

Operation and Maintenance Plan

Dept. of Environmental
Protection

MAR 02 2009

Southwest District

Catalina Yachts, Morgan Division

Wood Shop Dust Collector



CATALINA YACHTS
PROCESS PARAMETERS

Sepratairie® Centrifugal Air / Matter Separator with After Filter

Dept. of Environmental
Protection

MAR 02 2009

Southwest District

Model Number:	W30-15
Gas Flow Rate:	11,000 ACFM
Bag Material:	9 oz. Polyester Sateen
Number of Bags:	48 (7" X 108")
Bag Cleaning Mechanism:	Shaker
Operating Temperature:	Ambient
Collection Efficiency:	-99%

General Maintenance Intervals

Dept. of Environmental
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The exit vent of the collection is checked visually during each quarterly inspection. If any dust is noticed during the inspection, the dust collector will be checked and repaired as soon as possible.

The collector is inspected in a quarterly basis according to the attached inspection report. Any maintenance necessary during that inspection, is scheduled and performed as soon as possible.

The dust is emptied from the collector as needed, which is approximately two or three times per week.

The bags are replaced only as needed.

No spare parts are required to be kept on site.

O&M Plan Format Requirements

When submitting the O&M Plan, be sure to provide the following for each subsection listed in Pinellas County Code, Section 58-128.

Operation and maintenance plan

- (a) An operation and maintenance (O&M) plan for pollution control equipment shall be submitted to the Director for any source of pollution, which is required by Department permit pursuant to Chapter 62-210, F.A.C., 62-213, or Chapter 17-17, F.A.C., to utilize a pollution control device. The O&M plan shall be submitted with the application for an operating permit of such source and control device. The O&M plan shall include, but is not limited to:
- (1) Operating parameters of the pollution control device;
 - (2) Time table for the routine maintenance of the pollution control device as specified by the manufacturer;
 - (3) Time table of routine weekly, bi-weekly, or monthly observations of the pollution control device;
 - (4) A list of the type and quantity of the required spare parts for the pollution control device which are stored on the premises of the permit applicant;
 - (5) A record log which will indicate, at a minimum:
 - a. When maintenance and observations were performed;
 - b. What maintenance and observations were performed; and
 - c. Who performed said maintenance and observations.
 - d. Acceptable parameter ranges for each operational check.

To comply with the O&M Plan

1. The O&M Plan for each separate piece of equipment needs to indicate the acceptable operating parameters, such as, min-max operating temperatures, maximum design line pressures, line speed, flow rate, material handling rates, etc.
2. Submit the manufacturer's recommended maintenance schedule for each individual piece of control equipment which has a different manufacturer or model number.
3. Provide a list of the observations, checks, and operations that will be monitored and the inspection frequency schedule for each item identified.
4. List the quantity of spare parts required for each separate piece of control equipment. Be specific as to the quantities of individual parts maintained on site.
5. Submit a blank maintenance page for each individual piece of control equipment which lists by column, the time table for each maintenance and observations check, acceptable value for each check (example: pressure drop - 1"-6" water), observed value, date maintenance and observations check was performed, and a signature block for each check performed.

If you have questions regarding the O&M Plan, contact Gary Robbins at 464-4422.

Example of Operation and Maintenance Plan for a Baghouse

A. Process Parameters:

1. Source ARMS number
2. Manufacturer
3. Model name and number
4. Type: Baghouse
5. Air to cloth ratio
6. Bag Weave
7. Bag material
8. Design flow rate
9. Efficiency rating at design capacity
10. Acceptable pressure drop
11. Acceptable silo/baghouse pneumatic loading pressure

B. Observations and Maintenance

Daily or when Baghouse in use:

1. Bag pressure drop
2. Gas flowrate: direct method preferred; indirect method acceptable
3. Gas temperature, inlet and outlet
4. Bag cleaning conditions:
 - Pulse: Air pressure
 - Shake: shaker motor current
5. Bag cleaning cycle:
 - Shake: duration, frequency, and delay periods
 - Reverse: duration, frequency, and delay periods
6. Observed silo/baghouse pneumatic loading pressure

Weekly

1. Check cleaning mechanism moving parts
2. Inspect fans for corrosion and material build-up
3. Check all drive belts and chains for wear and tension
4. Check all hoses and clamps
5. Check accuracy of all indicating equipment
6. Inspect housing for corrosion

Quarterly

1. Inspect baffle plate for wear
2. Thoroughly inspect bags
3. Check duct for dust build-up
4. Observe damper valves for proper seating
5. Check gaskets on all doors
6. Inspect paint
7. Check screw conveyor flighting

C. Spare Parts List

1. List all spare parts required to be on-site.

Catalina Yachts
Twice Daily Cleaning and Checking of Bag House
Seprataire ® Centrifugal Air / Matter Separator with after Filter

<u>Component</u>	<u>Check For</u>	<u>Comments</u>
1.	Check all bags to make sure they are fully inflated	<hr/> <hr/>
2.	Check each of 3 collection boxes. If full, remove and clean	<hr/> <hr/> <hr/>
3.	Run shaker motor 1 minutes before cleaning each collection box	<hr/> <hr/> <hr/>

Person performing inspection

Date

Catalina Yachts
Twice Daily Cleaning and Checking of Bag House
Seprataire ® Centrifugal Air / Matter Separator with after Filter

<u>Component</u>	<u>Check For</u>	<u>Comments</u>
1.	Check all bags to make sure they are fully inflated	<hr/> <hr/>
2.	Check each of 3 collection boxes. If full, remove and clean	<hr/> <hr/> <hr/>
3.	Run shaker motor 1 minutes before cleaning each collection box	<hr/> <hr/> <hr/>

Person performing inspection

Date

Catalina Yachts
Weekly Inspection Report
Seprataire ® Centrifugal Air / Matter Separator with after Filter

<u>Component</u>	<u>Check For</u>	<u>Comments</u>
1.	Check shaker motor, shaker shaft and connections to shaker motor	<hr/> <hr/> <hr/>
2.	Check both fans for corrosion, make sure bearings are O.K. by moving fan back and forth	<hr/> <hr/> <hr/>
3.	Check all hose and clamps to make sure they are tight	<hr/> <hr/>
4.	Check housing for any holes from corrosion	<hr/> <hr/>

Person performing inspection

Date

Catalina Yachts, Morgan Division
Quarterly Inspection Report
Sepratairc® Centrifugal Air/Matter Separator with After Filter

<u>Component</u>	<u>Check For</u>	<u>Comments</u>
Bags	Worn, abraded, damaged bags; improper bag tension; loose, damaged or improper bag connections	_____ _____ _____ _____
Dust Removal System	Worn bearings, loose mountings, deformed parts, worn or loose drive mechanism, proper lubrication	_____ _____ _____ _____
Baghouse structure	Loose bolts, cracks in welds; cracked, chipped or worn paint; corrosion.	_____ _____ _____ _____
Ductwork	Corrosion, holes, external damage, loose bolts, cracked welds, dust buildup	_____ _____ _____ _____
Fan	Proper mounting, proper lubrication	_____ _____ _____ _____
Doors	Worn, loose, damaged or missing seals; proper tight closing	_____ _____ _____ _____

Person performing inspection

Date

THE Seprataire

Centrifugal Air/Matter Separator

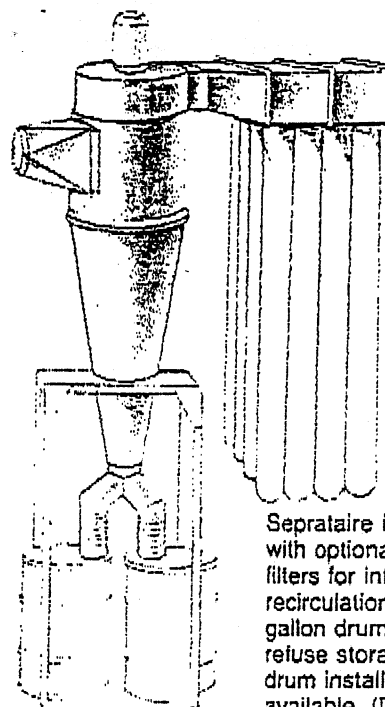
(with hi-efficiency "cyclonic" capacity)

There are six (6) Seprataire models of varying high performance capacities and low horsepower requirements. Each is designed to control high velocity air/matter intake, provide maximum separation efficiency, and collect and dispense foreign materials.

The conical Seprataire also deposits contaminants into a base container prior to exposure to the fan, thereby virtually eliminating fan blade wear and "fine" build up.

Seprataire installations are flexible, and various options are available to satisfy environmental and operational needs. Exhaust air, for example, can be vented outside, or further filtered for indoor recirculation.

Call toll free for further details and consultation about the Seprataire . . . the premier air/matter separators with verified ratings and guaranteed performance.



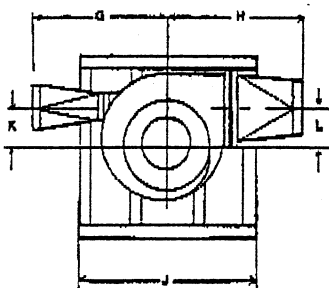
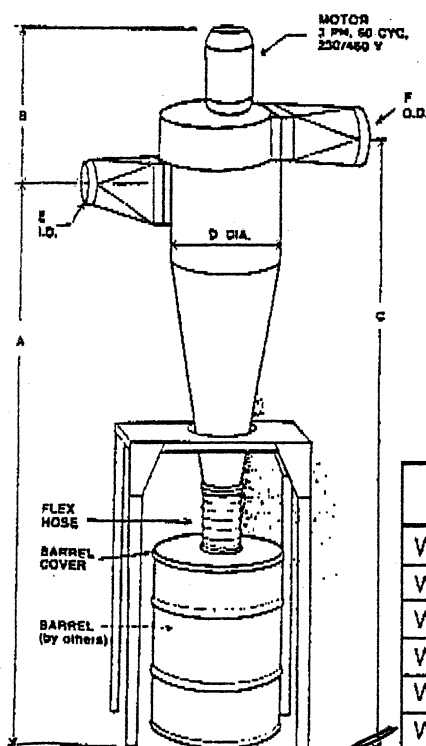
Seprataire illustrated with optional after filters for interior air recirculation. Single 55-gallon drum is standard refuse storage. Twin-drum installation available. (Drums not included)

STANDARD UNIT

Includes single drum package collector, fan, support legs, a 3600 RPM, TEFC, 230/460, 3 phase, 60 Hz motor, and necessary accessories.

OPTIONS

Twin Drum Package (for twin drum storage) • After-filter applications • Dust drawer • After-filter Enclosure • Manual and motor shaker • All required accessories. (elbows, bags, clamps, hoses, etc.)



Model No.	CFM	HP	A	B	C	D	E	F	G	H	J	K	L
W16-2	1200	2	89 3/4	21 3/4	96 1/2	16	6	8	25	21	32 1/4	6	8 1/4
W20-3	2000	3	99	25	107 1/2	20	8	10	25	23	32 1/4	7 1/2	8 1/4
W20-5	2500	5	99	27	107 1/2	20	8	10	25	25	32 1/4	7 1/2	8 1/2
W24-7 1/2	3500	7 1/2	110 3/4	26 1/4	121 1/2	24	10	12	29	25	32 1/4	9	9 3/4
W30-10	4500	10	127 3/4	35 1/4	141 1/4	30	12	14	34	36	42 1/4	11	11 1/4
W30-15	5500	15	127 3/4	38 1/4	141 1/4	30	12	14	34	36	42 1/4	11	11 1/4



W. C. WIEDENMANN & SON, INC.

875 N. JAN-MAR COURT, OLATHE, KS 66061 • 913-782-4900 • FAX 913-782-5423

JUN 25 10 12:48 PM CENTRAL FLA TESTING 8133832222 TO 90487383 P.03

RECEIVING

W. C. WIEDENMANN & SON, INC. (WCW) equipment has been carefully prepared for shipment after inspection at the factory and barring damage in transit, should be in perfect condition upon arrival.

When a carrier signs the WCW bill of lading, the carrier accepts the responsibility for any subsequent shortages or damage evident or concealed and any claim must be against the carrier by the purchaser. Evident shortage or damage should be noted on the carrier's delivery document before signature of acceptance. Inspection by the carrier of damage evident or concealed must be requested. After inspection, issue a purchase order for necessary parts or arrange for return of the equipment to WCW factory for repair.

STORAGE

If the unit is not to be installed promptly, store it in a dry location with bearings, shafts and motors protected against moisture, dust, corrosion and physical damage. DO NOT STORE OUTDOORS.

SAFETY PRECAUTIONS

The equipment which you have purchased includes a fan that is a rotating piece of equipment and can become a source of danger to life or cause injury if not properly applied. Personnel who operate this equipment, or those who will perform maintenance thereon, must be given this bulletin to read and warned of the potential hazards of this equipment:

This bulletin contains general recommendations, but specific requirements may apply to the individual installation. Such requirements are outlined in federal, state and local safety codes. Strict compliance with these codes, and strict adherence to these installation instructions are the responsibility of the user.

INSTALLATION

Inspect the equipment for correctness and condition. If any discrepancies are found, contact your local WCW representative immediately for assistance.

Assemble the legs to the unit using the bolts, nuts and washers provided. Set in position and securely anchor the unit to the foundation.

Install the flexible hose between the hopper discharge and the barrel cover, then secure using the screw clamps provided.

Check the fan wheel for free rotation by hand. Connect the unit into the piping of the system.

START-UP

The fan wheel has been previously checked for free rotation.

Start the fan with the motor to check proper rotation. If the wheel is turning in the wrong direction, reverse motor rotation.

Start the fan and allow unit to reach full speed, then shut down. During this short period, check for vibrations or any unusual noise. If any are observed, locate the cause and correct.

OPERATION & MAINTENANCE

Should excessive vibration develop, check the following possibilities: (1) Buildup of dirt or foreign matter on wheel, (2) Bolts on housings loose, (3) Check wheel set screws, (4) Vibration may be coming from a source other than the fan. Stop the fan and determine if the vibration still exists, (5) Proper clearance between the wheel and inlet.

Empty barrel at regular intervals. Never let barrel get over 2/3 full, if this occurs dust and chips will travel to filter unit or will be exhausted from cyclone if it does not have a filter.

On units with after filter bags periodically shake bags to dislodge collected fine material on the inside of the filter bags. Shut cyclone motor off before shaking and wait for dust to settle before starting up. Do not allow dust to fill up into the filter tubes since this will reduce the overall system efficiency.

The barrel cover comes with a gasket, which creates an air-tight seal to a good concentric barrel with roll bead. If the gasket should be damaged, the dust will not settle properly into the barrel and will be carried to the filters and reduce the units suction capacity.

DO NOT run the motor more than a few minutes until the ductwork is connected to the cyclone and DO NOT run the motor with the barrel cover off or the motor will be overloaded.

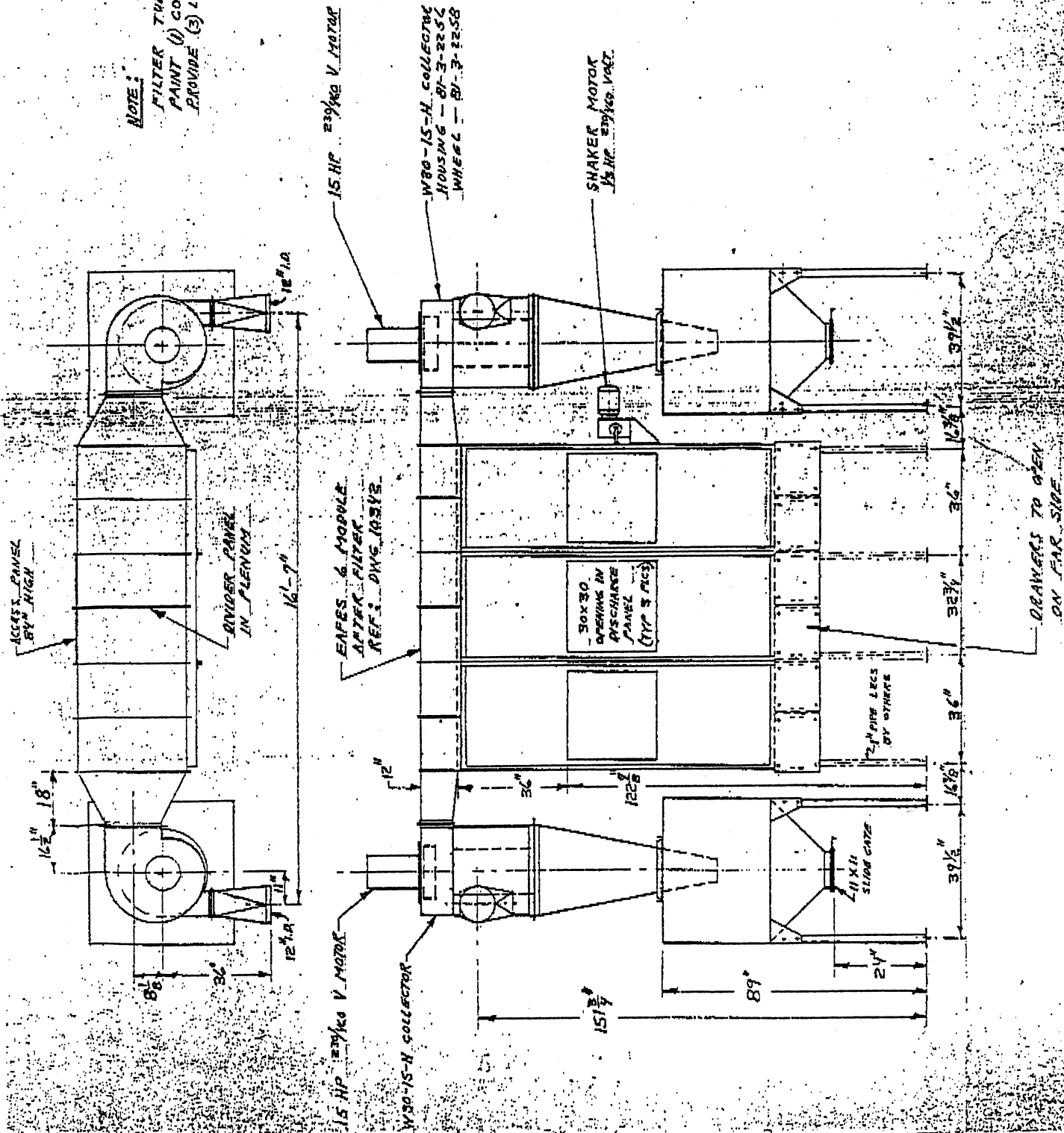
Under normal operating conditions, filter bags should be replaced every three (3) to four (4) years. Damaged bags should be replaced as necessary.

SPARE PARTS

Spare or repair parts may be ordered from your local WCW representative by giving the part name, (wheel, shaft, bearing, etc.) and the UNIT SERIAL NUMBER TAKEN from the nameplate.

NOTE:

FILTER TUBES BY OTHERS
PAINT (1) COAT MACHINE GREY
PROVIDE (3) LOOSE FLANGES 30K30.1A 14-11-48 L



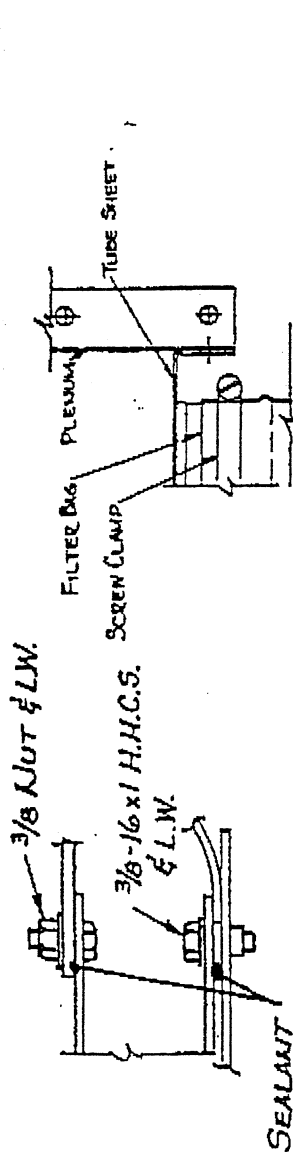
CHARGE	DATE	BY	REMARKS
C	7/10/50	42	ASSEMBLY (WHEEL RING) 11/1
B	7/10/50	52	REMOVED SURFACE COAT 11/1
A	6/10/50	52	DRINKING WATER TO BACK LINE

DOUBLE CYCLONE & AFTER FILTER	
DICK BENNETT CO.	
FOR	
MORGAN YACHT CO.	
ST. PETERSBURG FLORIDA	

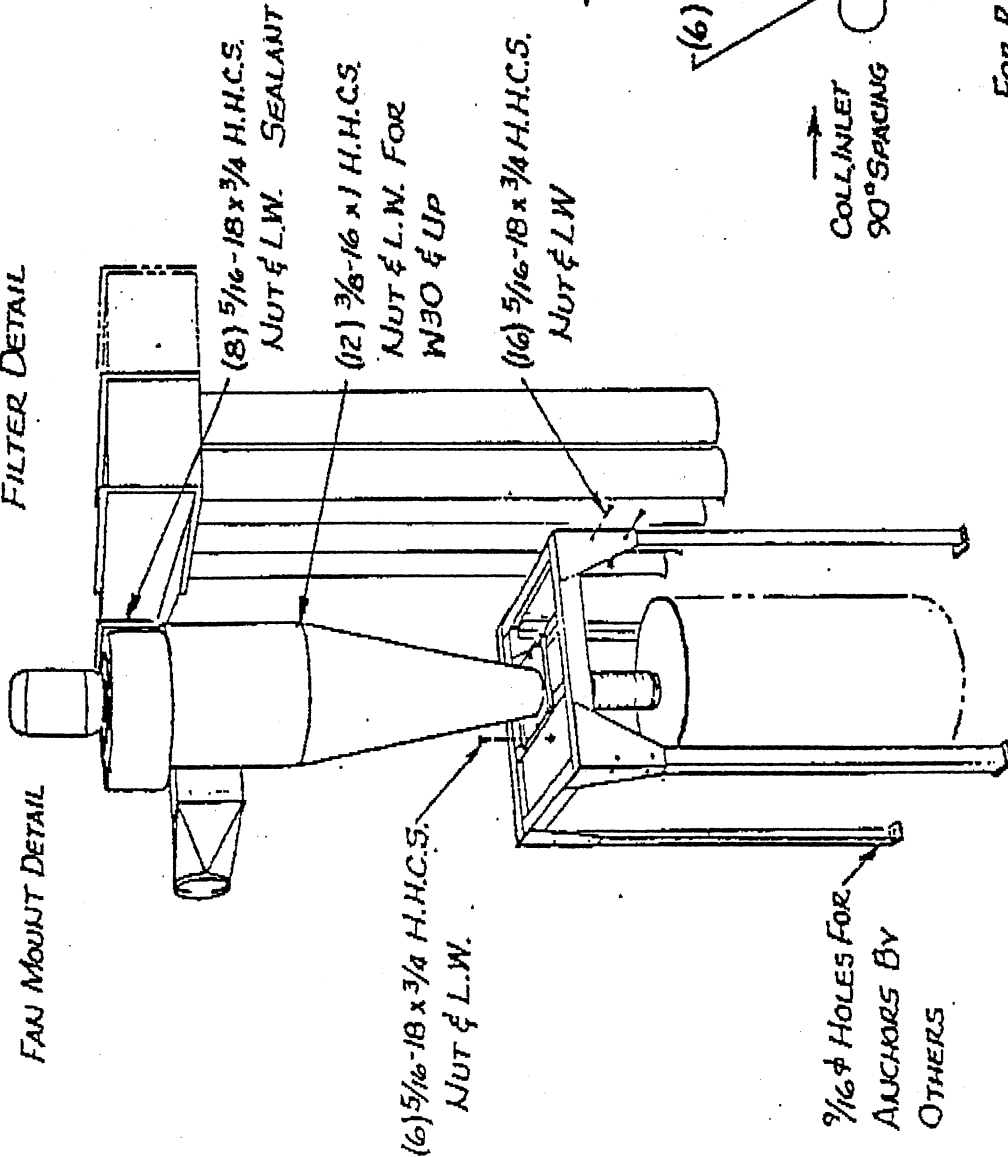
W. C. WIDENMANN & SON, INC.	11/1
DUST & AIR POLLUTION CONTROL	11/1
KANSAS CITY, MISSOURI	11/1

INSTRUCTIONS:

1. ASSEMBLE LEGS & COLLECTOR SUPPORT & SECURE TO FLOOR. SET COLLECTOR IN SUPPORT IN ANY OF 4 POSITIONS, BOLT SECURELY.
2. SET FAN HOUSING ON COLLECTOR BODY IN ANY OF 8 POSITIONS-EXCEPT NOT OVER INLET FITTING. ACCESS TO THESE BOLTS IS THRU FAN DISCHARGE OPENING. APPLY SEALANT AS NOTED IN SKETCH DETAIL. CHECK THAT INLET CONE IS CENTERED ON FAN WHEEL.
3. ON "255" UNITS, APPLY SEALANT TO FLANGE OF WYE FITTING & SECURE TO TAILINGS OUTLET OF COLLECTOR.
4. ASSEMBLE FLEX TUBE TO COLLECTOR OR WYE FITTING OUTLET & BARREL COVER, SECURE WITH SCREW CLAMPS.
5. APPLY SEALANT TO FLANGES & ASSEMBLE AFTER FILTER INLET, PLENUM, TUBE SHEET & END COVER, BOLT SECURELY. CAUTION-PROVIDE ADEQUATE SUPPORT TO PLENUM-THE FAN WILL NOT CARRY LOAD ALONE.
6. INSTALL FILTER BAGS OVER COLLARS ON TUBE SHEET & RETAIN WITH SCREW CLAMPS.
7. THE BAGS MAY BE EMPTIED THRU ZIPPER IN BOTTOM OF BAG.
8. CONNECT MOTOR TO ELECTRICAL SUPPLY IN ACCORDANCE WITH LOCAL CODES THAT APPLY. CHECK TO SEE MOTOR IS TURNING CLOCKWISE, LOOKING FROM MOTOR TO FAN.



FILTER DETAIL



For R255 Application

INSTALLATION INSTRUCTIONS FAN / COLLECTOR AFTER FILTER

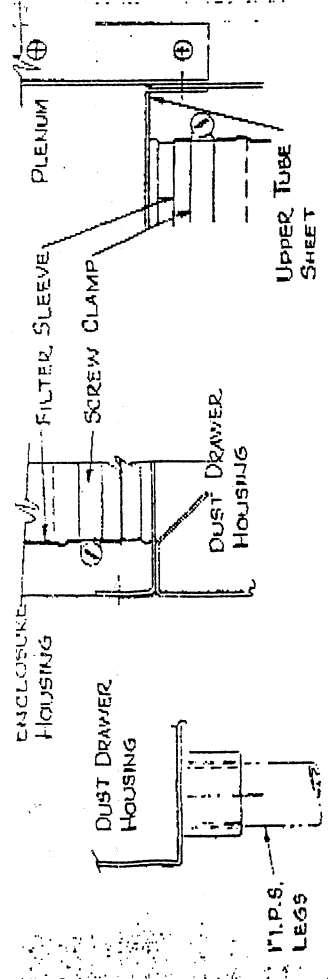
W. C. WEDERBURN & SON, INC.
DUST & AIR POLLUTION CONTROL
FARMALL CITY, IOWA

Post-it™ brand fax transmittal memo 7671

To	Brian Jaccett
Co.	CFL
Dept.	
Fax #	
Phone #	
Fax #	

of pages >

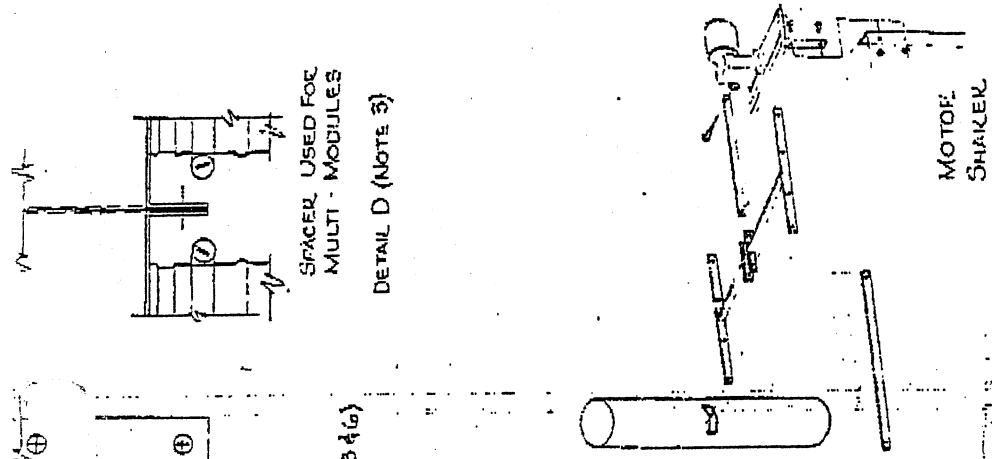
UNITS MAY BE ASSEMBLED
OPPOSITE HAND IF DESIRED



DETAIL A (NOTE 1)

DETAIL B (NOTE 2 & 6)

DETAIL C (NOTE 3 & 6)



- INSTRUCTIONS FOR ENCLOSURE AFTER FILTER
1. ASSEMBLE PIPE LEGS (8) (AFTERS) TO DUST DRAWER HOUSING.
 2. SET ENCLOSURE HOUSING OVER TOP FLANGE OF DUST DRAWER HOUSING & SECURE WITH BOLTS & NUTS.
 3. SET UPPER TUBE SHEET IN PLACE INSIDE OF HOUSING & PLENUM ON OUTSIDE OF HOUSING. APPLY A GOOD BEAD OF SEALANT BETWEEN FLANGES & SECURE WITH BOLTS & NUTS. NOTE - WHEN SEVERAL MODULES ARE ASSEMBLED TOGETHER, USE SPACER BETWEEN TUBE SHEETS.
 4. ATTACH INLET FITTING TO PLENUM & DUST-WORK OR FAN. APPLY A GOOD BEAD OF SEALANT BETWEEN FLANGES & SECURE WITH BOLTS & NUTS.
 5. INSTALL FILTER SLEEVES OVER COULURES OF UPPER & LOWER TUBE SHEETS & RETAIN WITH SCREW CLAMPS. BOLT SHAKER BAR TO GROMMET ON SLEEVES.
 6. INSTALL MANUAL CRANK OR GEAR MOTOR & SLIDER. TWENTY SHAKER BOLT LINKS, CHECK SHAKER FEMME FOR FREE OPERATION.
 7. APPLY A GOOD BEAD OF SEALANT TO FLANGES OF PLENUM. INSTALL END COVER ON PLENUM. ATTACH HOUSING ACCESS PANELS WITH SCREWS PROVIDED.

CHART	DATE	BY	REMARKS
AFTER FILTER HOUSING INSTALLATION INSTRUCTIONS USE WITH FAN/COLLECTOR INSTRUCTION SHEET			
W. C. WIDENHAIN & SONS, INC.	DUST & AIR POLLUTION CONTROL KANSAS CITY, MISSOURI		
10/65	10/65		