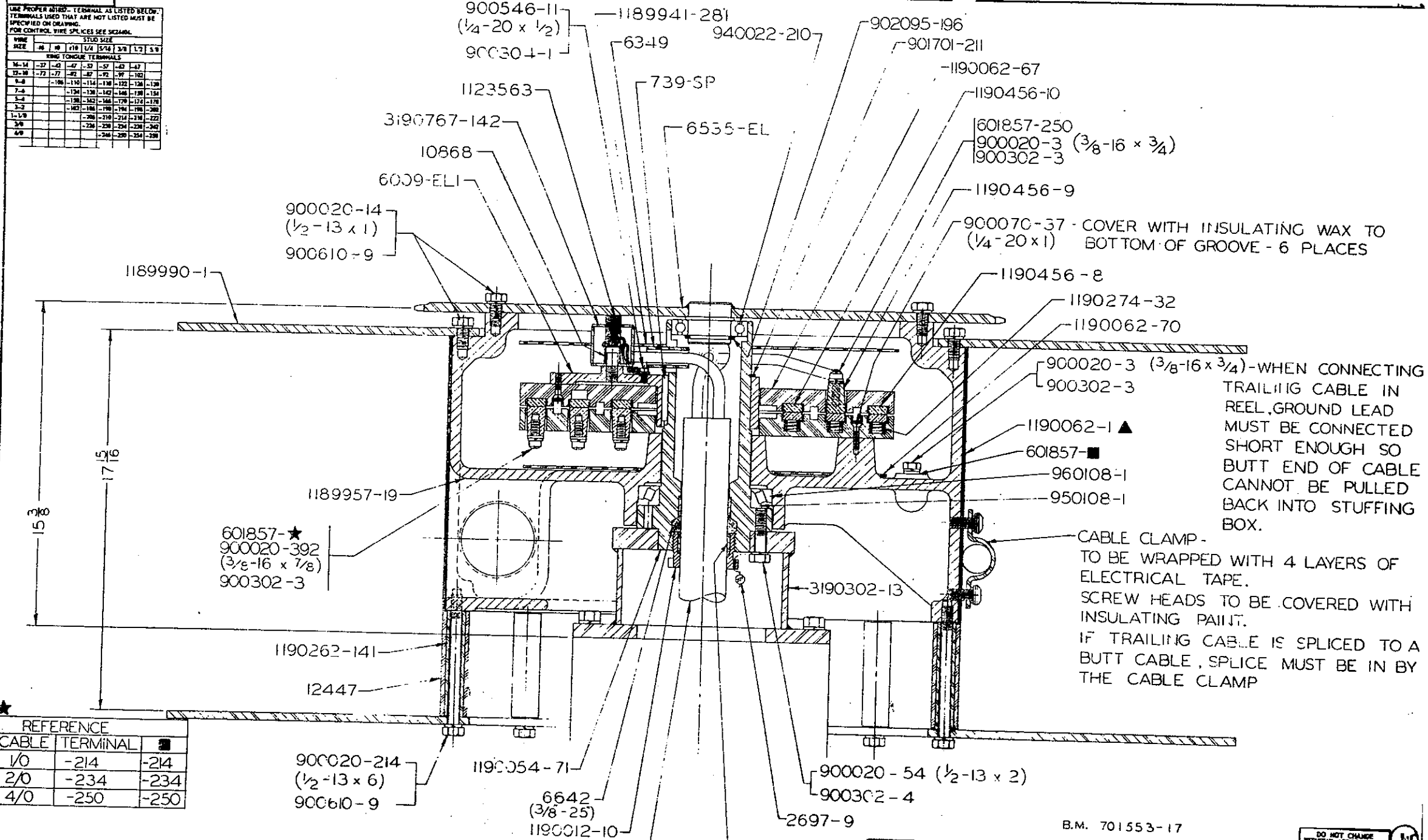


EL 1523

USE PROPER WIRE - TERMINAL AS LISTED BELOW. TERMINALS USED THAT ARE NOT LISTED MUST BE SPECIFIED ON DRAWING. FOR CONTROL WIRE SPLICES SEE DRAWING.

WIRE SIZE	#	W	D	1/4"	5/16"	3/8"	1/2"	5/8"
RING TONGUE TERMINALS								
16-14	-27	-42	-47	-57	-67	-77	-87	-97
12-10	-77	-87	-97	-107	-117	-127	-137	-147
8-6	-157	-167	-177	-187	-197	-207	-217	-227
7-6	-237	-247	-257	-267	-277	-287	-297	-307
5-4	-317	-327	-337	-347	-357	-367	-377	-387
3-2	-397	-407	-417	-427	-437	-447	-457	-467
1-1/8	-477	-487	-497	-507	-517	-527	-537	-547
3/8	-557	-567	-577	-587	-597	-607	-617	-627
4/8	-637	-647	-657	-667	-677	-687	-697	-707



900070-37 - COVER WITH INSULATING WAX TO (1/4-20x1) BOTTOM OF GROOVE - 6 PLACES

900020-3 (3/8-16 x 3/4) - WHEN CONNECTING TRAILING CABLE IN REEL, GROUND LEAD MUST BE CONNECTED SHORT ENOUGH SO BUTT END OF CABLE CANNOT BE PULLED BACK INTO STUFFING BOX.

CABLE CLAMP - TO BE WRAPPED WITH 4 LAYERS OF ELECTRICAL TAPE. SCREW HEADS TO BE COVERED WITH INSULATING PAINT. IF TRAILING CABLE IS SPICED TO A BUTT CABLE, SPICE MUST BE IN BY THE CABLE CLAMP

REFERENCE

CABLE	TERMINAL	■
1/0	-214	-214
2/0	-234	-234
4/0	-250	-250

▲ FOR REF. ONLY

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600064-1 -
4/0 3 COND. RD. G (2.04 O.D.)
FCP595
FBK 87 FBK 332 FBK 340 FBK 579 FBK 645 FBK 820 FBK 771

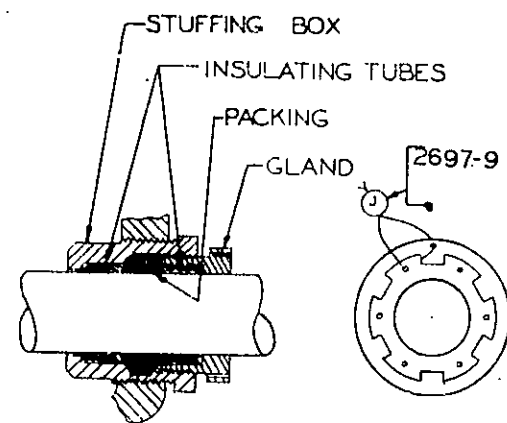
JOY MANUFACTURING CO.
PLANT LOCATION AS SHOWN ON DRAWING

DESIGNED BY	DATE	SCALE	CLASS
APPROVED BY			
REPLACES			
REPLACED BY			

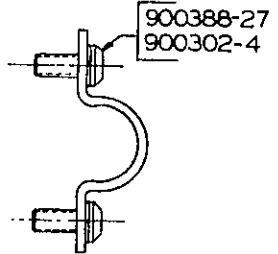
CABLE REEL ASSEMBLY
EL 1523

B.M. 701553-17

DO NOT CHANGE WITHOUT APPROVAL OF SRM



CABLE ENTRANCE PARTS FOR ROUND TRAILING CABLE



CABLE CLAMP ON DRUM

NOTE:
USE TYPE "G" CABLE IN ALL CASES EXCEPT WHEN AN EXTRA CONDUCTOR IS USED FOR GROUND OR WHEN A GROUNDING DIODE IS USED.

* LISTED TWICE

DO NOT CHANGE WITHOUT APPROVAL OF BUREAU OF MINES

CABLE ENTRANCE PARTS FOR ROUND TRAILING CABLES (3 5/8" THD. STUFF BOX)

B/M	STUFFING BOX	GLAND	INSULATING TUBES (2)	PACKING	CLAMP	FOR CABLE AND SIZE	REMARKS - JOY NO'S FOR CABLE
701542-44	1190299-34	1190012-9	1190062-58	17019 1/2" - 1 1/2"	187295	2/0-4 COND. 1.93" O.D. RD 4/0-2 COND. 1.92" O.D. "	601337-23 (TYPE W) 601320-28 (TYPE W)
701542-45	1190299-36	7025-EL	7026-EL	6642 3/8" - 20"	7175-EL	2/0-3 COND. RD. 1.75" OD	601332-23 (TYPE G) 601331-23 (TYPE W)
701542-46	1190299-36	7025-EL	181055	6642 3/8" - 25"	6526-EL	1/0-3 COND. RD. 1.65" OD.	601332-20 (TYPE G)
701542-48	"	"	186381	6642 3/8" - 20"	7175-EL	1/0-4 COND. RD. 1.79" OD.	601337-20 (TYPE W)
701542-51	"	"	7638-EL	6642 3/8" - 26"	7094-EL	#1 - 3 COND. RD. 1.5" 1/0-2 COND. RD. J.O.D.	601332-17 (TYPE G) 601320-20 (TYPE W)
701542-54	1190299-36	7025-EL	7219-EL	17019 1/2 - 18"	7542-EL	1.31" O.D.	BRITISH DRILL
701542-55	1190299-34	1190012-9	1190063-17	17019 1/2 - 18"	187295	1.86 O.D. 2.01 O.D.	SHD-GC BRITISH CUTTER
701542-56	1190299-36	7025-EL	7541-EL	17019 1/2 - 18-1/2"	7093-EL	#3 - 3 COND RD 1.24 O.D.	601332-10 (TYPE G) 601331-10 (TYPE W)
701542-57	1190299-34	1190012-9	1190063-18	17019 1/2 - 17-1/2"	187295	#4/0-3 COND. RD. 2.04 O.D.	601332-28 (TYPE G) 601331-28 (TYPE W)
701542-60	1190299-34	1190012-9	1190063-19	17019 1/2 - 17-1/2"	187295	#4/0-3 COND. RD. 2.13 O.D.	601345-10 (TYPE PCG)
701542-44	1190299-34	1190012-9	1190062-58	17019 1/2 - 17 1/2"	187295	1/0-4 COND. RD. 1.88 O.D.	TYPE "W" G.C.
701542-61	1190299-36	7025-EL	7575-EL	17019 1/2 - 21 1/2"	187295	1/0-3 COND RD. 1.85 O.D.	SHD TYPE G
701542-62	1190299-36	7025-EL	7341-EL	17019 1/2 - 19"	7094-EL	#4-3 COND RD. 1.40 O.D.	SHD-GC
701542-64	1190299-36	7025-EL	7559-EL	17019 1/2 - 18"	7542-EL	#2-3 COND. RD. 1.34 O.D.	TYPE "G"
701542-66	1190299-36	7025-EL	7685-EL	17019 1/2 - 18"	7225-EL	#4 - 3 COND. RD. 1.17" O.D.	TYPE "G"

FBP508	FBK201	FBK332	FBK368	FBK556	FBK729	FBK820	FBK857	FBP312
REVISIONS	FBB827	FBE206	FBE246	FBE451	FBE807	FBE869	FBE885	

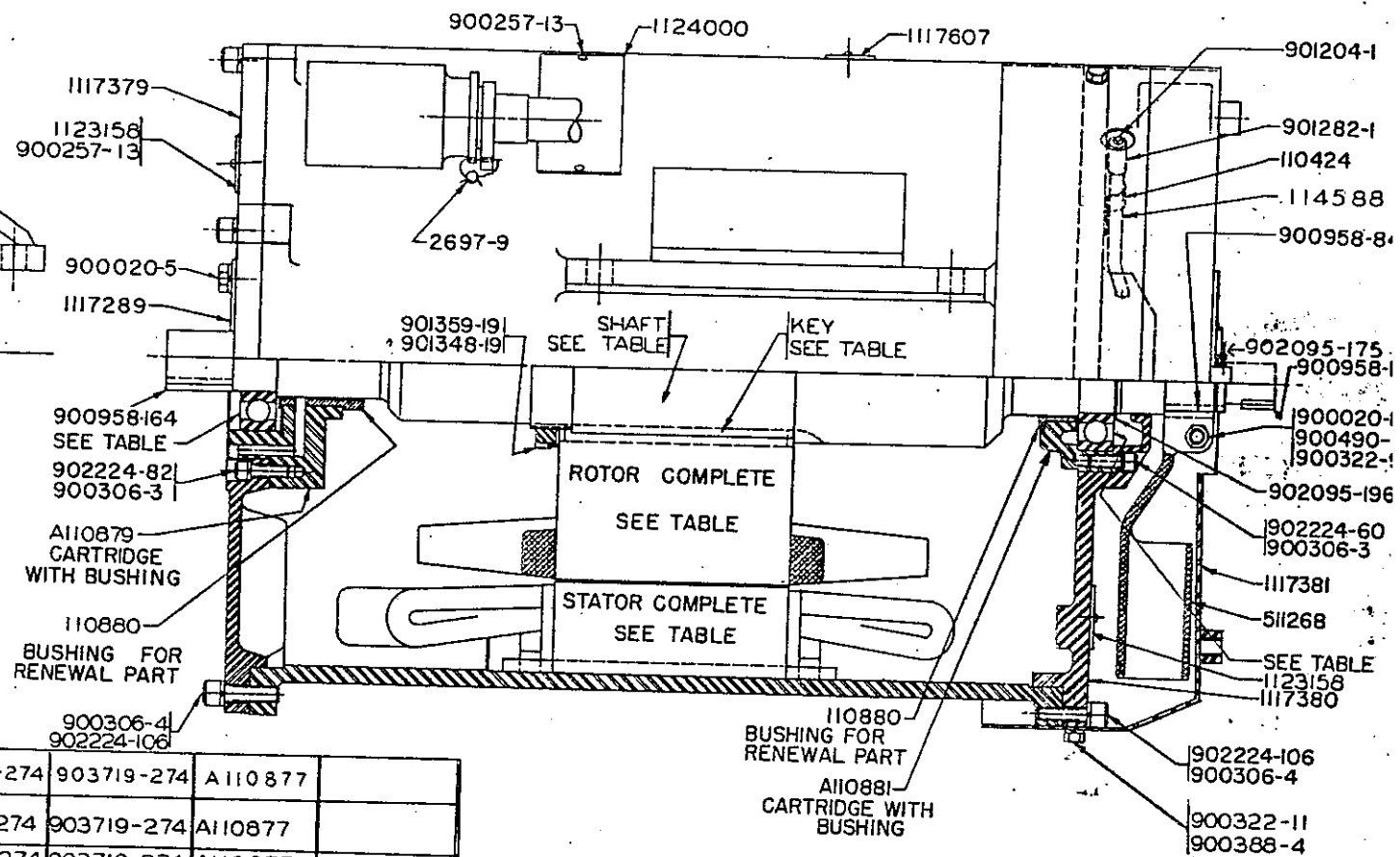
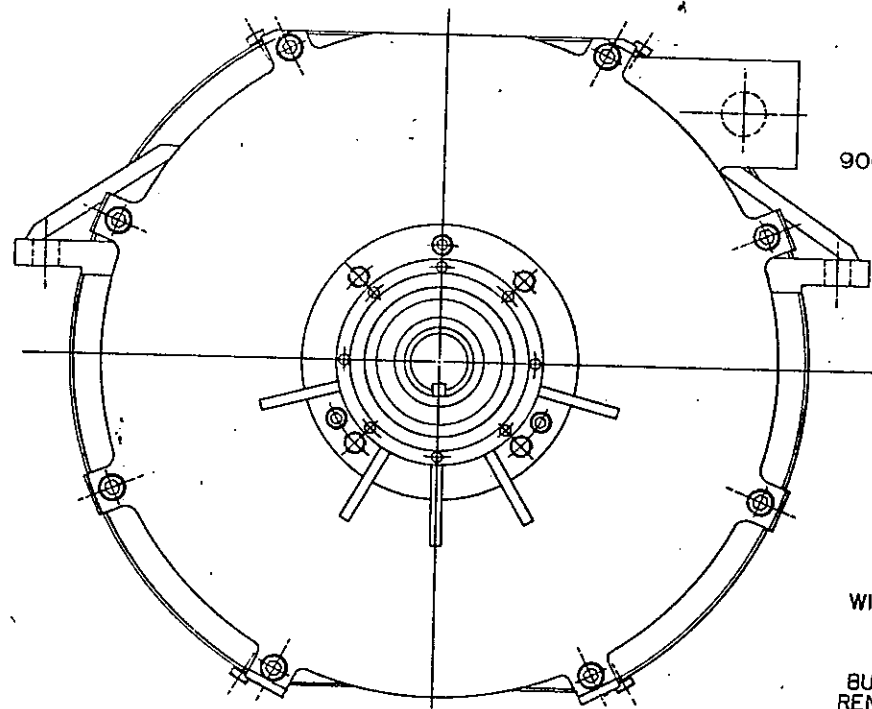
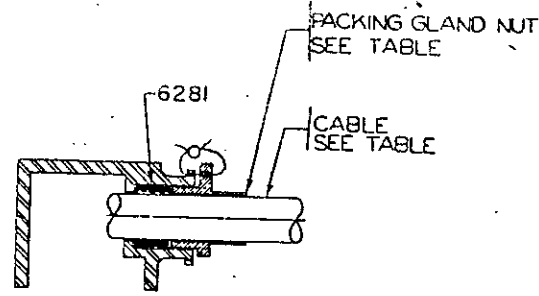
JOY MANUFACTURING CO.
PLANT LOCATION AS INDICATED BELOW
CLARKSBURG, W. VA. NEW PHILADELPHIA, O.
DALLAS, TEXAS ST. LOUIS, MISSOURI
FRANKLIN, PA. BUFFALO, NEW YORK
SALT, ONTARIO, CANADA
GREENOCK, SCOTLAND
NICHOLS CITY, IND.

TABULATION OF CABLE ENTRANCE PARTS FOR ROUND TRAILING CABLES
SIMILAR TO _____
SUPERSEDED BY _____
REPLACED BY _____
DR. SPAIN DINE
TR. 6/21/62
SCALE - CLASS C
EL 1394B

ES-761009

MOTOR NO.	PACKING GLAND NUT	CABLE	WDG. MATL.	COILS	REF COILS/SET	STATOR
600194-53	102199	600021-2	110887	110886	72	511266
600194-73	106076	600021-1	1123386	1123385	72	1123444
600194-74	106076	600021-1	1123446	1123445	72	1123444
600194-52	102199	600021-2	116467	116466	72	511266
600194-97	102199	601589-2	116467	1124015	72	511266
600194-113	102199	601589-2	116467	1124313	72	511266

PARTS NOT LISTED CAN BE OBTAINED BY GIVING JOY MOTOR PART NUMBER, MOTOR SERIAL NUMBER AND DESCRIPTIVE OF PART.



MOTOR NO.	VOLTS	CYCLE	PHASE	RPM.	H.P.	STATOR COMPLETE	ROTOR COMPLETE	BALL BRG. FRONT END	BALL BRG. BACK END	SHAFT	KEY ROTOR
600194-113	950/550 865/300	60	3	1150 960	65 60	1124314	A110890	903719-274	903719-274	A110877	
600194-97	950 865	60	3	1150 960	65 60	1124016	A110890	903719-274	903719-274	A110877	
600194-52	550/500	60/50	3	1150/960	65/60	1123506	A110890	903719-274	903719-274	A110877	900947-896
600194-74	550/500	60/50	3	1150/960	65/60	1123447	A110890	903719-274	903719-274	A110877	900947-896
600194-73	440/415	60/50	3	1180/960	115/105	1123387	A110890	903719-274	903719-274	1123389	
600194-53	440/415	60/50	3	1150/960	65/60	511269	A110890	903719-274	903719-274	1123389	

JOY MANUFACTURING CO.
PLANT LOCATION AS INDICATED BELOW

CLAREMONT, N. H.	NEW PHILADELPHIA, OHIO
DALLAS, TEXAS	ST. LOUIS, MISSOURI
FRANKLIN, PA.	
SALT, ONTARIO, CANADA	
GREENOCK, SCOTLAND	
LICHFIELD, ENGLAND	

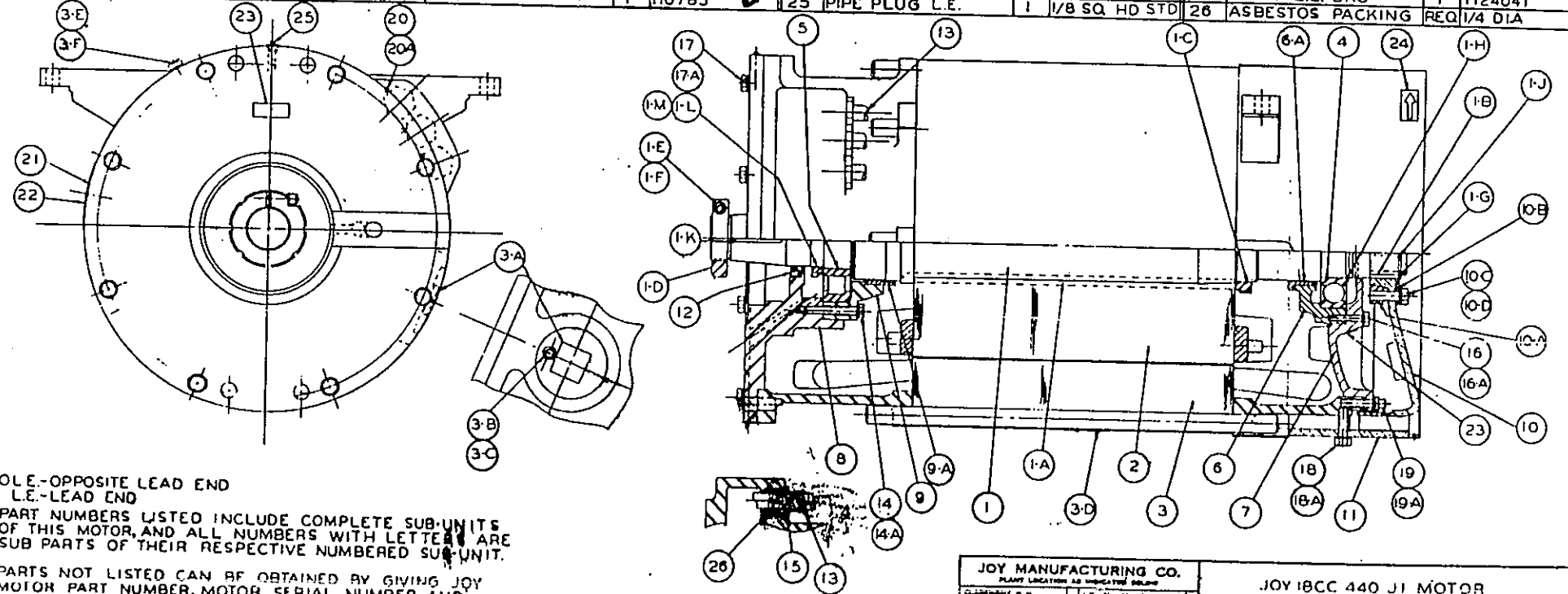
RELICANCE 700440JI F.C.X.P. MOTOR
RELICANCE 1100440JI F.C.X.P. MOTOR

DR. J.E. O'K. 1-4-62
SCALE: _____
CLASS: _____
600194-53

16-161009						ROTOR WITH SHAFT	WOUND CORE WITH FRAME	SET STATOR	COILS SET	
MOTOR NO	VOLTS	CYCLE	PHASE	RPM	HP			WINDING MAT'L	COILS	
600194-91	440 415	60 50	3 3	1180 980	230 210	1124014	1124013	1124012	1124011	54

PARTS LIST

ITEM	NAME	QTY	PART NUMBER	ITEM	NAME	QTY	PART NUMBER	ITEM	NAME	QTY	PART NUMBER	ITEM	NAME	QTY	PART NUMBER
1	SHAFT	1	1123381	3-B	12 PT CS BREATHER	1	1/2 X 3/4	10-A	TAPERED PLATE	1	1124003	17-A	LCKW L.E. BRKT	8	1/2 MED
1-A	CORE KEY	1	1/2 X 1/2 X 17 1/2	3-C	LCKW BREATHER	1	1/2 HI COLLAR	10-B	BACK UP PLATE	1	1124004	18	HHCS VANE SECTION	4	1/2 X 1 3/4
1-B	KEY FAN (RND END)	1	3/8 X 3/8 X 1 1/2	3-D	COVER STATOR	1	110774	10-C	HHCS FAN	4	90002B-44	18-A	LCKW VANE SECTION	4	1/2 MED
1-C	LOCKNUT ROTOR	1	901348-20	3-E	HHCS COVER	6	3/8 X 3/4	11	VANE SECTION	1	110788	19	12 PT CS OLE BRKT	4	1/2 X 1 1/2
1-D	LOCKNUT EXT	1	3190118-16	3-F	LCKW COVER	6	3/8 MED	12	OIL SEAL L.E.	1	901241-261	19-A	LCKW O.L.E. BRKT	4	1/2 HI COLLAR
1-E	Hx SOCHD CS (NYLOCK)	1	3/8 X 1 3/4	4	BALL BRG O.L.E.	1	903719-295	13	CABLE	3	801302-28	20	Hx SOCHD CS PKG NUT	3	1/4 X 3/4
1-F	LCKW	1	3/8 MED	5	ROLLER BRG L.E.	1	903719-310	14	HHCS L.E. CART.	6	90002B-94	20-A	LCKW PKG NUT	3	1/4 MED
1-G	SNAP RING FAN	1	902095-250	6	CARTRIDGE O.L.E.	1	538072	14-A	LCKW L.E. CART.	6	1/2 MED	21	NAME PLATE	1	
1-H	SNAP RING O.L.E. BRG	1	902095-293	6-A	BUSHING O.L.E. CART.	1	110781	15	PACKING GLAND NUT	3	1124069	22	LUBRICATION PLATE	1	
1-J	PIPE PLUG OLE	1	1/8 SQ HD STD	7	BRACKET OLE	1	1123264	16	HHCS O.L.E. CART.	4	3/8 X 1 1/2	23	BEARING PLATE	2	
1-K	KEY EXT (RND ENDS)	1	5/8 X 1/2 X 2 13/16	8	BRACKET L.E.	1	1123376	16-A	LCKW O.L.E. CART.	4	3/8 MED	24	ROTATION PLATE	1	
2	ROTOR	1	1124009	9	CARTRIDGE L.E.	1	1123394	17	HHCS L.E. BRKT	8	1/2 X 1 3/4	1-L	LOCKNUT L.E. BRG	1	901348-16
3	STATOR	1	1124010	9-A	BUSHING L.E. CART.	1	1123382	25	PIPE PLUG L.E.	1	1/8 SQ HD STD	1-M	LCKW L.E. BRG	1	1124041
3-A	BREATHER	1	1123250	10	FAN	1	110785					26	ASBESTOS PACKING	REQ	1/4 DIA



OLE.-OPPOSITE LEAD END
 L.E.-LEAD END
 PART NUMBERS LISTED INCLUDE COMPLETE SUB-UNITS OF THIS MOTOR, AND ALL NUMBERS WITH LETTERS ARE SUB PARTS OF THEIR RESPECTIVE NUMBERED SUB-UNIT.
 PARTS NOT LISTED CAN BE OBTAINED BY GIVING JOY MOTOR PART NUMBER, MOTOR SERIAL NUMBER, AND DESCRIPTION OF PART.

JOY MANUFACTURING CO.

PLANT LOCATIONS AS SHOWN ON MAP

JOY 18CC 440 J1 MOTOR

600194-91

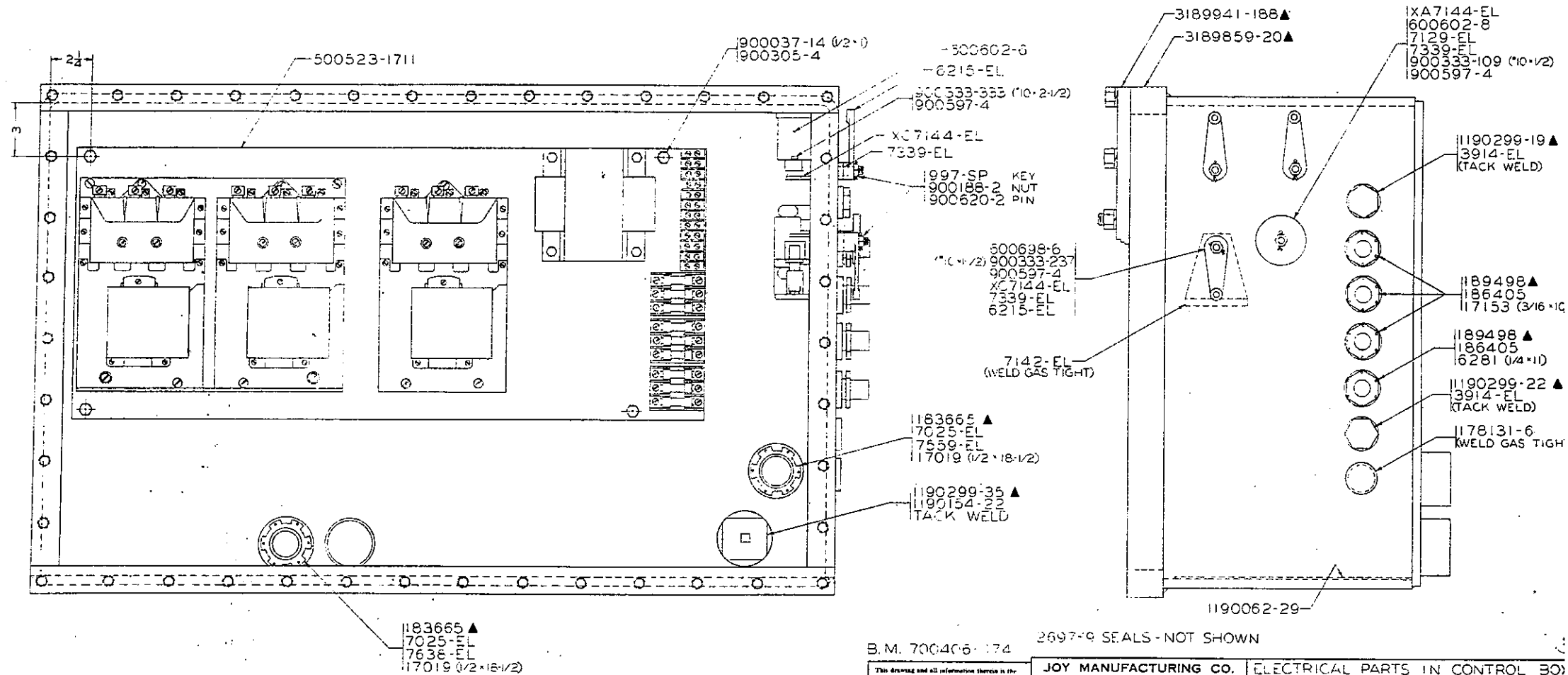
15694 181951 190531 190818

069173
EL1590

1189857-6

O.E.M. PRINT
FOR REFERENCE ONLY,
NOT AS REBUILT

▲ PART OF CASE



B.M. 700406-174

2697-9 SEALS - NOT SHOWN

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JOY MANUFACTURING CO.	
PLANT LOCATION AS INDICATED BELOW	
BUFFALO, NEW YORK	NEW PHILADELPHIA, OHIO
CLAREMONT, N. H.	
FRANKLIN, PA.	
GALT, ONTARIO, CANADA	
GREENOCK, SCOTLAND	
MICHIGAN CITY, IND.	

ELECTRICAL PARTS IN CONTROL BOX	
15RU A.C. 440/550	
SIMILAR TO EL 1590	DATE OF ORIGINAL DATE
SUPERSEDED BY	DR. 715, 611, 511
SUPERSEDED BY	TR. 5-27-73
REPLACES	CK
REPLACED BY	APPD

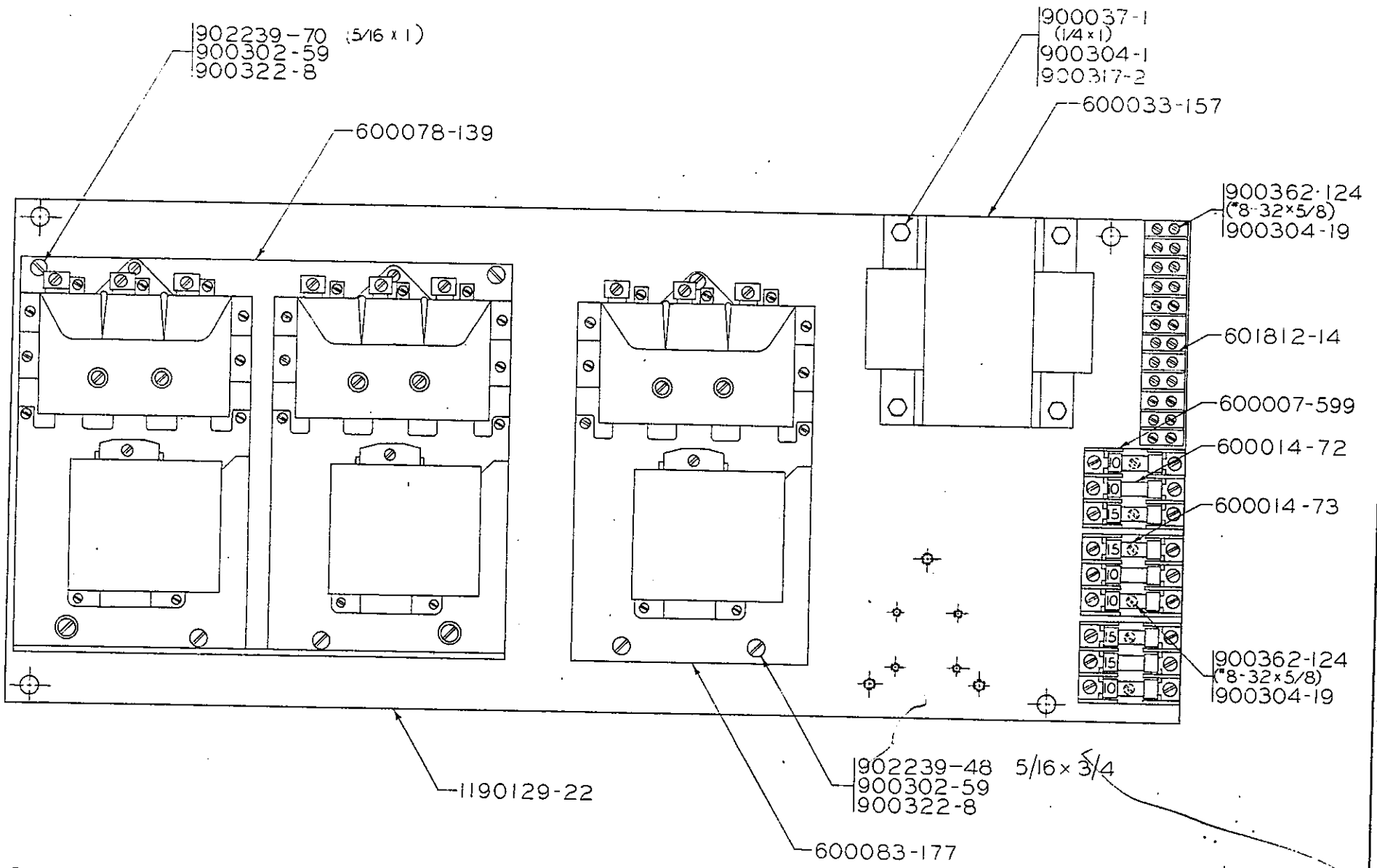
SCALE 1/2" = 1" CLASS 15
EL1590

DO NOT CHANGE WITHOUT APPROVAL BY HEAD

REV. 0001 01 306 REVISIONS: BP654/FEP47/FPT 561

DWG. SIZE 500523-1711

FORM NO. 5108



SEE DWG. WD3287 FOR PANEL WIRING NOT SHOWN
600697-1

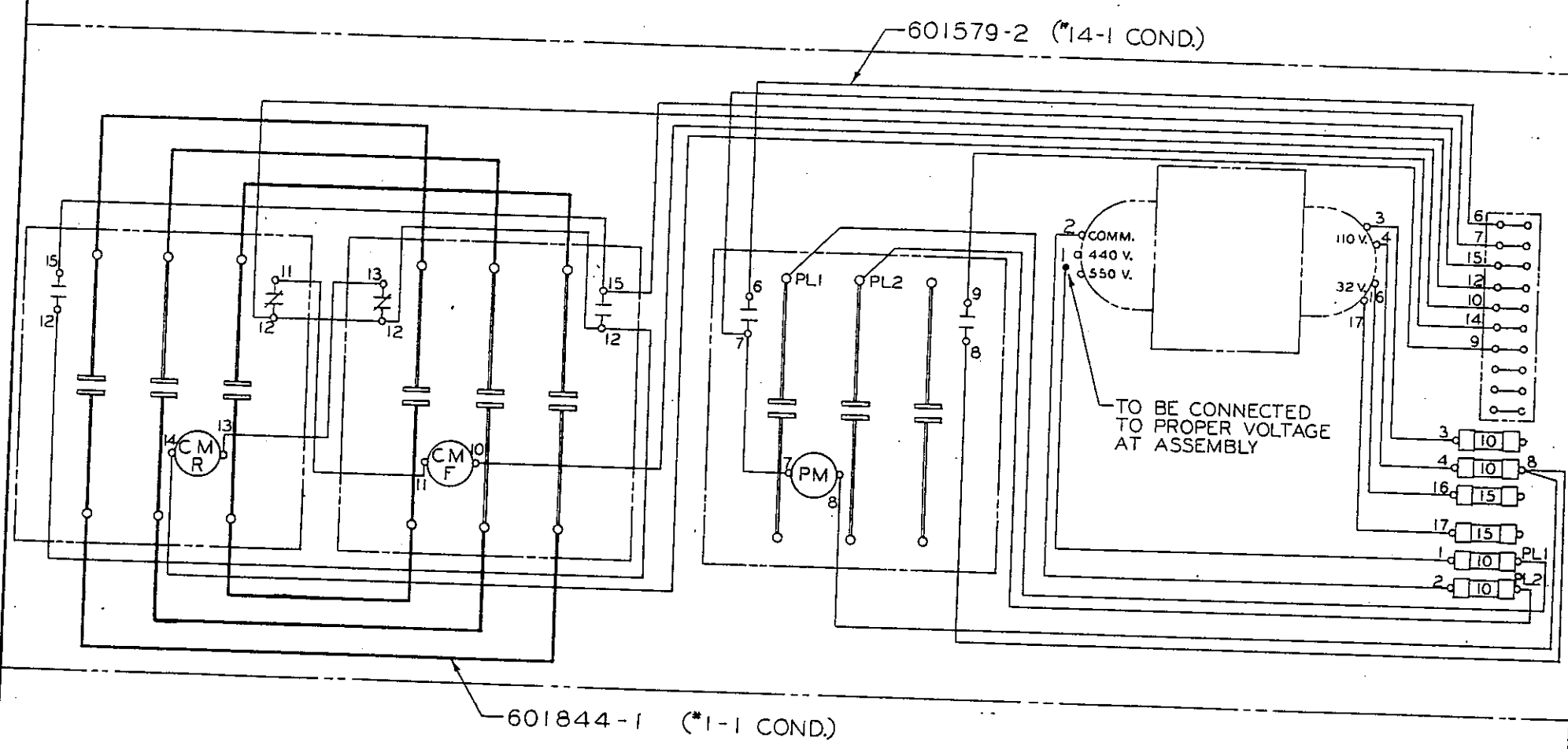
DO NOT CHANGE WITHOUT APPROVAL OF MSHA

JOY MANUFACTURING CO.		CONTROL PANEL	
PLANT LOCATION AS INDICATED BELOW			
BUFFALO, N. Y.	NEW PHILADELPHIA, O.	SIMILAR TO 500523-1711 SUPERSEDED BY: REPLACES: REPLACED BY:	SCALE 1/2" = 1" CLASS 15RU 500523-1711
CLARENCE, N. H.			
FRANKLIN, PA.			
GALT, ONTARIO, CANADA			
GREENOCK, SCOTLAND			
NICHIGAN CITY, IND.			
DATE: 8/23/74		APPD:	

E. D. FBP396	REVISIONS	FBP8/9	FBT 137	FCB 426
DATE				

O.E.M. PRINT FOR REFERENCE ONLY,

WD3287



SEE DWG. 500523-1711 FOR COMPONENTS

NUMBER ALL CONTROL WIRES INDICATED WITH APPROPRIATE 601572- MARKERS (BOTH ENDS)
ALL CIRCUITS ARE SHOWN DE-ENERGIZED

O.E.M. PRINT
FOR REFERENCE ONLY,
NOT AS REBUILT

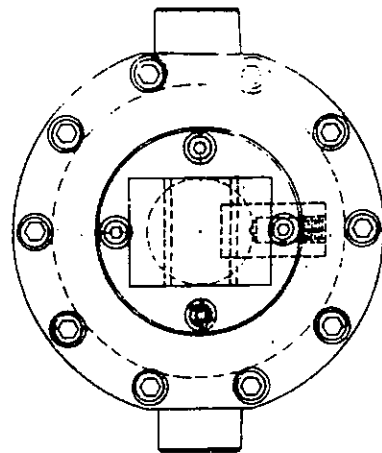
DATE	REVISED	BY
10-25-74	FBP622	FBP654
	FBP674	FBT 948

JOY MANUFACTURING CO. PLANT LOCATION AS INDICATED BELOW		WIRING DIAGRAM FOR 500523-1711 PANEL	
SUFFALO, N. Y.	NEW PHILADELPHIA, O.	SIMILAR TO	SCALE CLASS 15RU
CLARENCE, N. Y.		WD 12215	
FRANKLIN, PA.		SUPERSEDED BY	DR. 9-25-74
GALT, ONTARIO, CANADA		SUPERSEDED BY	CK
GREENOCH, SCOTLAND		REPLACES	APPRO
MICHIGAN CITY, IND.		REPLACES BY	

WD3287

116100203

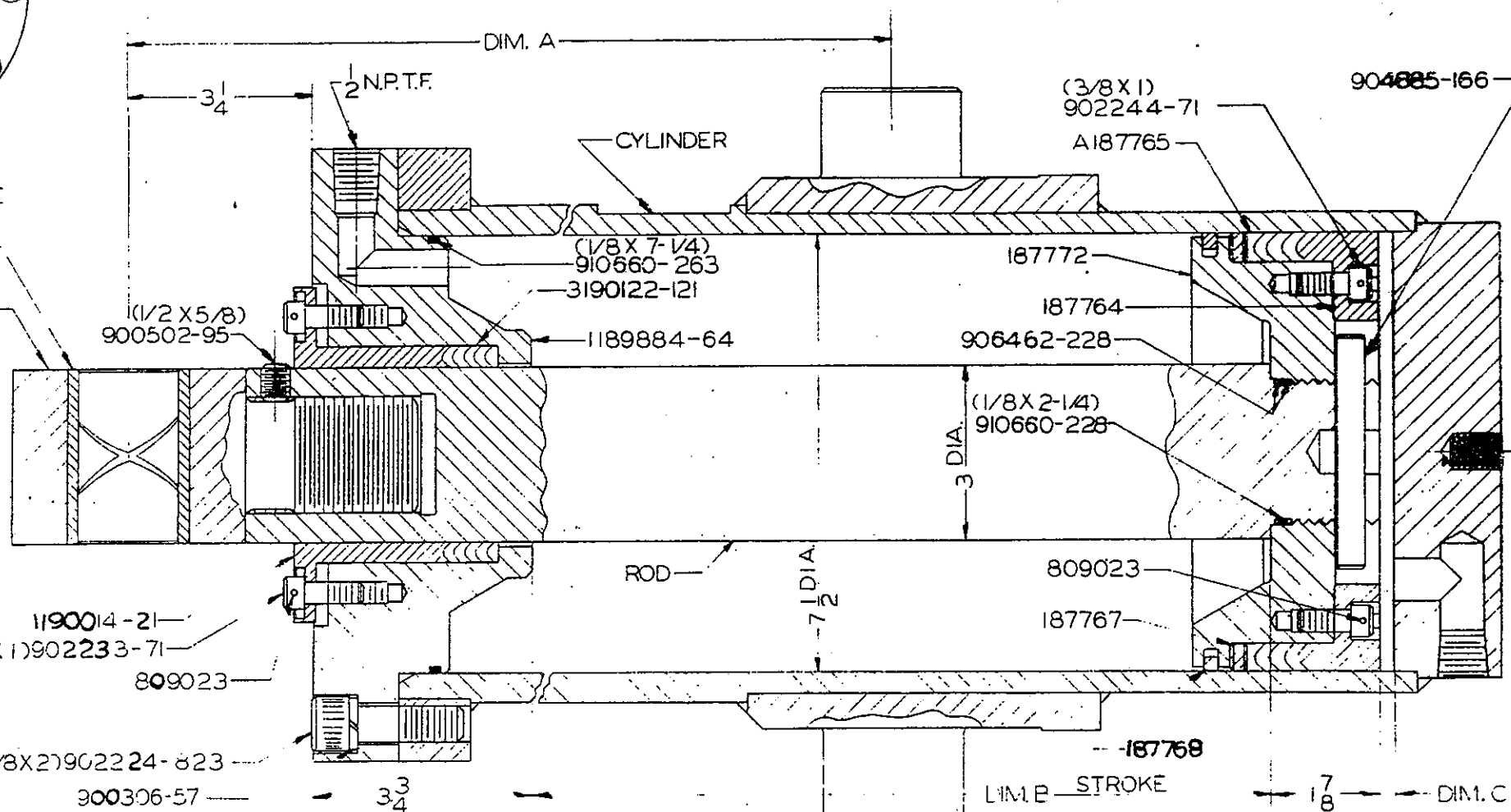
ASSY. NO.	ROD	CYLINDER	PLATED	DIM. A	DIM. B	DIM. C	REMARKS
503007-317	1190194-264	3189949-120	NO	13 1/8	12 1/2	1/4	REPLACED BY 503007-318
503007-318	1190194-265	3189949-120	YES	13 1/8	12 1/2	1/4	
503007-332	1190194-278	3189949-120	STAINLESS	13 1/8	12 1/2	1/4	
503007-340	1190194-291	3189949-141	YES	14 3/16	21 3/16	0	



VIEW A - HALF SIZE

1189876-113
(INCLUDED IN 3190198-25)

VIEW A



JOY MANUFACTURING CO.		BOOM LIFT CYLINDER ASSY. 7 1/2 DIA.	
PLANT LOCATION AS INDICATED BELOW			
BUFFALO, N. Y.	NEW HAVEN, CT.	SIMILAR TO	SCALE: 1/2" = 1"
CLANDON, N. Y.	FRANKLIN, PA.	SUPERSEDED BY	DATE: 1-17-69
ONTARIO, CANADA	GREENOCK, SCOTLAND	REPLACED BY	503007-317
NEW HAVEN, CT.		APPROVED BY	

E.O. DATE: FBE 385 REVISIONS: FBE 540 FBE 658 FBK 237 FBT 283

503007-317/-318/-332/-340

BOOM LIFT CYLINDER ASSY.

USE WITH 503007-317 ONLY: (REPLACED BY 503007-318)

1 3189949-120 CYLINDER
1 1190194-264 ROD

USE WITH 503007-318 ONLY:

1 3189949-120 CYLINDER
1 1190194-265 ROD

USE WITH 503007-332 ONLY:

1 3189949-120 CYLINDER
1 1190194-278 ROD

USE WITH 503007-340 ONLY:

1 3189949-141 CYLINDER
1 1190194-291 ROD

PARTS COMMON TO ALL LISTS:

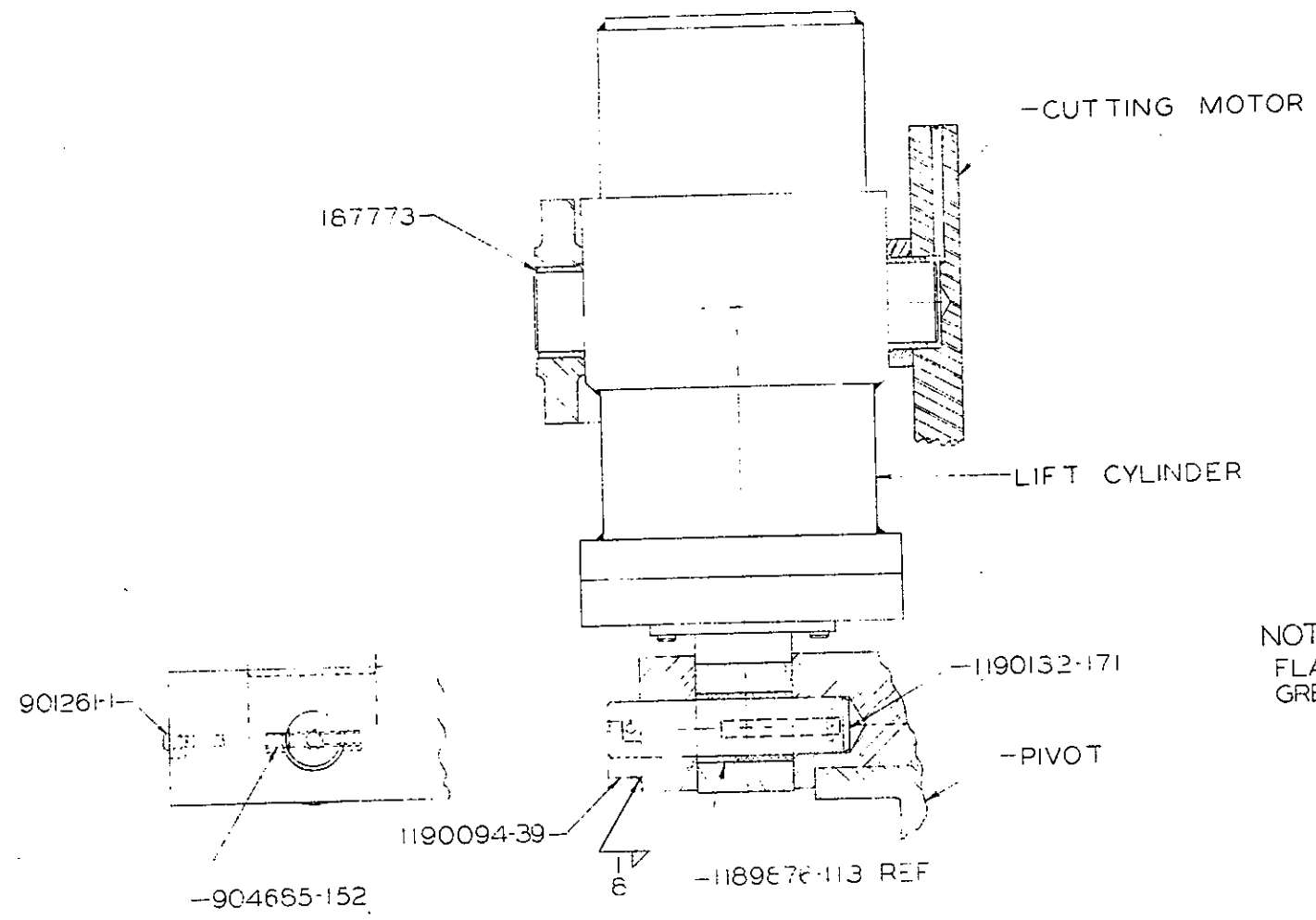
1	A187765	PISTON HEAD PACKING
1	3190122-121	PACKING
1	3190198-25	ROD END
	1189876-113	BUSHING
1	187764	RING
1	187767	BACK-UP WASHER
1	187768	PISTON RING
1	187772	ROD HEAD
1	1189884-64	CAP
1	1190014-21	GLAND
10	900306-57	5/8" LOCKWASHER
1	900502-95	1/2"-13 X 5/8" CAP SCREW
10	902224-823	5/8"-18 X 2" CAP SCREW
4	902233-71	3/8"-16 X 1" CAP SCREW
6	902244-71	3/8"-16 X 1" CAP SCREW
1	910660-228	"O" RING
1	910660-263	"O" RING
1	904685-166	PIN
2	906462-228	BACK-UP RING
3'	809023	1/16" DIA. BINDING WIRE

REVISION/

(503007-317)
(503007-318)
(503007-332)
(503007-340)

FBT283
FBT283
FBT283
FBT283

CM4751



NOTE:
 FLAT ON 1190132-171 PIN MUST FACE
 GREASE HOLE IN PIVOT

E.O. 12812 DATE REVISIONS FBP537 FBT264

JOY MANUFACTURING CO. PLANT LOCATION AS INDICATED BELOW		MISC. PARTS TO MOUNT LIFT CYLINDER	
BUFFALO, N. Y.	NEW PHILADELPHIA, OHIO	SIMILAR TO	DR. DL MILLER SCALE HALF CLASS 1
CLAREMONT, N. H.		SUPERSEDED BY	TR.
FRANKLIN, PA.		SUPERSEDED BY	CR.
GALT, ONTARIO, CANADA		REPLACED BY	APPD.
GREENOCK, SCOTLAND			
MICHIGAN CITY, IND.			

CM4751

LIST OF PARTS AS CALLED FOR ON B/M 700467-107

4	187773	TRUNNION BUSHING
2	1190094-39	LOCK
2	1190132-171	PIN
2	901261-1	1/8" FITTING
2	904685-152	1/2" X 3" PIN

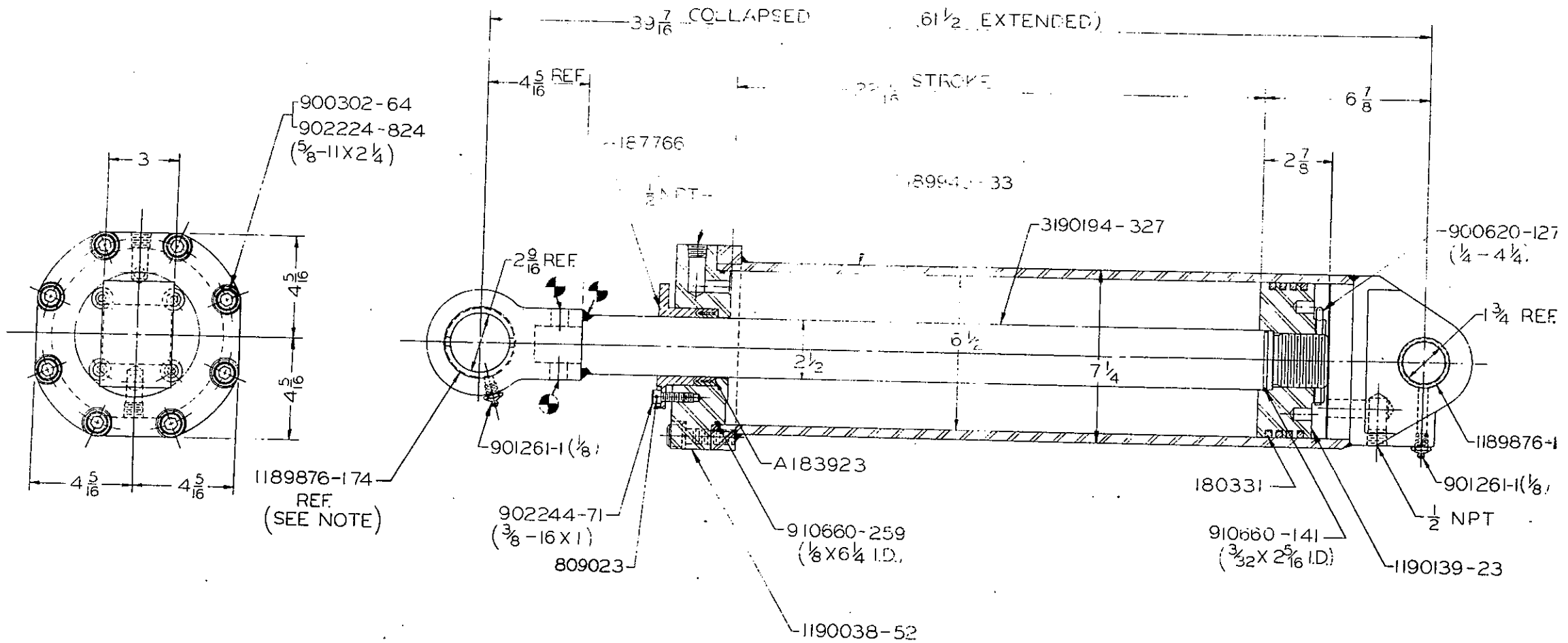
PART SHOWN FOR REFERENCE ONLY:

1189876-113	BUSHING
-------------	---------

REVISION/ FBT264

REF. DWG. - CM4751

503007-371



● REFERENCE WELDING NOTE
 ALL WELDS TO BE MADE WITH
 E7018 LOW HYDROGEN WELDING ROD

NOTE
 NO BUSHING SPECIFIED FOR ROD END
 PRIOR TO JAN. 27 1978

DATE	REVISED	FBK	FBK	FBP	FBT
FBK 245	461	637	576	557	

JOY MANUFACTURING CO. PLANT LOCATION AS INDICATED BELOW		BOOM SWING CYLINDER (CHROME PLATED ROD)	
BUFFALO, N.Y.	NEW PHILADELPHIA, OHIO	SIMILAR TO 503007-143	SCALE HALF CLASS. IF RU
CLARKSBURG, N.C.		SUPPLEMENTED BY	DATE OF INITIAL & FINAL
PHOENIX, AZ.		REPLACED BY	REV. 22 8-9-70
SALT SPRINGS, CANADA		REPLACED BY	TR.
SHREVEPORT, LOUISIANA		REPLACED BY	APPD.
WICHITAN, KANSAS			
WICHITAN, MISSOURI			
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WICHITAN, WISCONSIN			
WICHITAN, WYOMING			

503007-371



JOY MANUFACTURING CO.

BILL OF MATERIAL

DRAWING NO.
503007-371BILL OF MAT. NO.
503007-371

SHEET NO. 1 OF 1

15RU

NAME CYL. (BOOM SWING)

ORDER NO.

(CHROME PLATED ROD)

ISSUED: DECEMBER 17, 1970

FBK249

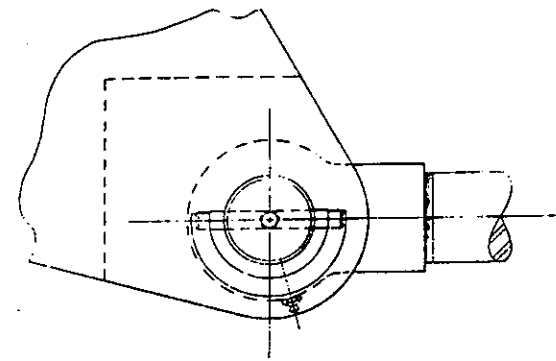
FBK677

FBP575

FBT557

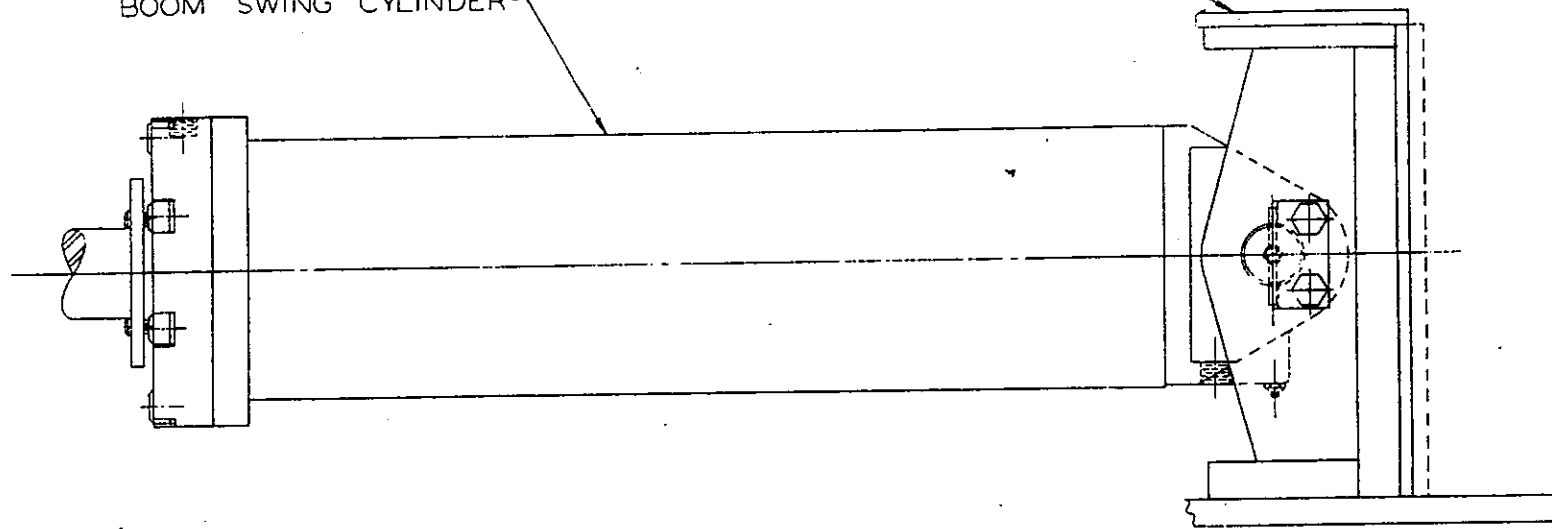
QUANTITY		PART NUMBER	NAME OF PART	COST PER PIECE	TOTAL AMOUNT
PER ORDER	PER UNIT				
	1	A183923	PACKING (SPLIT CHEVRON)		
	1	3189949-33	CYLINDER		
	1	3190194-327	ROD (PLATED)		
	4	180331	RING (PISTON)		
	1	187766	GLAND		
	1	1189876-11	BUSHING		
	1	1190038-52	HEAD		
	1	1190139-23	PISTON		
	8	900302-64	LWASHER (5/8)		
	1	900620-127	COTT PIN (1/4 X 4 1/2)		
	2	901261-1	FITTING (1/8 GREASE)		
	8	902224-824	CAP SCR (5/8 X 2 1/4 SOC HD)		
	4	902244-71	3/8" X 1" CAP SCREW		
	1	910660-141	O-RING		
	1	910660-259	O-RING		
	2	809023	WIRE		
			PART SHOWN FOR REFERENCE ONLY:		
		1189876-174	BUSHING		

CM4753-8

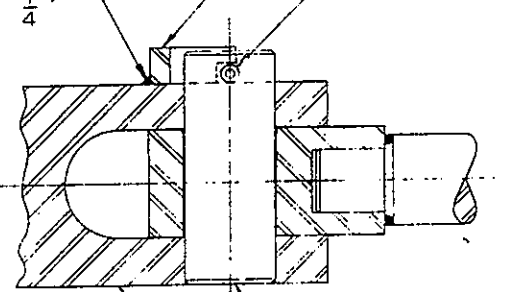


BOOM SWING CYLINDER

MAIN FRAME



LONG 3 PLACES

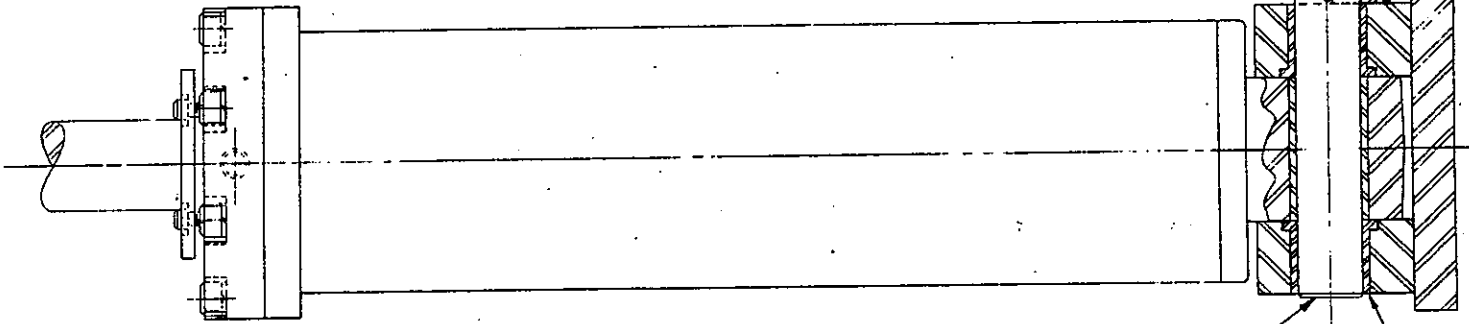


PIVOT

1190094-41

904685-166

1190132-172



900020-14
900302-4

1190094-4

904685-147

1190094-3

1190132-24

1189876-43

NOT SHOWN:

PARTS REQ'D. TO GREASE
 REAR PIN ON R.H. CYLINDER
 28674 915804-36
 900020-11 907636-4
 901176-55 904015-4
 901286-1
 902361-1
 907254-42

L.H. SIDE SHOWN

JOY MANUFACTURING CO.		MISC. PARTS TO MOUNT	
PLANT LOCATION AS INDICATED BELOW		BOOM SWING CYLINDER	
BRUNSWICK, N. Y.	NEW PHELPS, OHIO	SCALE: HALF	CLASS.
CLARKSBURG, N. Y.			
FRANKLIN, N. Y.			
SALT SPRING, CANADA			
WINDSOR, ONTARIO			
MICHIGAN CITY, IND.			
DESIGNED BY	ENGINEERED BY	DATE	SCALE
		12-14-52	CM4753

FBI 204

LIST OF PARTS AS CALLED FOR ON B/M 700467-108

4	1189876-43	BOOM SWING BRACKET BUSHING
2	1190094-3	CYLINDER END LOCK
2	1190094-4	CYLINDER END LOCK
2	1190094-41	ROD END LOCK
2	1190132-24	CYLINDER END PIN
2	1190132-172	ROD END PIN
4	900020-14	1/2"-13 X 1" CAP SCREW
4	900302-4	1/2" LOCKWASHER
2	904685-147	3/16" X 2-3/4" PIN
2	904685-166	1/2" X 4" PIN

PARTS REQUIRED BUT NOT SHOWN ON DRAWING:

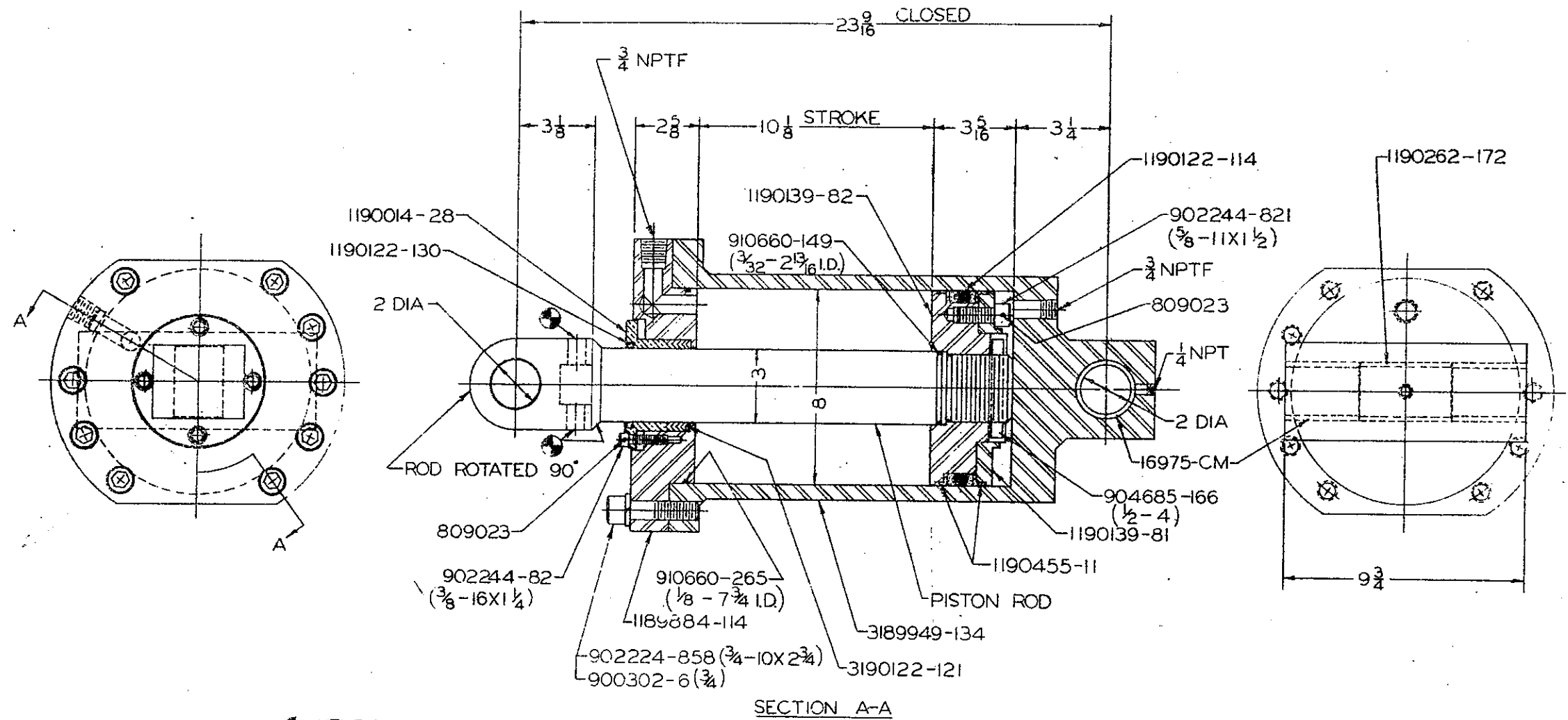
1	28674	MOUNT FOR HEADER BAR
1	900020-11	1/4"-20 X 1" CAP SCREW
1	901176-55	1/8" X 2" NIPPLE
1	901286-1	1/8" COUPLING
1	902361-1	HEADER
2	907254-42	1/8" ELBOW ADAPTER
1	915804-36	HOSE ASSY.
2	904015-4	COUPLING
3'	907636-4	HOSE

REVISION/ FBT264

REF. DWG. - CM4753-B

503007-308

ASSY NO.	PISTON ROD	PLATED
503007-308	3190194-253	NO
503007-309	3190194-254	YES
503007-331	3190194-279	STAINLESS



WELDING NOTE:
USE E7018 LOW HYDROGEN ROD FOR WELDS

JOY MANUFACTURING CO. PLANT LOCATION AS INDICATED BELOW		BAR TILT CYLINDER	
BUFFALO, N. Y. CLAREMONT, N. H. FRANKLIN, PA. GALT, ONTARIO, CANADA GREENOCK, SCOTLAND MICHIGAN CITY, IND.	<input type="checkbox"/> NEW PHILADELPHIA, OHIO	SIMILAR TO: SUPERSEDED BY: REPLACED BY:	OR BAUGHMAN TR. 8-29-68 APPD. <i>[Signature]</i>
DATE: FBE 179		SCALE: 1/2" = 1" CLASS: 15 BU	
REVISIONS: FBE 540 FBE 620 FBP575		503007-308	

503007-308/-309/-331

BAR TILT CYLINDER

USE WITH 503007-308 ONLY-

1 3190194-253 PISTON ROD

USE WITH 503007-309 ONLY-

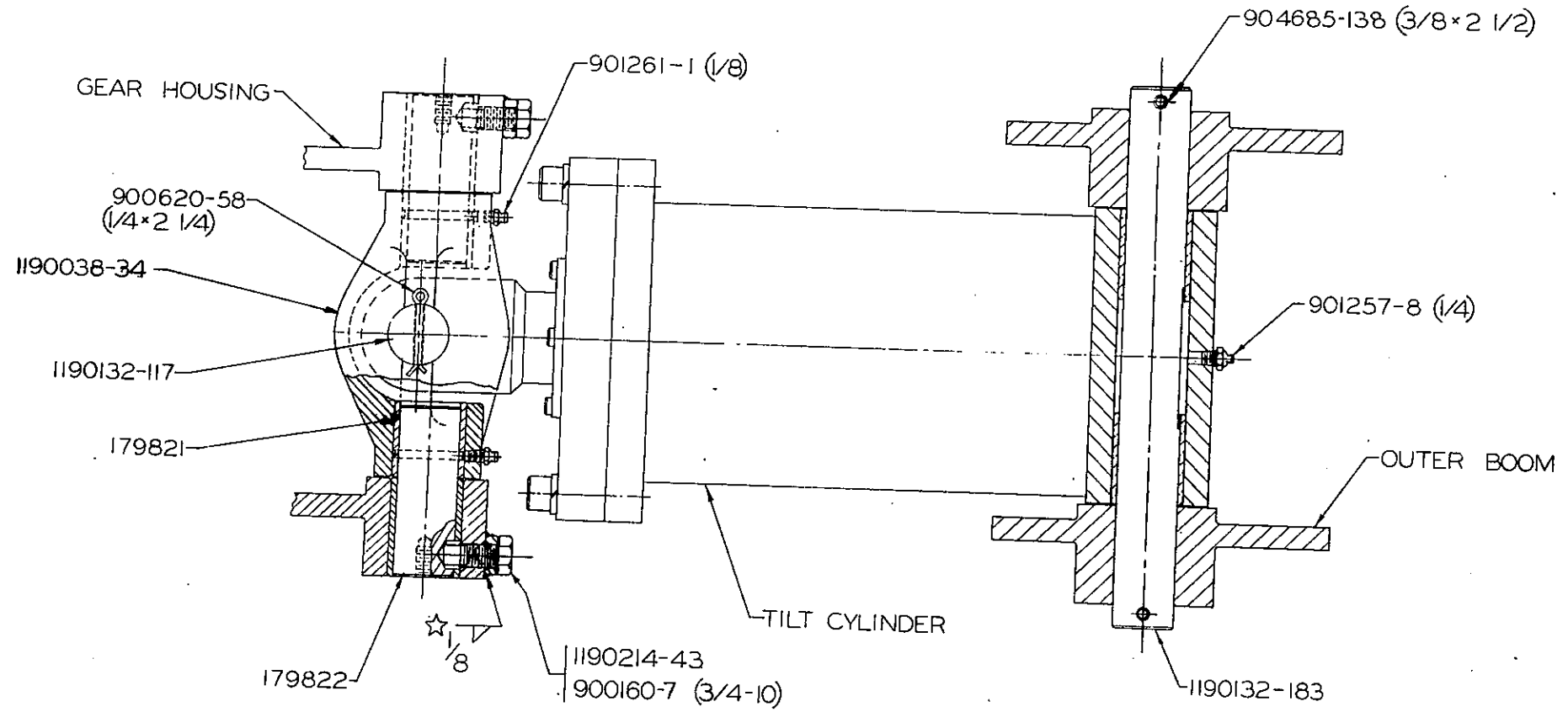
1 3190194-254 PISTON ROD

PARTS COMMON TO BOTH LISTS-

1	3189949-134	CYLINDER BODY
1	3190122-121	V PACKING
2	16975-CM	BUSHING
1	1189884-114	END CAP
1	1190014-28	GLAND
1	1190122-114	7" X 8" X 1" DOUBLE SEAL
1	1190122-130	ROD WIPER
1	1190139-81	REAR HALF PISTON
1	1190139-82	FRONT HALF PISTON
2	1190455-11	WEAR RING
1	1190262-172	SPACER
9	900302-6	3/4" LOCKWASHER
9	902224-858	3/4"-10 X 2 3/4" CAP SCREW
4	902244-82	3/8"-16 X 1 1/4" CAP SCREW
8	902244-821	5/8"-11 X 1 1/2" SCREW
1	910560-149	3/32" X 2-13/16" I.D. O-RING
1	910560-265	1/8" X 7-3/4" I.D. O-RING
1	904685-166	SPRING PIN
4	803023	1/16" STEEL WIRE

USE WITH 503007-331 ONLY:

1	3190194-279	PISTON ROD	
REVISION/	(503007-308)		FBP575
	(503007-309)		FBP575
	(503007-331)		FBP575



☆ TACK WELD AT ASSEMBLY
 BOTH SIDES. USE 70,000 MINIMUM TENSILE WELD ROD
 TACK SECURELY. USE 1/8 DIA ROD

700467-112 PARTS LIST

TACK WELD SET SCREWS TO HEX NUTS-TO REMOVE BREAK TACK WELDS ON HEX NUTS ONLY

JOY MANUFACTURING CO.		PLANT LOCATION AS INDICATED BELOW		PARTS TO MOUNT TILT CYLINDER	
BUFFALO, N. Y.		NEW PHILADELPHIA, OHIO		SIMILAR TO:	DR. BAUGHMAN
CLARKSBURG, N. H.				SUPERSEDES:	TR. 9-3-68
FRANKLIN, PA.				REPLACES:	CK.
GALT, ONTARIO, CANADA				REPLACED BY:	APPRO. [Signature]
GREENOCK, SCOTLAND					
MICHIGAN CITY, IND.					

FBT468							
E.O.F. DE 179	REV. 000000	FBE 680	FBP 443	FBP 600	FBP 784	FBT 181	
DATE							

CM 4932

JOY MANUFACTURING CO.

BILL OF MATERIAL

DRAWING NO.
CM4932

BILL OF MAT. NO.
700467-112

SHEET NO. 1 OF 1

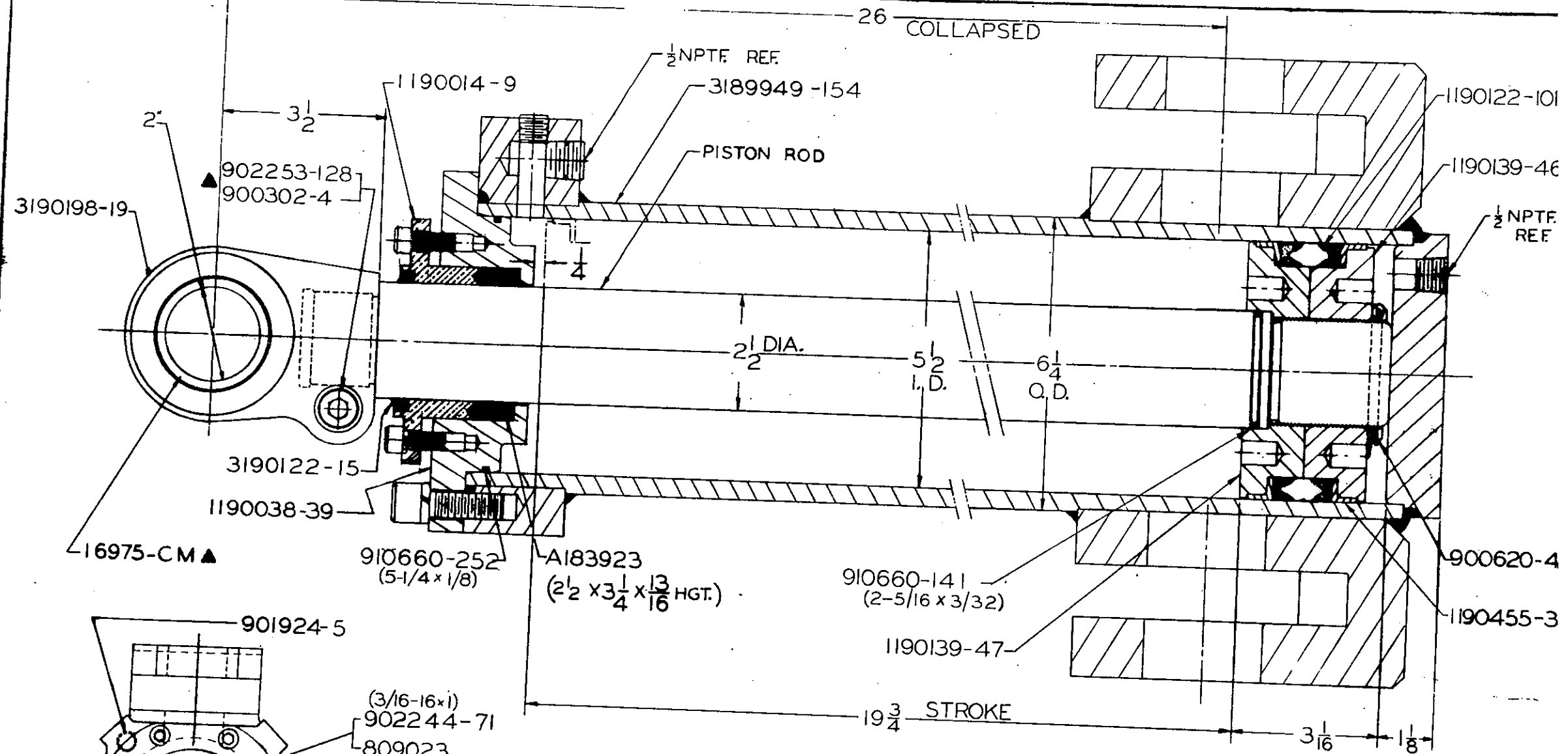
NAME MISC. PARTS TO MOUNT
8" TILT CYLINDER

ORDER NO.

ISSUED: SEPTEMBER 18, 1968		FBE179	
FBE680	FBP784		
FBP443	FBT181		
FBP600	FBT468		

QUANTITY		PART NUMBER	NAME OF PART	COST PER PIECE	TOTAL AMOUNT
PER ORDER	PER UNIT				
	2	179821	BUSHING		
	2	179822	PIN		
	1	1190132-117	PIN		
	1	1190132-183	PIN		
	1	1190038-34	HEAD		
	2	1190214- ⁴³	SET SCREW		
	2	900160-7	3/4"-10 NUT		
	2	900620-58	COTT PIN (1/4" X 2 1/2")		
	1	901257-8	FITTING (1/4" NPT GREASE)		
	2	901261-1	FITTING (1/8" NPT GREASE)		
	2	904685-138	3/8" X 2-1/2" SPRING PIN		

02E-200E05



ASSEMBLY	PISTON ROD	ROD TYPE
503007-370	1190194-199	PLATED

▲ INCLUDED IN 3190198-19

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FBK325 FBT443 FCC132 FCC156

JOY MANUFACTURING CO.		BAR SWING CYLINDER	
PLANT LOCATION AS INDICATED BELOW			
CLARKSBURG, W. VA.	NEW ORLEANS, LA.	DATE: 10-27-70	DRW. DATE: 5-11-70
DALLAS, TEXAS	ST. LOUIS, MISSOURI	DESIGNED BY	503007-370
FRANKFURT, PA.		CHECKED BY	
SALT SPRING, CANADA		APPROVED BY	
ST. LOUIS, MISSOURI		RELEASED BY	
ST. LOUIS, MISSOURI			

503007-370

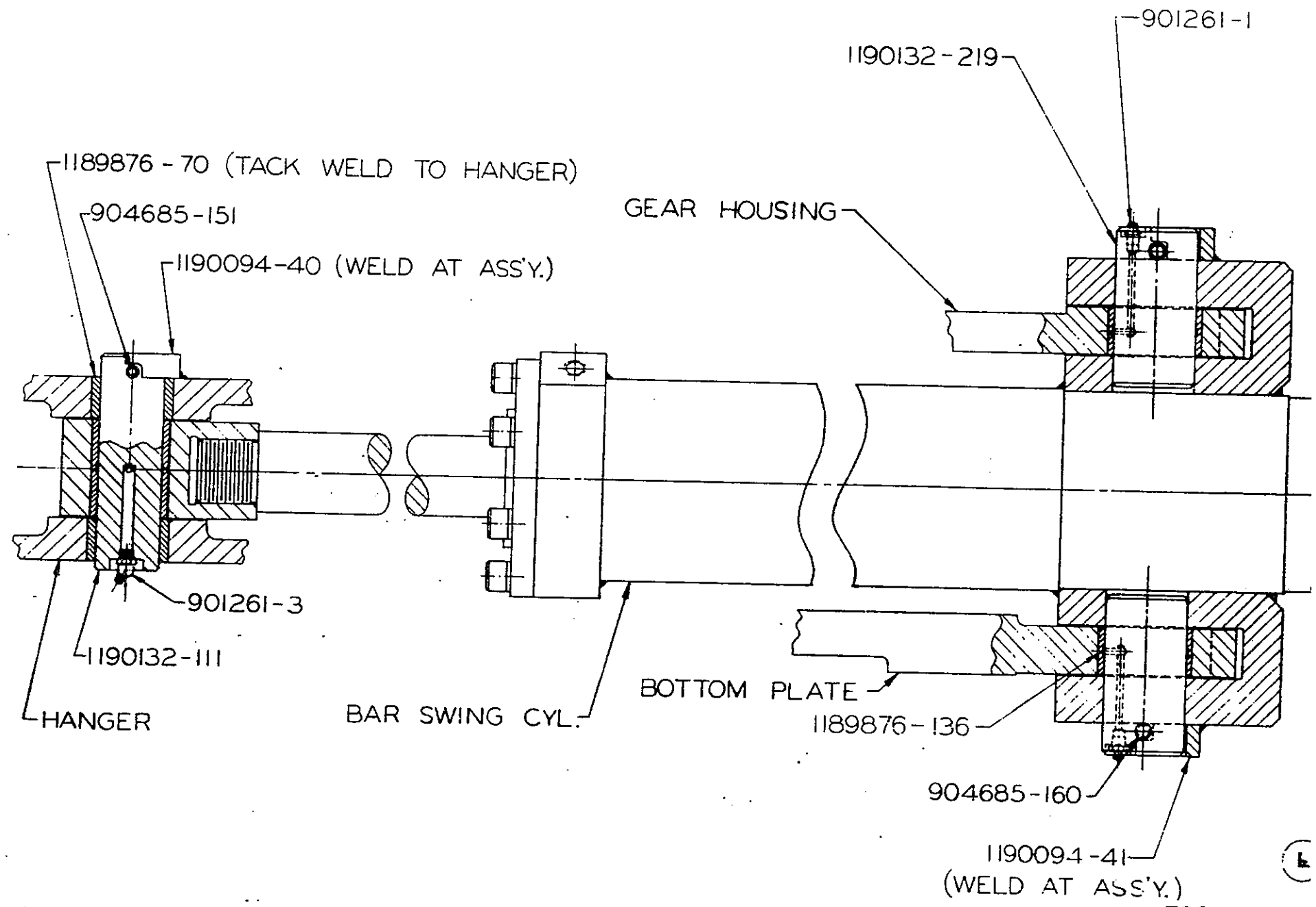
BAR SWING CYLINDER

1	A183923	PACKING
1	3189949-154	CYLINDER BODY
1	3190122-15	ROD WIPER
1	3190198-19	ROD END
	16975-CM	CYLINDER END BUSHING
	900302-4	1/2" LOCKWASHER
	902253-128	CAP SCREW
1	1190014-9	GLAND
1	1190038-39	BAR SWING HEAD
1	1190122-101	DOUBLE ACTING SEAL
1	1190139-46	FRONT HALF PISTON HEAD
1	1190139-47	REAR HALF PISTON HEAD
1	1190194-199	PISTON ROD (PLATED)
2	1190455-3	WEAR RING
8	900302-64	5/8" LOCKWASHER
1	900620-42	3/16" X 3" COTTER PIN
1	901924-5	1/2" PIPE PLUG
8	902224-822	5/8"-11 X 1-3/4" CAP SCREW
4	902244-71	3/8"-16 X 1" CAP SCREW
1	910660-141	"O" RING (2-5/16 X 3/32)
1	910660-252	"O" RING (5-1/4 X 1/8)
2	809023	1/16" DIA. WIRE

REVISION/

FCC156

CM4217A



REV. BK211
 DATE: _____
 REVISIONS: FBP 443 FBT264

JOY MANUFACTURING CO.		MISC PARTS TO MOUNT BAR SWING CYLINDER	
PLANT LOCATION AS INDICATED BELOW		DRAWN TO: CM4217	
DAYTON, O. I.	NEW PHILADELPHIA, O.	DESIGNED BY:	DATE: 11-5-70
CLARKSBURG, O.		APPROVED BY:	SCALE: HALF
PARSONS, PA.		REPLACED BY:	CM4217-
SALT SPRING, OHIO			
WHEELING, W. VA.			
WICHITA, KAN.			

LIST OF PARTS AS CALLED FOR ON B/M 700467-120

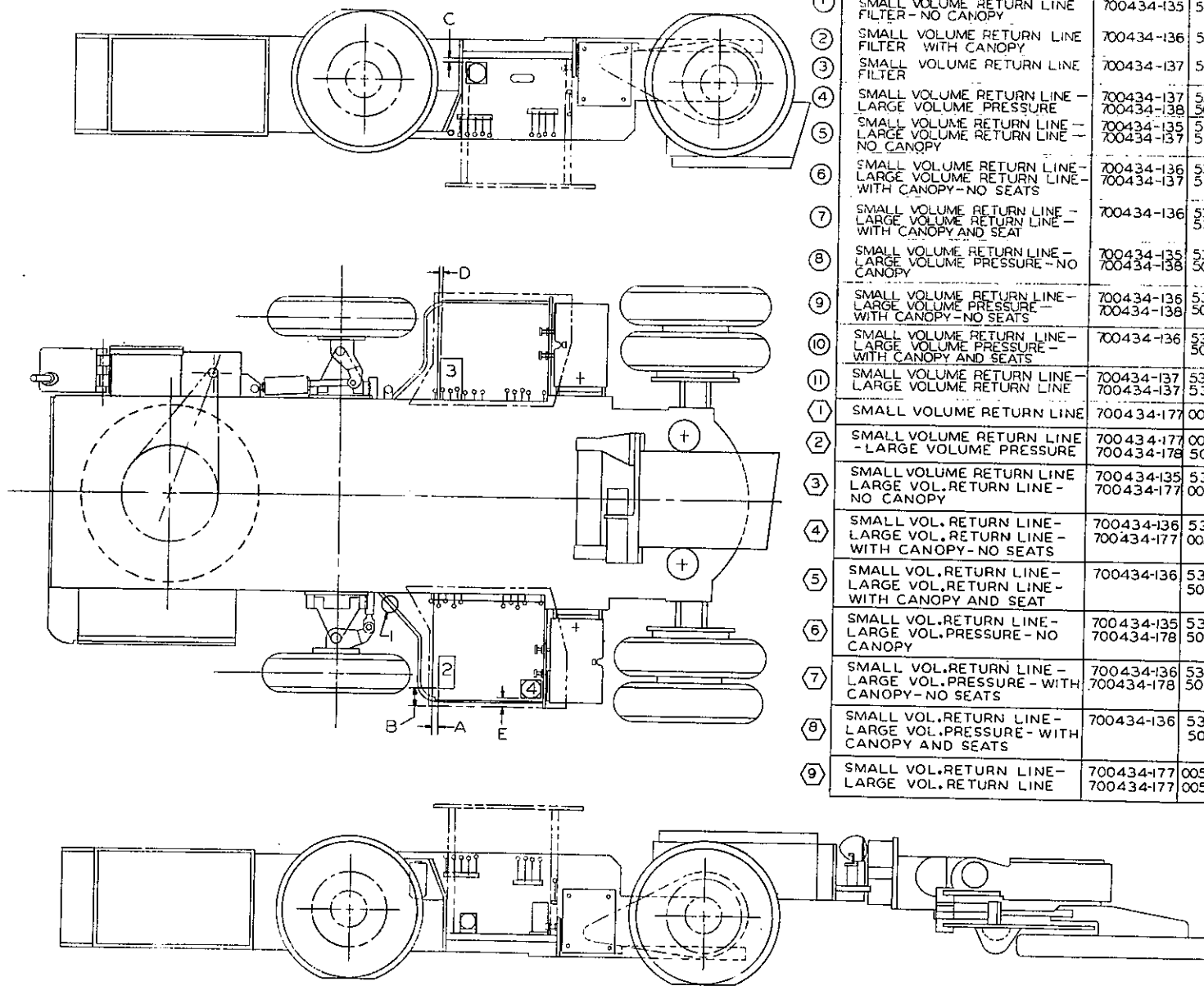
4	1189876-70	BUSHING
4	1189876-136	BUSHING
2	1190094-40	LOCK
4	1190094-41	LOCK
2	1190132-111	PIN
4	1190132-219	PIN
4	901261-1	1/8" GREASE FITTING
2	901261-3	1/8" GREASE FITTING
2	904685-151	3/8" SPRING PIN
4	904685-160	1/2" SPRING PIN

REVISION/

FST254

REF. DWG.

- CM4217-A



PARTS NOT SHOWN

BM. 700434-135

- 1190451-290
- 900020-14 (1/2 x 1)
- 900302-4 (1/2)
- 1563778

BM. 700434-136

- 1190451-464
- 1190451-467
- 900020-14 (1/2 x 1)
- 900302-4 (1/2)
- 1563778

BM. 700434-137 AND 700434-177

- 1190127-85
- 1190451-467
- 900020-104 (1/2 x 3-1/4)
- 900302-4 (1/2)

BM. 700434-138 AND 700434-178

- 01190451-0471
- 01190127-0089
- 900020-134 (1/2 x 4)
- 900302-4 (1/2)

▲NOTE-WHEN USING LOCATION 3 REFER TO SK24832

⑪ REPLACED BY ⑨

METHODS		B. M.	NO. OF FILTER-ELEMENT	MICRON	LOCATION	DIMENSIONS	
					HORIZONTAL - VERTICAL		
					1 2 3 4 5		
①	SMALL VOLUME RETURN LINE FILTER - NO CANOPY	700434-135	532520-4	1562673-2	10	V	
②	SMALL VOLUME RETURN LINE FILTER WITH CANOPY	700434-136	532520-4	1562673-2	10	H	A=4 B=6
③	SMALL VOLUME RETURN LINE FILTER	700434-137	530553-16	1067605	25	H	A=4 B=6
④	SMALL VOLUME RETURN LINE - LARGE VOLUME PRESSURE	700434-137 700434-138	530553-16 503076-8	1067605 1067605	25 25	H	A=4 B=6 A=4 E=3
⑤	SMALL VOLUME RETURN LINE - LARGE VOLUME RETURN LINE - NO CANOPY	700434-135 700434-137	532520-4 530553-16	1562673-2 1067605	10 25	V	A=4 E=3
⑥	SMALL VOLUME RETURN LINE - LARGE VOLUME RETURN LINE - WITH CANOPY - NO SEATS	700434-136 700434-137	532520-4 530553-16	1562673-2 1067605	10 25	H	A=4 B=6 A=4 E=3
⑦	SMALL VOLUME RETURN LINE - LARGE VOLUME RETURN LINE - WITH CANOPY AND SEAT	700434-136	532520-4 530553-16	1562673-2 1067605	10 25	H	C=2-1/2 D=1
⑧	SMALL VOLUME RETURN LINE - LARGE VOLUME PRESSURE - NO CANOPY	700434-135 700434-138	532520-4 503076-8	1562673-2 1067605	10 25	V	A=4 E=3
⑨	SMALL VOLUME RETURN LINE - LARGE VOLUME PRESSURE - WITH CANOPY - NO SEATS	700434-136 700434-138	532520-4 503076-8	1562673-2 1067605	10 25	H	A=4 B=6 A=4 E=3
⑩	SMALL VOLUME RETURN LINE - LARGE VOLUME PRESSURE - WITH CANOPY AND SEATS	700434-136	532520-4 503076-8	1562673-2 1067605	10 25	H	C=2-1/2 D=1
⑪	SMALL VOLUME RETURN LINE - LARGE VOLUME RETURN LINE	700434-137 700434-137	530553-16 530553-16	1067605 1067605	25 25	H	A=4 B=6 A=4 E=3
⑫	SMALL VOLUME RETURN LINE	700434-177	00530553-0044	1067605-1	10	H	A=4 B=6
⑬	SMALL VOLUME RETURN LINE - LARGE VOLUME PRESSURE	700434-177 700434-178	00530553-0044 503076-30	1067605-1 1067605-1	10 10	H	A=4 B=6 A=4 E=3
⑭	SMALL VOLUME RETURN LINE - LARGE VOL. RETURN LINE - NO CANOPY	700434-135 700434-177	532520-4 00530553-0044	1562673-2 1067605-1	10 10	V	A=4 E=3
⑮	SMALL VOL. RETURN LINE - LARGE VOL. RETURN LINE - WITH CANOPY - NO SEATS	700434-136 700434-177	532520-4 00530553-0044	1562673-2 1067605-1	10 10	H	A=4 B=6 A=4 E=3
⑯	SMALL VOL. RETURN LINE - LARGE VOL. RETURN LINE - WITH CANOPY AND SEAT	700434-136	532520-4 503076-29	1562673-2 1067605-1	10 10	H	C=2 1/2 D=1
⑰	SMALL VOL. RETURN LINE - LARGE VOL. PRESSURE - NO CANOPY	700434-135 700434-178	532520-4 503076-30	1562673-2 1067605-1	10 10	V	A=4 E=3
⑱	SMALL VOL. RETURN LINE - LARGE VOL. PRESSURE - WITH CANOPY - NO SEATS	700434-136 700434-178	532520-4 503076-30	1562673-2 1067605-1	10 10	H	A=4 B=6 A=4 E=3
⑲	SMALL VOL. RETURN LINE - LARGE VOL. PRESSURE - WITH CANOPY AND SEATS	700434-136	532520-4 503076-30	1562673-2 1067605-1	10 10	H	C=2 1/2 D=1
⑳	SMALL VOL. RETURN LINE - LARGE VOL. RETURN LINE	700434-177 700434-177	00530553-0044 00530553-0044	1067605-1 1067605-1	10 10	H	A=4 B=6 A=4 E=3

NOTE-

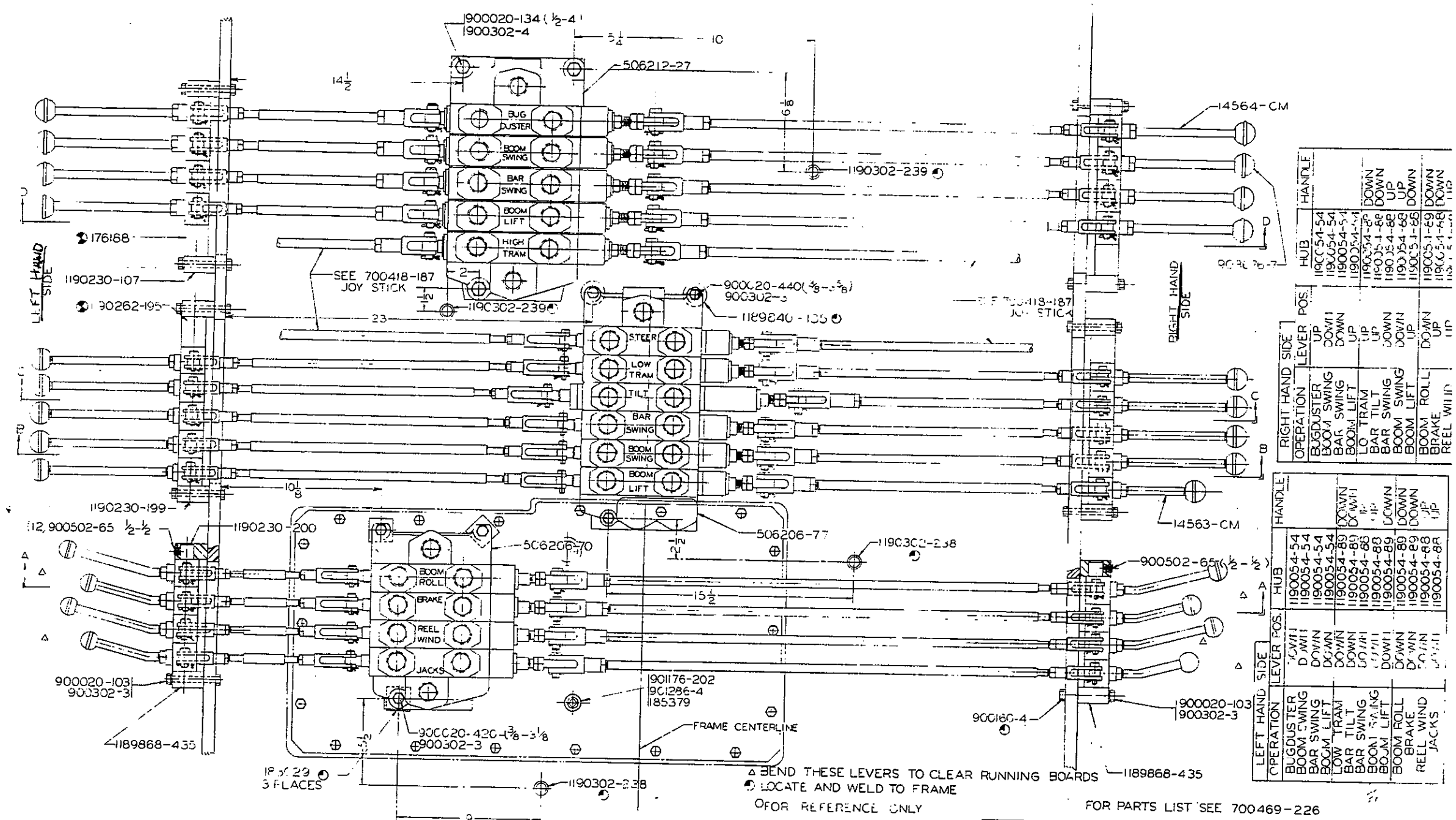
- ③ REPLACED BY ①
- ④ REPLACED BY ②
- ⑤ REPLACED BY ③
- ⑥ REPLACED BY ④
- ⑦ REPLACED BY ⑤
- ⑧ REPLACED BY ⑥
- ⑨ REPLACED BY ⑦
- ⑩ REPLACED BY ⑧

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JOY MANUFACTURING CO.
PLANT LOCATION AS INDICATED BELOW
BUFFALO, NEW YORK
NEW PHILADELPHIA, OHIO
FRANKLIN, PA.
SALT, ONTARIO, CANADA
SPRINGFIELD, ILLINOIS
MILWAUKEE, WISCONSIN

DATE OR REVISION DATE
DRAWN BY
CHECKED BY
APPROVED BY
SCALE
CLAMP 15 RU
CM5275

REV. NO. 1
REV. DATE 1/1/56
REVISED BY FBT 522 FBT 825 FCC 378 FCC 535 FCC 0779 FCC 0842



RIGHT HAND SIDE	HANDLE	HUB	LEVER POS.	OPERATION
		1190054-54	UP	BUG DUSTER
		1190054-54	DOWN	BOOM SWING
		1190054-54	DOWN	BAR SWING
		1190054-54	UP	BOOM LIFT
		1190054-80	UP	LO TRAM
		1190054-86	UP	BAR SWING
		1190054-86	DOWN	BOOM SWING
		1190054-88	UP	BOOM LIFT
		1190054-88	DOWN	BOOM LIFT
		1190054-88	UP	BOOM LIFT
		1190054-88	DOWN	REEL WIND

LEFT HAND SIDE	HANDLE	HUB	LEVER POS.	OPERATION
		1190054-54	DOWN	BUG DUSTER
		1190054-54	DOWN	BOOM SWING
		1190054-54	DOWN	BOOM LIFT
		1190054-80	DOWN	LOW TRAM
		1190054-86	UP	BAR SWING
		1190054-86	UP	BOOM LIFT
		1190054-88	DOWN	BOOM LIFT
		1190054-88	DOWN	BOOM LIFT
		1190054-88	DOWN	BOOM LIFT
		1190054-88	DOWN	REEL WIND
		1190054-88	UP	JACKS

PARTS MARKING SEE DRAWING 700418-197

ENGL. ORDER EBN-222 REVISIONS 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

JOY MANUFACTURING CO. PLANT LOCATION AS INDICATED BELOW		HYDRAULIC CONTROL VALVES AND PARTS	
BUFFALO, NEW YORK	NEW PHILADELPHIA, OHIO	REPLACES	SCALE CLASS
CLARENCE, N. H.		REPLACES	CM4952-B
FRANKLIN, PA.		REPLACES	SHEET 1 OF 2
GALT, ONTARIO, CANADA		REPLACES	
GREENOCK, SCOTLAND		REPLACES	
MICHIGAN CITY, IND.		REPLACES	

LIST OF PARTS AS CALLED FOR ON B/M'S 700418-197 700469-226

USE WITH B/M 700418-197 ONLY:

2 176188 SPACER
2 1190262-195 SPACER

USE WITH B/M 700469-226 ONLY:

1 X15819-CM SELECTOR VALVE ASSY.
1 506206-70 4 UNIT VALVE ASSY.
1 506206-77 VALVE ASSY.
1 506212-27 5 UNIT VALVE ASSY.

14 3189925-3 CONNECTOR
5 14563-CM SHORT LEVER
21 14564-CM LONG LEVER
3 176264 BLOCK
1 184649 BRACKET
1 185379 VENTED PLUG
12 1189868-435 BRACKET
1 1189933-6 SELECTOR VALVE ROD
4 1189933-42 ROD
4 1189933-43 ROD
1 1189933-44 ROD
4 1189933-54 ROD
1 1189933-57 ROD
4 1189933-61 ROD
4 1189933-62 ROD
1 1189933-63 ROD
8 1190054-54 HUB
10 1190054-88 HUB
8 1190054-89 HUB

2 900020-34 1/2"-13 X 1-1/2" CAP SCREW
24 900020-103 3/8"-16 X 3-1/4" CAP SCREW
3 900020-134 1/2"-13 X 4" CAP SCREW
4 900020-427 1/2"-13 X 1-1/8" CAP SCREW
3 900020-440 3/8"-16 X 3-5/8" CAP SCREW
24 900160-4 3/8"-16 HEX NUT
40 900199-5 1/2"-13 JAM NUT
35 900212-4 3/8"-24 JAM NUT
17 900212-5 1/2"-20 JAM NUT

30 900302-3 3/8" LOCKWASHER
9 900302-4 1/2" LOCKWASHER
35 900448-4 PIN ASSY.
17 900448-6 PIN ASSY.
35 900470-4 YOKE
17 900470-6 YOKE
12 900502-65 1/2"-13 X 1/2" SET SCREW
1 901176-202 1/2" X 6" PIPE NIPPLE
1 901286-4 1/2" PIPE COUPLING
26 903676-7 KNOB
3 900020-420 CAP SCREW

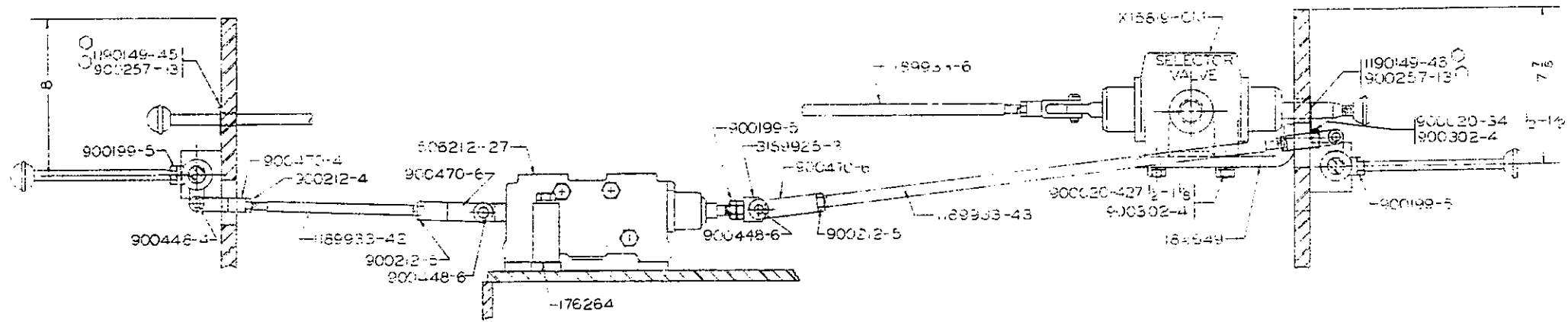
PARTS SHOWN FOR REFERENCE ONLY:

506206-70 4 UNIT VALVE ASSY.
506206-71 6 UNIT VALVE ASSY.
506212-27 5 UNIT VALVE ASSY.

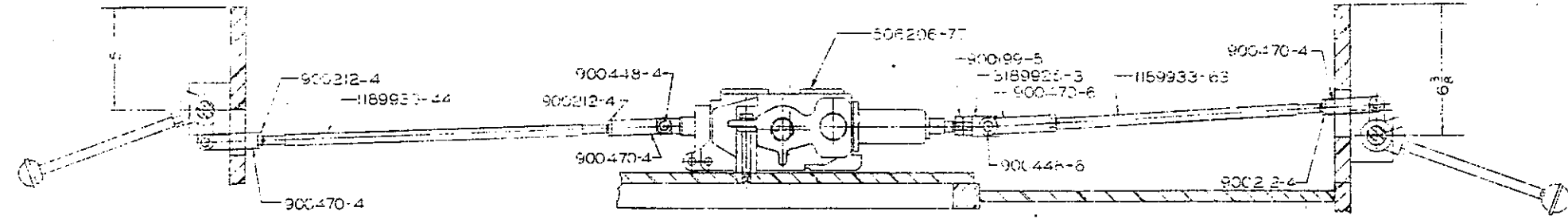
2 1190230-107 SHAFT
2 1190230-199 SHAFT
2 1190230-200 SHAFT
1 1190294-11 STRAP
2 1190302-238 SUPPORT
1 1190302-239 SUPPORT
3 183029 TAPPED BLOCK
4 1189933-57 ROD
2 1189840-135 BLOCK

REVISION/ FBT409
REF. DWG. - CM4952-B (SHEET 1)
CM4952-B (SHEET 2)

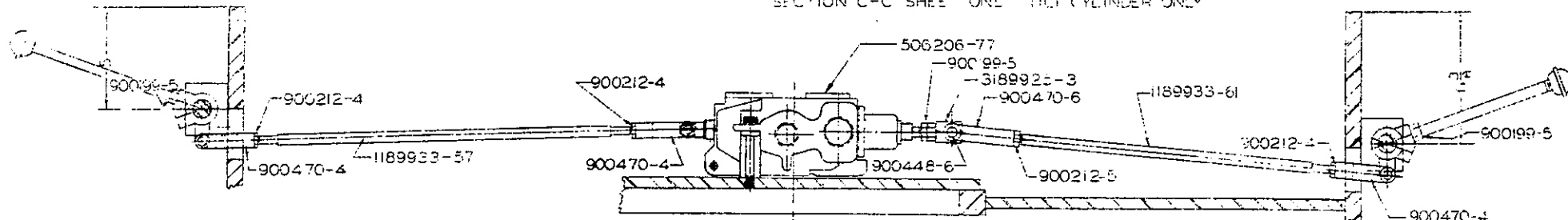
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2-1334



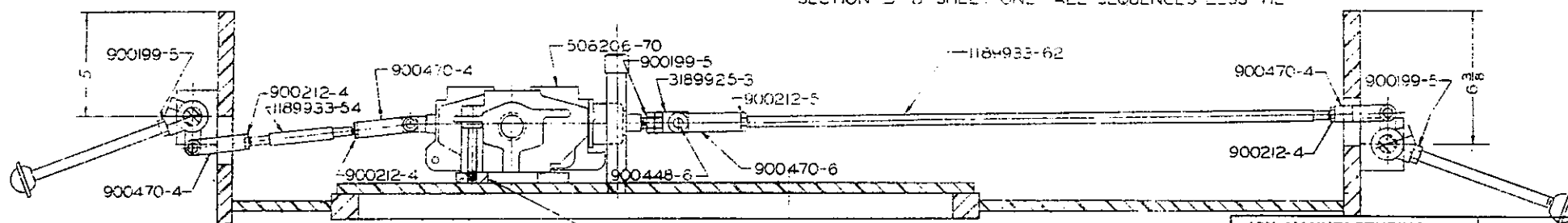
SECTION D-D SHEET ONE



SECTION C-C SHEET ONE TILT CYLINDER ONLY



SECTION B-B SHEET ONE ALL SEQUENCES LESS TILT



SECTION A-A SHEET ONE
183029 FOR PARTS LIST SEE 700469-226

JOY MANUFACTURING CO.		-HYDRAULIC CONTROL VALVES AND PARTS	
PLANT LOCATION AS INDICATED BELOW			
BUFFALO, NEW YORK	NEW PHILADELPHIA, OHIO		
CLAMORANT, N. H.			
FRANKLIN, PA.			
GALT, ONTARIO, CANADA			
GREENOCK, SCOTLAND			
MICHIGAN CITY, IND.			
		SIMILAR TO CM4952	DR. DOWNMAN
		SUPERSEDED BY	TR. 10.13.70
		REPLACES	CR.
		REPLACED BY	APPROV.
			SCALE AS SHOWN
			CLASS.
			CM4952-B
			SHEET 2 OF 2

REV. ORDER: EBK228 REVISIONS: EBK228 FOR 25068470 (REV. 11/71) 183029

LIST OF PARTS AS CALLED FOR ON B/M'S 700418-197 700469-226

USE WITH B/M 700418-197 ONLY:

2 176188 SPACER
2 1190262-195 SPACER

USE WITH B/M 700469-226 ONLY:

1 X15819-CM SELECTOR VALVE ASSY.
1 506206-70 4 UNIT VALVE ASSY.
1 506206-77 VALVE ASSY.
1 506212-27 5 UNIT VALVE ASSY.

14 3189925-3 CONNECTOR
5 14563-CM SHORT LEVER
21 14564-CM LONG LEVER
3 176264 BLOCK
1 184649 BRACKET
1 185379 VENTED PLUG
12 1189868-435 BRACKET
1 1189933-6 SELECTOR VALVE ROD
4 1189933-42 ROD
4 1189933-43 ROD
1 1189933-44 ROD
4 1189933-54 ROD
1 1189933-57 ROD
4 1189933-61 ROD
4 1189933-62 ROD
1 1189933-63 ROD
8 1190054-54 HUB
10 1190054-88 HUB
8 1190054-89 HUB

2 900020-34 1/2"-13 X 1-1/2" CAP SCREW
24 900020-103 3/8"-16 X 3-1/4" CAP SCREW
3 900020-134 1/2"-13 X 4" CAP SCREW
4 900020-427 1/2"-13 X 1-1/8" CAP SCREW
3 900020-440 3/8"-16 X 3-5/8" CAP SCREW
24 900160-4 3/8"-16 HEX NUT
40 900199-5 1/2"-13 JAM NUT
35 900212-4 3/8"-24 JAM NUT
17 900212-5 1/2"-20 JAM NUT

30 900302-3 3/8" LOCKWASHER
9 900302-4 1/2" LOCKWASHER
35 900448-4 PIN ASSY.
17 900448-6 PIN ASSY.
35 900470-4 YOKE
17 900470-6 YOKE
12 900502-65 1/2"-13 X 1/2" SET SCREW
1 901176-202 1/2" X 6" PIPE NIPPLE
1 901286-4 1/2" PIPE COUPLING
26 903676-7 KNOB
3 900020-420 CAP SCREW

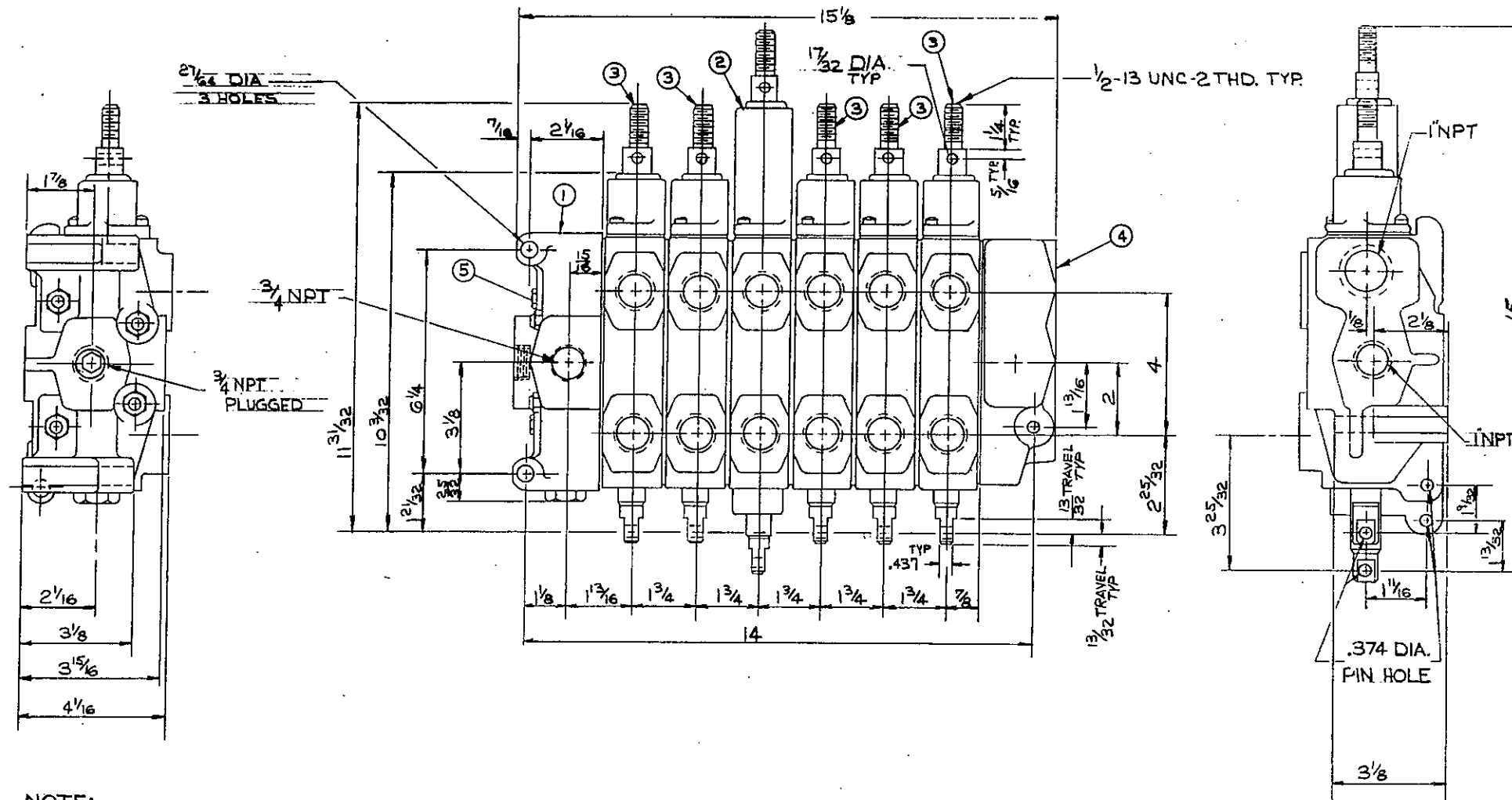
PARTS SHOWN FOR REFERENCE ONLY:

506206-70 4 UNIT VALVE ASSY.
506206-71 6 UNIT VALVE ASSY.
506212-27 5 UNIT VALVE ASSY.

2 1190230-107 SHAFT
2 1190230-199 SHAFT
2 1190230-200 SHAFT
1 1190294-11 STRAP
2 1190302-238 SUPPORT
1 1190302-239 SUPPORT
3 183029 TAPPED BLOCK
4 1189933-57 ROD
2 1189840-135 BLOCK

REVISION/ FBT409
REF. DWG. - CM4952-B (SHEET 1)
CM4952-B (SHEET 2)

LL-902905



NOTE:
ALL PORTS ARE 1/2 NPT.
UNLESS OTHERWISE NOTED.

REF.
COMPLETE SEAL KIT IS
3190767-402

LITHOPRINT, THIS DRAWING

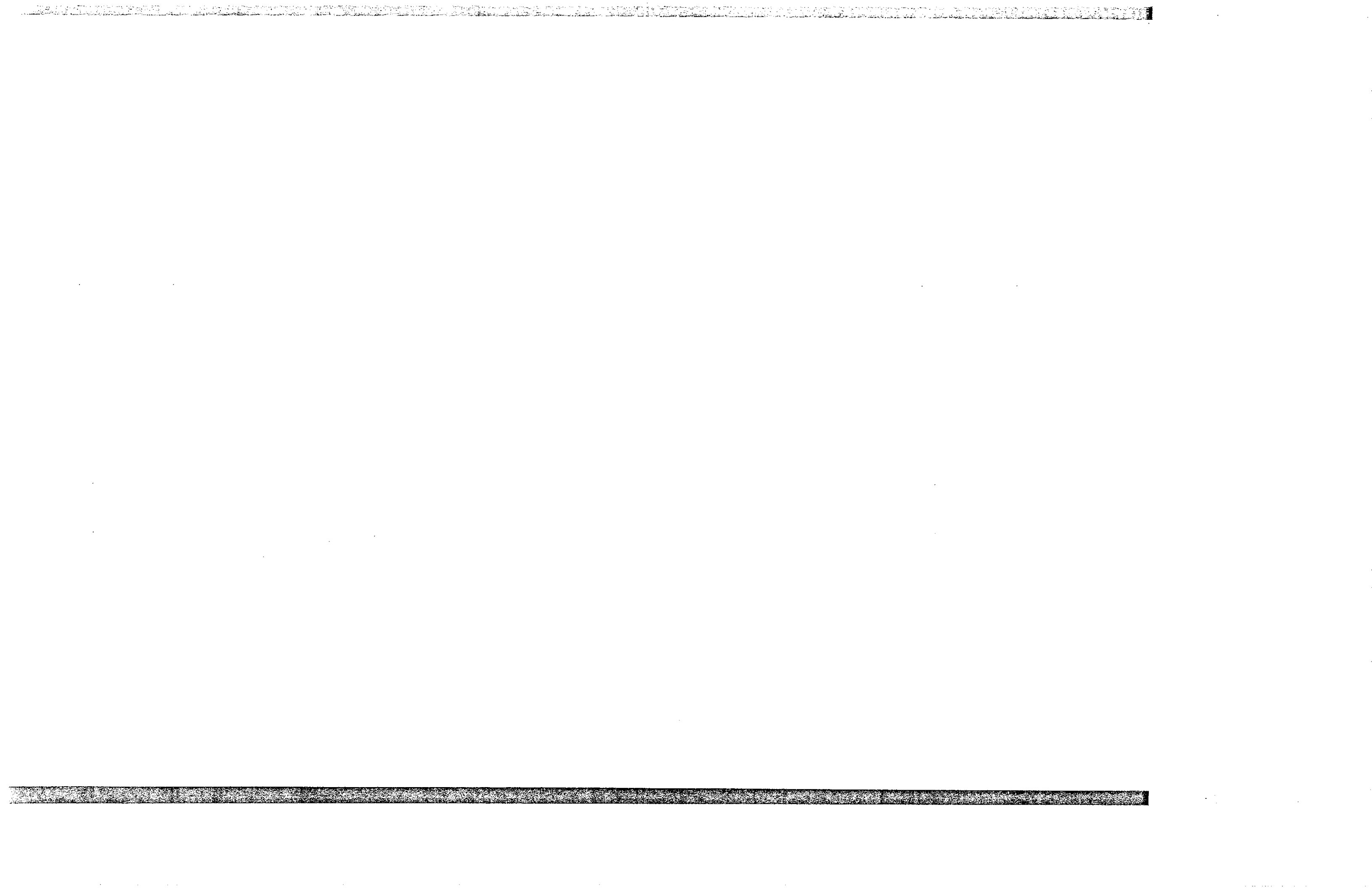
5	STUD ASSY.	4	1700147
4	OUTLET SECTION	1	506205-454
3	D.A. SECTION	5	506205-455
2	D.A. SECTION	1	506205-649
1	INLET SECTION	1	506205-457
ITEM	DESCRIPTION	QTY.	PART NO.

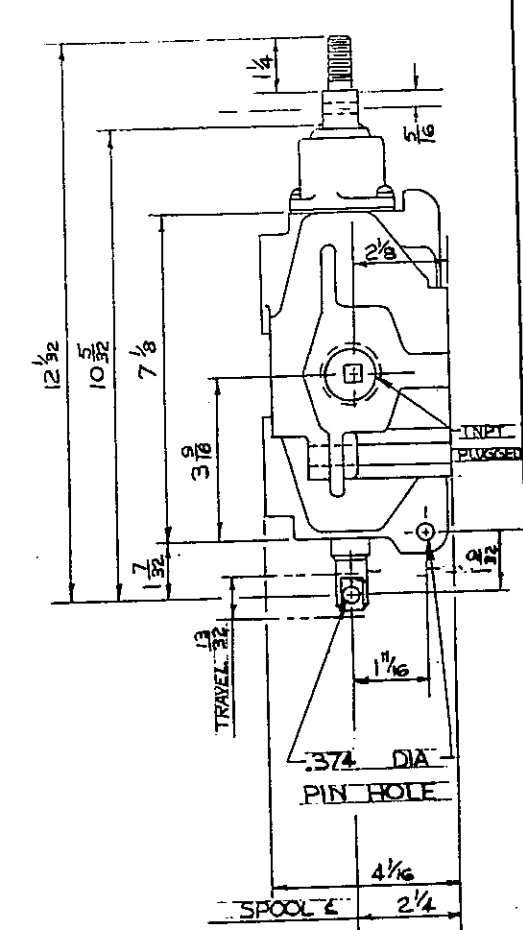
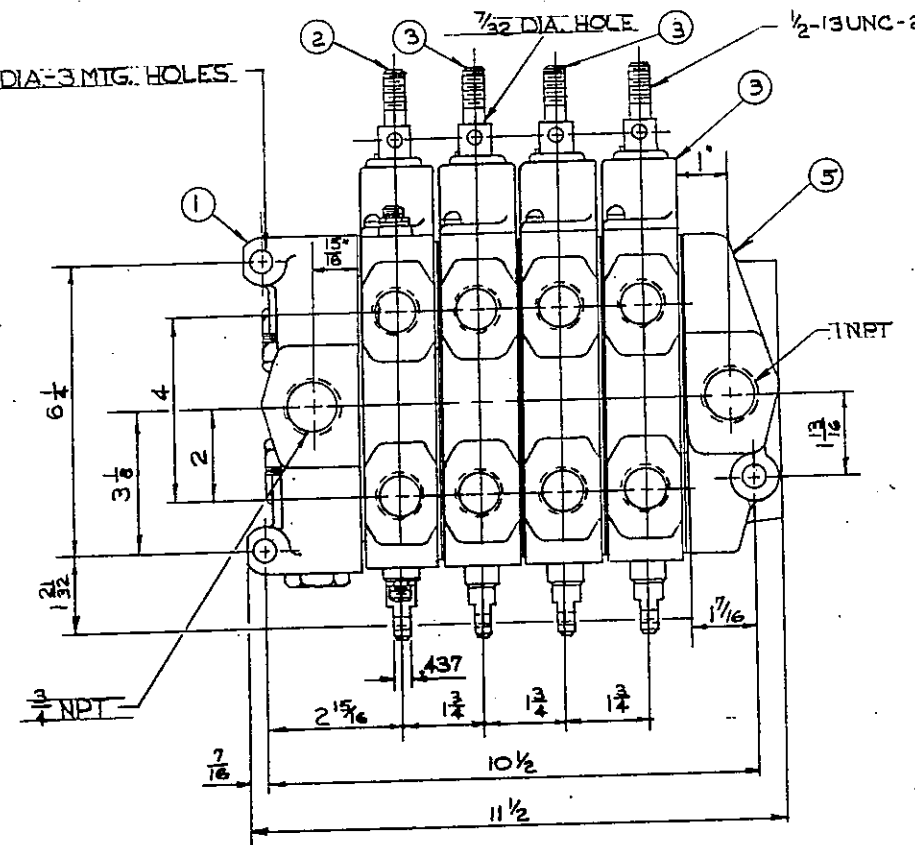
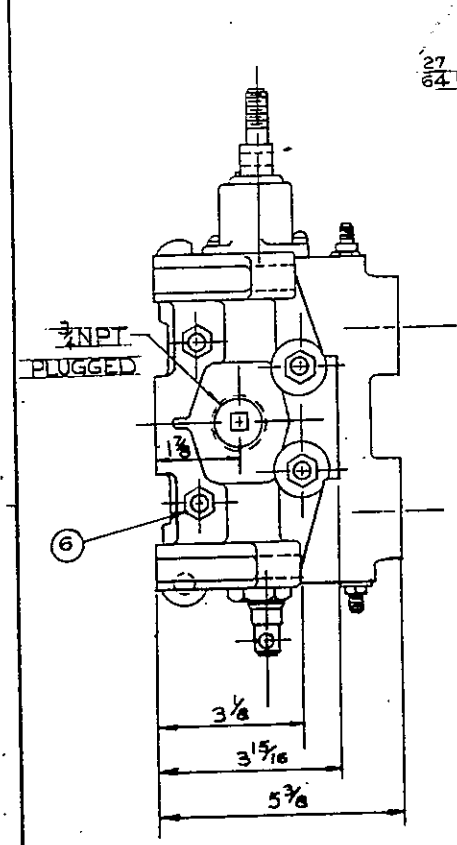
JOY MANUFACTURING CO.		CONTROL VALVE	
PLANT LOCATION AS INDICATED BELOW			
BUFFALO, N. Y.	NEW PHILADELPHIA, O.		
CLAREBORO, N. H.			
FRANKLIN, PA.			
GALT, ONTARIO, CANADA			
GREENOCK, SCOTLAND			
WHEATON CITY, MO.			
SIMILAR TO:	ORIGINATOR'S DATE:	SCALE:	CLASS:
SUPERSEDED BY:	TR.:	506206-77	
REPLACES:	CK.:		
REPLACED BY:	APPD.:		

E.O. FBK 592
DATE REVISIONS FBK 779 FBP 737 FCC 480 FCC 0787

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48





NOTE:
ALL PORTS ARE 1/2 NPT
UNLESS OTHERWISE NOTED

1st SEC. PORT A/B SET AT 1800²¹⁰⁰ PSI AT 10GPM.
REF.
COMPLETE SEAL KIT IS
3190767-403

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ITEM	PART NO.	REQ'D	DESCRIPTION
6	1700618	4	STUDS
5	460578	1	OUTLET
4			
3	506205-455	3	DA, SEC. 4WAY-3POS.
2	506205-689	1	DA SEC 4WAY-3 POS
1	506205-457	1	INLET

JOY MANUFACTURING CO.
PLANT LOCATION AS INDICATED BELOW

PLANT LOCATION	NEW PHILADELPHIA, PA.
BUFFALO, N. Y.	
CLAREMONT, N. H.	
FRANKLIN, PA.	/
GALT, ONTARIO, CANADA	
GREENOCK, SCOTLAND	

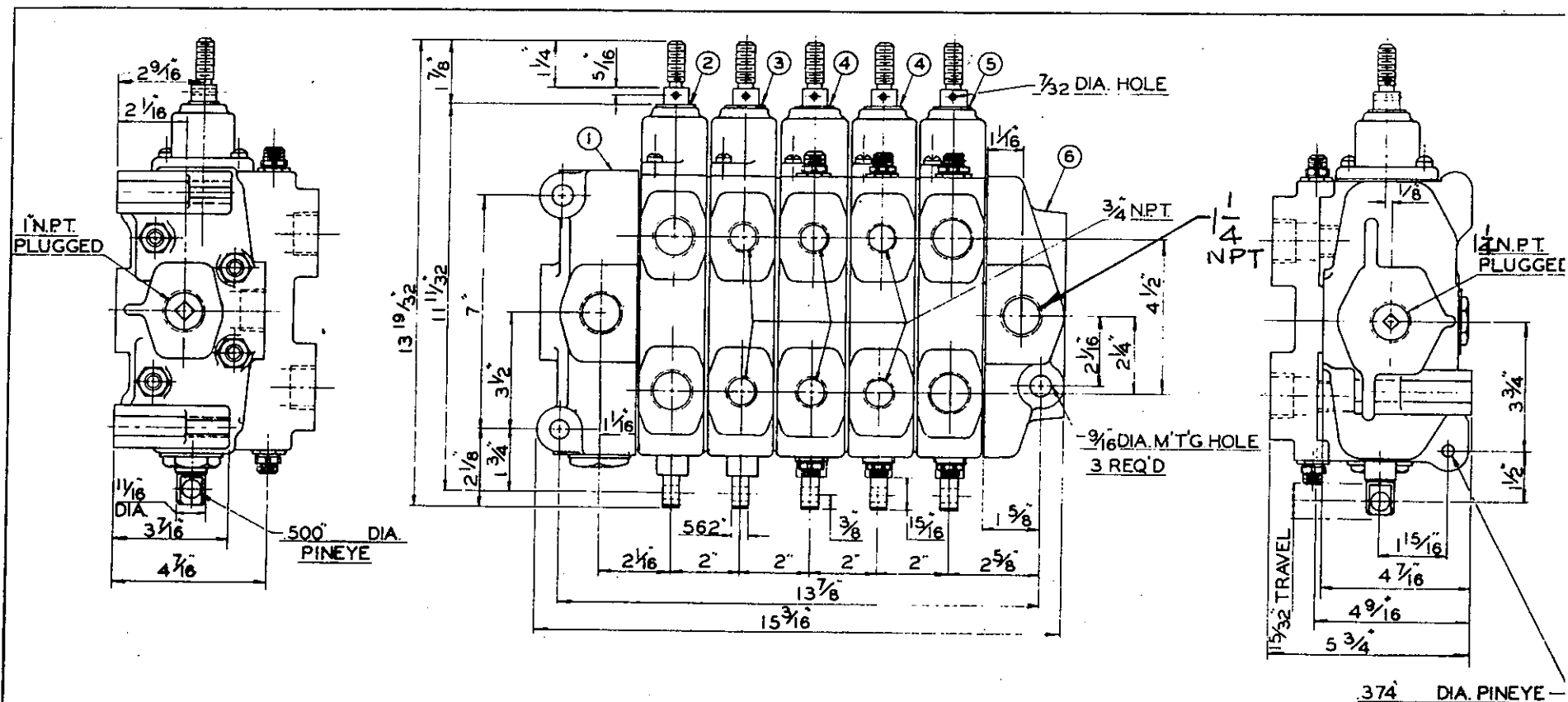
CONTROL VALVE

SIMILAR TO	NAME OR INITIAL & DATE	SCALE	CLASS
SUPERSEDED BY			
REPLACES			
REPLACED BY 506206-70			

506206-70

LITHOPRINT THIS DRAWING





NOTE:
ALL PORTS 1" NPT UNLESS OTHERWISE NOTED.
ALL RELIEF VALVES SET AT 1800 P.S.I.

LITHOPRINT, THIS DRAWING

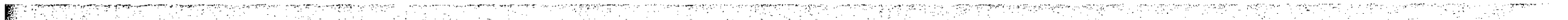
REF.
 COMPLETE SEAL KIT IS
 3190767-404

ITEM	JOY NO	REQ'D	DESCRIPTION
7	506205-94	4	STUDS
6	506205-79	1	OUTLET
5	506205-279	1	DA SECT.
4	506205-280	2	DA SECT.
3	506205-278	1	DA SECT.
2	506205-366	1	DA SECT. (SERIES)
1	506205-289	1	INLET

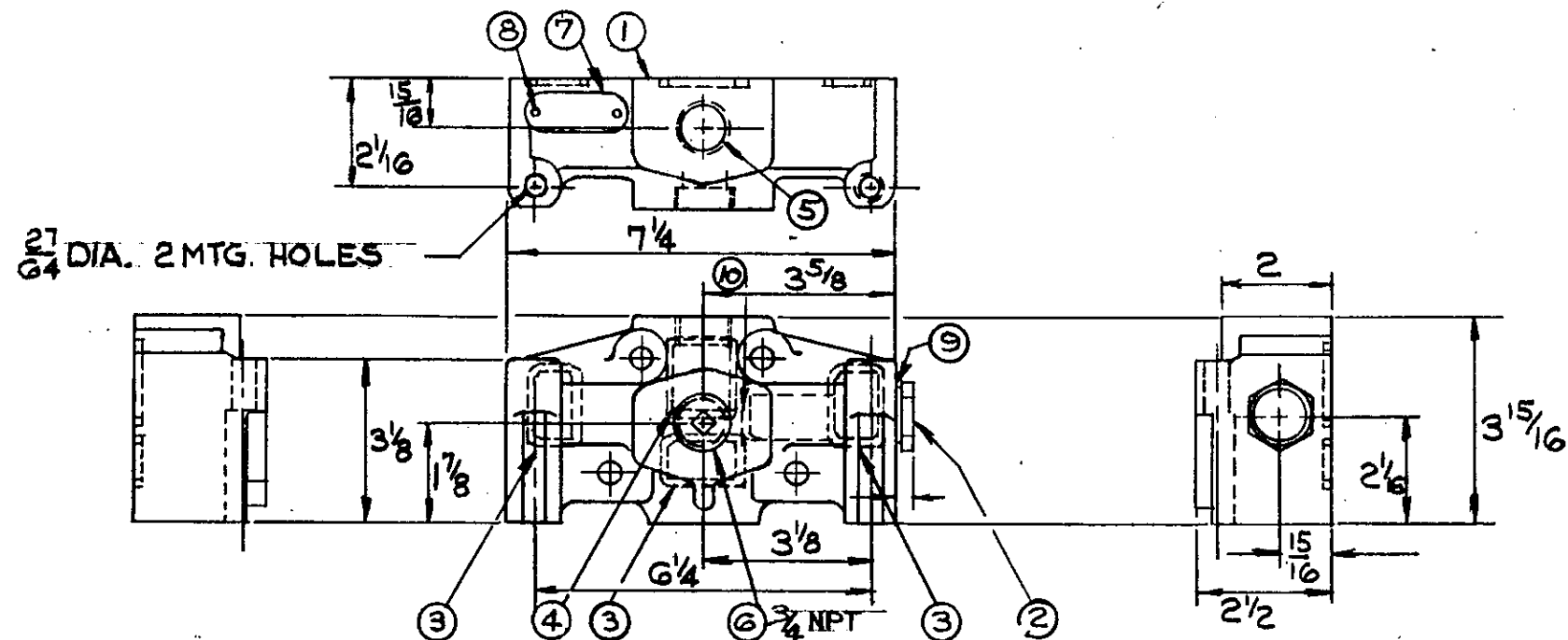
ENG. ORDER	DATE ISSUED	REVISIONS	FBB 753	FBE 49	FBE 868	FCC 787	FCC 480
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JOY MANUFACTURING CO.	
PLANT LOCATION AS INDICATED BELOW	
CLAREMONT, N. H.	NEW PHILADELPHIA, OHIO
DALLAS, TEXAS	ST. LOUIS, MISSOURI
FRANKLIN, PA.	<input checked="" type="checkbox"/>
GALT, ONTARIO, CANADA	
GREENOCK, SCOTLAND	
MICHIGAN CITY, IND.	

CONTROL VALVE		SCALE	CLASS
SIMILAR TO SUPERSEDED BY SUPERSEDED BY REPLACES REPLACED BY	DR <i>Banner</i>	TR	CK
		506212-27	



506205-457

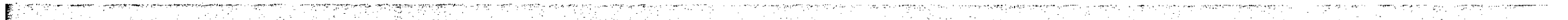


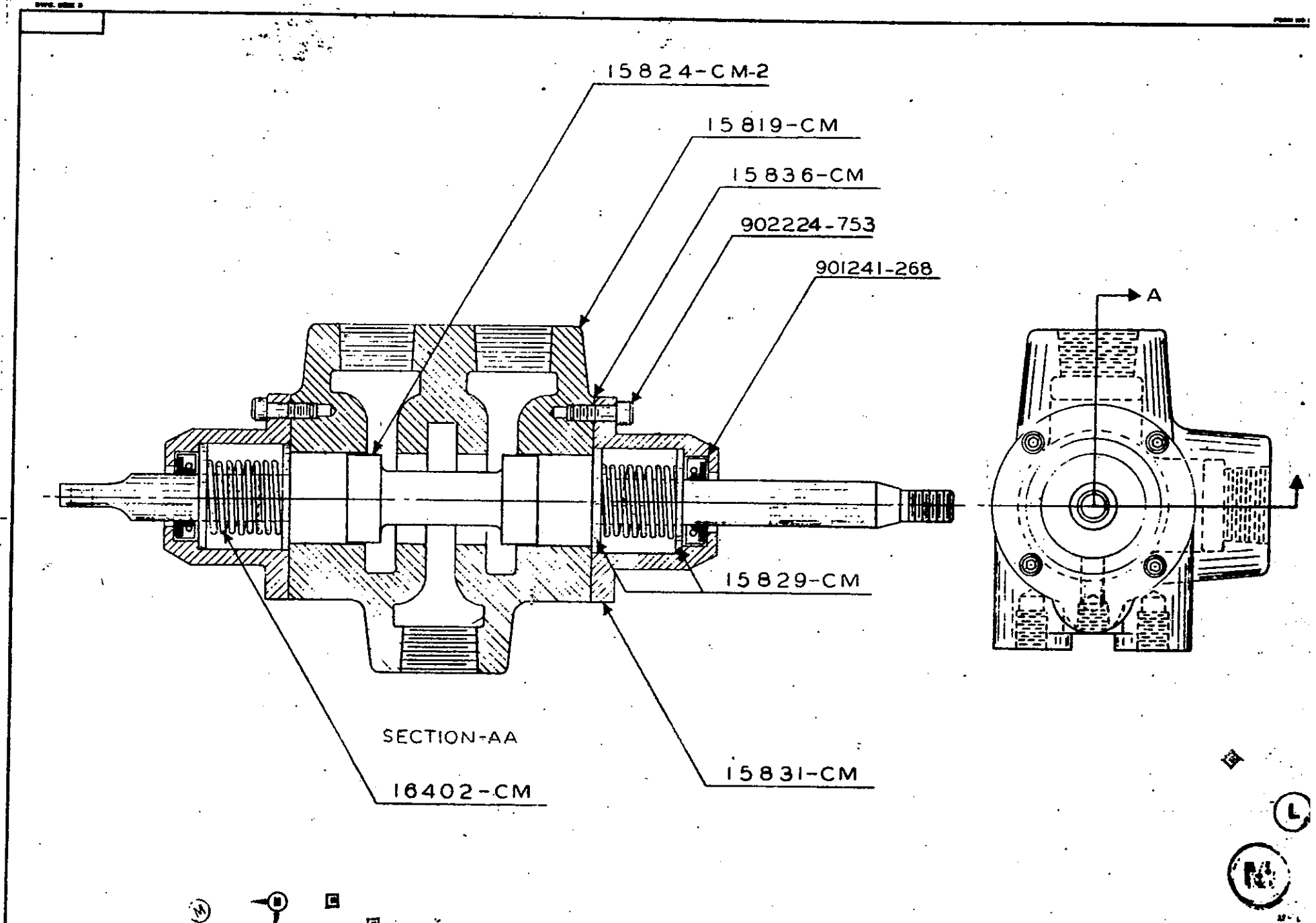
ITEM	DESCRIPTION	QTY	PART NO.
10	O' RING	1	907865-115
9	WASHER	1	460583
8	DRIVE SCREWS	2	263427
7	NAME PLATE	1	180576

ITEM	DESCRIPTION	QTY	PART NO.
6	3/4 NPT PLUG	1	901204-5
5	3/4 NPT PLASTIC CLOSURE	1	1700488
4	O' RING	1	910660129
3	O' RING	3	00910656-0125
2	STANDARD PLUG	1	506205-259
1	INLET SECTION HOUSING	1	460732

L

ENG. ORDER FBK 779 DATE ISSUED 12-14-72	REVISIONS FBQ 814	JOY MANUFACTURING CO. PLANT LOCATION AS INDICATED BELOW		VALVE SECTION	
FCC 787	FCC 0842	CLAREMONT, N. H.	NEW PHILADELPHIA, O.	DR. Johnson	TR. 4-14-72 CK. APPD.
		DALLAS, TEXAS	ST. LOUIS, MISSOURI	SUPERSEDES	SCALE \times CLASS \times
		FRANKLIN, PA.		SUPERSEDED BY	
		GALT, ONTARIO, CAN.		REPLACES	506205-457
		GREENOCK, SCOTLAND		REPLACED BY 00506205-1F	
		MICHIGAN CITY, IND.			





ENCL. ORDER <u>CJ-199</u> DATE ISSUED <u>4-21-53</u>		REVISIONS <u>CY 876</u> <u>CA-453</u> <u>CA8-70</u> <u>CAE-1</u> <u>FBE 228</u>		FINISH SYMBOLS 1 4 FREEMAN POLISH 2 8 FINE POLISH 3 16 COARSE POLISH 4 32 SAND OR RUBAL 5 60 GRINDY BACK 6 120 COARSE SAND		JOY MANUFACTURING CO. PLANT LOCATION AS SHOWN BELOW CLARKSBURG, W. VA. SALLAS, MISS. FERRIS, IL. FULLY EQUIPPED SHIPMENT SERVICE		SELECTOR VALVE ASSEMBLY DR. <u>F. J. Smith</u> SCALE: <u>1" = 1/4"</u> X15819-CM	
UNLESS OTHERWISE NOTED: ALL DIMENSIONS IN INCHES. FRACTIONAL TOLERANCES DIM. LIMITED TO $\pm 1/64$. DO NOT SCALE THIS DRAWING.		MATERIAL _____ HEAT TREAT _____ HARDEN _____ QUENCH _____ DRAW _____ HARDNESS _____		CARBURIZE _____ PATTERNS NO. _____		CHECKED BY _____ DESIGNED BY _____ DRAWN BY _____		APPROVED BY _____ DATE _____	

X15819-CM

SELECTOR VALVE ASSY.

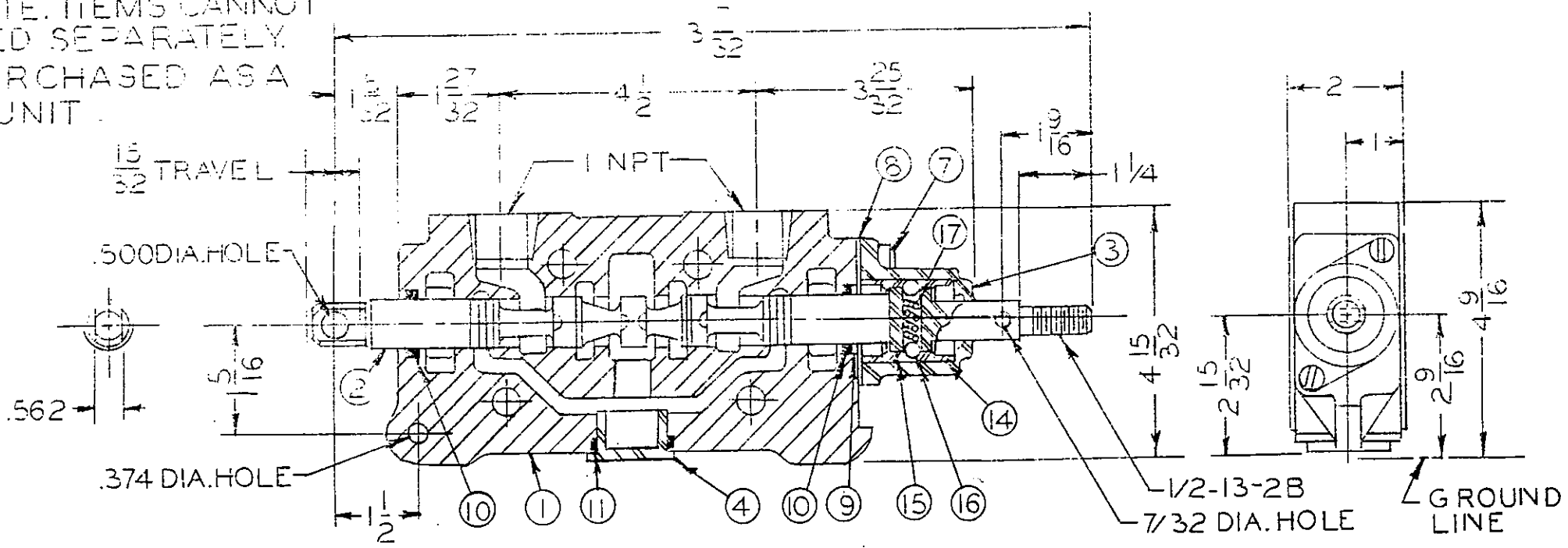
1	15819-CM	BODY
1	15824-CM2	VALVE CENTER
4	15829-CM	SPRING COLLAR
2	15831-CM	END
2	15836-CM	GASKET
2	16402-CM	VALVE SPRING
2	901241-268	OIL SEAL
8	902224-753	5/16"-18 X 3/4" CAP SCREW

REVISION/

FBE223

99E-502909

* NOTE: ITEMS CANNOT
BE PURCHASED SEPARATELY.
MUST BE PURCHASED AS A
COMPLETE UNIT.
506 217-12.



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REQUEST.

LITHOPRINT. THIS DRAWING

17	SPRING	1	26235
16	STEEL BALL	2	900572-7
15	POPPET RETAINER	1	461484
14	POPPET SLEEVE	1	460870
13	"O" RING (NOT SHOWN)	1	907865-145
12	"O" RING (NOT SHOWN)	2	910660-129
ITEM	DESCRIPTION	REQD.	PART NO.

11	"O" RING	1	910660-216
10	"O" RING	2	910660-212
9	BACK UP RING	1	461393
8	RETAINER PLATE	1	460858
7	CAPSCREW	2	900357-515
6			
5			
4	CHECK CAP	1	52574
3	VALVE CAP	1	461483
2	SPOOL *	1	461398
1	HOUSING *	1	461397
ITEM	DESCRIPTION	REQD.	PART NO.

JOY MANUFACTURING CO.
PLANT LOCATION AS INDICATED BELOW

<input type="checkbox"/> CLARESBURG, N. H.	<input type="checkbox"/> NEW PHILADELPHIA, O.
<input type="checkbox"/> DALLAS, TEXAS	<input type="checkbox"/> ST. LOUIS, MISSOURI
<input type="checkbox"/> FRANKLIN, PA.	<input type="checkbox"/>
<input type="checkbox"/> GALT, ONTARIO, CANADA	<input type="checkbox"/>
<input type="checkbox"/> GREENOCK, SCOTLAND	<input type="checkbox"/>
<input type="checkbox"/> MICHIGAN CITY, IND.	<input type="checkbox"/>

VALVE SERIES SECTION

FBB868

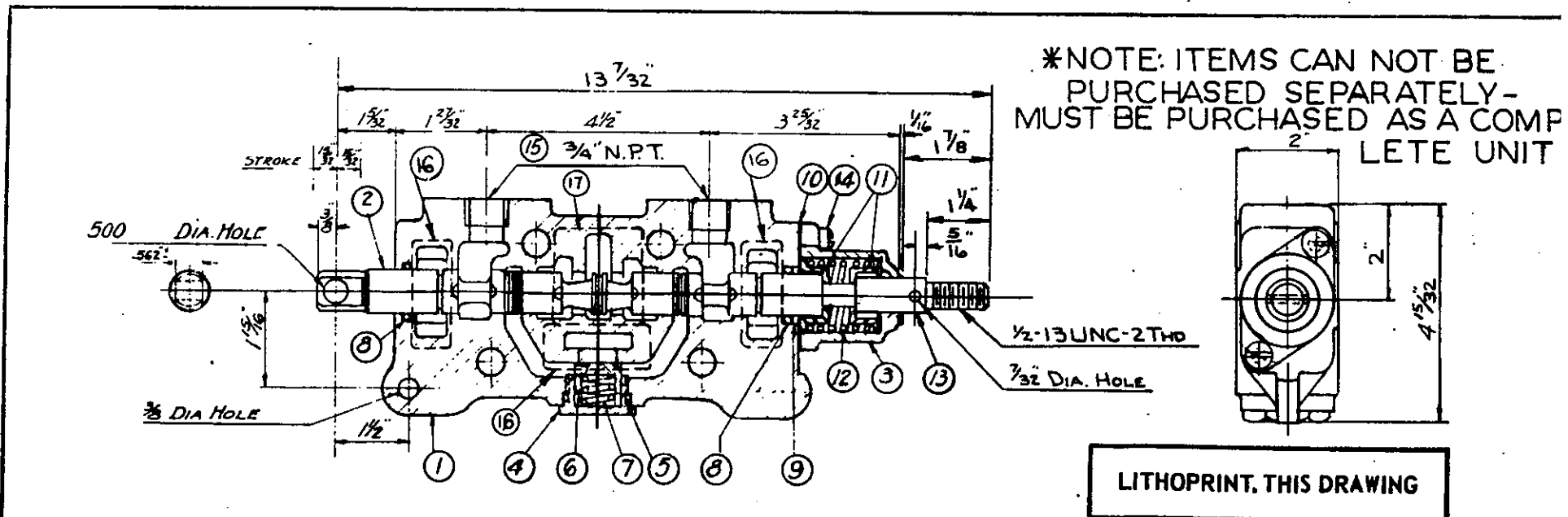
F210787

ING. ORDER 1-506 217-12
217-1201

SIMILAR TO: _____
SUPERSEDED BY: _____
REPLACED BY: _____
DR. CLARA SMITH SCALE _____ CLASS _____
TR. 1-23-68
SPEC. _____

506 205-366



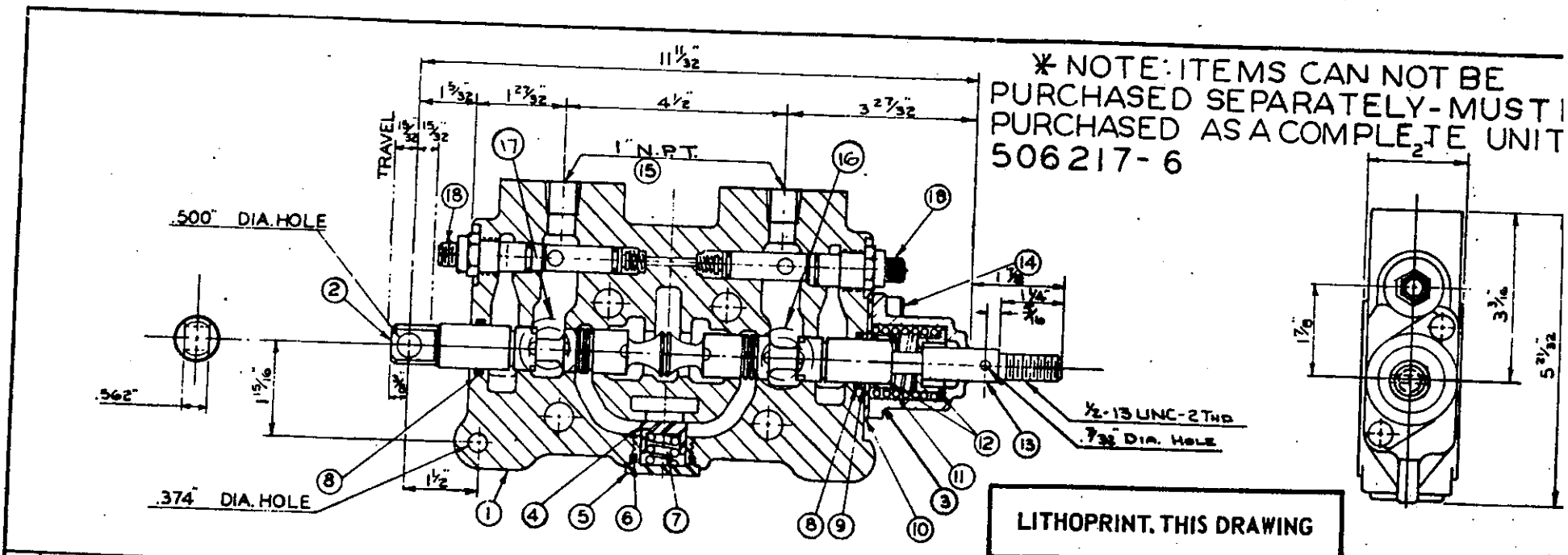


ITEM	DESCRIPTION OF MATERIAL	JOY NO.	REQS	ITEM	DESCRIPTION OF MATERIAL	JOY NO.
17	2" O.D. x 1 1/2" I.D. O-RING	910660-135	1	10	RETAINING PLATE	460858
16	1 3/4" O.D. x 1 1/2" I.D. O-RING	910660-129	3	9	BACK UP RING	461393
15	3/4" N.P.T. PLASTIC CLOSURE		2	8	O-RING - 1 1/8" O.D. x 1/8" I.D.	910660-212
14	FILLISTER HEAD SCREW	900357-515	2	7	SPRING	460856
13	SPECIAL STRIPPER BOLT	461485	1	6	CHECK POPPET	52575
12	SPRING	460864	1	5	O-RING - 1 1/8" O.D. x 1/8" I.D.	910660-216
11	SPRING GUIDE	460862	2	4	CHECK VALVE CAP	52574
				3	VALVE CAP	461483
				2	VALVE SPOOL *	460867
				1	VALVE HOUSING *	461542

FAY 382				JOY MANUFACTURING CO. PLANT LOCATION AS INDICATED BELOW CLAREMONT, N. H. NEW PHILADELPHIA, O. DALLAS, TEXAS ST. LOUIS, MISSOURI FRANKLIN, PA. <input checked="" type="checkbox"/> GALT, ONTARIO, CANADA GREENOCK, SCOTLAND MICHIGAN CITY, IND.		VALVE	
ENG. ORDER DATE ISSUED	REVISIONS FBP 101 FCC 480 FCC 0787	SIMILAR TO SUPERSEDED BY REPLACES REPLACED BY 00506205-1530	DR. CLARA SMITH TR. 9-25-65 CK. APPD.	SCALE 506205-2	CLASS		

135



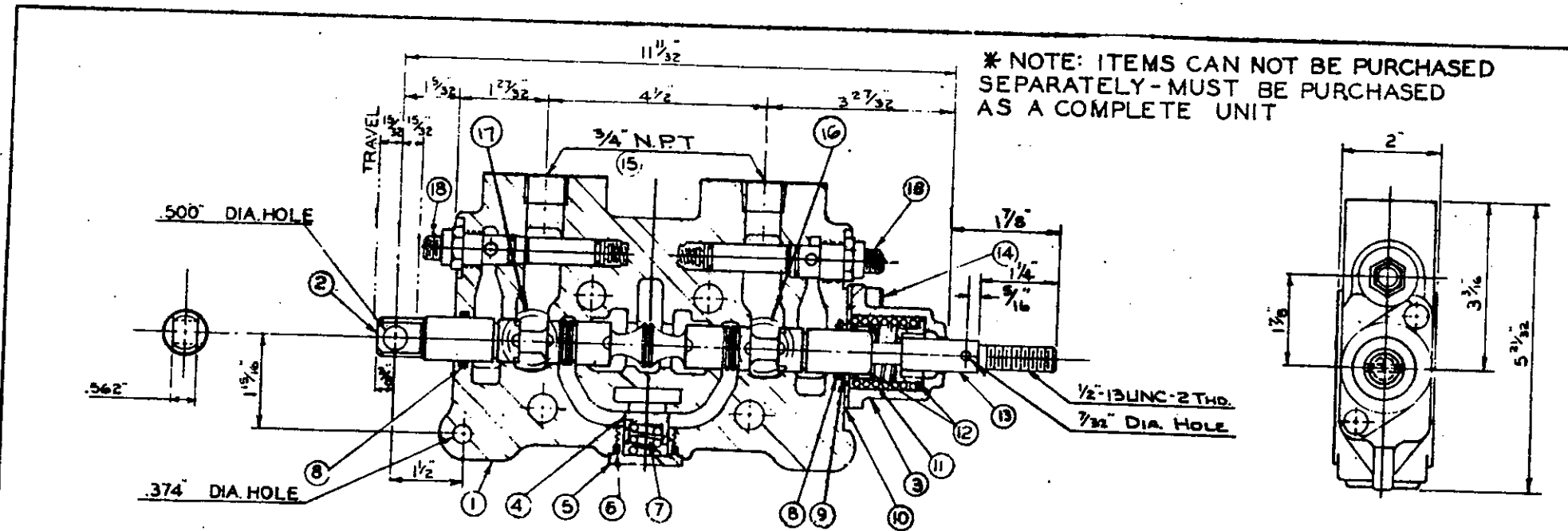


ITEM	DESCRIPTION	PRESS. SETTING	REF DWG	RE
19				
18	CROSSOVER 1/4" CARTRIDGE ASS'Y	2001-3300PSI	506205-75	2
17	O-RING 2" O.D. x 1 1/2" I.D.		910660-133	1
16	O-RING 1 1/4" O.D. x 1 1/8" I.D.		910660-129	3
15	PLASTIC PIPE CLOSURE			
14	FILLISTER HEAD SCREW			2
13	SPECIAL STRIPPER BOLT		900357-515	2
12	SPRING GUIDE		461485	1
11	SPRING		460862	2
10	RETAINING PLATE		460864	1

ITEM	DESCRIPTION	REF DWG	RE
10	RETAINING PLATE		
9	BACK-UP RING	460858	
8	O-RING 1 1/2" O.D. x 1 1/8" I.D.	461393	
7	SPRING	910660-212	
6	O-RING 1 1/8" O.D. x 1 1/8" I.D.	460856	
5	CHECK VALVE CAP	910660-216	
4	CHECK POPPET	52574	
3	VALVE CAP	52575	
2	VALVE SPOOL *	461483	
1	VALVE HOUSING *	460867	
		460872	

FAY382		FCC0787		FCC480		FBC131		FBE550	
JOY MANUFACTURING CO.		PLANT LOCATION AS INDICATED BELOW		VALVE		DR. CLARA SMITH		SCALE CLASS	
CLAREMONT, N. H.	NEW PHILADELPHIA, O.			SIMILAR TO		TR. 5-25-65		506205-279	
DALLAS, TEXAS	ST. LOUIS, MISSOURI			SUPERSEDED BY		CK.			
FRANKLIN, PA.				REPLACES		APPD.			
GALT, ONTARIO, CANADA				REPLACED BY 506205-138					
GREENOCK, SCOTLAND									
MICHIGAN CITY, IND.									





ITEM	DESCRIPTION	JOY NO.	REQ'D.
19			
18	CYLINDER $\frac{1}{4}$ CARTRIDGE ASS'Y	PRESSURE SETTING	
17	O-RING 2 O.D. x 1 1/2 I.D.	801-2000 PSI 506205-28	2
16	O-RING 1 3/4 O.D. x 1 1/2 I.D.	910660-133	1
15	PLASTIC PIPE CLOSURE	910660-129	3
14	FILLISTER HEAD SCREW		2
13	SPECIAL STRIPPER BOLT	900357-515	2
12	SPRING GUIDE	461485	1
11	SPRING	460862	2
10	RETAINING PLATE	460858	1
9	BACK-UP RING	461393	1
8	O-RING 1 1/2 O.D. x 3/8 I.D.	910660-212	2
7	SPRING	460856	1
6	O-RING 1 1/2 O.D. x 1 1/2 I.D.	910660-216	1
5	CHECK VALVE CAP	52574	1
4	CHECK POPPET	52575	1
3	VALVE CAP	461483	1
2	VALVE SPOOL *	460867	1
1	VALVE HOUSING *	461544	1

ITEM	DESCRIPTION	JOY NO.	REQ'D.
10	RETAINING PLATE	460858	1
9	BACK-UP RING	461393	1
8	O-RING 1 1/2 O.D. x 3/8 I.D.	910660-212	2
7	SPRING	460856	1
6	O-RING 1 1/2 O.D. x 1 1/2 I.D.	910660-216	1
5	CHECK VALVE CAP	52574	1
4	CHECK POPPET	52575	1
3	VALVE CAP	461483	1
2	VALVE SPOOL *	460867	1
1	VALVE HOUSING *	461544	1

FAY382

REVISIONS: FBE 550 | FBQ814 | FCC0787

JOY MANUFACTURING CO.
PLANT LOCATION AS INDICATED BELOW

CLAREMONT, N. H.	NEW PHILADELPHIA, O.
DALLAS, TEXAS	ST. LOUIS, MISSOURI
FRANKLIN, PA.	
BALT. ONTARIO, CANADA	
GREENOCK, SCOTLAND	
MICHIGAN CITY, IND.	

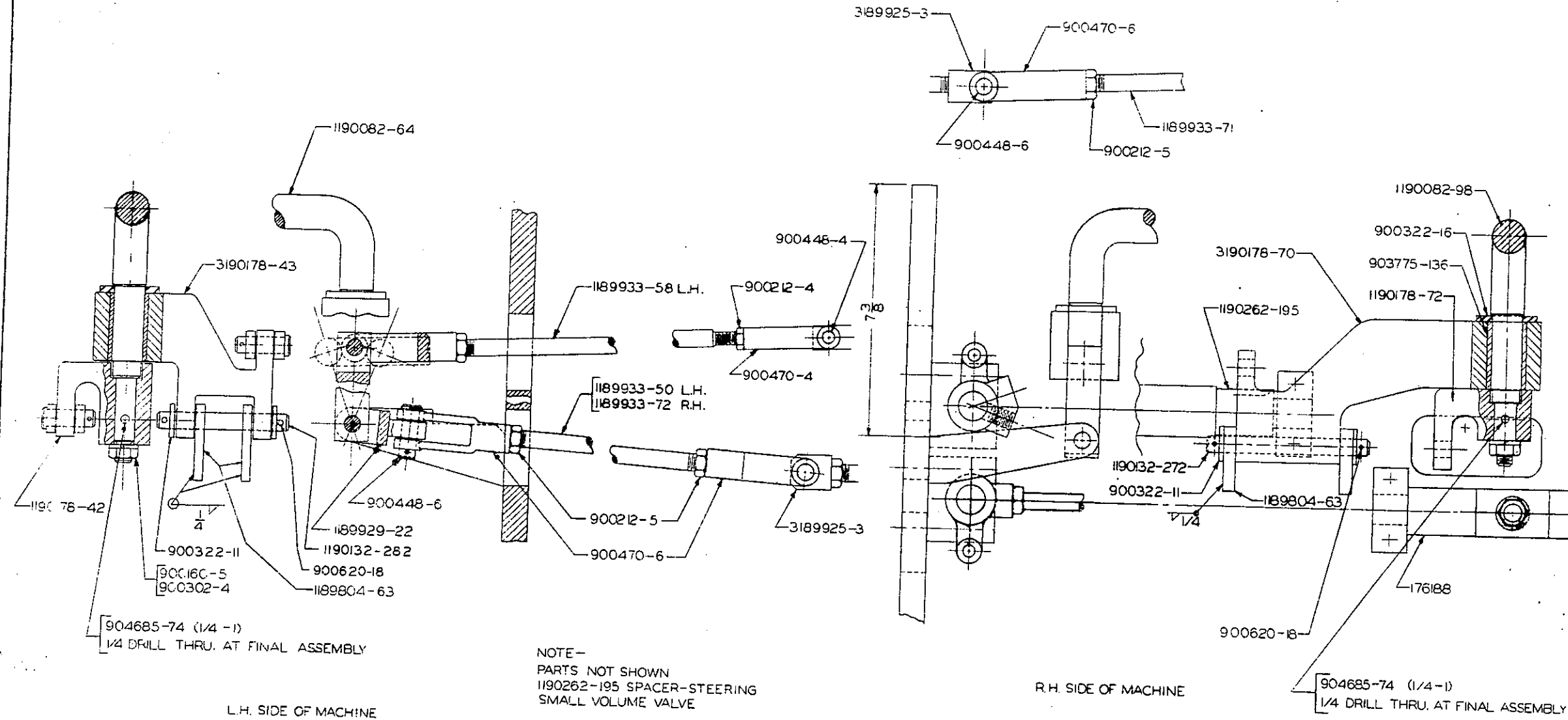
VALVE

DR. CLARA SMITH
TR. 3-25-68

SCALE: CLASS: 506 205-280

REPLACED BY: 00564205, 1590





<p>This drawing and all information therein is the property of the JOY MANUFACTURING CO. It is loaned subject to secure your demand, is not to be used directly or indirectly, in any way detrimental to our interest.</p>		<p>JOY MANUFACTURING CO. PLANT LOCATION AS INDICATED BELOW</p>		<p>JOY STICK</p>	
BUFFALO, NEW YORK	NEW PHILADELPHIA, OHIO	SYCAMON, ILL.	DATE OF SPEC. & REV.	SCALE	REVISION
CLARKSBURG, W. VA.			BY: [Signature]	CM 4857-7	
TYNAROCK, PA.			APPROVED BY:		
GALT, ONTARIO, CANADA			DATE:		
GREENOCK, SCOTLAND			PREPARED BY:		
MICHIGAN CITY, IND.					

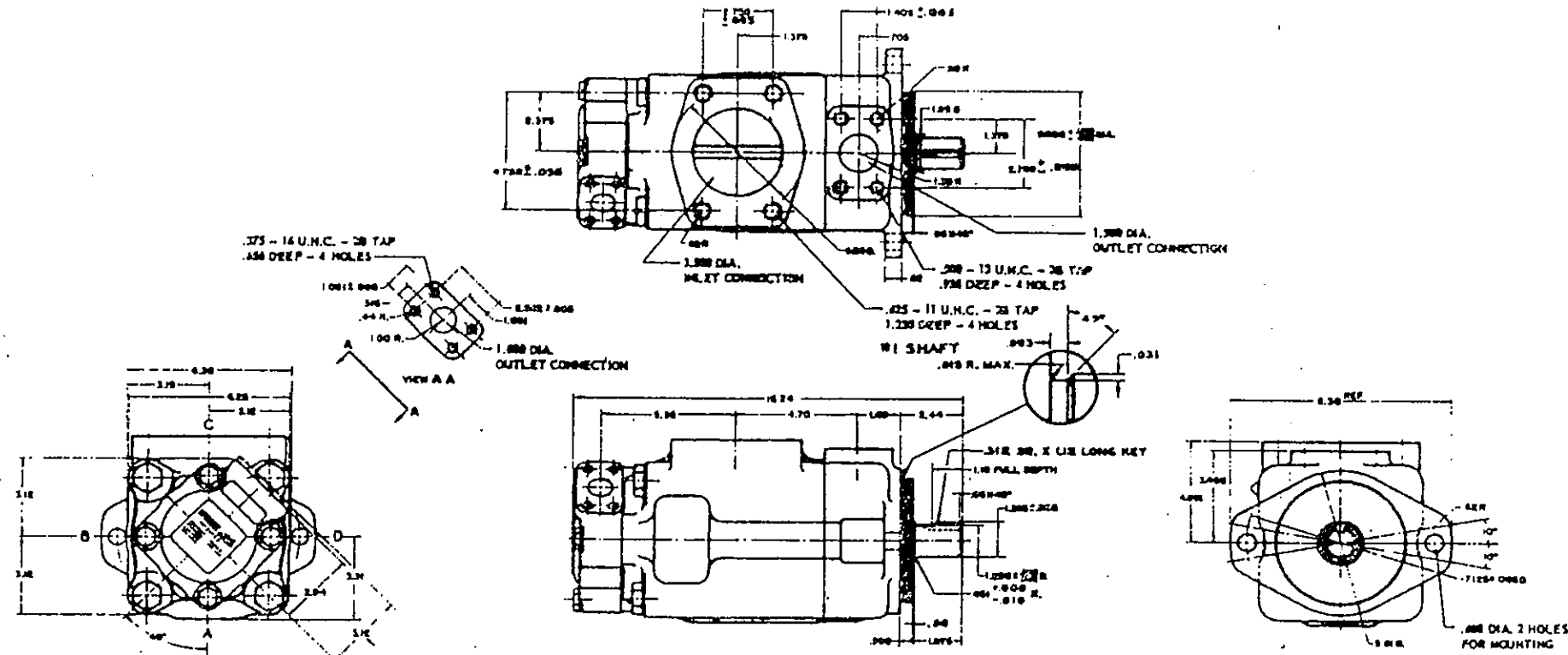
LIST OF PARTS AS CALLED FOR ON B/M 700418-217

2	3189925-3	CONNECTOR	REVISION/	FBT841
1	3190178-43	RETAINER (L.H. SIDE)		
1	3190178-70	RETAINER (R.H. SIDE)	REF. DWG. -	CM4857-7
2	176188	SPACER		
1	1190132-282	PIN		
4	1139804-63	ANCHOR		
2	1139929-22	CONNECTOR		
1	1189933-90	L.H. CONTROL ROD		
1	1189933-98	L.H. CONTROL ROD		
1	1189933-71	R.H. CONTROL ROD		
1	1189933-72	R.H. CONTROL ROD		
1	1190082-64	LEVER (L.H. SIDE)		
1	1190082-93	LEVER (R.H. SIDE)		
1	1190132-272	PIN		
1	1190178-42	RETAINER		
1	1190178-72	RETAINER		
2	1190262-195	SPACER		
2	900160-1	1/2" HEX NUT		
1	900212-4	3/8"-24 JAM NUT		
7	900212-5	1/2"-20 JAM NUT		
2	900302-4	1/2" LOCKWASHER		
4	900322-11	1/2" WASHER		
2	900322-16	7/8" WASHER		
1	900448-4	YOKE PIN		
7	900448-6	YOKE PIN		
1	900470-4	YOKE END		
7	900470-6	YOKE END		
4	900620-18	COTTER PIN		
2	903775-135	BEARING		
2	904685-74	1/4" X 1" PIN		

DWG. SIZE 1

FORM NO. 8178

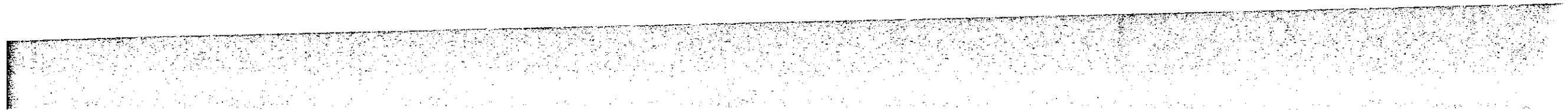
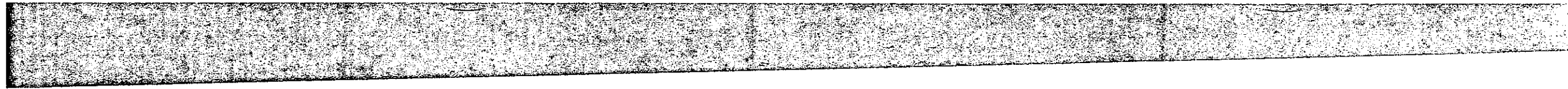
506971-5



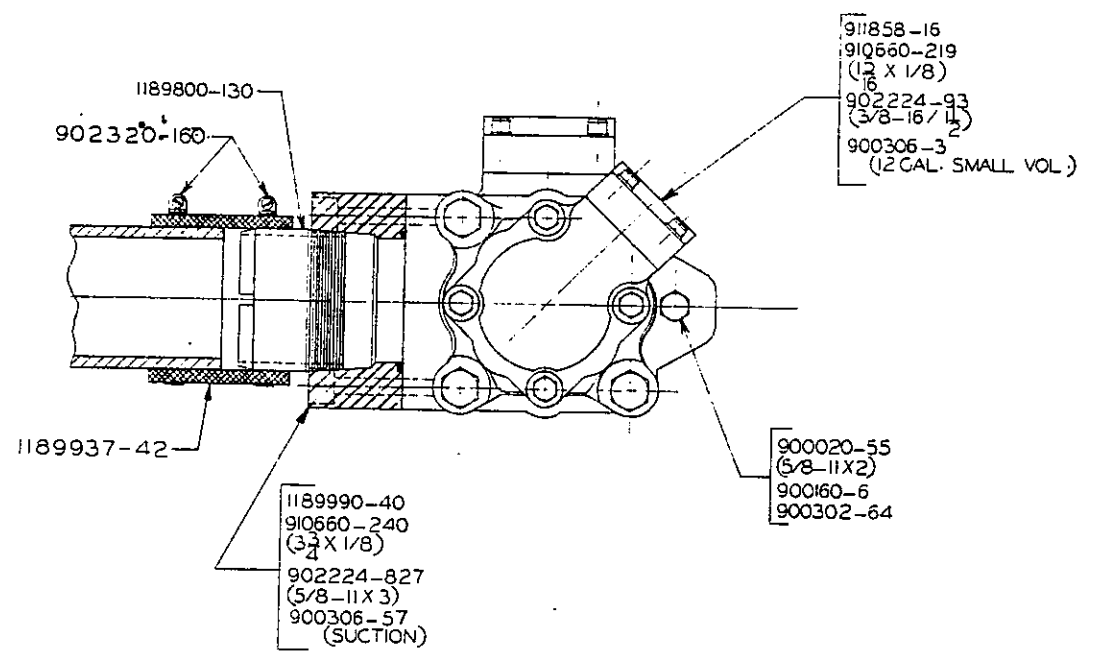
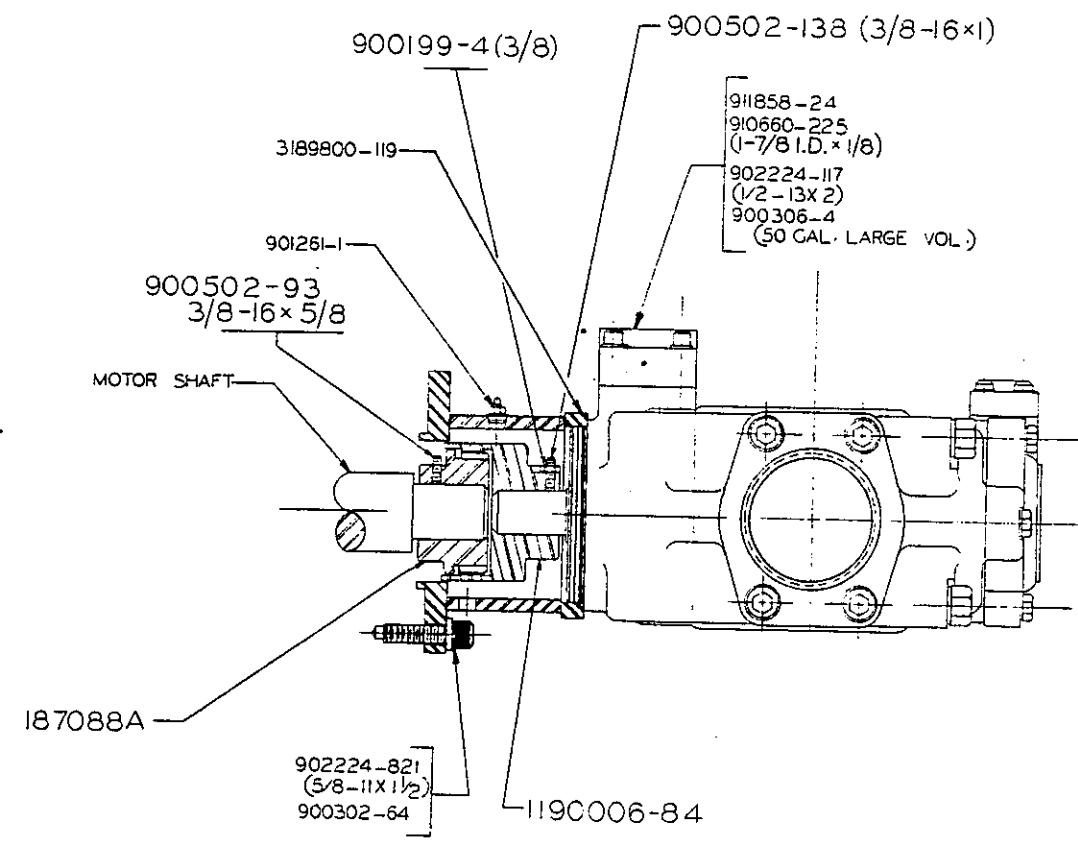
PUMP	ROTATION
506971-5	L.H. ROTATION
506971-6	R.H. ROTATION

ENG. ORDER EBK941	REVISIONS	JOY MANUFACTURING CO.		PUMP 50 $\frac{1}{2}$ 216 GPM	
DATE ISSUED 5-15-73		PLANT LOCATION AS INDICATED BELOW		DR. JHC	TR. CK. APPVD.
		CLAREMONT, N. H.	NEW PHILADELPHIA, O.	SUPERSEDES _____	SCALE ~ CLASS _____
		DALLAS, TEXAS	ST. LOUIS, MISSOURI	SUPERSEDED BY _____	
		FRANKLIN, PA.		REPLACES _____	
		GALT, ONTARIO, CAN.		REPLACED BY _____	506971-5
		GREENOCK, SCOTLAND			
		MICHIGAN CITY, IND.			

PR 1308-782



CM 3700-4



REPLACEMENT CARTRIDGES FOR VICKERS PUMP

CARTRIDGE	50 GPM	506971-8 REF.
CARTRIDGE	12 GPM	506971-9 REF.

ASSEMBLY NOTE:
ASSEMBLE INNER FACE OF 1190006-84 FLUSH WITH END OF PUMP SHAFT

LUBRICATION:
PACK COUPLING WITH JOY SPEC BGH HIGH TEMPERATURE LITHIUM BASE BEARING GREASE AT ASSEMBLY

BILL OF MAT. NO : 700425-434

<p>This drawing and all information therein is the property of the JOY MANUFACTURING CO. It is loaned to you and is not to be made public or used in any way without the written consent of the JOY MANUFACTURING CO.</p>		<p>JOY MANUFACTURING CO. PLANT LOCATION AS INDICATED BELOW</p> <table border="1"> <tr> <td>BUFFALO, N. Y.</td> <td>NEW PHILADELPHIA, OHIO</td> </tr> <tr> <td>CLAREMONT, N. H.</td> <td></td> </tr> <tr> <td>FRANKLIN, PA.</td> <td></td> </tr> <tr> <td>SALT, ONTARIO, CANADA</td> <td></td> </tr> <tr> <td>GREENOCK, SCOTLAND</td> <td></td> </tr> <tr> <td>MICHIGAN CITY, IND.</td> <td></td> </tr> </table>		BUFFALO, N. Y.	NEW PHILADELPHIA, OHIO	CLAREMONT, N. H.		FRANKLIN, PA.		SALT, ONTARIO, CANADA		GREENOCK, SCOTLAND		MICHIGAN CITY, IND.		<p>PUMP MOUNTING PARTS VICKERS</p>	
BUFFALO, N. Y.	NEW PHILADELPHIA, OHIO																
CLAREMONT, N. H.																	
FRANKLIN, PA.																	
SALT, ONTARIO, CANADA																	
GREENOCK, SCOTLAND																	
MICHIGAN CITY, IND.																	
<p>DATE: 1-20-76</p>	<p>REVISIONS: FBT283 FBT402 FBT403 FCC568</p>	<p>SIMILAR TO: _____</p> <p>SUPERSEDED BY: _____</p> <p>REPLACES: _____</p> <p>REPLACED BY: _____</p>	<p>UNAME OR INITIAL & DATE: _____</p> <p>DR: V-N 4-20-76</p> <p>SCALE: AS SHOWN</p> <p>CLASS: ISHU</p>	<p>CM 3700-4</p>													

LIST OF PARTS AS CALLED FOR ON B/M 700425-434

1	3I89800-119	PUMP ADAPTER
1	1189800-130	ADAPTER
1	1189937-42	COUPLING . .
1	1189990-40	PUMP SUCTION FLANGE
1	187088A	EXTERNAL GEAR COUPLING
1	1190006-84	INTERNAL GEAR COUPLING
2	900020-55	5/8"-11 X 2" CAP SCREW
2	900160-6	NUT
6	900302-64	5/8" LOCKWASHER
4	900306-3	3/8" LOCKWASHER
4	900306-4	1/2" LOCKWASHER
4	900306-57	5/8" LOCKWASHER
1	900502-93	3/8"-16 X 5/8" SET SCREW
1	901261-1	FITTING
4	902224-93	3/8"-16 X 1-1/2" CAP SCREW
4	902224-117	1/2"-13 X 2" CAP SCREW
4	902224-821	5/8"-11 X 1-1/2" CAP SCREW
4	902224-827	5/8"-11 X 3" CAP SCREW
2	902320-160	HOSE CLAMP
1	910660-219	1-5/16" X 1/8" O-RING
1	910660-240	3-3/4" X 1/8" O-RING
1	910660-225	1/8" X 1-7/8" I.D. O-RING
1	911858-16	O-RING PIPE THREAD FITTING
1	911858-24	O-RING PIPE THREAD FITTING
1	900199-4	3/8" NUT
1	900502-138	3/8"-16 X 1" SET SCREW

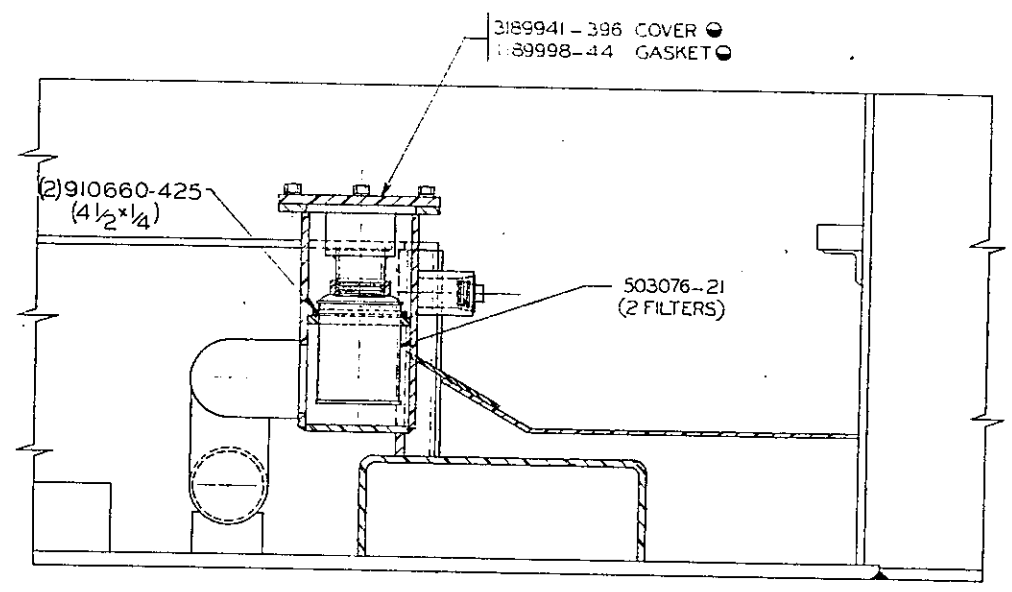
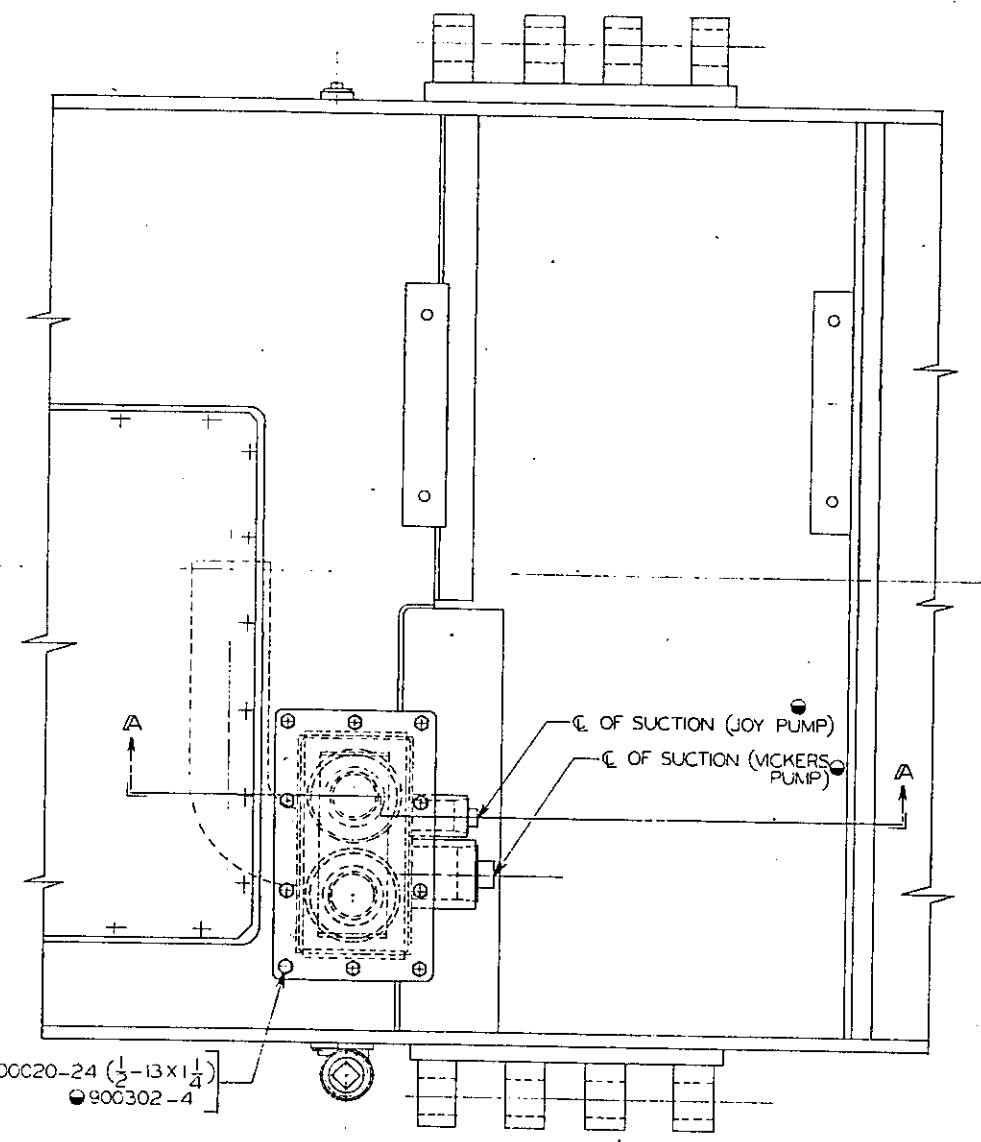
PARTS SHOWN FOR REFERENCE ONLY:

506971-8
506971-9

50 G.P.M. CARTRIDGE
12 G.P.M. CARTRIDGE

REVISION/ FCC568
REF. DWG. - CM3700-4

CM 5274



VIEW A-A

NOTE:
REMOVE FILTER TANK COVER
AND CLEAN FILTERS MONTHLY

REF. PART NO'S ON DWG. ONLY

BILL OF MAT NO: 700425-435 (JOY)
BILL OF MAT. NO: 700425-434 (VICKERS)

(L)

This drawing and all information herein is the property of the JOY MANUFACTURING CO. It is confidential and must not be made public or copied, it is loaned subject to return upon demand, it not to be used directly or indirectly in any way detrimental to our interest.

JOY MANUFACTURING CO.	
PLANT LOCATION AS INDICATED BELOW	
SUFFALO, N. Y.	NEW PHILADELPHIA, OHIO
CLAREMONT, N. H.	
FRANKLIN, PA.	
GALT, ONTARIO, CANADA	
GREENOCK, SCOTLAND	
MICHIGAN CITY, IND.	

INTANK FILTER	
SIMILAR TO	NAME OR INITIAL & DATE
SUPERSEDED BY	DATE
REPLACES	TR.
REPLACED BY	OK
	APPRO.

SCALE	CLASS
	CM 5274

E.O. 12812	REVISIONS	F8T 936	FCC 61
DATE 3-3-72			

LIST OF PARTS AS CALLED FOR ON B/M'S 700425-434/-435

2	503076-21	FILTER
2	910660-429	O-RING

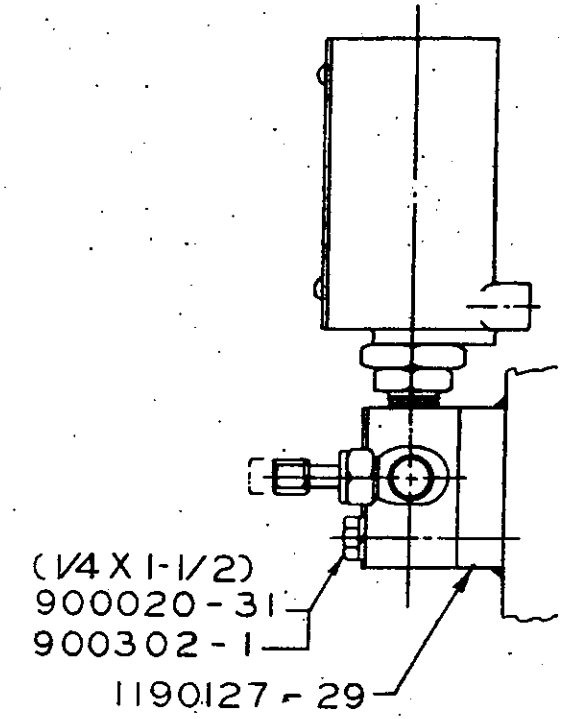
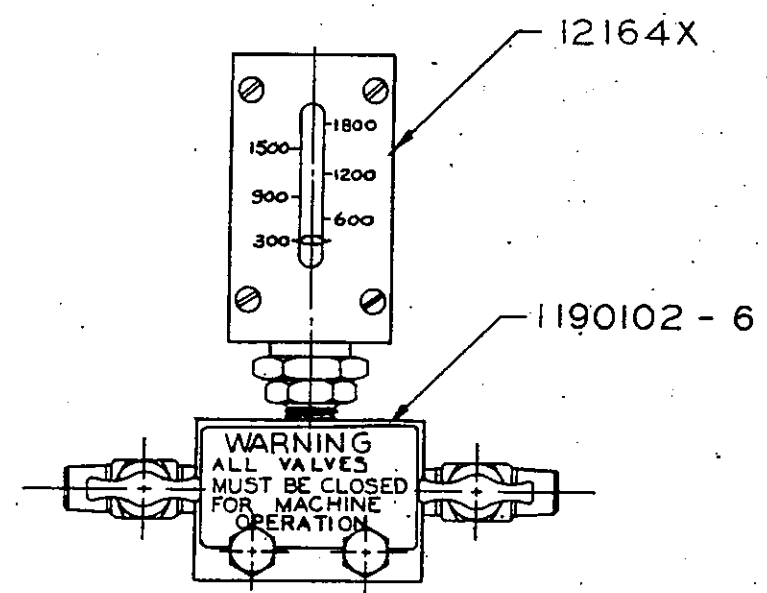
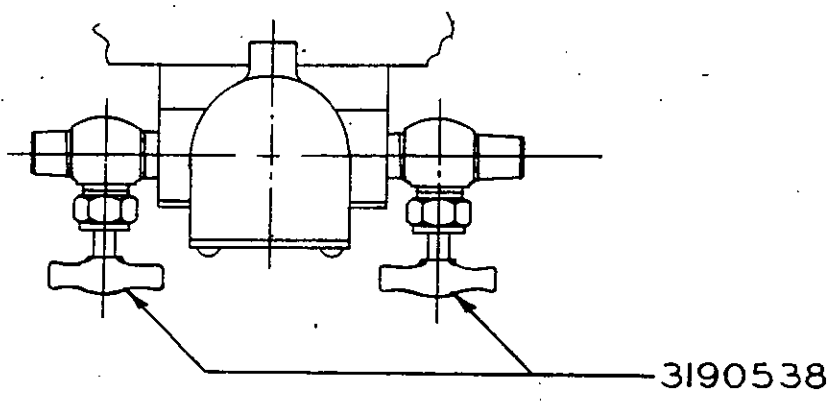
PARTS SHOWN FOR REFERENCE ONLY:

3189941-396	COVER
1189998-44	GASKET
900020-24	1/2"-13 X 1-1/4" CAP SCREW
900302-4	1/2" LOCKWASHER

REVISION/ FBT936

REF. DWG. - CM5274

CM 4054



O.E.M. PRINT
FOR REFERENCE ONLY,
NOT AS REBUILT

REV. CHAS. J. MATHIAS
DATE: 11-18-68
REVISIONS CAD 337 FBB690 FBE134 FBT409

JOY MANUFACTURING CO. PLANT LOCATED AS SHOWN BELOW		PRESSURE GAUGE	
MADE IN U.S.A.	NEW ORLEANS, LA.	Drawn By	CHAPMAN
DESIGNED BY	ST. LOUIS, MISSOURI	Checked By	11-18-68
FORN. NO.		Approved By	
SALES OFFICE		Replaced By	
ADDRESS, PORTLAND		Replaced By	
PHONE CITY, OR.		Appr.	
			CM 4054

(L)

LIST OF PARTS AS SHOWN ON CM-4054

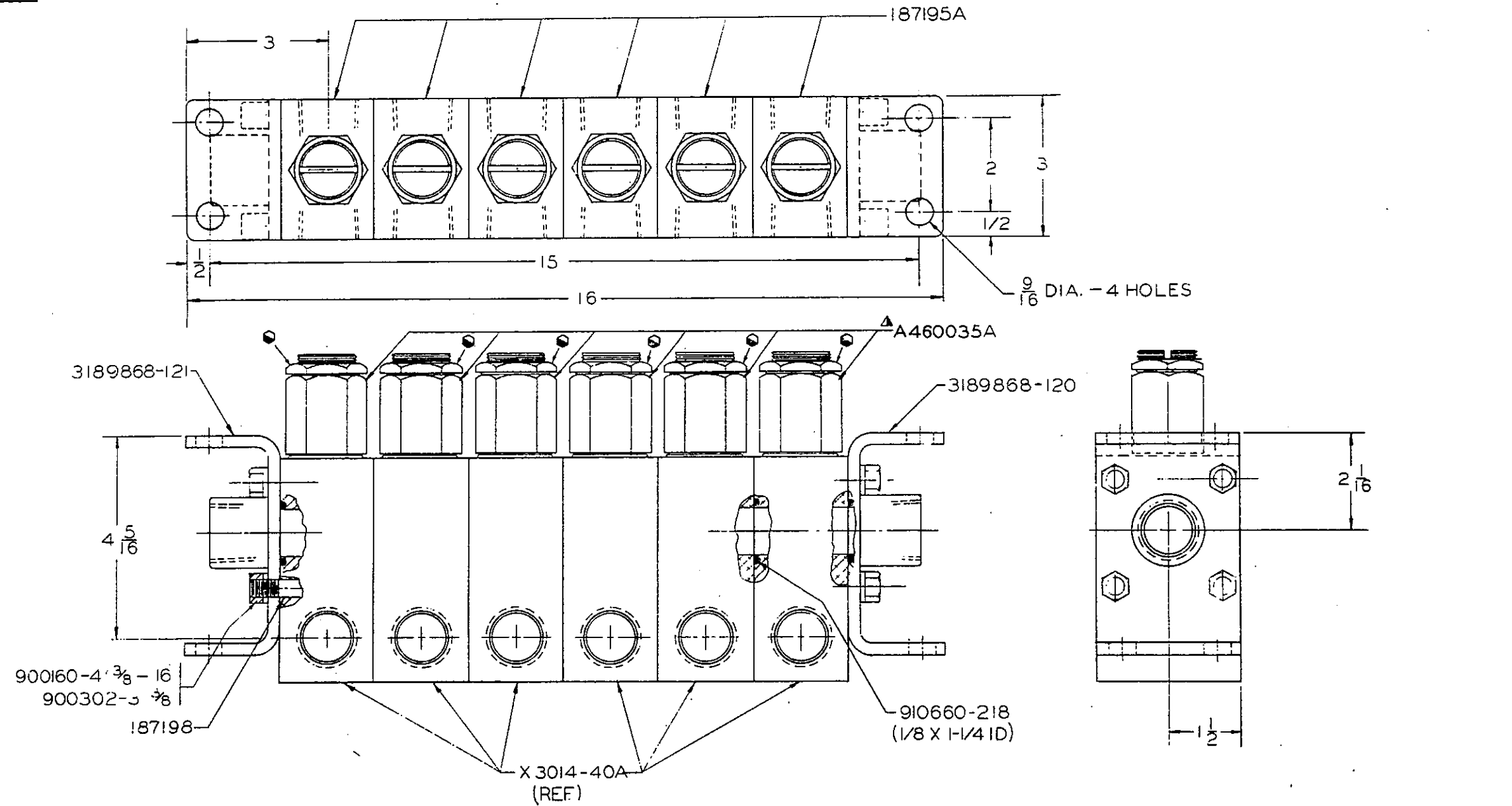
2	3190538	1/4" NEEDLE VALVE
1	12164X	GAUGE
1	1190102-6	GAUGE MANIFOLD
1	1190127-29	GAUGE PAD
1	1190149-42	"WARNING" NAME PLATE
2	900020-31	1/4"-20 X 1 1/2" CAP SCREW
2	900302-1	1/4" LOCKWASHER

REVISION/

FB7409

REF. B/M - 700425-297

503014-52



NOTE - DO NOT USE AIR WRENCH
 ▲ TORQUE TO 90 FT. LBS.
 ● TORQUE TO 75 FT. LBS.

WGT. 47 LBS.

X3014-40A -- ADJUSTABLE 800-2000PSI

REV. ORDER	CZ-229	REVISED	CZ 343 (AA-17) FBQG4G FBP6ZG FBT495	FINISH SYMBOLS		JOY MANUFACTURING CO.		RELIEF VALVE MANIFOLD ASSY	
UNLESS OTHERWISE NOTED: ALL DIMENSIONS IN INCHES. FRACTIONAL DIMENSIONS USE LUBRIC TO 2/16". DO NOT SCALE THIS DRAWING	MATERIAL	WHAT TREAT	CAMURIZ	A 4	FINISHED POLISH	C 20	HEAVY BUSH	CLAREMONT, N. H.	<input checked="" type="checkbox"/> NEW FINE LINE PUMP, OHIO
	HARDEN	BLENCH		D 2	FINE POLISH	H 20	HEAVY BUSH	DALLAS, TEXAS	ST. LOUIS, MISSOURI
	HARDEN	BLENCH		C 10	COARSE FINISH	E 100	EX. HEAVY BUSH	PITTSBURGH, PA.	
	DRAW	HANDDRN		D 20	GRIND OR BRUSH			SALT, ONTARIO, CANADA	
				F 10	GRIND BACK			BRIDGEHOLM, SCOTLAND	
				F 100	COARSE BACK			MICHIGAN CITY, IND.	

503014-

503014-52

RELIEF VALVE MANIFOLD ASSY.

1	3189868-120	R.H. BRACKET ASSY.
1	3189868-121	L.H. BRACKET ASSY.
4	187198	TIE ROD
8	900160-4	3/8"-16 HEX NUT
8	900302-3	3/8" LOCKWASHER
7	910660-218	1/8" X 1-1/4" I.D. O-RING

THE FOLLOWING PARTS SHOWN ON THE DRAWING ARE REQUIRED
TO MAKE SIX (6) X3014-40A RELIEF VALVE SECTION ASSEMBLY:

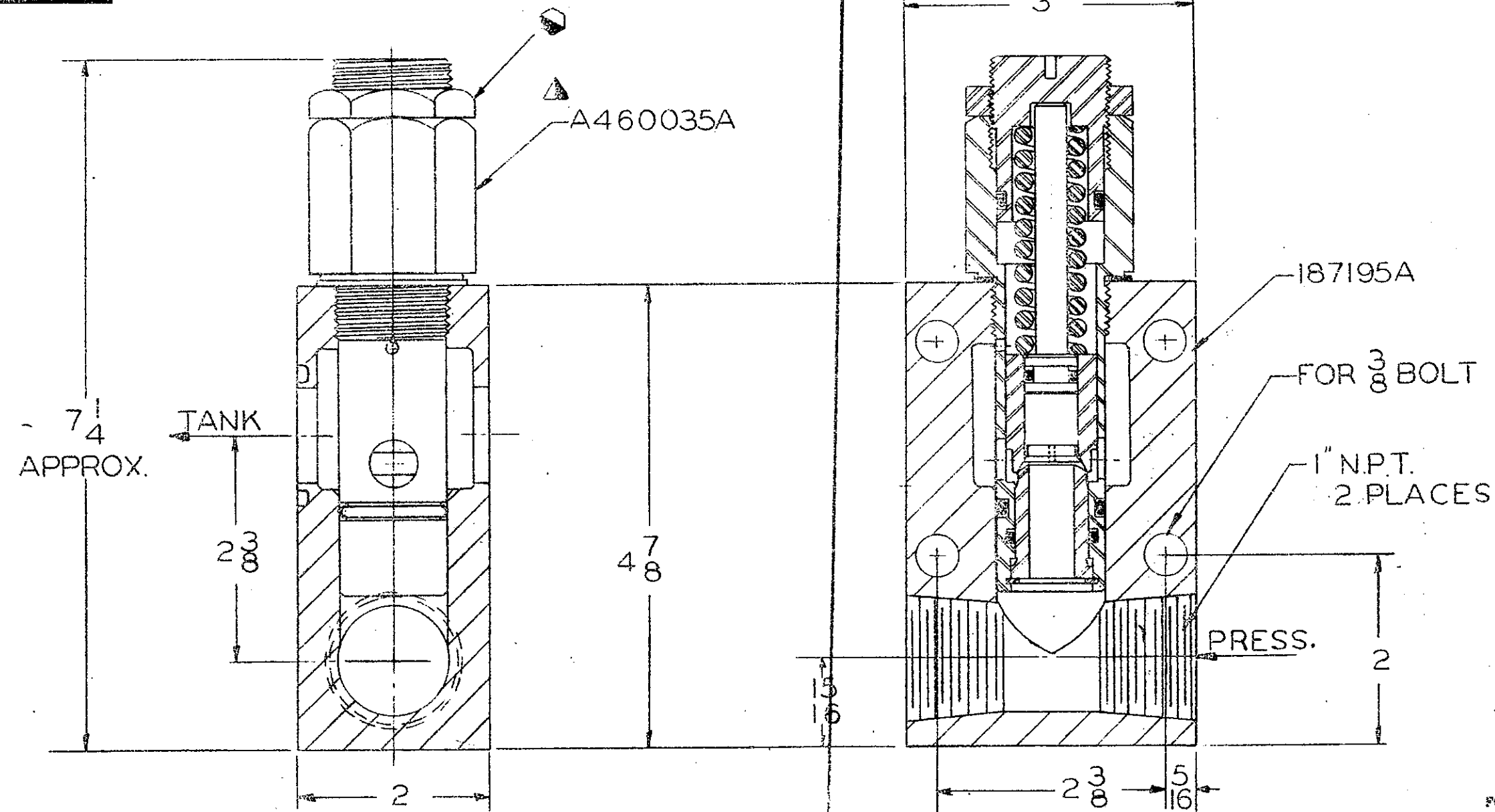
6	A460035A	RELIEF VALVE CARTRIDGE
6	187195A	RELIEF VALVE BODY

REVISION/

FBP626

OWG. SIZE 2
X-3014-40A

FORM No. 8108



NOTE - DO NOT USE AIR WRENCH
 ▲ TORQUE TO 90 FT. LBS.
 ◻ TORQUE TO 75 FT. LBS.

L
 APP'D FOR TRANS

DATE ISSUED _____ REVISIONS FBT 4 95

JOY MANUFACTURING CO.
 PLANT LOCATION AS INDICATED BELOW

CLAREMONT, N. H.	NEW PHILADELPHIA, O.
DALLAS, TEXAS	ST. LOUIS, MISSOURI
FRANKLIN, PA.	
SALT, ONTARIO, CANADA	
GREENOCK, SCOTLAND	
MICHIGAN CITY, IND.	

RELIEF VALVE SECTION ASSY

SIMILAR TO _____	DR. E. LEAR 12-20-61	SCALE FULL CLASS COAL
SUPERSEDED BY _____	FR. _____	
REPLACED BY X-3014-40	CK. RRL	X-3014-40A
REPLACED BY _____	APPD. _____	

GENERAL YELLOW A. S. & CHINA CO., PHILA. PA.

24 1528-1113

X3014-40A

RELIEF VALVE SECTION ASSY.

1
1

A460035A
187195A

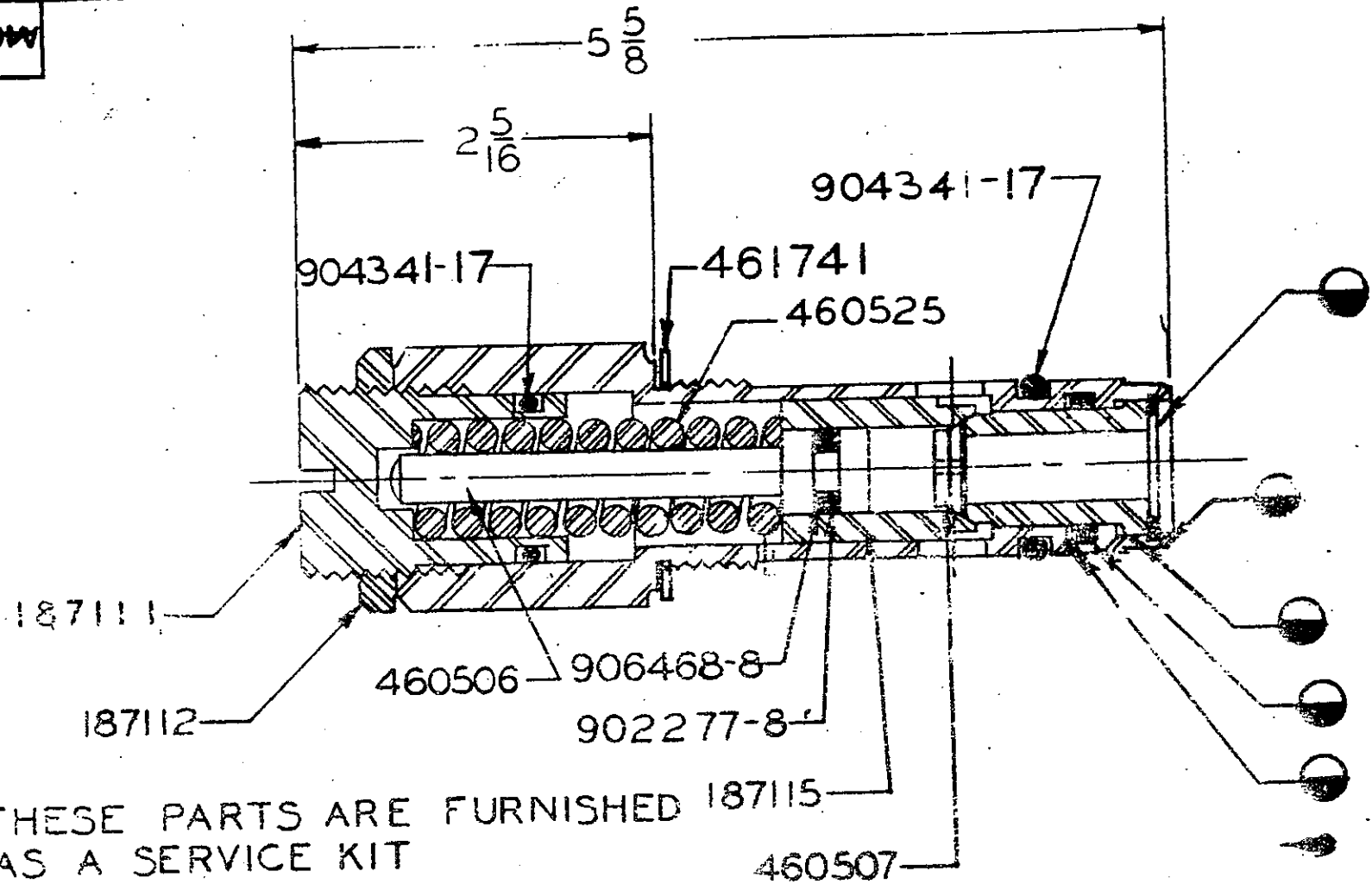
RELIEF VALVE CARTRIDGE ASSY.
RELIEF VALVE BODY

REVISION/

CY461

DWG. SIZE 1

46009W



THESE PARTS ARE FURNISHED AS A SERVICE KIT PART NO. 461434

800-2000 PSI

ENG. ORDER <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> DATE ISSUED _____		REVISIONS FAN712	JOY MANUFACTURING CO. PLANT LOCATION AS INDICATED BELOW	RELIEF VALVE CART ASS'Y	
FAR 497	FAX 667	FBC13	CLAREMONT, N. H. DALLAS, TEXAS FRANKLIN, PA. GALT, ONTARIO, CAN. GREENOCK, SCOTLAND INDIANAPOLIS, IND.	NEW PHILADELPHIA, OH. ST. LOUIS, MISSOURI	DR. JWR 61760 CHECKED BY _____ DESIGNED BY _____ REPLACED BY _____
FBD572	FBE 638				SCALE FULL A 460035A

BY MANUFACTURING CO.

BILL OF MATERIAL

ISSUES NO. A460035A

BILL OF MAT. NO. A460035A

SHEET NO. 1 OF 1

NAME CARTRIDGE (RELIEF VALVE)

ORDER NO.

ISSUED: JUNE 13, 1960		FAN50	
FAN402	FAR497	FBD572	
FAN712	FAX667	FBE638	
FAR181	FBC131		

QUANTITY		PART NUMBER	NAME OF PART	COST PER PIECE	TOTAL AMOUNT
PER ORDER	PER LIST				
			REPAIR PARTS LIST		
	1	187111	ADJ SCR (SPRING)		
	1	187112	NUT (LOCKING)		
	1	187115	SEAT (FLOATING)		
	1	460506	PLUNGER (DISPLACEMENT)		
	1	460507	SNIBBER		
		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX			
	1	460525	SPRING		
	1	461434	KIT (RELIEF VALVE)		
	1	461741	WASHER		
	1	902277-8	O RING		
	2	904341-17	O RING		
	1	906468-8	RING (BACK UP)		

CM5027

DWG. NO. 2

ENG. ORDER/E
906 REVISIONS

PROCEDURE FOR SETTING RELIEF VALVES ON 15RU3/4

THE RELIEF VALVES ON THIS MACHINE ARE CENTRALLY LOCATED ON THE RIGHT SIDE OF THE MACHINE JUST TO THE REAR OF THE OPERATORS PLATFORM. THE NAME PLATES ADJACENT TO EACH VALVE SHOW THE FUNCTION IT CONTROLS AND THE ORIGINAL FACTORY PRESSURE SETTING. THE PRESSURE SETTING IS ALSO SHOWN ON THE OVERALL HYDRAULIC SCHEMATIC LISTED ON THE SALES ORDER.

THE REQUIRED PROCEDURE FOR SETTING THESE VALVES IS LISTED BELOW. FAILURE TO FOLLOW THIS PROCEDURE MAY RESULT IN INCORRECT SETTINGS AND DAMAGE TO THE MACHINE. PRESSURES SHOULD BE SET WITH THE MACHINE AT NORMAL OPERATING TEMPERATURE.

1. LOCK BUGDUSTER AND SET 50 GPM RELIEF VALVE AT PRESSURE CALLED FOR ON HYDRAULIC SCHEMATIC (NORMALLY 1500 PSI).
2. OPERATE STEER VALVE UNTIL STEER CYLINDER REACHES END OF STROKE. HOLD VALVE OPEN AND SET 15 GPM RELIEF VALVE AT 1750 PSI.
3. OPERATE BOOM SWING VALVE UNTIL BOOM SWING CYLINDERS REACH END OF STROKE. HOLD VALVE WIDE OPEN AND SET BOOM SWING RELIEF VALVE AT PRESSURE SHOWN ON HYDRAULIC SCHEMATIC (USUALLY 1000 TO 1400.)
4. PLACE PRESSURE GAUGE IN BOOM ROLL RELIEF VALVE. OPERATE BOOM ROLL VALVE UNTIL BOOM COMES TO STOP. HOLD BOOM ROLL VALVE WIDE OPEN AND SET RELIEF VALVE AT PRESSURE CALLED FOR ON HYDRAULIC SCHEMATIC (USUALLY 1000, NEVER OVER 1200).
5. BE SURE TILT FLOAT VALVE IS CLOSED. PLACE PRESSURE GAUGE IN BAR TILT RELIEF VALVE. OPERATE BAR TILT VALVE UNTIL BAR TILT CYLINDER REACHES END OF STROKE. HOLD BAR TILT VALVE WIDE OPEN AND SET RELIEF VALVE AT PRESSURE CALLED FOR ON SCHEMATIC PIPING DIAGRAM (1550 PSI WITH 6 1/2" DIAMETER CYLINDER, 1100 WITH 8" DIAMETER CYLINDER).
6. OPERATE STEER VALVE UNTIL STEER CYLINDER REACHES END OF STROKE. HOLD STEER VALVE OPEN AND RESET 15 GPM RELIEF VALVE AT PRESSURE CALLED FOR ON HYDRAULIC SCHEMATIC (NORMALLY 1500).

THERE ARE BUILT-IN RELIEF VALVES IN THE TRAM, BAR SWING, AND BOOM LIFT SECTIONS OF THE 50 GPM MULTIPLE VALVE ALL FACTORY SET AT 1800 PSI, WHICH CANNOT BE RESET UNDER FIELD CONDITIONS. IF IT IS NECESSARY TO DISASSEMBLE ONE OF THESE VALVES FOR CLEANING, NOTE THE NUMBER OF THREADS PROJECTING THROUGH THE CHECK NUT (USUALLY 3) AND REASSEMBLE TO ORIGINAL POSITION.

JOY MANUFACTURING CO.	
PLANT LOCATION AS INDICATED BELOW	
CLERMONT, N. H.	NEW PHILADELPHIA, O.
DALLAS, TEXAS	ST. LOUIS, MISSOURI
FAIRBURN, PA.	
GALT, ONTARIO, CANADA	
GREENOCK, SCOTLAND	
NICHOLAN CTRY. IND.	

PROCEDURE FOR SETTING RELIEF VALVES ON 15RU 3/4

SHOWN TO _____
 SUPERSEDED BY _____
 REPLACES _____
 REPLACED BY _____

DR. RHH:B:869
 TR. _____
 CK. _____
 APPD. _____

SCALE 1/2 CLASS 15RU
CM5027





CM4918-4

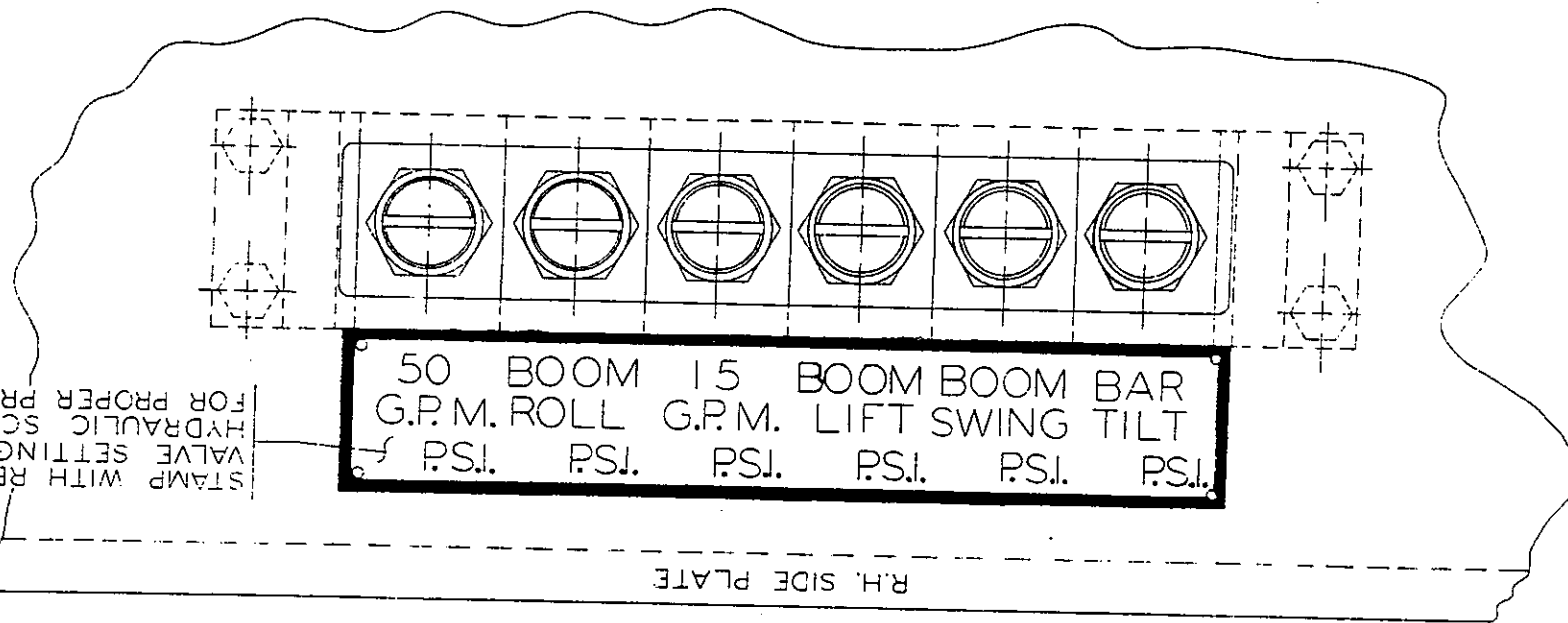
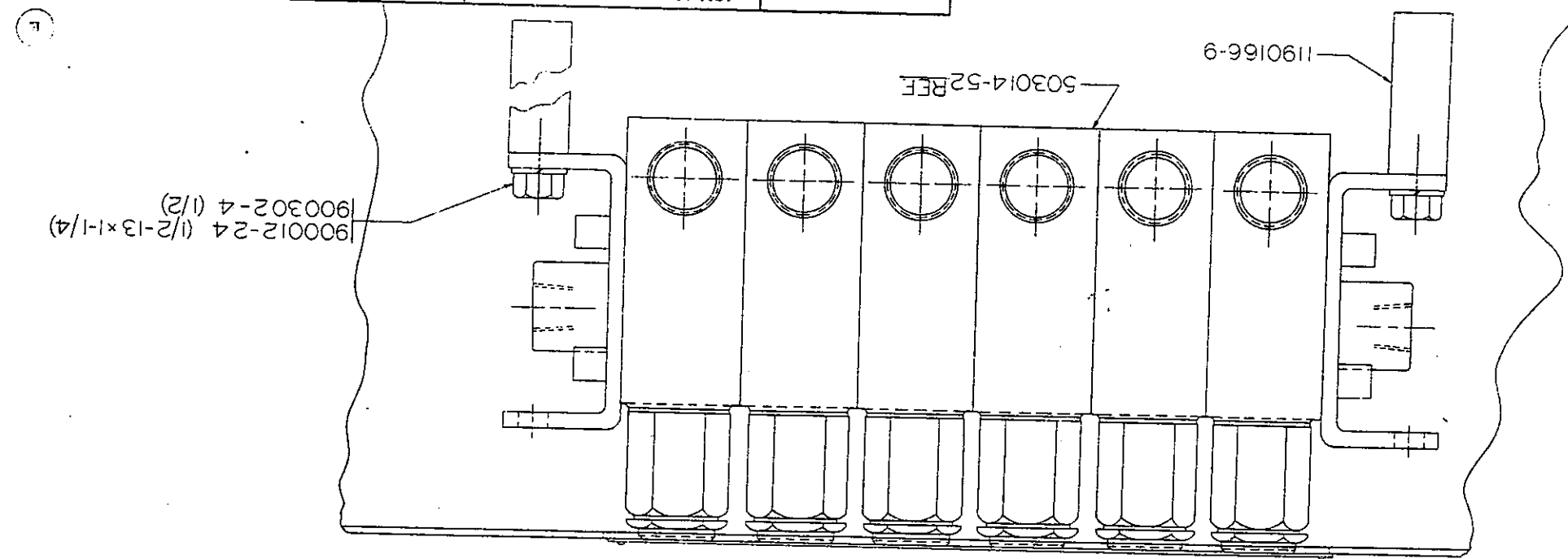
DATE OF RETIREMENT: 1-28-77
 NAME OF RETIREE: DR. J. B. BURGESS
 SCALE: FULL

REPLACED BY: _____
 SUPERSEDED BY: _____
 SIGNATURE: _____

JOY MANUFACTURING CO.
 PLANT LOCATION AS INDICATED BELOW
 NEW PHILADELPHIA, OHIO

700425-430
 DATE: 4-22-75
 DRAWING: 700425-430
 PART: 1190166-9

RELIEF VALVE MOUNTING



CM4918-4

JOY MANUFACTURING CO.

BILL OF MATERIAL

DRAWING NO.

BILL OF MAT. NO.

CM4918-4

700425-430

SHEET NO. 1 OF 1

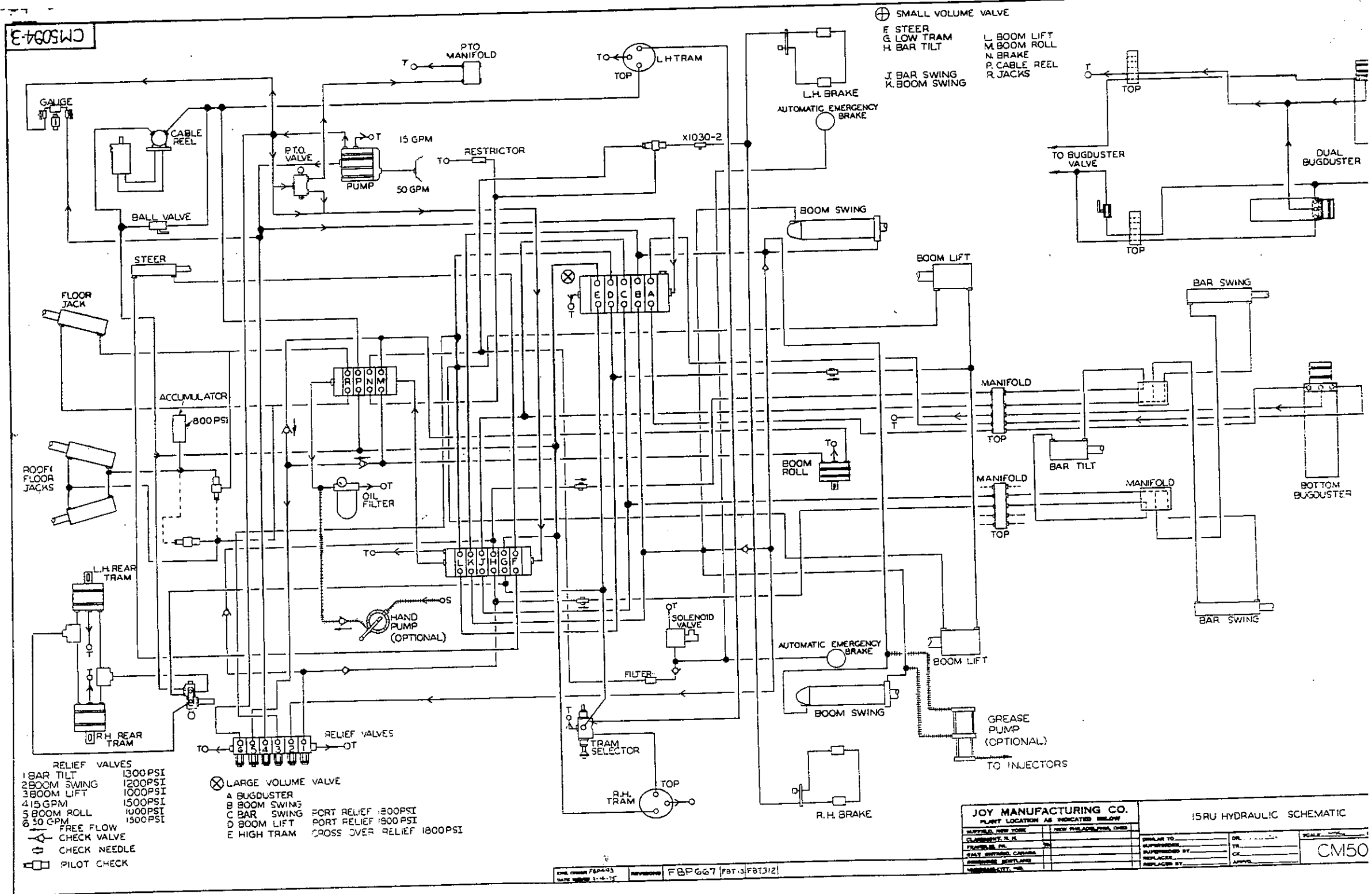
NAME RELIEF VALVE & MTG ORDER NO.

PARTS

ISSUED:	JUNE 5, 1975	FBP665
		FBT270
		FBT409

QUANTITY	PART NUMBER	NAME OF PART	NON-STOCK CODE	PRINT RE-QUIRED (1)
2	1190166-9	BOSS		
4	900072-24	CAP SCR (1/2-13 X 1 1/4)		
4	900302-4	LOCKWASHER		
		PART SHOWN FOR REFERENCE ONLY:		
		503014-52 6-SECTION RELIEF VALVE		

CM5094-3



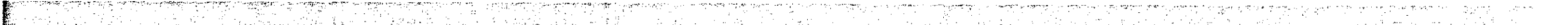
- ⊕ SMALL VOLUME VALVE
- F STEER
- G LOW TRAM
- H BAR TILT
- J BAR SWING
- K BOOM SWING
- L BOOM LIFT
- M BOOM ROLL
- N BRAKE
- P CABLE REEL
- R JACKS

- RELIEF VALVES
- 1 BAR TILT 1300PSI
- 2 BOOM SWING 1200PSI
- 3 BOOM LIFT 1000PSI
- 4 15 GPM 1500PSI
- 5 BOOM ROLL 1000PSI
- 6 50 GPM 1500PSI
- FREE FLOW
- CHECK VALVE
- CHECK NEEDLE
- PILOT CHECK

- ⊗ LARGE VOLUME VALVE
- A BUGDUSTER
- B BOOM SWING
- C BAR SWING
- D BOOM LIFT
- E HIGH TRAM
- PORT RELIEF 1800PSI
- PORT RELIEF 1800PSI
- CROSS OVER RELIEF 1800PSI

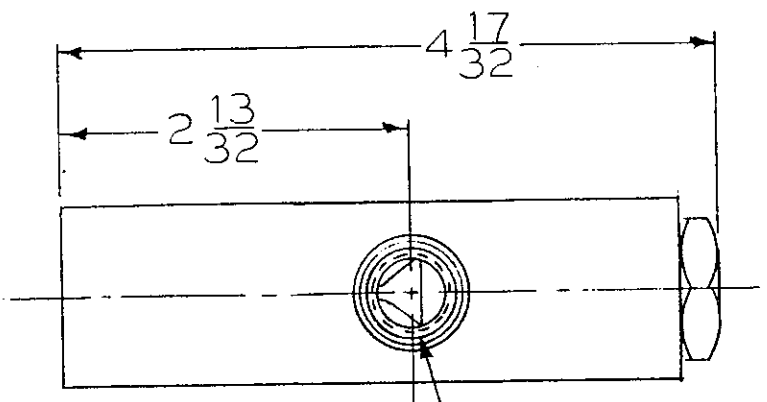
REV. 10/68 FB04-93 DATE 1-14-75 REVISIONS FBPGG7 FB04-93 FB0312

JOY MANUFACTURING CO.		15RU HYDRAULIC SCHEMATIC	
PLANT LOCATION AS INDICATED BELOW			
SUPPLIED NEW YORK	NEW PHILADELPHIA, OHIO	DESIGNED BY	DR.
CLASSIFIED R.H.		FRACASSED BY	TR.
ONLY SERVICE CANADA		REPLACED BY	CR.
REPLACEMENT PARTS		REPLACED BY	APPROV.
			SCALE
			CM50



DWG. SIZE 2

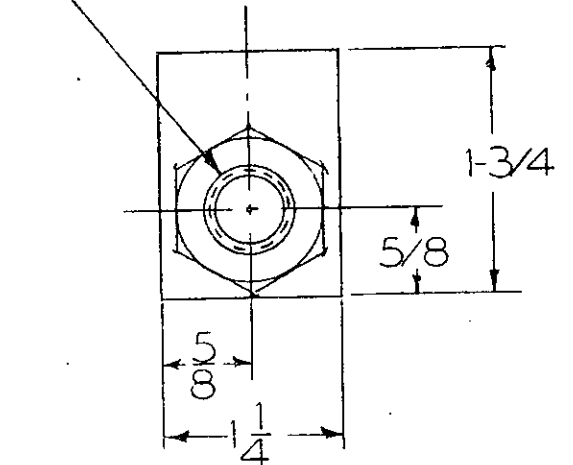
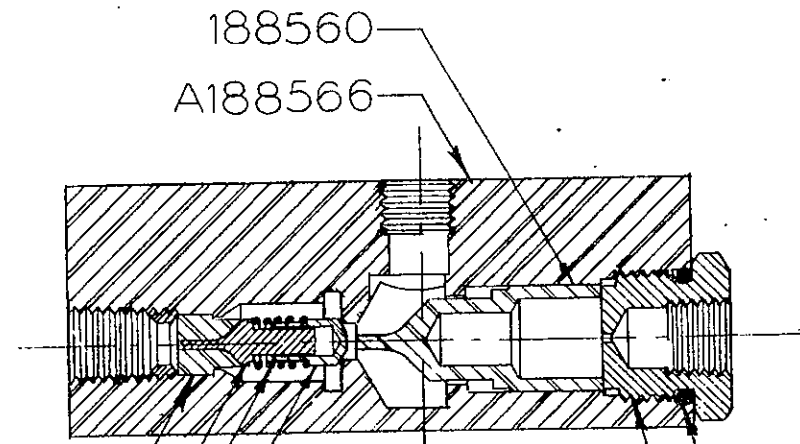
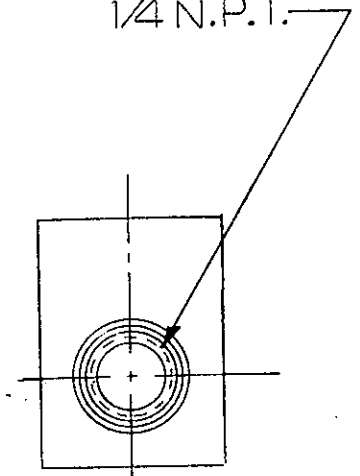
X3106-5



INLET PORT
1/4 N.P.T.

CYL. PORT
1/4 N.P.T.

PILOT PORT
1/4 N.P.T.



- 188560
- A188566
- 188556
- 188554
- 188558
- 188564
- 188562
- 188561

L9

APP'D FOR TRANS.

REDRAWN WITH ADDITIONS FROM OLD VET DATED 1/5/59

JOY MANUFACTURING CO.
PLANT LOCATION AS INDICATED BELOW

CLAREMONT, N. H.	NEW PHILADELPHIA, O.
DALLAS, TEXAS	ST. LOUIS, MISSOURI
FRANKLIN, PA.	
SALT, ONTARIO, CANADA	
GREENOCK, SCOTLAND	
MICHIGAN CITY, IND.	

1/4 PILOT CHECK VALVE

GIMILAR TO	DR. T. GONYA	SCALE N.T.S. CLASS
SUPERSEDED BY	TR. 4/2/59	
REPLACES	CK.	
REPLACED BY	APP'D. [Signature]	

ENG. ORDER C7-951 REVISIONS CU-383/FBT
 DATE ISSUED 1/5/59 292

X3106-5

X3106-5

1/4" PILOT CHECK VALVE

THE FOLLOWING PARTS ARE SHOWN ON THE DRAWING
FOR SERVICE REQUIREMENTS ONLY:

1	A188566	BODY
1	188554	GUIDE
1	188556	SCREW
1	188558	SPRING
1	188560	PISTON
1	188561	PLUG
1	188562	"O" RING
1	188564	POPPET

REVISION/

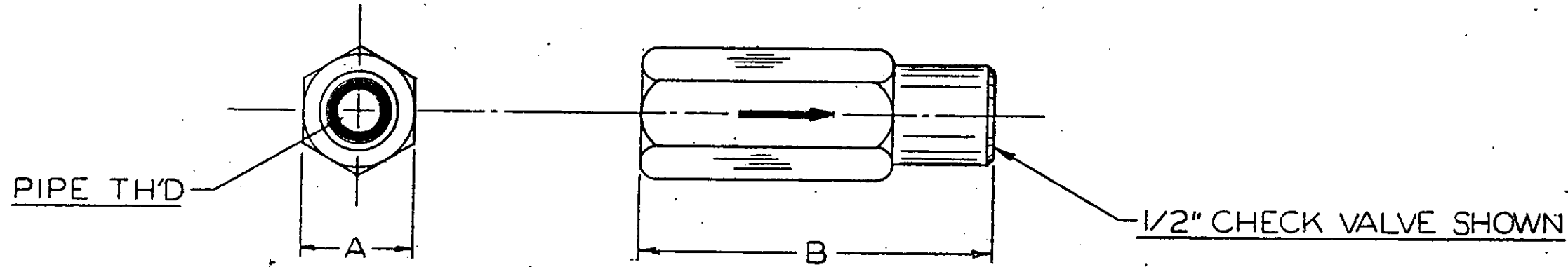
CU389

2/12/53

UNLESS OTHERWISE NOTED ALL DIMENSIONS IN INCHES—
FRACTIONAL MACHINING DIMENSIONS LIMITED TO ± 1/64.
DO NOT SCALE THIS DRAWING.

ENG. ORDER CJ-601
DATE ISSUED 7-9-53

REVISIONS CT-966 FCC671



PART NO.	PIPE TH'D.	WIDTH 'A'	LENGTH 'B'	REPLACES	EO.	REVISIONS
X3043-9	✓ 1/4	3/4	2 3/4			
X3043-10	✓ 3/8	7/8	3			
X3043-11	✓ 1/2	1 1/8	3 1/2			
X3043-12	✓ 3/4	1 3/8	4 1/2			
X3043-15	✓ 1"	1 3/4	4 7/8	°X3043-13	FCC671	
X3043-16	✓ 1 1/4	2 1/4	5 7/16			

APPROVED FOR TRANS.

M L

LITHOPRINT THIS DRAWING

PATTERN NUMBER _____

MATERIAL PURCHASED (SEE 3M)

HEAT TREAT _____

HARDEN _____ QUENCH _____

HARDEN _____ QUENCH _____

DRAW _____ HARDNESS _____

CARBURIZE _____

SYM	SYMBOL	DESCRIPTION	SYM	SYMBOL	DESCRIPTION
A	4	FORGING FLOW	G	879	ROUGH BENCH
B	9	FINE FINISH	H	880	HEAVY BENCH
C	10	COARSE FINISH	K	1890	EX. HEAVY EDGING
D	72	GRIND AND GRIND			
E	83	SMOOTH BENCH			
F	125	COARSE FINISH			

JOY MANUFACTURING CO.
PLANT LOCATION AS INDICATED BELOW

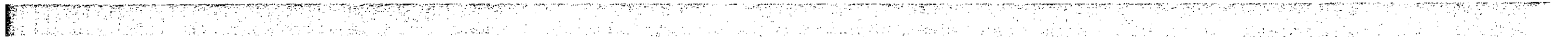
CLACKMONT, N.J.	ST. LOUIS, MISSOURI
SALT LAKE, UTAH	
FRANKLIN, PA.	
SALT SPRING, CANADA	
REVEREND, SOUTH IOWA	
WILSON, N.Y.	

CHECK VALVE

SIMILAR TO _____
SUPERSEDED BY _____
REPLACED BY _____

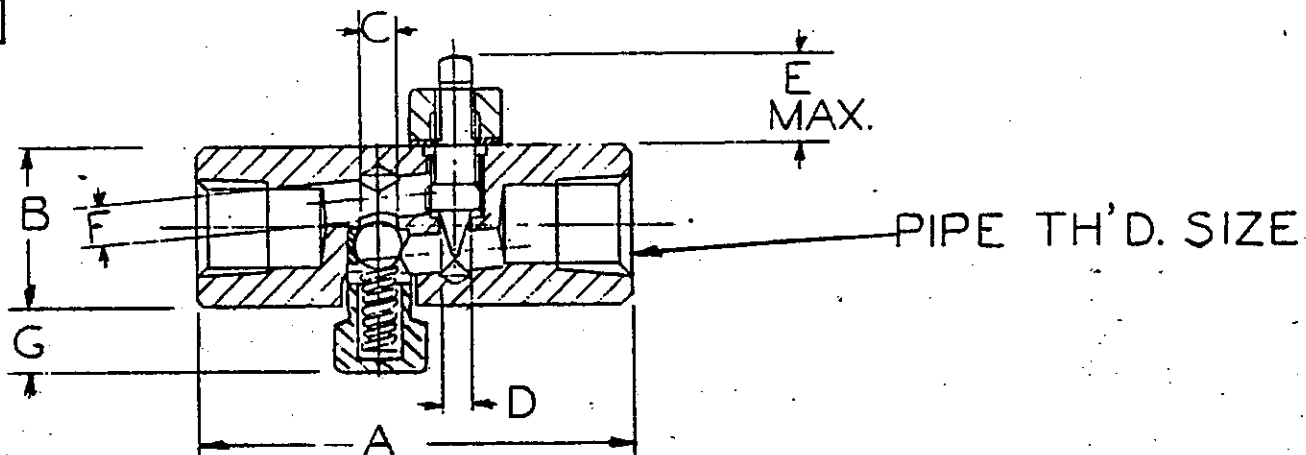
BY DeLaBranche
DATE 7-8-53

SCALE FULL CLASS MISC.
X3043-9



DWG. SIZE 1

2/12/65



NO.	A	B	C	D	E	F	G	PIPE TH'D. SIZE
X0003044-0001	1 3/4	1 1/16	.141	.107	1/2	.140	13/64	1/8
X0003044-0002	2 3/8	7/8	.203	.156	5/8	.218	23/64	1/4
X0003044-0003	2 3/4	1 1/16	.266	.219	3/4	.281	1 1/32	3/8
X0003044-0004	3 3/16	1 5/16	.329	.281	1	.343	15/32	1/2

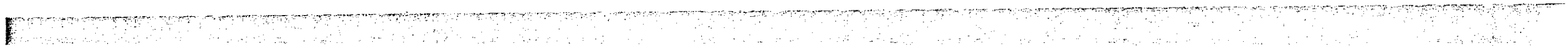
APP'D.
FOR TRAC.

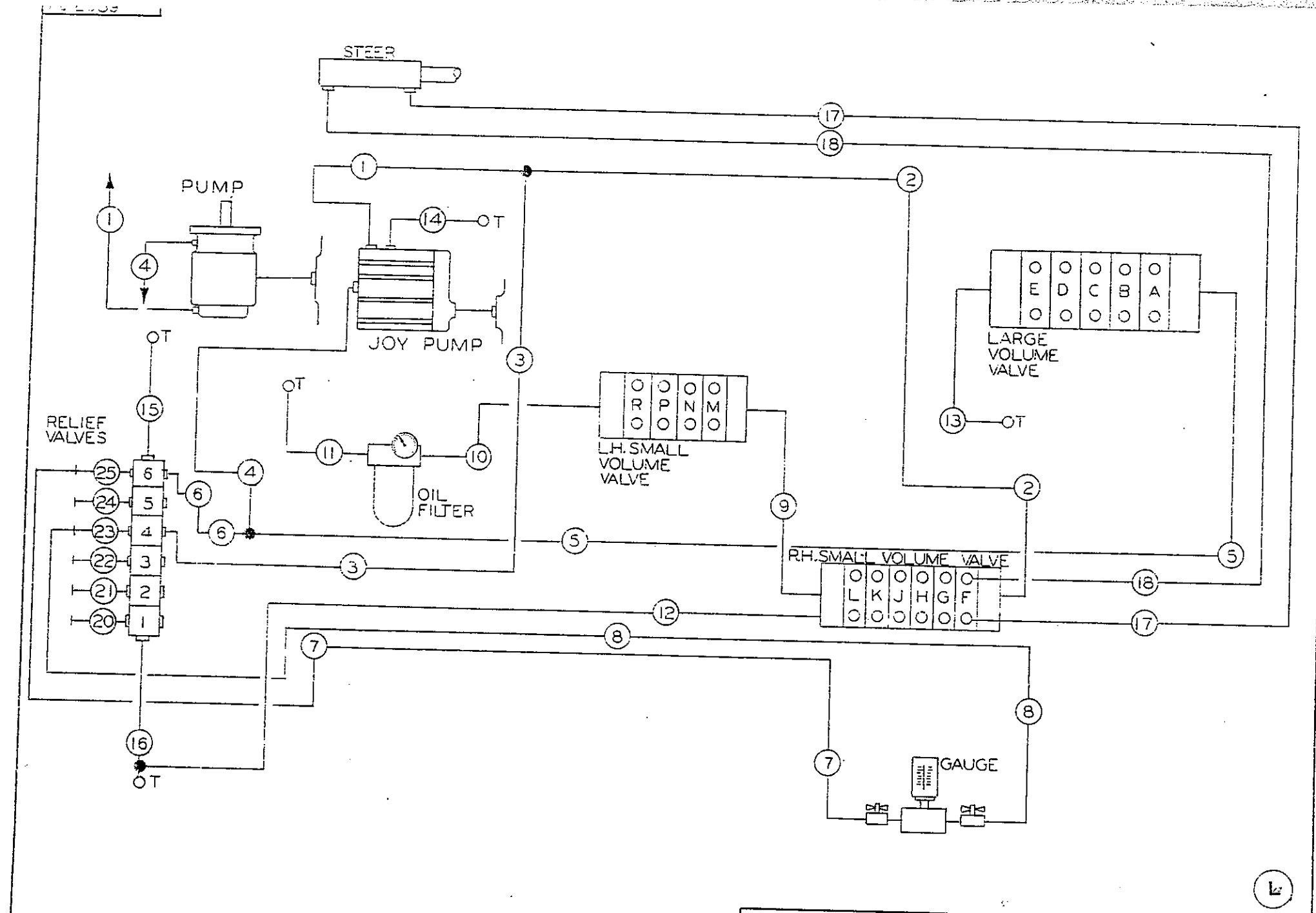
① REDRAWN WITH CHANGES
FROM OLD VET CKD. 6-20-51

ENG. ORDER <u>CD-674</u>	REVISIONS <u>CX-442</u>	JOY MANUFACTURING CO.		CONTROL VALVE	
DATE ISSUED		PLANT LOCATION AS INDICATED BELOW		(NEEDLE & CHECK)	
FDC7828		CLAREMONT, N. H. <input type="checkbox"/>	NEW PHILADELPHIA, O. <input checked="" type="checkbox"/>	DR. ELEAR 5961 TR.	CHK RRL APPD.
		DALLAS, TEXAS <input type="checkbox"/>	ST. LOUIS, MISSOURI <input type="checkbox"/>	SUPERSEDES _____	SCALE _____ CLASS _____
		FRANKLIN, PA. <input type="checkbox"/>		SUPERSEDED BY _____	X0003044-0001
		GALT, ONTARIO, CAN. <input type="checkbox"/>		REPLACES _____	
		GREENOCK, SCOTLAND <input type="checkbox"/>		REPLACED BY _____	
		MICHIGAN CITY, IND. <input type="checkbox"/>			

CRYSTAL VELLUM A. S. S. SMITH CO., PHILA. PA.

PR 1-50-658





E.O. FBT 30 DATE 3-2-76		REVISIONS	FBT 312	FCC 408	FCC 493	JOY MANUFACTURING CO. PLANT LOCATION AS INDICATED BELOW BUFFIELD, N.Y. NEW PHILADELPHIA, O. CLAREMONT, N.H. <input checked="" type="checkbox"/> FRANKLIN, PA. <input checked="" type="checkbox"/> GALT, ONTARIO, CANADA GREENOCK, SCOTLAND MICHIGAN CITY, IND.		PUMP & STEER SIMILAR TO _____ SUPERSEDED BY _____ REPLACES _____ REPLACED BY _____		MAKE OR INITIAL & DATE DR. _____ TR. _____ CK. _____ APPD. _____	SCALE: \times CLASS: L.S.V. PD2639
----------------------------	--	-----------	---------	---------	---------	---	--	---	--	--	--



LOCATION - FITTINGS - HOSE ASSY.	LOCATION - FITTINGS - HOSE ASSY.	LOCATION - FITTINGS - HOSE ASSY.
13 FROM OUTLET PORT ON LARGE VOLUME VALVE TO DRAIN PORT #3 ON TANK 903685-11 1/4" - 90° UNION ELBOW ADAPT 915703-17 #20 DMB HOSE ASSY 17" LG 903686-2420 1 1/4" - 1 1/2" 90° UNION ADAPTER	14 FROM DRAIN PORT ON PUMP TO DRAIN PORT #16 ON TANK 903687-5 1/2" - 90° UNION FEMALE ADAPT *914508-28 #8 DMB HOSE ASSY 28" LG *914708-28 #8 DMB HOSE ASSY 28" LG 903697-5 1/2" - 90° FEM UNION ELBOW ADAPTER	15 FROM REAR PORT ON MANIFOLD RELIEF VALVE TO DRAIN PORT #9 ON TANK 900716-21 1" UNION ADAPTER *914516-17 #16 DMB HOSE ASSY 17" LG *914716-17 #16 DMB HOSE ASSY 17" LG 903686-10 1" - 90° UNION ELBOW ADAPT
16 FROM FRONT PORT ON MANIFOLD RELIEF VALVE TO DRAIN PORT #7 ON TANK 903686-10 1" - 90° UNION ELBOW ADAPTER *914516-32 #16 DMB HOSE ASSY 32" LG *914716-32 #16 DMB HOSE ASSY 32" LG 903686-10 1" - 90° UNION ELBOW ADAPTER 901093-5 1" TEE	17 FROM L.H. PORT "F" ON R.H. SMALL VOLUME VALVE TO ROD END PORT ON STEER CYLINDER 901165-86 BUSHING 1/2" - 3/8" 903686-5 5/8" - 90° UNION ELBOW ADAPTER *914508-86 #6 DMB HOSE ASSY 86" LG *914708-86 #6 DMB HOSE ASSY 86" LG 900716-9 5/8" UNION ADAPTER	18 FROM R.H. PORT "F" ON R.H. SMALL VOLUME VALVE TO PISTON END PORT ON STEER CYLINDER 901165-86 BUSHING 1/2" - 3/8" 903686-5 5/8" - 90° UNION ELBOW ADAPT *914508-88 #6 DMB HOSE ASSY 88" LG *914708-88 #6 DMB HOSE ASSY 88" LG 903686-5 5/8" - 90° UNION ELBOW ADAPT
20 FROM GAUGE PORT #1 TO RELIEF VALVE #1 901165-164 1" TO 1/4" BUSHING 901176-47 1/4" NIPPLE 1 1/2" LG 906310-4 1/4" - 90° PIPE 901176-128 1/4" NIPPLE 4" LG 907244-44 1/4" CONNECTOR 905582-4 CAP NUT	21 FROM GAUGE PORT #2 TO RELIEF VALVE #2 901165-164 1" TO 1/4" BUSHING 901176-47 1/4" NIPPLE 1 1/2" LG 906310-4 1/4" - 90° PIPE 901176-128 1/4" NIPPLE 4" LG 907244-44 1/4" CONNECTOR 905582-4 CAP NUT	22 FROM GAUGE PORT #3 TO RELIEF VALVE #3 901165-164 1" TO 1/4" BUSHING 901176-47 1/4" NIPPLE 1 1/2" LG, 906310-4 1/4" - 90° PIPE 901176-128 1/4" NIPPLE 4" LG 907244-44 1/4" CONNECTOR 905582-4 CAP NUT
23 FROM GAUGE PORT #4 TO RELIEF VALVE #4 901165-164 1" TO 1/4" BUSHING 901176-47 1/4" NIPPLE 1 1/2" LG 906310-4 1/4" - 90° PIPE 901176-128 1/4" NIPPLE 4" LG 907244-44 1/4" CONNECTOR 905582-4 CAP NUT	24 FROM GAUGE PORT #5 TO RELIEF VALVE #5 901165-164 1" TO 1/4" BUSHING 901176-47 1/4" NIPPLE 1 1/2" LG 906310-4 1/4" - 90° PIPE 901176-128 1/4" NIPPLE 4" LG 907244-44 1/4" CONNECTOR 905582-4 CAP NUT	25 FROM GAUGE PORT #6 TO RELIEF VALVE #6 901165-164 1" TO 1/4" BUSHING 901176-47 1/4" NIPPLE 1 1/2" LG 906310-4 1/4" - 90° PIPE 901176-128 1/4" NIPPLE 4" LG 907244-44 1/4" CONNECTOR 905582-4 CAP NUT

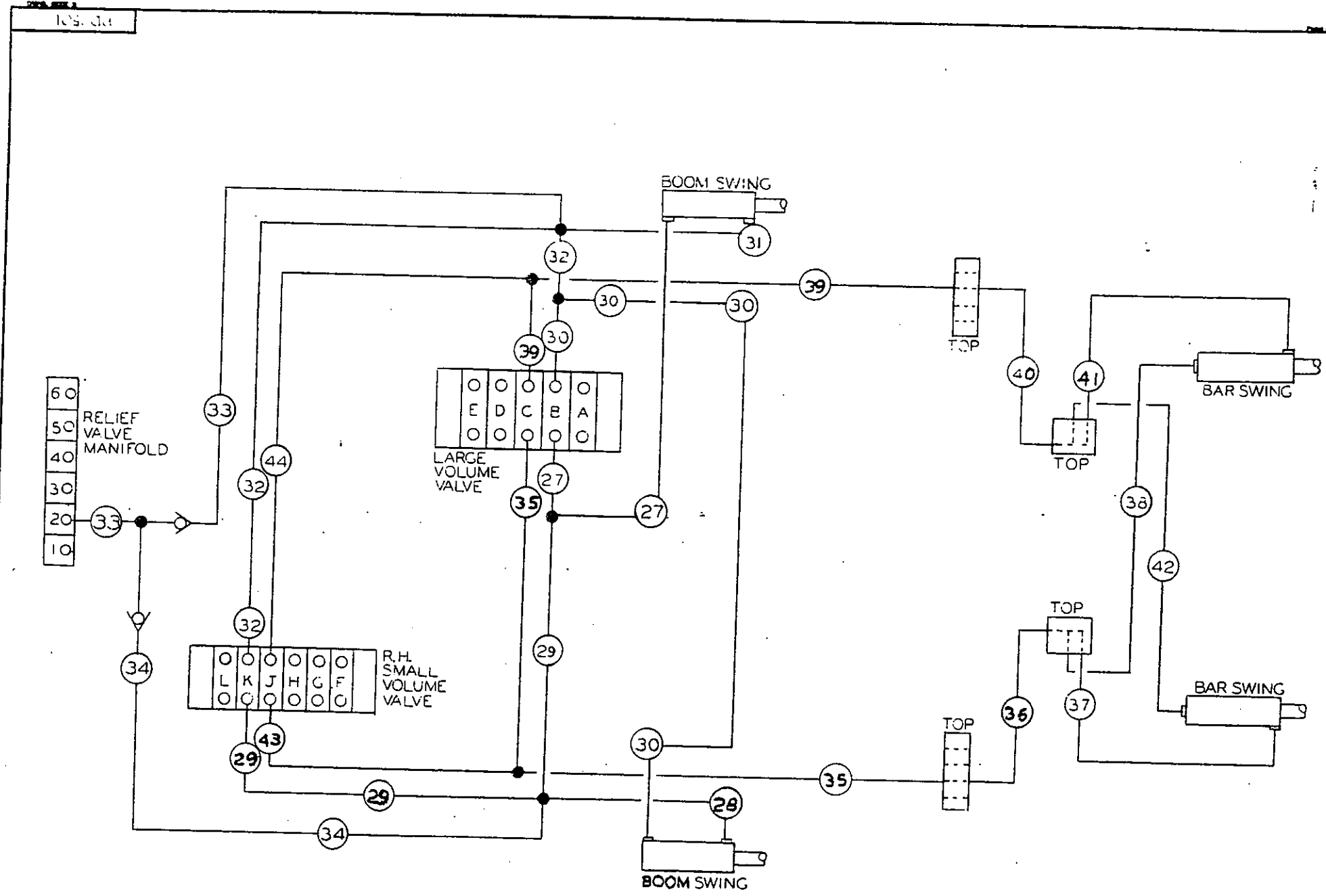
O.E.M. PRINT
FOR REFERENCE ONLY,
NOT AS REBUILT.

<p>SEQUENCE OF HYD PIPING ON 15RU PUMP AND STEER CIRCUIT</p> <p>*AERQUIP-DMB-CRIMPED MALE PIPE</p> <p>*AERQUIP-DMB- REUSABLE MALE PIPE</p> <p>1 FROM 15 GPM PORT ON PUMP TO TEE IN PRESSURE LINE 903685-8 3/4" - 90° UNION ELBOW ADAPT *914512-18 #12 DMB HOSE ASSY 18" LG *914712-18 #12 DMB HOSE ASSY 18" LG 900716-17 3/4" UNION ADAPTER 901096-4 3/4" TEE</p> <p>2 FROM THE TEE IN LINE #1 TO TEE INLET PORT ON R.H. SMALL VOLUME VALVE 903685-8 3/4" UNION 90° *914512-44 #12 DMB HOSE ASSY 44" LG *914712-44 #12 DMB HOSE ASSY 44" LG 900716-17 3/4" UNION</p> <p>3 FROM MANIFOLD RELIEF VALVE #4 TO TEE IN LINE #1 900716-31 3/4" UNION ADAPTER *914516-72 #12 DMB HOSE ASSY 72" LG *914716-72 #12 DMB HOSE ASSY 72" LG 900716-17 3/4" UNION ADAPTER</p> <p>4 FROM 50 GPM PORT ON PUMP TO TEE IN PRESSURE LINE 903687-5 1" - 45° UNION ELBOW ADAPT *914516-38 #16 DMB HOSE ASSY 38" LG *914716-38 #16 DMB HOSE ASSY 38" LG 900716-21 1" UNION ADAPTER 901096-5 1" TEE</p> <p>5 FROM INLET PORT ON LARGE VOLUME VALVE TO TEE IN LINE #4 906058-15 1" CLOSE NIPPLE 903697-10 1" - 90° FEM UNION ELBOW</p> <p>6 FROM MANIFOLD RELIEF VALVE #6 TO TEE IN LINE #4 901052-5 1" - 90° ST ELBOW</p> <p>7 FROM MANIFOLD REAR PORT 1/4" UNION ADAPTER 900716-21 1" UNION ADAPTER *914516-25 #16 DMB HOSE ASSY 25" LG *914716-25 #16 DMB HOSE ASSY 25" LG 900716-41 1" UNION ADAPTER</p> <p>8 FROM LINE #25 TO PRESSURE GAUGE 900718-1 1/4" UNION ADAPTER</p> <p>9 FROM PRESSURE BEYOND PORT ON R.H. SMALL VOLUME VALVE TO INLET PORT ON L.H. SMALL VOLUME VALVE 903687-15 #4 DMB HOSE ASSY 15" LG *914704-22 #4 DMB HOSE ASSY 22" LG 903697-1 1/4" FEM UNION ADAPTER 90°</p> <p>10 FROM OUTLET PORT ON L.H. SMALL VOLUME VALVE TO THE INLET PORT ON THE FILTER 900716-21 1" UNION ADAPTER *914516-48 #12 DMB HOSE ASSY 48" LG *914716-48 #12 DMB HOSE ASSY 48" LG 903685-10 1" - 90° UNION</p> <p>11 FROM OUTLET PORT ON THE FILTER TO DRAIN PORT #17 912772-2016 1" TO 1 1/4" O-RING ADAPTER</p> <p>12 FROM THE R.H. SMALL VOLUME VALVE TO TEE IN LINE #16 903687-1612 1" - 3/4 95° UNION *914512-24 #12 DMB HOSE ASSY 24" LG *914712-24 #12 DMB HOSE ASSY 24" LG 900716-31 1" - 3/4" UNION ADAPTER</p>	<p>JOY MANUFACTURING CO.</p> <p>PLANT LOCATION AS INDICATED BELOW</p> <table border="1"> <tr> <td>SUFFALO, N. Y.</td> <td>NEW PHILADELPHIA, O.</td> </tr> <tr> <td>CLAREMONT, N. H.</td> <td></td> </tr> <tr> <td>FRANKLIN, PA.</td> <td></td> </tr> <tr> <td>GALT, ONTARIO, CANADA</td> <td></td> </tr> <tr> <td>GREENOCK, SCOTLAND</td> <td></td> </tr> <tr> <td>MICHIGAN CITY, IND.</td> <td></td> </tr> </table> <p>SIMILAR TO _____ SUPERSEDED BY _____ REPLACES _____ REPLACED BY _____</p> <p>DATE OR INITIAL & DATED _____ SCALE _____ CLASS _____</p>	SUFFALO, N. Y.	NEW PHILADELPHIA, O.	CLAREMONT, N. H.		FRANKLIN, PA.		GALT, ONTARIO, CANADA		GREENOCK, SCOTLAND		MICHIGAN CITY, IND.	
SUFFALO, N. Y.	NEW PHILADELPHIA, O.												
CLAREMONT, N. H.													
FRANKLIN, PA.													
GALT, ONTARIO, CANADA													
GREENOCK, SCOTLAND													
MICHIGAN CITY, IND.													

+ 700417-1416/1418
* 712417-1416/1418

ENG. ORDER FGT 20	REVISIONS	1787312	FC 493
DATE ISSUED 2-2-76			





(L)

K.O. FGP483
DATE 3-19-75

REVISIONS FBPG667 FBTJ12

JOY MANUFACTURING CO.		BAR SWING & BOOM SWING	
PLANT LOCATION AS INDICATED BELOW			
SWYDRA, N. Y.	NEW PHILADELPHIA, O.		
CLARSBURY, N. Y.			
FRIDLETT, PA.			
SALT SPRING, CANADA			
SHRECK, SCOTLAND			
WICHITA, KANS.			
		SIMILAR TO	ORIGIN OR INITIAL & DATE
		SUPERSEDED BY	DR. 11/11/1975
		REPLACES	TR.
		REPLACED BY	CK.
			APPD.
		SCALE: 1/2" = 1'-0" CLASS. 15, R1	
		P02501	



LOCATION - FITTINGS - HOSE ASSY.

LOCATION - FITTINGS - HOSE ASSY.

LOCATION - FITTINGS - HOSE ASSY.

26. FROM CENTER PORT IN R.H. MANIFOLD ON BOOM TO PISTON END OF L.H. BAR SWING CYLINDER
 900716-13 1/2" UNION ADAPTER
 +914508-48 #8 DMB HOSE ASSY 48" LG
 +914708-48 #8 DMB HOSE ASSY 48" LG
 900686-6 1/2"-90° UNION ELBOW ADAPTER
 FROM L.H. PORT "C" ON LARGE VOLUME VALVE TO L.H. MANIFOLD ON MOTOR CASE
 901062-4 3/4" 90° ST ELBOW
 901058-12 3/4" CLOSE NIPPLE
 901096-4 3/4" TEE
 901686-8 3/4"-90° UNION ELBOW ADAPTER
 +914512-108 #12 DMB HOSE ASSY 108" LG
 +914712-108 #12 DMB HOSE ASSY 108" LG
 900716-17 3/4" UNION ADAPTER
 FROM L.H. MANIFOLD ON MOTOR CASE TO L.H. MANIFOLD ON BOOM REAR BOTTOM PORT
 900716-17 3/4" UNION ADAPTER
 +914508-34 #8 DMB HOSE ASSY 34" LG
 +914708-34 #8 DMB HOSE ASSY 34" LG
 900716-30 1/2"-90° UNION ELBOW ADAPTER
 FROM FRONT TOP PORT IN L.H. MANIFOLD ON BOOM TO ROD END OF L.H. BAR SWING CYLINDER
 900716-13 1/2" UNION ADAPTER
 +914508-34 #8 DMB HOSE ASSY 34" LG
 +914708-34 #8 DMB HOSE ASSY 34" LG
 900716-30 1/2"-90° UNION ELBOW ADAPTER
 FROM CENTER PORT IN L.H. MANIFOLD ON BOOM TO PISTON END OF R.H. BAR SWING CYLINDER
 900716-13 1/2" UNION ADAPTER
 +914508-34 #8 DMB HOSE ASSY 34" LG
 +914708-34 #8 DMB HOSE ASSY 34" LG
 900716-30 1/2"-90° UNION ELBOW ADAPTER
 FROM R.H. PORT "J" ON R.H. SMALL VOLUME VALVE TO TEE IN LINE #35
 901176-94 1/2"-3" NIPPLE
 900687-6 1/2" 90° UNION ELBOW ADAPTER
 +914708-48 #8 DMB HOSE ASSY 48" LG
 +914708-32 #8 DMB HOSE ASSY 32" LG
 +914708-32 #8 DMB HOSE ASSY 32" LG
 900716-29 3/4"-1/2" UNION ADAPTER
 FROM L.H. PORT "J" ON R.H. SMALL VOLUME VALVE TO TEE IN LINE #39
 901176-94 1/2"-3" NIPPLE
 +914508-34 #8 DMB HOSE ASSY 34" LG
 +914508-34 #8 DMB HOSE ASSY 34" LG
 900687-128 3/4"-1/2" 45° UNION ELBOW ADAPTER

27. FROM CENTER PORT IN R.H. MANIFOLD ON BOOM TO PISTON END OF L.H. BAR SWING CYLINDER
 900716-13 1/2" UNION ADAPTER
 +914508-48 #8 DMB HOSE ASSY 48" LG
 +914708-48 #8 DMB HOSE ASSY 48" LG
 900686-6 1/2"-90° UNION ELBOW ADAPTER
 FROM L.H. PORT "C" ON LARGE VOLUME VALVE TO L.H. MANIFOLD ON MOTOR CASE
 901062-4 3/4" 90° ST ELBOW
 901058-12 3/4" CLOSE NIPPLE
 901096-4 3/4" TEE
 901686-8 3/4"-90° UNION ELBOW ADAPTER
 +914512-108 #12 DMB HOSE ASSY 108" LG
 +914712-108 #12 DMB HOSE ASSY 108" LG
 900716-17 3/4" UNION ADAPTER
 FROM L.H. MANIFOLD ON MOTOR CASE TO L.H. MANIFOLD ON BOOM REAR BOTTOM PORT
 900716-17 3/4" UNION ADAPTER
 +914508-34 #8 DMB HOSE ASSY 34" LG
 +914708-34 #8 DMB HOSE ASSY 34" LG
 900716-30 1/2"-90° UNION ELBOW ADAPTER
 FROM FRONT TOP PORT IN L.H. MANIFOLD ON BOOM TO ROD END OF L.H. BAR SWING CYLINDER
 900716-13 1/2" UNION ADAPTER
 +914508-34 #8 DMB HOSE ASSY 34" LG
 +914708-34 #8 DMB HOSE ASSY 34" LG
 900716-30 1/2"-90° UNION ELBOW ADAPTER
 FROM CENTER PORT IN L.H. MANIFOLD ON BOOM TO PISTON END OF R.H. BAR SWING CYLINDER
 900716-13 1/2" UNION ADAPTER
 +914508-34 #8 DMB HOSE ASSY 34" LG
 +914708-34 #8 DMB HOSE ASSY 34" LG
 900716-30 1/2"-90° UNION ELBOW ADAPTER
 FROM R.H. PORT "J" ON R.H. SMALL VOLUME VALVE TO TEE IN LINE #35
 901176-94 1/2"-3" NIPPLE
 900687-6 1/2" 90° UNION ELBOW ADAPTER
 +914708-48 #8 DMB HOSE ASSY 48" LG
 +914708-32 #8 DMB HOSE ASSY 32" LG
 +914708-32 #8 DMB HOSE ASSY 32" LG
 900716-29 3/4"-1/2" UNION ADAPTER
 FROM L.H. PORT "J" ON R.H. SMALL VOLUME VALVE TO TEE IN LINE #39
 901176-94 1/2"-3" NIPPLE
 +914508-34 #8 DMB HOSE ASSY 34" LG
 +914508-34 #8 DMB HOSE ASSY 34" LG
 900687-128 3/4"-1/2" 45° UNION ELBOW ADAPTER

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28. FROM R.H. ROOM SWING CYLINDER PISTON ROD END PORT TO TEE IN LINE #29
 901686-6 1/2"-45° UNION ELBOW ADAPTER
 +914508-32 #8 DMB HOSE ASSY 32" LG
 +914708-32 #8 DMB HOSE ASSY 32" LG
 901687-128 3/4"-1/2" 45° UNION ELBOW ADAPTER
 FROM R.H. PORT "K" ON R.H. SMALL VOLUME VALVE TO TEE IN LINE #27
 901686-6 1/2" 90° UNION ADAPTER
 +914508-22 #8 DMB HOSE ASSY 22" LG
 +914708-22 #8 DMB HOSE ASSY 22" LG
 901121-12 3/4" CROSS
 900558-12 3/4" BUSHING
 FROM SWING FROM L.H. PORT "B" ON LARGE VOLUME VALVE TO PISTON END PORT ON R.H. ROOM SWING CYLINDER
 900558-12 3/4" CLOSE NIPPLE
 901058-12 3/4" 45° ST ELBOW
 901096-4 3/4" TEE
 901687-128 3/4"-1/2" 45° UNION ELBOW ADAPTER
 +914508-60 #8 DMB HOSE ASSY 60" LG
 +914708-60 #8 DMB HOSE ASSY 60" LG
 901686-6 1/2"-90° UNION ELBOW ADAPTER
 FROM PISTON ROD END PORT OF L.H. BOOM SWING CYLINDER TO TEE IN LINE #30
 900686-6 1/2" 90° UNION ADAPTER
 +914708-30 #8 DMB HOSE ASSY 30" LG
 +90686-7 #8 DMB HOSE ASSY 30" LG
 901121-12 3/4" CROSS
 900558-12 3/4" BUSHING
 FROM RELIEF VALVE MANIFOLD PORT #2 TO CROSS IN LINE #12
 90165-1617 BUSHING 1-3/4" ST ELBOW
 901058-12 3/4" CLOSE NIPPLE
 901096-4 3/4" TEE
 900686-11 3/4" CLOSE NIPPLE
 900716-17 3/4" CHECK VALVE
 +914512-72 #12 DMB HOSE ASSY 72" LG
 +914712-72 #12 DMB HOSE ASSY 72" LG
 901687-4 3/4"-45° UNION ELBOW ADAPTER
 FROM CROSS IN LINE #29 TO TEE IN LINE #33
 900687-4 3/4"-45° UNION ELBOW ADAPTER
 +914512-54 #12 DMB HOSE ASSY 54" LG
 +914712-54 #12 DMB HOSE ASSY 54" LG
 900716-17 3/4" UNION ADAPTER
 +914712-96 #12 DMB HOSE ASSY 96" LG
 900686-11 3/4" CHECK VALVE
 901052-4 3/4" ST ELBOW
 FROM SWING FROM R.H. PORT "C" ON LARGE VOLUME VALVE TO R.H. MANIFOLD ON MOTOR CASE
 901052-4 3/4" ST ELBOW
 900558-12 3/4" CLOSE NIPPLE
 901096-4 3/4" TEE
 901686-8 3/4"-90° UNION ELBOW ADAPTER
 +914512-96 #12 DMB HOSE ASSY 96" LG
 +914712-96 #12 DMB HOSE ASSY 96" LG
 900716-17 3/4" UNION ADAPTER
 FROM R.H. MANIFOLD ON MOTOR CASE TO R.H. MANIFOLD ON BOOM REAR BOTTOM PORT
 900716-17 3/4" UNION ADAPTER
 +914512-72 #12 DMB HOSE ASSY 72" LG
 +914712-72 #12 DMB HOSE ASSY 72" LG
 900716-30 1/2"-3/4" UNION ADAPTER
 FROM TOP FRONT PORT IN R.H. MANIFOLD ON CYLINDER TO ROD END PORT ON R.H. BAR SWING CYLINDER
 900716-17 1/2" UNION ADAPTER
 +914508-14 #8 DMB HOSE ASSY 34" LG
 +914708-14 #8 DMB HOSE ASSY 34" LG
 901686-6 1/2"-90° UNION ADAPTER

29. FROM R.H. PORT "K" ON R.H. SMALL VOLUME VALVE TO TEE IN LINE #27
 901686-6 1/2" 90° UNION ADAPTER
 +914508-22 #8 DMB HOSE ASSY 22" LG
 +914708-22 #8 DMB HOSE ASSY 22" LG
 901121-12 3/4" CROSS
 900558-12 3/4" BUSHING
 FROM SWING FROM L.H. PORT "B" ON LARGE VOLUME VALVE TO PISTON END PORT ON R.H. ROOM SWING CYLINDER
 900558-12 3/4" CLOSE NIPPLE
 901058-12 3/4" 45° ST ELBOW
 901096-4 3/4" TEE
 901687-128 3/4"-1/2" 45° UNION ELBOW ADAPTER
 +914508-60 #8 DMB HOSE ASSY 60" LG
 +914708-60 #8 DMB HOSE ASSY 60" LG
 901686-6 1/2"-90° UNION ELBOW ADAPTER
 FROM PISTON ROD END PORT OF L.H. BOOM SWING CYLINDER TO TEE IN LINE #30
 900686-6 1/2" 90° UNION ADAPTER
 +914708-30 #8 DMB HOSE ASSY 30" LG
 +90686-7 #8 DMB HOSE ASSY 30" LG
 901121-12 3/4" CROSS
 900558-12 3/4" BUSHING
 FROM RELIEF VALVE MANIFOLD PORT #2 TO CROSS IN LINE #12
 90165-1617 BUSHING 1-3/4" ST ELBOW
 901058-12 3/4" CLOSE NIPPLE
 901096-4 3/4" TEE
 900686-11 3/4" CLOSE NIPPLE
 900716-17 3/4" CHECK VALVE
 +914512-72 #12 DMB HOSE ASSY 72" LG
 +914712-72 #12 DMB HOSE ASSY 72" LG
 901687-4 3/4"-45° UNION ELBOW ADAPTER
 FROM CROSS IN LINE #29 TO TEE IN LINE #33
 900687-4 3/4"-45° UNION ELBOW ADAPTER
 +914512-54 #12 DMB HOSE ASSY 54" LG
 +914712-54 #12 DMB HOSE ASSY 54" LG
 900716-17 3/4" UNION ADAPTER
 +914712-96 #12 DMB HOSE ASSY 96" LG
 900686-11 3/4" CHECK VALVE
 901052-4 3/4" ST ELBOW
 FROM SWING FROM R.H. PORT "C" ON LARGE VOLUME VALVE TO R.H. MANIFOLD ON MOTOR CASE
 901052-4 3/4" ST ELBOW
 900558-12 3/4" CLOSE NIPPLE
 901096-4 3/4" TEE
 901686-8 3/4"-90° UNION ELBOW ADAPTER
 +914512-96 #12 DMB HOSE ASSY 96" LG
 +914712-96 #12 DMB HOSE ASSY 96" LG
 900716-17 3/4" UNION ADAPTER
 FROM R.H. MANIFOLD ON MOTOR CASE TO R.H. MANIFOLD ON BOOM REAR BOTTOM PORT
 900716-17 3/4" UNION ADAPTER
 +914512-72 #12 DMB HOSE ASSY 72" LG
 +914712-72 #12 DMB HOSE ASSY 72" LG
 900716-30 1/2"-3/4" UNION ADAPTER
 FROM TOP FRONT PORT IN R.H. MANIFOLD ON CYLINDER TO ROD END PORT ON R.H. BAR SWING CYLINDER
 900716-17 1/2" UNION ADAPTER
 +914508-14 #8 DMB HOSE ASSY 34" LG
 +914708-14 #8 DMB HOSE ASSY 34" LG
 901686-6 1/2"-90° UNION ADAPTER

JOY MANUFACTURING CO.
 PLANT LOCATION AS INDICATED BELOW
 BUFFALO, N. Y. NEW BRUNSWICK, N. J.
 CLAMBERT, N. H. FRANKLIN, PA.
 GALT, ONTARIO, CANADA
 BIRMINGHAM, SCOTLAND
 MICHIGAN CITY, IND.

BAR SWING & BOOM SWING

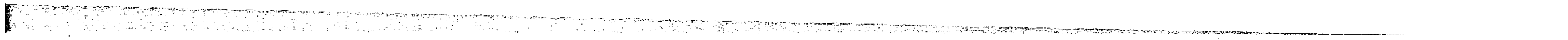
DESIGNED BY: _____
 SUPERVISOR: _____
 CHECKED BY: _____
 REPLACED BY: _____

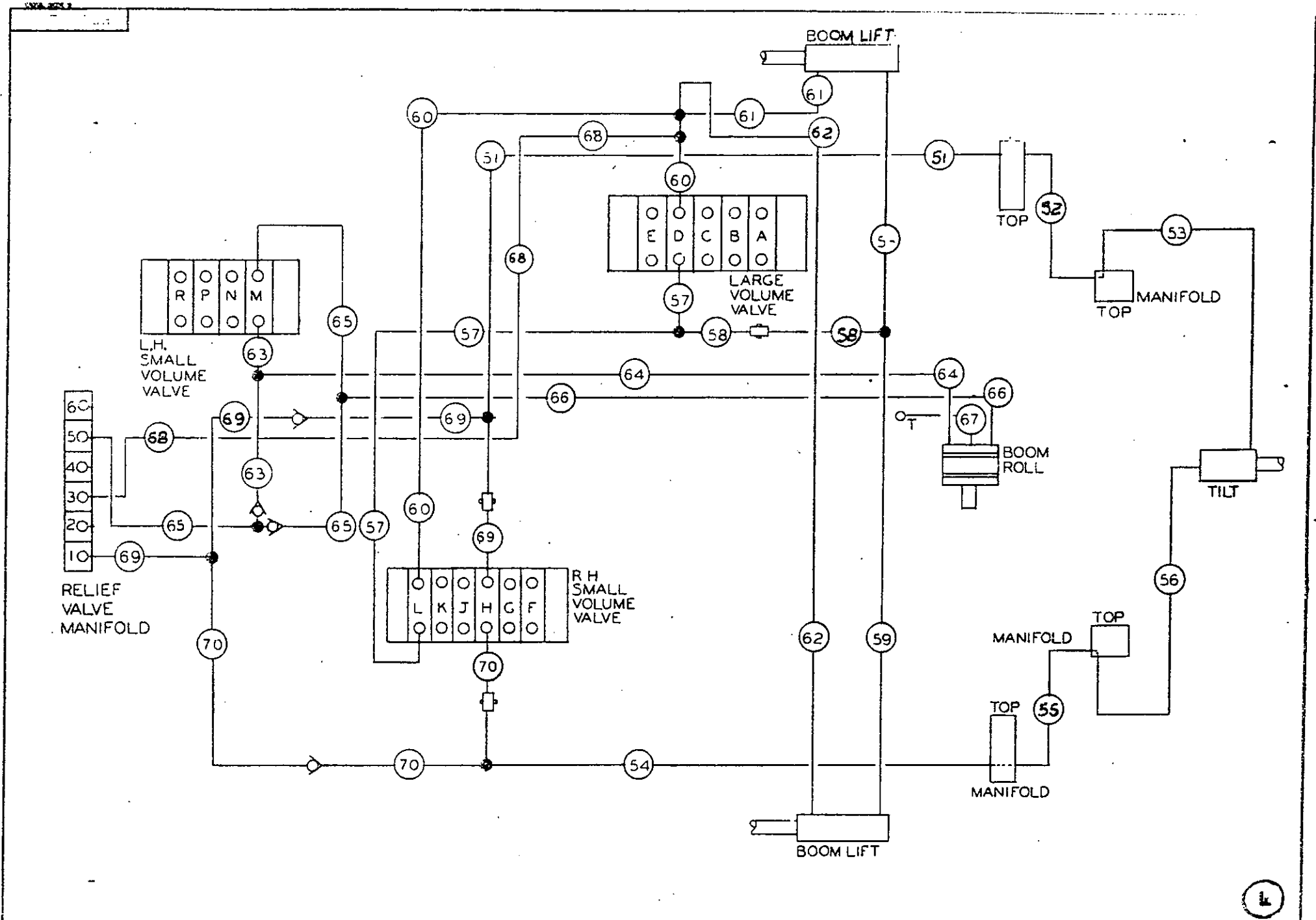
DATE: _____
 REVISIONS: _____

PD2501-2

DATE ORDERED: FBPS 73
 DATE SHIPPED: 2-7-73
 REVISIONS: FBP 667 FBT 272 FBT 312 FBT 472

+ 700417 -1369/1371
 * 712417 -1369/1371

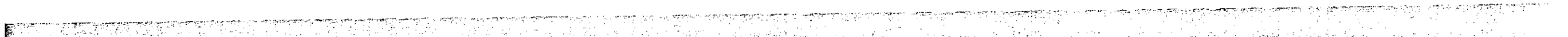




2.6 F6P493
 DATE 2-75 REVISIONS FBP 1067 FBT 312

JOY MANUFACTURING CO. PLANT LOCATION AS INDICATED BELOW		BAR TILT- BOOM LIFT & ROLL	
DETALD, S. F. CLARKSBURG, W. V.	NEW PHILADELPHIA, O.	SIMILAR TO: _____ SUPERSEDED BY: _____ REPLACED BY: _____	SCALE: 1/2" = 1'-0" DRAWN BY: _____ CHECKED BY: _____ APPROVED BY: _____
PENNSYLVANIA, PA. SALT SPRING, CANADA WEDDING, SCOTLAND WILSON, CITY, MD.			PD2502

1



REV. ORDER NO. 19-70
DATE REVISED 1-19-70

REVISIONS FBPG67 FBT312

+ 700417-1368/1370
* 712417-1368/1370

JOY MANUFACTURING CO.
PLANT LOCATION AS INDICATED BELOW

BUFFALO, N. Y.	NEW PHILADELPHIA, D.
CLAREMONT, N. H.	
FRANKLIN, PA.	
SALT, ONTARIO, CANADA	
WEDDICK, SCOTLAND	
RICHMOND CITY, MD.	

BAR TILT-BOOM LIFT & ROLL MALE

SIMILAR TO	DATE OF INITIAL & DATE	SCALE: 1/4" = 1'-0"
SUPERSEDED BY	ORL	
SUPERSEDED BY	TR	
REPLACES	OF	
REPLACES	APPO	

PD2502-2

LOCATION - FITTINGS - HOSE ASSY.

SEQUENCE OF HYD. PIPING FOR 15RU BAR TILT-BOOM LIFT-BOOM ROLL CIRCUIT

- *ALCOQUIP-DWG-CRIMPED MALE PIPE
- *ALCOQUIP-DWG-REUSABLE MALE PIPE
- 51 FROM TEE IN LINE #89 TO BOTTOM PORT IN L.H. MANIFOLD ON MOTOR CASE
 - 1/2 UNION
 - #8 DMB HOSE 110" LG
 - #8 DMB HOSE 110" LG
 - 1/2 UNION
- 52 FROM BOTTOM PORT IN L.H. MANIFOLD ON MOTOR CASE TO BOTTOM PORT IN L.H. MANIFOLD ON BOOM
 - 1/2 UNION ADAPTER
 - #8 DMB HOSE ASSY 84" LG
 - #8 DMB HOSE ASSY 84" LG
 - 1/2 UNION ADAPTER
- 53 FROM FRONT BOTTOM PORT IN BOTTOM OF L.H. MANIFOLD ON BOOM TO ROD END OF TILT CYL.
 - 1/2 UNION ADAPTER
 - #8 DMB HOSE ASSY 32" LG
 - #8 DMB HOSE ASSY 32" LG
 - 1/2 UNION ADAPTER
- 54 FROM TEE IN LINE #70 TO BOTTOM PORT IN R.H. MANIFOLD ON MOTOR CASE
 - 1/2 UNION
 - #8 DMB HOSE 110" LG
 - #8 DMB HOSE 110" LG
 - 1/2 UNION
- 55 FROM BOTTOM PORT IN R.H. MANIFOLD ON MOTOR CASE TO BOTTOM PORT IN R.H. MANIFOLD ON BOOM
 - 1/2 UNION ADAPTER
 - #8 DMB HOSE ASSY 72" LG
 - #8 DMB HOSE ASSY 72" LG
 - 1/2 UNION ADAPTER
- 56 FROM FRONT BOTTOM PORT IN BOTTOM OF R.H. MANIFOLD ON BOOM TO PISTON END OF TILT CYL.
 - 1/2 UNION ADAPTER
 - #8 DMB HOSE ASSY 32" LG
 - #8 DMB HOSE ASSY 32" LG
 - 1/2 UNION ADAPTER
- 57 FROM F.H. PORT "L" ON R.H. SMALL VOLUME VALVE TO R.H. PORT "D" ON LARGE VOLUME VALVE
 - 1/2 CLOSE NIPPLE
 - 1/2-50" FEM ELBOW ADAPTER
 - #8 DMB HOSE ASSY 36" LG
 - #8 DMB HOSE ASSY 36" LG
 - 1/2 UNION ELBOW ADAPTER
- 58 FROM PISTON END PORT OF L.H. BOOM LIFT CYLINDER TO TEE IN LINE #57
 - 1/2-45" UNION ELBOW ADAPT
 - #8 DMB HOSE ASSY 60" LG
 - #8 DMB HOSE ASSY 60" LG
 - 1/2 UNION ADAPTER
 - 1/2 CROSS
 - 1/2-90" UNION ADAPTER
 - 1/2 CLOSE NIPPLE
 - 1/2 CHECK AND NEEDLE VALVE
 - 1/2-3/4" UNION ELBOW
- 59 FROM PISTON END PORT OF R.H. BOOM LIFT CYLINDER TO TEE IN LINE #58
 - 1/2-45" UNION ELBOW ADAPT
 - #8 DMB HOSE ASSY 66" LG
 - #8 DMB HOSE ASSY 66" LG
 - 1/2-90" UNION ELBOW
- 60 FROM L.H. PORT "L" ON R.H. SMALL VOLUME VALVE TO L.H. PORT "D" ON LARGE VOLUME VALVE
 - 1/2-3" NIPPLE
 - 1/2-90" FEM ELBOW ADAPTER
 - #8 DMB HOSE ASSY 36" LG
 - #8 DMB HOSE ASSY 36" LG
 - 1/2 UNION ADAPTER
 - 1/2-90" UNION ADAPTER
 - 1/2 CLOSE NIPPLE
 - 1/2-3" TEE
 - 1/2-3" UNION ELBOW
 - 1/2-3" NIPPLE
- 61 FROM ROD END PORT ON L.H. BOOM LIFT CYL. TO CROSS IN LINE #60
 - 1/2-45" UNION ELBOW ADAPT
 - #8 DMB HOSE ASSY 84" LG
 - #8 DMB HOSE ASSY 84" LG
 - 1/2-1/2" ADAPTER

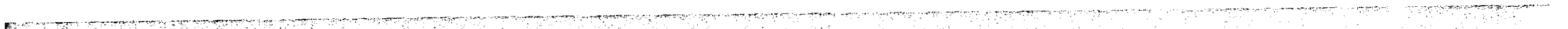
LOCATION - FITTINGS - HOSE ASSY.

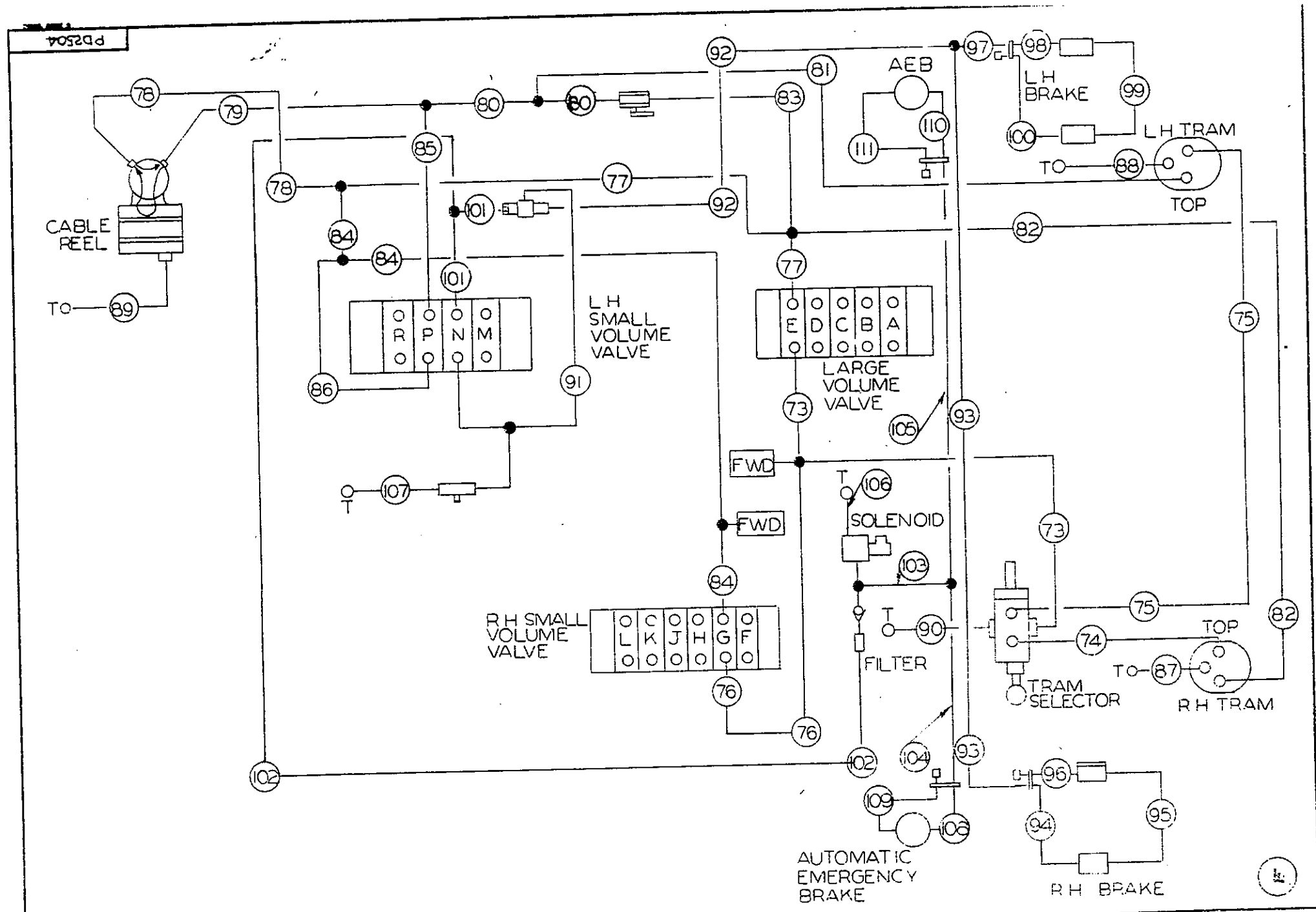
- 62 FROM ROD END PORT IN R.H. BOOM LIFT CYL. TO CROSS IN LINE #60
 - 1/2-45" UNION ELBOW ADAPTER
 - #8 DMB HOSE ASSY 120" LG
 - #8 DMB HOSE ASSY 120" LG
 - 1/2-90" UNION ELBOW ADAPT
- 63 FROM R.H. PORT "M" ON L.H. SMALL VOLUME VALVE TO TEE IN LINE #65
 - 1/2-90" MALE ADAPTER UNION
 - #8 DMB HOSE ASSY 34" LG
 - #8 DMB HOSE ASSY 34" LG
 - 1/2-90" MALE ADAPTER UNION
 - 1/2 TEE
 - 1/2-90" MALE ADAPTER UNION
 - 1/2 CLOSE NIPPLE
 - 1/2 CHECK VALVE
 - 1/2-90" STREET ELBOW
- 64 FROM FRONT PORT IN BOOM ROLL MOTOR TO TEE IN LINE #63
 - BUSHING 1-1/2
 - 1/2-45" UNION ELBOW ADAPTER
 - #8 DMB HOSE ASSY 114" LG
 - #8 DMB HOSE ASSY 114" LG
 - 1/2 UNION ADAPTER
- 65 FROM L.H. PORT "M" ON L.H. SMALL VOLUME VALVE TO RELIEF VALVE #5
 - 1/2-90" UNION ELBOW ADAPTER
 - #8 DMB HOSE ASSY 44" LG
 - #8 DMB HOSE ASSY 44" LG
 - 1/2 UNION ADAPTER
 - 1/2 TEE
 - 1/2 CLOSE NIPPLE
 - 1/2 CHECK VALVE
 - 1/2-90" STREET ELBOW
 - 1/2-90" STREET ELBOW
 - 1-1/2 BUSHING
- 66 FROM REAR PORT IN BOOM ROLL MOTOR TO TEE IN LINE #65
 - BUSHING (1-1/2)
 - 1/2-45" UNION ELBOW ADAPTER
 - #8 DMB HOSE ASSY 114" LG
 - #8 DMB HOSE ASSY 114" LG
 - 1/2 UNION ADAPTER
- 67 FROM BOTTOM PORT ON BOOM ROLL MOTOR TO DRAIN PORT #1 TO TANK
 - 1/2-45" UNION ELBOW ADAPTER
 - #8 DMB HOSE ASSY 44" LG
 - #8 DMB HOSE ASSY 44" LG
 - 1/2-45" UNION ELBOW ADAPT
- 68 FROM TEE IN LINE #60 TO RELIEF VALVE #3
 - 1/2-90" UNION ELBOW ADAPTER
 - #12 DMB HOSE ASSY 72" LG
 - #12 DMB HOSE ASSY 72" LG
 - 1/2-90" FEM UNION ADAPTER
 - 1/2-3/4" CLOSE NIPPLE
 - 1-3/4" BUSHING
- 69 FROM L.H. PORT "M" ON R.H. SMALL VOLUME VALVE TO RELIEF VALVE #4
 - 1/2-90" MALE ADAPTER UNION
 - #8 DMB HOSE ASSY 36" LG
 - #8 DMB HOSE ASSY 36" LG
 - 1/2-90" MALE ADAPTER UNION
 - 1/2 CHECK & NEEDLE VALVE
 - 1/2 CLOSE NIPPLE
 - 1/2 TEE
 - 1/2 CLOSE NIPPLE
 - 1/2 CHECK VALVE
 - 1/2 CLOSE NIPPLE
 - 1/2 CLOSE NIPPLE
 - 1/2-90" ST ELBOW
 - 1-1/2 BUSHING
- 70 FROM R.H. PORT "M" ON R.H. SMALL VOLUME VALVE TO TEE IN LINE #69
 - 1/2-90" MALE ADAPTER UNION
 - #8 DMB HOSE ASSY 36" LG
 - #8 DMB HOSE ASSY 36" LG
 - 1/2-90" MALE ADAPTER UNION
 - 1/2 CHECK & NEEDLE VALVE
 - 1/2 CLOSE NIPPLE
 - 1/2 TEE
 - 1/2 CLOSE NIPPLE
 - 1/2 CHECK VALVE
 - 1/2 CLOSE NIPPLE
 - 1/2-90" ST ELBOW
 - 1-1/2 BUSHING

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LOCATION - FITTINGS - HOSE ASSY.

PD2502-2





E.O. 72493
 DATE 5-13-73
 REVISIONS FBP667/FBT414

JOY MANUFACTURING CO.
 PLANT LOCATION AS INDICATED BELOW

BUFFALO, N. Y.	NEW PHILADELPHIA, O.
CLARKSBURG, N. C.	
FRENCHBURG, PA.	
SALT SPRING, CANADA	
GREENOCK, SCOTLAND	
MICHIGAN CITY, IND.	

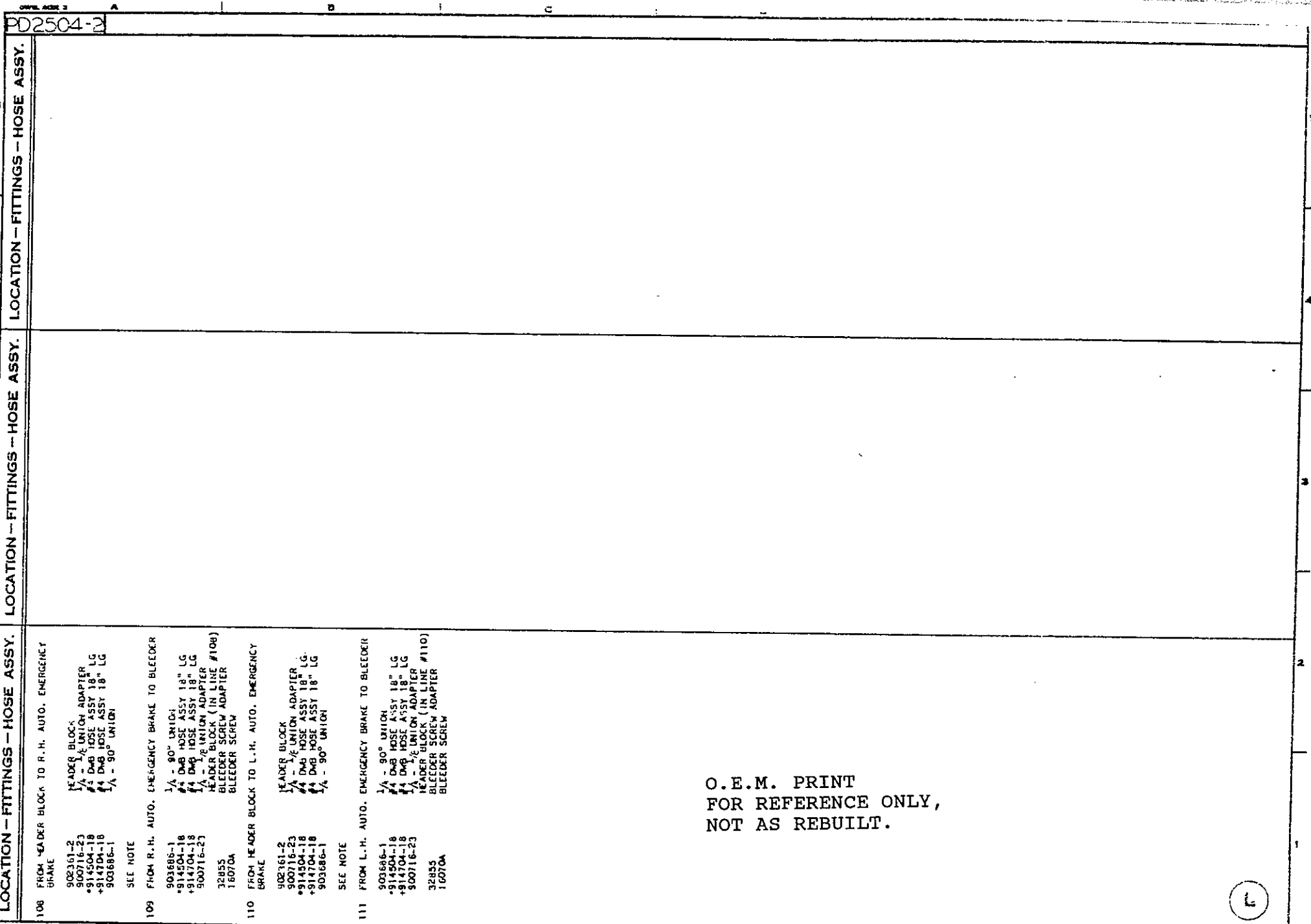
TRAM REEL & BRAKE

SIMILAR TO	DATE OF ORIGINAL DATE	SCALE	CLASS
SUPPERSEDED BY	TR		
REPLACES	CH		
REPLACED BY	APPD		

P02504







108 FROM HEADER BLOCK TO R.H. AUTO. EMERGENCY BRAKE	
902361-2	HEADER BLOCK
900716-23	1/4 - 1/2 UNION ADAPTER
+914504-18	#4 DMB HOSE ASSY 18" LG
+914704-18	#4 DMB HOSE ASSY 18" LG
903686-1	1/4 - 90° UNION
SEE NOTE	
109 FROM R.H. AUTO. EMERGENCY BRAKE TO BLEEDER	
903686-1	1/4 - 90° UNION
+914504-18	#4 DMB HOSE ASSY 18" LG
+914704-18	#4 DMB HOSE ASSY 18" LG
900716-23	1/4 - 1/2 UNION ADAPTER
32855	HEADER BLOCK (IN LINE #108)
16070A	BLEEDER SCREW ADAPTER
110 FROM HEADER BLOCK TO L.H. AUTO. EMERGENCY BRAKE	
902361-2	HEADER BLOCK
900716-23	1/4 - 1/2 UNION ADAPTER
+914504-18	#4 DMB HOSE ASSY 18" LG
+914704-18	#4 DMB HOSE ASSY 18" LG
903686-1	1/4 - 90° UNION
SEE NOTE	
111 FROM L.H. AUTO. EMERGENCY BRAKE TO BLEEDER	
903686-1	1/4 - 90° UNION
+914504-18	#4 DMB HOSE ASSY 18" LG
+914704-18	#4 DMB HOSE ASSY 18" LG
900716-23	1/4 - 1/2 UNION ADAPTER
32855	HEADER BLOCK (IN LINE #110)
16070A	BLEEDER SCREW ADAPTER

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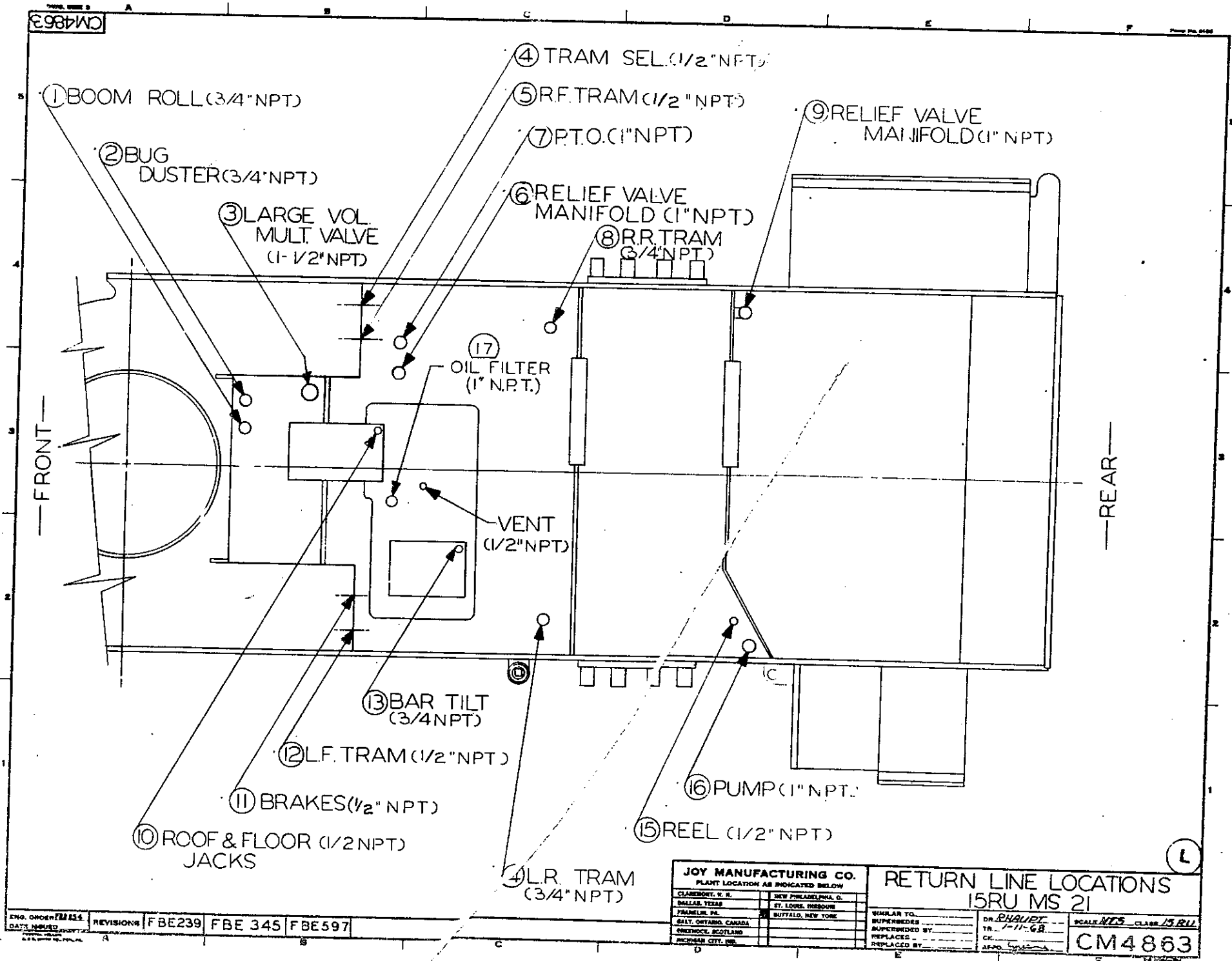
(L)

FORM OVERSHEET #1A	REVISIONS
DATE ORDERED 7-11-77	

JOY MANUFACTURING CO.	
PLANT LOCATION AS INDICATED BELOW	
BUFFALO, N. Y.	<input type="checkbox"/> NEW PHILADELPHIA, O.
CLARKSON, N. Y.	<input type="checkbox"/>
FRANKLIN, PA.	<input checked="" type="checkbox"/>
SALT CREEK, OHIO	<input type="checkbox"/>
GENESEE, SCOTLAND	<input type="checkbox"/>
MACHIAS CITY, W.V.	<input type="checkbox"/>

TRAM-REEL & BRAKE WITH AEB SH. 2 OF 2	
SIMILAR TO	DATE OF INITIAL & DATE
SUPERSEDED BY	DR. _____
REPLACED BY	TR. _____
REPLACED BY	CR. _____
REPLACED BY	APPRO. _____
SCALE 1" = 4" CLASS S.R.V.	
PD2504-2	



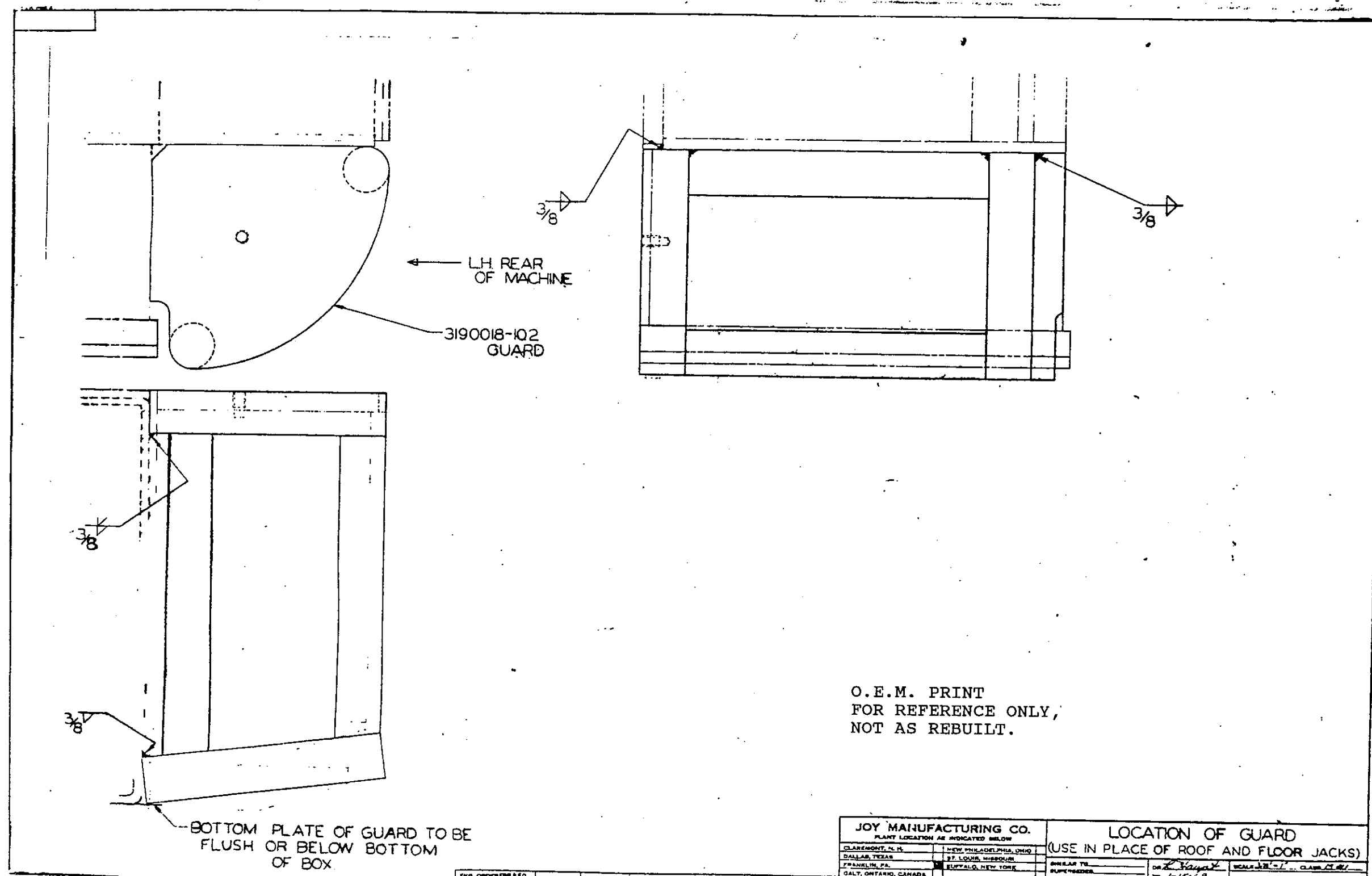


ENG. ORDER NO. 441	REVISIONS	FBE239	FBE 345	FBE597
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JOY MANUFACTURING CO.	
PLANT LOCATION AS INDICATED BELOW	
CLARKSON, N. H.	NEW PHILADELPHIA, O.
DALLAS, TEXAS	ST. LOUIS, MISSOURI
FARMERS, PA.	BUFFALO, NEW YORK
SALT, ONTARIO, CANADA	
GREENOCK, SCOTLAND	
PICHINAH CITY, ECU.	

RETURN LINE LOCATIONS		15RU MS 21	
SIMILAR TO	DR. <i>BAHNET</i>	SCALE <i>NES</i>	CLASS <i>15RU</i>
SUPERSEDED BY	TR. <i>1-11-68</i>		
REPLACED BY	CR.		
REPLACED BY	APPRO. <i>[Signature]</i>		
		CM4863	





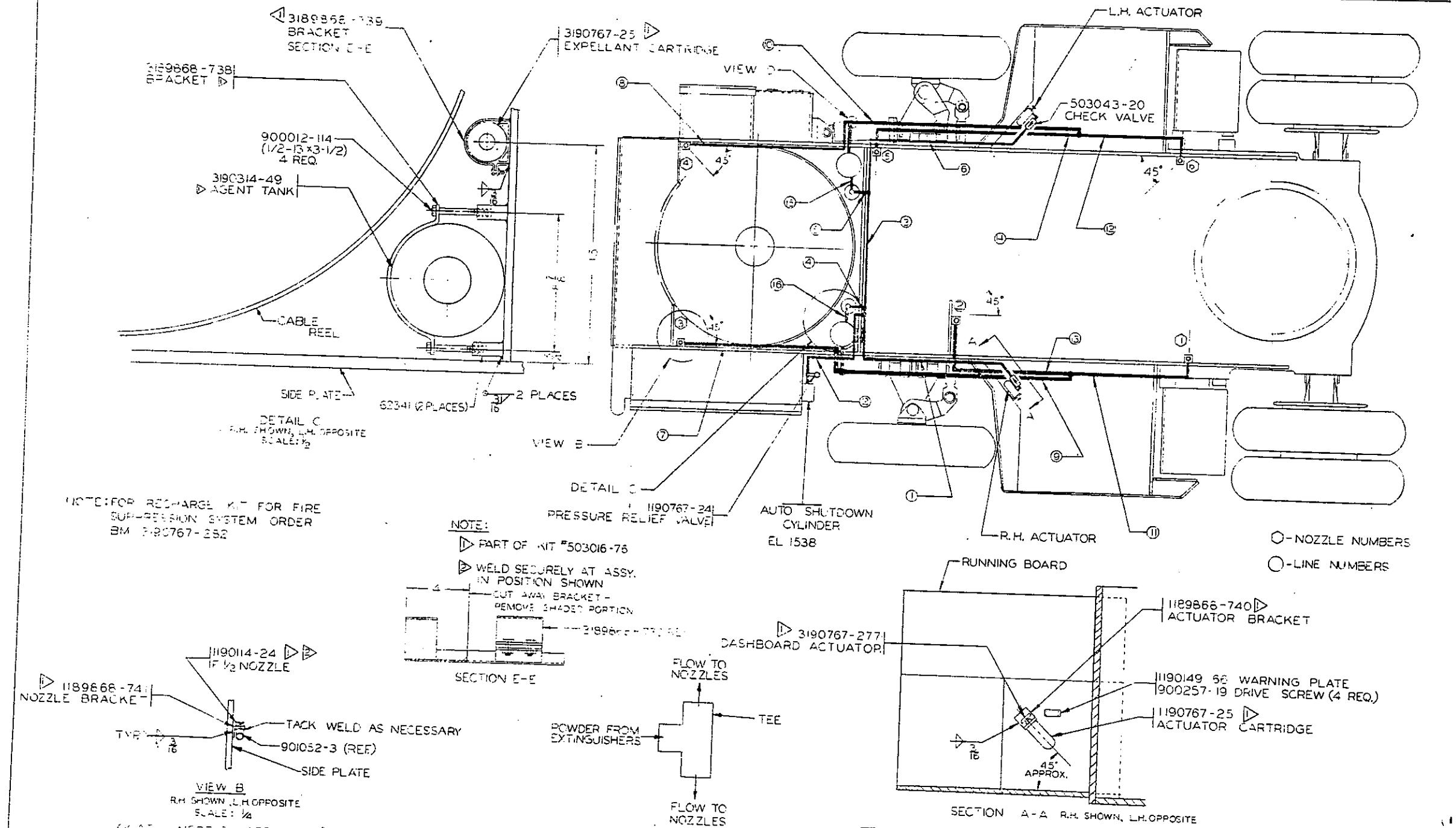
O.E.M. PRINT
FOR REFERENCE ONLY,
NOT AS REBUILT.

JOY MANUFACTURING CO. PLANT LOCATION AS INDICATED BELOW		LOCATION OF GUARD (USE IN PLACE OF ROOF AND FLOOR JACKS)	
CLAREMONT, N.J.	NEW PHILADELPHIA, OHIO	DESIGNED BY	DR. <i>L. V. ...</i>
DALLAS, TEXAS	ST. LOUIS, MISSOURI	SUPERSEDED BY	TR. <i>L. V. ...</i>
FRANKLIN, PA.	ELFTALD, NEW YORK	REPLACES	CM 4861
GALT, ONTARIO, CANADA		REPLACED BY	
GREENOCK, SCOTLAND		APPROVED	
MICHIGAN CITY, IND.			

ENG. ORDER FILED, DATE ISSUED, REVISIONS FB# 222



PD 2627



This drawing and all information therein is the property of the JOY MANUFACTURING CO. and confidential use need not be made outside of room. It is loaned subject to return upon demand, and not to be used directly or indirectly in any way detrimental to our interest.

JOY MANUFACTURING CO.		FIRE SUPPRESSION SYSTEM (15R)	
PLANT LOCATION AS INDICATED BELOW			
BUFFALO, NEW YORK	NEW PHILADELPHIA, OHIO	DESIGNED BY	DATE
CLAYTON, N. H.	FRANKLIN, PA.	SUPPLEMENTED BY	TR.
GALT, ONTARIO, CANADA	GREENOCK, SCOTLAND	REPLACES	CC.
MICHIGAN CITY, IND.		REPLACES BY	APPROV.

PD 262

LIST OF PARTS AS CALLED FOR ON

B/M'S 701554-41/-42/-1041/-1042

2	503043-20	CHECK VALVE
1	503016-76	FIRE SUPPRESSION KIT
4	3189868-738	BRACKET
3	3189868-739	BRACKET
3	3190314-49	AGENT TANK
3	3190767-25	EXPPELLANT CARTRIDGE
3	3190767-277	DASHBOARD ACTUATOR
3	1189868-740	ACTUATOR BRACKET
3	1189868-741	NOZZLE BRACKET
3	1190114-24	NOZZLE
3	1190767-24	PRESSURE RELIEF VALVE
3	1190767-25	ACTUATOR CARTRIDGE
4	62341	BOSS
2	1190149-66	WARNING PLATE
4	900012-114	1/2"-13 X 3-1/2" CAP SCREW
8	900257-19	#8 X 3/8" DRIVE SCREW

PART SHOWN FOR REFERENCE ONLY:

901052-3 ELBOW

REVISION/ FCC641

REF. DWG. - PD2627

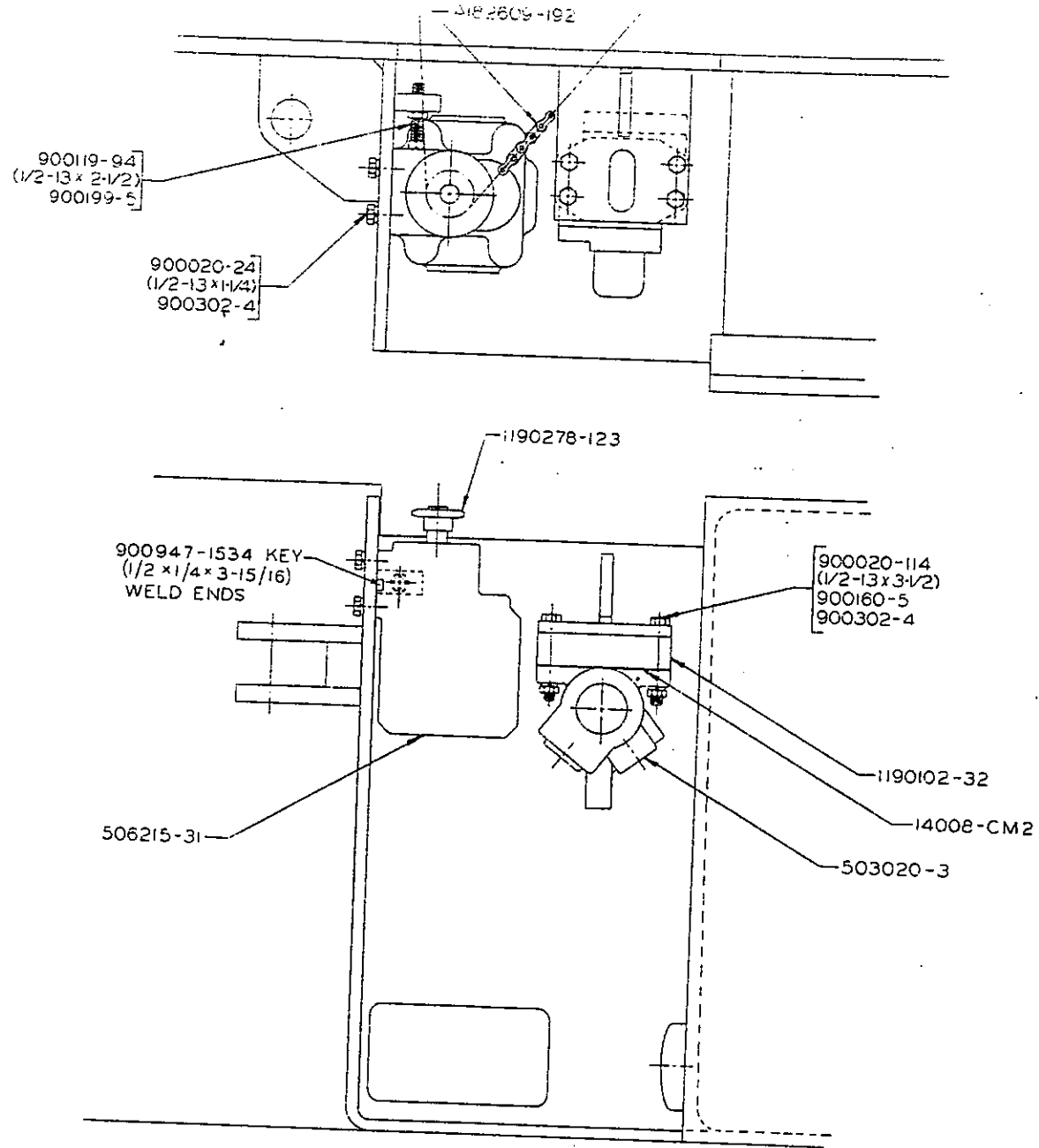
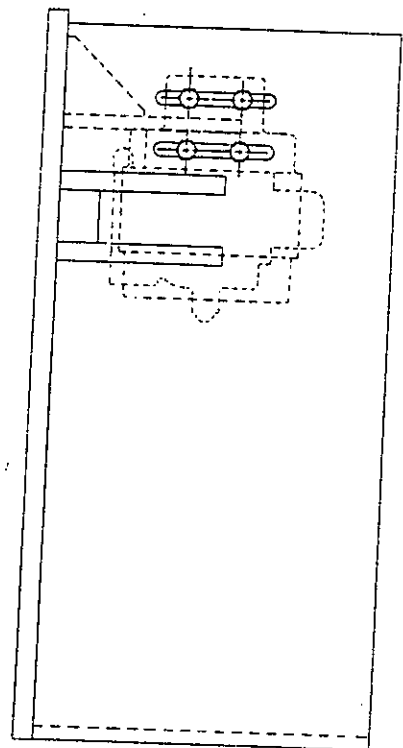
LOCATION - FITTINGS - HOSE ASSY.	LOCATION - FITTINGS - HOSE ASSY.	LOCATION - FITTINGS - HOSE ASSY.
<p>SEQUENCE OF PIPING FOR FIRE SUPPRESSION SYSTEM - 15RU</p> <p>*AERO DMB CRIMPED MALE *AERO DMB REUSABLE MALE</p> <p>1 FROM R.H. ACTUATOR TO TEE</p> <p>503043-20 1/4" CHECK VALVE 103037-20 1/4" DMB HOSE ASSY 52" LG *914504-20 #4 DMB HOSE ASSY 52" LG *914504-22 #4 DMB HOSE ASSY 52" LG *914504-23 #4 DMB HOSE ASSY 52" LG *914504-24 #4 DMB HOSE ASSY 52" LG *914504-25 #4 DMB HOSE ASSY 52" LG *914504-26 #4 DMB HOSE ASSY 52" LG *914504-27 #4 DMB HOSE ASSY 52" LG *914504-28 #4 DMB HOSE ASSY 52" LG *914504-29 #4 DMB HOSE ASSY 52" LG *914504-30 #4 DMB HOSE ASSY 52" LG *914504-31 #4 DMB HOSE ASSY 52" LG *914504-32 #4 DMB HOSE ASSY 52" LG *914504-33 #4 DMB HOSE ASSY 52" LG *914504-34 #4 DMB HOSE ASSY 52" LG *914504-35 #4 DMB HOSE ASSY 52" LG *914504-36 #4 DMB HOSE ASSY 52" LG *914504-37 #4 DMB HOSE ASSY 52" LG *914504-38 #4 DMB HOSE ASSY 52" LG *914504-39 #4 DMB HOSE ASSY 52" LG *914504-40 #4 DMB HOSE ASSY 52" LG *914504-41 #4 DMB HOSE ASSY 52" LG *914504-42 #4 DMB HOSE ASSY 52" LG *914504-43 #4 DMB HOSE ASSY 52" LG *914504-44 #4 DMB HOSE ASSY 52" LG *914504-45 #4 DMB HOSE ASSY 52" LG *914504-46 #4 DMB HOSE ASSY 52" LG *914504-47 #4 DMB HOSE ASSY 52" LG *914504-48 #4 DMB HOSE ASSY 52" LG *914504-49 #4 DMB HOSE ASSY 52" LG *914504-50 #4 DMB HOSE ASSY 52" LG *914504-51 #4 DMB HOSE ASSY 52" LG *914504-52 #4 DMB HOSE ASSY 52" LG *914504-53 #4 DMB HOSE ASSY 52" LG *914504-54 #4 DMB HOSE ASSY 52" LG *914504-55 #4 DMB HOSE ASSY 52" LG *914504-56 #4 DMB HOSE ASSY 52" LG *914504-57 #4 DMB HOSE ASSY 52" LG *914504-58 #4 DMB HOSE ASSY 52" LG *914504-59 #4 DMB HOSE ASSY 52" LG *914504-60 #4 DMB HOSE ASSY 52" LG *914504-61 #4 DMB HOSE ASSY 52" LG *914504-62 #4 DMB HOSE ASSY 52" LG *914504-63 #4 DMB HOSE ASSY 52" LG *914504-64 #4 DMB HOSE ASSY 52" LG *914504-65 #4 DMB HOSE ASSY 52" LG *914504-66 #4 DMB HOSE ASSY 52" LG *914504-67 #4 DMB HOSE ASSY 52" LG *914504-68 #4 DMB HOSE ASSY 52" LG *914504-69 #4 DMB HOSE ASSY 52" LG *914504-70 #4 DMB HOSE ASSY 52" LG *914504-71 #4 DMB HOSE ASSY 52" LG *914504-72 #4 DMB HOSE ASSY 52" LG *914504-73 #4 DMB HOSE ASSY 52" LG *914504-74 #4 DMB HOSE ASSY 52" LG *914504-75 #4 DMB HOSE ASSY 52" LG *914504-76 #4 DMB HOSE ASSY 52" LG *914504-77 #4 DMB HOSE ASSY 52" LG *914504-78 #4 DMB HOSE ASSY 52" LG *914504-79 #4 DMB HOSE ASSY 52" LG *914504-80 #4 DMB HOSE ASSY 52" LG *914504-81 #4 DMB HOSE ASSY 52" LG *914504-82 #4 DMB HOSE ASSY 52" LG *914504-83 #4 DMB HOSE ASSY 52" LG *914504-84 #4 DMB HOSE ASSY 52" LG *914504-85 #4 DMB HOSE ASSY 52" LG *914504-86 #4 DMB HOSE ASSY 52" LG *914504-87 #4 DMB HOSE ASSY 52" LG *914504-88 #4 DMB HOSE ASSY 52" LG *914504-89 #4 DMB HOSE ASSY 52" LG *914504-90 #4 DMB HOSE ASSY 52" LG *914504-91 #4 DMB HOSE ASSY 52" LG *914504-92 #4 DMB HOSE ASSY 52" LG *914504-93 #4 DMB HOSE ASSY 52" LG *914504-94 #4 DMB HOSE ASSY 52" LG *914504-95 #4 DMB HOSE ASSY 52" LG *914504-96 #4 DMB HOSE ASSY 52" LG *914504-97 #4 DMB HOSE ASSY 52" LG *914504-98 #4 DMB HOSE ASSY 52" LG *914504-99 #4 DMB HOSE ASSY 52" LG *914504-100 #4 DMB HOSE ASSY 52" LG</p>	<p>13 FROM TEE IN LINE 9 TO NOZZLE #2</p> <p>900716-29 3/4" - 1/2" UNION *914708-50 #8 DMB HOSE ASSY 50" LG *914508-50 #8 DMB HOSE ASSY 50" LG 900716-13 1/2" UNION 901049-4 1/2" ELBOW 901049-4-NOZZLE-1/2 ELBOW</p> <p>14 FROM TEE IN LINE #10 TO NOZZLE #5</p> <p>900716-28 3/4" - 1/2" UNION *914708-50 #8 DMB HOSE ASSY 50" LG *914508-50 #8 DMB HOSE ASSY 50" LG 900716-13 1/2" UNION 901049-4 1/2" ELBOW 901049-4 1/2" ELBOW</p> <p>15 FROM R.H. EXPPELLANT CART TO EXTINGUISHER</p> <p>901052-64 1/4" - 3/8" ELBOW 900716-9 3/8" UNION *914708-15 #8 DMB HOSE ASSY 15" LG *914508-15 #8 DMB HOSE ASSY 15" LG 901158-8 5/8" BUSHING 900716-9 3/8" UNION</p> <p>16 FROM L.H. EXPPELLANT CART TO EXTINGUISHER</p> <p>901052-64 1/4" - 3/8" ELBOW 900716-9 3/8" UNION *914708-15 #8 DMB HOSE ASSY 15" LG *914508-15 #8 DMB HOSE ASSY 15" LG 901158-8 5/8" BUSHING 900716-9 3/8" UNION</p>	<p>2 FROM TEE IN LINE #1 TO AUTO SHUTDOWN CYL.</p> <p>906098-4 1/4" RIPPLE 901096-1 1/4" TEE 900716-5 1/4" UNION *914704-43 #4 DMB HOSE ASSY 43" LG *914504-43 #4 DMB HOSE ASSY 43" LG *914504-44 #4 DMB HOSE ASSY 43" LG *914504-45 #4 DMB HOSE ASSY 43" LG *914504-46 #4 DMB HOSE ASSY 43" LG *914504-47 #4 DMB HOSE ASSY 43" LG *914504-48 #4 DMB HOSE ASSY 43" LG *914504-49 #4 DMB HOSE ASSY 43" LG *914504-50 #4 DMB HOSE ASSY 43" LG *914504-51 #4 DMB HOSE ASSY 43" LG *914504-52 #4 DMB HOSE ASSY 43" LG *914504-53 #4 DMB HOSE ASSY 43" LG *914504-54 #4 DMB HOSE ASSY 43" LG *914504-55 #4 DMB HOSE ASSY 43" LG *914504-56 #4 DMB HOSE ASSY 43" LG *914504-57 #4 DMB HOSE ASSY 43" LG *914504-58 #4 DMB HOSE ASSY 43" LG *914504-59 #4 DMB HOSE ASSY 43" LG *914504-60 #4 DMB HOSE ASSY 43" LG *914504-61 #4 DMB HOSE ASSY 43" LG *914504-62 #4 DMB HOSE ASSY 43" LG *914504-63 #4 DMB HOSE ASSY 43" LG *914504-64 #4 DMB HOSE ASSY 43" LG *914504-65 #4 DMB HOSE ASSY 43" LG *914504-66 #4 DMB HOSE ASSY 43" LG *914504-67 #4 DMB HOSE ASSY 43" LG *914504-68 #4 DMB HOSE ASSY 43" LG *914504-69 #4 DMB HOSE ASSY 43" LG *914504-70 #4 DMB HOSE ASSY 43" LG *914504-71 #4 DMB HOSE ASSY 43" LG *914504-72 #4 DMB HOSE ASSY 43" LG *914504-73 #4 DMB HOSE ASSY 43" LG *914504-74 #4 DMB HOSE ASSY 43" LG *914504-75 #4 DMB HOSE ASSY 43" LG *914504-76 #4 DMB HOSE ASSY 43" LG *914504-77 #4 DMB HOSE ASSY 43" LG *914504-78 #4 DMB HOSE ASSY 43" LG *914504-79 #4 DMB HOSE ASSY 43" LG *914504-80 #4 DMB HOSE ASSY 43" LG *914504-81 #4 DMB HOSE ASSY 43" LG *914504-82 #4 DMB HOSE ASSY 43" LG *914504-83 #4 DMB HOSE ASSY 43" LG *914504-84 #4 DMB HOSE ASSY 43" LG *914504-85 #4 DMB HOSE ASSY 43" LG *914504-86 #4 DMB HOSE ASSY 43" LG *914504-87 #4 DMB HOSE ASSY 43" LG *914504-88 #4 DMB HOSE ASSY 43" LG *914504-89 #4 DMB HOSE ASSY 43" LG *914504-90 #4 DMB HOSE ASSY 43" LG *914504-91 #4 DMB HOSE ASSY 43" LG *914504-92 #4 DMB HOSE ASSY 43" LG *914504-93 #4 DMB HOSE ASSY 43" LG *914504-94 #4 DMB HOSE ASSY 43" LG *914504-95 #4 DMB HOSE ASSY 43" LG *914504-96 #4 DMB HOSE ASSY 43" LG *914504-97 #4 DMB HOSE ASSY 43" LG *914504-98 #4 DMB HOSE ASSY 43" LG *914504-99 #4 DMB HOSE ASSY 43" LG *914504-100 #4 DMB HOSE ASSY 43" LG</p> <p>3 FROM TEE IN LINE #2 TO TEE IN LINE #6</p> <p>900716-25 1/4" - 3/8" UNION *914708-43 #6 DMB HOSE ASSY 43" LG *914508-43 #6 DMB HOSE ASSY 43" LG 900716-25 1/4" - 3/8" UNION</p> <p>4 FROM TEE IN LINE #1 TO R.H. EXTINGUISHER</p> <p>900716-5 1/4" UNION *914704-20 #4 DMB HOSE ASSY 20" LG *914504-20 #4 DMB HOSE ASSY 20" LG 900716-23 1/4" - 1/4" UNION 901049-2 1/4" ELBOW</p> <p>5 FROM TEE IN LINE #6 TO L.H. EXTINGUISHER</p> <p>900716-5 1/4" UNION *914704-20 #4 DMB HOSE ASSY 20" LG *914504-20 #4 DMB HOSE ASSY 20" LG 900716-23 1/4" - 1/4" UNION 901049-2 1/4" ELBOW</p> <p>6 FROM L.H. ACTUATOR TO TEE</p> <p>503263-20 3/4" CHECK VALVE 103497-1 1/4" DMB HOSE ASSY 15" LG *914704-52 #4 DMB HOSE ASSY 52" LG *914504-52 #4 DMB HOSE ASSY 52" LG *914504-53 #4 DMB HOSE ASSY 52" LG *914504-54 #4 DMB HOSE ASSY 52" LG *914504-55 #4 DMB HOSE ASSY 52" LG *914504-56 #4 DMB HOSE ASSY 52" LG *914504-57 #4 DMB HOSE ASSY 52" LG *914504-58 #4 DMB HOSE ASSY 52" LG *914504-59 #4 DMB HOSE ASSY 52" LG *914504-60 #4 DMB HOSE ASSY 52" LG *914504-61 #4 DMB HOSE ASSY 52" LG *914504-62 #4 DMB HOSE ASSY 52" LG *914504-63 #4 DMB HOSE ASSY 52" LG *914504-64 #4 DMB HOSE ASSY 52" LG *914504-65 #4 DMB HOSE ASSY 52" LG *914504-66 #4 DMB HOSE ASSY 52" LG *914504-67 #4 DMB HOSE ASSY 52" LG *914504-68 #4 DMB HOSE ASSY 52" LG *914504-69 #4 DMB HOSE ASSY 52" LG *914504-70 #4 DMB HOSE ASSY 52" LG *914504-71 #4 DMB HOSE ASSY 52" LG *914504-72 #4 DMB HOSE ASSY 52" LG *914504-73 #4 DMB HOSE ASSY 52" LG *914504-74 #4 DMB HOSE ASSY 52" LG *914504-75 #4 DMB HOSE ASSY 52" LG *914504-76 #4 DMB HOSE ASSY 52" LG *914504-77 #4 DMB HOSE ASSY 52" LG *914504-78 #4 DMB HOSE ASSY 52" LG *914504-79 #4 DMB HOSE ASSY 52" LG *914504-80 #4 DMB HOSE ASSY 52" LG *914504-81 #4 DMB HOSE ASSY 52" LG *914504-82 #4 DMB HOSE ASSY 52" LG *914504-83 #4 DMB HOSE ASSY 52" LG *914504-84 #4 DMB HOSE ASSY 52" LG *914504-85 #4 DMB HOSE ASSY 52" LG *914504-86 #4 DMB HOSE ASSY 52" LG *914504-87 #4 DMB HOSE ASSY 52" LG *914504-88 #4 DMB HOSE ASSY 52" LG *914504-89 #4 DMB HOSE ASSY 52" LG *914504-90 #4 DMB HOSE ASSY 52" LG *914504-91 #4 DMB HOSE ASSY 52" LG *914504-92 #4 DMB HOSE ASSY 52" LG *914504-93 #4 DMB HOSE ASSY 52" LG *914504-94 #4 DMB HOSE ASSY 52" LG *914504-95 #4 DMB HOSE ASSY 52" LG *914504-96 #4 DMB HOSE ASSY 52" LG *914504-97 #4 DMB HOSE ASSY 52" LG *914504-98 #4 DMB HOSE ASSY 52" LG *914504-99 #4 DMB HOSE ASSY 52" LG *914504-100 #4 DMB HOSE ASSY 52" LG</p> <p>7 FROM UNION ON R.H. EXTINGUISHER TO NOZZLE #3</p> <p>901052-64 1/4" - 3/8" ELBOW 900716-9 3/8" UNION *914708-15 #8 DMB HOSE ASSY 15" LG *914508-15 #8 DMB HOSE ASSY 15" LG 901158-8 5/8" BUSHING 900716-9 3/8" UNION</p> <p>8 FROM UNION ON L.H. EXTINGUISHER TO NOZZLE #4</p> <p>901052-64 1/4" - 3/8" ELBOW 900716-9 3/8" UNION *914708-15 #8 DMB HOSE ASSY 15" LG *914508-15 #8 DMB HOSE ASSY 15" LG 901158-8 5/8" BUSHING 900716-9 3/8" UNION</p> <p>9 FROM TEE IN LINE #7 TO TEE</p> <p>900716-17 3/4" UNION *914712-60 #12 DMB HOSE ASSY 60" LG *914512-60 #12 DMB HOSE ASSY 60" LG 900716-17 3/4" UNION 901098-5 3/4" TEE</p> <p>10 FROM TEE IN LINE #8 TO TEE</p> <p>900716-17 3/4" UNION *914712-60 #12 DMB HOSE ASSY 60" LG *914512-60 #12 DMB HOSE ASSY 60" LG 500716-29 3/4" - 1/2" UNION 901098-5 3/4" TEE</p> <p>11 FROM TEE IN LINE #9 TO NOZZLE #1</p> <p>900716-29 3/4" UNION *914708-50 #8 DMB HOSE ASSY 50" LG *914508-50 #8 DMB HOSE ASSY 50" LG 900716-13 1/2" UNION 901049-4 1/2" ELBOW 901049-4-NOZZLE-1/2 ELBOW</p> <p>12 FROM TEE IN LINE #10 TO NOZZLE #6</p> <p>900716-29 3/4" UNION *914708-50 #8 DMB HOSE ASSY 50" LG *914508-50 #8 DMB HOSE ASSY 50" LG 900716-13 1/2" UNION 901049-4 1/2" ELBOW 901049-4-NOZZLE-1/2 ELBOW</p>

O.E.M. PRINT FOR REFERENCE ONLY, NOT AS REBUILT.

<p>+ 701554 -42 REUSABLE MALE * 701554 -1042 CRIMPED MALE</p>		<p>JOY MANUFACTURING CO. PLANT LOCATION AS INDICATED BELOW</p> <table border="1"> <tr> <td>BUFFALO, N. Y.</td> <td>NEW PHILADELPHIA, O.</td> </tr> <tr> <td>CLAREMONT, N. H.</td> <td></td> </tr> <tr> <td>FRANKLIN, PA.</td> <td></td> </tr> <tr> <td>GALT, ONTARIO, CANADA</td> <td></td> </tr> <tr> <td>SPRINGFIELD, SCOTLAND</td> <td></td> </tr> <tr> <td>WINDHAM, CT, U.S.A.</td> <td></td> </tr> </table>		BUFFALO, N. Y.	NEW PHILADELPHIA, O.	CLAREMONT, N. H.		FRANKLIN, PA.		GALT, ONTARIO, CANADA		SPRINGFIELD, SCOTLAND		WINDHAM, CT, U.S.A.		<p>PIPING FIRE SUPPRESSION SYSTEM</p> <table border="1"> <tr> <td>SIMILAR TO SUPERSEDED BY</td> <td>NAME OR INITIAL & DATE</td> <td>SCALE</td> </tr> <tr> <td>REPLACED BY</td> <td>DR. J. HARRON</td> <td>CLAS 15 RU</td> </tr> <tr> <td>REPLACED BY</td> <td>TR</td> <td></td> </tr> <tr> <td>REPLACED BY</td> <td></td> <td></td> </tr> <tr> <td>REPLACED BY</td> <td></td> <td></td> </tr> </table>		SIMILAR TO SUPERSEDED BY	NAME OR INITIAL & DATE	SCALE	REPLACED BY	DR. J. HARRON	CLAS 15 RU	REPLACED BY	TR		REPLACED BY			REPLACED BY		
BUFFALO, N. Y.	NEW PHILADELPHIA, O.																															
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<p>ENG. ORDER # 222 DATE ISSUED 7-12-71</p>		<p>REVISIONS FBT100 FCC553 FCC641</p>		<p>PD2627-2</p>																												



CM479-2



900119-94
(1/2-13 x 2-1/2)
900199-5

900020-24
(1/2-13 x 1-1/4)
900302-4

3182609-192

900947-1534 KEY
(1/2 x 1/4 x 3-15/16)
WELD ENDS

900020-114
(1/2-13 x 3-1/2)
900160-5
900302-4

1190278-123

1190102-32

14008-CM2

506215-31

503020-3

70,000 MINIMUM WELD TENSILE

701516-56

This drawing and all information therein is the property of the JOY MANUFACTURING CO. It is confidential and shall not be made public or copied, it is loaned subject to return upon demand, it is not to be used directly or indirectly in any way detrimental to our interest.

JOY MANUFACTURING CO.	
PLANT LOCATION AS INDICATED BELOW	
BUFFALO, NEW YORK	NEW PHILADELPHIA, OHIO
CLAMONCHET, IL. IN.	
FRANKLIN, PA.	
SALT, ONTARIO, CANADA	
GREENOCK, SCOTLAND	
MICHIGAN CITY, IND.	

REEL DRIVE AND CONTROL PARTS

DESIGNED BY	DATE	SCALE	CLASS
SUPERSEDED BY	DATE		
REPLACES			
REPLACED BY			

KEYWORDS: FCC 230

CM479-2

JOY MANUFACTURING CO.

BILL OF MATERIAL

DRAWING NO.
CM4779-2

BILL OF MAT. NO.
701516-56

SHEET NO. 1 OF 1

MAKE REEL DRIVE & CONTROL PARTS
(15RU)

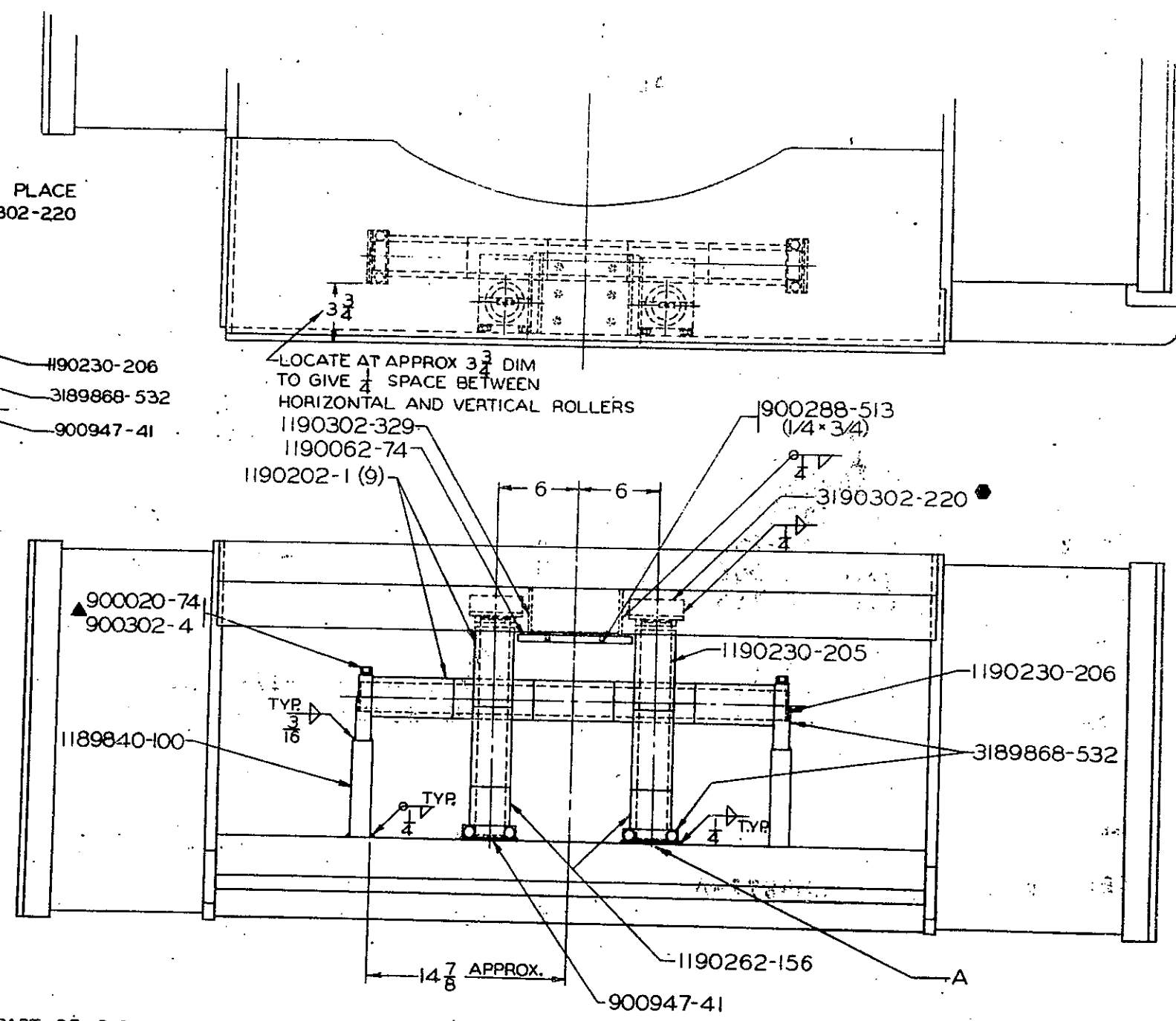
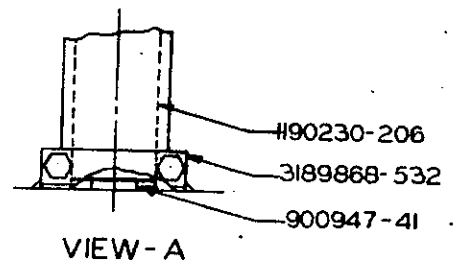
ORDER NO.

ISSUED: SEPTEMBER 9, 1976		FBP871	
FCC230			

QUANTITY		PART NUMBER	NAME OF PART	NON-STOCK CODE	PRINT RE-QUIRED (1)
PER ORDER	PER UNIT				
	1	503020-3	VALVE (REEL)		
	1	506215-31	MOTOR (OIL)		
	1	A182609-192	CHAIN (5/8 P. - 192 PITCHES)		
	1	14008-CM2	GASKET		
	1	1190102-32	MANIFOLD		
	1	1190278-123	SPROCKET		
	4	900020-24	CAP SCR (1/2 - 13 X 1 1/4)		
	4	900020-114	CAP SCR (1/2 - 13 X 3 1/2)		
	1	900119-94	SET SCR (1/2 - 13 X 2 1/2 SQ HD)		
	4	900160-5	NUT (1/2 - 13)		
	1	900199-5	NUT (1/2 - 13)		
	3	900302-4	WASHER (1/2)		
	1	900947-1534	1/2" X 1/4" X 3-15/16" KEY		

CM4872-A

INSURE 900947-41 IS IN PLACE BEFORE WELDING 3190302-220



▲ PART OF 3189868-532

B.M. 701514-43

DO NOT CHANGE WITHOUT APPROVAL OF DESIGN OFFICE

FBK 332 FBK665 FBT44

JOY MANUFACTURING CO. PLANT LOCATION AS SHOWN ON DRAWING		CABLE ROLLERS & PARTS VERTICAL REEL	
DESIGNED BY DRAWN BY CHECKED BY DATE	NEW PRODUCT DATE	ORDER NO. CM4872 QUANTITY DATE	CM4872-A CM4872-A

LIST OF PARTS AS CALLED FOR ON B/M 701514-43

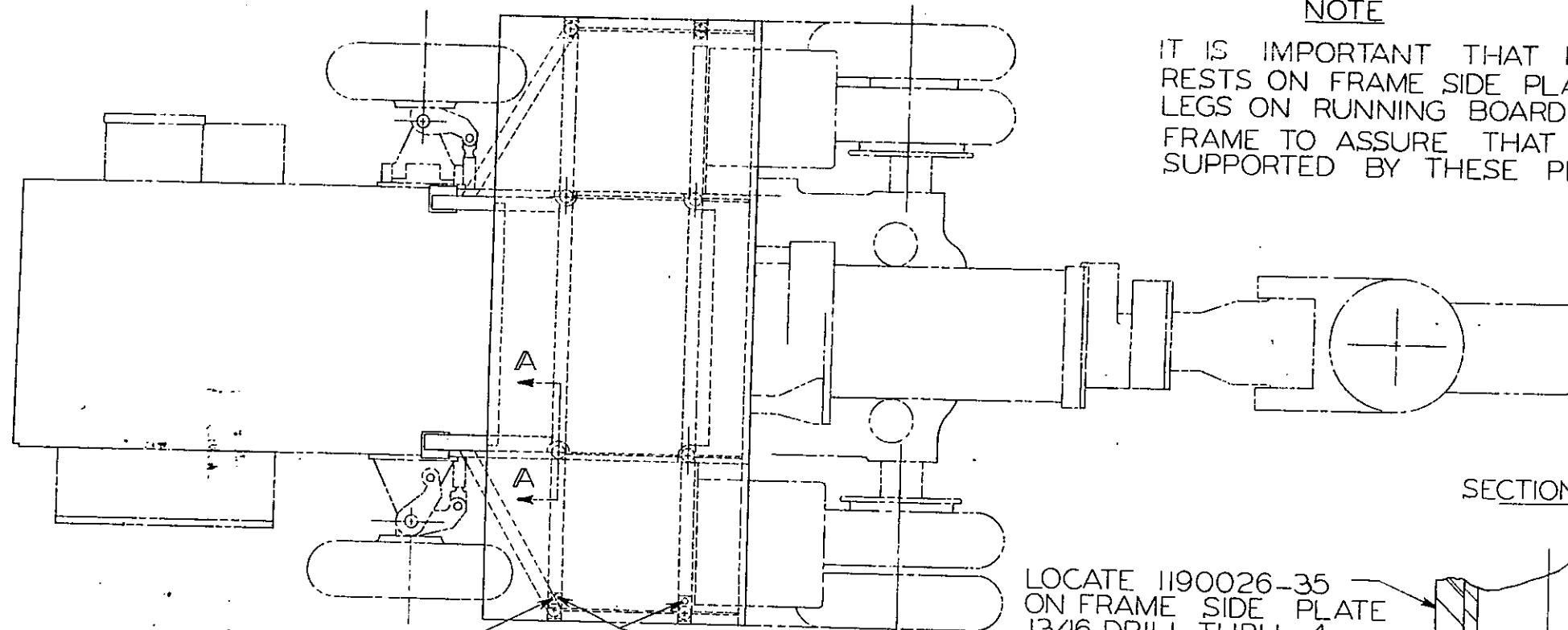
4	3189868-532	BRACKET
	900020-74	CAP SCREW
	900302-4	LOCKWASHER
2	3190302-220	SUPPORT
2	1189840-100	BLOCK
9	1190202-1	ROLLER
2	1190230-205	SHAFT
1	1190230-206	SHAFT
2	1190262-156	SPACER
1	1190062-74	INSULATOR
1	1190302-329	SUPPORT
2	900947-41	1/4" X 1/4" X 1-1/4" KEY
6	900288-513	MACHINE SCREW

REVISION/ FBK665

REF. DWG. - CM4872-A

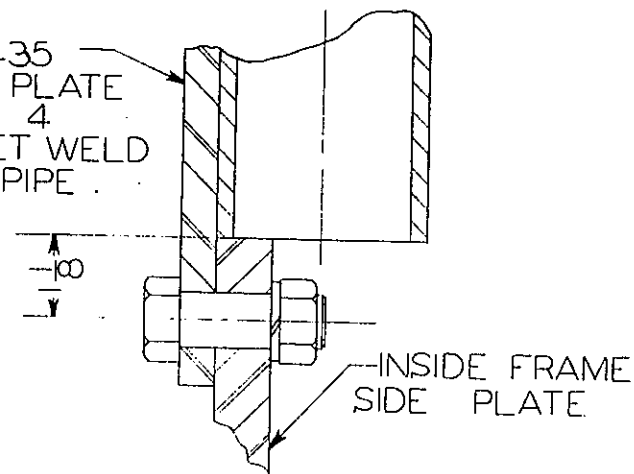
NOTE

IT IS IMPORTANT THAT PIPE FRAME RESTS ON FRAME SIDE PLATES SHIM LEGS ON RUNNING BOARD OR MAIN FRAME TO ASSURE THAT CANOPY IS SUPPORTED BY THESE PLATES.



SECTION A-A

LOCATE 1190026-35 ON FRAME SIDE PLATE 13/16 DRILL THRU 4 PLACES 1/4 FILLET WELD AROUND -35 TO PIPE.



O.E.M. PRINT FOR REFERENCE ONLY NOT AS REBUILT

(3/4-10x2) 900020-56
900160-7
900302-6

900317-7

3189994-516

85

GD. CL.

703501-33

This drawing and all information therein is the property of the JOY MANUFACTURING CO. It is loaned subject to return upon demand, is not to be used, altered or otherwise in any way detrimental to our interest.

JOY MANUFACTURING CO.

PLANT LOCATION AS INDICATED BELOW

BUFFALO, N. Y.	NEW PHILADELPHIA, OHIO
CLAREMONT, N. H.	
FRANKLIN, PA.	
GALT, ONTARIO, CANADA	
GREENOCK, SCOTLAND	
MICHIGAN CITY, IND.	

OPERATOR CANOPY - 7 FT.

SIMILAR TO CM 5105 A	DATE OF REVISION & DATE	SCALE	CLASS. ISRU
SUPERSEDED BY	TR		
REPLACED BY	CK		
REPLACED BY	APPD.		

CM 5211-26

E. O. PDP 860
DATE 5-14-76

REVISIONS

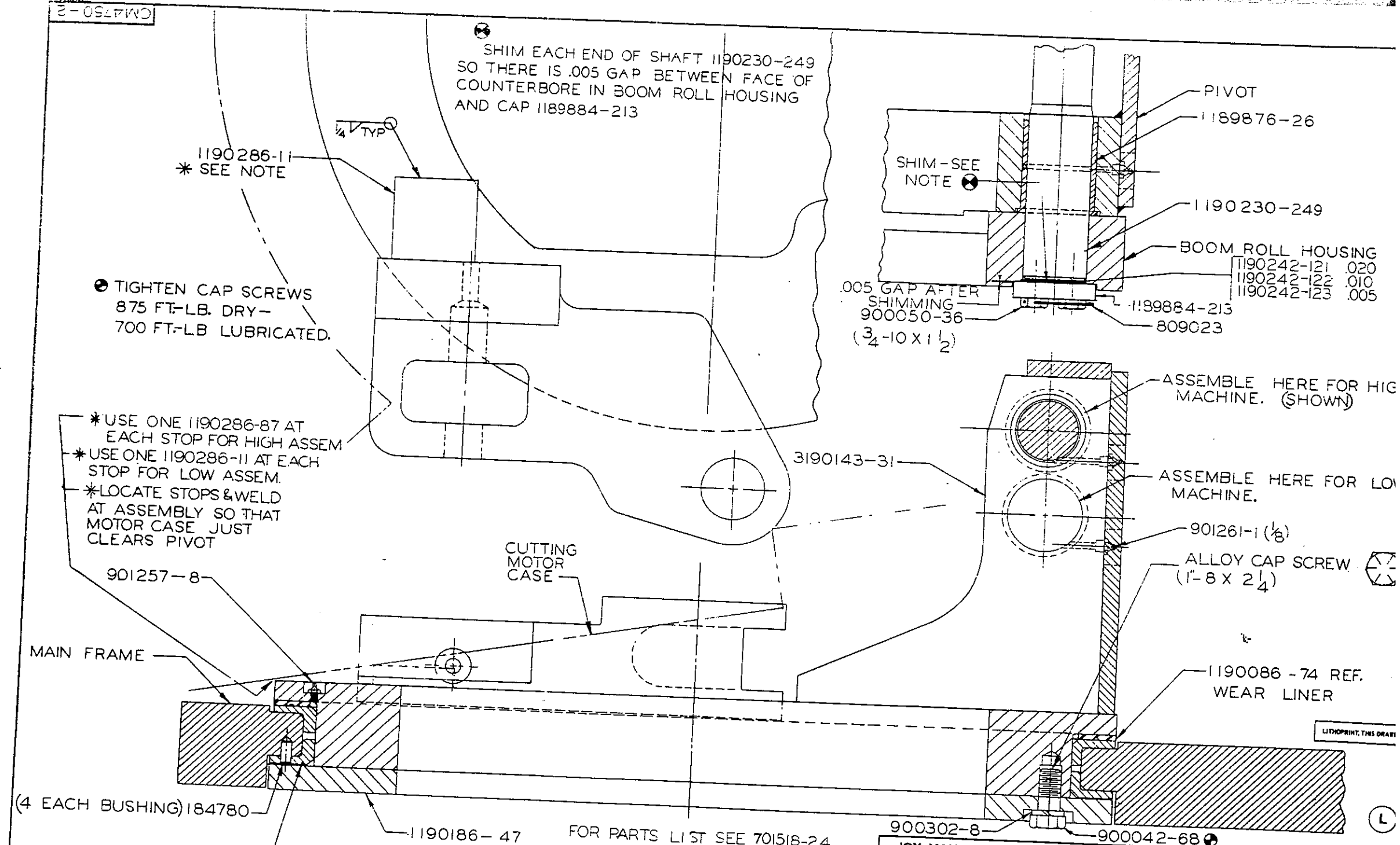
LIST OF PARTS AS CALLED FOR ON B/M 703501-33

1	3189994-516	FRAME
4	1190026-35	GUSSET
12	900020-56	3/4"-10 X 2" CAP SCREW
12	900160-7	3/4"-10 NUT
12	900302-6	3/4" LOCKWASHER
4	900317-7	3/4" WASHER

REVISION/ FBP860

REF. DWG. - CM5211-26

2-0927WD



FOR PARTS LIST SEE 701518-24

JOY MANUFACTURING CO.
PLANT LOCATION AS INDICATED BELOW

BUFFALO, N. Y.	NEW PHILADELPHIA, OHIO
CLARKSBORO, N. H.	
FRANKLIN, PA.	
SALT SPRING, CANADA	
SPRINGBROOK, SCOTLAND	
MICHIGAN CITY, IND.	

PIVOT - PARTS

REPLACED BY: CM 4750A

BY: DONOVAN

TR: 5-16-77

SCALE: HALF

CLASS: 1189

CM 4750-

ENG ORDER FBT-527

DATE

REVISIONS

FCC 531

LITHOPRINT THIS DRAFT

(L)

LIST OF PARTS AS CALLED FOR ON B/M 701518-24

1	3190143-31	PIVOT
8	184780	PIN
2	1189876-9	BUSHING
2	1189876-26	BUSHING
2	1189884-213	END CAP
1	1190186-47	THRUST RING
1	1190230-249	SHAFT
5	1190242-121	.020" SHIM
5	1190242-122	.010" SHIM
5	1190242-123	.005" SHIM
2	1190286-11	STOP
2	1190286-87	STOP
27	900042-68	1"-8 X 2-1/4" CAP SCREW
4	900050-36	3/4"-10 X 1-1/2" CAP SCREW
27	900302-8	1" LOCKWASHER
8	901257-8	1/4" GREASE FITTING
2	901261-1	1/8" FITTING
1'	809023	#16 STEEL WIRE

PART SHOWN FOR REFERENCE ONLY:

1190086-74 WEAR LINER

REVISION/ FCC531

REF. DWG. - CM4750-2

LIST OF PARTS AS CALLED FOR ON

B/M'S 700417-1138/-1139
712417-1138/-1139

1 A32765-2 INJECTOR
1 58909 MOUNTING PLATE

1 900020-404 3/8" X 1-5/8" CAP SCREW
1 900302-3 3/8" LOCKWASHER
1 901924-4 PLUG

REVISION/ FBK285

REF. DWG. - PD1822

PD18222

LOCATION - FITTINGS - HOSE ASSY. LOCATION - FITTINGS - HOSE ASSY. LOCATION - FITTINGS - HOSE ASSY.

PIVOT AUTO LUBE FOR 15RU MS21
*AEROQUIP-DWB-CRIMPED MALE PIPE
*AEROQUIP-DWB-REUSABLE MALE PIPE
1 FROM L.N. PORT "A" ON LARGE VOLUME VALVE TO OIL INJECTOR

JOINTING-LUBE
500016-9 3/8" UNION ADAPTER
*314506-52 3/8" DWG HOSE ASSY 52" LG
+314704-52 3/8" DWG HOSE ASSY 52" LG
303681-2 3/8" UNION ELBOW ADAPTER
2 FROM OIL INJECTOR TO R.N. SIDE OF PIVOT
303686-2A 1/4" - 3/8" - 90° UNION ELBOW ADAPT
*314504-76 3/4" DWG HOSE ASSY 76" LG
+314704-76 3/4" DWG HOSE ASSY 76" LG
303686-4 3/4" UNION ELBOW ADAPTER
3 FROM OIL INJECTOR TO L.N. SIDE OF PIVOT
*303686-2A 1/4" - 3/8" - 90° UNION ELBOW ADAPT
*314504-40 3/4" DWG HOSE ASSY 40" LG
+314704-40 3/4" DWG HOSE ASSY 40" LG
303686-4 3/4" UNION ELBOW ADAPTER

O.E.M. PRINT
FOR REFERENCE ONLY,
NOT AS REBUILT.

* 712417-1139 CRIMPED MALE
+ 700417-1139 REUSABLE MALE

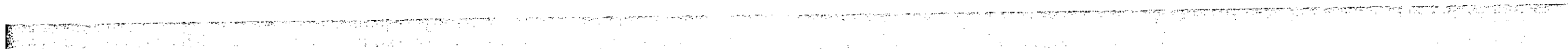
ENG. ORDER
DATE ISSUED
REVISIONS
FBE 411
FBE 635

JOY MANUFACTURING CO.	
PLANT LOCATION AS INDICATED BELOW	
BUFFALO, N. Y.	NEW PHILADELPHIA, O.
CLAREMONT, N. H.	
FRANKLIN, PA.	
SALT, ONTARIO, CANADA	
WYVERN, SCOTLAND	
WICHMAN CTRY. IND.	

PIVOT AUTO LUBE
AEROQUIP-DWB

SIMILAR TO _____
SUPERSEDED BY _____
REPLACES _____
REPLACED BY _____
DR. P.H.
TR. P.H.
CK. P.H.
APPRO. P.H.
SCALE CLASS 15.00

PD1822-2

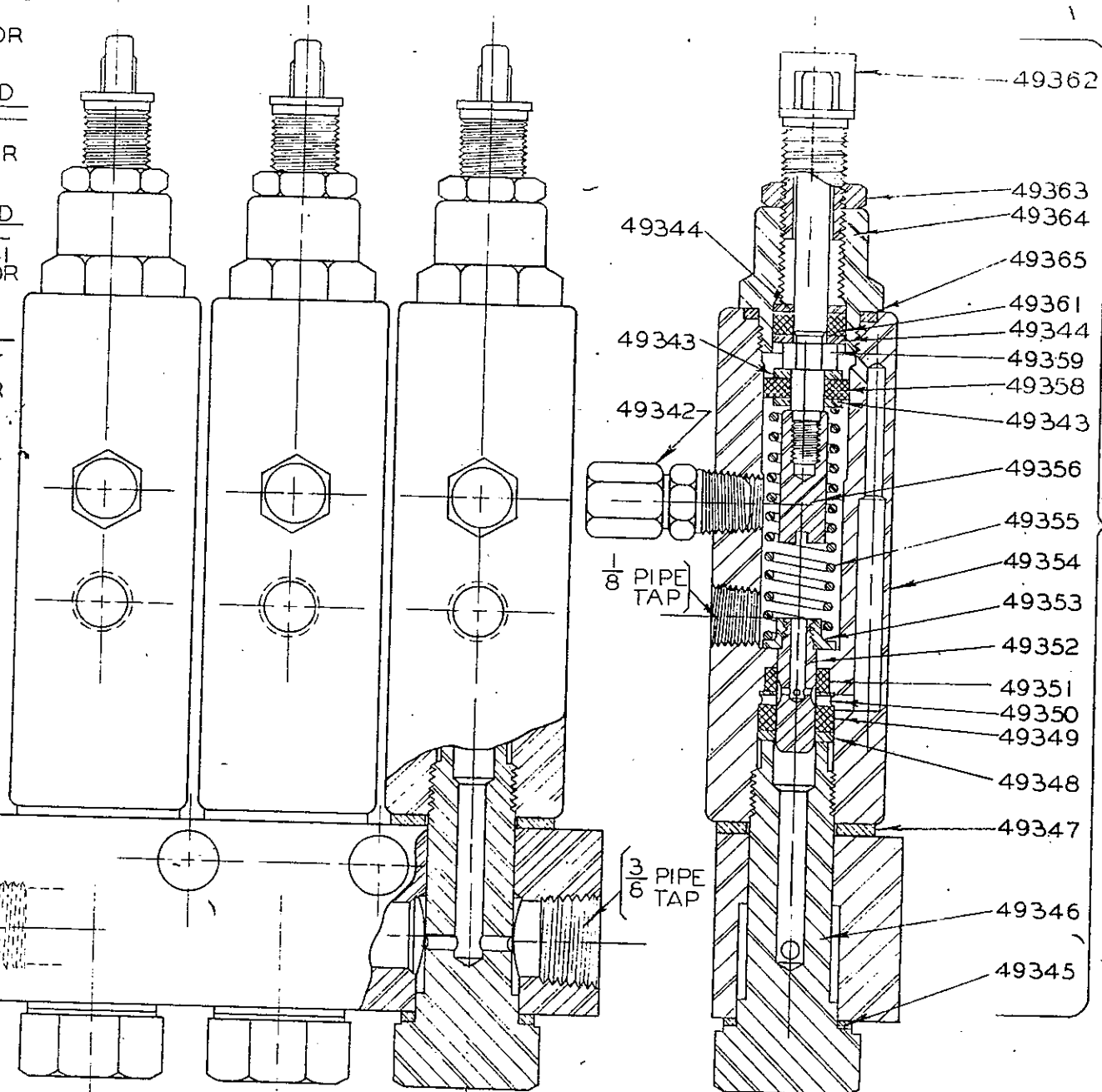


A32765

FORM NO. 8108

- A32765-1 — ONE-A49341 INJECTOR
ONE INJECTOR MANIFOLD ASSM. ONE-50286 MANIFOLD
- A32765-2 — TWO-A49341 INJECTOR
TWO INJECTOR MANIFOLD ASSM. ONE-50287 MANIFOLD
- * A32765-3 — THREE-A49341 INJECTOR
THREE INJECTOR MANIFOLD ASSM. ONE-50288 MANIFOLD
- A32765-4 — FOUR A49341 INJECTOR
FOUR INJECTOR MANIFOLD ASSM. ONE-50289 MANIFOLD
- A32765-5 — FIVE A49341 INJECTOR
FIVE INJECTOR MANIFOLD ASSM. ONE 50290 MANIFOLD

* A32765-3 IS SHOWN



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ENG. ORDER **66572** REVISIONS **FAG 871**
DATE **10/11/54**

JOY MANUFACTURING CO.		INJECTOR MANIFOLD ASSEMBLY	
PLANT LOCATION AS INDICATED BELOW			
CLARKSBURG, W. VA.	NEW PHILADELPHIA, O.	SIMILAR TO:	SCALE:
DALLAS, TEXAS	ST. LOUIS, MISSOURI	SUPERSEDED BY:	TR.
FRANKLIN, PA.		REPLACED BY:	DRYED BASIS
SALT, ONTARIO, CANADA			CLARK
GREENOCK, SCOTLAND			
VICINIAN CITY, IND.			
		APPROV.:	A32765



A 32765-1/2/3/4/5 INJECTOR MANIFOLD

USED FOR A 32765-1 ONLY-

1 50286 MANIFOLD

USED FOR A 32765-2 ONLY-

1 50287 MANIFOLD

USED FOR A 32765-3 ONLY-

1 50288 MANIFOLD

USED FOR A 32765-4 ONLY-

1 50289 MANIFOLD

USED FOR A 32765-5 ONLY-

1 50290 MANIFOLD

PARTS COMMON TO ALL LISTS-

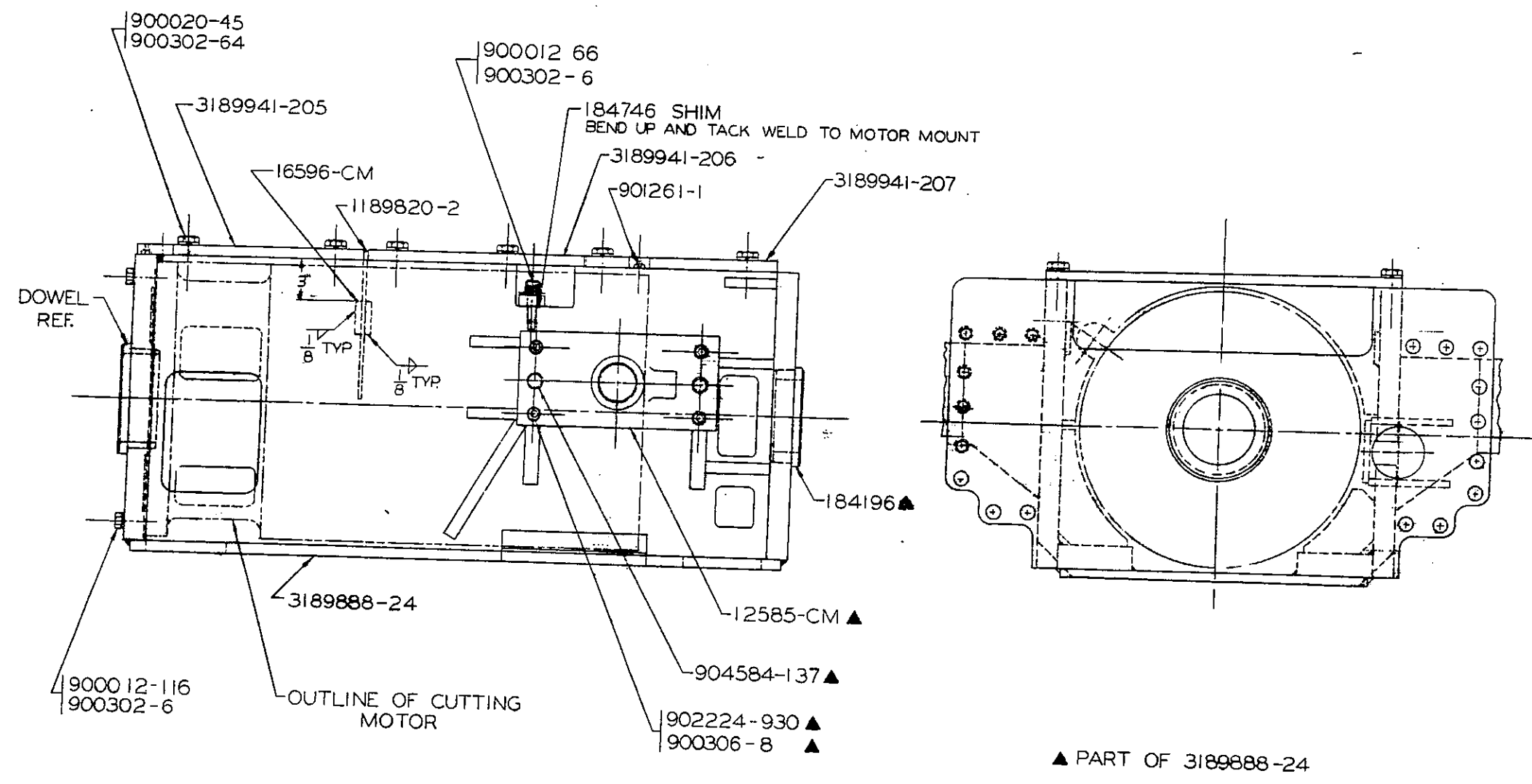
5	A49341	INJECTOR MANIFOLD ASSEMBLY
	1	49342 FITTING ASSEMBLY
	2	49343 PISTON PACKING WASHER
	2	49344 PLUG WASHER
	1	49345 PISTON STOP GASKET
	1	49346 ADAPTER BOLT
	1	49347 ADAPTER GASKET
	1	49348 WASHER
	1	49349 LARGE PACKING
	1	49350 INLET DISC
	1	49351 SMALL PACKING
	1	49352 PLUNGER
	1	49353 SPRING SEAT
	1	49354 INJECTOR BODY ASSEMBLY
	1	49355 PLUNGER SPRING
	1	49356 PISTON ROD EXTENSION
	1	49358 PISTON PACKING
	1	49359 PISTON ROD
	1	49361 PLUG PACKING
	1	49362 ADJUSTING NUT
	1	49363 LOCK NUT
	1	49364 PISTON STOP PLUG
	1	49365 PISTON STOP GASKET

REVISIONS

(A 32765-1/-2/-3/-4/-5)

FAG572

CM4811



701510-11

JOY MANUFACTURING CO. PLANT LOCATION AS INDICATED BELOW		CUTTING MOTOR CASE & PARTS	
BUFFALO, N. Y. CLAREMONT, N. H. PHILADELPHIA, PA. SALT, ONTARIO, CANADA SHEPPOCK, SCOTLAND WASHINGTON CITY, MD.	NEW PHILADELPHIA, OHIO	DESIGNED BY SUPERSEDED BY REPLACED BY REPLACED BY	DR. KOTRONIS TR. 7-6-67 SCALE 1/4 CLASS 15
E.D. FBB 589 DATE	REVISIONS FBP 296 FBT 722 FBE 100 FBE 125 FBE 597 FBK 409	CM-4811	

LIST OF PARTS /S SHOWN ON CM-4811

1	3189888-24	CUTTING MOTOR CASE
	12585-CM	BRACKET
	184196	DOWEL
	900306-8	SPRING LOCKWASHER
	902224-930	CAP SCREW
	904584-137	DOWEL PIN
1	3189941-205	FRONT COVER
1	3189941-206	MIDDLE COVER
1	3189941-207	REAR COVER
2	16596-CM	1/2" X 3/8" X 2 1/2" KEY
6	184746	1/64" SKIM
1	1189820-2	PLATE BAFFLE
12	900020-45	5/8"-11 X 1 3/4" CAP SCREW
6	900302-6	3/4" LOCKWASHER
12	900302-64	5/8" LOCKWASHER
3	901261-1	1/8" ALEMITE FITTING
2	900012-66	3/4"-10 X 2 1/4" CAP SCREW
4	900012-116	3/4"-10 X 3-1/2" CAP SCREW

FBK609

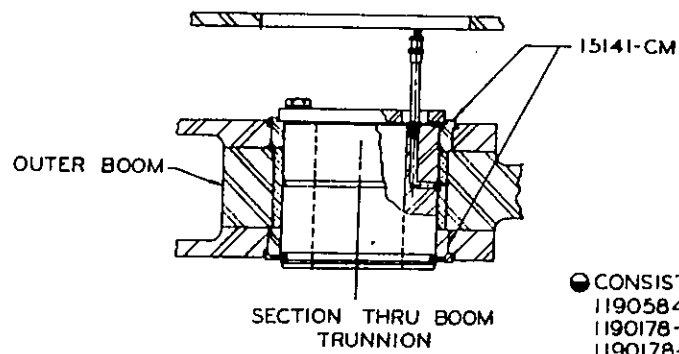
REVISION/

REF. B/M - 701510-11

OD. OF BEVEL GEAR AND WHEEL OF PINION GEAR TO BE FLUSH WHEN SHIMMED FOR .008 TO .012 BACKLASH.

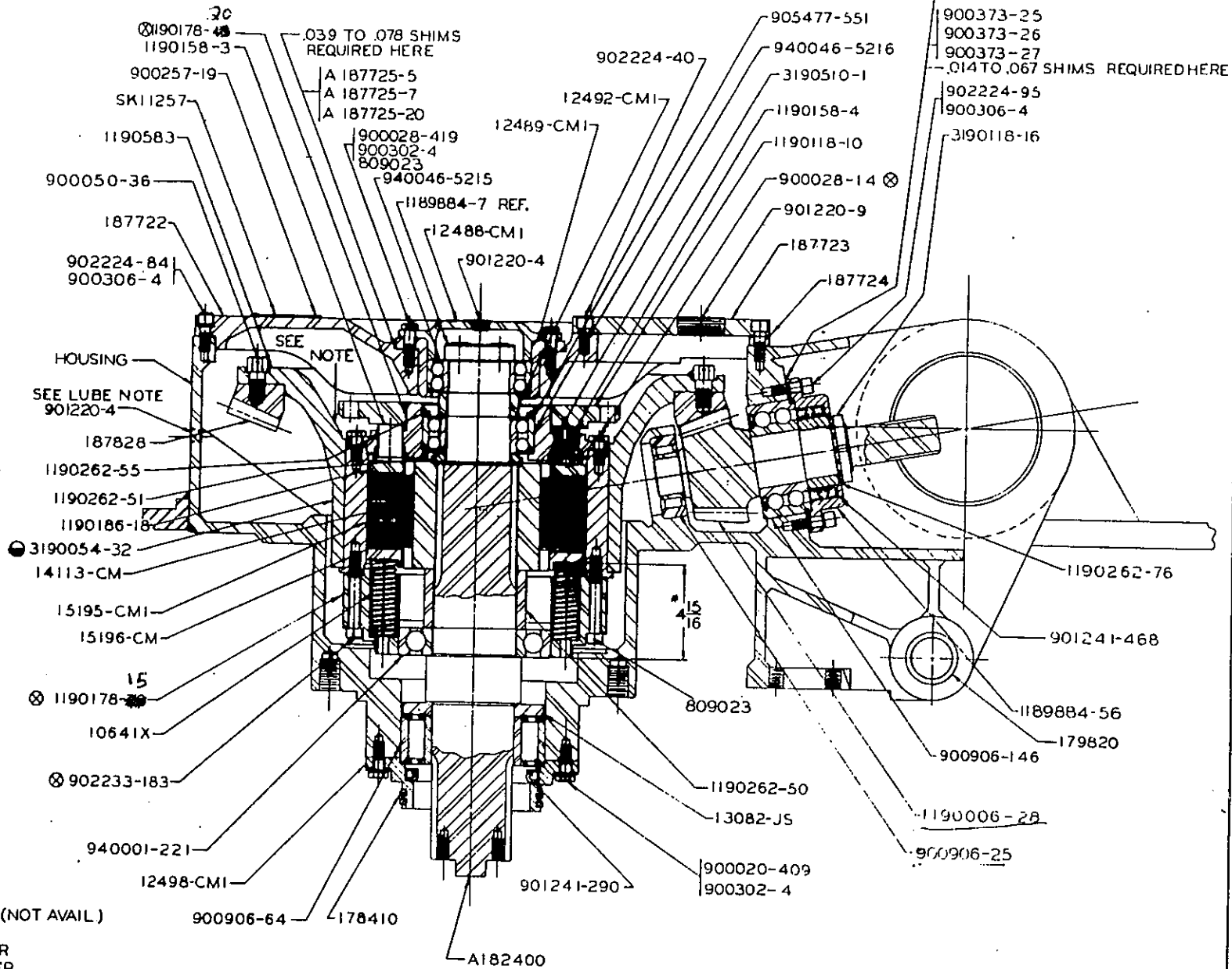
CUTTER ASSY.	HOUSING
503012-66	3190050-107
503012-67	3190050-118 CHROMED TURN

LUBE NOTE:
FILL TO THIS LEVEL WITH GLM (SAE 140 GEAR OIL)
MUST NOT CONTAIN E.P. ADDITIVES SEMI-FLUID
GREASE MUST NOT BE USED BECAUSE OF SLIP CLUTCH



- CONSISTS OF HUB (NOT AVAIL)
1190584 INSERT
1190178-15 RETAINER
1190178-20 RETAINER
- ⊗ INCLUDED IN 3190054-32
- MATCH MARKS WHEN ASSEMBLING 3190054-32

ADJUST CLUTCH TO INITIAL HEIGHT OF 4 15/16 IN.



SEAL FLUID

JOY MANUFACTURING CO.		CUTTER HEAD AND PARTS	
PLANT LOCATION AS INDICATED BELOW			
PHILADELPHIA, PA.	NEW PHILADELPHIA, OHIO	REPLACES TO 503012-66	SCALE 6:1 - DIM. 1:12:1
DESIGNED BY	APPROVED BY	REPLACES BY	DATE
DRAWN BY	CHECKED BY	REPLACES BY	DATE
FBP 270		503012-66	



USE WITH 503012-66 ONLY:

1 3190050-107 HOUSING

USE WITH 503012-67 ONLY:

1 3190050-118 HOUSING

PARTS COMMON TO BOTH LISTS:

1	A182400	SHAFT
3	A187725-5	.005" SHIM
3	A187725-7	.0075" SHIM
1	A187725-20	.020" SHIM
1	3190054-32	HUB ASSY.
	1190178-15	RETAINER
	1190178-20	RETAINER
	1190584	INSERT
	900028-4	CAP SCREW
	902233-183	CAP SCREW
1	3190118-16	LOCKNUT
1	3190510-1	DETENT
16	10641X	SPRING
1	12488-CM1	DRIVE SHAFT BEARING COVER
1	12489-CM1	BEARING RETAINER
1	12492-CM1	SPACER
1	12498-CM1	DRIVE SHAFT BOTTOM COVER
1	13082-JS	BEARING RETAINER
1	14113-CM	DRIVE SHAFT SPIDER
4	15141-CM	BUSHING
20	15195-CM1	EXTERNAL BRONZE PLATE
19	15196-CM	INTERNAL STEEL PLATE
2	178410	PISTON RING
2	179820	BUSHING
1	187722	TOP COVER

1	187723	INSPECTION HOLE COVER
1	187724	GASKET
1	187828	GEAR
1	1189884-56	OIL SEAL PINION CAP
1	1190006-28	PINION
1	1190118-10	ADJ. NUT
2	1190158-3	ADJ. NUT PLUNGER
1	1190158-4	BALL DETENT PLUNGER
2	1190186-18	CLUTCH PLATE RING
1	1190262-50	SPACER
1	1190262-51	SPACER
1	1190262-55	SPACER
1	1190262-76	PINION SPACER
8	1190583	ROD
1	SK11257	LUBRICATION PLATE

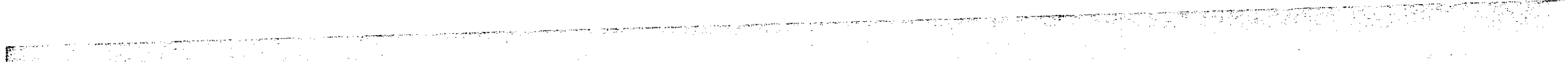
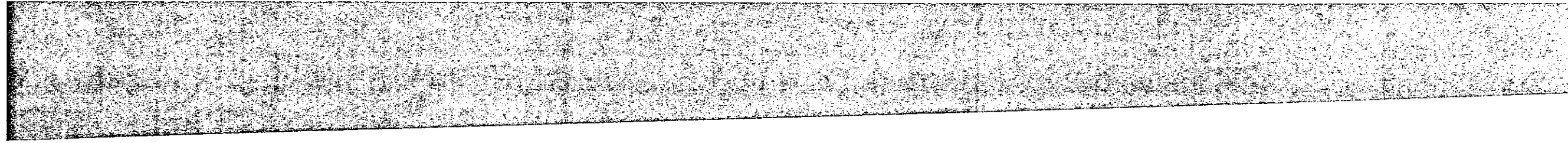
12	900020-409	1/2"-13 X 1-3/8" CAP SCREW
12	900028-419	1/2"-13 X 1-5/8" CAP SCREW
24	900050-36	3/4"-10 X 1-1/2" CAP SCREW
4	900257-19	#8 X 3/8" DRIVE SCREW
24	900302-4	1/2" LOCKWASHER
27	900306-4	1/2" LOCKWASHER
3	900373-25	.005" SHIM
3	900373-26	.007" SHIM
1	900373-27	.020" SHIM
1	900906-25	BEARING
1	900906-64	BEARING
1	900906-146	BEARING
2	901220-4	PLUG
1	901220-9	PLUG
1	901241-290	OIL SEAL
1	901241-468	OIL SEAL
7	902224-40	1/2"-13 X 5/8" CAP SCREW
24	902224-84	1/2"-13 X 1-1/4" CAP SCREW
6	902224-95	1/2"-13 X 1-1/2" CAP SCREW
1	905477-551	SNAP RING
1	940001-221	BEARING
1	940046-5215	BEARING
1	940046-5216	BEARING
11	809023	WIRE

PART SHOWN FOR REFERENCE ONLY:

1189884-7 CAP

REVISION/ (503012-66)
(503012-67)

FBP270
FBP234



To Set the Clutch on a 16RU or 15RU

1. Remove the ten (10) cap screws holding the small inspection cover on, and remove cover.
2. Swing the bar, using bar swing cylinders, all the way to the right.
3. Anchor the chain to prevent it from moving forward on the left hand side of the bar.
4. Sprag the adjusting nut to keep it from turning counterclockwise (use a bar against the R.H. side of the hole in the cover, or make adjusting tool shown).

CAUTION: If a punch is used it must not stick thru the adjusting nut holes too far. If this happens, the punch will be broken or the heads of the cap screws beneath the adjusting nut will be damaged.

5. Swing the bar to the extreme left using the bar swing cylinder. Then swing to the right a little, remove the punch or tool from the nut, and complete the swing to the right. Replace the punch or tool and swing left again. If the chain moves in the bar, you may have to reposition the chain lock.

When does the clutch need setting?

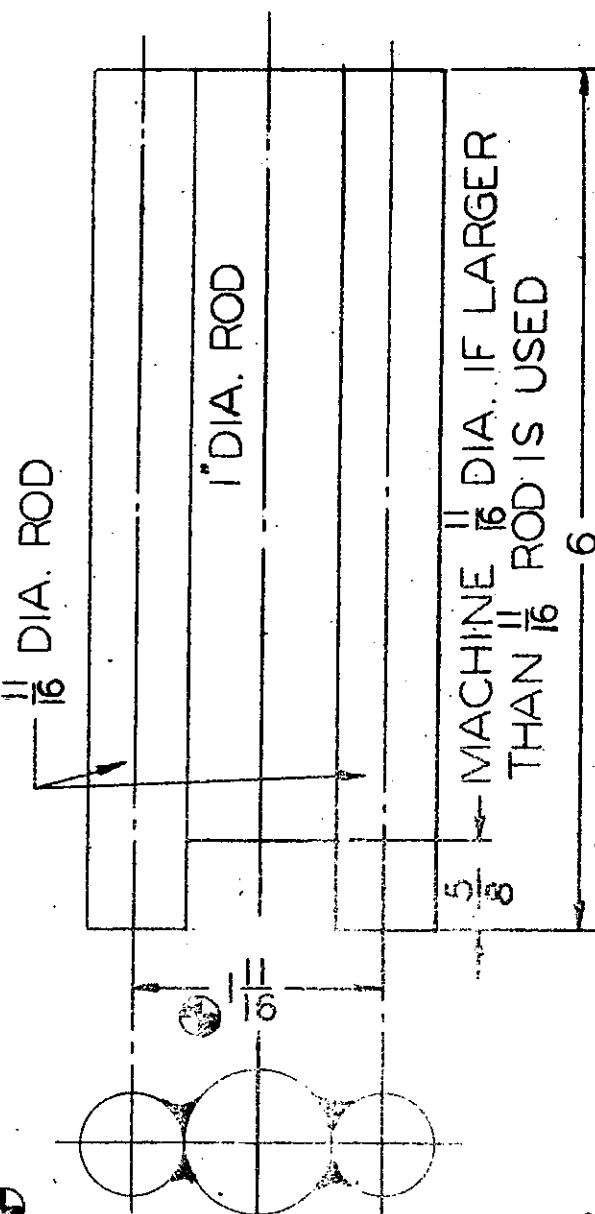
What is the proper amperage to set it at?

The clutch needs to be set when it slips while cutting across the face. Normally the clutch may be slipped if the machine is sumped too fast. The clutch should not slip while cutting across the face. Under normal conditions the machine should slide before the clutch slips. Set it to do the job.

As a check, the following amp readings may be used as normal values for clutch slip. These are the amps pulled just before the clutch starts to slip. After the slip starts, the reading will drop off noticeably.

Machine	Volts	Motor N/P Rating (HP)	Amps
16 RB	250 (DC)	100	500
	440 (60 Cyc.)	135	275
	550 (60 Cyc.)	135	225
	440 (60 Cyc.)	150	325
	550 (60 Cyc.)	150	275
15 RU	250 (DC)	125	600
	250 (DC)	140	675
	440 (60 Cyc.)	75	375
	440 (60 Cyc.)	185	375
	550 (60 Cyc.)	185	300
	440 (60 Cyc.)	230	475
	550 (60 Cyc.)	230	375
	550 (50 Cyc.)	190	160
	500 (50 Cyc.)	210	370

CLUTCH ADJUSTING TOOL



DISTANCE MUST BE HELD DURING WELDING

JOY MANUFACTURING CO.
PLANT LOCATION AS INDICATED BELOW

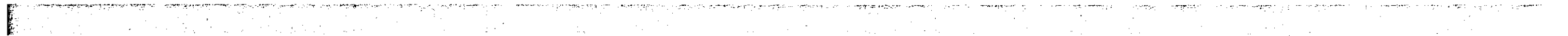
CLAREMONT, N. H.	NEW PHILADELPHIA, O.
DALLAS, TEXAS	ST. LOUIS, MISSOURI
FRANKLIN, PA.	
GALT, ONTARIO, CANADA	
GREENOCK, SCOTLAND	
MICHIGAN CITY, IND.	

INSTRUCTION SHEET
(CLUTCH ADJUSTMENT)

SIMILAR TO	DR. <i>W. D. ...</i>	SCALE	CLASS
SUPERSEDED BY	TR. 4-11-70		
SUPERSEDED BY	CK		
REFLECTS	APPD.		
REPLACED BY			

CM5073

ENG. ORDER	FBK 962
DATE ISSUED	FCC 193
REVISIONS	



503041-7/-9/-11

CLUTCH ASSY.

USE WITH 503041-7 ONLY:

1 A182400 SHAFT

USE WITH 503041-9 ONLY:

1 14112-CM1 SHAFT

USE WITH 503041-11 ONLY:

1 1190230-184 SHAFT

2	1190158-3	ADJ. NUT PLUNGER
1	1190158-4	BALL DETENT PLUNGER
1	1190186-18	CLUTCH PLATE RING
1	1190262-50	SPACER
1	1190262-51	SPACER
1	1190262-55	SPACER

1	905477-551	SNAP RING
1	940001-221	BEARING
1	940046-5216	BEARING

PART SHOWN FOR REFERENCE ONLY:

1190584 INSERT

PARTS COMMON TO ALL LISTS:

1	3190054-32	HUB
	1190178-15	BOTTOM BEARING RETAINER
	1190178-20	BEARING CARRIER
	900028-14	CAP SCREW
	902244-183	CAP SCREW
1	3190510-1	DETENT ASSY.
14	10641X	CLUTCH SPRING
1	12492-CM1	SPACER
1	14113-CM	SPIDER
20	15195-CM1	DRIVING CLUTCH PLATE
19	15196-CM	DRIVEN CLUTCH PLATE
2	1190118-10	ADJ. NUT

REVISION/

(503041-7)
(503041-9)
(503041-11)

FBP127
FBP127
FBP127

503041-7

503041-7	FOR 15RU	A182400 SHAFT
503041-9	FOR 10RU 6" BUG D.	14112-CMI SHAFT
503041-11	FOR 15RU 9" BUG D.	1190230-184 SHAFT

(P) PUNCH INLINE MARKS OPPOSITE DELETED SPACER (3190510-1) FOR BLIND LOCATION.

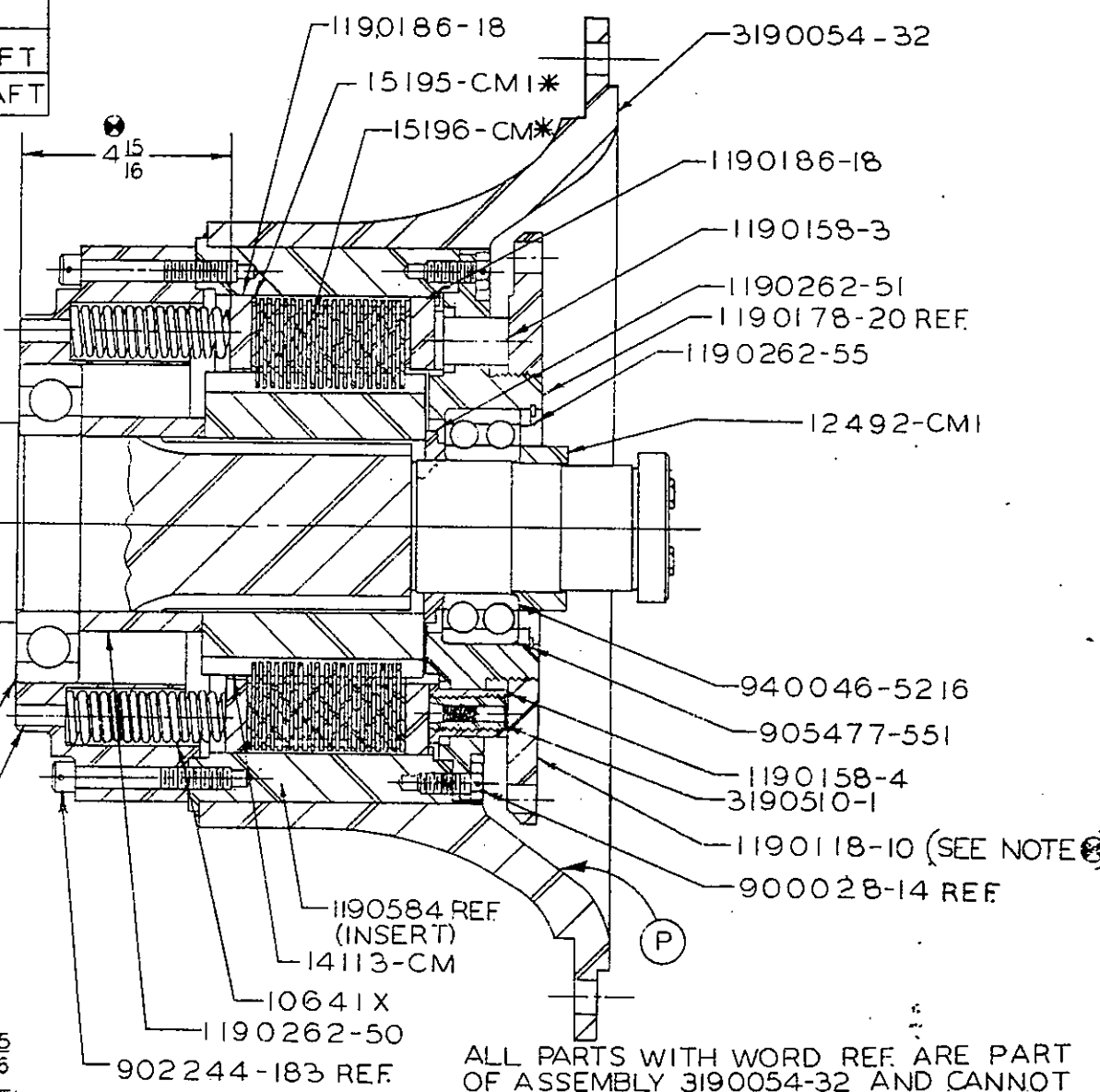
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SHAFT - SEE TABLE (A182400 SHOWN)

⊗ WHEN FACE OF NUT 1190118-10 IS FLUSH WITH END OF 3190054-32 CORRECT SPRING HEIGHT IS OBTAINED

⊗ ADJUST CLUTCH TO INITIAL HEIGHT $4\frac{15}{16}$

BRONZE STEEL
* ALTERNATE 15195-CMI AND 15196-CM STARTING AND ENDING WITH 15195-CMI LUBRICATE PLATES WITH TO-M OIL WHEN INSTALLING.



ALL PARTS WITH WORD REF. ARE PART OF ASSEMBLY 3190054-32 AND CANNOT BE PURCHASED SEPARATELY EXCEPT 1190584 INSERT

LITHOPRINT THIS DRAWING

JOY MANUFACTURING CO.	
PLANT LOCATION AS INDICATED BELOW	
BUFFALO, N. Y.	NEW PHILADELPHIA, O.
CLAREBONT, N. H.	
FRANKLIN, PA.	<input checked="" type="checkbox"/>
GALT, ONTARIO, CANADA	
GREENOCK, SCOTLAND	
MICHIGAN CITY, IND.	

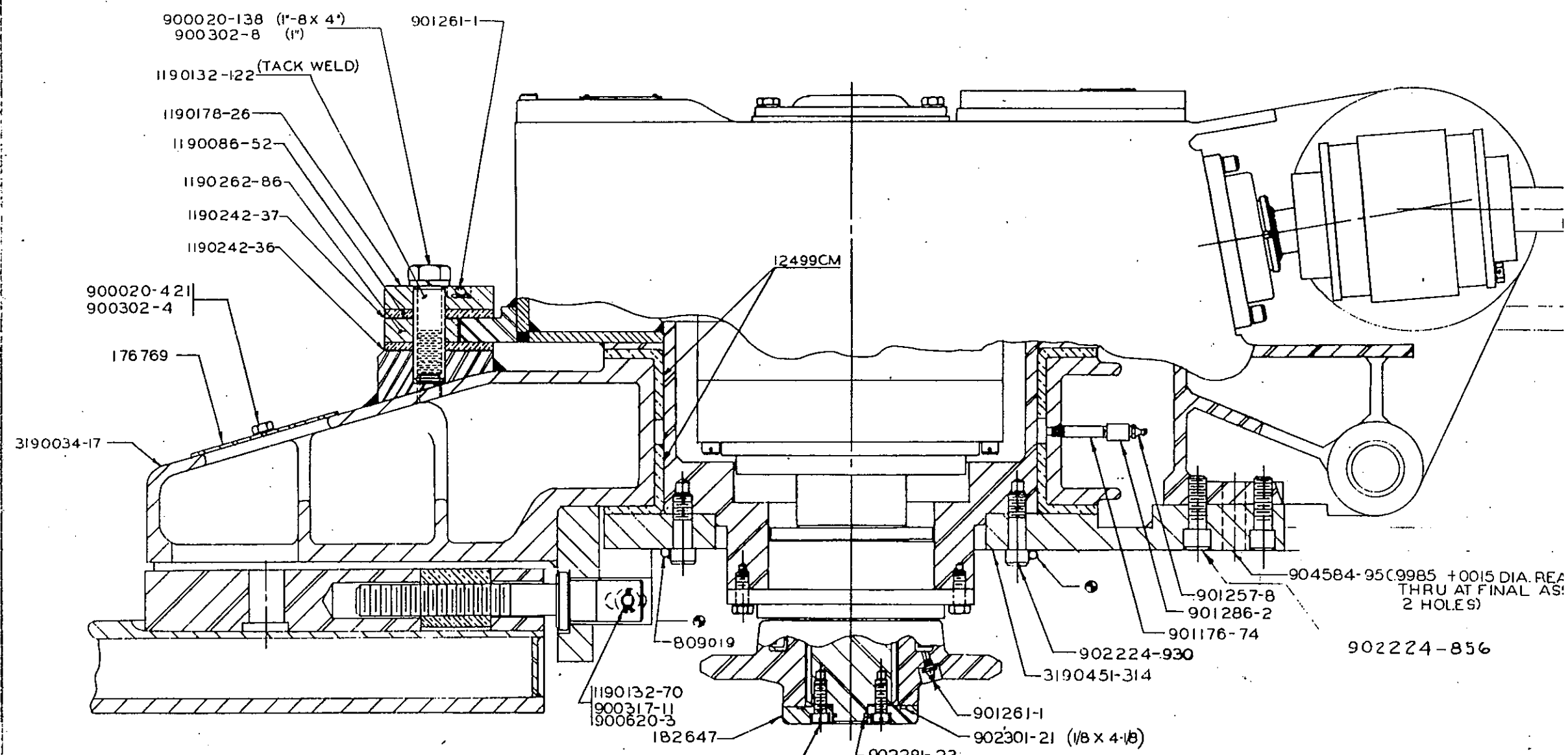
CLUTCH ASSEMBLY

SIMILAR TO	DR. CLARA SMITH	SCALE: HAL E. CLAS 15RU
SUPERSEDED BY	TR. 5-2-62	
REPLACES		
REPLACED BY		
APPD.		503041-7

E.O. DATE	FBE 41	REVISIONS	FBE 280	FBE 428	FBE 455	FBE 127	FBE 755	FBE 570
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503030-27

CM 5103 A



WELD WIRE TO CAPSCREWS ONLY

U.S. FBK 710
DATE 9-18-72

JOY MANUFACTURING CO.		MISC. PARTS FOR CUTTER HEAD WITH GIB	
PLANT LOCATION AS INDICATED BELOW			
DESIGNED BY	DATE	APPROVED BY	SCALE
DR. CHAPMAN	9-18-72		CLASS 2
REPLACED BY			
REPLACED BY			

CM 5103

503030-27

DISC JOINT DRIVE ASSY.

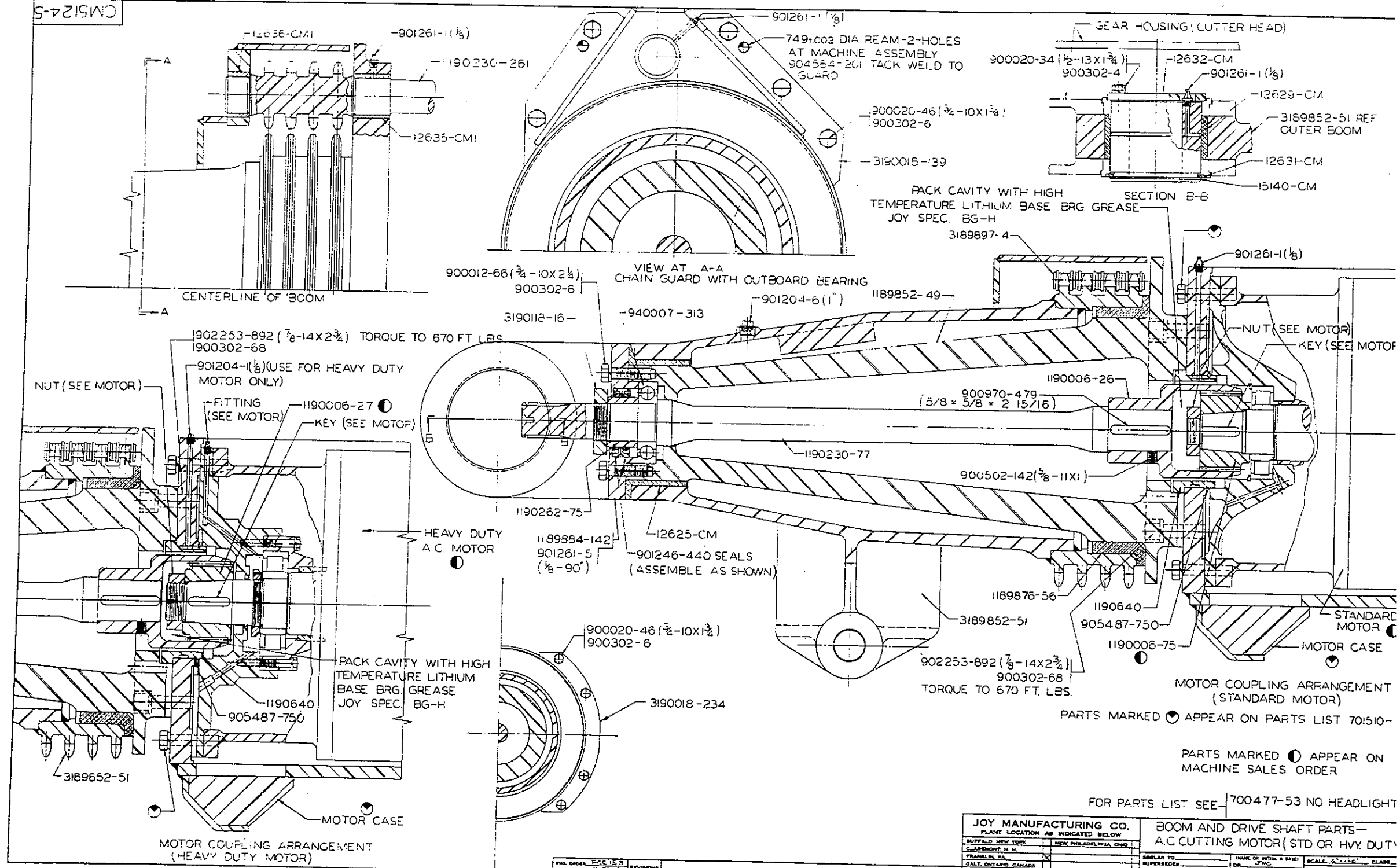
THE FOLLOWING PARTS SHOWN ON THE DRAWING ARE
FOR REPAIR REFERENCE ONLY:

2	3190218-20	SEAL
1	3190218-23	SPHERICAL SEAL SUB-ASSY.
1	1189941-275	WIPER COVER
1	1190218-24	OUTER SPHERICAL SEAL
1	1190274-33	SPRING
1	3190262-77	SPLINED SPACER RING
2	3190638	DISC JOINT SUB-ASSY.
2	1189800-51	SPLINED ADAPTER RING
6	1189998-12	GASKET
1	1190186-32	SNAP RING
2	1190639	LUBE FITTING
12	900043-154	1/2" X 4-1/2" CAP SCREW
12	900302-4	1/2" LOCKWASHER
4	809023	#16 WIRE

REVISION/

FBK86

CM5124-5



JOY MANUFACTURING CO.		BOOM AND DRIVE SHAFT PARTS -	
PLANT LOCATION AS INDICATED BELOW		A.C. CUTTING MOTOR (STD OR HVY. DUTY)	
BUFFALO, NEW YORK	NEW PHILADELPHIA, OHIO	SIMILAR TO	DATE OF INT'L. & DATE
CLAREMONT, N. H.		SUPPERSED BY	DR. J.W.C.
FRANKLIN, PA.		REPLACES	CR.
GALT, ONTARIO, CANADA		REPLACED BY	APPD.
GREENOCK, SCOTLAND			
MICHIGAN CITY, IND.			

REV. 10-68

CM5124-

LIST OF PARTS AS CALLED FOR ON B/M 700477-53

1	3189852-51	OUTER BOOM
1	3189897-4	BOOM ROLL CHAIN
1	3190018-139	R.H. GUARD
1	3190018-234	L.H. GUARD
1	3190118-16	LOCKNUT
1	12625-CM	BUSHING
2	12629-CM	BUSHING
4	12631-CM	TRUNNION LOCK RING
2	12632-CM	TRUNNION PIN PLATE
1	12635-CM1	BOOM ROLL SHAFT BUSHING
1	12636-CM1	OUTBOARD BEARING BUSHING
2	15140-CM	PIN
1	1189852-49	INNER BOOM
1	1189876-56	SPROCKET BUSHING
1	1189884-142	INNER BOOM CAP
1	1190006-26	GEAR
1	1190230-77	SHAFT
1	1190230-261	BOOM ROLL SHAFT
1	1190262-75	SPACER
1	1190640	DOWEL

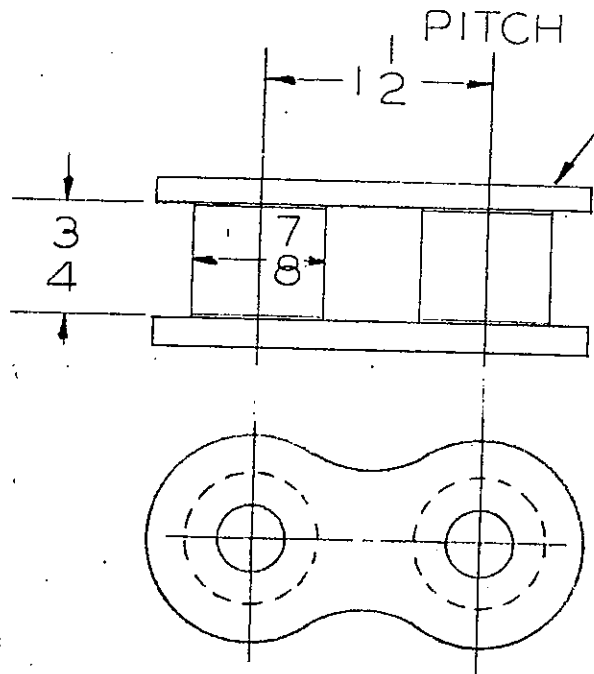
PARTS SHOWN FOR REFERENCE ONLY:

3189852-51	OUTER BOOM
1190006-27	EXTERNAL SPLINE GEAR
1190006-75	EXTERNAL SPLINE GEAR

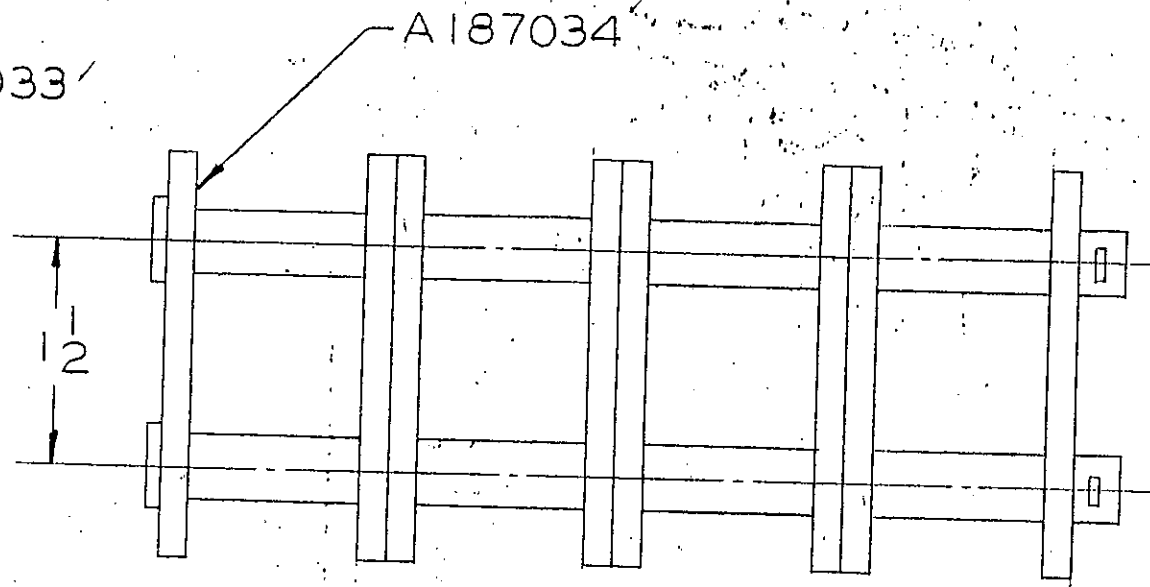
8	900012-66	3/4"-10 X 2-1/4" CAP SCREW
8	900020-34	1/2"-13 X 1-1/2" CAP SCREW
9	900020-46	3/4"-10 X 1-3/4" CAP SCREW
8	900302-4	1/2" LOCKWASHER
17	900302-6	3/4" LOCKWASHER
23	900302-68	7/8" LOCKWASHER
1	900502-142	5/8"-11 X 1" SET SCREW
1	900970-479	5/8" X 5/8" X 2-15/16" KEY
1	901204-1	1/8" PIPE PLUG
1	901204-6	1" PIPE PLUG
2	901246-440	OIL SEAL
4	901261-1	1/8" FITTING
1	901261-5	1/8" FITTING
23	902253-892	7/8"-14 X 2-3/4" CAP SCREW
2	904584-201	DOWEL PIN
1	905487-750	SNAP RING
1	940007-313	BEARING

REVISION/ FCC153

REF. DWG. - CM5124-5



ROLLER LINK NON-STD.
SOLID ROLLER



PIN LINK COTTERED TYPE WITH
SLIP FIT CENTER AND COVER PLATES.
USE WITH NON-STD. ROLLER LINK
FOR NO. 472 QUADRUPLE NON-STD.
1-1/2 PITCH CHAIN 7/8 DIA. ROLLER
3/4 LONG.

PART NO.	USED ON	PITCHES
SK-10217	10-RU & 17 RU	44
SK-10540	11 & 15RU LIGHT BOOM	38
3189897-4	15-RU HEAVY BOOM	46
3189897-9	16 RB COUPLING	12

JOY MANUFACTURING CO.
PLANT LOCATION AS INDICATED BELOW

CLAREMONT, N. H.	<input checked="" type="checkbox"/>	NEW PHILADELPHIA, O.
DALLAS, TEXAS	<input type="checkbox"/>	ST. LOUIS, MISSOURI
FRANKLIN, PA.	<input type="checkbox"/>	
GALT, ONTARIO, CANADA	<input type="checkbox"/>	
GREENOCK, SCOTLAND	<input type="checkbox"/>	
MICHIGAN CITY, IND.	<input type="checkbox"/>	

**BOOM ROLL DRIVE CHAIN
REPAIR PARTS**

SIMILAR TO _____
SUPERSEDED BY _____
SUPERSEDED BY _____
REPLACES _____
REPLACED BY 00571967-12

DR. *ATW. 8/20/57*
TR. _____
CK. _____
APPD. *APB. 8/20/57*

SCALE *FULL* CLASS *CM*

CM-3009

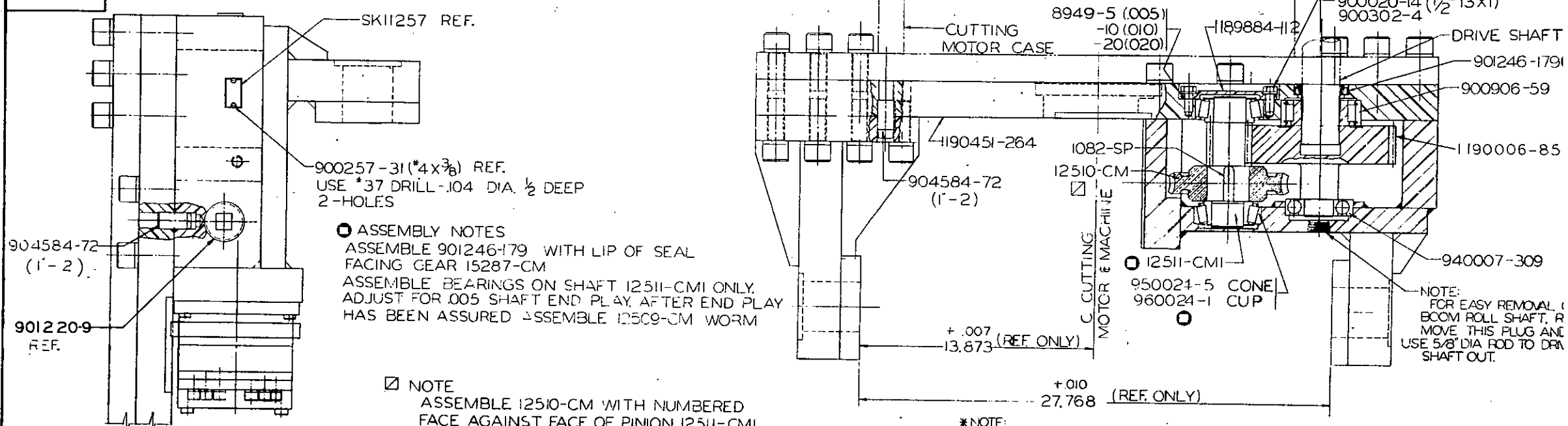
APP'D.
FOR TRAC.



DER. *CR-727*
JUED _____
REVISIONS CV-35 CAD-909 FBB-861 FBE210 FDE0401



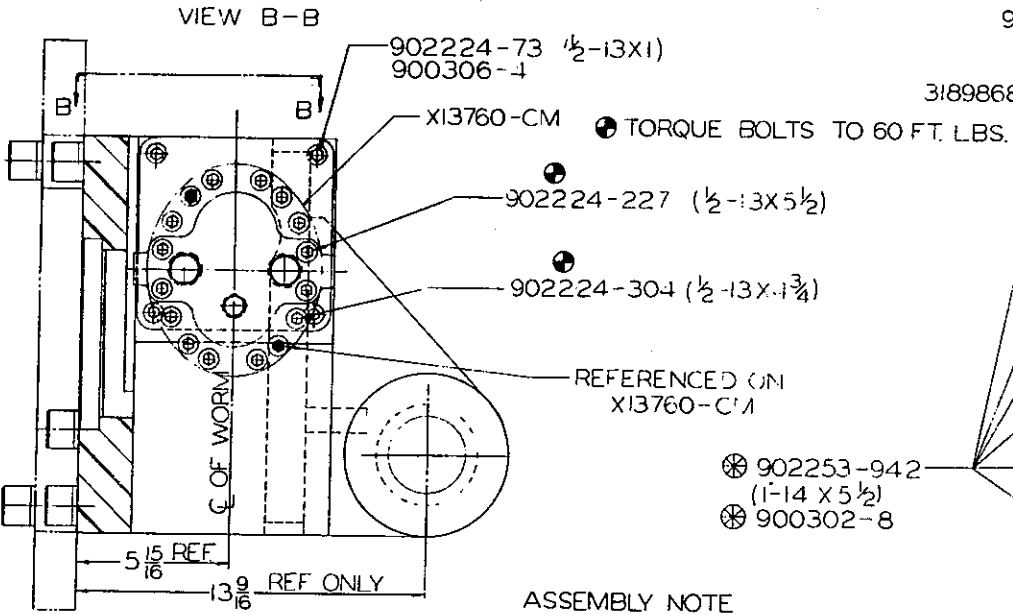
SEI-000605



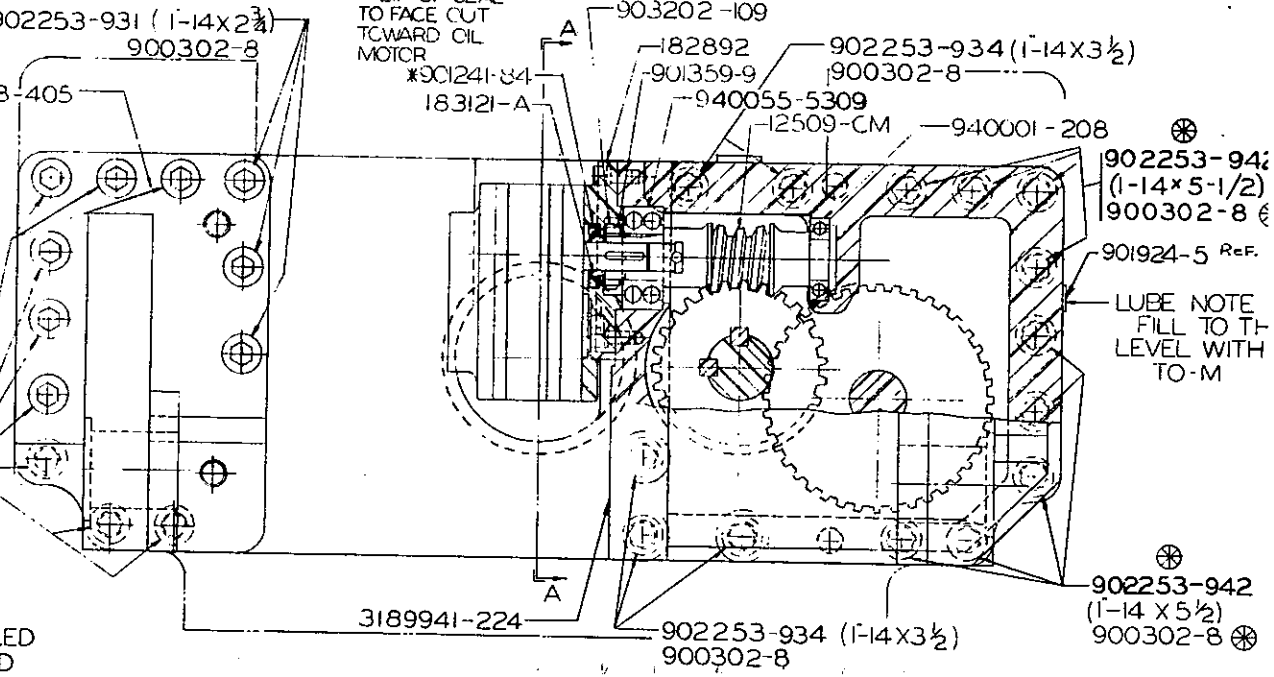
ASSEMBLY NOTES
ASSEMBLE 901246-179 WITH LIP OF SEAL
FACING GEAR 15287-CM
ASSEMBLE BEARINGS ON SHAFT 12511-CMI ONLY.
ADJUST FOR .005 SHAFT END PLAY. AFTER END PLAY
HAS BEEN ASSURED ASSEMBLE 12509-CM WORM

NOTE
ASSEMBLE 12510-CM WITH NUMBERED
FACE AGAINST FACE OF PINION 12511-CMI

*NOTE:
LIP OF SEAL
TO FACE CUT
TOWARD OIL
MOTOR



ASSEMBLY NOTE
PARTS MARKED ⊗ ARE ASSEMBLED
AT FINAL MACHINE ASSEMBLY AND
APPEAR ON SALES ORDER



JOY MANUFACTURING CO.		TRANSMISSION - BOOM ROLL	
PLANT LOCATION AS INDICATED BELOW			
BUFFALO, NEW YORK	NEW ENGLAND, MASS. CHD	SIMILAR TO 263489-100	DR. JWC
CLARENCE, N. H.		SUPERSEDED BY	TR. 2-20-81
FRANKLIN, PA.		REPLACES	
GALT, ONTARIO, CANADA		REPLACES BY 0223000-0141	
GUNDSHOOT, SCOTLAND			
WORMBURN CITY, SD.			
			SCALE: 1/2" = 1" CLARENCE
			503000-13

REV. 158
REV. 2-20-81

REVISIONS
FCC 198
FCC 353
FCC 0800

503000-135

BOOM ROLL TRANSMISSION

1	X13760-CM	OIL MOTOR
1	3189868-405	BOOM ROLL BRACKET
1	3189941-224	TRANSMISSION COVER
2	1082-SP	KEY
3	8949-5	.005" SHIM
2	8949-10	.010" SHIM
2	8949-20	.020" SHIM
1	12509-CM	WORM
1	12510-CM	WORM GEAR
1	12511-CM1	DRIVE PINION
1	182892	ADAPTER
1	183121-A	SPACER
1	1189884-112	END CAP
1	1190006-85	DRIVE GEAR
1	1190451-264	MOUNTING PLATE

PARTS SHOWN FOR REFERENCE ONLY:

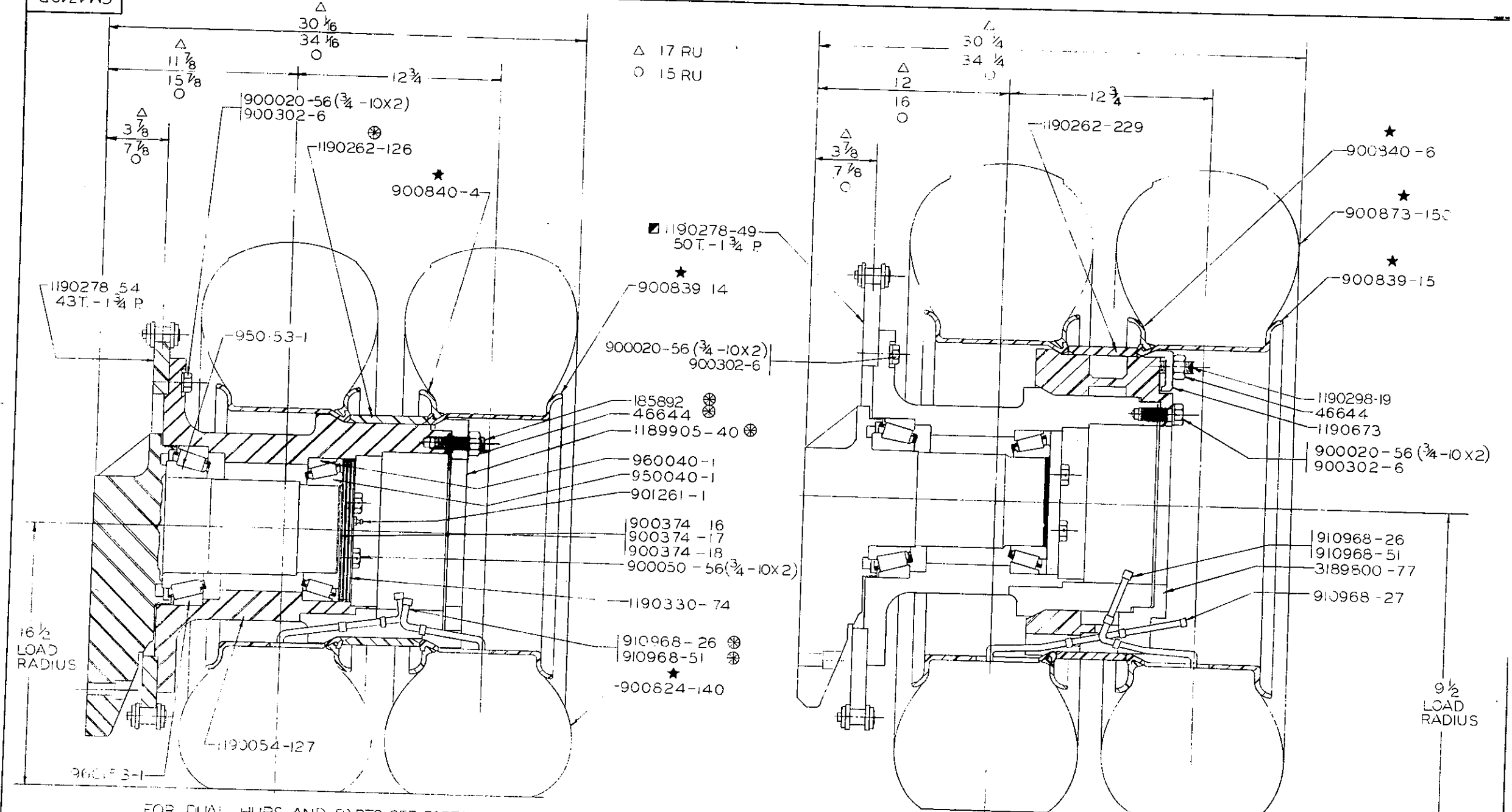
901220-9	PIPE PLUG
900257-31	#4 X 3/8" DRIVE SCREW
901924-5	PIPE PLUG
902253-942	1"-14 X 5-1/2" CAP SCREW
900302-8	1" LOCKWASHER

4	900020-14	1/2" X 1" CAP SCREW
4	900302-4	1/2" LOCKWASHER
8	900302-8	1" LOCKWASHER
14	900306-4	1/2" LOCKWASHER
1	900906-59	BEARING
1	901241-84	OIL SEAL
1	901246-179	OIL SEAL
1	901359-9	LOCKWASHER
4	902224-73	1/2" X 1" CAP SCREW
4	902224-227	1/2" X 5-1/2" CAP SCREW
10	902224-304	1/2" X 4-3/4" CAP SCREW
3	902253-931	1" X 2-3/4" CAP SCREW
5	902253-934	1" X 3-1/2" CAP SCREW
1	903202-109	BEARING LOCKNUT
4	904584-72	DOWEL PIN
1	940001-208	BEARING
1	940007-309	BEARING
1	940055-5309	BEARING
2	950024-5	CONE
2	960024-1	CUP

REVISION/

FCC353

CM4749B



FOR DUAL HUBS AND PARTS SEE PARTS LIST 700419-100
 DUAL WHEEL, ADAPTER PARTS FOR 10.00X15 TIRES-SEE 700419-112
 ★ SEE SALES ORDER FOR RIM, RING, AND TIRE ASSEMBLY

DUAL WHEEL ADAPTER AND PARTS PARTS LIST FOR
 10.00 X 20 TIRES - 700419-111 OR 700419-117 LESS SPROCKET

REV. 02/21/53
 DATE 02/21/53
 573 FCCB4 FCC315

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JOY MANUFACTURING CO.
 PLANT LOCATION AS INDICATED BELOW
 BIRMINGHAM, AL
 BUFFALO, NY
 CAMBRIDGE, ONT. CANADA
 EAST PITTSBURGH, PA
 LA GRANGE, ILL
 MICHIGAN CITY, IN
 NEW PULASKI, WVA. ON
 WEST PITTSBURGH, PA

DUAL HUBS AND PARTS AND
 DUAL WHEELS AND PARTS
 SIMILAR TO CM4749B
 SUPERSEDED BY
 REPLACES
 NAME OR INITIAL & DATE
 DR. DEVOYAN
 TR. S. S. ZB
 SCALE HALF
 CLASS 700-1520
 CM 4749 B

LIST OF PARTS AS CALLED FOR ON B/M'S 700419-100/-111/-112/-117

USE WITH B/M 700419-100 ONLY:

2	1190054-127	HUB
2	1190330-74	WASHER
8	900050-56	3/4"-10 X 2" CAP SCREW
6	900374-16	.005" SHIM
6	900374-17	.007" SHIM
6	900374-18	.020" SHIM
2	901261-1	FITTING
2	950040-1	CONE
2	950153-1	CONE
2	960040-1	CUP
2	960153-1	CUP
2'	809023	STEEL WIRE

USE WITH B/M 700419-112 ONLY:

26	46644	NUT
26	185892	STUD
2	1189905-40	CLAMP
2	1190262-126	SPACER
2	1190278-54	SPROCKET
24	900020-54	3/4"-20 X 2" CAP SCREW
24	900302-6	3/4" LOCKWASHER
2	910968-26	VALVE EXTENSION
4	910968-51	VALVE EXTENSION

USE WITH B/M 700419-111 ONLY:

2	3189800-77	ADAPTER
30	46644	NUT
30	1190298-19	STUD
2	1190262-229	SPACER
2	1190278-49	SPROCKET
30	1190673	CLAMP
26	900020-56	3/4"-10 X 2" CAP SCREW
24	900020-418	3/4"-10 X 1-7/8" CAP SCREW
50	900302-6	3/4" LOCKWASHER

PARTS SHOWN FOR REFERENCE ONLY:

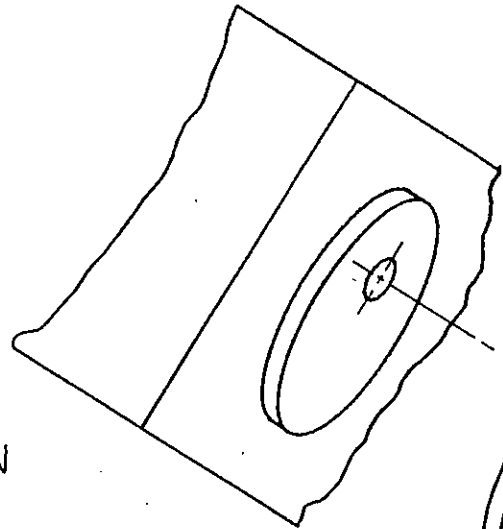
900824-140	TIRE, TUBE & FLAP
900839-14	RIM BASE
900839-15	RIM BASE
900840-4	RING
900840-6	RING
900873-150	TIRE, TUBE & FLAP

REVISION/ FCC315
REF. DWG. - CM4749-B

USE WITH B/M 700419-117 ONLY:

2	3189800-77	ADAPTER.
30	46644	NUT
2	1190262-229	SPACER
30	1190298-19	STUD
30	1190673	CLAMP
13	900020-56	3/4"-10 X 2" CAP SCREW
13	900302-6	3/4" LOCKWASHER

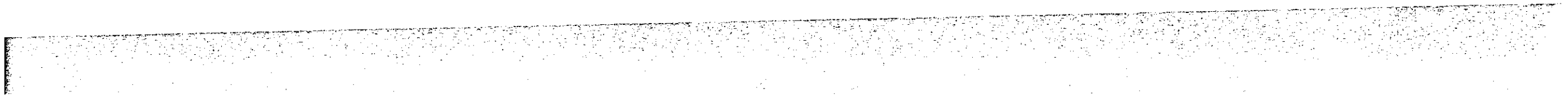
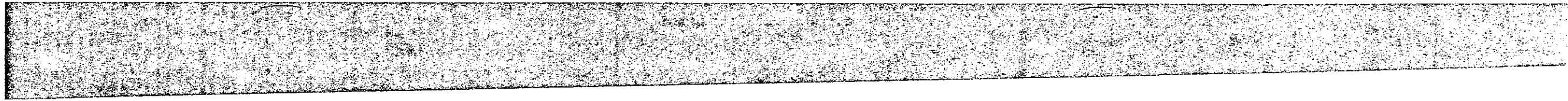
TRANSMISSION
HOUSING



S-1236
MOUNTING ADAPTER PLATE

S-1235
CHAR-LYNN MOTOR
WITH SPECIAL SHAFT

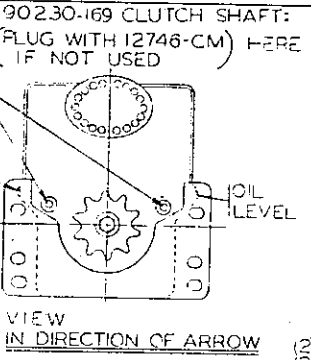
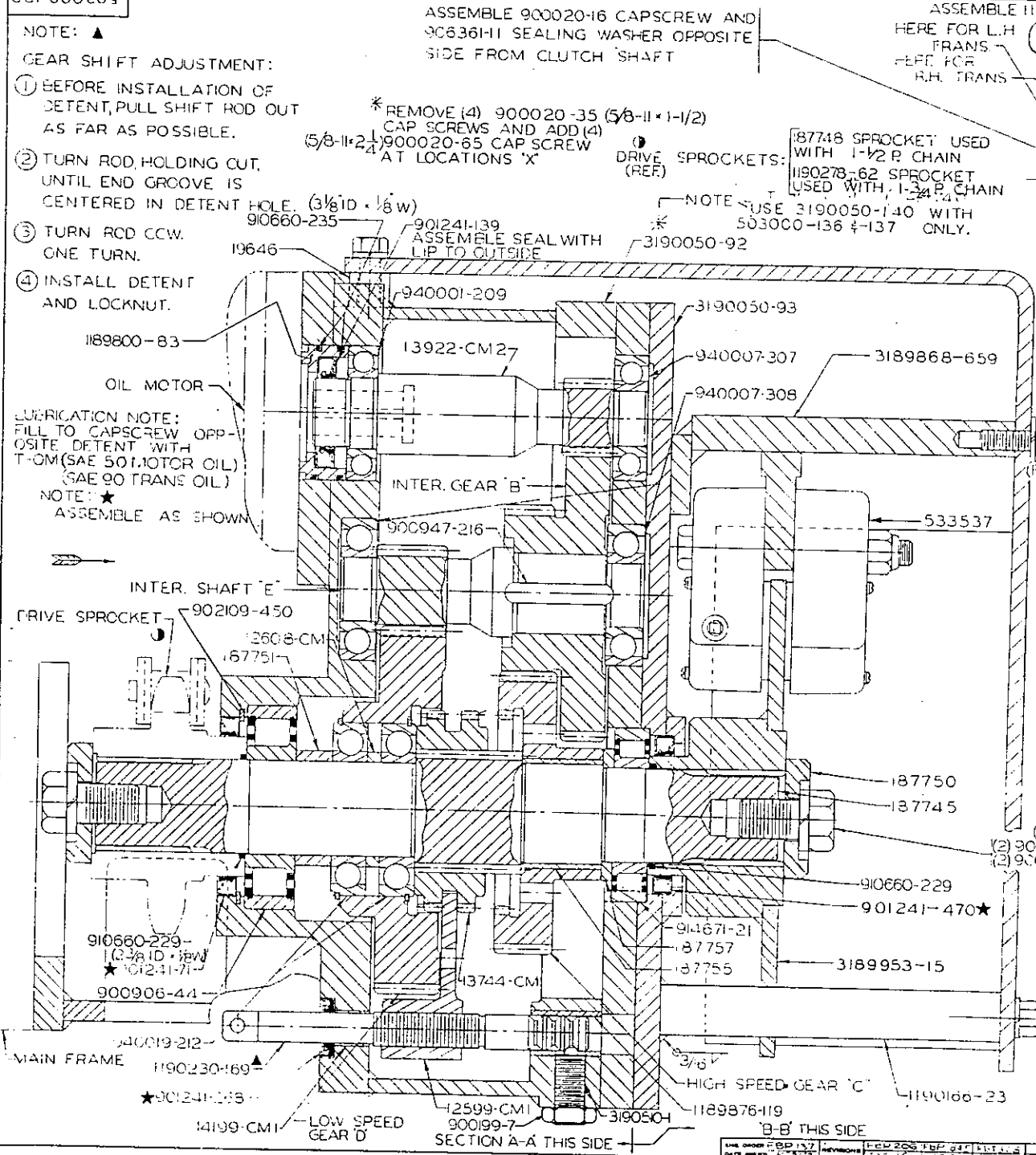
SOUTHERN EQUIPMENT COMPANY PECKS MILL, WV 25547		
SCALE: NONE	APPROVED BY:	DRAWN BY <i>JEL</i>
DATE: 3-11-91		REVISED
TRANSMISSION MODIFICATION FOR CHAR-LYNN MOTOR ASSEMBLY VIEW		
		DRAWING NUMBER S-1306



221-000E05

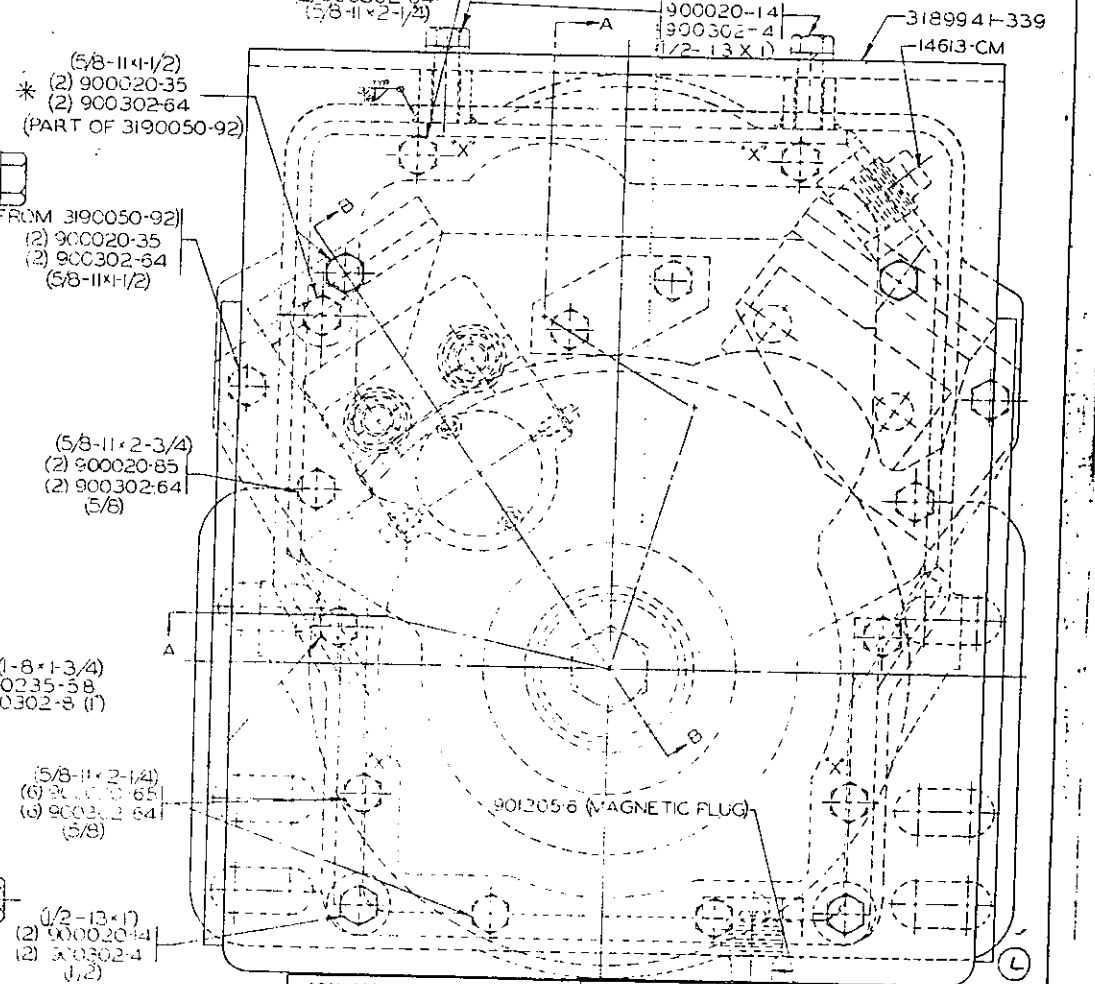
- NOTE: ▲
GEAR SHIFT ADJUSTMENT:
 ① BEFORE INSTALLATION OF DETENT, PULL SHIFT ROD OUT AS FAR AS POSSIBLE.
 ② TURN ROD HOLDING OUT UNTIL END GROOVE IS CENTERED IN DETENT HOLE. (3/8 ID x 1/8 W)
 ③ TURN ROD CCW ONE TURN.
 ④ INSTALL DETENT AND LOCKNUT.

LUBRICATION NOTE:
 FILL TO CAPSCREW OPPOSITE DETENT WITH T-OIL (SAE 50 MOTOR OIL) (SAE 90 TRANS OIL)
 NOTE: ★ ASSEMBLE AS SHOWN



TRANS. RATIOS	TRANS. ASSY.	INT. GEAR 'B'	HIGH GEAR 'C'	LOW GEAR 'D'	INT. SHAFT 'E'
18.75:1-LOW	503000-122	R.H. 187728A	187729 A	187653A	13749-CM3
6.83:1-HIGH	503000-123	L.H. 50/25 T.	41/29 T.	54/29 T.	12 T.
8.75:1-LOW	503000-124	R.H. 1190006-39	1190006-40	187653 A	13749-CM3
5.65:1-HIGH	503000-125	L.H. 50/28 T.	38/29 T.	54/29 T.	12 T.

TRANS. ASSY.	DESCRIPTION
503000-128	R.H. SAME AS 503000-122, LESS 3189941-339
503000-129	L.H. SAME AS 503000-123, LESS 3189941-339
503000-130	R.H. SAME AS 503000-124, LESS 3189941-339
503000-131	L.H. SAME AS 503000-125, LESS 3189941-339
503000-136	R.H. SPECIAL-SAME RATIO AS -122
503000-137	L.H. SPECIAL-SAME RATIO AS -123



JOY MANUFACTURING CO.
 PLANT LOCATION AS INDICATED BELOW

BUFFALO, NEW YORK	NEW BRUNSWICK, N.J.
CLAREMONT, N.H.	
FRANKLIN, PA.	
SALT SPRINGS, CANADA	
GREENOCK, SCOTLAND	
WETUMBO, ONT. CAN.	

TRANSMISSION ASSEMBLY

SCALE: FULL

CLASS: IS, RI

503000-122

503000-122/-123/-124/-125/-128/-129/-130/-131/-136/-137

TRANSMISSION ASSY.

USE WITH 503000-122 ONLY:

1	3189941-339	DISC COVER
1	3190050-92	BEARING RETAINER & HOUSING
2	900020-35	5/8" X 1-1/2" CAP SCREW
2	900302-64	5/8" LOCKWASHER
1	13749-CM3	INTERMEDIATE SHAFT
1	187653A	LOW SPEED GEAR
1	187728A	INTERMEDIATE GEAR
1	187729A	HIGH SPEED GEAR
2	1190166-23	POST

USE WITH 503000-123 ONLY:

1	3189941-339	DISC COVER
1	3190050-92	BEARING RETAINER & HOUSING
2	900020-35	5/8" X 1-1/2" CAP SCREW
2	900302-64	5/8" LOCKWASHER
1	13749-CM3	INTERMEDIATE SHAFT
1	187653A	LOW SPEED GEAR
1	187728A	INTERMEDIATE GEAR
1	187729A	HIGH SPEED GEAR
2	1190166-23	POST

USE WITH 503000-124 ONLY:

1	3189941-339	DISC COVER
1	3190050-92	BEARING RETAINER & HOUSING
2	900020-35	5/8" X 1-1/2" CAP SCREW
2	900302-64	5/8" LOCKWASHER
1	13749-CM3	INTERMEDIATE SHAFT
1	187653A	LOW SPEED GEAR
1	1190006-39	INTERMEDIATE GEAR
1	1190006-40	HIGH SPEED GEAR
1	1190166-23	POST

USE WITH 503000-125 ONLY:

1	3189941-339	DISC COVER
1	3190050-92	BEARING RETAINER & HOUSING
2	900020-35	5/8" X 1-1/2" CAP SCREW
2	900302-64	5/8" LOCKWASHER
1	13749-CM3	INTERMEDIATE SHAFT
1	187653A	LOW SPEED GEAR
1	1190006-39	INTERMEDIATE GEAR
1	1190006-40	HIGH SPEED GEAR
1	1190166-23	POST

USE WITH 503000-128 ONLY:

1	3190050-92	BEARING RETAINER & HOUSING
2	900020-35	5/8" X 1-1/2" CAP SCREW
2	900302-64	5/8" LOCKWASHER
1	13749-CM3	INTERMEDIATE SHAFT
1	187653A	LOW SPEED GEAR
1	187728A	INTERMEDIATE GEAR
1	187729A	HIGH SPEED GEAR
2	1190166-23	POST

USE WITH 503000-129 ONLY:

1	3190050-92	BEARING RETAINER & HOUSING
2	900020-35	5/8" X 1-1/2" CAP SCREW
2	900302-64	5/8" LOCKWASHER
1	13749-CM3	INTERMEDIATE SHAFT
1	187653A	LOW SPEED GEAR
1	187728A	INTERMEDIATE GEAR
1	187729A	HIGH SPEED GEAR
2	1190166-23	POST

USE WITH 503000-130 ONLY:

1	3190050-92	BEARING RETAINER & HOUSING
2	900020-35	5/8" X 1-1/2" CAP SCREW
2	900302-64	5/8" LOCKWASHER
1	13749-CM3	INTERMEDIATE SHAFT
1	187653A	LOW SPEED GEAR
1	1190006039	INTERMEDIATE GEAR
1	1190006-40	HIGH SPEED GEAR
1	1190166-23	POST

USE WITH 503000-131 ONLY:

1	3190050-92	BEARING RETAINER & HOUSING
2	900020-35	5/8" X 1-1/2" CAP SCREW
2	900302-64	5/8" LOCKWASHER
1	13749-CM3	INTERMEDIATE SHAFT
1	187653A	LOW SPEED GEAR
1	1190006-39	INTERMEDIATE GEAR
1	1190006-40	HIGH SPEED GEAR
1	1190166-23	POST

USE WITH 503000-136 ONLY:

1	3190050-140	BEARING RETAINER & HOUSING
4	900020-65	5/8" X 2-1/4" CAP SCREW
4	900302-64	5/8" LOCKWASHER
1	13749-CM3	INTERMEDIATE SHAFT
1	187653A	LOW SPEED GEAR
1	187728A	INTERMEDIATE GEAR
1	187729A	HIGH SPEED GEAR
2	1190166-23	POST

USE WITH 503000-137 ONLY:

1	3190050-140	BEARING RETAINER & HOUSING
4	900020-65	5/8" X 2-1/4" CAP SCREW
4	900302-64	5/8" LOCKWASHER
1	13749-CM3	INTERMEDIATE SHAFT
1	187653A	LOW SPEED GEAR
1	187728A	INTERMEDIATE GEAR
1	187729A	HIGH SPEED GEAR
2	1190166-23	POST

PARTS COMMON TO ALL LISTS:

1	533537	BRAKE CYLINDER
1	3189868-659	SERVICE BRAKE MOUNTING BRACKET
1	3189953-15	BRAKE DISC
1	3190050-93	BEARING & BRAKE MOUNTING HOUSING
1	3190510-1	DETENT
1	12595-CM1	CLUTCH ARM
1	12608-CM	SPACER
1	12746-CM	PLUG
1	13744-CM	CLUTCH GEAR
1	13922-CM2	DRIVE SHAFT
1	14199-CM1	BUSHING
1	14613-CM	FILLER PLUG
2	18646	BLOCK
1	187745	CLUTCH SHAFT
2	187750	CAP
1	187751	SPACER
1	187755	BUSHING
1	187757	SPACER
1	1189800-83	ADAPTER
1	1189876-119	BUSHING
1	1190230-169	CLUTCH ARM SHAFT

6	900020-14	1/2" X 1" CAP SCREW
1	900020-16	CAP SCREW
8	900020-65	5/8" X 2-1/4" CAP SCREW
2	900020-85	5/8" X 2-3/4" CAP SCREW
1	900199-7	3/4"-10 JAM NUT
2	900235-58	1" X 1-3/4" CAP SCREW
5	900302-4	1/2" LOCKWASHER
2	900302-8	1" LOCKWASHER
10	900302-64	5/8" LOCKWASHER
1	900906-44	BEARING
1	900947-216	KEY
1	901205-6	1" PLUG
1	901241-71	OIL SEAL
1	901241-139	OIL SEAL

1	901241-268	OIL SEAL
1	901241-470	OIL SEAL
1	902109-450	SNAP RING
1	906361-11	3/4" WASHER
1	910660-229	1/8" X 2-3/8" I.D. O-RING
2	910660-235	1/8" X 3-1/8" I.D. O-RING
1	914671-21	BEARING
1	940001-209	BEARING
1	940007-307	BEARING
2	940007-308	BEARING
2	940019-212	BEARING

PARTS SHOWN FOR REFERENCE ONLY:

187748	1-1/2" P. CHAIN SPROCKET
1190278-62	1-3/4" P. CHAIN SPROCKET

REVISION/	(503000-122)	FBT92
	(503000-123)	FBT92
	(503000-124)	FBT92
	(503000-125)	FBT92
	(503000-128)	FBT92
	(503000-129)	FBT92
	(503000-130)	FBT92
	(503000-131)	FBT92
	(503000-136)	FCC320
	(503000-137)	FCC320

DWG SIZE 1

FORM NO 8104

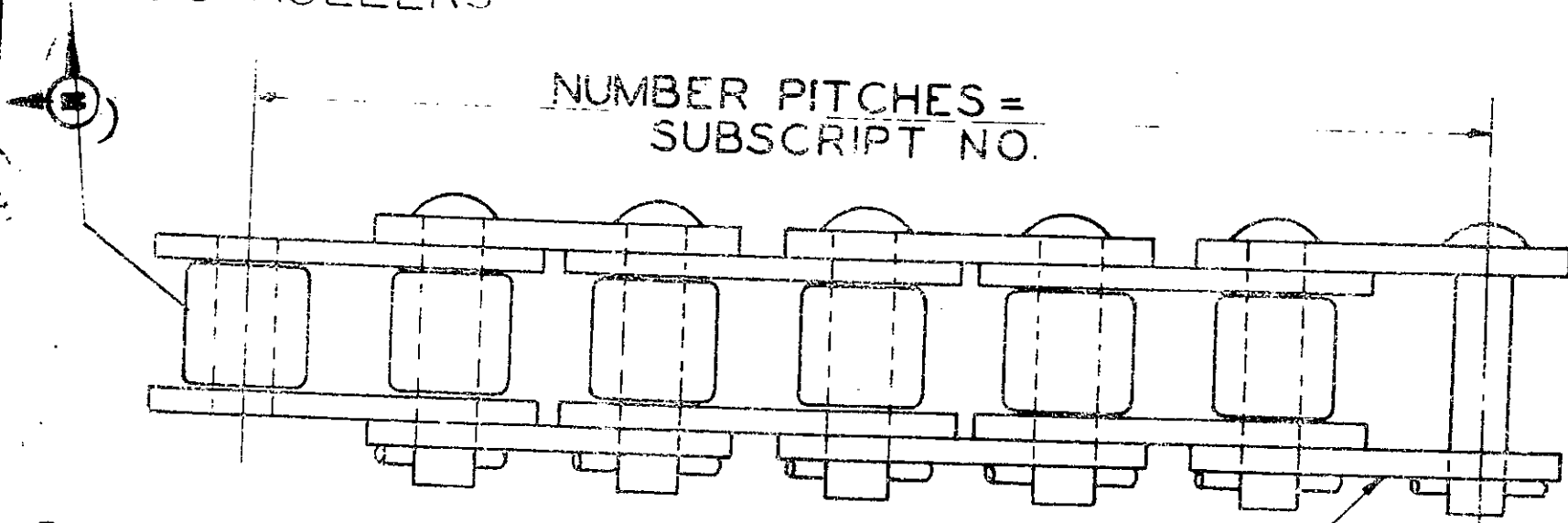
MATERIAL SEE B.M.	HEAT TREAT	CARB	QUENCH	DRAW
UNLESS OTHERWISE NOTED - ALL DIMENSIONS IN INCHES - FRACTIONAL MACHINING DIMENSIONS TO 1/32" UNLESS OTHERWISE NOTED			QUENCH	HARDNESS

FOR REPAIRS SEE CM-2377
 REDRAWN WITH CHANGES FROM OLD VET
 CHECKED 11-2-54

② SOLID ROLLERS

NUMBER PITCHES =
SUBSCRIPT NO.

E.O. CM-36 REVISIONS CM-343 (1) CR-331 (2) CX-341 (3) CZ-685 (4)



DIAMOND X3120230
 BALDWIN DUCKWORTH 140-HE
 WHITNEY 8-140-H
 LINK BELT RC-140-SU
 MORSE 8-140-H ③

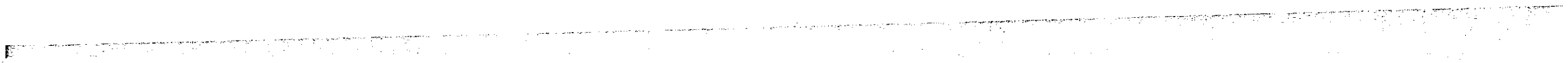
INCLUDES
SLIP FIT CONN. LINK

(HEAVY SIDE PLATES & OIL HDN. PINS) 13 3/4" ④ PITCH - A.S.A. 140 H

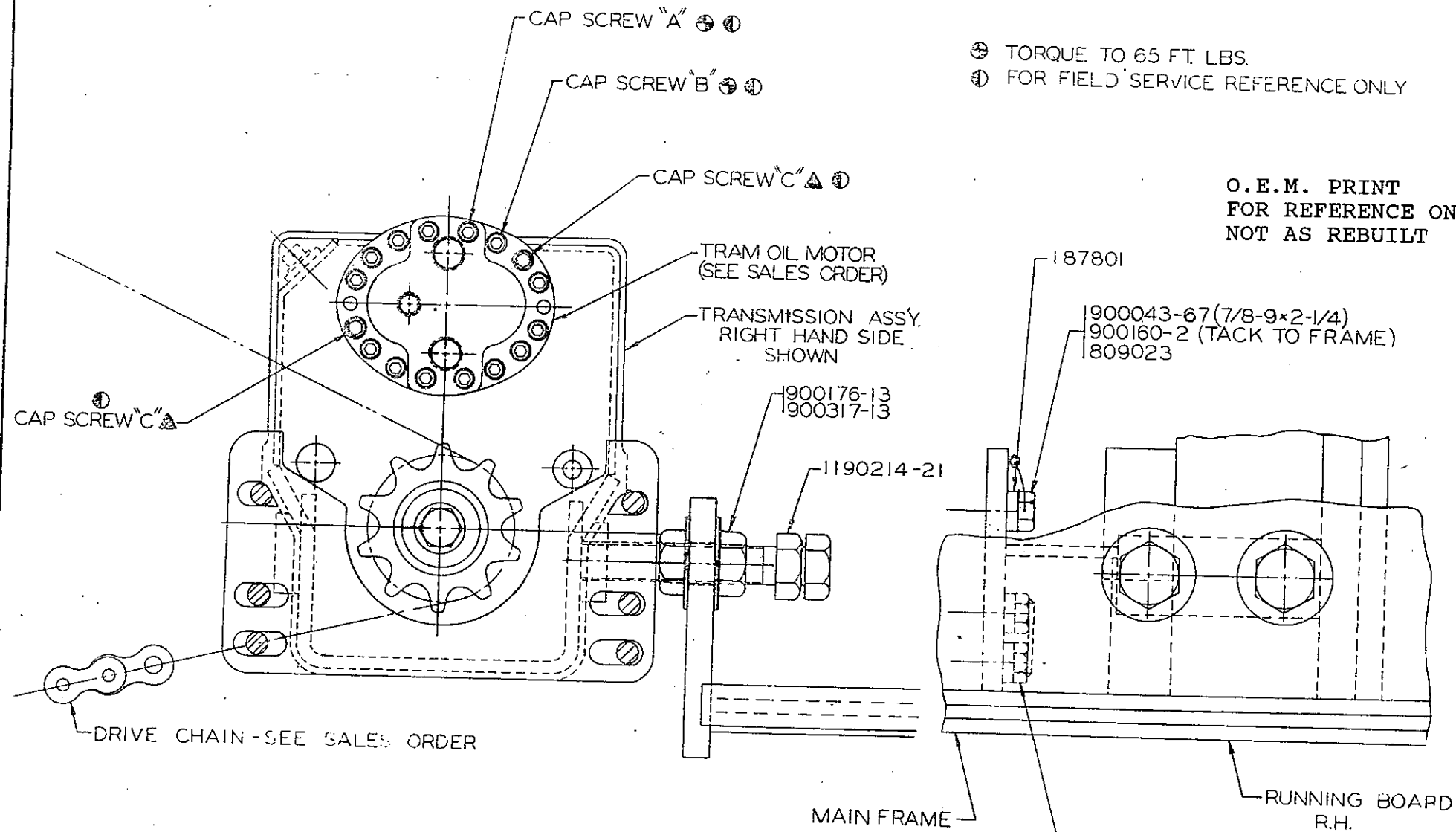
APP'D FOR TRANS. (L)

FINISH SYMBOLS				JOY MANUFACTURING CO. DRIVE CHAIN - COTTERED - EVEN PITCHES	
SYM	MICRO INCHES	DESCRIPTION	SYM	MICRO INCHES	DESCRIPTION
A	4	PRECISION POLISH	G	250	ROUGH MACH.
B	8	FINE POLISH	H	500	HEAVY ROUGH
C	16	COMMON POLISH	K	1000	EX. HEAVY ROUGH
D	32	GRIND OR EQUAL			
E	63	SMOOTH MACH.			
F	125	COMMON MACH.			

PLANT LOCATION AS INDICATED BELOW		DR. E. LEAR 51-61 TR. CK. APPVD. C.P.D.	
CLAREMONT, N. H.	<input checked="" type="checkbox"/> NEW PHILADELPHIA, O.	SCALE _____ CLASS _____	
DALLAS, TEXAS	ST. LOUIS, MISSOURI	SUPERSEDES _____	
FRANKLIN, PA.		SUPERSEDED BY _____	
GALT, ONTARIO, CAN.		REPLACES _____	
GREENOCK, SCOTLAND		REPLACED BY _____	
MICHIGAN CITY, IND.		A182616	



B/M	OIL MOTOR	GEAR	CAP SCREW "A"	SIZE	CAP SCREW "B"	SIZE	CAP SCREW "C" ▲	SIZE
700425-388	503071-2	2"	902224-227	1/2-13X5 1/2	902224-216	1/2-13X5	901858-80	1/2-13X4
700425-431	503071-10	2 1/2"	902224-238	1/2-13X6	902224-227	1/2-13X5 1/2	901858-81	1/2-13X4
700425-432	503071-11	3"	902224-429	1/2-13X6 1/2	902224-238	1/2-13X6	901858-82	1/2-13X4



⊕ TORQUE TO 65 FT. LBS.
 Ⓛ FOR FIELD SERVICE REFERENCE ONLY

O.E.M. PRINT
 FOR REFERENCE ONLY,
 NOT AS REBUILT

▲ PART OF OIL MOTOR

900042-67 (7/8-9x2-1/4)
 TACK A PIECE OF WELD ROD
 ACROSS THE BOLT HEADS

E.O. BK 152	REVISED	FBR588	FBP63	FBP752	FCC328	FCC381	FCC461
DATE							

JOY MANUFACTURING CO.		MISC. PARTS TO MOUNT OIL MOTOR AND TRANSMISSION	
PLANT LOCATION AS INDICATED BELOW			
BUFFALO, N. Y.	NEW PHILADELPHIA, OHIO		
CLASBORO, N. H.			
FRANKLIN, PA.			
GALT, ONTARIO, CANADA			
GREENOCK, SCOTLAND			
MICHIGAN CITY, IND.			
SIMILAR TO CM 4752	DR. R. P. BAUSER	SCALE HALF	CLASS 15
SUPERSEDED BY	TR. 8-20-70		
REPLACES	CR.		
REPLACED BY	APPD.		

CM 4752-

LIST OF PARTS AS CALLED FOR ON B/M'S 700425-388/-431/-432

USE WITH B/M 700425-388 ONLY:

PARTS SHOWN FOR REFERENCE ONLY:

X3071-2 OIL MOTOR
2 901858-80 CAP SCREW "C"

USE WITH B/M 700425-431 ONLY:

PARTS SHOWN FOR REFERENCE ONLY:

503071-10 OIL MOTOR
2 901858-81 CAP SCREW "C"

USE WITH B/M 700425-432 ONLY:

PARTS SHOWN FOR REFERENCE ONLY:

507071-11 OIL MOTOR
2 901858-82 CAP SCREW "C"

PARTS COMMON:

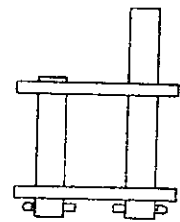
12 187801 WASHER
4 1190214-21 ADJ. SCREW

8 900517-13 1-5/8" WASHER
8 900042-67 7/8" X 2-1/4" CAP SCREW
8 900176-13 1-1/2" NUT
4 900043-67 7/8" X 2-1/4" CAP SCREW
4 900180-2 1/4" NUT
3 809005 WIRE

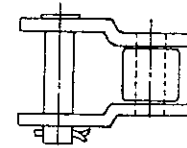
REVISION/

FCC661

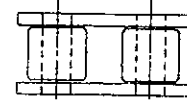
REF. DWG. - CM4752-A



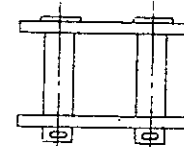
ATTACHMENT LINK
COTTERED SPECIAL



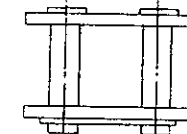
OFFSET LINK



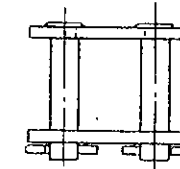
ROLLER LINK



CONNECTING LINK
COTTERED TYPE
SLIP FIT



CONNECTING LINK
SPRING CLIP TYPE
SLIP FIT



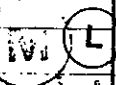
ATTACHMENT LINK
COTTERED STANDARD

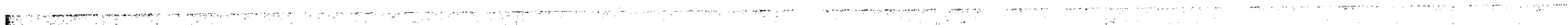
* AMERICAN STANDARD ASS'N

PITCH	ASA	OFFSET LINK	ROLLER LINK	CONNECTING LINKS		ATTACHMENT LINK	
				COTTERED	SPRING CLIP	STANDARD	SPECIAL
3/8	35	A184817	A184818		A184819		
1/2	40	A183441	A183447		A183459		
5/8	50	A183442	A183448		A183460		
3/4	60H	A183443	A183449	A183455			
1	80H	A183444	A183450	A183456		3190396	
1-1/4	100H	A183445	A183451	A183457			01190090-0112
1-1/2	120H	A183446	A183452	A183458			
1-3/4	140H	A183901	A183902	A183903			
5/8	HOIST CHAIN					3190509	

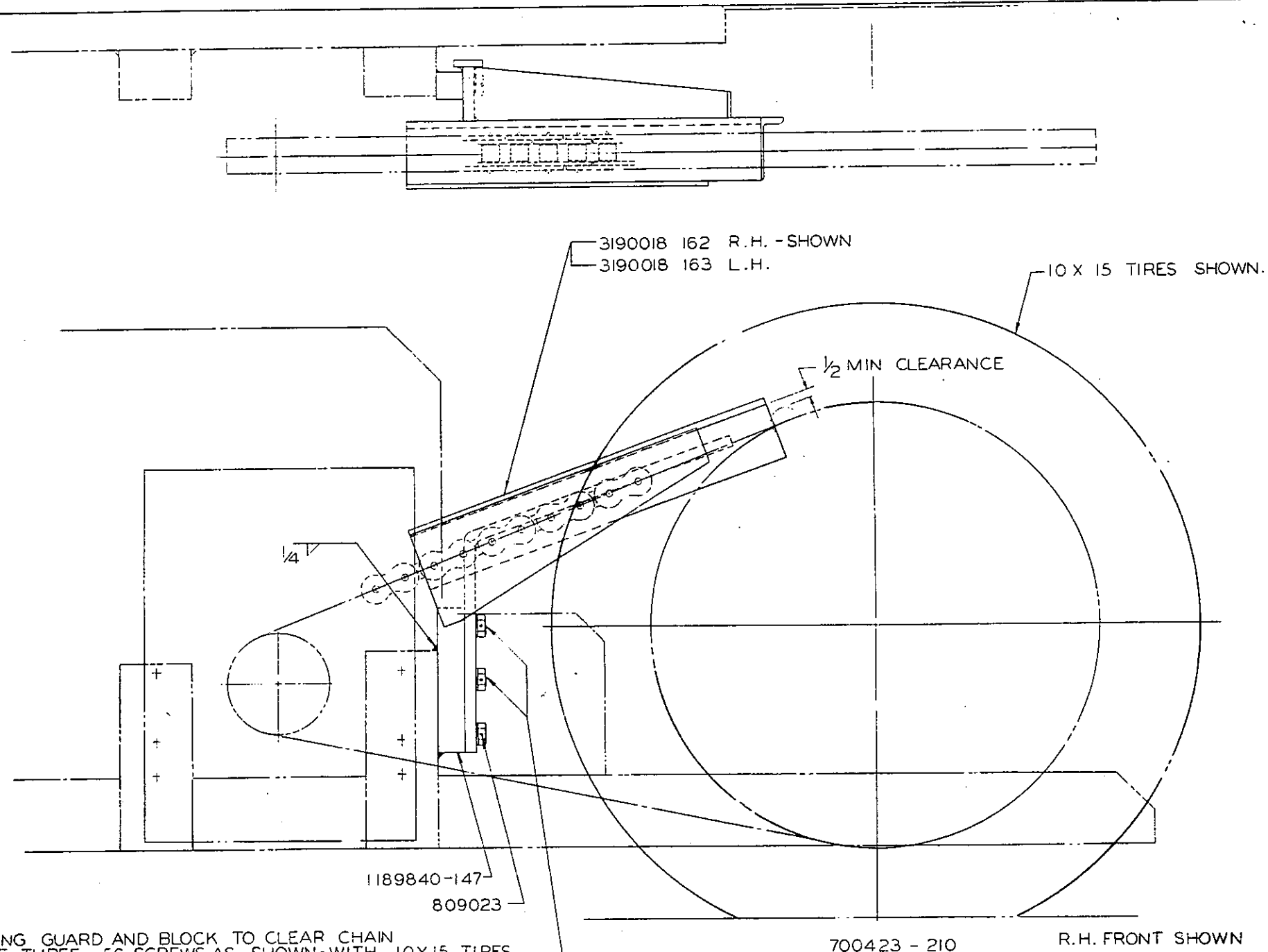
REDRAWN FROM OLD VET DATED 5-20-54

ENGR. ORDER <i>CL-113</i>	REVISIONS <i>CM-44 @ CN-835/CN-571/RY-343/EAG-13/FCC/DOT</i>	FINISH SYMBOLS		JOY MANUFACTURING CO.		ROLLER CHAIN REPAIR PARTS	
DATE ISSUED		1 MICRO INCHES	2 MICRO INCHES	PLANT LOCATION AS INDICATED BELOW			
UNLESS OTHERWISE NOTED: ALL DIMENSIONS IN INCHES. FRACTIONAL MACHINING DIM. LIMITED TO ± 1/64. DO NOT SCALE THIS DRAWING	MATERIAL HEAT TREAT HARDEN HARDEN DRAW	4 PRECISION POLISH	8 FINE POLISH	0 250 BROWN BACK	CLAREMONT, N. H.	NEW PHILADELPHIA, O.	SIMILAR TO SUPERSEDED BY REPLACES REPLACED BY
	CARBURIZE QUENCH HARDNESS	16 COMMON POLISH	320 HEAVY ROUGH	DALLAS, TEXAS	DALLAS, TEXAS	ST. LOUIS, MISSOURI	
	PATTERN NO.	64 BRIDG CR EQUAL	1000 EX. HEAVY ROUGH	FRANCONIA, PA.	SALT, ONTARIO, CANADA		SCALE <i>1/2" = 1"</i> CLASS <i>A36</i>
		63 SMOOTH BACK		GREENOCK, SCOTLAND			DR. <i>Wm. W. W.</i> TR. <i>W. W. W.</i> APPROVED <i>W. W. W.</i>
		125 COMMON BACK		INDIANAPOLIS, IND.			CM-2377





CM 5171



WHEN LOCATING GUARD AND BLOCK TO CLEAR CHAIN
 AT TOP FRONT, USE THREE -56 SCREWS AS SHOWN WITH 10X15 TIRES.
 MOVE GUARD UP ON BLOCK AND USE THESE TWO HOLES ONLY
 WHEN USED WITH 10 X 20 OR LARGER TIRES.

900028-56
 900302-6

700423 - 210

R.H. FRONT SHOWN

This drawing and all information therein is the property of the JOY MANUFACTURING CO. It is loaned subject to return upon demand, is not to be used directly or indirectly in any way detrimental to our interest.

JOY MANUFACTURING CO.	
PLANT LOCATION AS INDICATED BELOW	
BUFFALO, NEW YORK	NEW PHILADELPHIA, OHIO
CLAREMONT, N. H.	
FRENDSBURG, PA.	
SALT, ONTARIO, CANADA	
SPRINGBROOK, SCOTLAND	
MICHIGAN CITY, IND.	

CHAIN GUARD & PARTS		
DESIGNED BY	DATE	SCALE
DRAWN BY	TR.	CLASS.
CHECKED BY	CR.	
APPROVED BY	BY	

CM 5171



JOY MANUFACTURING CO.

BILL OF MATERIAL

DRAWING NO.

BILL OF MAT. NO.

SHEET NO. 1 OF 1

15RU

CM5171

700423-210

NAME CHAIN GUARDS & MTG.

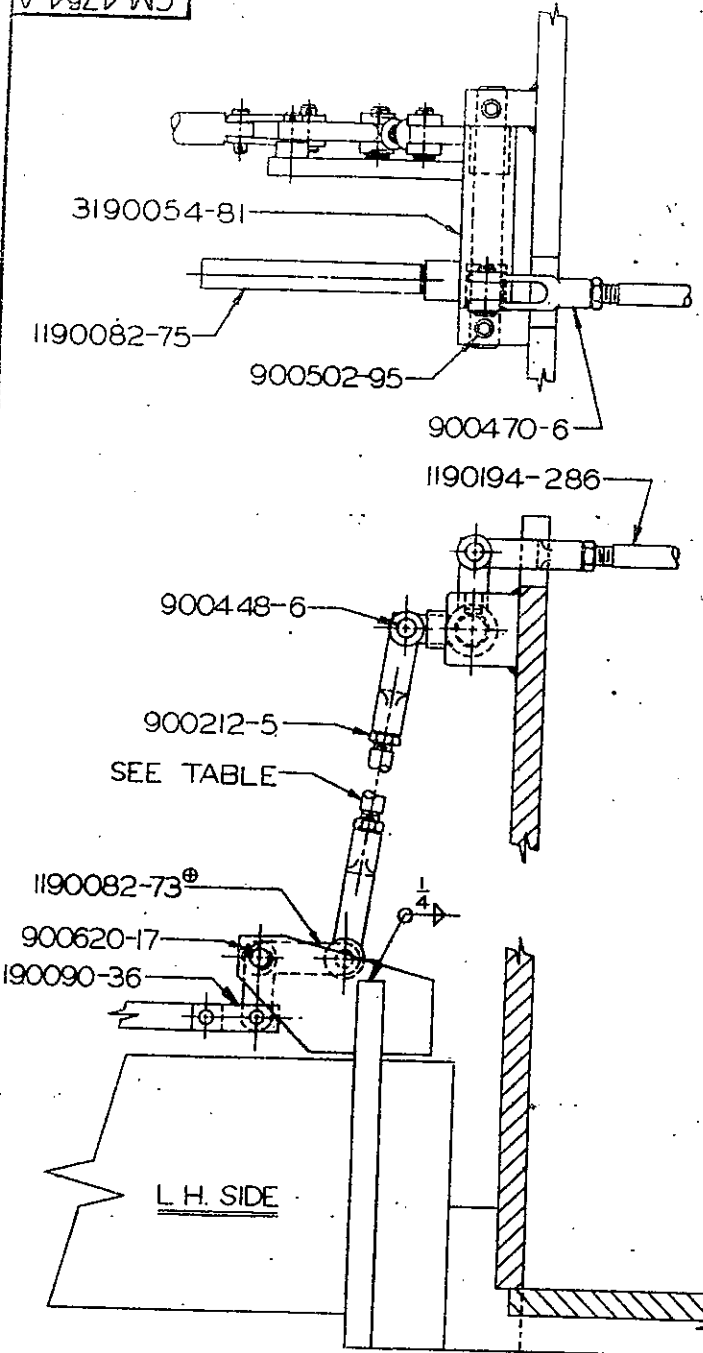
ORDER NO.

PARTS

ISSUED: FEBRUARY 21, 1973 FBK845

ISSUED:		FEBRUARY 21, 1973		FBK845	

QUANTITY		PART NUMBER	NAME OF PART	COST PER PIECE	TOTAL AMOUNT
PER ORDER	PER UNIT				
	1	3190018-162	GUARD (R.H.)		
	1	3190018-163	GUARD (L.H.)		
	2	1189840-147	BLOCK		
	6	900028-56	CAP SCR (3/4-10 X 2)		
	6	900302-6	LWASHER (3/4)		
	2'	809023	WIRE		



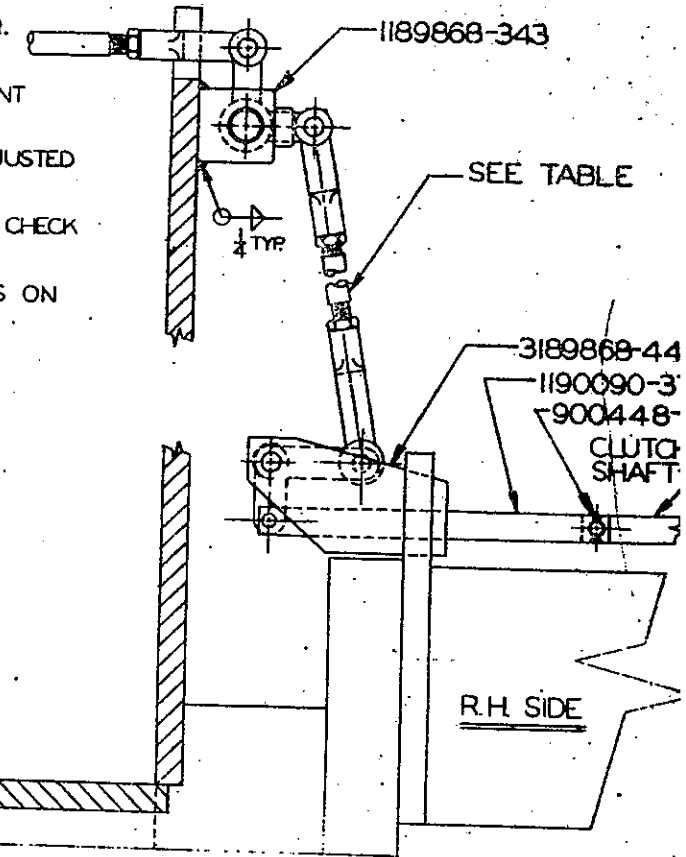
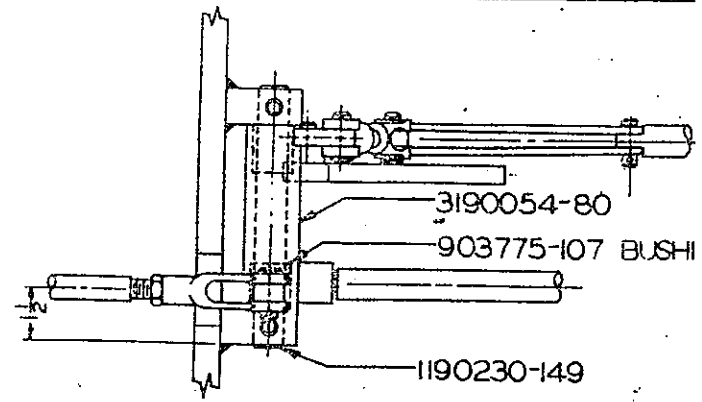
- LINKAGE ADJUSTMENT
- ① CHECK TRANSMISSION SHIFT ADJUSTMENT PER INSTRUCTIONS ON TRAM TRANSMISSION DRAWING.
 - ② SET BOTH TRANSMISSIONS IN NEUTRAL.
 - ③ ADJUST 1190194-286 ROD SO BOTH LEVERS ARE LEVEL.
 - ④ ADJUST R.H. ROD 1190194-285 TO CONNECT TO PIVOT 1190082-73 WITH HANDLES STILL LEVEL.
 - ⑤ TACK WELD 3189868-441 IN PLACE.
 - ⑥ REPEAT ABOVE PROCEDURE FOR L.H. SIDE, ADJUSTING 1190194-285 ROD TO MAINTAIN LEVEL HANDLES.

TO CHECK EACH TRAM TRANSMISSION SHIFTER ROD ADJUSTMENT:

- ① DISCONNECT CROSS ROD GOING FROM ONE SIDE OF MACHINE TO THE OTHER.
- ② CHECK EACH TRANSMISSION SEPARATELY FOR THE SHIFT BETWEEN LOW AND HIGH GEAR PER INSTRUCTIONS ON ASSEMBLY DRAWING. THE FULL ENGAGEMENT OF THE DETENT IN ALL 3 POSITIONS SHOULD BE ABLE TO BE FELT.
- ③ SHIFT BOTH TRANSMISSIONS INTO HIGH AND CHECK THAT CROSS ROD IS ADJUSTED TO CORRECT LENGTHS.
- ④ WITH CROSS ROD STILL UNHOOKED, SHIFT BOTH TRANSMISSIONS INTO LOW. CHECK TO ASSURE CROSS ROD IS STILL CORRECT LENGTH.
- ⑤ IF ROD LENGTH REQUIRED CHANGES BETWEEN HIGH AND LOW, THE BRACKETS ON FRAME MUST BE REPOSITIONED OR LOWER ROD READJUSTED.
- ⑥ RECONNECT CROSS ROD.

PARTS LIST	CONTROL ROD
700418-193	1190194-285
700418-199	1190194-319

⊕ 1190082-73 MUST SET SQUARE WHEN IN NEUTRAL.



REDRAWN WITH CHANGES JUNE 11, 1970

JOY MANUFACTURING CO.		GEAR SHIFT PARTS	
PLANT LOCATION AS INDICATED BELOW		DRAWN TO CM 4754	
WESTFIELD, N.Y.	NEW PULASKI, N.Y.	DESIGNED BY	DR. HALPT
CLARKSBURG, N.Y.		SUPERSEDED BY	TR. HENZLER
FRANKLIN, PA.		REPLACES	BRIDGE HALF
SALT SPRING, CANADA		REPLACED BY	CM 4754-A
CHESAPEAKE, SCOTLAND			
ROCKFORD, ILL.			

LIST OF PARTS AS CALLED FOR ON B/M'S 700418-193/-199

USE WITH B/M 700418-193 ONLY:

2 1189868-343 BRACKET
2 1190194-285 CONTROL ROD

USE WITH B/M 700418-199 ONLY:

4 1189868-343 BRACKET
2 1190194-319 CONTROL ROD

6	900212-5	1/2"-20 JAM NUT
2	900448-4	PIN ASSY.
8	900448-6	PIN ASSY.
6	900470-6	YOKE
4	900502-95	1/2"-13 X 5/8" SET SCREW
2	900620-17	1/8" X 1" COTTER PIN
4	903775-107	BUSHING

PARTS COMMON:

2 3189868-441 BRACKET
1 3190054-80 R.H. HUB
1 3190054-81 L.H. HUB

2 1190082-73 ARM
2 1190082-75 ARM
2 1190090-36 LINK
2 1190090-37 LINK

1 1190194-286 ROD
2 1190230-149 SHAFT

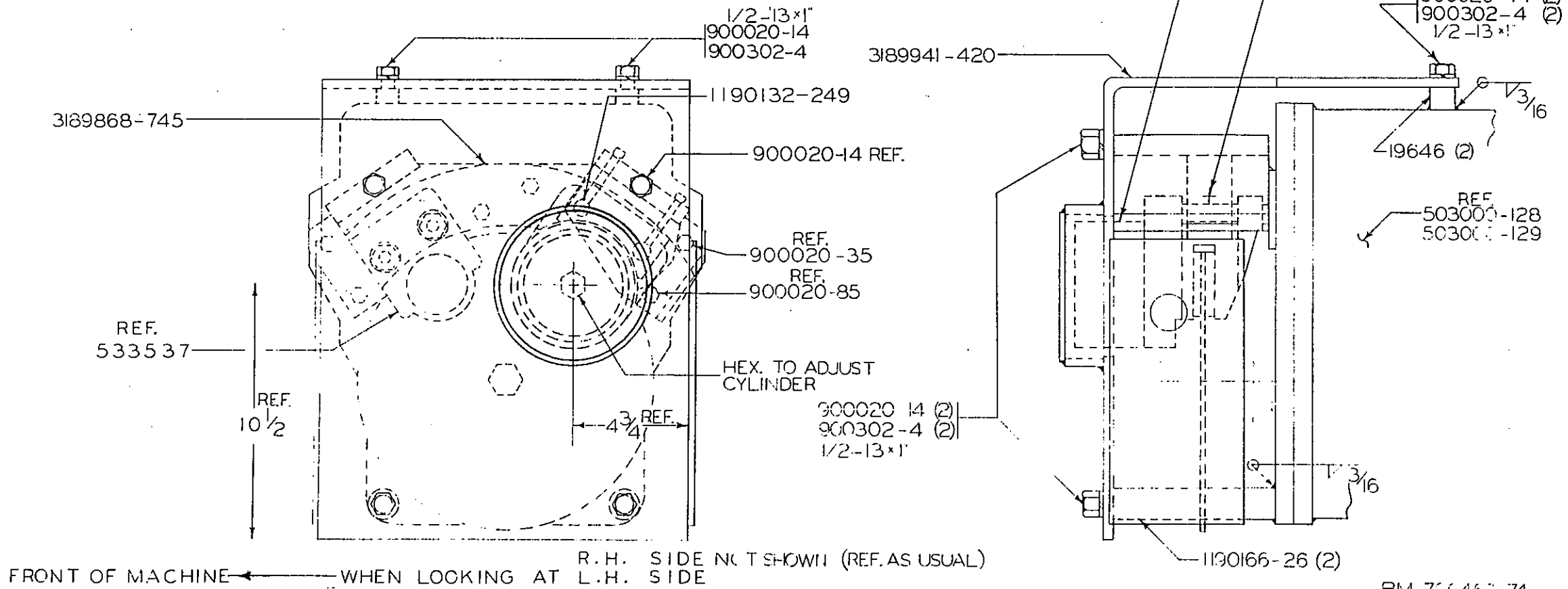
REVISION/

FbT409

REF. DWG. - CM4754-A

TO ADD AUTO EMERGENCY BRAKE CYLINDER 503007-398 TO 503000-128 OR 503000-129

- ① REMOVE (1) 3189868-659 BRACKET FROM L.H. TRAM TRANS. 503000-129 AND REMOVE SERVICE BRAKE 533537 FROM BRACKET.
- ② ATTACH 533537 SERVICE BRAKE AND 503007-398 CYLINDER (AUTO EMER. BRAKE) TO (1) 3189868-745 BRACKET AND INSTALL ON 503000-129 (L.H. SIDE).
- ③ RELEASE 503007-398 BRAKE CYLINDER BEFORE SLIDING OVER DISC AND ATTACHING TO BRACKET WITH 1190132-249 PIN. RETAIN PINS WITH 900119-91 SET SCREWS. (BOTH SIDES)
- ④ 503007-398 BRAKE CYLINDER MUST BE ADJUSTED BEFORE ATTACHING TRAM TRANS. COVER. (BOTH SIDES) TO ADJUST- SCREW SPRING RETAINING CAP CLOCKWISE UNTIL CONTACT IS MADE WITH DISC BY BOTH BRAKE PADS. AFTER INITIAL CONTACT IS MADE SCREW CAP IN 4 1/2 FULL TURNS. -CAUTION- DO NOT EXCEED 5 TURNS. BRAKE IS NOW TORQUED TO CYLINDER POTENTIAL.
- ⑤ REMOVE (1) 3189868-659 BRACKET FROM R.H. TRAM TRANS. 503000-128 AND ATTACH 503007-398 CYLINDER (AUTO EMER. BRAKE) TO 3189868-659 BRACKET. REINSTALL 3189868-659 BRACKET ON 503000-128 R.H. TRAM TRANS. RETURN TO STEPS 3 & 4.
- ⑥ ATTACH (1) 3189941-420 COVER TO L.H. TRANS. 503000-129.
ATTACH (1) 3189941-411 COVER TO R.H. TRANS. 503000-128.



FRONT OF MACHINE ← WHEN LOOKING AT L.H. SIDE R.H. SIDE NOT SHOWN (REF. AS USUAL)

BM 700463 74

DATE ORDERED: FBI 03 DATE SHIPPED: 10-21-76		REVISIONS 1 2 3 4 5 6 7	FINISH SYMBOLS 1 2 3 4 5 6 7	JOY MANUFACTURING CO. PLANT LOCATION AS INDICATED BELOW BUFFALO, N. Y. CLAMINGTON, N. H. FRANKLIN, PA. GREAT BRITAIN, BRISTOL NEWARK, N. J. PHOENIX, ARIZ.	AUTO EMERGENCY BRAKE S. PARTS DRAWN BY: _____ CHECKED BY: _____ APPROVED BY: _____ DATE: _____ TITLE: _____ SCALE: 1/2 CLASS: 15 RU CM5210-2
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LIST OF PARTS AS CALLED FOR ON B/M 700468-74

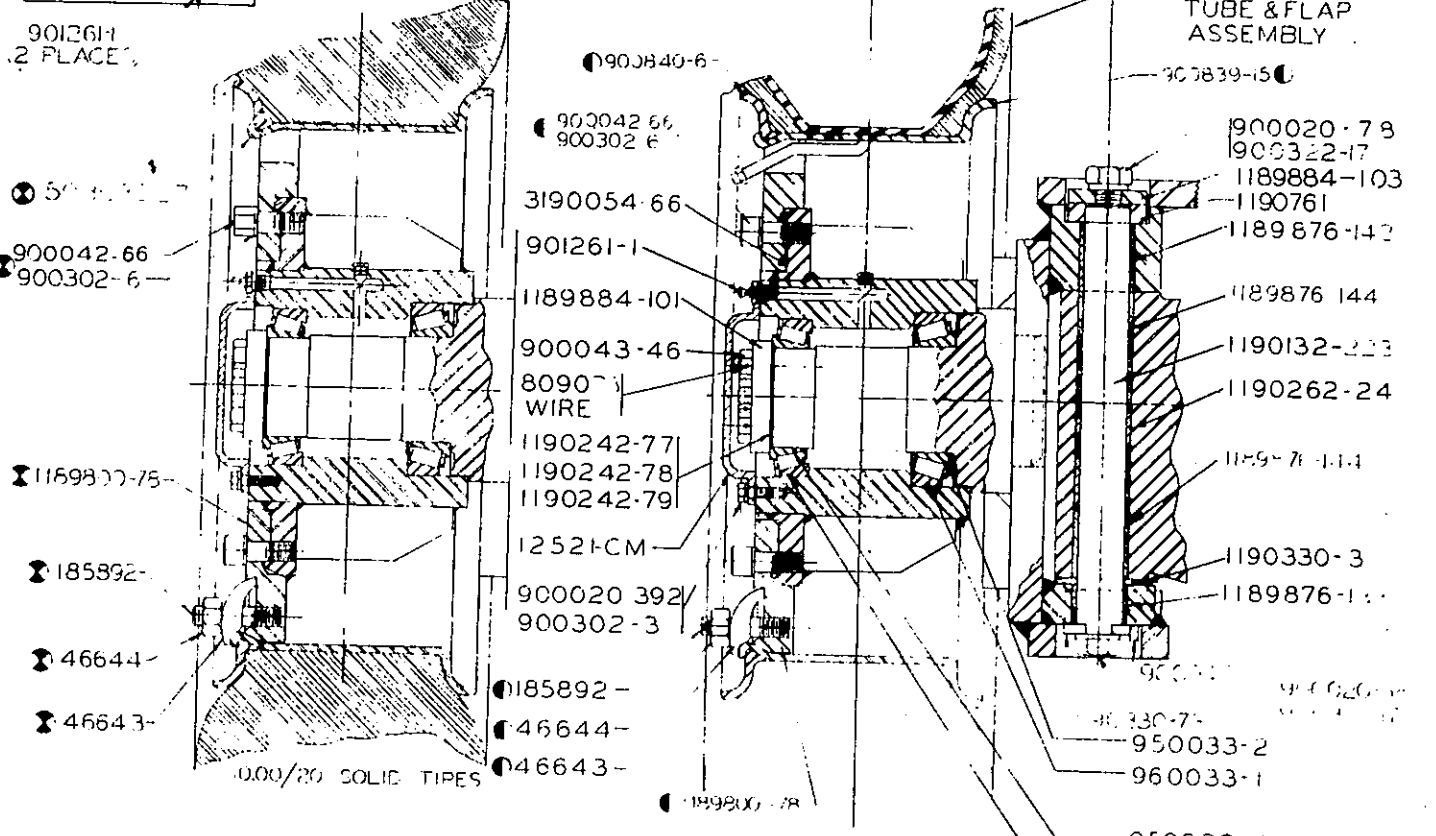
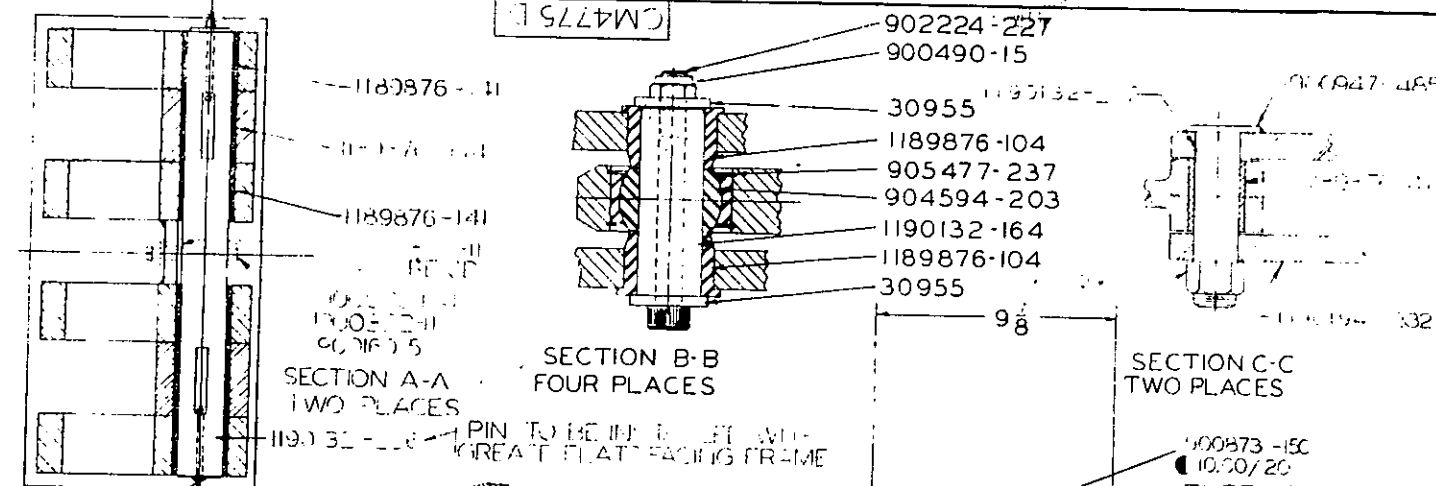
1	3189868-745	L.H. AUTO EMERGENCY BRACKET
1	3189941-420	L.H. SIDE COVER
4	19646	BOSS
4	1190132-249	PIN
4	1190166-26	POST
12	900020-14	1/2"-13 X 1" CAP SCREW
4	900119-91	1/4"-20 X 2-1/2" SET SCREW
12	900302-4	1/2" LOCKWASHER

PARTS SHOWN FOR REFERENCE ONLY:

503000-128	R.H. TRANSMISSION
503000-129	L.H. TRANSMISSION
503007-398	CYLINDER
533537	SERVICE BRAKE
900020-14	1/2" X 1" CAP SCREW
900020-35	CAP SCREW
900020-85	CAP SCREW

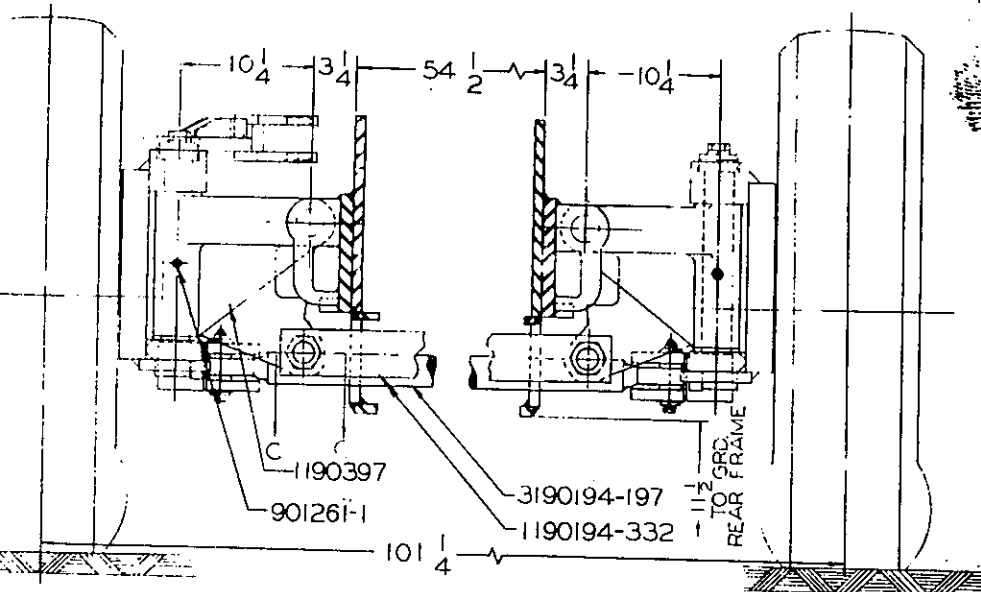
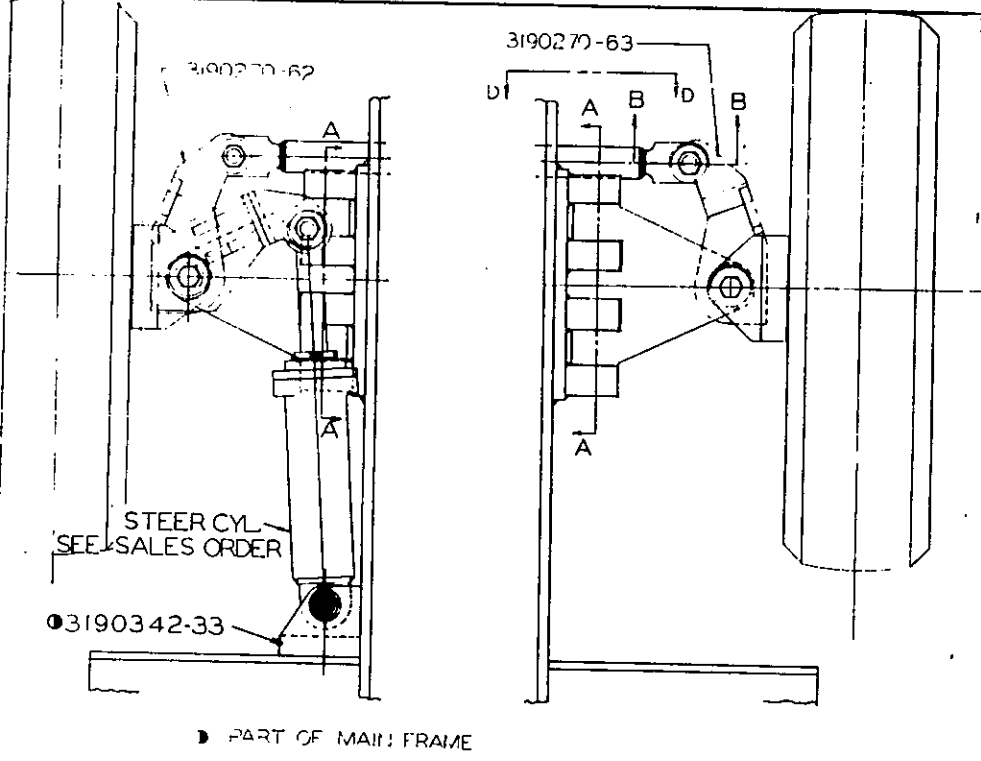
REVISION/ FBT83

REF. DWG. - CM5210-2



700420 : PARTS FOR STEER WHEELS
700420-1 : STEER TIRES AND PARTS NOT AT
PARTS MARKED ⚡ APPEAR ON 700420-

700420-3 : PARTS FOR STEER WHEELS
700420-7 : STEER TIRES AND PARTS
PARTS MARKED ⚡ APPEAR ON 700420-



JOY MANUFACTURING CO.		STEERING WHEEL AND PARTS	
PLANT LOCATION AS INDICATED BELOW			
BUFFALO, N.Y.	NEW ORLEANS, LA.	CHICAGO, ILL.	SCALE 3/4" = 1"
CLAMONT, N.J.	NEW YORK, N.Y.	PHOENIX, ARIZ.	CLAMP 18 1/2"
FRANKLIN, PA.	PHOENIX, ARIZ.	PHOENIX, ARIZ.	
SALT LAKE CITY, UTAH	PHOENIX, ARIZ.	PHOENIX, ARIZ.	
SPRINGFIELD, MASS.	PHOENIX, ARIZ.	PHOENIX, ARIZ.	
WICHITA, KANS.	PHOENIX, ARIZ.	PHOENIX, ARIZ.	

CM-4775 D

LIST OF PARTS AS CALLED FOR ON B/M'S 700420-87/-112/-130

USE WITH B/M 700420-87 ONLY:

30	46643	RIM LUG
30	46644	RIM NUT
30	185892	RIM STUD
2	1189800-78	RING ADAPTOR
28	900042-66	3/4"-10 X 2-1/4" CAP SCREW
28	900302-6	3/4" LOCKWASHER
2	900839-15	RIM BASE
2	900840-6	RIM RING
2	900873-150	TIRE, TUBE & FLAP ASSY.

USE WITH B/M 700420-112 ONLY:

2	503035-27	TIRE & RIM ASSY.
30	46643	RIM LUG
30	46644	RIM NUT
30	185892	RIM STUD
2	1189800-78	RING ADAPTOR
28	900042-66	3/4"-10 X 2-1/4" CAP SCREW
28	900302-6	3/4" LOCKWASHER

USE WITH B/M 700420-130 ONLY:

2	3190054-66	HUB
1	3190194-197	STEERING ROD
1	3190270-62	L.H. SPINDLE
1	3190270-63	R.H. SPINDLE
2	12521-CM	END CAP
8	30955	WASHER
8	1189876-104	BUSHING
2	1189876-139	BUSHING
8	1189876-141	BUSHING
2	1189876-142	BUSHING
10	1189876-144	BUSHING
2	1189884-101	CAP
2	1189884-103	CAP
4	1190132-164	PIN
2	1190132-223	PIN
2	1190132-226	PIN
2	1190132-227	PIN
2	1190194-332	TIE ROD
4	1190242-77	.005" SHIM
4	1190242-78	.007" SHIM
4	1190242-79	.020" SHIM
2	1190262-24	SPACER
2	1190330-3	WASHER
2	1190330-73	3/8" LOCKWASHER
2	1190397	RÜCKER ARM
2	1190761	SPACER

2	900020-58	1" X 2" CAP SCREW
2	900020-78	1"-8 X 2-1/2" CAP SCREW
2	900020-104	1/2" X 3" CAP SCREW
8	900020-392	3/8"-16 X 7/8" CAP SCREW
8	900043-46	3/4"-10 X 1-3/4" CAP SCREW
2	900160-5	1/2" NUT
8	900302-3	3/8" LOCKWASHER
2	900302-4	1/2" LOCKWASHER
4	900302-8	1" LOCKWASHER
4	900490-15	1/2"-13 LOCKNUT
2	900490-22	1-1/4"-7 LOCKNUT
2	900947-7	5/8" X 3/8" X 1" KEY
2	900947-1485	1/4" X 1/2" X 2-1/4" KEY
8	901261-1	FITTING
4	900012-194	1/2"-13 X 5-1/2" CAP SCREW
2	904594-203	BEARING
4	905477-237	RETAINING RING
2	950029-4	CONE
2	950033-2	CONE
2	960029-1	CUP
2	960033-1	CUP
2	809023	#16 WIRE

PART SHOWN FOR REFERENCE ONLY:

3190342-33	YOKE
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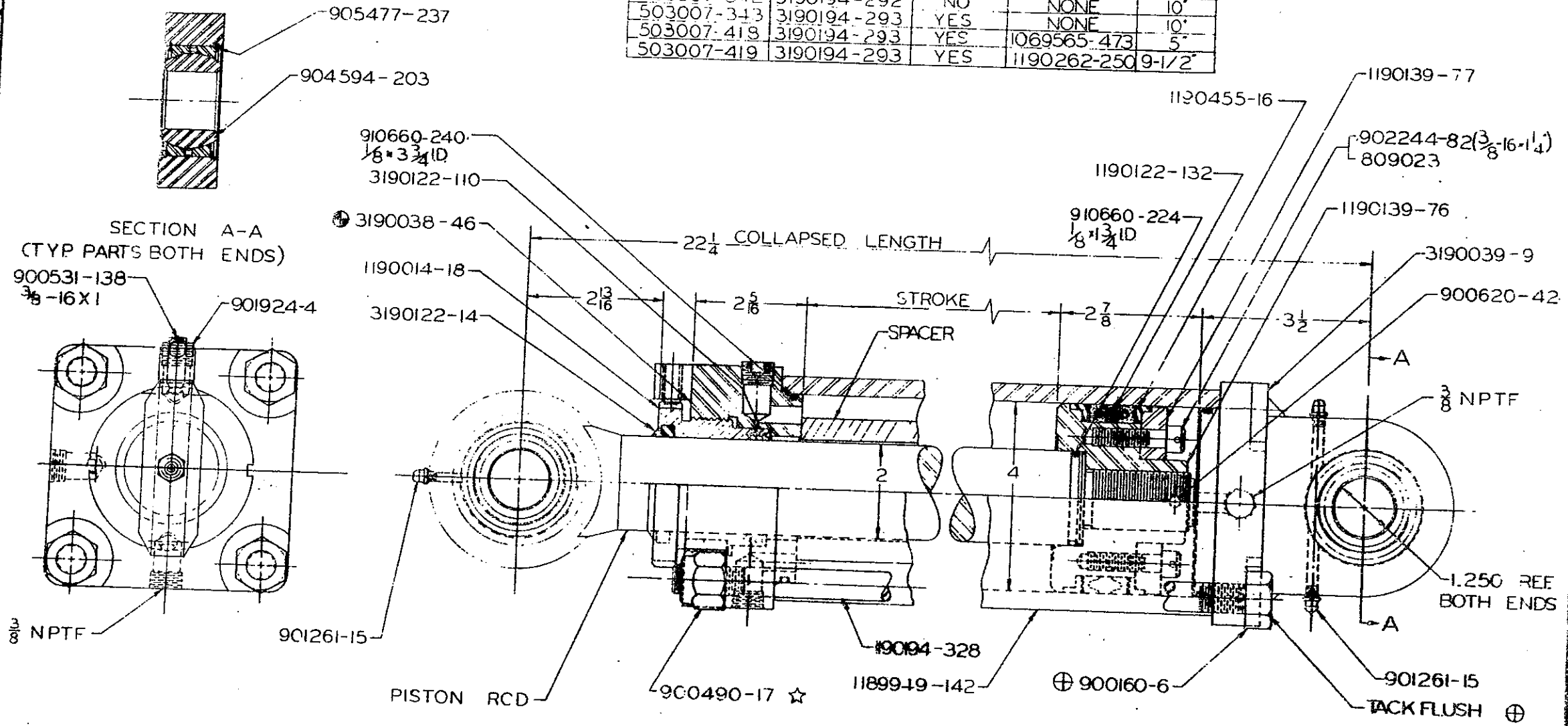
REVISION/

FBP734

REF. DWG. - CM4775-D

503007-342

ASSEMBLY	PISTON ROD	PLATED	SPACER	STROKE
503007-342	3190194-292	NO	NONE	10"
503007-343	3190194-293	YES	NONE	10"
503007-418	3190194-293	YES	1069565-473	5"
503007-419	3190194-293	YES	1190262-250	9-1/2"



NOTES:
 † TACK WELD HEX NUTS TO TIE RODS
 ☆ TORQUE LOCKNUTS 100 FT. LBS.

ASSEMBLE 3190038-46 IN RELATION TO CYLINDER PORT

CONFIDENTIAL
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ENG. ORDER: FBE 732	REVISIONS: FB-171, FBF 919, FBT 230, FBTS 72	DATE ISSUED: FBK 88, FBK 168, FBK 186, FBK 240, FBK 311, FBK 656	FINISH SYMBOLS	JOY MANUFACTURING CO. PLANT LOCATION AND MANUFACTURING DEPT.	STEER CYLINDER ASSEMBLY																													
UNLESS OTHERWISE NOTED ALL DIMENSIONS IN INCHES. MACHINING DIMENSIONS LIMITED TO FRACTIONAL 1/16. DECIMAL 2 DIG. ANGULAR 1/2°. DO NOT SCALE THIS DRAWING.	MATERIAL: HEAT TREAT: HARDEN: QUENCH: HARDEN: DRAW	CAMBRIDGE	<table border="1"> <tr><th>NO.</th><th>DESCRIPTION</th><th>FINISH SYMBOL</th><th>REMARKS</th></tr> <tr><td>A</td><td>PRECISION POLISH</td><td>2</td><td>ROOM BENCH</td></tr> <tr><td>B</td><td>FINE POLISH</td><td>2</td><td>HEAVY ROUGH</td></tr> <tr><td>C</td><td>COMMON POLISH</td><td>2</td><td>EX HEAVY ROUGH</td></tr> <tr><td>D</td><td>GLASS OR SPALL</td><td>2</td><td></td></tr> <tr><td>E</td><td>BROTH HATCH</td><td></td><td></td></tr> <tr><td>F</td><td>COMMON HATCH</td><td></td><td></td></tr> </table>	NO.	DESCRIPTION	FINISH SYMBOL	REMARKS	A	PRECISION POLISH	2	ROOM BENCH	B	FINE POLISH	2	HEAVY ROUGH	C	COMMON POLISH	2	EX HEAVY ROUGH	D	GLASS OR SPALL	2		E	BROTH HATCH			F	COMMON HATCH			BUFFALO, N. Y. CLAREMONT, N. H. FRANKLIN, PA. SALT, ONTARIO, CANADA GREENOCK, SCOTLAND BIRMINGHAM CITY, ENGL.	SIMILAR TO 503007-243 SUPERSEDED BY: REPLACES: REPLACED BY:	SCALE: FULL 503007-342
NO.	DESCRIPTION	FINISH SYMBOL	REMARKS																															
A	PRECISION POLISH	2	ROOM BENCH																															
B	FINE POLISH	2	HEAVY ROUGH																															
C	COMMON POLISH	2	EX HEAVY ROUGH																															
D	GLASS OR SPALL	2																																
E	BROTH HATCH																																	
F	COMMON HATCH																																	

503007-342/-343/-418/-419

STEER CYLINDER ASSY.

USE WITH 503007-342 ONLY:

1 3190194-292 PISTON ROD

USE WITH 503007-343 ONLY:

1 3190194-293 PISTON ROD (CHROME PLATED)

USE WITH 503007-418 ONLY:

1 3190194-293 PISTON ROD (CHROME PLATED)
1 1069565-473 SPACER

USE WITH 503007-419 ONLY:

1 3190194-293 PISTON ROD (CHROME PLATED)
1 1190262-250 SPACER

PARTS COMMON TO ALL LISTS:

1 3190038-46 HEAD
1 3190039-9 CYLINDER CAP
1 3190122-14 WIPER
1 3190122-110 "V" PACKING
1 1199949-142 CYLINDER
1 1190013-18 GLAND
1 1190122-132 SEAL
1 1190139-76 REAR HALF PISTON
1 1190139-77 FRONT HALF PISTON
4 1190194-328 TIE ROD
2 1190455-16 WEAR RING

4 900160-6
4 900490-17
1 900531-138
1 900620-42
3 901261-15
1 901924-4
8 902244-82
2 904594-203
4 905477-237
1 910660-224
2 910660-240
2 809023

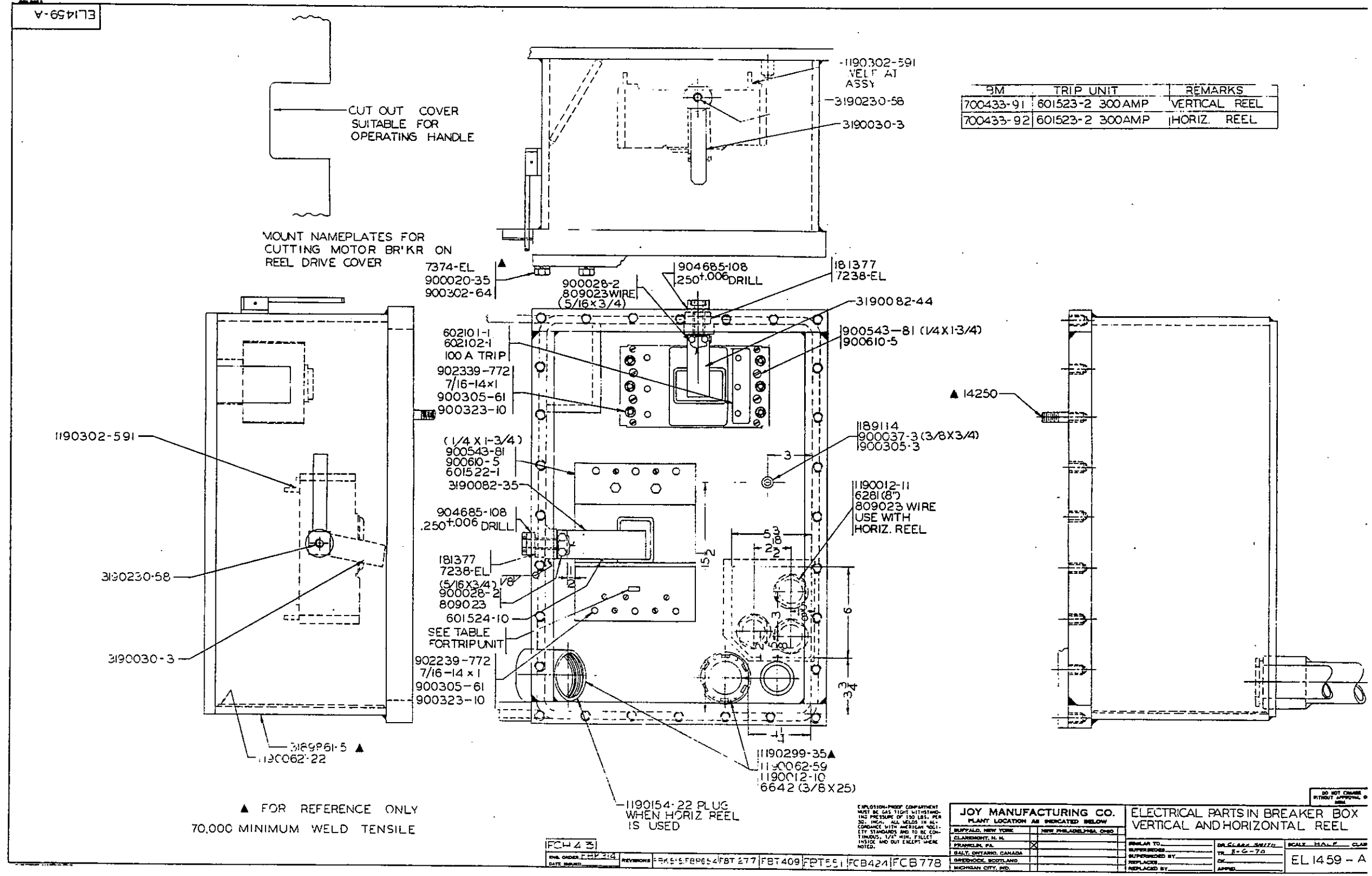
5/8"-11 HEX NUT
5/8"-11 STOP NUT
3/8"-16 X 1" SET SCREW
3/16" X 3" COTTER PIN
1/4" GREASE FITTING
3/8" PLUG
3/8"-16 X 1-1/4" CAP SCREW
BEARING
INTERNAL SNAP RING
1/8" X 1-3/4" I.D. O-RING
1/8" X 3-3/4" I.D. O-RING
WIRE

REVISION/

(503007-342)
(503007-343)
(503007-418)
(503007-419)

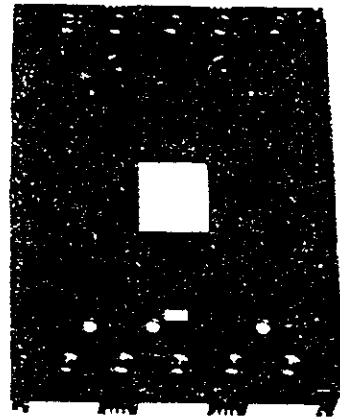
FBF919
FBF919
FBF919
FBT230

EL1459-A

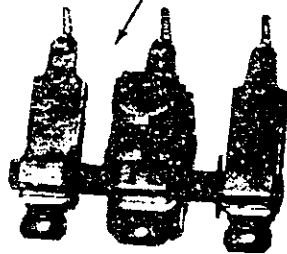


601522-1

9



2



USED ON 601522-1 CIRCUIT BREAKER ASSEMBLY

USED ON 601522-1 CIRCUIT BREAKER ASSEMBLY

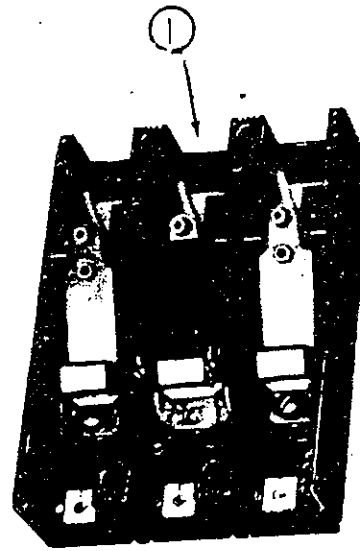
1 601523-2 TRIP UNIT ASSEMBLY - 300 Amp.

1 601523-3 TRIP UNIT ASSEMBLY - 225

PARTS COMMON TO 601522-1 CIRCUIT BREAKER ASSEMBLY

- 1. 1 601524-2 BREAKER FRAME - WITHOUT TRIP UNIT & TERMINALS
- 2. 1 W1764867 MOVING CONTACT ASSEMBLY
- 3. 3 W1764869 MOVING CONTACT
- 4. 3 601524-3 MOVING CONTACT SPRING
- 5. 3 W131799 MOVING CONTACT SPRING HOLDER
- 6. 1 W1310986 MOULDED HANDLE
- * 2 601524-4 MAIN SPRING
- 7. 3 601524-5 STATIONARY CONDUCTOR WITH CONTACTS
- 8. 3 601524-6 ARC CHAMBER
- 9. 1 601524-7 COVER
- * 6 602103-1 SOLDERLESS TERMINALS

* NOT SHOWN



TRIP UNIT
(ORDER SEPARATELY)
SEE ABOVE

7



3



6



8



4



5



TRIP UNIT
(ORDER SEPARATELY)
SEE ABOVE

JOY MANUFACTURING CO.

PLANT LOCATION AS INDICATED BELOW

CLAREMONT, N. H.	NEW PHILADELPHIA, O.
DALLAS, TEXAS	ST. LOUIS, MISSOURI
FRANKLIN, PA.	<input checked="" type="checkbox"/>
GALT, ONTARIO, CANADA	
GREENOCK, SCOTLAND	
MICHIGAN CITY, IND.	

TYPE LA 400 AMP CIRCUIT
BREAKER

SIMILAR TO _____
SUPERSEDES _____
SUPERSEDED BY _____
REPLACES _____
REPLACED BY _____

DR. R.E.B. 11/30/64
TR. C. SMITH 6/4/70
CK. _____
APPD. _____

SCALE _____ CLASS _____

601522-1

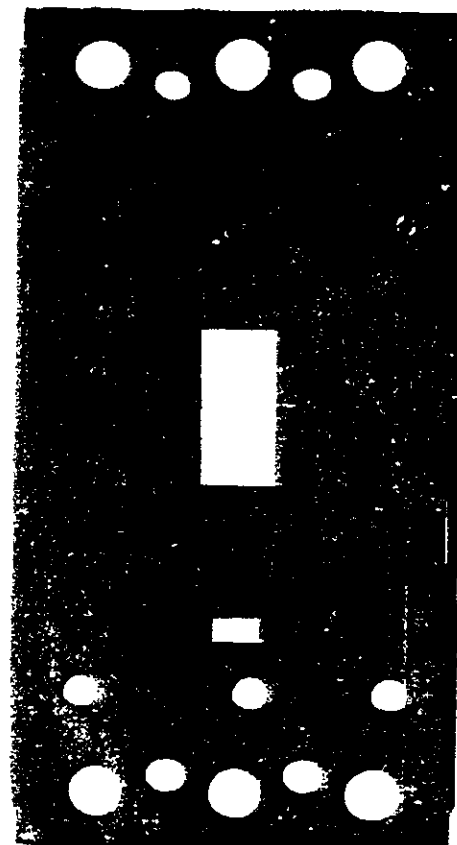
ENG. ORDER CAC 809 REVISIONS FBK 90
DATE ISSUED _____

DO NOT CHANGE
WITHOUT APPROVAL OF
BUREAU OF MINES

DWG. SIZE 2

1-101209

DO NOT CHANGE
WITHOUT APPROVAL OF
BUREAU OF MINES



1



4



5



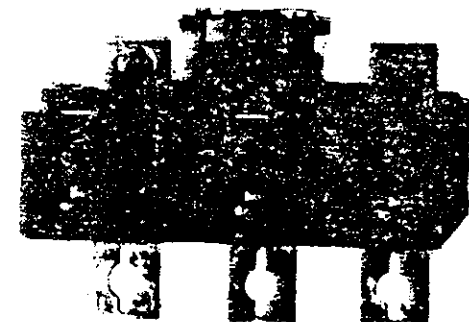
7



2



3



6

SEE NOTE

REPAIR PARTS FOR 602101- "KA" FRAME
CIRCUIT BREAKER

REF. NO.	QTY DESCRIPTION	WESTINGHOUSE NO.	JOY NO.
1	1 COVER	456D973G01	602103-2
2	1 HANDLE	314C930H01	602103-3
3	3 ARC EXTINGUISHER	456D976G02	602103-4
4	3 STATIONARY CONTACT & CONDUCTOR	208B262G01	602103-5
5	6 BARRIER	314C928H05	602103-6
6	1 TRIP UNIT	SEE NOTE	
7	6 TERMINAL	207B510G05	602103-1

NOTE:

100 AMP. TRIP UNIT	KA3100T	602102-1
225 AMP. TRIP UNIT	KA3225T	602102-2
200 AMP. TRIP UNIT	KA3200T	602102-3

JOY MANUFACTURING CO.
PLANT LOCATION AS INDICATED BELOW

CLAREMONT, N. H.	NEW PHILADELPHIA, O.
DALLAS, TEXAS	ST. LOUIS, MISSOURI
FRANKLIN, PA.	<input checked="" type="checkbox"/>
GALT, ONTARIO, CANADA	
GREENOCK, SCOTLAND	
MICHIGAN CITY, IND.	

KA CIRCUIT BREAKER
FRAME REPAIR PARTS

SIMILAR TO _____	DR. <i>R.E.B. 6/18/65</i>	SCALE _____ CLASS <i>COAL</i>
SUPERSEDES _____	TR. <i>SMITH 6/4/70</i>	
SUPERSEDED BY _____	CK _____	
REPLACES _____	APPD _____	
REPLACED BY _____		602101-1

ENG. ORDER *CA0585* REVISIONS *CAE334 FBK90*

600007-634

900362-122
(#6-32x5/8)
900609-2

7 3/4 REF

900020-24 REF
900012-24 ALT.
(#2-13x1-1/4)
900302-4

7 1/2 REF

1189941-340

3189859-36

3 1/4 REF

O.E.M. PRINT
FOR REFERENCE ONLY,
NOT AS REBUILT

LITHOPRINT THIS DRAWING

DO NOT CHANGE
WITHOUT APPROVAL OF
MSHA

JOY MANUFACTURING CO.	
PLANT LOCATION AS INDICATED BELOW	
BUFFALO, N. Y.	NEW PHILADELPHIA, O.
CLAREMONT, N. H.	
FRANKLIN, PA.	X
GALT, ONTARIO, CANADA	
GREENOCK, SCOTLAND	
MICHIGAN CITY, IND.	

CONNECTION BOX

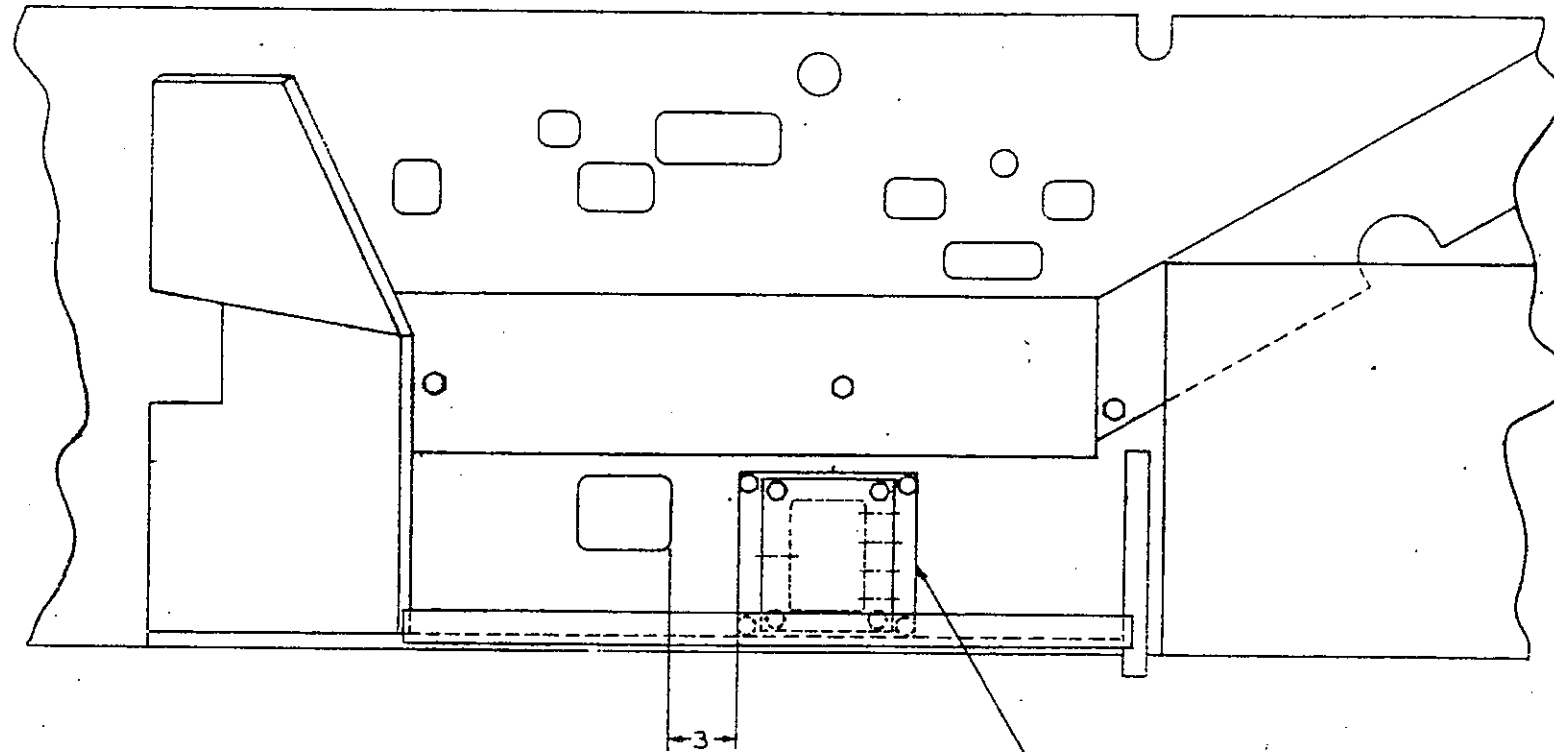
SIMILAR TO	NAME OR INITIAL & DATE	SCALE	CLASS
SUPERSEDED BY	DR. 12-73		
REPLACES	TR.		
REPLACED BY	CK.		
	APPD.		

503088-7

E.O. FCB 317	REVISIONS	FCB 426	0FCH962	FCP599
DATE				

EL1600

RIGHT SIDE OPERATORS PLATFORM



503088-7 JUNCTION BOX (REF.)
(SEE WIRING DIAGRAM FOR MOUNTING PARTS)

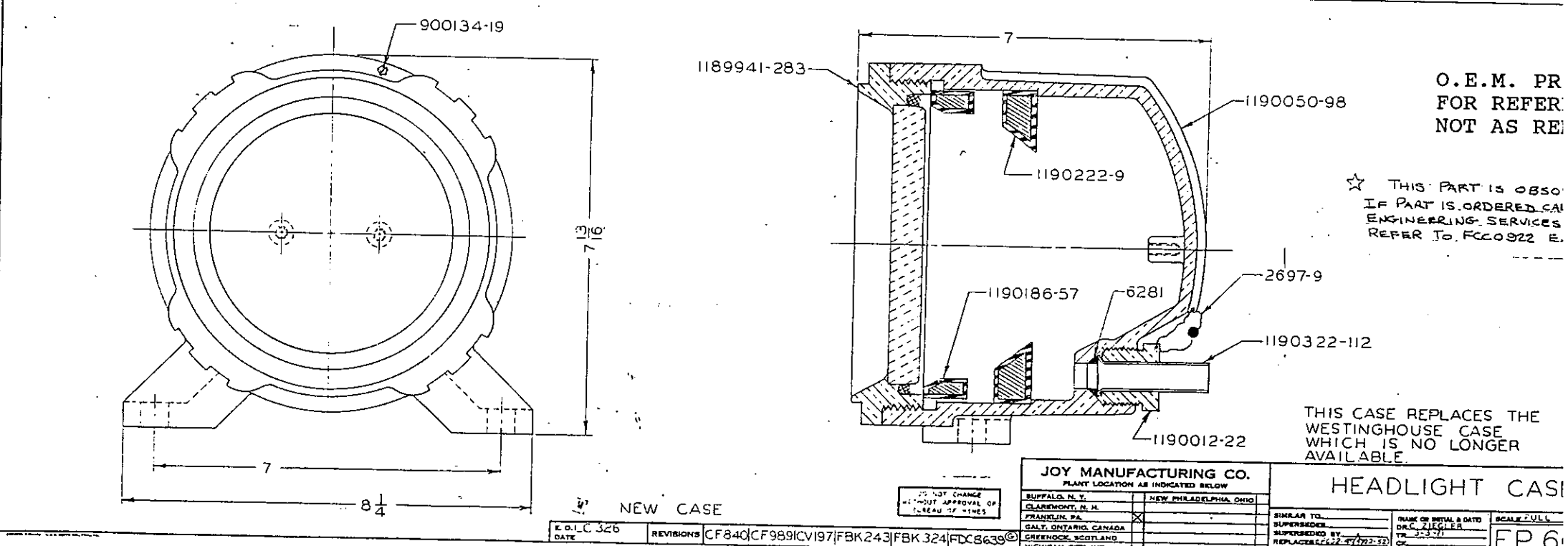
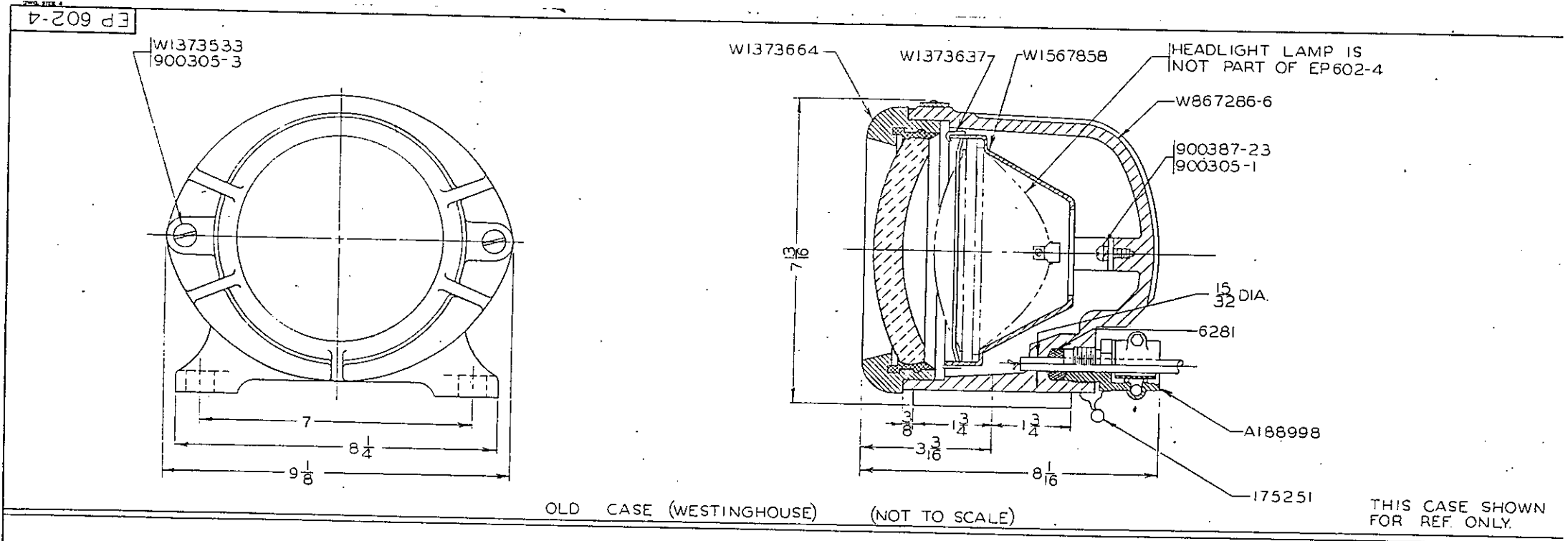
O.E.M. PRINT
FOR REFERENCE ONLY,
NOT AS REBUILT.

(L)

M
 I.O.P. BP595
 DATE _____

JOY MANUFACTURING CO.		LOCATION OF JUNCTION BOX ON 15RU CUTTER	
PLANT LOCATION AS INDICATED BELOW			
COVING, S. C.	NEW HAVEN, S. C.	RELAY TO:	DATE OF TEST: _____
CLARKSON, S. C.		SUPERSEDED BY:	BY: _____
FRANKLIN, N. C.		REPLACES:	BY: _____
WICK, GEORGIA COUNTY			
GEORGIA, GEORGIA			
WILSON, N. C.			

EL1600



E. O. L. C. 326
DATE

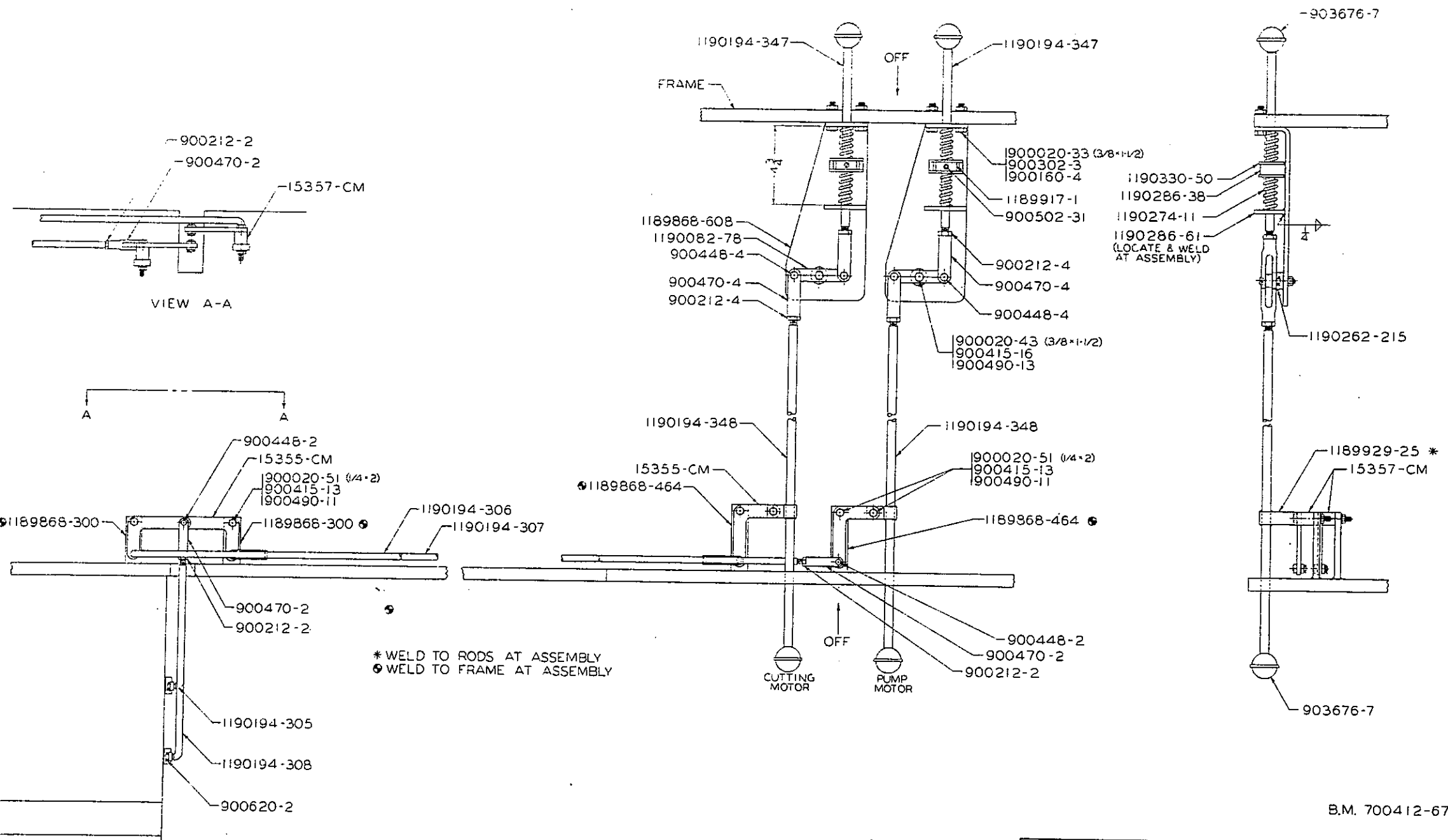
REVISIONS CF840|CF989|CV197|FBK243|FBK324|FDC8638

JOY MANUFACTURING CO.	
PLANT LOCATION AS INDICATED BELOW	
BUFFALO, N. Y.	NEW PHILADELPHIA, OHIO
CLAREMONT, N. H.	
FRANKLIN, PA.	
SALT SPRING, CANADA	
GREENOCK, SCOTLAND	
MICHIGAN CITY, IND.	

HEADLIGHT CASE	
SIMILAR TO	SCALE FULL
SUPERSEDED BY	DATE OF ISSUE
REPLACES	APPROVED BY
REPLACED BY	

EP 6

EL1607



B.M. 700412-67

<p>This drawing and all information therein is the property of the JOY MANUFACTURING CO. It is confidential and must not be made public or copied. It is loaned subject to return upon demand, is not to be used directly or indirectly in any way detrimental to our interest.</p>		<p>JOY MANUFACTURING CO. PLANT LOCATION AS INDICATED BELOW</p> <table border="1"> <tr> <td>BUFFALO, NEW YORK</td> <td>NEW PHILADELPHIA, OHIO</td> </tr> <tr> <td>CLARENCE, N. H.</td> <td></td> </tr> <tr> <td>FRANKLIN, PA.</td> <td></td> </tr> <tr> <td>GALT, ONTARIO, CANADA</td> <td></td> </tr> <tr> <td>GREENOCK, SCOTLAND</td> <td></td> </tr> <tr> <td>MICHIGAN CITY, IND.</td> <td></td> </tr> </table>		BUFFALO, NEW YORK	NEW PHILADELPHIA, OHIO	CLARENCE, N. H.		FRANKLIN, PA.		GALT, ONTARIO, CANADA		GREENOCK, SCOTLAND		MICHIGAN CITY, IND.		<p>PUSH-PULL MOTOR CONTROL PARTS</p> <table border="1"> <tr> <td>DESIGNED BY</td> <td>SCALE 1/2"=1"</td> </tr> <tr> <td>DRAWN TO: EL 14.3.55-D</td> <td>DATE</td> </tr> <tr> <td>SUPERSEDED BY</td> <td>DR. C. J. EGLE</td> </tr> <tr> <td>SUPERSEDED BY</td> <td>TR. 11-10-75</td> </tr> <tr> <td>REPLACES</td> <td>CL</td> </tr> <tr> <td>REPLACES BY</td> <td>APPROV.</td> </tr> </table>		DESIGNED BY	SCALE 1/2"=1"	DRAWN TO: EL 14.3.55-D	DATE	SUPERSEDED BY	DR. C. J. EGLE	SUPERSEDED BY	TR. 11-10-75	REPLACES	CL	REPLACES BY	APPROV.
BUFFALO, NEW YORK	NEW PHILADELPHIA, OHIO																												
CLARENCE, N. H.																													
FRANKLIN, PA.																													
GALT, ONTARIO, CANADA																													
GREENOCK, SCOTLAND																													
MICHIGAN CITY, IND.																													
DESIGNED BY	SCALE 1/2"=1"																												
DRAWN TO: EL 14.3.55-D	DATE																												
SUPERSEDED BY	DR. C. J. EGLE																												
SUPERSEDED BY	TR. 11-10-75																												
REPLACES	CL																												
REPLACES BY	APPROV.																												
<p>ENCL. SHEET 1 OF 2 DATE REVISIONS</p>	<p>EL1607</p>																												

WD3288

CABLES AND HOSES				
REF	PART NO.	SIZE	O.D.	LENGTH
A	601844-1	*1 AVC		9'-0"
B	601432-16	*2-6 COND.	1.46	15'-0"
C	600064-1	4/0-3 COND.	2.04	15'-0"
D	601589-14	4/0-3 COND.	2.04	15'-0"
E	600021-2	*2-3 COND.	1.34	12'-6"
F	10510-B	*12-6 COND.	.75	12'-0"
G	601708-2	*14-3 COND.	.40	15'-0"
H	601302-28	2/0-1 COND.	.82	25'-0"
J	601579-1	*14-1 COND.		50'-0"

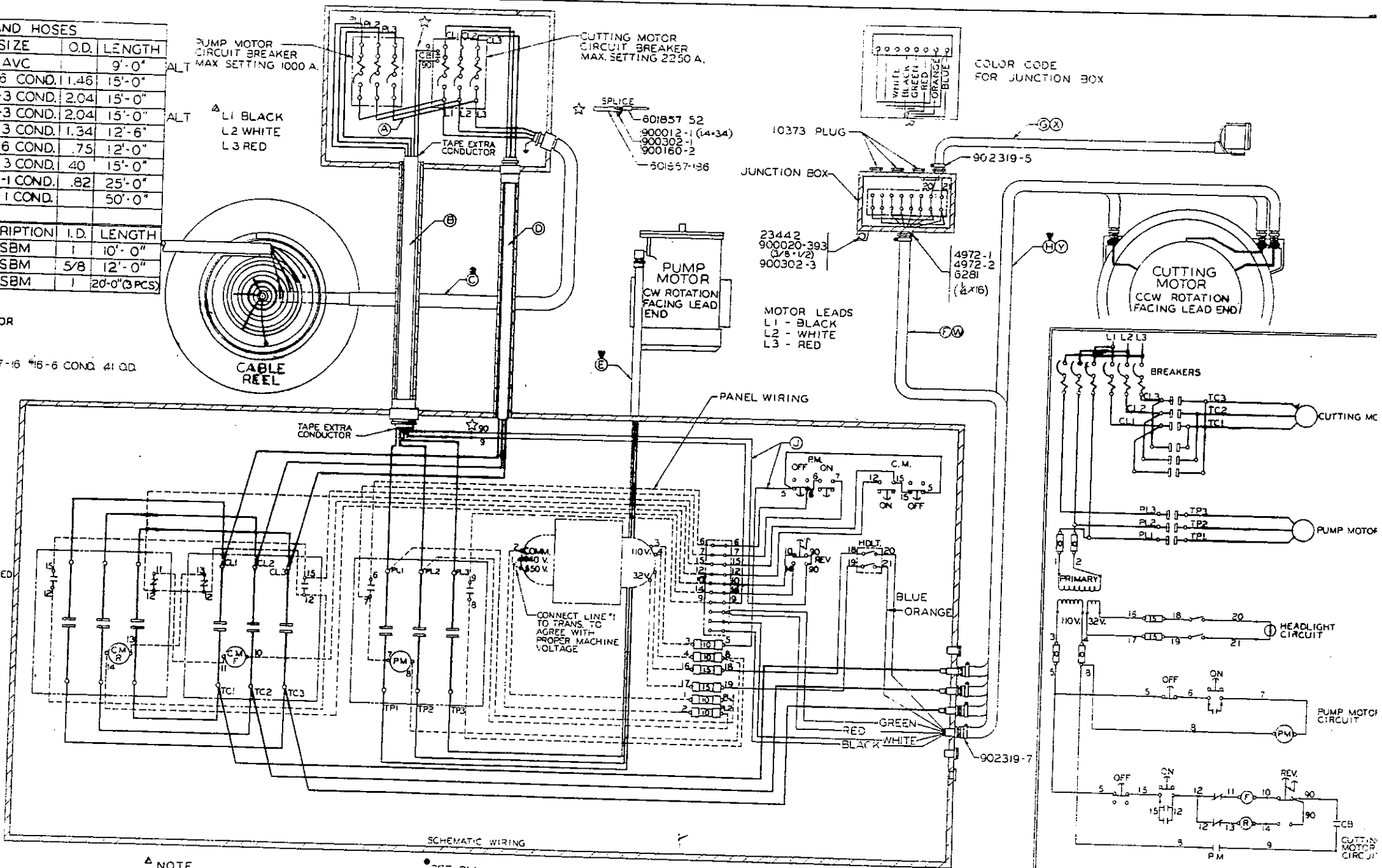
REF	HOSE NO.	DESCRIPTION	I.D.	LENGTH
W	2670A	USBM	1	10'-0"
X	178985	USBM	5/8	12'-0"
Y	2670A	USBM	1	20'-0" (3 PCS)

▼ INCLUDED WITH MOTOR
 ● INCLUDED WITH REEL
 † REF ONLY
 OLD PART NO. 600217-16 #6-6 COND. 41 OD

NUMBER ALL WIRES (BOTH ENDS)
 ALL CIRCUITS SHOWN DE-ENERGIZED

WIRE NO.	FROM	TO	TERMINAL
1	15	11	11
2	12	10	10
3	13	9	9
4	14	8	8
5	15	7	7
6	16	6	6
7	17	5	5
8	18	4	4
9	19	3	3
10	20	2	2
11	21	1	1
12	22	0	0

THE PORTABLE CABLE TO THE MACHINE MUST HAVE SHORT-CIRCUIT PROTECTION AS PRESCRIBED IN TABLE E, PAGE 23 OF U.S.S.A. SCHEDULE THE CONNECTIONS NOT MADE IN PLATE, BRIDGE AIR SHALL BE MADE ACCORDING TO SCHEDULE 36.
 ALL SPLICES TO BE TAPPED AS FOLLOWS:
 2 LAYERS 110° ABSORBER CLOTH TAPE HALF LAYERS
 1 LAYER 3M™ GLASS-REINFORCED TAPE HALF LAYERS
 1 LAYER 3M™ ULTRATHIN EPOXY RESIN TAPE HALF LAYERS
 (These to be applied over the splice)



NOTE
 INSURE POWER CABLE IS PHASED BLACK, WHITE, RED. SWAP ANY 2 LINES AT THE LINESTARTER TO CHANGE THE DIRECTION OF THE MOTOR

REF ONLY
 OLD PART NO. 600024-1 #1 AVC
 REF ONLY
 OLD PART NO. 600021-2 4/0-3 COND. 2.04 OD

B.M. 700414-311

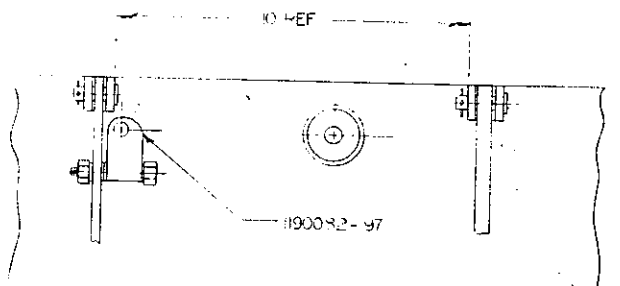
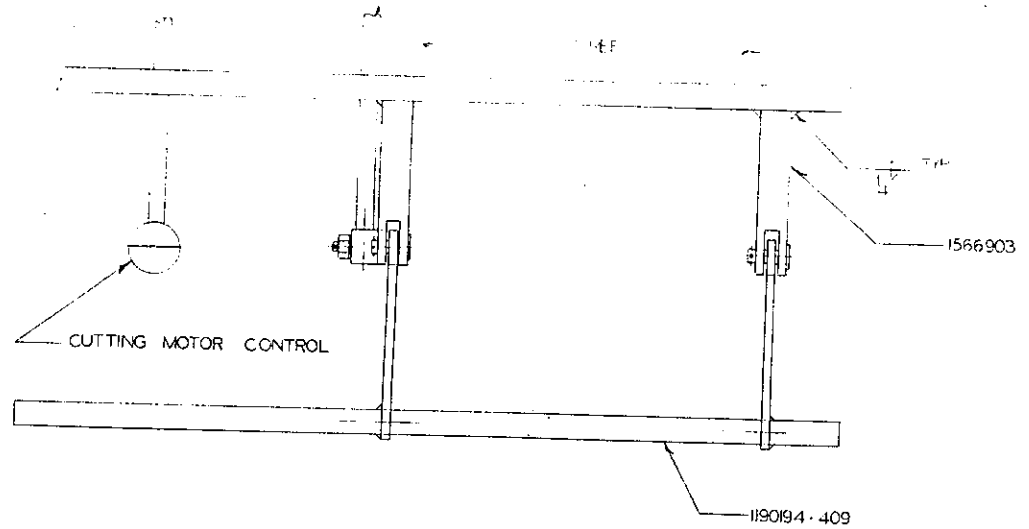
This drawing and all information thereon is the property of the JOY MANUFACTURING CO. It is confidential and must not be made public or copied, in its whole or in part, without the written consent of the JOY MANUFACTURING CO. in any way detrimental to our interest.

JOY MANUFACTURING CO.
 PLANT LOCATION AS INDICATED BELOW
 BUFFALO, NEW YORK
 CLAREMONT, N. H.
 FRANKLIN, PA.
 GALT, ONTARIO, CANADA
 GREENOCK, SCOTLAND
 MICHIGAN CITY, IND.

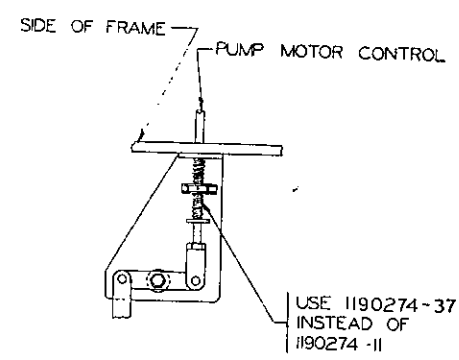
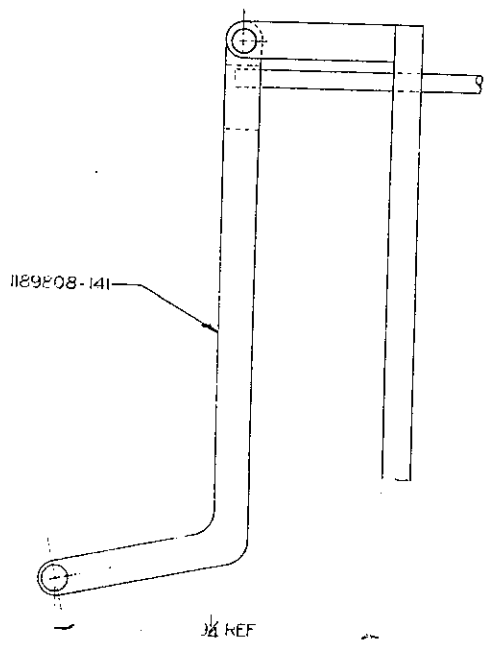
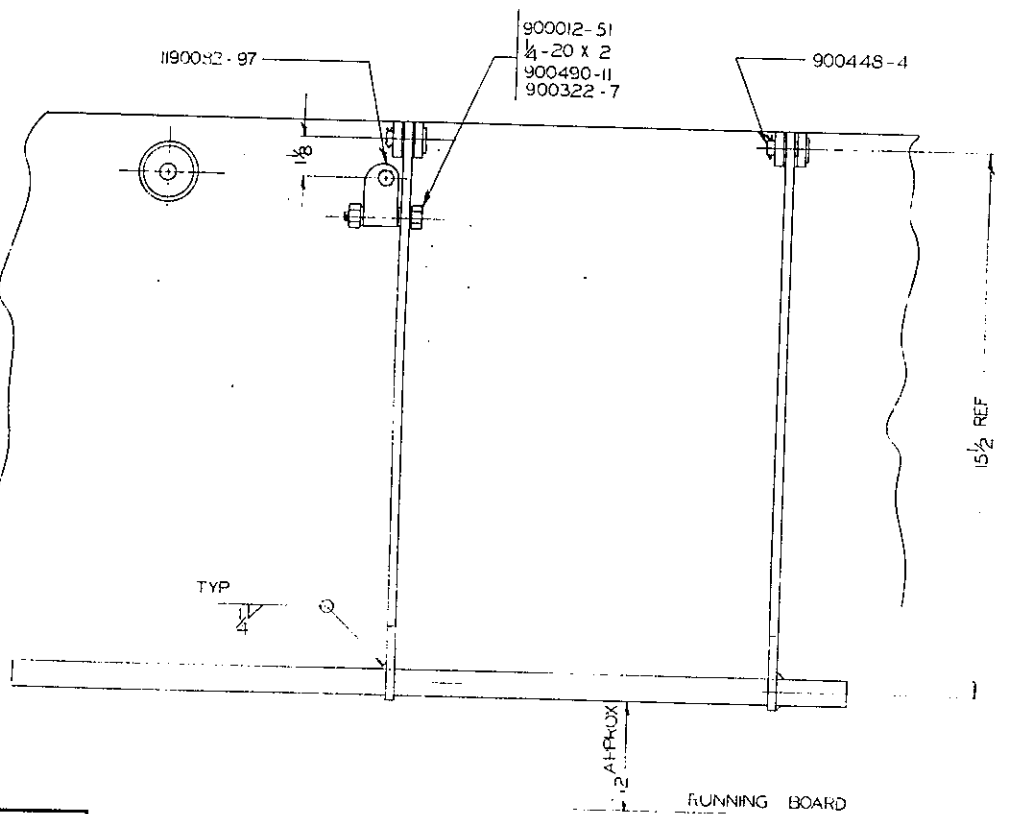
ELEMENTARY WIRING
WIRING DIAGRAM 15RU (440/550 A.C.)
 SIMILAR TO AIR 1225
 SUPERSEDED BY: _____
 REPLACES: _____
 DATE: 10-17-74
 SCALE: _____
 CLASS: 152
WD3288

EL 1608

PUMP MOTOR CONTROL



NOTE: MOUNT PANIC BAR ON BOTH SIDES OF MACHINE. (TYPICAL MOUNTING ON R.H. SIDE OF MACHINE SHOWN) MOUNTING ON L.H. SIDE DIFF AS SHOWN IN DETAIL.



MESA
PANIC BAR
THIS PANIC BAR MEETS THE MINIMUM REQUIREMENTS AS SET FORTH IN SECTION 75.523-1 AND 75.523-2 OF PART 75, SUBCHAPTER O, CHAPTER I OF TITLE 30 OF THE CODE OF FEDERAL REGULATIONS, PROVIDED THAT THE INSTALLATION INSTRUCTIONS ARE FOLLOWED EXACTLY. THE ACTUATING BAR DOES NOT REQUIRE MORE THAN 15 LBS. OF FORCE AND NO MORE THAN 2 INCHES OF MOVEMENT TO DEENERGIZE THE TRAM MOTORS.

BM 700445-171

(L)

DO NOT CHANGE WITHOUT APPROVAL OF MESA

E. O. FBP 686	REVISIONS	FBP 747	FBP 805	FBP 864	FBT 65	FBT 555
DATE						

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JOY MANUFACTURING CO.	
PLANT LOCATION AS INDICATED BELOW	
BUFFALO, N. Y.	NEW PHILADELPHIA, OHIO
CLAREMONT, N. H.	
FRANKLIN, PA.	
SALT, ONTARIO, CANADA	
GREENOCK, SCOTLAND	
MICHIGAN CITY, IND.	

PARTS TO MOUNT MECHANICAL PANIC BAR ON 15RU CUTTER		SCALE HALF	CLASS 15RU
SIMILAR TO	NAME OR INITIAL & DATE		
SUPERSEDED BY	DR. GREENOCK, N.Y.		
REPLACES	TR.		
REPLACED BY	CK.		
	APPO.	EL 1608	

SK 24249-18



United States Department of the Interior

MINING ENFORCEMENT AND SAFETY ADMINISTRATION

4800 FORBES AVENUE
PITTSBURGH, PENNSYLVANIA 15213

In Reply Refer To:
EMS:A6CC

April 15, 1976

Joy Manufacturing Company
Attention: Mr. Russell E. Baldwin
325 Buffalo Street
Franklin, PA 16323

Gentlemen:

The results of the investigation requested in your letter of April 2, 1976, indicate that the panic bar installed on your Model 15RU Coal Cutter is in compliance with Section 75.523-2.

File Number Pb-75/0-0104-0 has been assigned to this system. The panic bar must be fabricated, assembled, and installed in accordance with the attached engineering records list on file with the Approval and Certification Center.

Because of the large variety of control locations resulting from retrofits, rebuild operations, and individual machine designs, the operator controls should be examined carefully before installing the panic bar. This acceptance is valid only for those machines on which the panic bar is installed as shown on Drawing No. EL 1608 and is granted only for the panic bar as required by Part 75.523-1 and -2. Any changes to the electrical system must be processed through established Mining Enforcement and Safety Administration (MESA) procedures.

The Mining Enforcement and Safety Administration approves only complete machines and advertising this system as "approved" is not sanctioned.

The Mining Enforcement and Safety Administration reserves the right to rescind this letter of acceptance, for cause, at any time.

Changes or modifications to the system must be authorized by the Mining Enforcement and Safety Administration. Correspondence relating to changes should refer to the File Number Pb-75/0-0104-0 and the date of this letter.

Sincerely yours,

[Signature]
John Mulhern, Acting Chief
Approval and Certification Center



Enclosure

JOY MANUFACTURING COMPANY

Pb-75/0-0104-0, Engineering Records List
Panic Bar Assembly

TITLE	DRAWING NO.	REVISION
Parts to Mount Mechanical Panic Bar on 15RU Cutter	EL 1608	E.O FBP 805
Bill of Material	B.M. No. 700445-171	FBP 805
Atm	1189808-141	E.O FBP 805
Yoke (Special)	1566903	E.O FBP 135
Rod	1190194-409	E.O FBP 686
Wiring Diagram for Electric Emergency Stop (DC)	WD 3281	E.O FBP 99
Wiring Diagram for Electric Emergency Stop (AC)	WD 3280	E.O FBP 381

This drawing and all information therein is the property of the JOY MANUFACTURING CO. & confidential and must not be made public or copied. It is loaned subject to return upon demand, is not to be used directly or indirectly in any way detrimental to our interest.

JOY MANUFACTURING CO.

PLANT LOCATION AS INDICATED BELOW

RUFFALO, N. Y.	NEW PHILADELPHIA, O.
CLAREMONT, N. H.	
FRANKLIN, PA.	
GALT, ONTARIO, CANADA	
GREENOCK, SCOTLAND	
MICHIGAN CITY, IND.	

LETTER OF ACCEPTANCE

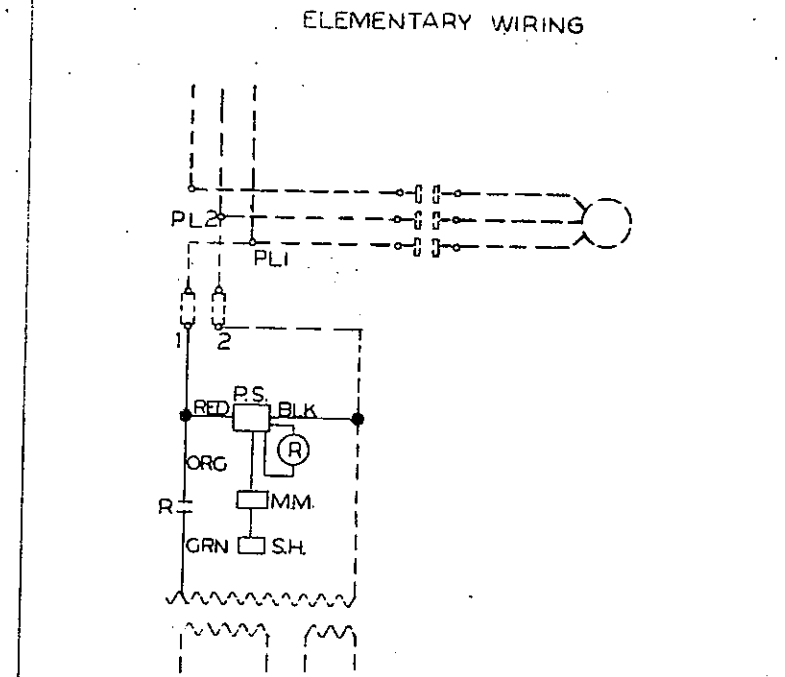
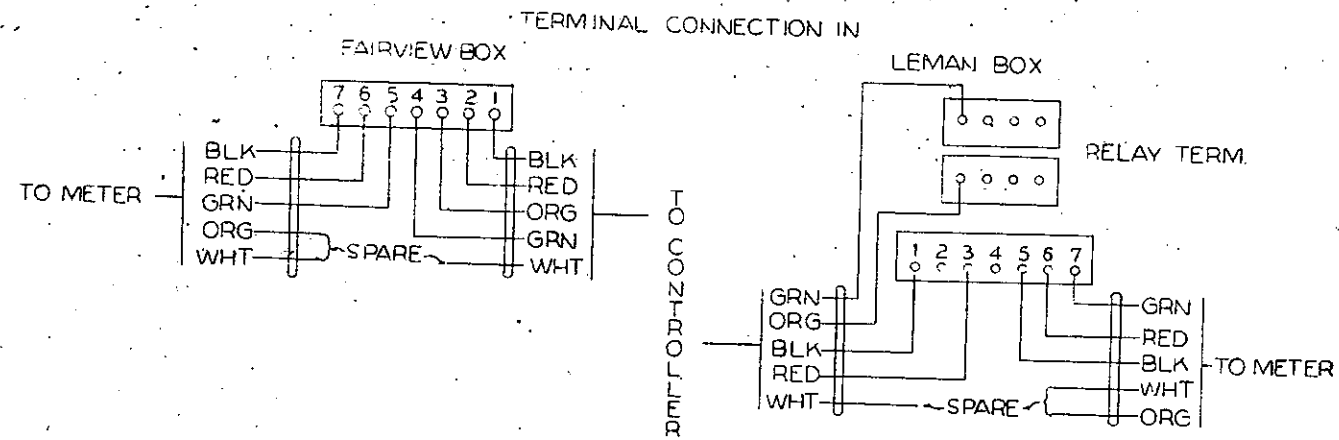
SIMILAR TO _____	(NAME OR INITIAL & DATE)	SCALE _____	CLASS CUTTER
SUPERSEDES _____	DR VJS 5-10-76		
SUPERSEDED BY _____	TR _____		
REPLACES _____	CK _____		
REPLACED BY _____	APPD _____		

SK 24249-18

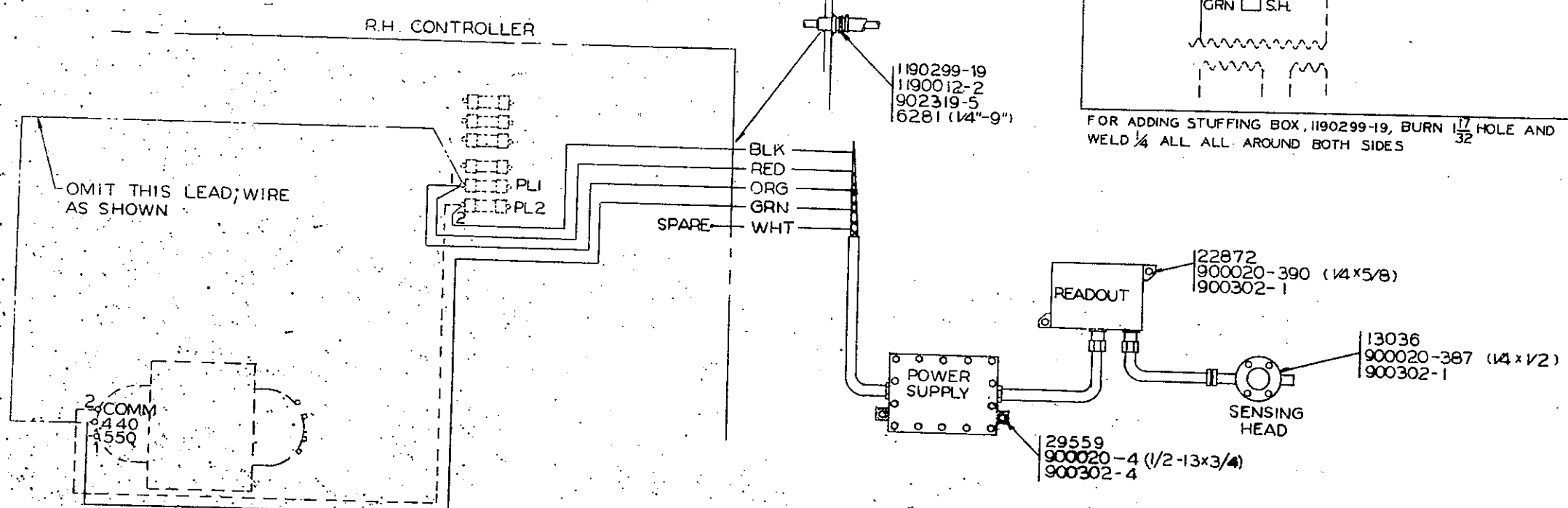
E.C.FBP 864
DATE

REVISIONS

EL1545A



CAUTION: GROUND SYSTEM IF SHOCK MOUNTED



FOR ADDING STUFFING BOX, 1190299-19, BURN $\frac{17}{32}$ HOLE AND WELD $\frac{1}{4}$ ALL AROUND BOTH SIDES

- 1190299-19
- 1190012-2
- 902319-5
- 6281 (1/4"-9")

- 22872
- 900020-390 (1/4x5/8)
- 900302-1

- 13036
- 900020-387 (1/4x1/2)
- 900302-1

- 29559
- 900020-4 (1/2-13x3/4)
- 900302-4

700445-152

DO NOT CHANGE WITHOUT APPROVAL OF 329A

MONITOR ASSY	VOLTAGE
601577-31	440
601577-32	550

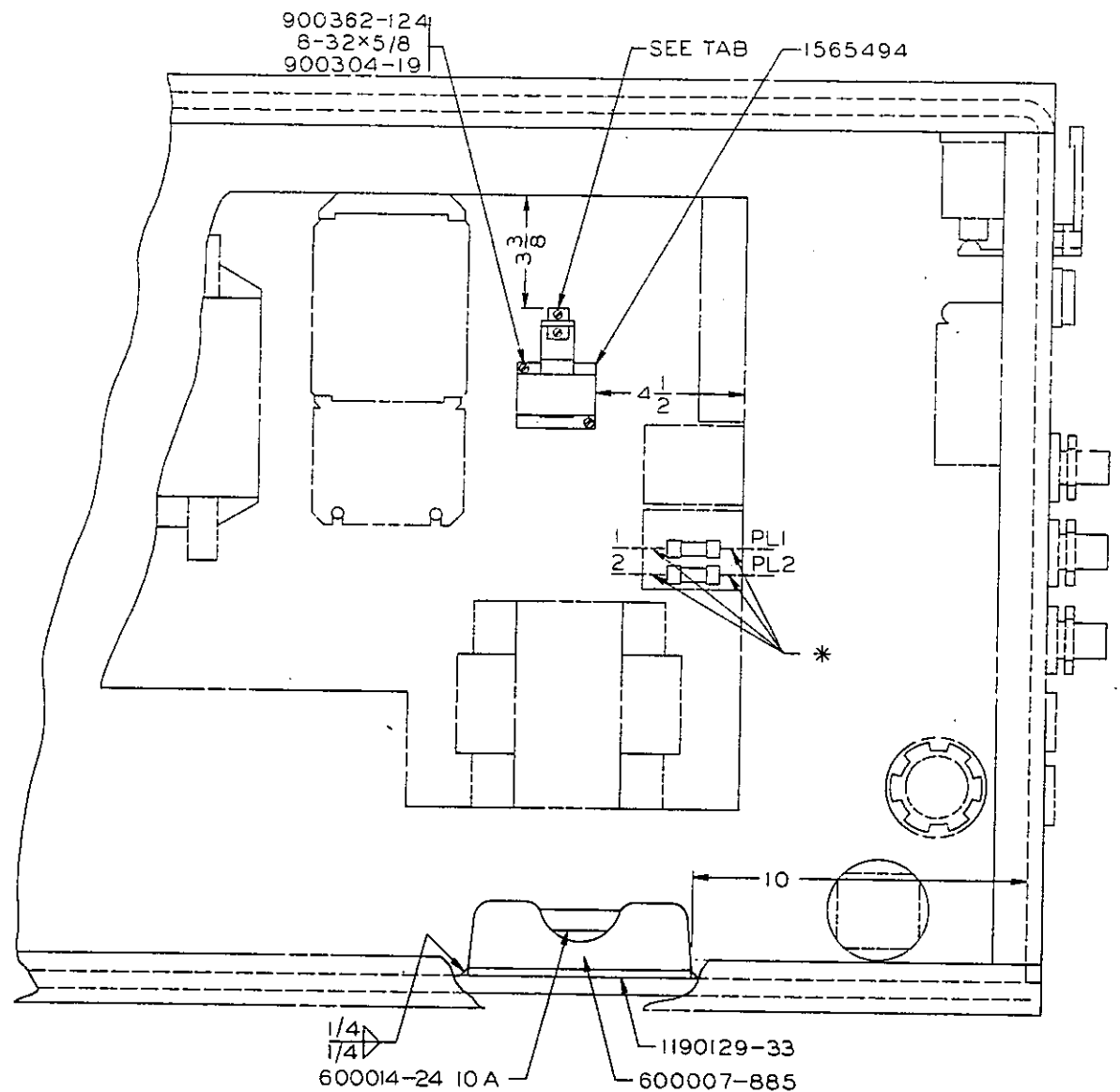
DATE: FBP441 REVISIONS: FBT409 FBT690 OFCH942

This drawing and all information hereon is the property of the JOY MANUFACTURING CO. It is made available and used only for the specific purpose intended. It is loaned subject to return upon demand. It is not to be used directly or indirectly in any way detrimental to our interest.		JOY MANUFACTURING CO. PLANT LOCATION AS INDICATED BELOW		ADDITIONAL ELECTRICAL PART - N.M.S. METHANE MONITOR	
BUFFALO, N. Y.	NEW PLYMOUTH, OHIO	SIMILAR TO:	APPROVED BY:	SCALE:	CLASS:
CLAMBERSVILLE, PA.		SUPERSEDED BY:	DR. G.I.L. 1/23/64		
FRANKLIN, PA.		REPLACES:			
GALT, ONTARIO, CANADA		REPLACED BY:			
GREENOCK, SCOTLAND					
MICHIGAN CITY, IND.					

EL1545A

DWG. SIZE A
SK25257

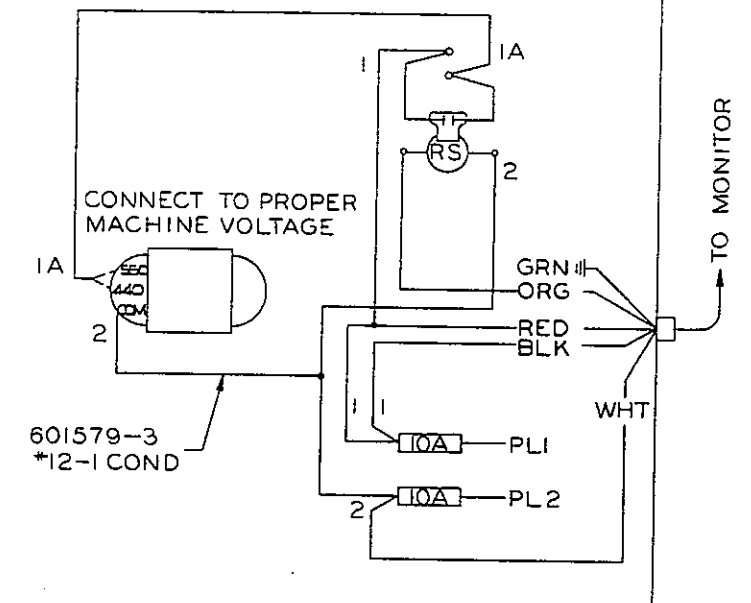
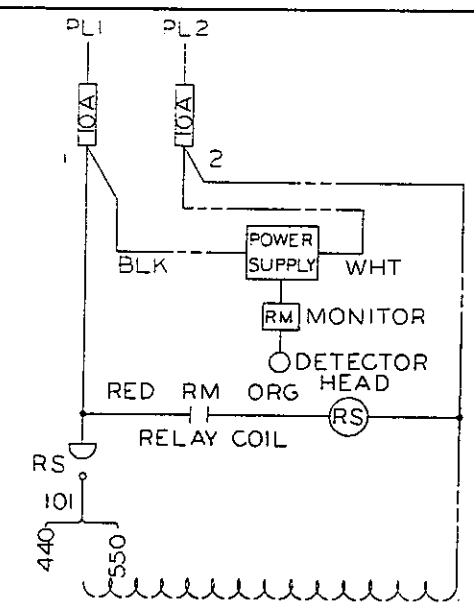
VOLTAGE	BM	RELAY
440	701534-601	601505-83
550	701534-602	601505-68



* DISCONNECT THESE LEADS (PL1, PL2, 1 AND 2) RECONNECT TO NEW FUSE BLOCK AS SHOWN

MOUNTING SCREWS (NOT SHOWN)
 900362-493
 1/4 x 1/2
 900305-58

ALL LOCATION DIMENSIONS ARE APPROXIMATE



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JOY MANUFACTURING CO.		PLANT LOCATION AS INDICATED BELOW	
BIRMINGHAM, AL	L.A. GRANGE, NC		
BUFFALO, NY	MICHIGAN CITY, IN		
CAMBRIDGE, ONT., CAN.	NEW PHILADELPHIA, OH		
CLAREMONT, NH			
EAST KILBRIDE, SCOT.			
FRANKLIN, PA			

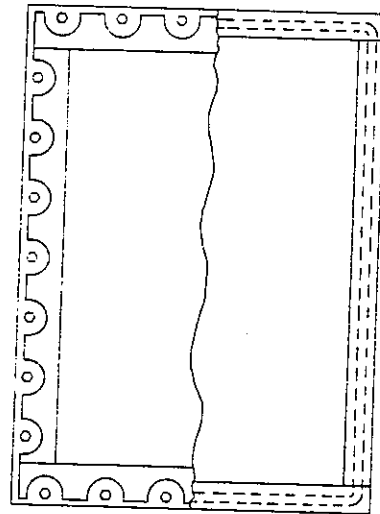
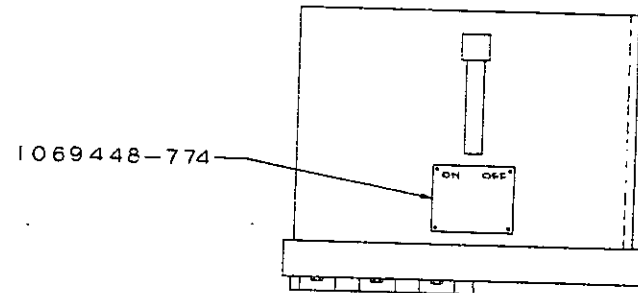
601579-3
*12-1 COND

TO MONITOR

PARTS TO ADD RELAY FOR MSA METHANE MONITOR

DATE OF INITIAL & DATE	SCALE	BY	CHKD.	APPD.

SK25257



BREAKER BOX

NOTE
1190149-143 DANGER AND 1190149-144
USED PRIOR TO JAN 1, 1983 AND SINGLE
DISCONNECT.

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JOY MANUFACTURING CO.
PLANT LOCATION AS INDICATED BELOW

BIRMINGHAM, AL	LS GRANGE, NC
BUFFALO, NY	MICHIGAN CITY, IN
CAMBRIDGE, ONT., CAN.	NEW PHILADELPHIA, OH
CLAREMONT, NH	
EAST KILBRIDE, SCOT.	
FRANKLIN, PA	

NAME PLATE ARRANGE
SHEET 2 OF 2

SIMILAR TO _____	DATE OF INITIAL & DATED _____	SCALE _____
SUPERSEDED BY _____	DRG. FILE # _____	
REPLACED BY _____	TR. _____	
REPLACED BY _____	CK. _____	
	APPR. _____	

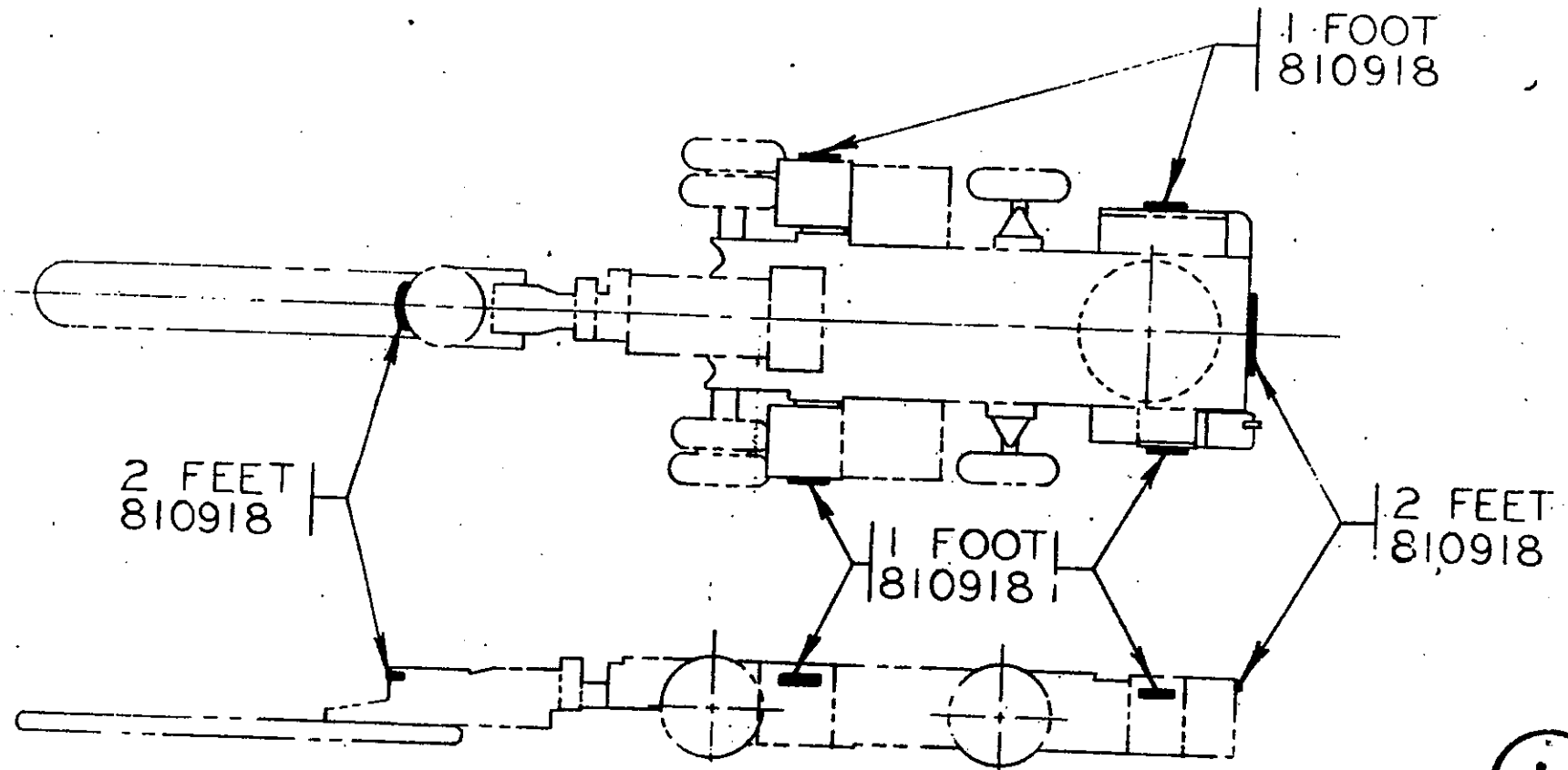
E. O. FCC 293
DATE 2-5-82 REVISIONS FCC 467

CM529

DWG. SIZE 1

EL1553

USE TOTAL OF 8 FEET OF
810918 REFLECTIVE TAPE

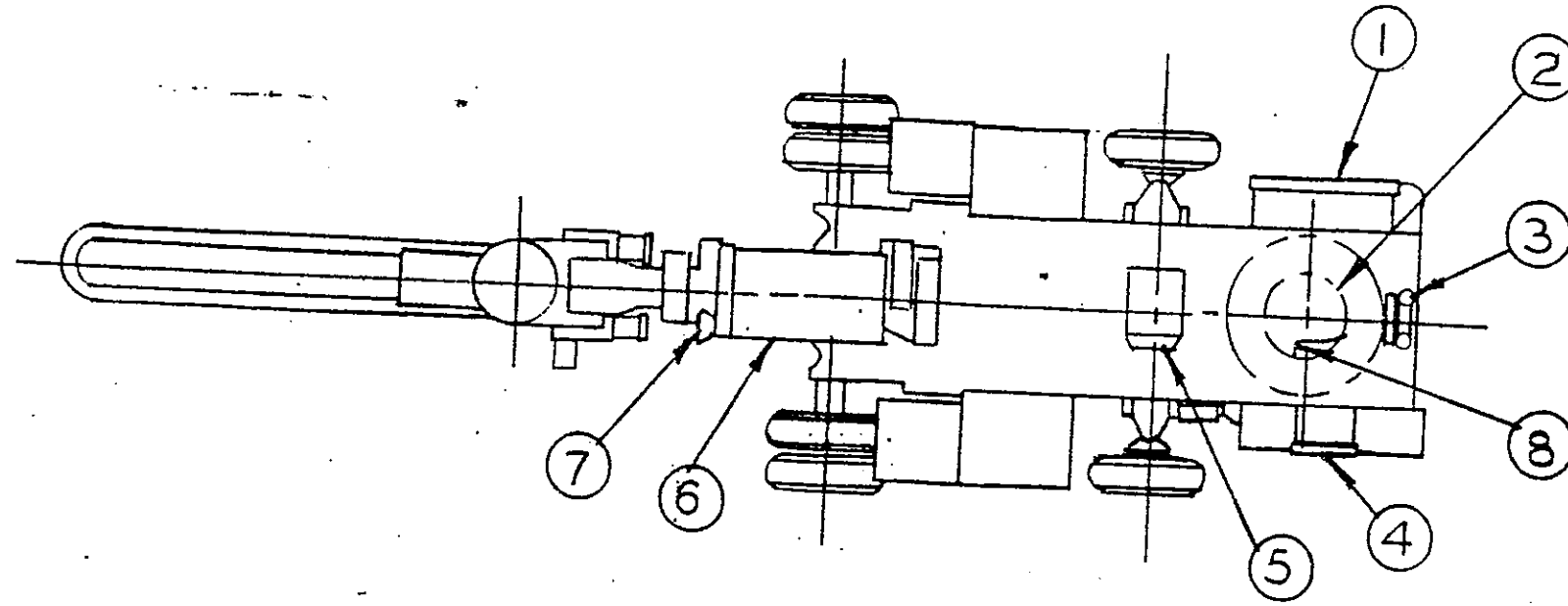


ENG. ORDER EBK514	REVISIONS	JOY MANUFACTURING CO.		LOCATIONS OF REFLECTIVE TAPE	
DATE ISSUED		PLANT LOCATION AS INDICATED BELOW		DR. C. ZIEGLER TR. 11-17-71 CK. APPD.	
		CLAREMONT, N. H.	NEW PHILADELPHIA, O.	SCALE N.T.S. CLASS CUTTERS	
		DALLAS, TEXAS	ST. LOUIS, MISSOURI	SUPERSEDED BY _____	
		FRANKLIN, PA.		REPLACES _____	
		GALT, ONTARIO, CAN.		REPLACED BY _____	
		GREENOCK, SCOTLAND		EL 1553	
		MICHIGAN CITY, IND.			

CRYSTAL VELLUM A. & B. SMITH CO., PHOENIX, PA.

PR 1728-583

SK 21988



NO	PART	ITEMS AND POINTS TO CHECK
1	RIGHT HAND CONTROLLER	PLANE FLANGE, JOINT COVER, SWITCHES, AND GLANDS
2	CABLE REEL	FLANGE INSULATION, PLANE FIT
3	CABLE GUIDES	NO HOLES THRU INSULATION ROLLS
4	LEFT HAND CONTROLLER	PLANE FLANGE, JOINT COVER, GLAND
5	PUMP MOTOR	PACKING GLAND, HANDHOLE COVERS, BOLTS, AND SEALS
6	CUTTING MOTOR	PACKING GLAND, HANDHOLE COVERS, BOLTS, AND SEALS
7	HEADLIGHT	LENS, PACKING GLAND, SEAL
8	CABLE ENTRANCE PARTS	GLAND AND SEAL

JOY MANUFACTURING CO. (L)
 15 RUCUTTER PERMISSIBLE INSPECTION LIST

E.O. FBE944

SK 21988