (TanisTechnologies.com) for belt adjustment video.</b>
	2. Belt is worn out, broken, or defective.	1. Remove back panel. Follow instructions on page 9 to replace belt. <b>For further instruction, visit our website (TanisTechnologies.com) for belt adjustment video.</b>
Air cleaner has poor performance.	<b>1. It's possible that the air cleaner may have been wired backwards upon installation. Air will blow out the exhaust either way, but if wired correctly it should blow at about 58 mph.</b>	<b>1. If the motor is wired to run the wrong direction, disconnect power supply, &amp; switch the necessary wires around to reverse the motors rotation with the voltage you are using.</b>
	<b>2. The bag filter may not be seated properly</b>	<b>2. Reach in each pocket to make sure fabric is not between filter stop and filter frame.</b>
Air is not staying as clear as usual	1. Prefilters may be loaded with debris	1. Turn unit off, lock out power to unit, then replace the prefilter by pushing clips out of the way and then sliding it out and sliding a new one in.
	2. Bag filter(s) may be spent	2. Follow step (1) to remove the prefilter, then if unit is equipped with clips, push them out and away from the bag filter, slide out the old bag filter and slide in new one until clips snap around it.

## General Safety information SAFETY GUIDELINES- DEFINITIONS

This manual contains information that important for you to know and understand. This information relates to protecting YOUR SAFETY and PREVENTING EQUIPMENT PROBLEMS.

### GENERAL SAFETY RULES

#### !WARNING!

This machine was designed for certain applications only. Tanis Technologies strongly recommends that this machine not be modified and/or used for any application other than that for which it was designed. If you have any questions relative to a particular application, DO NOT use the machine until you have first contacted Tanis Technologies and confirmed that the product is suited for your application.

#### !WARNING!

Failure to follow these rules may result in serious personal injury.

**1. For your safety, read and understand the instruction manual before operating the unit.** Learn the unit's application and limitations as well as the specific hazards, related to it.

**2. Don't use in dangerous environment.**

Don't use this unit in damp or wet locations or expose to rain.

**3. Disconnect unit** before servicing.

**4. Check damaged parts** before future use of the unit, properly repair or replace any part that is damaged.

### ADDITIONAL SAFETY RULES FOR AIR CLEANERS

1. Install AF-31243 series air cleaners

according to all electrical and safety codes as well as the National Electrical Code (NEC) National Fire Protection Association (NFPA) and the Occupational Safety and Health Act (OSHA). Only someone who is qualified to do electrical work should wire the units in.

2. These air cleaners are intended to be installed at least **8.2 feet (2.5 meters) above the floor.**

3. Specific duct design and dust collector configurations are required under standards set forth by the National Fire Protection Association (NFPA). These are applicable when collecting potentially reactive metal dusts (like aluminum, magnesium and other materials). NFPA also has standards that cover other dusts like grain and plastics, ect. For guidelines on determining which precautions should be taken, please refer to NFPA

497. There may be other specifications that apply for your particular application, so please consult current NFPA standards that may be acquired at:

NFPA  
1 Batterymarch Park  
Quincy, MA 02269  
1-800-344-3555

This information may contain safeguards that are required for the installation, operation and service of AF-36xxVT series products.

#### !WARNING!

4. Avoid mixing combustible materials like (but not limited to) the following: buffing lint, paper/wood dust, aluminum or magnesium with

dust generated from the grinding of ferrous materials. This creates a potential for fires due to the mixing of sparks and combustible materials.

5. A machine operator should NEVER be allowed to put lit cigarettes or any burning object into this or any dust control system.

6. If there is a chance for heated and/or flammable materials to enter the unit, installation of the unit should be evaluated to determine if a fire protection/exhaustion systems should be installed. Federal, State or local codes, as required by organizations such as NFPA and Factory Mutual Insurance or your insurance carrier may require such a system. **Tanis Technologies can offer basic guidelines for such an installation: however, final installation design is the responsibility of the purchaser.**

7. Securely anchor unit to a permanent or fixed supporting structure, be sure the structure is rated to hold the weight of the unit.

8. Support this unit or clamp it to the work surface when using it in a portable application to eliminate potential injury or damage to the unit

9. Ensure that the intake and exhaust areas are clear prior to starting the unit. Clogged intakes or exhaust can cause explosion and/or fire.

10. Keep arms and fingers away from fan. Avoid all exposure to rotating parts to prevent injury.

11. Do not attempt to remove/replace filters while unit is running. Fan blades can cause severe cuts. Be sure

the unit is disconnected from power source

12. Maintain the unit in top condition. Clogged filters can increase potential for fire or explosion. Follow instructions for changing filters.

13. Turn the unit “off” and disconnect power source before installing or removing accessories, before adjusting or changing set-ups or when making repairs. An accidental start up can cause serious injury.

14. Explosion relief vents are required for some applications. Consult with an insurance underwriter or an NFPA manual to determine proper vent size and ratio. The unit DOES NOT CONTAIN EXPLOSION RELIEF VENTS as shipped from the factory and must be field installed per NFPA standards.

15. The AF-31243 series units are made to run continuously, check the filters regularly for built-up debris. Frequency of filter changes will depend upon the environment in which the unit is running.

16. To maintain warranty, be sure to use only filters that are approved by the manufacturer.

## **INSTALLATION AND PREPARATION BEFORE OPERATING:**

### **Disclaimer:**

Although instructions and recommendations are included for installation of your air filtration system, the manufacturer does not assume responsibility for the installation of this equipment nor shall be held liable for direct or consequential damages resulting from improper methods, structural failure or inadequate supports.

### **Installation: (Diagram on PG. 5)**

Installation methods will depend upon the style of intake options that were selected when your system was ordered. The following is a basic guide line and only a suggestion. A professional installer should be consulted.

One option is to mount Uni-Strut to the building structure, dangle threaded rod through the holes in the strut with a nut and washer 6” down and under the strut. Lift the unit up until the top of the unit taps the threaded rod. Thread the connector nuts onto the ½” studs provided in the

top of the unit. Start a ½” nut on the threaded rod to be used as a jam nut.

Now screw the threaded rod into the connector nuts and tighten up the jam nuts.

The unit can now be lowered and the nuts under the strut can be tightened up to finish the suspension.

The uni-strut rails, nuts, and threaded rods are not provided with the units.

Again, mounting instructions are only a suggestion. Tanis Technologies is indemnified from any liability related to improper installation. Improper installation could result in person injury and/or damage to the unit.

### **Noise Declaration**

The figures shown are emissions levels and are not necessarily safe working levels. While there is a correlation between the emission and exposure levels, this cannot be used reliably to determine whether or not further precautions are required.

# Simple Installation Guide

For a more detailed description, see page 4.

## ½"-13 connector nuts

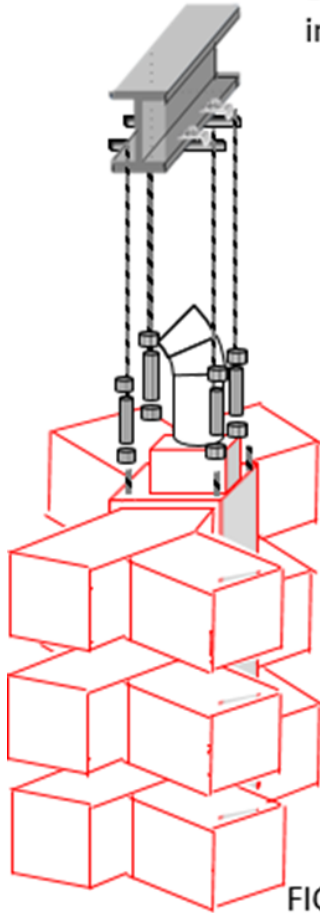


FIG. 2

The unit is mountable with ½-13 Bolt and nut hardware top and bottom, this ties in to the units main frame and is very secure.

Figure 2 shows a unit mounted by UNI-STRUT under a hoist beam or building structure.

Connector nuts are used on the provided ½" studs of the unit with a jam nut. Threaded rod is dangled loosely from UNI-STRUT with nuts and washers above and below to allow some vertical movement to ease assembly. Raise the unit up and simply thread into the connector nuts and tighten the jam nut, lower the unit until suspended, then tighten the nuts under the UNI-STRUT to finish.

## Example: Model 3643VT

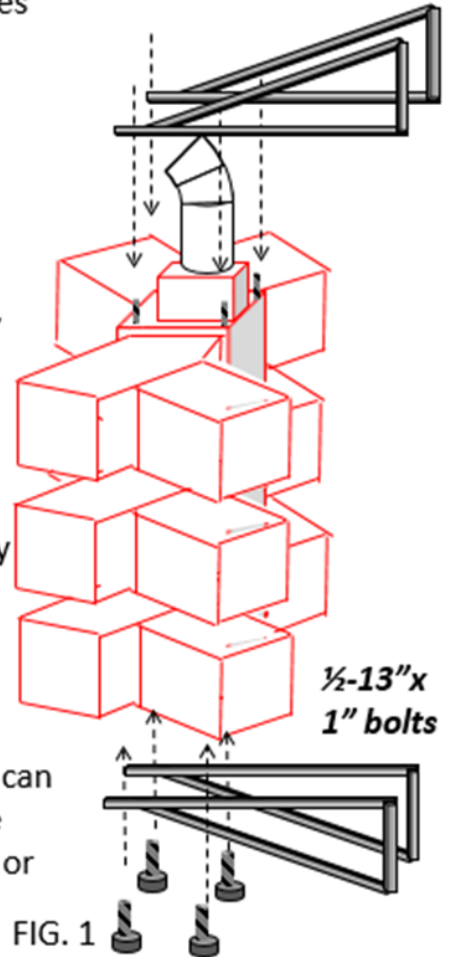
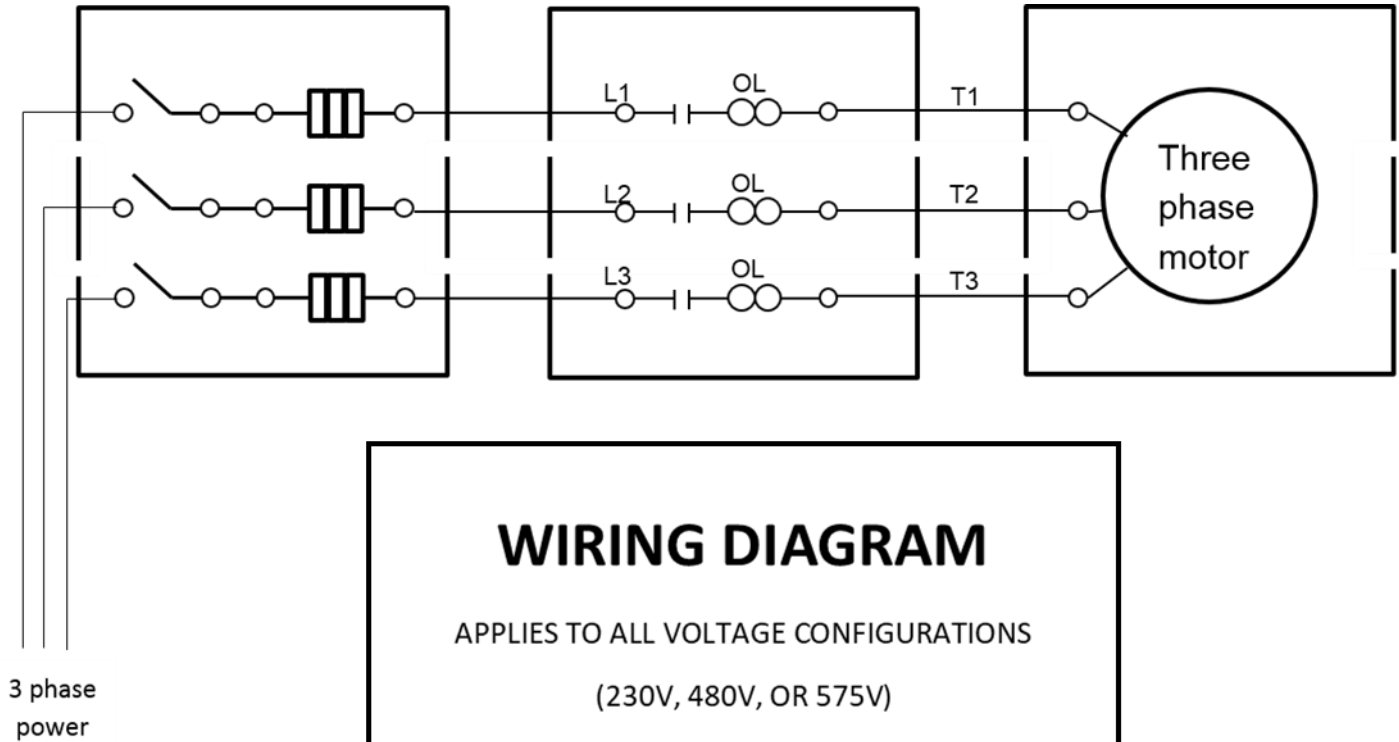


FIG. 1

Figure 1 shows a wall mount, it can be mounted with a simple angle frame on the bottom or the top or both.

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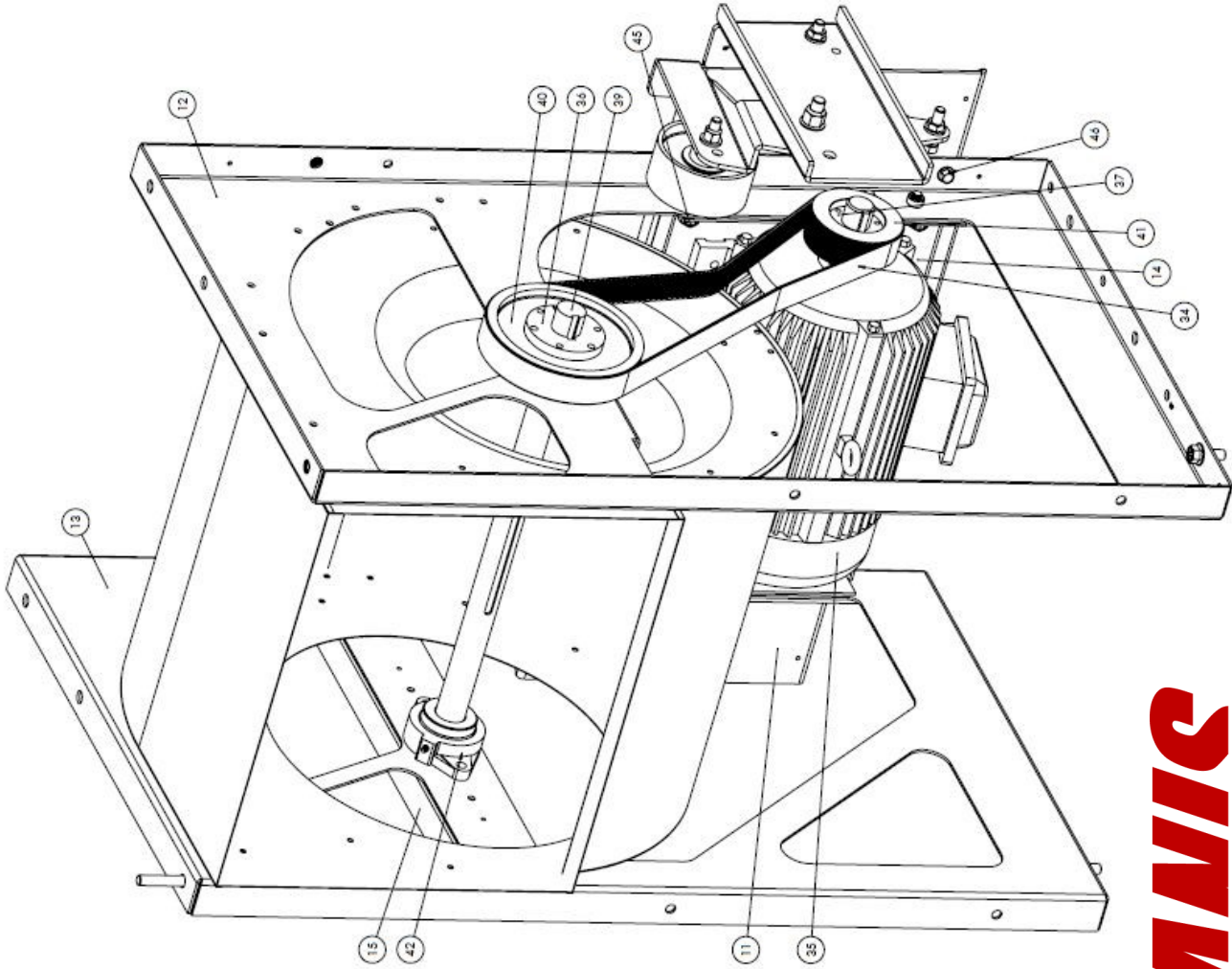
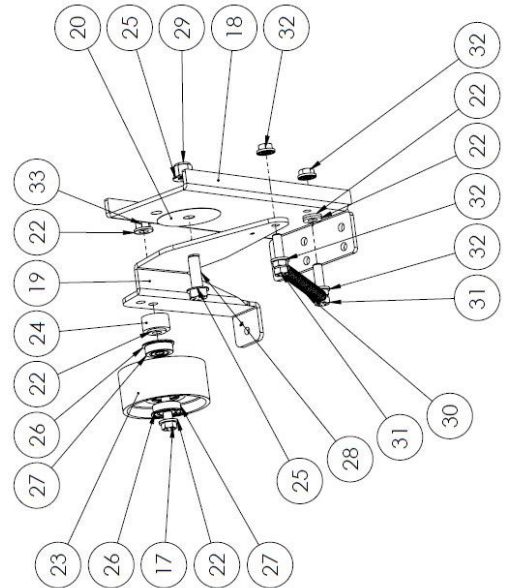
**NOTE:**

**EACH UNIT CONTAINS (2) MOTORS THAT EACH NEED TO BE WIRED SEPARATELY.**



11	A36-11	1	MOTOR MOUNT BRACKET
12	A36S-12	1	RH BLOWER BRACKET
13	A36S-13	1	LH BLOWER BRACKET
14	A36-14	1	MOTOR MOUNT BRACKET
15	A36-15	1	C CHANNEL SUPPORT BRACKET
16	A36S-21R	1	CORNER BRACKET R
17	MAF-112-13X3.5-HEX	1	HEX CAP SCREW, GR 8, 1/2-13 X 3-1/2
18	A36-18	1	TENSIONER BASE
19	A36-19	1	ASYMMETRICAL TENSIONER
20	A36-20	1	TENSIONER SHIM
21	A36S-21L	1	CORNER BRACKET L
22	MAF-112-WASH	5	FLAT WASHER, SAE, ZINC, FITS 1/2 INCH
23	MAB-361P	1	TENSIONER PULLEY, 4.95" DIAMETER
24	MAM-36SPACER	1	PULLEY SPACER
25	MAF-518-CUPWASH	2	5/8 BELLEVILLE WASHER
26	MAB-361PS	2	1-5/8" INTERNAL RETAINING RING
27	MAB-361B	2	NSK 6203-RS-8, 1 1/2" BORE, BEARING FOR 36 SERIES
28	MAF-518-18X2	1	HCS 5/8-18X2 Y78 HEX CAP SCREW
29	MAF-518-NYLOCK	1	HEX LOCKNUT GRADE 5 5/8-18
30	MAF-SF-314-6.5	1	STEEL EXTENSION SPRING WITH LOOP ENDS
31	MAF-112-13X2-HEX	2	1/2-13X2 HEX CAP SCREW
32	MAF-112-LKNUT	12	1/2"-13 LOCK NUT, SERRATED
33	MAF-112-NYLOCK	1	LOCKNUT, NYLON INSERT, 1/2-13
34	MAB-630J1.6 (A36S)	1	1.6-RIB POLY-V BELT, 63" LENGTH
35	MAM-10HP-230-480V	1	10HP 230/480V MOTOR, LEESON (215T)
36	MAM-SK1716	1	SK 1-7/16" BUSHING, TB WOODS
37	MAM-SH138	1	SH 1-3/8" BUSHING, TB WOODS
38	MAB-18BLOWER	1	18" LAU BLOWER ASSEMBLY (BELT DRIVE)
39	MAB-18SHAFT	1	1-7/16" DIAM. SHAFT FOR 18" LAU BLOWER
40	MAB-16J775	1	POLY-V SHEAVE, 7.75" DIAMETER
41	MAB-16J450	1	POLY-V SHEAVE, 4.5" DIAMETER
42	MAB-1-7116-DODGE	2	DODGE 1-7/16" BEARING
43	MAB-BH-GREASE	2	BULKHEAD GREASE FITTING
44	MAB-W68PLP-4-2	4	PRESTOLOK MALE GREASE CONNECTOR
45	MAF-112-13X1FB	14	1/2-13 X 1" FLANGE BOLT (9/16" HEX HEAD)
46	MAF-3/8-16X1-HEX	8	3/8-16X1" HEX BOLT
47	MAF-112-13X1.25FB	6	1/2-13X1.25 FLANGED HEX HEAD CAP SCREW
48	MAE-BOX-ASSY	1	ELECTRICAL HANDY BOX ASSEMBLY
49	MAE-COVER	1	ELECTRICAL BOX COVER, GRAINGER
50	MAF-112-13X3-HEX	7	1/2-13X3"-HEX BOLT

BELT TENSIONER ASSEMBLY

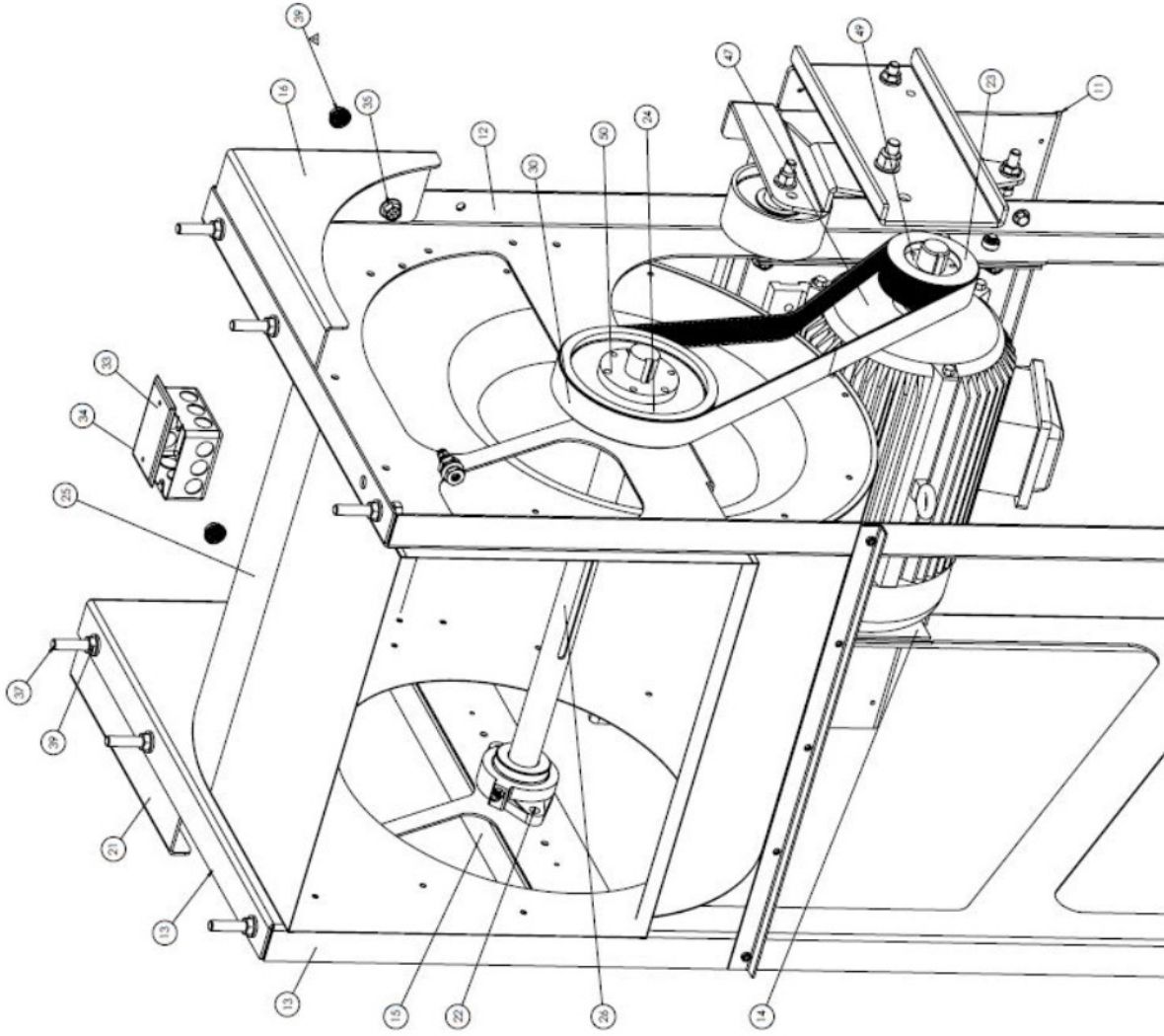
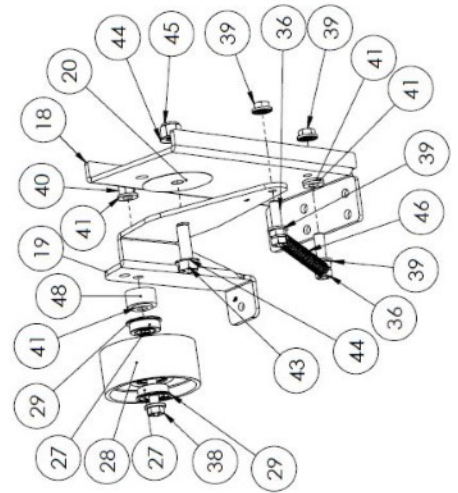


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DESCRIPTION:  
A36S Assembly for V12

11	A36-11	MOTOR MOUNT BRACKET	1
12	A36-12	RH BLOWER BRACKET	1
13	A36-13	LH BLOWER BRACKET	1
14	A36-14	MOTOR MOUNT BRACKET	1
15	A36-15	C CHANNEL SUPPORT BRACKET	1
16	A36S-21R	CORNER BRACKET R	2
17	A36T	PEAR PANEL TRANSITION WELDMENT	1
18	A36-18	TENSIONER BASE	1
19	A36-19	ASYMMETRICAL TENSIONER	1
20	A36-20	TENSIONER SHIM	1
21	A36S-21L	CORNER BRACKET L	2
22	MAB-127116-DODGE	DODGE 1-7/16" BEARING	2
23	MAB-161450	POLY-V SHEAVE, 4.5" DIAMETER	1
24	MAB-161775	POLY-V SHEAVE, 7.75" DIAMETER	1
25	MAB-18BLW	18" LAU BLOWER ASSEMBLY (BELT DRIVE)	1
26	MAB-18BSHAFT	1-7/16" DIAM. SHAFT FOR 18" LAU BLOWER	1
27	MAB-36TB	NSK 6203-85-B, 1 1/2" BORE, BEARING FOR 36 SERIES	2
28	MAB-36TP	TENSIONER PULLEY, 4.95" DIAMETER	1
29	MAB-36TPS	1-5/8" INTERNAL RETAINING RING	2
30	MAB-630J16 (A36-V12)	16-RIB POLY-V BELT, 63" LENGTH	1
31	MAB-8H-GREASE	BULKHEAD GREASE FITTING	2
32	MAB-W68PUP-4-2	PRESTOLOK MALE GREASE CONNECTOR	4
33	MAE-BOX-ASSY	ELECTRICAL HANDY BOX ASSEMBLY	1
34	MAE-COVER	ELECTRICAL BOX COVER, GRAINGER	1
35	MAF-112-13KITB	1/2-13 X 1" FLANGE BOLT (7/16" HEX HEAD)	20
36	MAF-112-13X2-HEX	1 1/2-13X2 HEX CAP SCREW	2
37	MAF-112-13X3-HEX	1/2-13X3-HEX BOLT	6
38	MAF-112-13X3.5-HEX	HEX CAP SCREW, GR 8, 1/2-13 X 3-1/2	1
39	MAF-112-LKNUIT	1/2"-13 LOCK NUT, SERRATED	14
40	MAF-112-NYLOCK	LOCKNUT, NYLON INSERT, 1/2-13	1
41	MAF-112-WASH	FLAT WASHER, SAE ZINC, FITS 1/2 INCH	5
42	MAF-318-16X1-HEX	3/8-16X1" HEX BOLT	8
43	MAF-518-18X2	HCS 5/8-18X2 Y28 HEX CAP SCREW	1
44	MAF-518-CUPWASH	5/8 BELLEVILLE WASHER	2
45	MAF-518-NYLOCK	HEX LOCKNUT GRADE 5, 5/8-18	1
46	MAF-SP-314-6.5	STEEL EXTENSION SPRING WITH LOOP ENDS	1
47	MAM-10HP-230-480V	10HP 230/480V MOTOR, LEESON (21ST)	1
48	MAM-36SPACER	PULLEY SPACER	1
49	MAM-5H138	5H 1-3/8" BUSHING, TB WOODS	1
50	MAM-SK1716	SK 1-7/16" BUSHING, TB WOODS	1

#### BELT TENSIONER ASSEMBLY



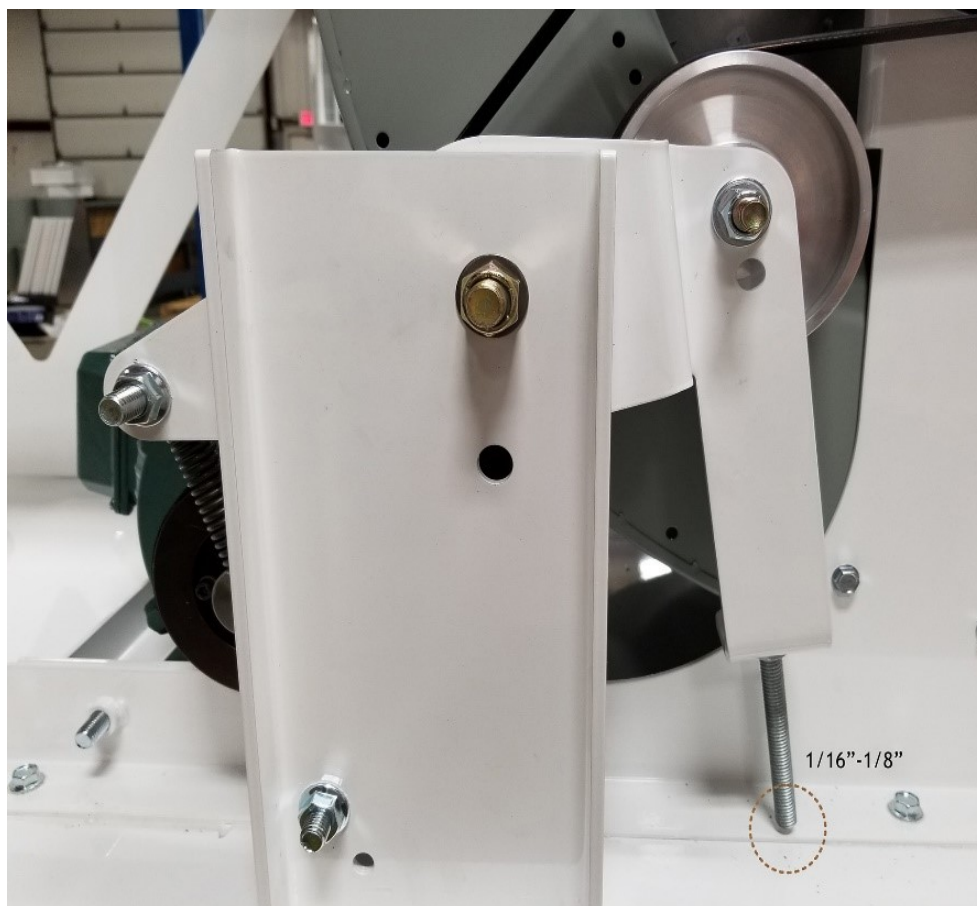
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DESCRIPTION:  
A36 SERIES AIR FILTRATION SYSTEM



# BELT REPLACEMENT INSTRUCTIONS

1. REMOVE ACCESS PANEL
2. LOOSEN JAM NUT ON REVERSE TENSION BOLT
3. TURN REVERSE TENSION BOLT INWARDS TO ALLOW TENSIONER TO MOVE
4. MOVE/PUSH TENSIONER PULLEY AWAY FROM BELT AND REMOVE BELT
5. INSTALL BELT IN REVERSE ORDER, MAKE SURE BELT IS ALIGNED PROPERLY AND ALL GROOVES ARE IN THE CORRECT AREA
6. ADJUST REVERSE TENSION BOLT SO THERE IS 1/16" - 1/8" CLEARANCE BETWEEN BOLT AND THE BODY OF THE UNIT.





### **Limited One (1) Year Parts Warranty**

TANIS TECHNOLOGIES warrants all TANIS TECHNOLOGIES filtration products to be free from defects in materials or workmanship. This warranty is valid for the original purchaser and for a period of one (1) year from the date of shipment or installation sign off. The liability of TANIS TECHNOLOGIES is limited expressly to the replacement or rebuilding of any article, or part thereof, proven defective, when returned by authorized approval to TANIS TECHNOLOGIES, transportation prepaid, within a reasonable time after the termination of the 365-day warranty. Customer must be able to provide proof of purchase in order to submit a claim.

NOTE: In order to maintain the one year warranty on TANIS TECHNOLOGIES products replacement filters must be purchased from TANIS TECHNOLOGIES for that first year. Proof of filter orders must be kept on file and be readily available upon request by TANIS TECHNOLOGIES.

This warranty is void if the product is installed or assembled in any manner that contradicts the instructions specified by TANIS TECHNOLOGIES, or if the product is dismantled, modified, altered or damaged from improper maintenance, excessive temperature, excessively dirty filters, or other abuse. This warranty does include standard warranties from purchased parts such as motors, blowers, ect. Any part which is determined to be defective in material or workmanship can be shipped, prepaid, to TANIS TECHNOLOGIES or authorized service facility in which case a determination will be made whether to repair or replace the component.

TANIS TECHNOLOGIES is not responsible for shipping costs related to sending replacement parts to customer or customer returning parts to TANIS TECHNOLOGIES for inspection. All freight costs incurred by warranty claims are the responsibility of the customer.

TANIS TECHNOLOGIES is not responsible for any damages to buildings or equipment nor is liable for any injuries caused by filter fires. Customers are responsible for choosing necessary spark arrestor accessories and equipment.

No representative, agent or employee of TANIS TECHNOLOGIES has any authority to modify the terms of this warranty. TANIS TECHNOLOGIES will not be responsible for any consequential or resulting damage which may be claimed to have occurred though the sale or use of such products or parts thereof, which might be defective.

There are no warranties which extend beyond the description contained under this heading, express or implied, including warranties of fitness for a particular purpose.

Any damages incurred while parts are in transit from customer to TANIS TECHNOLOGIES or authorized service facilities are the responsibility of the sender. TANIS TECHNOLOGIES and distributors reserve the right to freeze the warranty claim process if parts are damaged in shipping until customer can be contacted and informed.

**Tanis Technologies LLC**  
645 Commerce Court, Suite 10  
Holland, MI 49424  
Phone: 616-796-2712 Fax: 616-796-1213