FORM H. C. N. 22

MATERIAL LIST

HART CARTER CO.
NORTHERN DIVISION

MACHINE UNIT NO. 2 HART UNI-FLOW CYLINDER SEPARATOR

STYLE NO. ACJ1

SHEET NO. 5
TOTAL SHEETS 6

★ IN SUB ASSEMBLY

DATE 3-19-57

★	ITEM NO.	PART NO.	QUAN EACH MACH.	NAME OF PART	PATT. NO.	DRG. NO.	
	1	Note 4:		When a roll type feeding hopper is			
	2			required, the following parts can be			
	3			supplied:			
	4	20539	1	Assy., Feeding Hopper		43017	
	5	16231	2	Bolt, Spec.Conn.Rod, 1/4"-20 x 1-1/2"		25240	
	6	20626	1	Guard, Belt		35702	
	7	20528	1	Support, Feed Hopper		35684	
	8	20532	1	Spout, Feed		35688	
	9	20265	1	Sheave, 3-3/8" O.D., Sgl. Gr., Sec. A,			
	10			1-3/16" Bore	2373	26180	
	11	20268	1	Sheave, C.I., 4.15" O.D., Adj. Pitch,			
	12			Single Gr., Sec. A, 3/4" Bore			
	13		1	V-Belt, Link Type, Section A, 37-7/8"			
	14			Long (40-11/16" Pitch Length without			
	15			stretch allowance)			
	16		2	Screw, Set, Hol. Hd., 3/8"-16 x 1/2"			
	17		7	Screw, Mach., R.H., 1/4"-20 x 1/2"			
	18		2	Screw, Mach., R.H., 1/4"-20 x 5/8"			
	19		1	Screw, Mach., R.H., 1/4"-20 x 3/8"			
	20		12	Nut, Hex., 1/4"-20			
	21		1	Washer, Cut, 1/4"			
	22						
	23	Note 5:		The following spouting adapters for			
	24			connecting the discharges to 4" O.D.			
	25			spouting should be supplied with each			
	26			single machine:			
	27	S-191	1	Spout, Adapter, Liftings Discharge		SC-3054	
	28	S-194	1	Spout, Adapter, Tailings Discharge		SC-3056	
	29		7	Nut, Hex., 1/4"-20			
	30		4	Screw, Mach., R.H., 1/4"-20 x 1/2"			
	31		3	Screw, Mach., R.H., 1/4"-20 x 5/8"			
	32						
	33	Note 6:		When this machine is arranged Two-High			
	34			for parallel flow with the feed divided			
	35			to each machine, such as Flow 2A, the			
	36			following can be supplied(A Three-High			
	37			unit, such as Flow 3A, would require			
	38			the quantity shown in the parentheses):			
	39	S-191	2	(3) Spout, Adapter, Liftings Discharge		SC-3054	
	40	S-194	2	(3) Spout, Adapter, Tailings Discharge		SC-3056	
	41		14	(21) Nut, Hex., 1/4"-20			
	42		8	(12) Screw, Mach., R.H., 1/4"-20 x 1/2"			
	43		6	(9) Screw, Mach., R.H., 1/4"-20 x 5/8"			
	44						
	45						

FORM H. C. N. 22

MATERIAL LIST

HART CARTER CO.
NORTHERN DIVISION

MACHINE UNIT: NO. 2 HART UNI-FLOW CYLINDER SEPARATOR

STYLE NO. ACJ1

SHEET NO. 6
TOTAL SHEETS 6

★ IN SUB ASSEMBLY

DATE 3-19-57

★	ITEM NO.	PART NO.	QUAN. EACH MACH.	NAME OF PART	PATT. NO.	DRG. NO.
	1	Note 7:		When this machine is arranged Two-High		
	2			for Series Flow, and the liftings are		
	3			fed into the machine below, such as		
	4			Flow 2B, the following is required		
	5			(A Three-High unit, such as Flow 3B,		
	6			would require the quantity shown in		
	7			the parentheses):		
	8	S-191	1	(1) Spout, Adapter, Liftings Discharge		SC-3054
	9	S-194	2	(3) Spout, Adapter, Tailings Discharge		SC-3056
	10	S-190	1	(2) Spout, Liftings Discharge		SC-3048
	11	S-189	1	(2) Spout, Liftings Receiving		SC-3047
	12		16	(21) Nut, Hex., 1/4"-20		
	13		2	(4) Screw, Mach., R.H., 1/4"-20 x 3/8"		
	14		8	(12) Screw, Mach., R.H., 1/4"-20 x 1/2"		
	15		5	(7) Screw, Mach., R.H., 1/4"-20 x 5/8"		
	16					
	17	Note 8:		When this machine is arranged Two-High		
	18			for Series Flow, and the Tailings are		
	19			fed into the machine below, such as		
	20			Flow 2C, the following can be supplied		
	21			(A Three-High unit, such as Flow 3C,		
	22			would require the quantity shown in		
	23			the parentheses):		
	24	S-191	2	(3) Spout, Adapter, Liftings Discharge		SC-3054
	25	S-194	1	(1) Spout, Adapter, Tailings Discharge		SC-3056
	26	S-232	1	(2) Spout, Tailings Discharge		SC-3076
	27	S-233	1	(2) Spout, Tailings Receiving		SC-3077
	28		17	(27) Nut, Hex., 1/4"-20		
	29		3	(6) Screw, Mach., R.H., 1/4"-20 x 3/8"		
	30		8	(12) Screw, Mach., R.H., 1/4"-20 x 1/2"		
	31		6	(9) Screw, Mach., R.H., 1/4"-20 x 5/8"		
	32					
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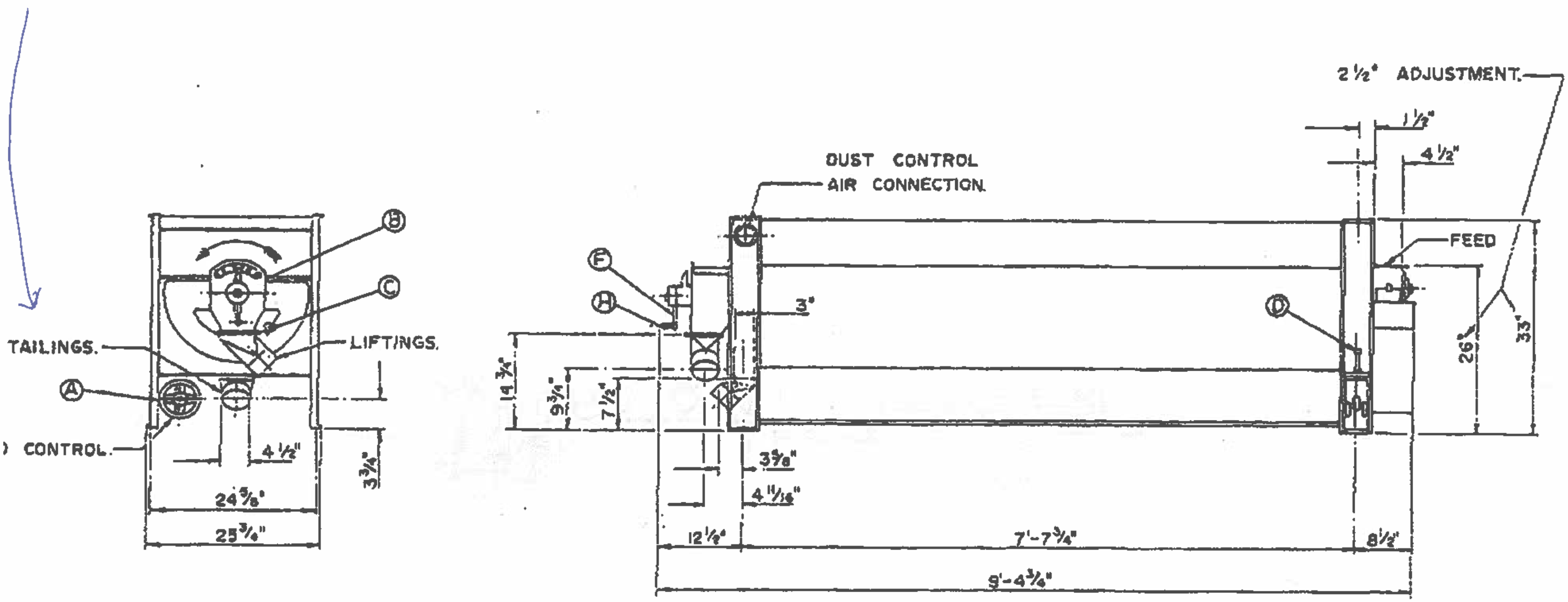
From Ross Elmon Solis 726-4403

Need tailings Spout Style ACH-1

No Part # available in Manual



Att Trina - Corkin - Day

INSTRUCTIONS
AND
PARTS LIST

No. 3 HART

UNI-FLOW

C-ACH 1-B

No. W109

CEA·SIMON-DAY LTD.
Box 488, Winnipeg, Manitoba R3C 2J6
Vancouver • Calgary • Thunder Bay • Toronto • Montreal

INSTRUCTIONS
INSTALLATION AND OPERATION

NO. 3 HART UNI-FLOW CYLINDER SEPARATOR
STYLE C-ACH1-B

The No. 3 Hart Uni-Flow Cylinder Separator should be installed to grade free flowing granular material after roughage and dust has been removed. This machine is light and runs without vibration. A motor is mounted within the machine so that it can be installed as a unit on any solid structure. It is also possible to mount these machines one above another to make a multiple unit as desired.

A cylinder speed between 38 R.P.M. and 56 R.P.M. can be obtained as desired by moving the motor. This adjustment can be made by turning the handwheel shown at "A". In most applications, a speed between 50 and 56 R.P.M. would be most suitable. It will be necessary to check the cylinder speed periodically during operation to be sure that the most desirable speed is maintained. If the speed is too fast, the cylinder pockets will have a tendency to lift the longer material and if the speed is too slow, the cylinder pockets will not lift all of the shorter material and the capacity will be decreased.

A stop collar has been provided on the outside motor support rail. This collar should be adjusted to prevent the motor mount overtightening the drive belt. Too much tension on the motor or driven sheave will cause early bearing failure.

The knob shown at "B" is used to adjust the conveyor trough within the cylinder shell to make the proper separation. It is important to wait approximately five minutes after an adjustment is made before any samples are taken for checking the separation. If long material is being lifted, the separating edge of the conveyor trough is set too low. If the short material which is lifted does not fall into the conveyor trough, the separating edge is set too high.

An adjustable retarder has been provided as shown at "C". This retarder should be set to hold a uniform bank of material within the cylinder in order that the cylinder pockets can have a better opportunity to pick out the shorter material.

The cylinder is mounted within the machine at a slight incline to permit complete cleanout. This incline may prove to be suitable for the more free flowing material operating on a small stream. However, as the volume is increased and if the material moves more slowly, a little more incline may be more desirable. This incline can be increased by turning down the two set screws as shown at "D". The hex nuts which hold the feet to the legs should be loosened before adjusting the set screws. After the proper incline has been obtained and the head end is leveled across, the hex nuts should be re-tightened.

When this machine is to be cleaned out, the conveyor trough should be turned over to completely empty it out. The conveyor trough can be more quickly cleaned out without disturbing the setting by loosening the thumbscrew shown at "F" and turning the crank shown at "G". After the cleaning has been completed, the crank should be returned to its original position and the thumbscrew re-tightened.

When it becomes necessary to change the cylinder shell, the following suggestions may be helpful:

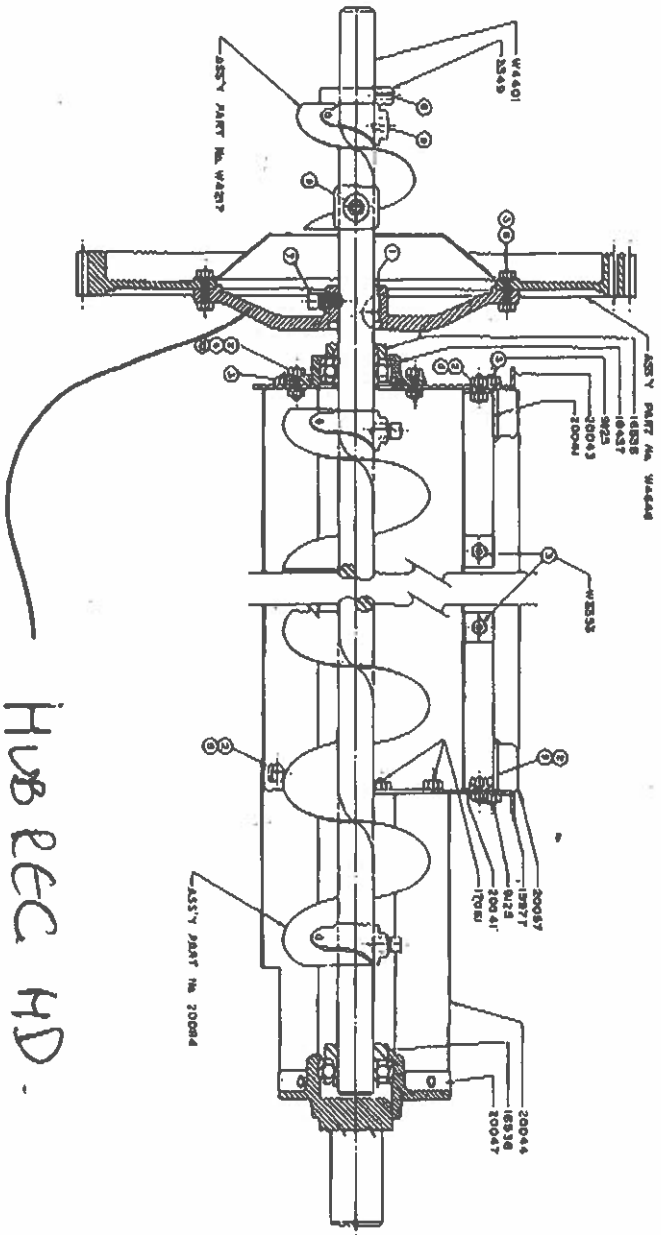
1. Remove the center side plates (both sides).
2. Place a board across the two lower side plates under the cylinder.
3. Loosen the set screws in the feed spout bearing collar.
4. Remove the crank and pointer at the discharge end.
5. Remove the cast iron conveyor trough support with liftings discharge spout.
6. Pull the cylinder assembly out through the discharge end.

The cylinder shell is made the same at both ends and can be installed by reversing the steps above.

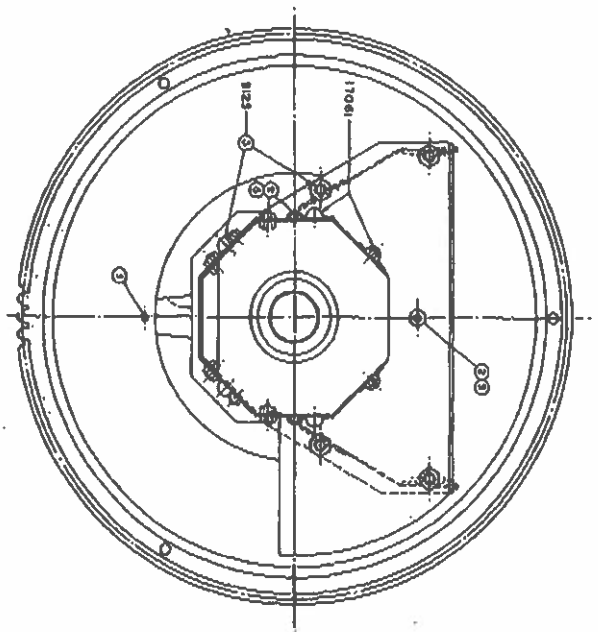
All bearings used on this machine are ball bearings, lubricated and sealed. They should not require lubrication. The driving pinion should have a small amount of grease once every 500 hours of operation.

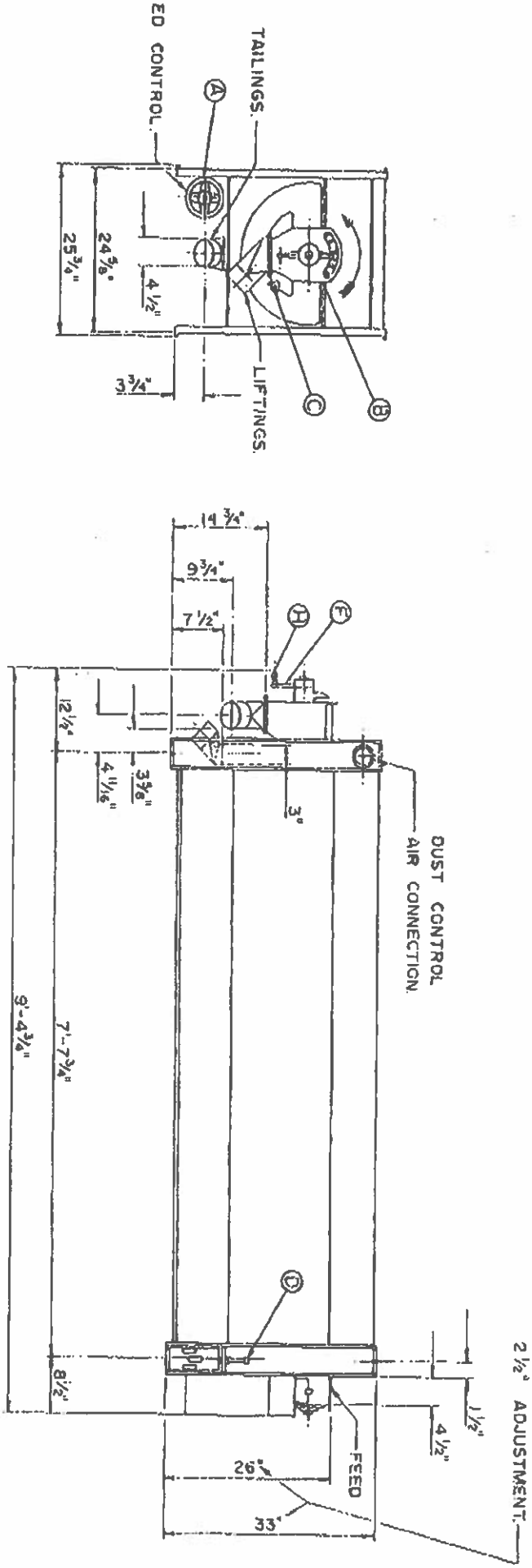
In order to remove the ball bearings from the flanges, it will be necessary to remove both from the shaft. Then the bearing must be given a quarter turn in the flange and taken out where the flange has been cut away to clear the spherical surface of the outer bearing race.

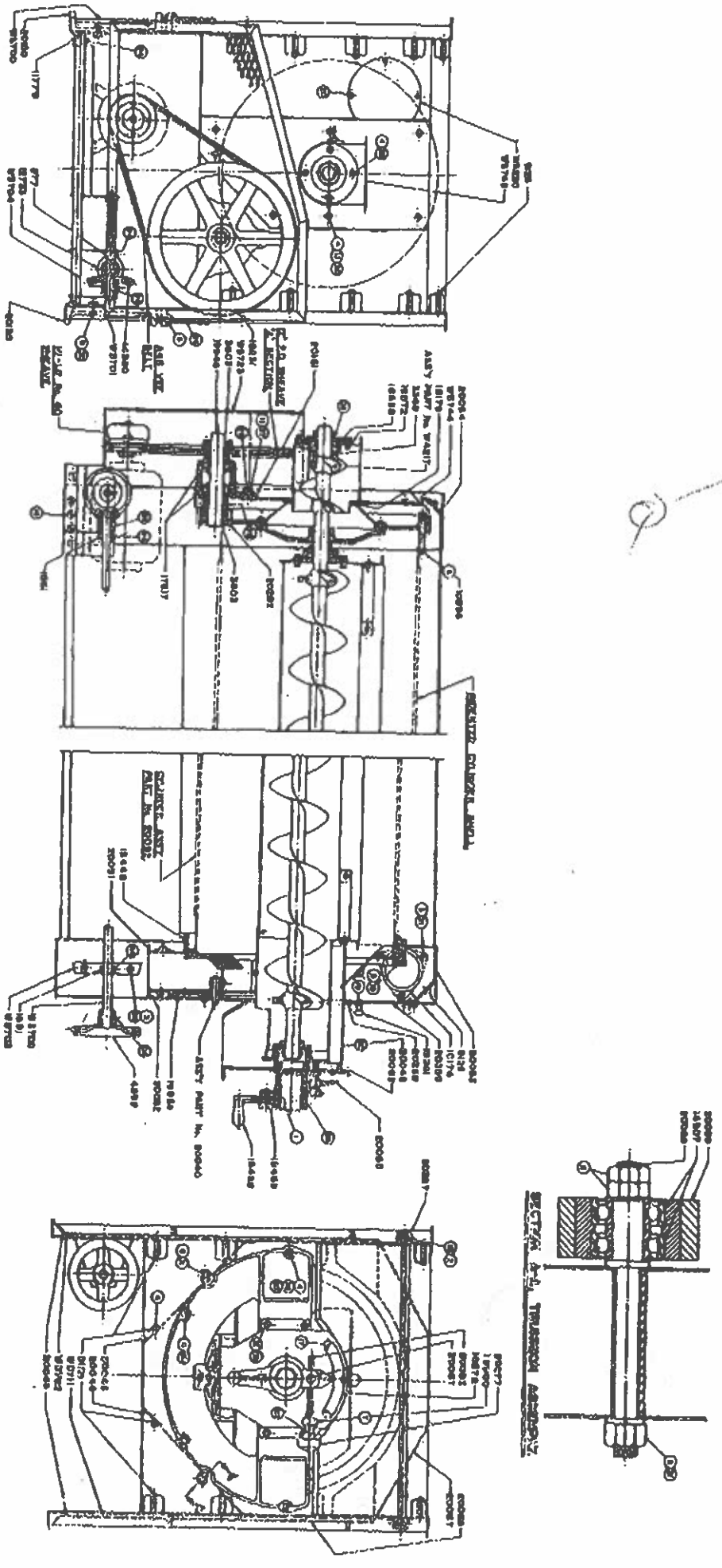
When making reference to the above machine, be sure to give the Style Number and Serial Number.



HUB REC HD.
W4645




ED CONTROL
TAILINGS
A
25¾"
24⅝"
4½"
3¾"
LIFTINGS
C
B
14¾"
9¾"
7½"
H
F
12½"
4 11/16"
3⅜"
3"
DUST CONTROL
AIR CONNECTION
9'-4¾"
7'-7¾"
D
8½"
2½" ADJUSTMENT
1½"
4½"
FEED
26"
33"



PARTS LIST

NO. 3 HART UNI-FLOW CYLINDER SEPARATOR
STYLE C-ACH1-B

PART NO.	DESCRIPTION	(casting Numbers in brackets)
W-3353	Rod, Tie 5/16" x 11-3/4"	
W-4216	Flighting, L.H. 4" O/D, 1½" c/o, 4" Lg.	
W-4217	Ass'y. Conveyor Flighting	
W-4397	Head, Receiving	
W-4398	Head, Cylinder Receiving	(3095)
W-4401	Shaft, Cylinder 1-3/16" Ø x 108½" Lg.	
W-4513	Ass'y. Shaft & Flighting	
W-4645	Hub, Receiving	
W-4646	Ass'y. Head Receiving	(2758)
W-5220	Plate, Cover, End Plate	
W-5700	Leg, Feed End	
W-5701	Leg, Feed End	
W-5702	Leg, Discharge End	
W-5703	Bracket, Speed Control Shaft	
W-5704	Support, Motor	
W-5707	Rod, Speed Control ½" x 8-7/8"	
W-5708	Shaft, Speed Control	
W-5711	Leg, Discharge End	
W-5723	Guard, Belt	
W-5743	Spout, Feed	
W-5744	Plate, Feed End	
977	Collar, Set ½" x 1-1/16" x 3/8"	
1177W	Collar, Set 3/4" x 1½" x ½"	
1561	Collar, Set 5/8" x 1-3/16" x 5/8"	
3349	Collar, Set 1-3/16" x 2½" x ½"	
3603	Key ¼" x ¼" x 1-5/8"	
4463	Dog, Flighting, L.H.	
4899	Handwheel	(1521)
9125	Bolt, Connecting Rod 5/16" - 18 x 1-31/32"	(N-75)
10821	Washer, Packing 1-63/64" x 1½" x 1/16"	
10822	Washer, Felt 1.187 ID x 2.0 x .025	
10876	Plate Indicator	
10895	Bolt, Connecting Rod 5/16" - 18 x 3½"	
12733	Pinion, Bevel 12T., 6P., 5/8" Bore	
14380	Gear, Bevel 12T., 6P., ½" Bore	(1279)
16174	Flange, Air Connection	(1399)
16179	Washer, Felt 6½" x 5" x ½"	(2792)
16231	Bolt, Connecting Rod ½" - 20 x 1½"	
16536	Bearing, S.K.F. No. 1736206-103	
16872	Flange Bearing	
16900	Bearing, RE5M7, Male Threaded Shank	(2846)
17061	Bolt, Connecting Rod ½" - 20 x 1-11/32	
17517	Bearing, S.K.F. No. 1736206-101	

(casting Numbers in brackets)

PART NO.	DESCRIPTION	
18265	Washer, Fiber 1¼" x 2" x 1/16"	
18437	Flange, Bearing	(2978)
18446	Ring, Cylinder Discharge	(2983)
18447	Clamp, Retarder	(2984)
18460	Thumbscrew 5/16" - 18 x ½"	
18468	Crank, Conveyor Trough	(2990)
18469	Thumbscrew 3/8" - 16 x 1½"	
19361	Knob, Inspection Door	
19946	Shaft, Counter	
19969	Support, Discharge End	(3098)
19979	Flighting, L.H. 5" O/D, 1¼" c/o 86" Long	
20034	Pin, Retarder	
20035	Retarder	(3100)
20036	Seal, Retarder	
20038	Spring, Retarder	
20041	Brace, Conveyor Trough	
20042	Cover, Discharge End	
20043	End, Conveyor Trough	
20044	Extension, Conveyor Trough	
20045	Filler, Tailings Hopper	
20046	Filler, Tailings Hopper	
20047	Housing, Bearing	(3102)
20049	Plate, Lower Side	
20051	Plate, Tailings Hopper, Inside	
20052	Plate, Tailings Hopper, Outside	
20053	Plate, Upper Discharge End	
20054	Plate, Upper Feed End	
20055	Pointer	(3103)
20057	Trough, Conveyor	
20062	Spout, Liftings, Discharge	(3104)
20065	Plate, Side	
20067	Plate, Top	
20081	Bar, Retarder Pivot	(3099)
20084	Ass'y. Conveyor Flighting	
20085	Rod, Control	
20087	Pin, Pointer Control	
20088	Stud, Roller	
20088A	Stud, Roller, Rod	
20088B	Stud, Roller, Bushing	
20089	Trunnions	
20092	Ass'y. Conveyor Flighting	
20159	Foot, Adjustable	(3112)
20161	Flange Bearing	(3113)
20277	Knob, Adjusting	(2642)
20282	Pinion, 16 T., 6 P., Rawhide	
20357	Clip, Joint	
20358	Strip, Rubber	
20359	Door, Inspection, Discharge End	

(casting Numbers in brackets)

PART NO.	DESCRIPTION
31630	Transfer, Trade Mark
S-74	Plug, Air Connection
S-191	Spout, Adaptor, Liftings
S-194	Spout, Adaptor Tailings
	Plate, Serial Number
	Sheave, 12" P.D. "A" Section Single Groove 1-1/16" Bush Bored, Browning "AK124R"
	Sheave, Variable Pitch "A" Section Hi-Lo #40
	Shell, Indent
	Vee Belt "A46"

OPTIONS:

S-189	Spout, Liftings, Discharge
W-5771	Spout, Liftings, Receiving
W-5791	Spout, Tailings, Discharge
W-5793	Spout, Tailings, Receiving