

WYSONG[®]

PARTS LIST



**HEAVY DUTY
AIR SHEARS**

WYSONG & MILES COMPANY

U.S. 29 North P. O. Box 21168 Phone (919) 275-2864

GREENSBORO, NORTH CAROLINA 27420

WYSONG AND MILES COMPANY

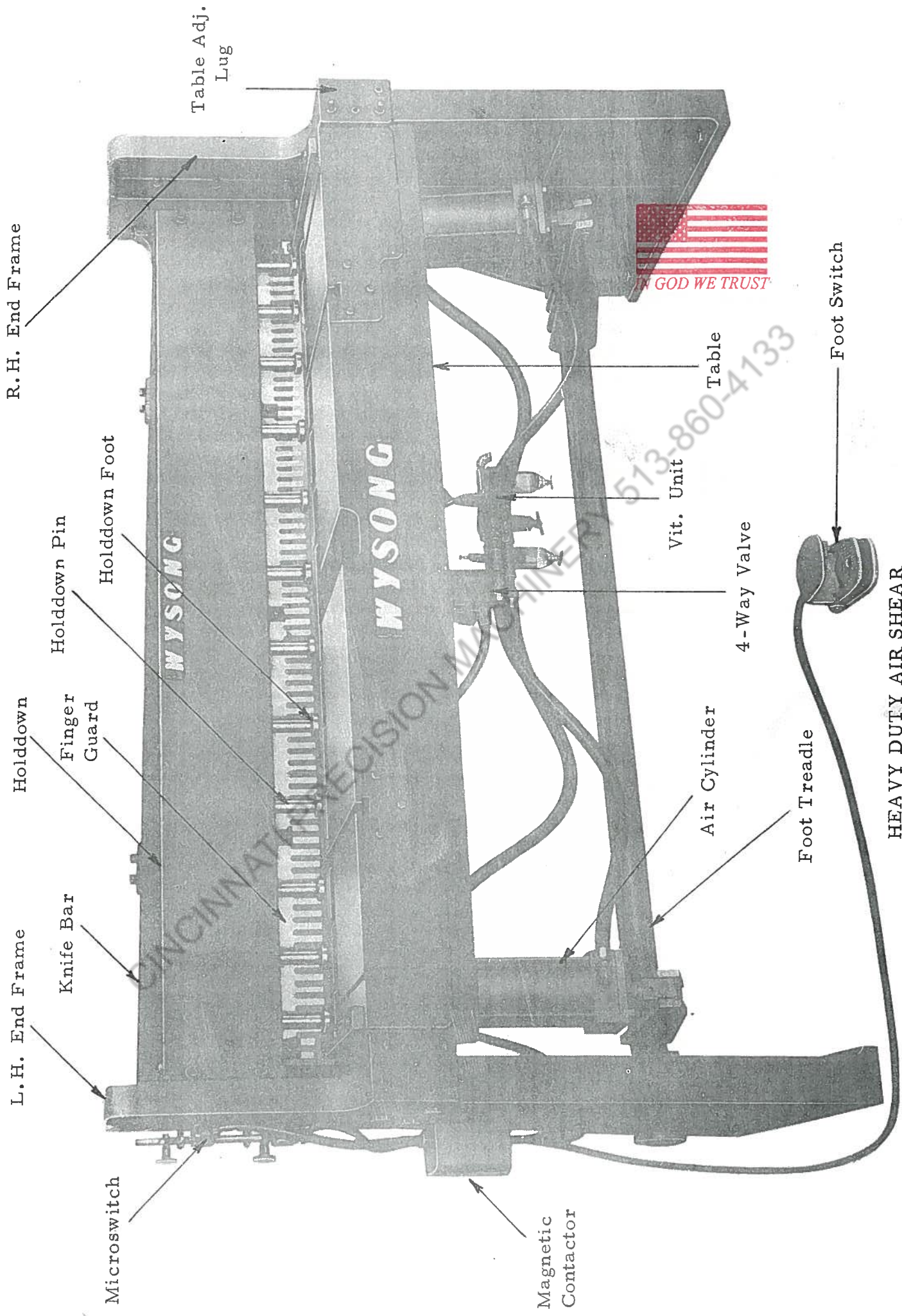
P.O. Box 21168

GREENSBORO, NORTH CAROLINA

PARTS LIST FOR *WYSONG* A-1472-HD, A-1696-HD, A-120-HD
AND A-144-HD HEAVY DUTY AIR POWER SQUARING SHEARS

CINCINNATI PRECISION MACHINERY 513-860-4133

February 1971



R.H. End Frame

Table Adj.
Lug



Holddown Pin
Holddown Foot

Holddown
Finger
Guard

L.H. End Frame

Knife Bar

Microswitch

WYSONG

Table
Vit. Unit

4-Way Valve

Air Cylinder

Foot Treadle

Foot Switch

Magnetic
Contactor

HEAVY DUTY AIR SHEAR

CINCINNATI PRECISION MACHINERY 513-860-4133

INSTALLATION AND INSTRUCTION MANUAL FOR NOS. A-1472-HD, A-1696-HD, A-120-HD AND A-144-HD *HVYSONG* HEAVY DUTY AIR SHEARS

When your *HVYSONG* Air Shear arrives, check the machine and parts carefully for possible damage in transit. Should any evidence of damage exist, file claim against the carrier and contact us for any necessary information.

INSTALLATION

The machine should be removed from the skids and placed directly over the mounting bolts (see floor plan on machine involved for bolt location). Use a precision level and be careful to level the unit both longitudinally and horizontally. After the unit is leveled on the foundation, securely tighten the mounting bolts and recheck for any possible change. Check the blade clearance as follows:

1. Apply air to the machine and permit the pressure build-up to raise the ram for removing the shipping blocks. NOTE: Be careful not to press the foot switch. (Machines with Electro-Pneumatic Controls should be disconnected from the electric supply).
2. To check blade clearance, adjust the pressure regulator by turning the adjustment handle until the pressure is reduced enough to permit the knife bar to move downward. Reduce the pressure slowly so that the movement of the rams can be stopped at the desired position. If it drops past the desired position, increase pressure slowly until it stops at the proper position. The clearance should be .003" on each end and .002" in the center and should be checked from right to left at the point the cutting edges intersect in order to determine the blade clearance. The clearance should be established before the machine is moved through a complete cycle. If it is indicated that the clearance has been disturbed in transit, follow instructions under No. 3 to re-adjust blades. The ram can be raised to the standing position by increasing the pressure 85-90# (operating pressure) with the pressure regulator. NOTE: Be sure to have the back gauge installed prior to checking or adjusting blades.
3. If the clearance varies, loosen the table bolts and move the table in or out, whichever the case may be. Use the square head set screws to push the table in, the cap screws to draw the table out. Be careful to maintain the same pressure on both pushing and drawing so as to have complete control over the table at all times. Check the clearance after the table bolts are tightened to see if any changes have occurred.
4. To change the clearance in the center, use the tension stud in the center of the knife bar. Never shim back of the blade.
5. After the proper blade clearance is established, the machine is ready for operation.

BLADE CARE

1. Never permit the blades to rub each other, as this will cut down the blade life and cause an overloaded condition.

2. Lubricate the blades with a brush or oil soaked cloth when shearing stainless or galvanized material. Wipe oil on the lower blade; the upper blade will pick up enough during shearing cycle.
3. Keep the blades sharp, as dull blades can increase the shear load as much as 50%. Turn or change the blades as soon as a burr is noted on the shear stock if no change has occurred in the blade clearance. It is recommended that a spare set of blades be held in stock so as not to impair production during re-grinding. The A-1472-HD, A-1696-HD, A-120-HD, and A-144-HD have a 4-edge blade with a 2-edge upper blade which offers several combinations of cutting edges, and should be turned as often as the edges become dull.
4. After the blades are ground, place shim stock under the lower blade to keep the blade level with the table.
5. Always use a feeler gauge to check the clearance.

LUBRICATION

1. Grease fittings and oil ports are provided for all points requiring lubrication and should be kept well lubricated at all times.
2. The air vitalizer unit should be drained daily to remove the moisture, and the needle valve above the oil chamber should be adjusted so that one drop of oil falls through the sight gauge for every 15 to 20 strokes. Oil may be added by removing the plug in the top of the oil chamber. (It is not necessary to remove the hose or turn the air off). (Use S.A.E. 20 weight or lighter good grade of mineral lubricant.)
3. The capacity of the moisture trap is sufficient to trap only the moisture which may form between the regular air system trap and the machine. It is best to open the trap before starting the machine in the morning leaving the valve slightly open for the first few cycles. This will force out the moisture coming through the line due to the temperature change. When using the machine in high humidity zones or on production runs, the trap should be drained twice daily.

POWER SUPPLY

Approximately 75-85 pounds pressure is required to operate a shear. A 3 to 5 HP. unit is recommended for the A-1472-HD, A-1696-HD, A-120-HD and A-144-HD Shears. A larger compressor will increase the strokes per minute slightly and might be considered for production shearing. The speed rating below is for full length shearing. A much higher rate may be obtained in operations which do not require full cutting length. Be sure to use not less than 3/4" line to the machine from the feeder line. The ratings below are figured with 80 pound gauge pressure at 80% efficiency of the compressor.

MODEL	HP.	STROKES PER MIN.	CUBIC FT. PER MIN.	HP.	STROKES PER MIN.	CUBIC FT. PER MIN.
A-1472-HD	3-5	7-11	32	5-7-1/2	9-13	28

MODEL	HP.	STROKES PER MIN.	CUBIC FT. PER MIN.	HP.	STROKES PER MIN.	CUBIC FT. PER MIN.
A-1696-HD	3-5	10-14	40	5-7-1/2	15-19	55
A-120-HD	3-5	7-11	32	5-7-1/2	9-13	28
A-144-HD	3-5	7-11	22	5-7-1/2	9-13	28

ORDERING REPAIR PARTS

When ordering repair parts, be sure to give the following information:

1. Serial Number of the shear (located on the bed surface at the right hand end.)
2. Part Number from enclosed parts list.
3. Complete description of part required.
4. Delivery required.

LEAKS

Wasted air is costly- - - for best results, keep system free of leaks. The table below indicates just how expensive a leak can be:

Equivalent leak dia. in inches	1/32"	1/16"	1/8"	3/16"	1/4"
Air wasted per month cu. ft. of free air per 100 PSI	73,440	293,760	1,123,200	2,592,000	4,449,600
Savings possible at 10¢ per 1000 cu. ft.	\$7.34	\$29.38	\$112.32	\$259.20	\$444.96

HOW TO CHECK FOR LEAKS

Leakage at the exhaust part of the control valve indicates a leak within the valve or past the cylinder piston.

- (a) To determine if the leak is past the piston or past the valve, remove the hose from the cylinder opposite the end where pressure is applied (with the knife bar down, remove the lower hose or with knife bar up, remove the upper hose.)
- (b) If the leakage is from the hose, the valve is leaking. Replace valve if leak is sufficient to warrant replacement. If the air escapes from the cylinder, it indicates the leakage is past the piston.

Leakage around piston rod can be found by applying light oil to the shaft and checking for bubbles. The chevron packing is self-adjusting but may be tightened after wear has exceeded the range of the packing.

PARTS LIST FOR NOS. A -1472 -HD, A -1696 -HD, A -120 -HD AND A -144 -HD HEAVY DUTY

WYSONG AIR SHEARS

QUAN.	NAME OF PART	A -1472 -HD	A -1696 -HD	A -120 -HD	A -144 -HD
1	Knife Bar	7S-114	7H-60	7H-467	A12-10
1	RH End Housing	7S-30	7S-30	7S-30	7S-30
1	LH End Housing	7S-31	7S-31	7S-31	7S-31
1	Table	7S-68	7H-437	7H-436	A12-4
2	Knife Bar Gibs	7H-6	7H-6	7H-6	7H-6
2	Table Adjusting Lugs	7S-32	7S-32	7S-32	7S-32
2	Table Extensions	7E-6	7E-6	7E-6	7K-61
2	Torque Tube Pivot Shafts	7SS-379	7SS-379	7SS-379	7SS-379
1	Tension Rod	7SS-4	7HS-719	7HS-733	A12S-14
2	Table Bolt Locking Plates	7SS-260	7SS-260	7SS-260	7SS-260
2	Table Bolt Locking Plates	7SS-259	7SS-259	7SS-259	7SS-259
2	Cylinder Pivot Bearings	5YS-195	5YS-195	5YS-195	5YS-195
2	Knuckles	5YS-199	5YS-199	5YS-199	5YS-199
2	Knuckle Pins	7SS-499	7SS-499	7SS-499	7SS-499
1	Torque Tube Assembly	7SS-101	7HS-532	7HS-99	A12S-11
2	Take Up Gibs	7HS-8	7HS-8	7HS-8	7HS-8
1	Valve Bracket	7SS-385	7SS-385	7SS-385	7SS-385
1	Tension Rod Stud	7GS-43	7GS-43	7GS-43	S14S-11
2	Side Gauges	SGS-17	SGS-17	SGS-2	SGS-18
2	Lower Treadle Conn. Pins	7SS-500	7SS-500	7SS-500	7SS-500
2	Upper Treadle Conn. Pins	5YS-173	5YS-173	5YS-173	5YS-173
1	Actuator Rod	ZS-1	ZS-1	ZS-1	ZS-1
2	Mounting Screws	ZS-2	ZS-2	ZS-2	ZS-2
2	Dogs	ZS-3	ZS-3	ZS-3	ZS-3
2	Adjusting Knobs	DK-11	DK-11	DK-11	DK-11
1	LH Knife Bar Pull Rod	7SS-48	7HS-93	7HS-93	A12S-20
1	RH Knife Bar Pull Rod	7SS-258	7HS-699	7HS-702	A12S-19
2	Blades (2-edge Upper, 4-edge Lower)	73 x 3 x 1	98 x 3 x 1	122 x 3 x 1	146 x 3 x 1
28	Blade Bolts	5/8 x 3-1/2			
34	Blade Bolts		5/8 x 3		
42	Blade Bolts			5/8 x 3	
50	Blade Bolts				5/8 x 3-1/2
1	Holddown	7SS-288	7XS-34	S10S-260	S14S-89
2	Mounting Lugs	7SS-102	7SS-102	8BS-21	8BS-21
12	Holddown Pins	7SS-93	7SS-93		
16	Holddown Pins			S10S-262	
18	Holddown Pins				S10S-262
12	Holddown Feet	7SS-94	7SS-94		
16	Holddown Feet			S10S-261	
18	Holddown Feet				S10S-261
12	Ball Sleeves	7SS-96	7SS-96		
16	Ball Sleeves			8BS-170	
18	Ball Sleeves				8BS-170
24	Steel Balls	3/8"	3/8"		
32	Steel Balls			3/8"	
36	Steel Balls				3/8"

PARTS LIST FOR NOS. A-1472-HD, A-1696-HD, A-120-HD AND A-144-HD HEAVY DUTY
 WYSONG AIR SHEARS

QUAN.	NAME OF PART	A-1472-HD	A-1696-HD	A-120-HD	A-144-HD
4	Holddown Feet Springs (Outside)	B-101	B-101	B-102	B-102
8	Holddown Feet Springs (Middle)	B-74	B-74		
12	Holddown Feet Springs (Middle)			B-88	
14	Holddown Feet Springs (Middle)				B-88
12	Holddown Feet Springs	B-106	B-106		
12	Holddown Feet Springs	B-114	B-114		
16	Holddown Feet Springs			B-107	
16	Holddown Feet Springs			B-109	
18	Holddown Feet Springs				B-107
18	Holddown Feet Springs				B-109
12	Lifting Lugs	7SS-52	7SS-52		
16	Lifting Lugs			8BS-31	
18	Lifting Lugs				8BS-31
1	Lifting Channel				S14S-90
4	Lifting Channel	7SS-289	7XS-36	S10S-264	S14S-91
2	Lifting Channel	7SS-290	7XS-35	S10S-263	S14S-92
2	Lifting Channel				S14S-93
1	Holddown Finger Guard	7SS-103	7HS-535	7HS-531	
1	Finger Guard	7SS-23	7XS-17	S10S-88	S14S-7
	Finger Guard Clips	S10S-116 (5)	S10S-116 (7)	S10S-116 (5)	S10S-116 (
1	Front Cover	7HS-803	7HS-804	8BS-181	A12S-027
1	Bevel Gauge	S10S-553	S10S-553	S10S-553	S10S-553
1	Table Plate	7SS-175	7HS-615	7HS-616	A12S-13
2	Cover Plates	7SS-109	7SS-110	7SS-109	7SS-110
1	Vitalizer Unit Support	7SS-107	7SS-107		
2	Front Gibs	MG-38	MG-40	MG-043	MG-043
2	Rear Gibs	MG-041	MG-041	MG-004	MG-046
2	Bronze Oilite Bearings (3/4 ID x 1 OD x 1-1/4 L.)	B1216-10	B1216-10	B1216-10	B1216-10
4	Bronze Bushings (1-1/4 OD x 1 ID x 7/8 L.)	7LS-60	7LS-60	7LS-60	7LS-60
2	Bronze Bushings (2-1/2 OD x 2 ID x 4 L.)	S38-30	S38-30	S38-30	S38-30
2	Dis. Stop Springs	B-31	B-31	B-31	B-31
1	T-Bolt for Angle Gauge	6ES-045	6ES-045	6ES-045	6ES-045
2	T & J Air Cylinders, S3-5, 5" Bore x 10" Stroke, Male Thds. Type 5 Std., Rod Size 1 (Cushion Rod End Only) (All Models)				
2	Disappearing Stops	S12S-55A	S12S-55A	S12S-55A	S12S-55A
6	Spacers for Micro Switch	5YS-242	5YS-242	5YS-242	5YS-242

PARTS LIST FOR NOS. A-1472-HD., A-1696-HD, A-120-HD AND A-144 HD HEAVY DUTY
WYSONG AIR SHEARS

QUAN.	NAME OF PART	A-1472-HD	A-1696-HD	A-120-HD	A-144-HD
1	331B-1-3 Mac 4-Way Solenoid Valve			Side Ports 1/2" (A-120-HD & A-144-HD)	
1	681B-1-2 Mac 4-Way Solenoid Valve, Side Ports 3/8"			(A-1472-HD & A-1696-HD)	
1	BAF1-2RN2-RH Micro Switch				
1	DTF2-2RN2-LH Micro Switch				
1	10251-H34 NEMA 4 Foot Switch w/Guard and without Latch C.				
1	C4J-300-M3E-AU Norgren Filter Regulator Lubricator	(A-1472-HD & A-1696-HD)			
1	C4J-400-M3E-AU Norgren Filter Regulator Lubricator	(A-120-HD & A-144-HD)			
3	Tiny Tim Air Mufflers#EM-3	(A-1472-HD & A-1696-HD)			
1	Tiny Tim Air Mufflers #EM-4	(A-120-HD & A-144-HD)			
2	Schraeder Air Mufflers #4612, 3/4"	(A-120-HD & A-144-HD)			
2	Pneu-Trol EV-375 Quick Exhaust Valves	(A-1472-HD & A-1696-HD)			
2	Pneu-Trol EV-500 Quick Exhaust Valves	(A-120-HD & A-144-HD)			
6	3/8 St. Ells	(A-1472-HD & A-1696-HD)			
1	3/8 x 4 L. Nipple	(A-14-72-HD & A-1696-HD)			
2	3/8 Tees	(A-1472-HD & A-1696-HD)			
3	3/8 x 4-1/2 Nipples	(A-1472-HD & A-1696-HD)			
1	3/8 x 2 Nipples	(A-1472-HD & A-1696-HD)			
1	3/8 Coupling	(A-1472-HD & A-1496-HD)			
4	1/2-3/8 Reducing Bushing	(A-1472-HD & A-1696-HD)			
10	Parker #30182-6-8 Push-Lok Fittings	(A-1472-HD & A-1696-HD)			
	Parker #801-8-1/2" Hose	(A-1472-HD & A-1696-HD)			
1	1/2 x 4 L. Nipple	(A-120-HD & A-144-HD)			
3	1/2 x 4-1/2 Nipple	(A-120-HD & A-144-HD)			
3	1/2 x 2 Nipple	(A-120-HD & A-144-HD)			
4	1/2 Galv. Street Elbow	(A-120-HD & A-144-HD)			
2	1/2 Female Elbow	(A-120-HD & A-144-HD)			
2	1/2 Female Tee	(A-120-HD & A-144-HD)			
10	Parker #30182-8-10 Push-Lok Fittings	(A-120-HD & A-144-HD)			
1	1/2 Coupling	(A-120-HD & A-144-HD)			
	5/8 Push-Lok Hose #801-10	(A-120-HD & A-144-HD)			
12	5100-100 Truarc Locks for A-1472-HD				
12	5100-87 Truarc Locks for A-1696-HD				
16	5100-100 Truarc Locks for A-120-HD				
18	5100-100 Truarc Locks for A-144-HD				



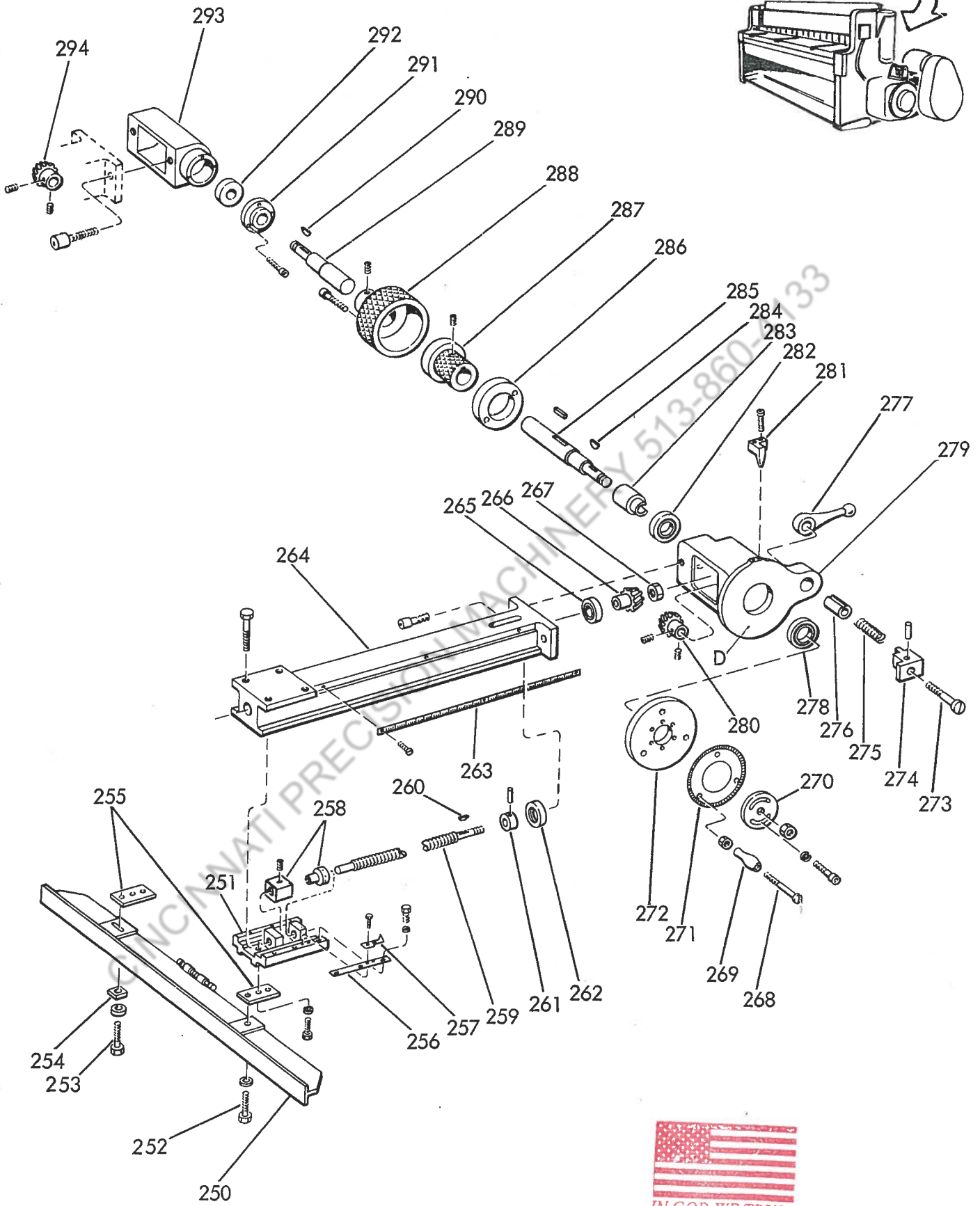
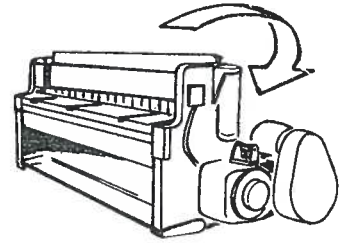
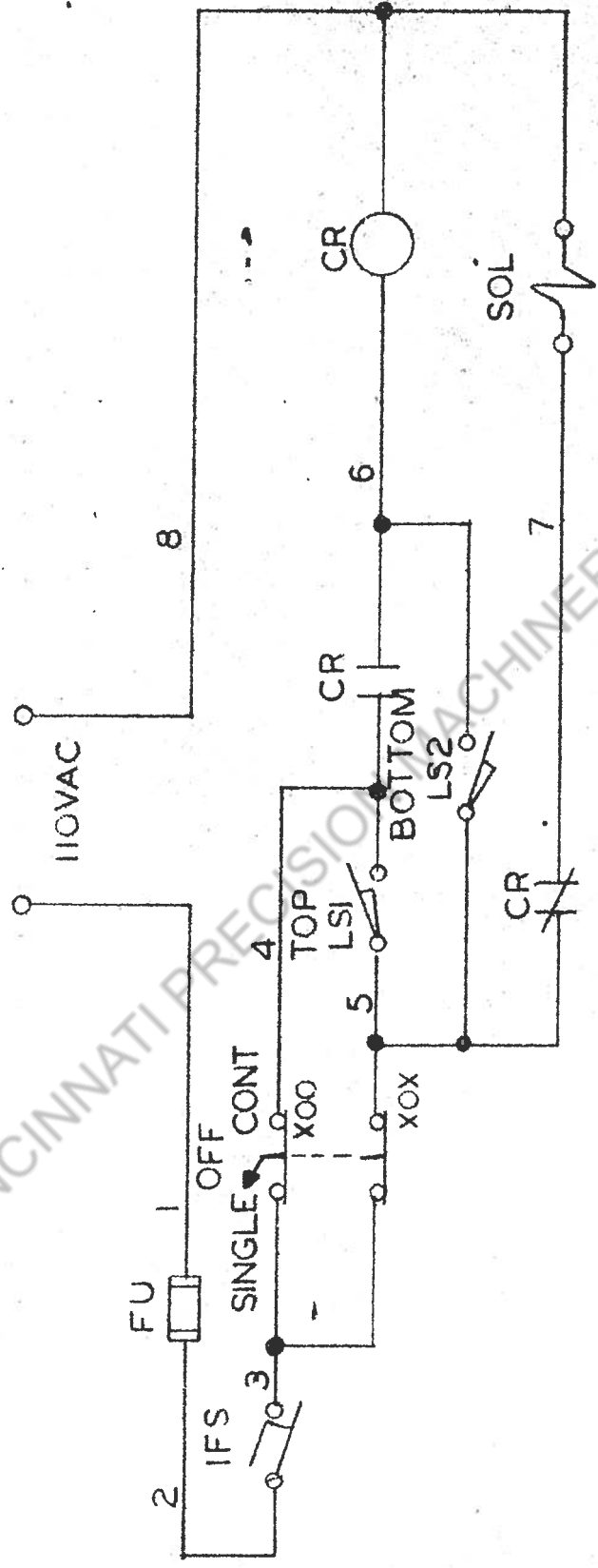


FIG. 5 BACK GAUGE ASSEMBLY



CINCINNATI PRECISION MACHINERY 513-860-4133

CONTROL FOR AIR SHEAR WITH NON-REPEAT

S-72-392

WAS	DATE	BY	MACHINE	DRAWN	CHK'D	SCALE
			WYSONG & MILES CO. GREENSBORO, N. C.			
				TITLE	NO.	C