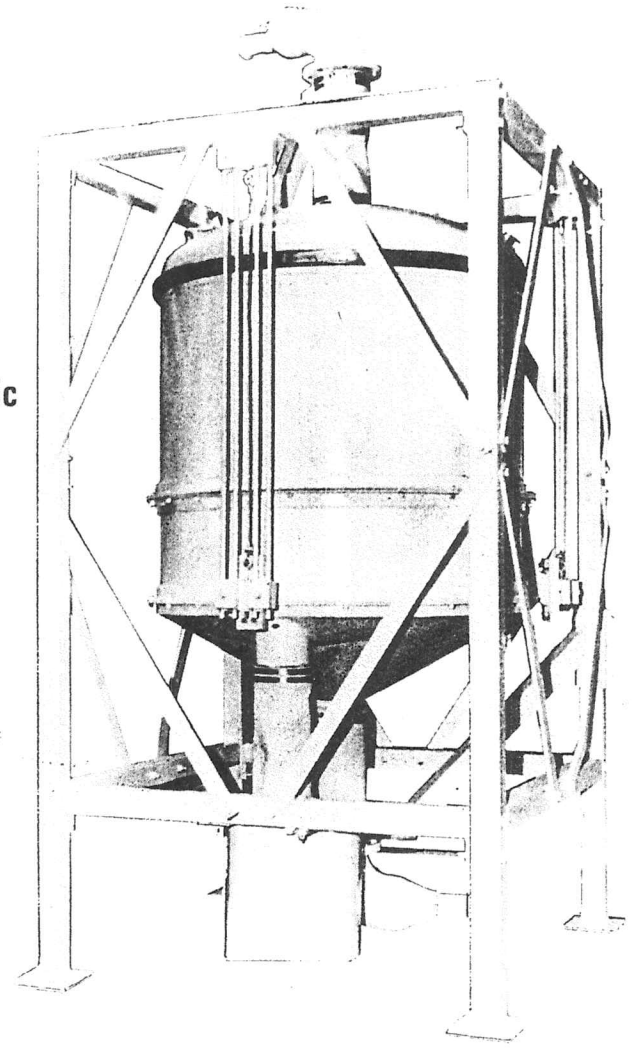
INSTRUCTIONS MANUAL

PNEUMATIC

FREE SWINGING

JET INLINE SIFTER

The Original Pneumatic Jet Sifter.



PROTECTIVE SIFTING DURING PNEUMATIC CONVEYING

MODEL _____

SERIAL _____

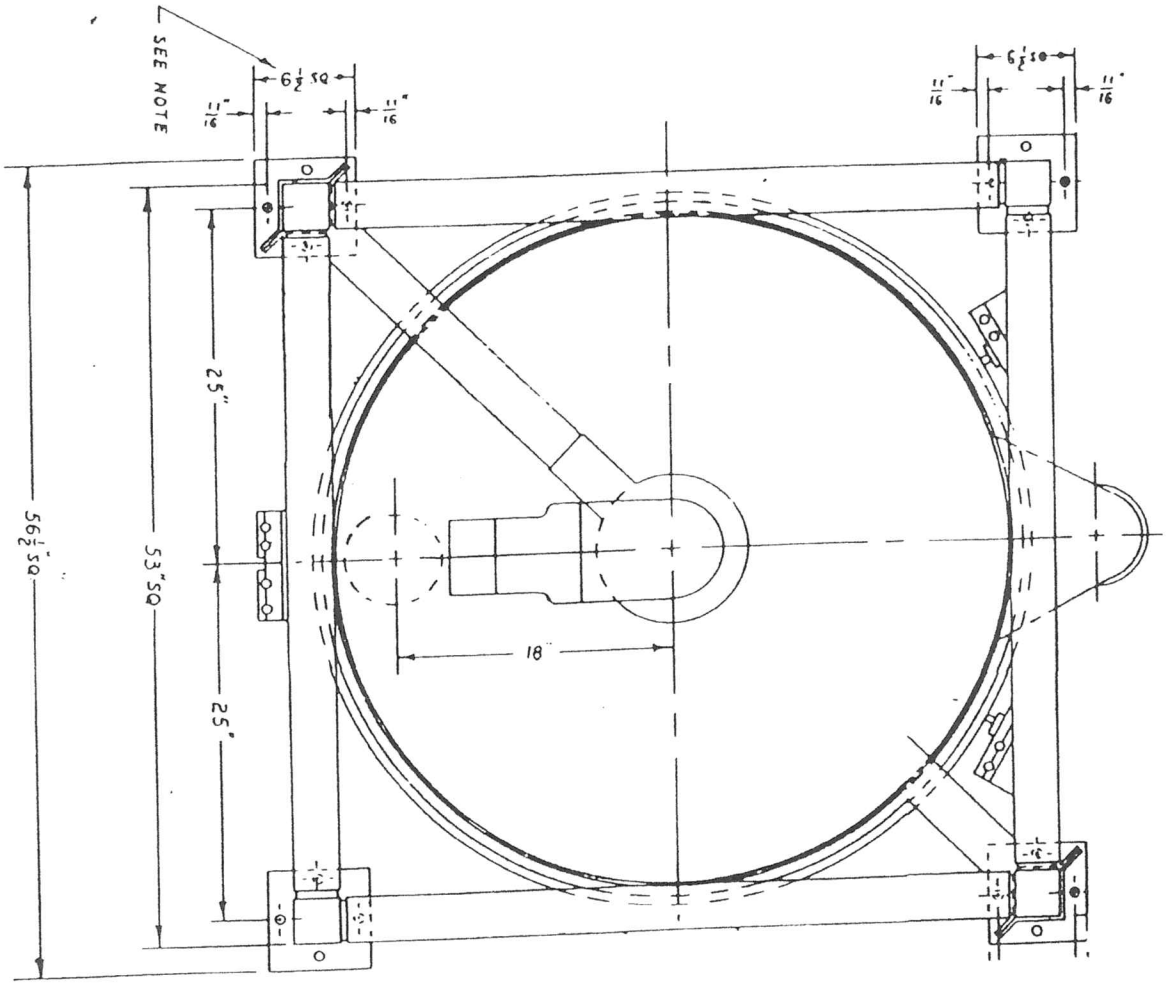
MOTOR 1 HP

JET SIFTER DIMENSIONS

PLAN VIEW ALL SIZES

DRAWING NO.104-100-002

NORVELL
COMPANY INCORPORATED
Fort Scott, KS 66701 USA



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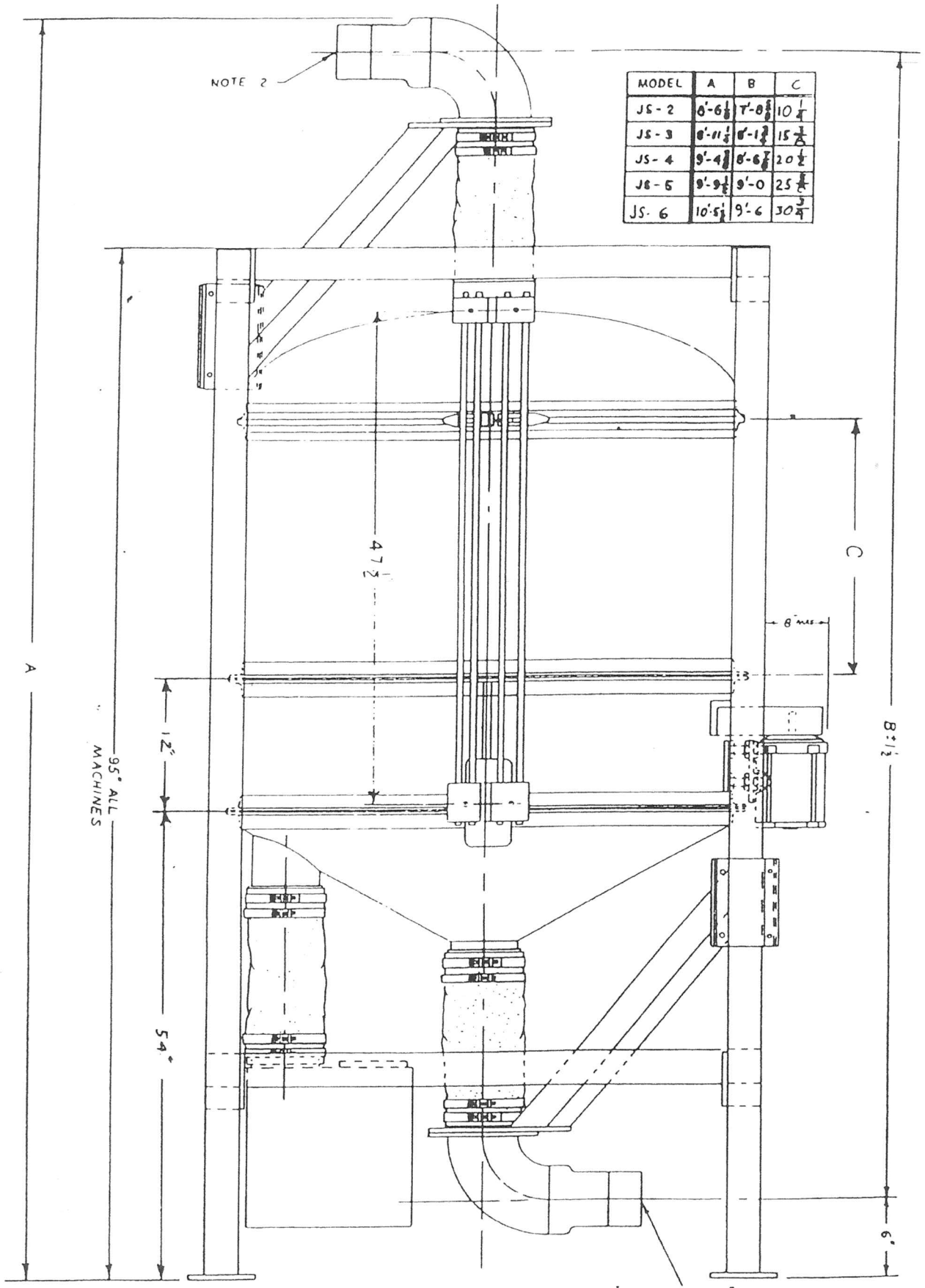
	DESIGNED BY SMCO	DRAWN BY PM	
	APPROVED BY	CHECKED BY	
	SCALE 2"=1'0"	DATE 9-17-96	
JET PNEUMATIC SIFTER	DRAWER NO. 127	DRAWING NO. 104-100-002	



MODEL	A	B	C
JS-2	6'-6 1/8	7'-8 5/8	10 1/4
JS-3	8'-11 1/8	8'-1 3/4	15 1/4
JS-4	9'-4 3/8	8'-6 7/8	20 1/2
JS-5	9'-9 1/4	9'-0	25 3/4
JS-6	10'-5 1/8	9'-6	30 1/4

	DESIGNED BY SMCO	DRAWN BY PM
	APPROVED BY	CHECKED BY
JET PNEUMATIC SIFTER	SCALE 2"-1'0"	DATE 9-17-76
	DRAWING NO. 127	DRAWING NO. 107-100-001

DRIG. DATE:	
DRAWN BY:	
CAD DWG. 1/27/98	
DRAWN BY: RLS	
SCALE: NO SCALE	
NO. JETISO2	

DESCRIPTION:
JET SIFTER
ISOMETRIC FLOW DIAGRAM

NORVELL
COMPANY INCORPORATED
FORT SCOTT, KANSAS

FREE SWINGING ALL METAL JET SIFTER

INSTALLATION

FRAMEWORK ASSEMBLY

SIFTER SHOULD BE UNCRATED AND EITHER BLOCKED OR HOISTED UP TO OPERATING HEIGHT.

UNCRATE TUBULAR SIFTER HANGING FRAME AND ASSEMBLE FRAME AROUND THE SIFTER.

MAJOR FRAME PIECES ARE MATCH-MARKED TO AID IN ASSEMBLY. "C" & "D" LEGS GO TO THE REAR WITH "A" & "B" LEGS TO THE FRONT.

THE SIFTER MOTOR IS TO THE REAR OF THE FRAME.

NECESSARY NUTS, BOLTS, WASHERS, ETC. ARE IN THE FIELD KIT PACKED INSIDE THE STEEL OVERS CONTAINER.

FRAME SHOULD FIRST BE ERECTED WITH ALL BOLTS & NUTS "HAND TIGHT". AFTER ALL BOLTS ARE IN PLACE, THEY SHOULD BE TIGHTENED BY WRENCH.

HANGING SIFTER

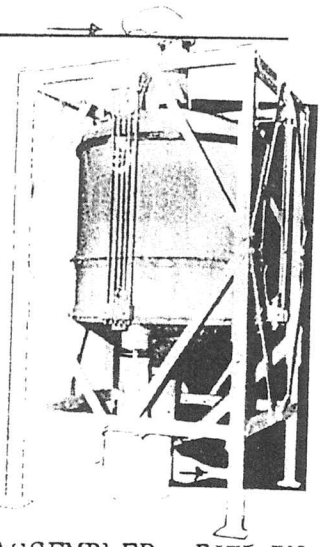
WITH THE SIFTER BLOCKED OR HOISTED INTO OPERATING HEIGHT, FIRST INSTALL THE 3 SAFETY CABLES. THE SHORT CABLE EYE-BOLTS GO AT THE TOP AND SHOULD BE SCREWED INTO TAPPED BLOCK AND LOCKED IN PLACE WITH JAM NUTS. CLOCKWISE TURN NUTS ON LOWER EYE-BOLTS UNTIL SIFTER IS 1/4" ABOVE ITS OPERATING HEIGHT.

AT THIS HEIGHT, INSTALL THE 12 HICKORY REEDS, AND CLAMP AND BOLT.

CAUTION BE SURE TO PROTECT REEDS FROM ANY SHARP EDGES OF CLAMPS BY INSERTING THE THIN NEOPRENE GASKETS PROVIDED FOR THIS PURPOSE. THE GASKET SHOULD BE "SANDWICHED" BETWEEN THE REEDS AND THE CLAMPS.

NOTE THE REED CLAMPS SHOULD BE DRAWN UP TIGHT AT THE TOP. HOWEVER, DRAW THE BOTTOM CLAMPS UP JUST TIGHT ENOUGH SO THAT THERE IS A SLIGHT CLAMPING PRESSURE ON THE REEDS BUT THE WEIGHT OF THE SIFTER WILL ALLOW ITSELF TO SLIDE DOWN THE REEDS A FRACTION AS CABLES ARE LOOSENED DURING THE LEVELING PROCESS. THIS PROCEDURE STRETCHES THE REED EQUAL TO EACH OTHER AVOIDING UNEQUAL REED CLAMPING POSITIONS WHICH CAUSES AN OVAL OPERATING CIRCLE.

JET SIFTER



SHIPPING-RECEIVING INSTRUCTIONS

YOUR JET SIFTER WAS COMPLETELY ASSEMBLED, RUN-IN, AND TESTED AT THE FACTORY PRIOR TO SHIPMENT TO INSURE YOUR SIFTER IS PERFECTLY BALANCED AND OPERATING AT THE CORRECT SPEED AND CIRCLE. AFTER AN INSPECTION TEST RUN CHECKING FOR PERFECT OPERATING CONDITION, YOUR JET SIFTER WAS TURNED OVER TO THE CARRIER FOR DELIVERY.

UPON RECEIPT OF SHIPMENT, IT IS SUGGESTED THAT EACH ITEM OF YOUR JET SIFTER BE CHECKED OVER CAREFULLY. IF ANY SHIPPING DAMAGE IS DISCOVERED, IMMEDIATELY CALL IT TO THE ATTENTION OF THE CARRIER AND NOTE THE DAMAGE ON THE BILL OF LADING. THIS PRECAUTION WILL AVOID LEGAL CONTROVERSY WHEN CLAIM OF DAMAGE IS FILED WITH THE CARRIER BY THE PARTY RECEIVING THE SHIPMENT.

HANDLING INSTRUCTIONS

COMPONENT DATA

THE JET SIFTER HAS BEEN SHIPPED TO YOU IN TWO (2) CRATES AS FOLLOWS:

CRATE NO. 1 HEAVY DUTY TUBULAR STEEL FRAMEWORK FROM WHICH THE SIFTER WILL BE SUSPENDED UPON ASSEMBLY AT CUSTOMER'S PLANT.

CRATE NO. 2

- 1 - ALL METAL SIFTER COMPLETE WITH ENCLOSED DRIVE AND ONE (1) 1.0 HP, 230/460 VOLT, 3 PH, 60 CYCLE MOTOR.
- 1 - SET OF STACKED SIEVES (IN SIFTER) COMPLETE WITH WIRE CLOTH AND CLEANERS.
- 1 - STEEL OVERS CONTAINER WITH SIGHT GLASS DOOR.
- 3 - SPECIAL PRESSURE STOCKINGS WITH 12 CLAMPS.
- 2 - INLET AND OUTLET ELBOW SUPPORT BRACKETS.
- 2 - STEEL ELBOWS W/REDUCER TO CONNECT TO CUSTOMER'S PNEUMATIC LINE.
- 1 - FIELD KIT W/ALL NUTS, BOLTS, WASHERS FOR ASSEMBLY USE.
- 12 - 5/8" DIAMETER X 4'0" LONG HICKORY REEDS W/CLAMPS.
- 1 - INSTRUCTION MANUAL.

SHIPPING CRATES SHOULD BE MOVED INTO ERECTION AREA PRIOR TO UNCRATING.

INSTALLATION

FOR PROTECTIVE SIFTING DURING PNEUMATIC CONVEYING

LEVELING THE SIFTER

WITH SIFTER HANGING ON SAFETY CABLES 1/4" ABOVE OPERATING HEIGHT AND BOTTOM REEDS HAND-TIGHT, YOU ARE READY TO LEVEL THE SIFTER.

A ROUND BUBBLE-TYPE LEVEL IS FACTORY INSTALLED ON THE SIDE OF THE SIFTER DRIVE HOUSING FOR LEVELING PURPOSES. NO OTHER LEVELING DEVICE IS REQUIRED.

REMOVE COVER OVER BUBBLE WHEN LEVELING SIFTER.

WITH BOTTOM REED CLAMPS HAND-TIGHT, SLOWLY LOWER THE SIFTER BY COUNTER CLOCKWISE LOWERING THE NUTS ON BOTTOM CABLE EYE-BOLTS. PROGRESS FROM ONE CABLE TO ANOTHER AROUND THE SIFTER UNTIL SIFTER IS AT PROPER OPERATING HEIGHT AND THE BUBBLE-LEVEL INDICATES A PERFECTLY LEVEL POSITION.

IN THIS POSITION, TIGHTEN THE BOTTOM REED CLAMPS WITH WRENCH. LOOSEN LOWER CABLE EYE-BOLT NUTS COUNTER CLOCKWISE SLIGHTLY SO THAT ENTIRE WEIGHT OF SIFTER IS NOW SUSPENDED ON THE 12 HICKORY REEDS. CABLES WILL NOW BE USED ONLY TO ACT AS SAFETY CABLES IN CASE OF DAMAGE TO REEDS DURING OPERATION. ALSO CABLES CAN BE USED WHENEVER LEVELING AGAIN DURING REED REPLACEMENT OR ADJUSTMENT.

AT THIS POINT, PHYSICALLY CHECK THAT THE WEIGHT OF SIFTER IS EQUALLY DISTRIBUTED ON THE THREE (3) SETS OF REEDS AND ALSO THAT THE SIFTER IS STILL LEVEL ON INSPECTION OF THE BUBBLE.

IF ANY REEDS ARE LOOSE, OR NOT CARRYING THEIR LOAD EQUALLY, RAISE THAT SIDE OF SIFTER 1/4" ABOVE OPERATING HEIGHT AGAIN AND RE-LEVEL AS NOTED ABOVE, WITH A SLIGHTLY TIGHTEN CLAMP SLIDING PRESSURE ON THE REEDS AS THAT SIDE OF SIFTER IS LOWERED BACK INTO LEVEL POSITION.

INSTALLATION

MOTOR AND DRIVE

MOTOR, SHEAVES, AND V-BELTS ARE FACTORY INSTALLED WITH PROPER V-BELT TENSION. IF, FOR ANY REASON MOTOR IS REMOVED IN THE FIELD, THE V-BELTS SHOULD BE HELD IN PLACE WITH CLAMPS SO THEY DO NOT FALL OUT OF GROOVES OF INTERIOR DRIVE WHEEL. IF BELTS ARE ALLOWED TO COME OFF DRIVE WHEEL, THE SMALL UPPER DRIVE INSPECTION STEEL COVER WILL HAVE TO BE REMOVED TO LOCATE BELTS IN THE GROOVES OF THE DRIVEN SIFTER SHEAVE.

EXTERNAL WIRING

SIFTER IS PROVIDED SO THAT MOTOR LEADS ARE MADE UP IN FIELD TO SUIT CUSTOMER VOLTAGE REQUIREMENTS. NO STARTER IS SUPPLIED. THE MOTOR IS ATTACHED TO AND SWINGS FREELY WITH THE SIFTER AND IT MUST BE WIRED BY CUSTOMER WITH A FLEXIBLE CORD CONNECTOR. THE FACTORY SUGGESTS A FLEXIBLE RUBBER CORD FROM ABOVE ATTACHED SECURELY TO ONE OF THE WOOD REEDS AS A SATISFACTORY WAY TO BRING POWER TO THE SWINGING MOTOR. THE CORD TAPED TO THE WOOD REED WILL GIVE THE FLEXIBILITY REQUIRED WITHOUT LETTING THE CORD WHIP DURING GYRATION CAUSING IT FATIGUE. WHEN CONNECTING TO CUSTOMER POWER SOURCE, BE SURE SIFTER ROTATES AS PER DIRECTION PROVIDED BY ARROW.

OVERS CONTAINER DRUM

THE STEEL OVERS CONTAINER (BOLTS TO THE LOWER FRONT CROSS PIECE OF THE STEEL FRAME STAND. MOUNT CONTAINER SO THAT THE ROUND INLET IS DIRECTLY BELOW THE CORRESPONDING OUTLET OF THE SIFTER ABOVE. THE TRANSPARENT PORT-HOLE OR SIGHT GLASS SHOULD BE TIGHTLY CLOSED DURING OPERATION.

NOTE WHERE A 1/4" PIPE NIPPLE IS WELDED INTO THE TOP OF THE OVERS CONTAINER. THIS CAN BE USED AS A PRESSURE TAP TO SENSE A PRESSURE DROP IN THE SIFTER. THIS MAY BE DESIRABLE TO SHUT OFF FEED IN CASE OF SUDDEN PRESSURE DROP FOR SOME REASON. WHEN NOT USED, THIS PRESSURE TAP SHOULD BE PLUGGED.

INLET & OUTLET ARRANGEMENTS

THE INLET & OUTLET ELBOW BRACKETS MAY BE BOLTED TO ANY OF THE FOUR (4) FRAMEWORK LEGS. THE FLANGED STEEL ELBOWS BOLT TO THE MATING FLANGES ON THE MOUNTING BRACKETS. THE MULTIPLE HOLE FLANGES ALLOWS CUSTOMER TO APPROACH AND LEAVE THE SIFTER FROM ANY DIRECTION WITH HIS PNEUMATIC PIPING.

INSTALLATION

INLET & OUTLET ARRANGEMENTS

ADJUST THE ELBOW MOUNTING BRACKETS UP OR DOWN UNTIL THERE IS 12" BETWEEN THE STOCKING ATTACHMENTS ON THE TOP AND BOTTOM OF THE SIFTER.

THE COMBINATION NYLON-RUBBER SPECIAL STOCKINGS ARE 16" LONG AND ARE TO BE INSTALLED ON SIFTER INLET AND TWO (2) OUTLETS SO THEY OVERLAP THE METAL STUBS 2" ON EACH END. FIRMLY ATTACH WITH DOUBLE SCREW CLAMPS ON EACH END OF THE STOCKING.

STOCKINGS SHOULD BE INSTALLED WITH NO SLACK FOR BEST SIFTER OPERATION. LOOSE FITTING STOCKINGS MAY CREATE PROBLEMS WHEN SIFTER OPERATES UNDER PRESSURE.

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WHEN MOUNTING THE STOCKING INSERT A 2" WIDE CLOSE SPORE 1/8" RUBBER BETWEEN CLAMP AND THE STOCKING. THIS WILL AID IN REDUCING WEAR TO THE PORTION OF THE STOCKING HELD BY THE CLAMP.

KEEP A MINIMUM OF SPACE BETWEEN THE END OF THE OUTLET STUB WHEN CLAMPING THE STOCKING. THIS WILL AVOID STOCK BUILDING UP AND CAUSING WEAR BETWEEN THE END OF THE OUTLET FLANGE AND THE SIFTER STOCKING.

SIEVES

SIEVES ARE FLOWED AND STACKED IN THE SIFTER AND ARE FULLY CLOTHED PER SPECIFICATION, WITH CLEANERS INSTALLED. SIEVES NEED NOT BE REMOVED EXCEPT FOR INSPECTION PURPOSES. WHEN REMOVING SIEVES, CARE SHOULD BE TAKEN SO AS NOT TO DAMAGE THE SEAL STRIPS ON THE BOTTOMS, OR THE WIRE MESH ON THE TOP SIEVE.

REPLACING THE SIEVES

THE SIEVE LOCKING DEVICE IN BACK CHANNEL SHOULD BE LOOSENED PRIOR TO REMOVING SIEVES AND RE-TIGHTENED AFTER THEY ARE REPLACED. THIS INSURES AGAINST SIEVES MOVING DURING OPERATION.

BE SURE SIEVES GO BACK INTO THE UNIT IN PROPER SEQUENCE. USE THE METAL SIEVE GUIDES PROVIDED TO PROTECT THE SIEVE CORNER SEAL INSIDE THE DRUM.

SIFTER START-UP

YOUR SIFTER SHOULD BE STARTED UP FIRST UNDER NO PRODUCT LOAD AND RUN IN THIS MANNER FOR 10 TO 15 MINUTES. DIRECTION OF ROTATION ON MOTOR SHEAVE IS CLOCKWISE AS VIEWED FROM ABOVE. AFTER SHORT RUN-IN PERIOD, CHECK ALL REED CLAMP BOLTS FOR TIGHTNESS. THIS SHOULD ALSO BE DONE ROUTINELY THE FIRST FEW WEEKS OF OPERATION UNTIL YOU ARE SATISFIED THERE IS NO FURTHER INITIAL ADJUSTMENT NECESSARY.

AFTER RUNNING SIFTER WITH NO LOAD, START IT UP WITH PRESSURE SYSTEM IN OPERATION BUT NO PRODUCT LOAD AND OBSERVE SIFTER OPERATION. IF SIFTER ACTION APPEARS ERRATIC AND SIFTER IS NOT SWINGING A TRUE CIRCLE, THE STOCKINGS ARE PROBABLY TOO SLACK. REMOVE SLACK FROM STOCKINGS, TIGHTEN ALL STOCKING CLAMPS AND RE-RUN SIFTER. WHEN YOU ARE SATISFIED THAT SIFTER IS OPERATING PROPERLY, THEN INTRODUCE PRODUCT LOAD.

NOTE BE SURE THAT PRODUCT FEEDER IS NOT FEEDING HIGHER THAN THE SPECIFIED CAPACITY OF THE SIFTER AS A CHOKE WILL POSSIBLY OCCUR. AFTER SIFTER HAS BEEN CHECKED OUT FOR OPERATING ON STREAM AT RATED CAPACITY, YOU ARE READY TO PUT IT INTO FULL OPERATION.

SIFTER OPERATIONAL PROTECTION

PRESSURE

CUSTOMER SHOULD PROVIDE ALL POSSIBLE PROTECTION FOR THE SIFTER. THE POSITIVE PRESSURE PNEUMATIC SYSTEM SHOULD BE EQUIPPED WITH POP-OFF VALVE TO INSURE THAT THE SYSTEM DOES NOT EXCEED THE PRESSURE FOR WHICH IT IS DESIGNED. Normal pressures of 3 to 8 psi gauge.
maximum 15 psi gauge.

OVERLOAD

PRODUCT FEEDER SHOULD BE OPERATED IN SUCH A MANNER THAT THE SIFTER CANNOT BE LOADED IN EXCESS OF IT'S SPECIFIED RATED CAPACITY.

PURGING SYSTEM

ON SYSTEM SHUT-DOWN, THE AIR PUMP AND SIFTER SHOULD RUN FOR A PERIOD OF TIME AFTER THE PRODUCT FEED HAS BEEN SHUT OFF TO PURGE THE PNEUMATIC LINE AND SIFTER OF PRODUCT. THIS WILL PREVENT UNNECESSARY SIFTER CHOKES AND LINE PLUGGING ON NEXT START-UP. IT MAY TAKE ONE TO THREE MINUTES FOR THE SIFTER TO COMPLETELY EMPTY ITSELF DEPENDING ON FLOW RATE.

JET SIFTER

HOW TO BETTER SERVICE YOUR JET SIFTER

REMOVE MOISTURE FROM UNIT BEFORE START UP & AVOID HUMIDITY PROBLEMS.

JET SIFTERS SHOULD BE RUN FOR 15 MINUTES WITH AIR FLOWING THRU UNIT BEFORE MACHINE IS LOADED WITH PRODUCT. THIS WILL PREVENT MESH APPERATURES FROM COATING OVER.

EMPTY OUT THE UNIT ON SHUT DOWN & AVOID PLUGGING MESHES.

JET SIFTERS SHOULD BE EMPTIED OUT OF PRODUCT AT THE END OF EACH OPERATION AND THE SIFTER BE ALLOWED TO OPERATE WITH THE AIR FLOWING THRU IT FOR APPROXIMATELY 15 MINUTES.

TIGHTEN MESH CLOTHING TO ELIMINATE SAGGING.

MESH CLOTHING WILL STRETCH FROM TIME TO TIME WHENEVER UNDUE AMOUNT OF PRESSURE OR PRODUCT CAUSES IT TO STRETCH. TAKE OUT STRETCH AND SAG --- KEEP TIGHT. SIFTER WILL RUN 35% UNDER CAPACITY WHENEVER THE UNITS' CLOTHING IS ALLOWED TO SAG.

MESH APPERATURES NOT BEING CLEANED PROPERLY.

CHECK CLEANERS LOCATED BENEATH THE TOP MESH AND THE BACKING WIRE. THEY MAY BE WORN DOWN. NOTE IF SAGGING CLOTH IS PREVENTING CLEANERS FROM WORKING ACTIVELY IN CLEANING CLOTH. TIGHTEN MESH CLOTHING, REPLACE CLEANERS WHERE NECESSARY.

WIRE MESH OR CLOTHING MAYBE COATED OVER.

TAKE A HARD BRISTLE BRUSH AND CLEAN THE CLOTHING FREQUENTLY. THIS SERVICE IS DEPENDENT ON THE TYPE PRODUCT THE UNIT IS HANDLING, AND THE FAT CONTENT WITHIN THE PRODUCT.

SHOULD SIFTER NOT BE OPERATING UP TO REQUIRED SPEED

TO OBTAIN PROPER SIFTING EFFICIENCY OF THE JET SIFTER IT IS NECESSARY THAT THE PROPER RPM SPEED OF THE SIFTER BE MAINTAINED. OCASSIONALLY, MOISTURE, HEAT, OR OTHER CONDITIONS CAUSES V-BELTS TO STRETCH AND THIS IN TURN CAUSES THE SIFTER TO SLOW DOWN. THE STRETCH TAKE-UP UNIT ON THE JET SIFTER DRIVE ALLOWS FOR CORRECTION. TIGHTEN UP THE BELT SLACK WITH THE PROVIDED BELT TAKE UP ARRANGEMENT AND BRING SIFTER UP TO PROPER SPEEDS.

NOTE: AVOID SHORT INTERVALS OF OPERATION. KEEP SIFTER RUNNING.

EMPTYING OVERS CONTAINER

THE STEEL OVERS PRODUCT CONTAINER MUST BE EMPTIED PERIODICALLY. FREQUENCY WILL DEPEND ON PERCENTAGE OF OVERTAIL PRODUCT IN CUSTOMER'S SYSTEM. OPTIMUM SYSTEM PROTECTION CAN BE PROVIDED BY EQUIPING THIS CONTAINER WITH A PRODUCT LEVEL INDICATOR THAT WILL AUTOMATICALLY SHUT OFF FEED PRODUCT WHEN CONTAINER IS FULL. THIS DEVICE CAN ALSO SIGNAL PLANT PERSONNEL, BY A BUZZER OR LIGHT, THAT THE CONTAINER NEEDS TO BE EMPTIED. THIS DEVICE IS OPTIONAL EQUIPMENT AND IS NOT STANDARD WITH UNIT FURNISHED.

SIFTER STOCKINGS

STOCKINGS SHOULD BE CHECKED ROUTINELY FOR EXCESSIVE WEAR AND REPLACED WHEN INNER LAYER OF NYLON CANVAS STARTS WEARING THROUGH. FAILURE OF ONE OF THE PRESSURE STOCKINGS DURING OPERATION WILL MAKE SYSTEM INOPERATIVE AND PRODUCT WILL BE BLOWN INTO ROOM AREA UNTIL FEED IS SHUT OFF. A PRESSURE TAP AT THE OVERS CONTAINER IS A GOOD PLACE TO DETECT A SUDDEN DROP IN PRESSURE FOR ANY REASON. AN AUXILIARY PRESSURE SWITCH TO SENSE A SUDDEN PRESSURE DROP CAN BE PROVIDED BY CUSTOMER WHICH CAN AUTOMATICALLY SHUT OFF PRODUCT FEED IF DESIRED.

WOOD REEDS PROPER MAINTENANCE AND INSTALLATION

INSTALLATION

SUSPEND THE SIFTER ON THE STEEL CABLES AND LEVEL. INSTALL THE WOOD REEDS AND TORQUE THE BOLTS TO 60 LBS. EACH. USING A SMALL HAMMER, GIVE EACH PAD A SHARP RAP.. ON EACH SIDE - JUST ENOUGH TO ASSURE THAT THE REEDS ARE SEATED PROPERLY IN THE GROOVES. FINALLY, TORQUE EACH BOLT AT 80 TO 100 FT. LBS. LOOSEN CABLES SO THERE IS NO LOAD ON THE CABLES, MAKING SURE THE CABLES DON'T HIT THE REEDS AND SIFTER IS READY TO GO.

MAINTENANCE

CHECK REED CLAMPS FOR TIGHTNESS AFTER 40 HRS. THEN CHECK ABOUT EVERY 200 HOURS OF OPERATION. HEAT OR COLD MAY CAUSE CONTRACTION OR EXPANSION OF THE CASTINGS OR THE REEDS WHICH MIGHT ALLOW THE REEDS TO SLIP OUT OF THEIR HOLDING POSITION UNLESS CHECKED UNDER NORMAL MAINTENANCE AND CARE. REPLACE REEDS THAT ARE BROKEN OR CRACKED IMMEDIATELY.

BEARING & V-BELT INSTALLATION

A. INSTALL NEW LOWER BEARING (ITEM 16 AND SAFETY WIRE CAP SCREW (ITEM 15)
B. INSTALL DRIVE WHEEL AND DRIVE SHAFT (ITEM 14)
C. TIGHTEN (2) SET SCREW IN BEARING (ITEM 16)
D. CONNECT GREASE LINE TO LOWER BEARING
E. INSTALL NEW V-BELT (ITEM 13)
F. INSTALL BEARING BRACKET AND TIGHTEN (6) CAP SCREW (ITEM 10)
G. TIGHTEN (2) SET SCREW IN TOP BEARING
H. CONNECT GREASE LINE TO UPPER BEARING
I. TIGHTEN V-BELT (ITEM 13 BY THE MOTOR MOUNT (ITEM 17)
J. INSTALL NEW GASKET MATERIAL 3/16 X 1-1/2 WIDE CLOSE CELL ON HOUSING COVER (ITEM 9 BE SURE TO SEAL ALL BUTT JOINTS AND EDGES TO KEEP GASKET FROM LEAKING. WITH HIGH GRADE CONTACT CEMENT
K. INSTALL HOUSING COVER (ITEM 9) USING NEW LOCK SEAL WASHER
L. CLEAN SIEVE HOUSING BEFORE INSTALLING SIEVES
M. INSTALL SIEVES (ITEM 6) AND TIGHTEN ALL CLAMPS
N. INSTALL O-RING (ITEM 5)
O. INSTALL DOME (ITEM 3) MAKING SURE ARROW ON DOME AND SIEVE HOUSING LINE UP
P. INSTALL CLAMP (ITEM 4) BE SURE THE SPACING BETWEEN DOME AND HOUSING IS EQUAL. TIGHTEN CLAMP, BE SURE CLAMP IS EVENLY TIGHTENED AROUND HOUSING.
Q. INSTALL CLAMP AND CONNECT STOCKING (ITEM 1 & 2) TO DOME (ITEM 3)
R. SIFTER IS READY FOR STARTING AND OPERATING.

LUBRICATION

GREASE ZERKS ARE PROVIDED ON OUTSIDE REAR OF SIFTER NEAR MOTOR FOR CONVENIENCE IN LUBRICATING DRIVE BEARINGS.

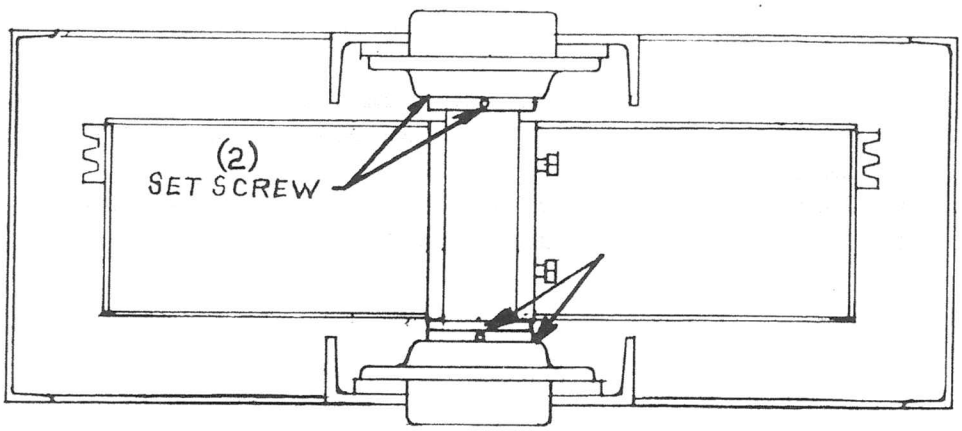
THESE BEARINGS SHOULD BE LUBRICATED EVERY ONE TO TWO MONTHS. RECOMMENDED LUBRICANT BE MOBILUX EP#1 OR EQUIVALENT. THIS IS THE ONLY LUBRICATION NECESSARY.

BEARING & V-BELT REMOVABLE
(CAUTION POWER SUPPLY MUST BE OFF
TOP BEARING & V-BELT)

A. LOOSEN AND REMOVED STOCKING (ITEM 1) FROM DOME (ITEM 3)
B. LOOSEN DOME CLAMP (ITEM 4), AND REMOVE DOME
C. LOOSEN SIEVES HOLD DOWN CLAMP, AND REMOVED SIEVES (ITEM 6)
D. LOOSEN V-BELT, BY BACKING OFF ADJUSTABLE MOTOR MOUNT (ITEM 17)
E. REMOVING DRIVE HOUSING COVER (ITEM 9)
F. DISCONNECT GREASE LINE FROM TOP BEARING (ITEM 11)
G. LOOSEN (2) SET SCREW IN BEARING.
H. REMOVE (6) SOCKET HEAD CAP SCREW (ITEM 10) FROM BEARING BRACKET (ITEM 12)
I. LIFT OUT BEARING & BRACKET ASSEMBLY (ITEM 11 & 12)
J. REMOVE V-BELTS (ITEM 13)

FOR REMOVING LOWER BEARING

K. DISCONNECT GREASE LINE FROM LOWER BEARING (ITEM 16)
L. LOOSEN (2) SET SCREW IN BEARING
M. LIFT OUT DRIVE WHEEL AND DRIVE SHAFT ASSEMBLY (14)
N. REMOVE BEARING FROM HOUSING BY REMOVING (4) CAP SCREW (ITEM 15)
O. REMOVED OLD GASKET MATERIAL AND CLEAN HOUSING.
P. CHECK SPRINGS IN DRIVE WHEEL (ITEM 14)



COUNTER WEIGHT SPRING REPLACEMENT

CONDITION OF COUNTERWEIGHT SPRINGS CAN BE DETERMINED BY INSPECTION THROUGH INSPECTION PLATE . IF REPLACEMENT IS NEEDED, REMOVE TOP DRIVE COVER . IT IS SUGGESTED THAT SPRINGS BE REPLACED IN SETS AND NOT ONE AT A TIME.

HOW TO BETTER SERVICE YOUR JET SIFTER

REMOVE MOISTURE FROM UNIT BEFORE START UP & AVOID HUMIDITY PROBLEMS.

JET SIFTERS SHOULD BE RUN FOR 15 MINUTES WITH AIR FLOWING THRU UNIT BEFORE MACHINE IS LOADED WITH PRODUCT. THIS WILL PREVENT MESH APPERATURES FROM COATING OVER.

EMPTY OUT THE UNIT ON SHUT DOWN & AVOID PLUGGING MESHES.

JET SIFTERS SHOULD BE EMPTIED OUT OF PRODUCT AT THE END OF EACH OPERATION AND THE SIFTER BE ALLOWED TO OPERATE WITH THE AIR FLOWING THRU IT FOR APPROXIMATELY 15 MINUTES.

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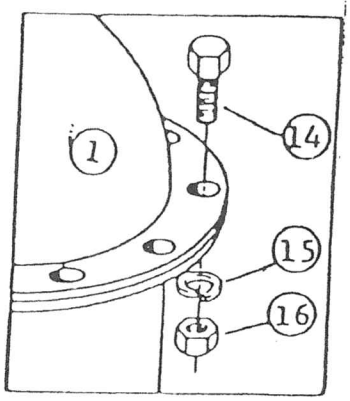
NOTE: AVOID SHORT INTERVALS OF OPERATION. KEEP SIFTER RUNNING.

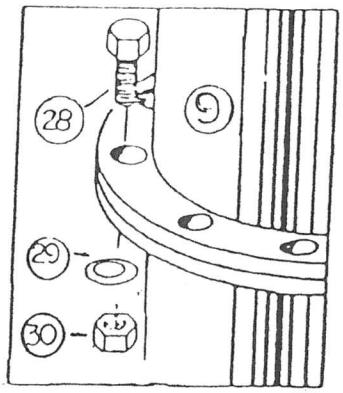
norvell

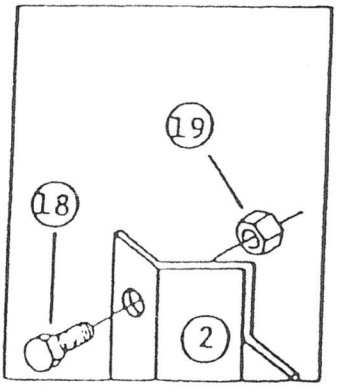
JET SIFTER

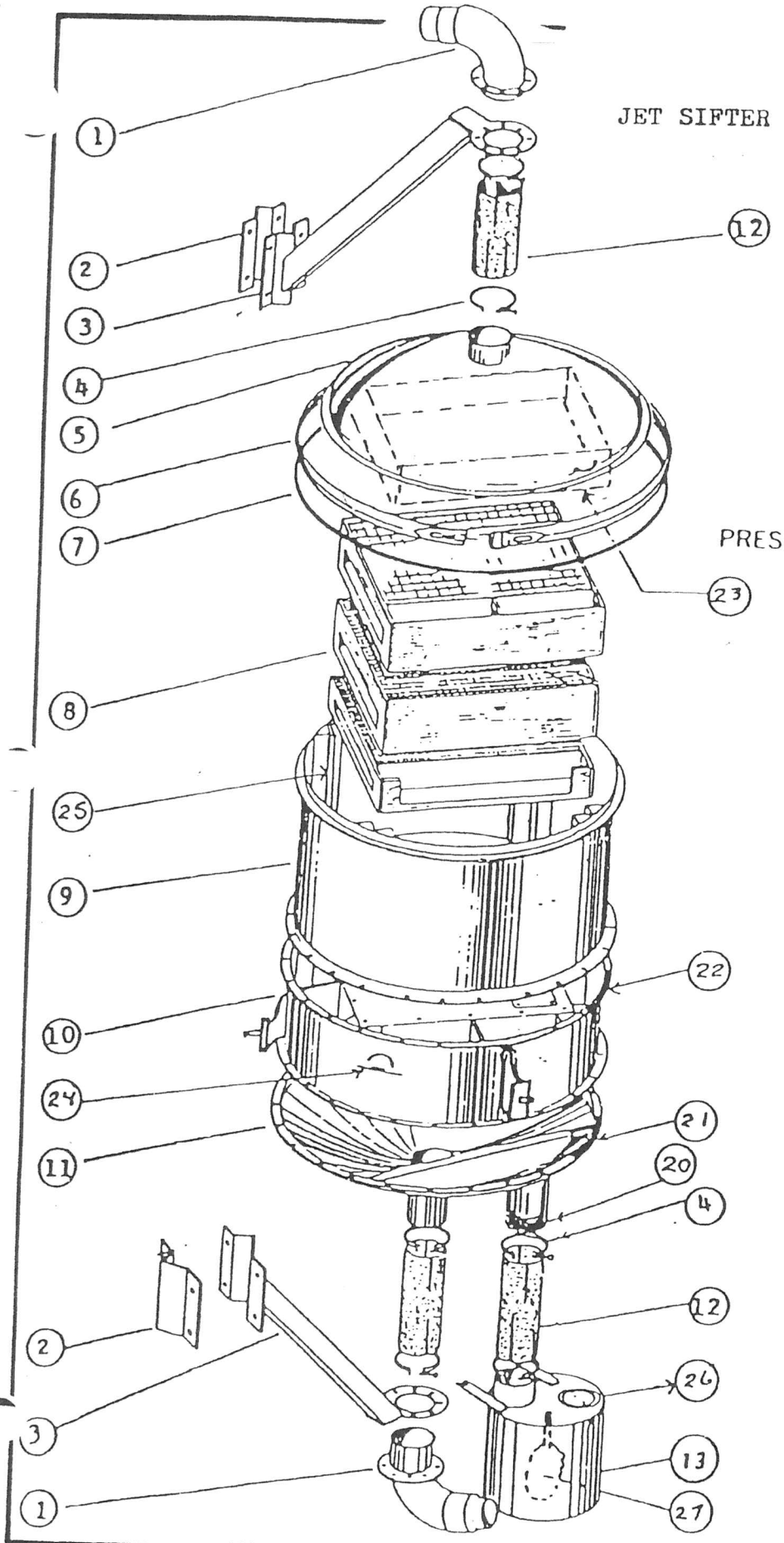


DRAWING NO.1

PRESSURE TANK ASSEMBLY







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Norvell Company, Inc.
All Metal Pressure Jet Sifter
Price sheet - effective July 1, 2008

For parts drawing No. 1

Item	Description	Quantity	Item Number
1	Elbows	2	104-600-003
2	Support clamps	2	104-400-013
3	Elbow supports	2	104-400-012
4	1/2" stocking clamps	6	104-600-001
5	"Old-Style" Pressure Head Dome	1	104-201-002
5	"New-Style" Pressure Head Dome	1	104-201-002
6	Pressure Head Dome Clamp Ring	1	104-207-002
	T-Bolt and Trunnion for Clamp Ring	1	104-207-003
7	Pressure Head Dome O-Ring (gasket)	1	104-207-001
8	Top Sieve, less cloth & cleaners	1	104-203-004
8	2nd Sieve, less cloth & cleaners (center)	1	104-203-006
8	3rd Sieve, less cloth & cleaners (center)	1	104-203-006
8	Vented Sieve, less cloth & cleaners	1	104-203-008
8	Bottom Sieve, less cloth & cleaners	1	104-203-010
9	Sieve Housing JS - 3	1	104-202-004
9	Sieve Housing JS - 4	1	104-202-006
9	Sieve Housing JS - 5	1	104-202-008
9	Sieve Housing JS - 6	1	
10	Drive Housing Assembly	1	104-300-001
11	Bottom Hopper	1	104-205-002
12	Jet Sifter Stocking w/ Stocking Cover	3	104-600-002
12	Jet Sifter Stocking Rubber Boot	3	107-200-021
12	Jet Sifter Stocking Cover, only	3	107-200-022
13	Complete Overs Bucket with Port & Lens	1	104-206-001
14	Cap screw 3/8" - 16 x 1 1/2"	16	107-200-001
15	Lock washer 3/8"	16	107-200-002
16	Hex nuts 3/8" - 16	64	107-200-003
17	Cap screw 3/8" - 16 x 1 1/2"	48	107-200-004
18	Cap screw 1/2" - 13 x 2 1/4"	8	107-200-005
19	Hex Nut 1/2" - 13	8	107-200-006
20	Stocking gasket 1/4" x 2" x 21 3/4"	6	107-200-007
21	Gasket, drive to hopper 3/8" x 1 1/2"	1	107-200-008
22	Gasket, sieve to drive 3/8" x 1 1/2"	1	107-200-009
23	Gasket, dome to sieve 3/4" x 1" x 31-1/2"	4	107-200-010
24	Bubble leveling gauge	1	107-200-011
24	Bubble level guard	1	107-200-012
25	Sieve channel gasket 3/8"x2"x8'	6	107-200-013
25	Sieve channel gasket 3/8"x2"x10 1/2'	6	107-200-014
25	Sieve channel gasket 3/8"x2"x13'	6	107-200-015
25	Sieve channel gasket 3/8"x2"x15 1/2'	6	107-200-023
26	Overs Bucket Inspection Port w/ Lens & Seal	1	107-200-016
26	Overs Bucket Inspection Port Lens	1	107-200-017
26	Overs Bucket Inspection Port O-Ring	1	107-200-018
27	Overs Bucket Breather Sock	1	107-200-019
	Complete drive housing with counter		
	weight, shaft, lead and bearing	1	107-200-020
28	Cap screw, 3/8" x 1 1/2"	48	107-200-066
29	Flat washer 3/8"	48	107-200-067
30	Fiber stop nuts 3/8"	48	107-200-068

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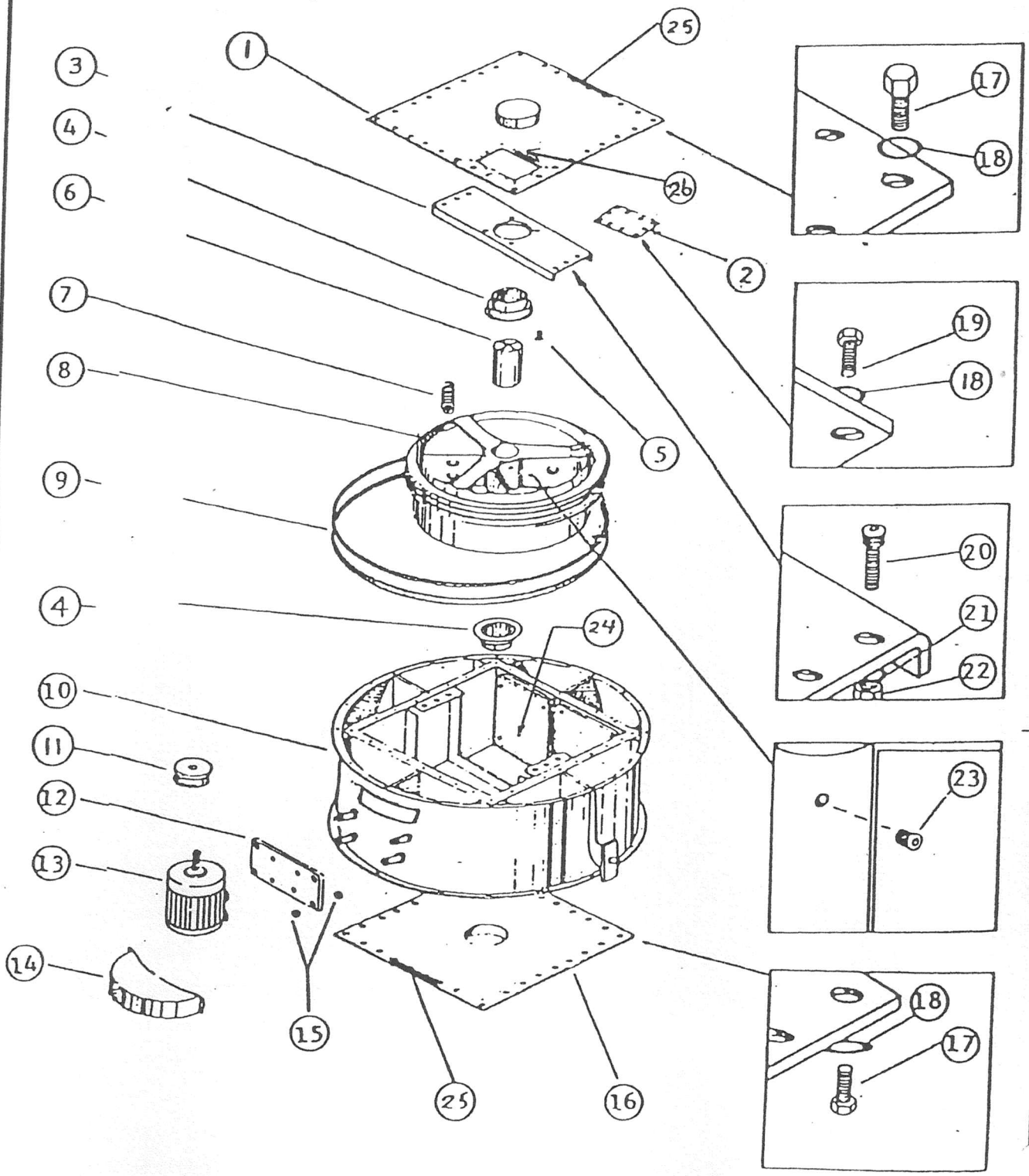
DRAWING NO. 2

DRIVE ASSEMBLY

JET SIFTER



Norvell Company, Inc.
Jet Sifter Drive Assembly
Price sheet - effective July 1, 2008

For parts drawing No. 2

Item	Description	Quantity	Item Number
1	Housing cover with seal	1	104-303-001
2	Inspection Plate	1	104-303-002
3	Bearing Bracket 104-302-002	1	104-304-002
4	Bearing - FCB 22439H	2	104-304-001
5	Cap screw 1/2" - 20 thread x 1-1/2"	8	107-200-023
6	Shaft, 2-7/16" diameter x 13-7/8" long	1	104-301-001
7	Springs	3	104-305-001
8	Drive Wheel Assembly	1	104-306-002
9	V-Belts B-105	2	104-305-003
	V-Belts I Banded	1	
10	Drive Housing	1	104-302-003
11	Sheave 5/8" x PD 2B-4-2	1	104-305-002
12	Motor Mount	1	104-303-004
13	1-1/2 Horsepower Explosion-Proof Motor	1	104-500-001
14	V-Belt Guard	1	104-303-005
15	Hex nut 3/4" - 10	8	107-200-024
16	Housing Bottom	1	104-303-003
17	Socket-Head Cap Screws, 5/16" x 3/4"	78	107-200-025
18	Rubber Lock Seal Washer, 5/16"	78	107-200-026
19	Socket-Head Cap Screws, 5/16" x 3/4"	10	107-200-025
20	Socket-Head Cap Screws, 1/2" x 1 1/2"	6	107-200-028
21	Lock Washer 1/2"	6	107-200-029
22	Hex nut 1/2" - NC	6	107-200-030
23	Set Screws 5/8" - 11 x 1 1/4"	2	107-200-031
24	Counterweights	6	107-200-032
25	Gasket for Top **OR** Bottom Cover Plate		
	of Drive Housing, 3/8" x 1-1/2" x 186"	1	107-200-033
26	Gasket for Small Inspection Plate on Top		
	Dust Cover, 3/8" x 1-1/2" x 28"	1	106-200-060

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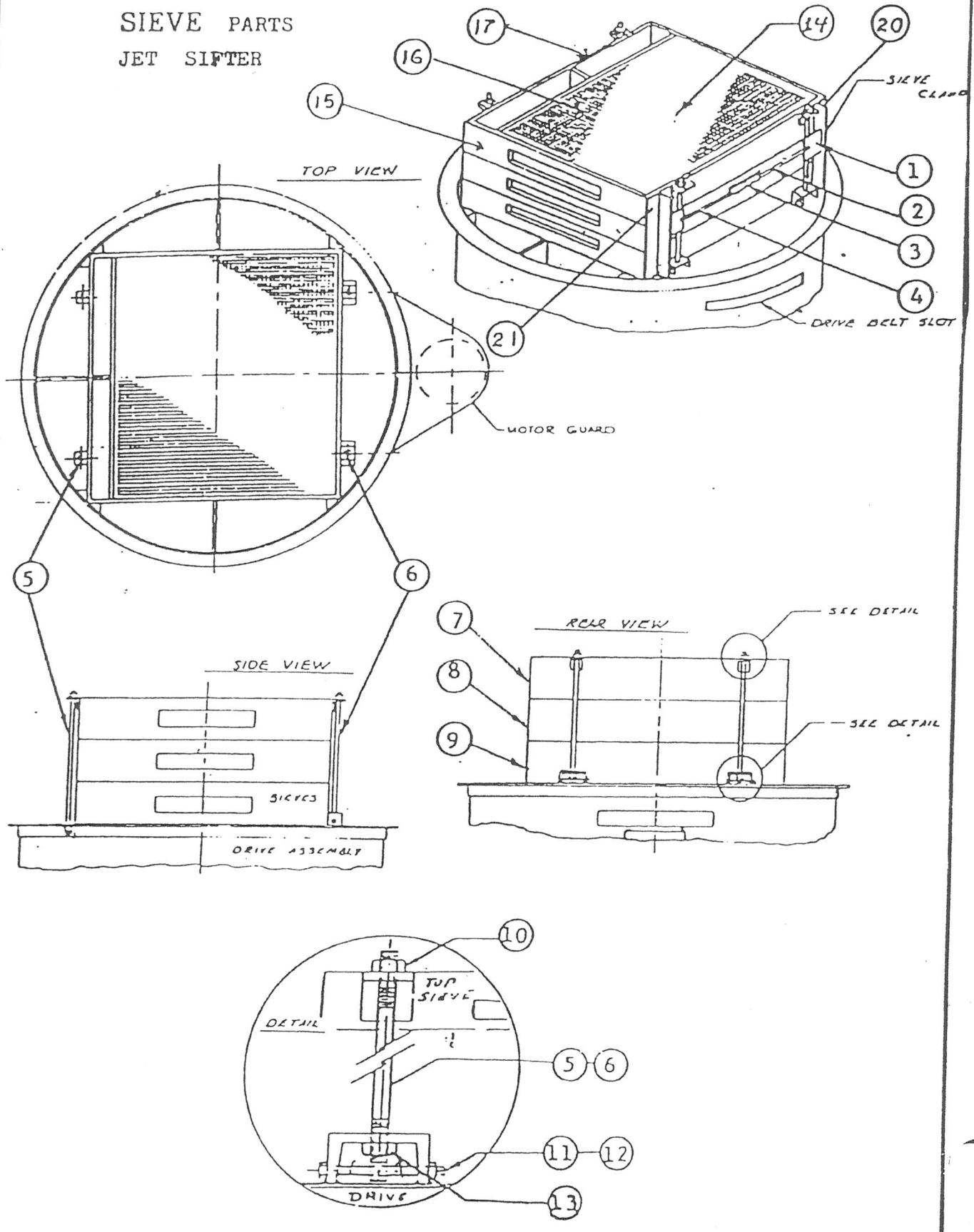
DRAWING NO. 3

SIEVE PARTS
JET SIFTER



Norvell Company, Inc.
Jet Sifter Sieve Parts
Price sheet - effective July 1, 2008

For parts drawing No. 3

Item	Description	Quantity	Item Number
1	Sieve angle clamp JS - 2	2	104-204-014
1	Sieve angle clamp JS - 3	2	104-204-015
1	Sieve angle clamp JS - 4	2	104-204-016
1	Sieve angle clamp JS - 5	2	104-204-017
1	Sieve angle clamp JS - 6	2	
2	Adjusting Screw; Right Hand	1	104-204-018
3	Turnbuckle	1	104-204-020
4	Adjusting screw; Left Hand	1	104-204-019
5	Front sieve hold down rod JS - 2	2	104-204-002
5	Front sieve hold down rod JS - 3	2	104-204-004
5	Front sieve hold down rod JS - 4	2	104-204-006
5	Front sieve hold down rod JS - 5	2	104-204-008
5	Front sieve hold down rod JS - 6	2	
6	Rear sieve hold down rod JS - 2	2	104-204-003
6	Rear sieve hold down rod JS - 3	2	104-204-005
6	Rear sieve hold down rod JS - 4	2	104-204-007
6	Rear sieve hold down rod JS - 5	2	104-204-009
6	Rear sieve hold down rod JS - 6	2	
7	Top Sieve (clothing and cleaners not included)	1	104-203-004
not shown	Center Sieve (clothing and cleaners not included)	?	104-203-006
8	Vented Sieve (clothing and cleaners not included)	1	104-203-008
9	Bottom Sieve (clothing and cleaners not included)	1	104-203-010
10	Hex locknut 1/2" - 13	8	107-200-034
11	Cap screw 1/4" - 20 x 1 1/2"	2	107-200-035
12	Hex nut 1/4" - 20	2	107-200-036
13	Hex nut 1/2" - 13	2	107-200-037
14	Sieve Tray (clothing and cleaners not included)	1	107-200-038
14	Sieve Tray (clothing and cleaners included)	1	107-200-038
15	Aluminum sieve only, less silk tray	1	107-200-040
16	Backing wire on silk tray	1	107-200-041
17	Sieve seal strip - 31" per side, 10 1/2' per sieve		107-200-042
17	Aluminum Frame for Clothing (4 pieces per sieve)		107-200-039
	Stainless steel wire cloth - 5 mesh		
18	Stainless steel wire cloth - 10 mesh		107-200-043
18	Stainless steel wire cloth - 12 mesh		107-200-064
18	Stainless steel wire cloth - 14 mesh		107-200-044
18	Stainless steel wire cloth - 16 mesh		107-200-045
18	Stainless steel wire cloth - 18 mesh		107-200-046
18	Stainless steel wire cloth - 20 mesh		107-200-047
18	Stainless steel wire cloth - 30 mesh		107-200-048
18	Stainless steel wire cloth - 40 mesh		107-200-049
18	Stainless steel wire cloth - 50 mesh		107-200-050
18*	Magnetic Stainless Steel Wire Cloth - any size		
19	5/8" Tan Rubber Ball Cleaners		107-200-051
20	TR12 Rod end angle	1	107-200-052
21	TL12 Rod end angle	1	107-200-053
22	Screen for vented sieve 8 1/2" x 25"	With cloth	107-200-061
23	Gasket for Turnbuckle Angles 3/8" x 2"	2	107-200-065
24	Flat head phillips SS screws 5/8", #6	76	107-200-072

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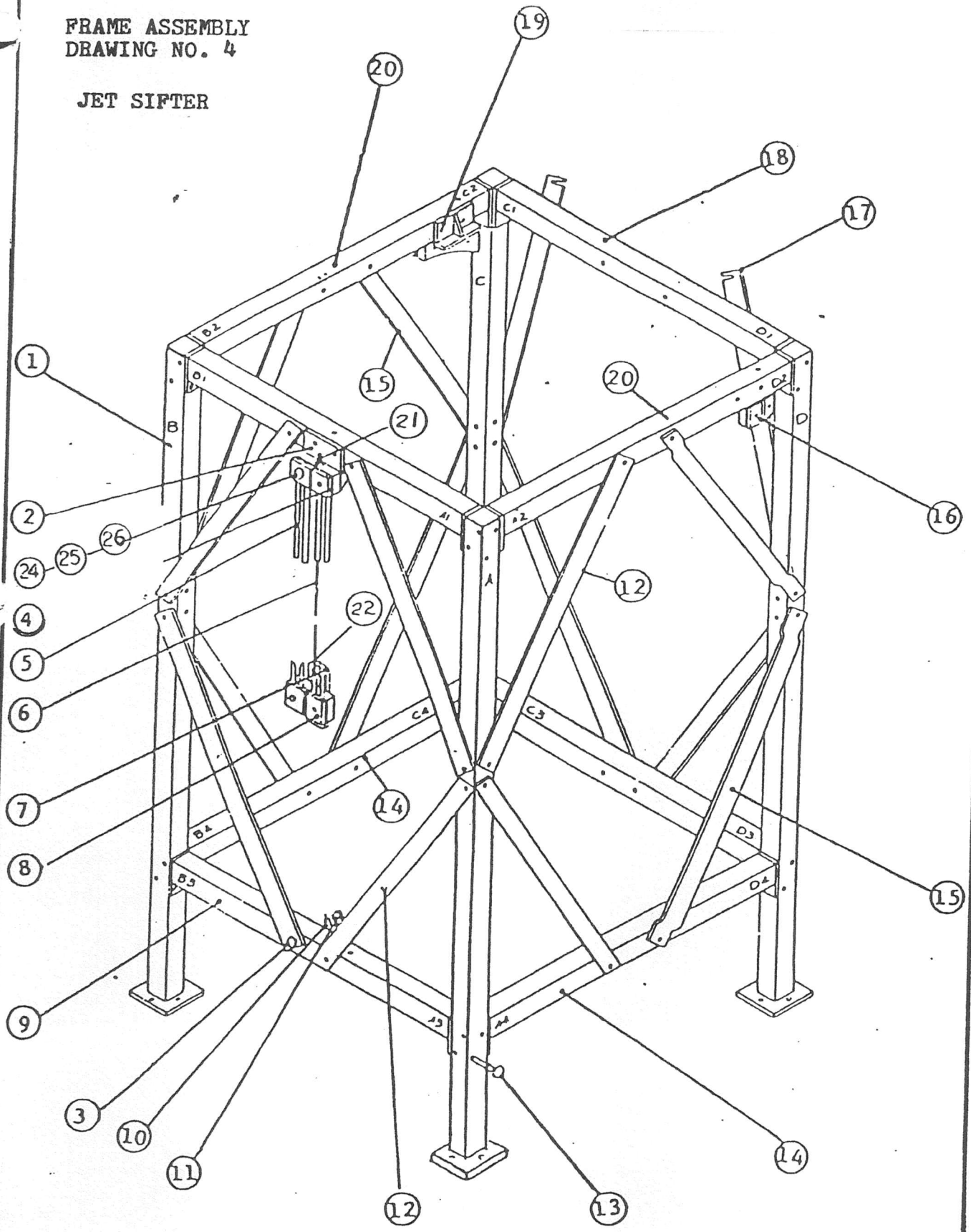
FRAME ASSEMBLY
DRAWING NO. 4

JET SIFTER



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Norvell Company, Inc.
Jet Sifter Frame Assembly
Price sheet - effective July 1, 2008

For parts drawing No. 4

Item	Description	Quantity	Item Number
1	Support leg	4	104-400-001
2	Front top reed bracket	1	104-401-002
3	Cap screw 1/2" - 13 x 2"	12	107-200-054
4	Rubber Hickory Reed Gaskets	12	104-401-011
5	Hickory Reeds 5/8" x 60"	12	104-401-013
6	1/4" Safety Cable (Priced Per Cable)	3	104-401-012
7	Bottom reed bracket	3	104-401-008
8	Reed clamp with rubber pad	12	104-401-010
9	Cross bar bottom front	1	104-401-007
10	Lock washer 1/2"	78	107-200-055
11	Hex nuts 1/2" - 13	60	107-200-056
12	Tie brace, flat w/holes	10	104-400-008
13	Cap screw 1/2" - 13 x 4 1/2"	76	107-200-057
14	Cross bar bottom RH/LH	2	104-400-005
15	Tie brace side off-set	4	104-400-009
16	Right top reed bracket	1	104-401-006
17	Tie brace top rear	2	104-400-010
18	Cross bar top rear	1	104-400-006
19	Left top reed bracket	1	104-401-004
20	Cross bar top RH/LH	2	104-400-004
21	Eye bolt for cable 3 3/8"	3	107-200-058
22	Eye bolt for cable 6"	3	107-200-059
23	Cable only - no clamps or eye bolts	3	107-200-062
24	Cap screw 1/2"x 2"	12	107-200-069
25	Flat washer 1/2"	12	107-200-070
26	Hex nut 1/2"	12	107-200-071