

USERGUIDE

6" Grabber



WARNING - Reliance on this Manual Could Result in Severe Bodily Injury or Death!

This manual is out-of-date and is provided only for its technical information, data and capacities. Portions of this manual detailing procedures or precautions in the operation, inspection, maintenance and repair of the product forming the subject matter of this manual may be inadequate, inaccurate, and/or incomplete and cannot be used, followed, or relied upon.

Contact Conair at info@conairgroup.com or 1-800-654-6661 for more current information, warnings, and materials about more recent product manuals containing warnings, information, precautions, and procedures that may be more adequate than those contained in this out-of-date manual.

THIS CATALOG HAS BEEN PREPARED AS A
GUIDE TO SELECTING PARTS FOR A
STANDARD MARTIN INDUSTRIES PRODUCT.

DUE TO THE MANY VARIATIONS AND
OPTIONS AVAILABLE, PLEASE INCLUDE THE
MARTIN JOB NUMBER WITH EACH ORDER FOR
PARTS. THIS NUMBER MAY BE FOUND
STAMPED IN THE MOUNTING BASE PLATE OF
EACH MACHINE.

RECOMMENDED SPARE PARTS FOR 6" GRABBER

<u>MARTIN PART #</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
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MECHANICAL

BRG-00135	BEARING - CAM MOD SHORT	2
BRG-00053	BEARING - CAM CONCENTRIC	2

STRIPPER ASSEMBLY, 6" CAM

2 CYL. HVY. DUTY

BRG-00020	BEARING SLEEVE, 3.004 ID X 3.505 OD X 3.000 LG.	1
VAL-00076	VALVE - SOL. SIN. SPG RET 2 POS. .250 NPTE	1
CYL-00114	CYLINDER - AIR, 3.250 BORE X 4.000 STROKE	2

ARM ASSEMBLY, 6" CAM

W/O PART SENSE

GRB-00004	GRABBER - SPRUE, 4" ASY. .750 BORE X 1.000 STROKE	1
SPG-00006	SPRING - COMP. MUSIC WIRE, .210 DIA. X .670 LG.	2
CYL-00034	CYLINDER - AIR, .750 BORE X 1.000 STROKE	1

ARM ASSEMBLY, 6 "CAM

WITH PART SENSE

GRB-00008	GRABBER - SPRUE, MRS ASY 4" .750 B X 1.000 STR.	1
SWT-00015	SWITCH - REED, MAG NO. 12V-230V	1
CYL-00038	CYLINDER - BIMBA .750 BORE X 1.000 STK. MRS	1
SPG-00006	SPRING - COMP. MUSIC WIRE, .210 DIA. X .670 LG	2

KIT - PACKING, CAM 6"

ELECTRICAL & MECHANICAL

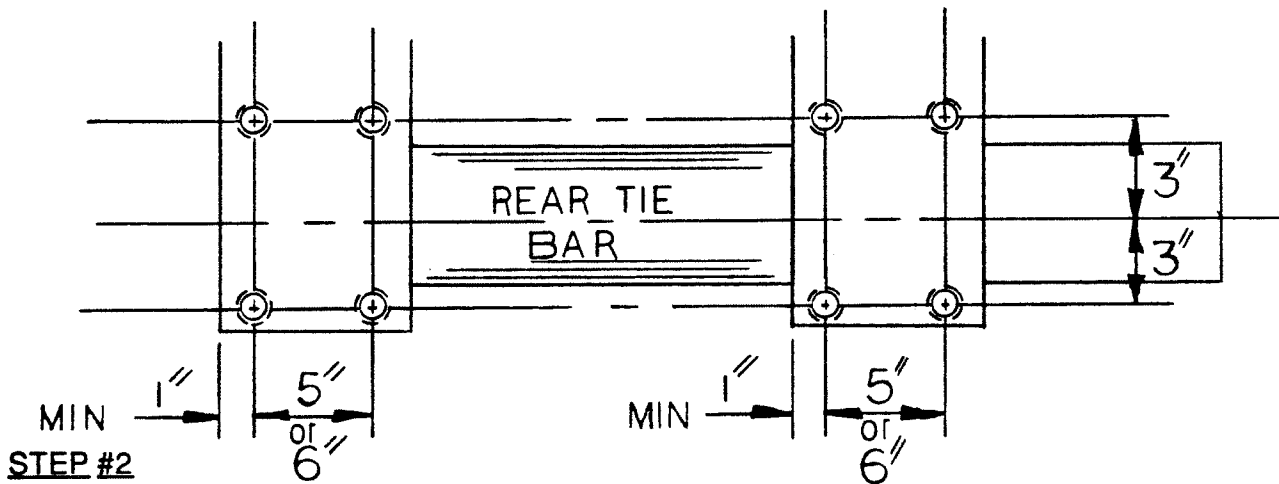
SKT-00001	SOCKET - RELAY, MINI SNAP-ON SURFACE/ MNT.	2
FUS-00015	FUSE - CERAMIC, TUBE, .250 X 1.250 OL 5 AMP	2
RES-00002	RESISTOR - VARISTOR, METAL OXIDE, 130V RMS	2
RLY-00001	RELAY - MINIATURE, 4 POLE 200 VOLTS	2
REG-00001	REGULATOR - FILTER, .125 PTF PORTS, MANUAL	1

**MARTIN INDUSTRIES
INSTALLATION INSTRUCTIONS
TWO- AND FOUR- MOTION GRABBERS**

STEP #1

DRILL AND TAP FOUR (4) 1/2-13 HOLES ON TOP OF FIXED AND MOVING PLATENS.

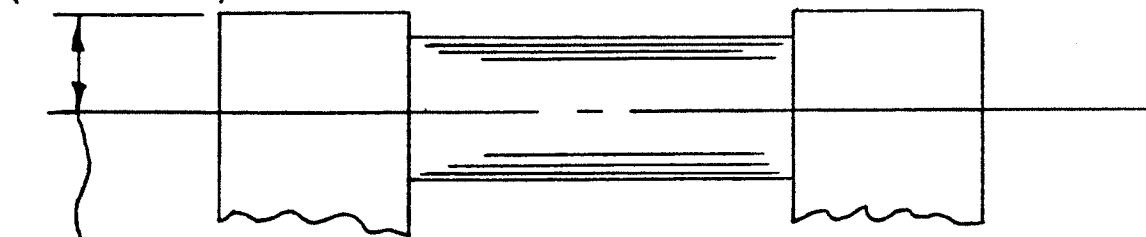
(SEE SKETCH)



STEP #2

GET MOUNTING SURFACES ON TOP OF PLATENS PARALLEL TO TIE BAR. CHECK WITH GROUND STOCK AND PRECISION LEVEL BETWEEN TWO PLATENS. SHIM AS NEEDED.

(SEE SKETCH)



**EQUAL AND PARALLEL
WITHIN .015**

STEP #3

MOUNT CAM AND PUSHER BLOCK SQUARE WITH PLATEN FACES.

STEP #4

INSERT BAR INTO CAM AND PUSHER BLOCK.

STEP #5

BAR MUST SLIDE BACK AND FORTH BY HAND. TIGHT SPOTS SHOULD BE ONLY IN THE HELIX AND YOU SHOULD BE ABLE TO WEDGE BY THE TIGHT SPOTS BY HAND. IF BAR SHOULD BECOME TIGHTLY WEDGED, CHECK ALIGNMENT OF CAM AND PUSHER BLOCK.

STEP #6

CONNECT CONTROL CIRCUITS. ELECTRIC AND PNEUMATIC FOR FOUR-MOTION UNITS. PNEUMATIC FOR TWO-MOTION UNITS.

STEP #7

SET STRIPPER NUTS FOR DESIRED AMOUNT OF STRIPPING ACTION. MAKE SURE THEY ARE EQUAL ON BOTH SIDES.

STEP #8

INSERT BAR AND HAVE ROLLERS AT THE START OF HELIX. WITH STRIPPER PLATE FORWARD, CLAMP LOCKING COLLAR WITH BEARING WASHERS TO BAR.

STEP #9

WITH STRIPPER PLATE FORWARD, CLOSE PRESS SLOWLY TO LOCK UP POSITION. CHECK ROLLER HEAD TO BE SURE IT DID NOT COME OUT OF CAM. REOPEN PRESS.

STEP #10

MOUNT ARM ON SHAFT. WITH STRIPPER BACK TO PICK UP SPRUE WITH PRESS IN OPEN POSITION.

STEP #11

CLOSE PRESS SLOWLY TO CHECK FOR INTERFERENCE WITH ARM.

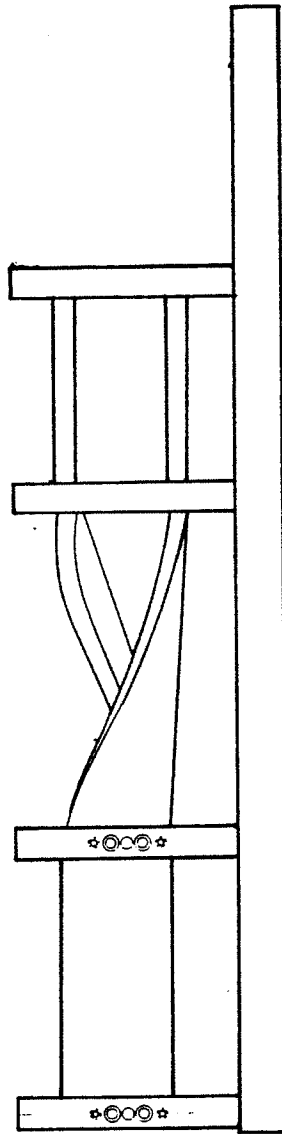
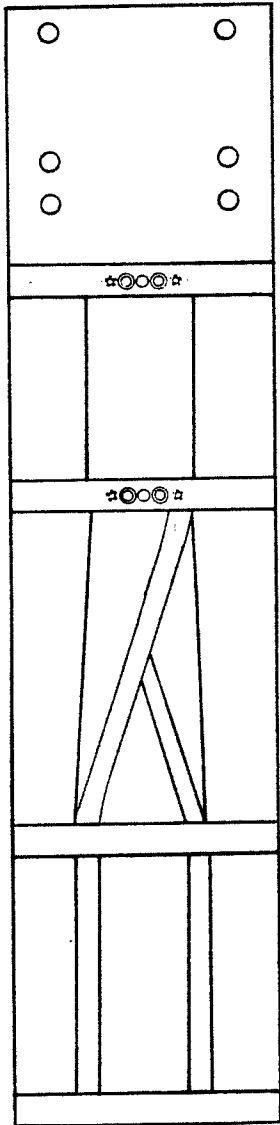
STEP # 12

PRESS IS NOW READY TO START UP.

PROCEDURE FOR CHANGING MOLDS:

1. REMOVE ARM
2. REMOVE CAM BAR, BUT DO NOT REMOVE PUSHER BLOCK OR CAM.
3. CHANGE MOLD AS USUAL AND REPEAT STEPS 7 THRU 12.

WARNING: REMOVE ARM WHEN BOTH HALVES OF MOLD ARE HUNG ON ONE PLATEN ONLY.



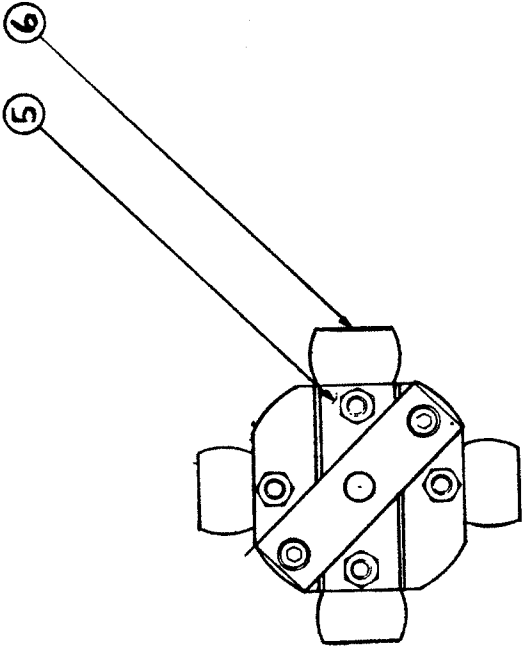
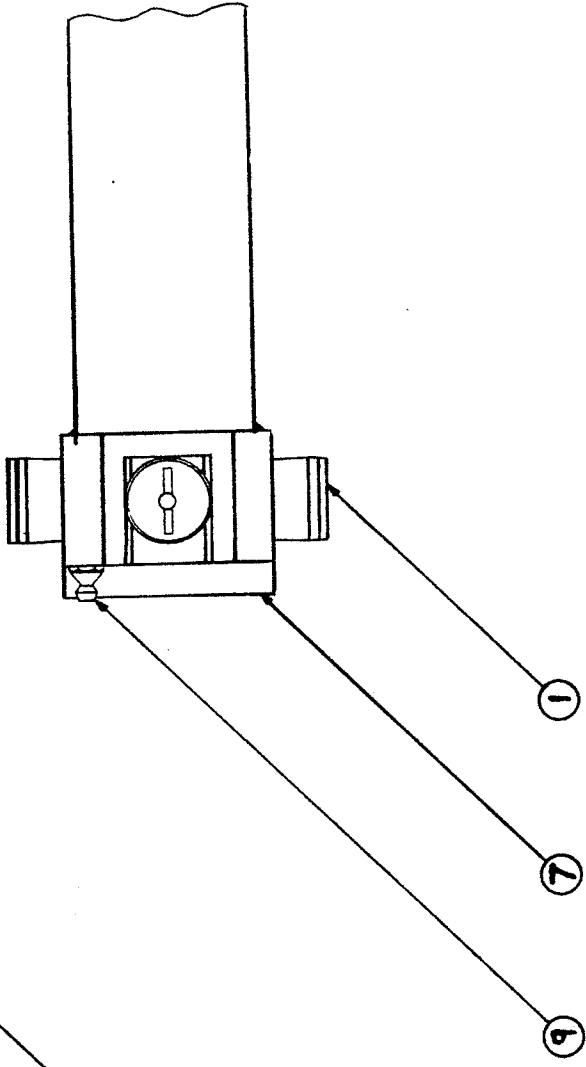
TRC-00054 TRACK ASSEMBLY, CAM 6" 90 DG RH, 9" RISE, 31" LG

TRC-00055 TRACK ASSEMBLY, CAM 6" 90 DG LH, 9" RISE, 31" LG

TRC-00077 TRACK ASSEMBLY, CAM 6" 90 DG RH, 12" RISE, 31" LG

TRC-00078 TRACK ASSEMBLY, CAM 6" 90 DG LH, 12" RISE, 31" LG

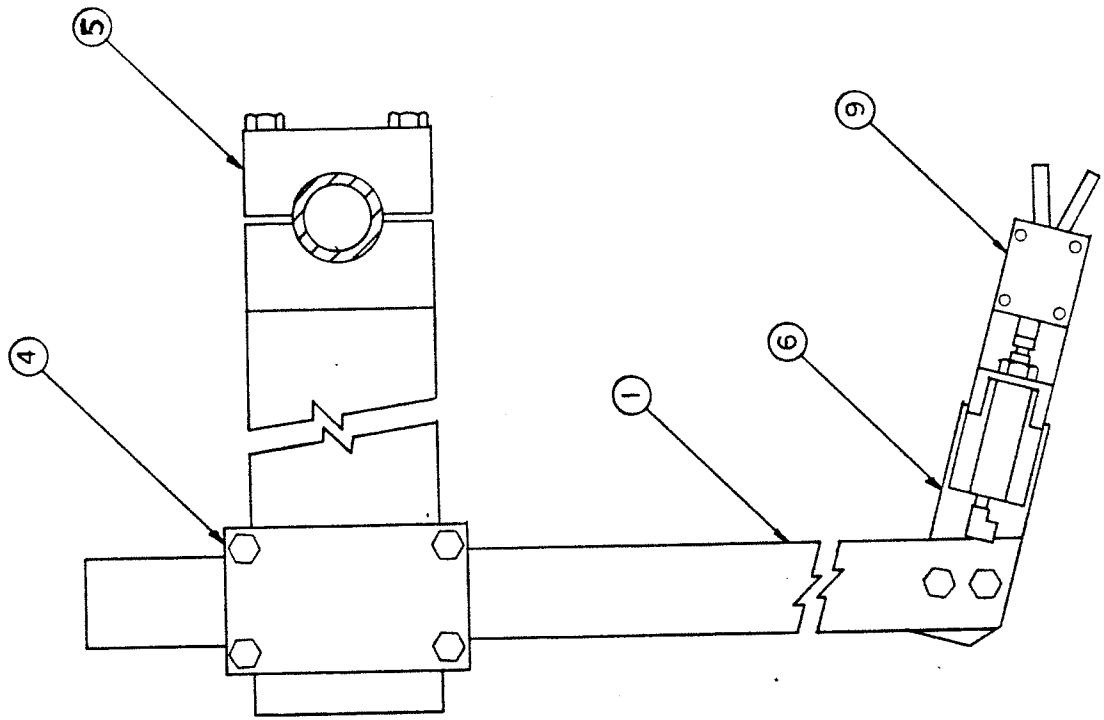
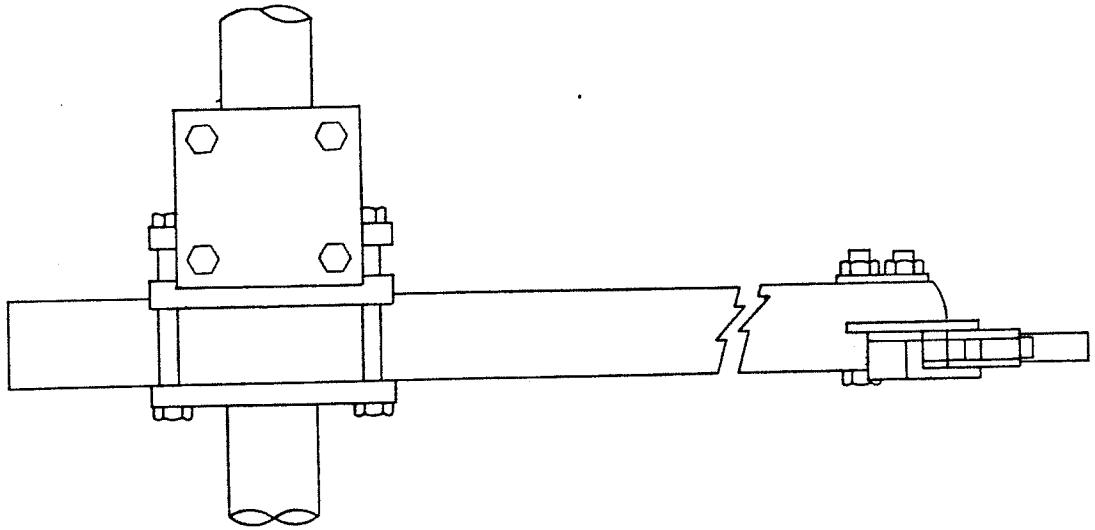
TRC-00100 TRACK ASSEMBLY, CAM 6" 60 DG RH, 9" RISE, 31" LG



BAR-00012

BAR ASSEMBLY, 6" CAM

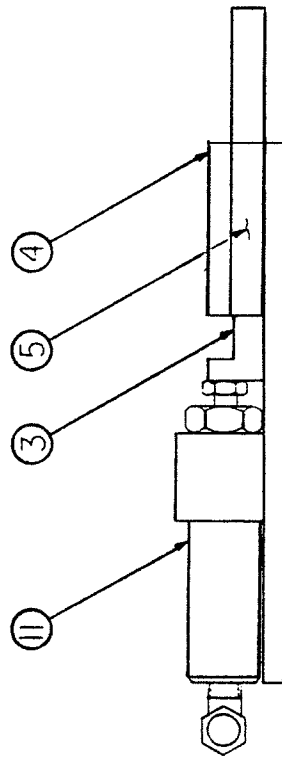
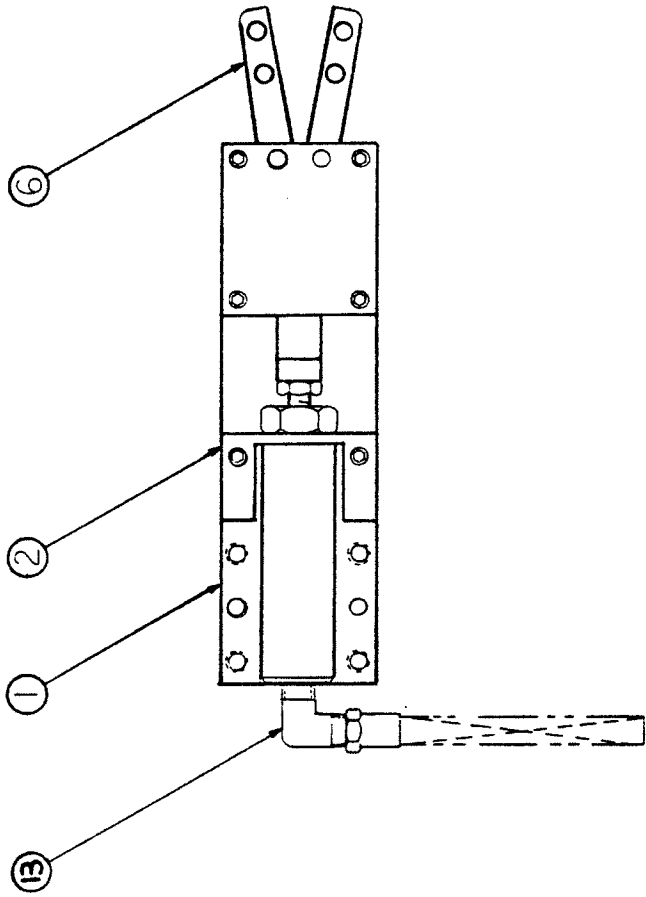
NUMBER	DESCRIPTION	PART NUMBER	QUANTITY
1	SHORT BEARING	BRG-00135	2
2	SET SCREW #10-32 X .500 LG	SCR-00230	4
3	SET SCREW .500-20 X .500	SCR-00578	4
4	SET SCREW .500-20 X .500	SCR-00579	4
5	BEARING HEAD LINK	LNK-00003	1
6	LONG BEARING	BRG-00053	2
7	BEARING HEAD COVER	COV-00048	1
8	SHCS .312-18 X .750	SCR-00418	2
9	GREASE FITTING	FTG-00012	4
10	DOWEL PIN .375 X 2.500 LG	PIN-00057	1



ARM-00112 ARM ASSEMBLY, CAM 6" WITH OUT PART SENSE
 ARM-00113 ARM ASSEMBLY, CAM 6" WITH PART SENSE

LINE	DESCRIPTION	PART NUMBER	QUANTITY
1	VERTICAL ARM	ARM-00111	1
2	HEX HD. .375-16 X 3.500 LG.	SCR-00297	2
3	HEX NUT .375-16	NUT-00008	2
4	BINDER BLOCK ASY	BLK-00040	1
5	ADAPTOR BLOCK	ADP-00027	1
6	GRABBER MTG PLATE	PLT-00424	1
7	HEX HD. .250-20 X .750 LG	SCR-00317	4
8	DOWEL PIN .187 DIA X .750 LG	PIN-00028	2
9	GRABBER W/PART SENSING	GRB-00008	1
	GRABBER W/O PART SENSING	GRB-00004	1
10	NYLON HOSE .375 DIA	HOS-00027	15 FT
11	CABLE, 16 GAGE	CAB-00030	15 FT

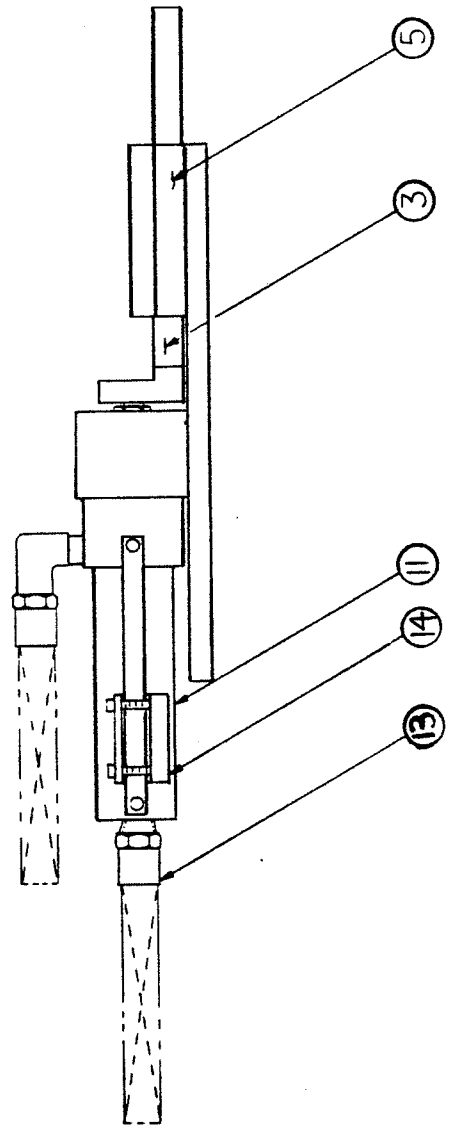
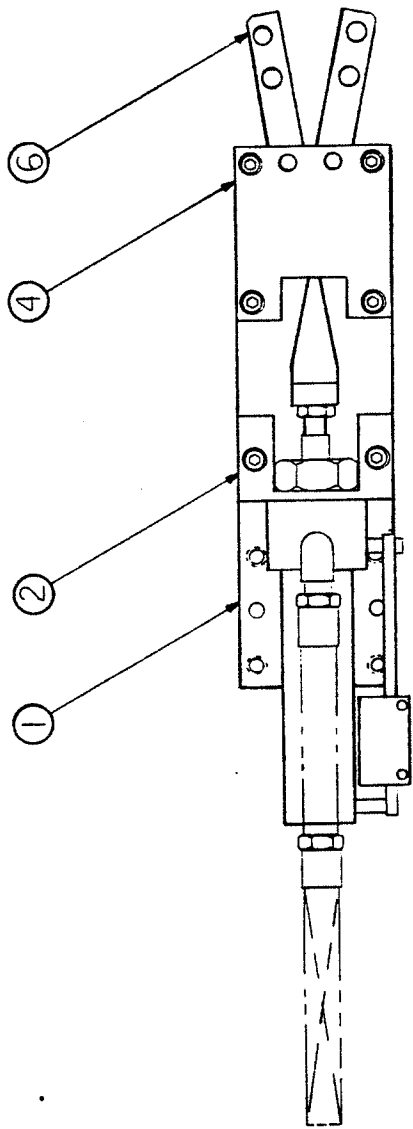
* USE WITH PART SENSING



GRB-00004

GRABBER-SPRUE, 6" ASY

NUMBER	DESCRIPTION	PART NUMBER	QUANTITY
1	MOUNTING PLATE	PLT-00044	1
2	MOUNTING BRACKET	BRK-00024	1
3	JAW ACTUATOR	ACT-00005	1
4	JAW COVER	COV-00011	1
5	GRABBER SPACER	SPC-00010	2
6	GRABBER JAW	JAW-00002	2
7	SHCS #8-32 X 1.000 LG	SCR-00027	2
8	SHCS #8-32 X .750 LG	SCR-00026	4
9	DOWEL PIN .187 X .875 LG	PIN-00029	2
10	COMPRESSION SPRING	SPG-00006	2
11	AIR CYLINDER	CYL-00034	1
12	JAM NUT .500-20	NUT-00030	1
13	MALE ELBOW	ELL-00003	2
14	JAM NUT .500-20	NUT-00021	1



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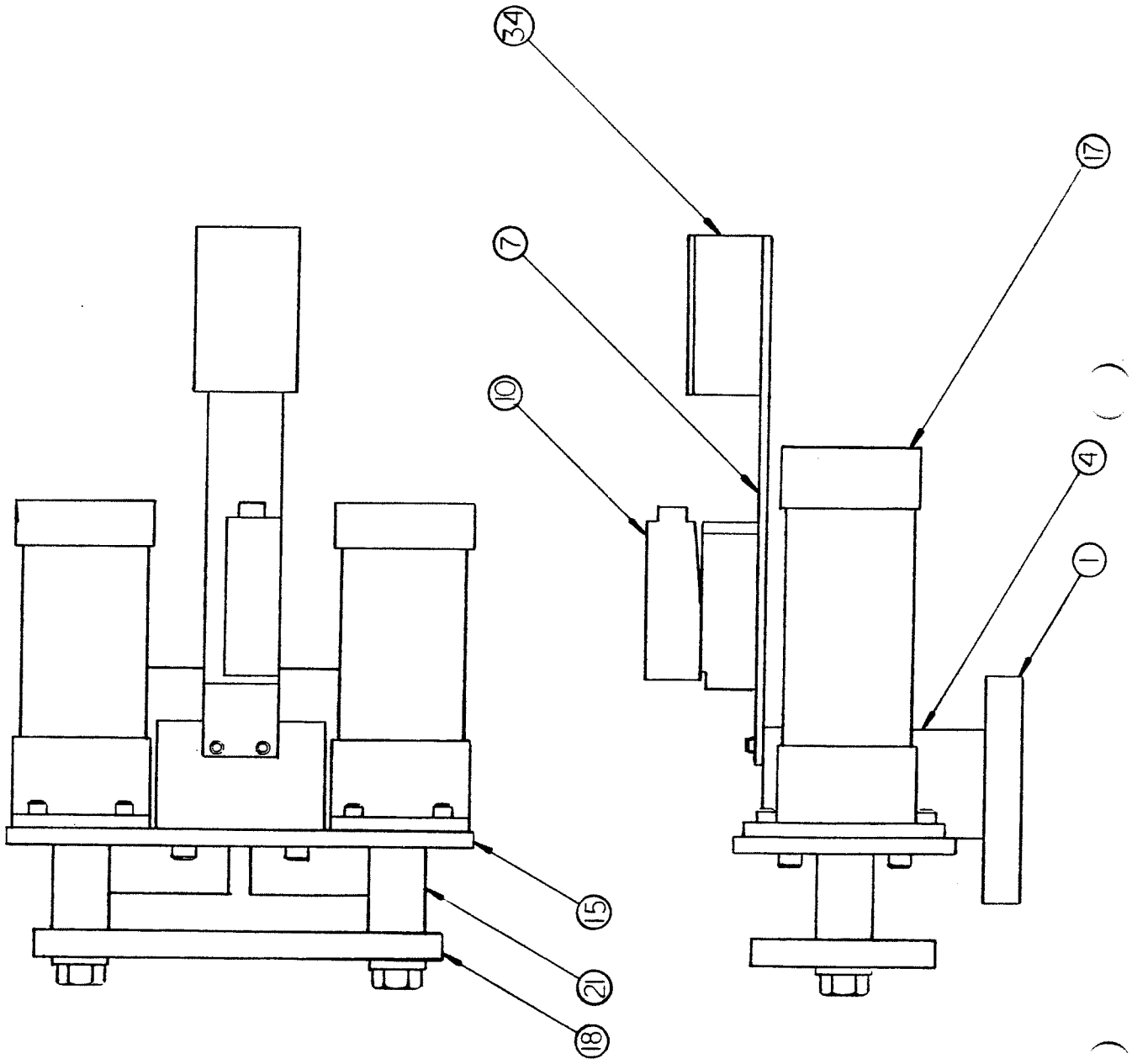
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GRB-00008

GRABBER-SPRUE, MRS ASY 6"

NUMBER	DESCRIPTION	PART NUMBER	QUANTITY
1	MOUNTING PLATE	PLT-00044	1
2	MOUNTING BRACKET	BRK-00025	1
3	JAW ACTUATOR	ACT-00008	1
4	JAW COVER	COV-00013	1
5	GRABBER SPACER	SPC-00010	2
6	GRABBER JAW	JAW-00002	2
7	SHCS #8-32 X 1.000 LG	SCR-00027	2
8	SCHS #8-32 X .750 LG	SCR-00026	4
9	DOWEL PIN .187 X .875 LG	PIN-00029	2
10	COMPRESSION SPRING	SPG-00006	2
11	AIR CYLINDER	CYL-00038	1
12	JAM NUT .625-18	NUT-00032	1
13	MALE ELBOW	ELL-00003	2
14	REED SWITCH	SWT-00015	1
15	JAM NUT .250-28	NUT-00022	1



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STR-00030 6" CAM STRIPPER W/ PART SENSE
 STR-00028 6" CAM STRIPPER W/O PART SENSE

LINE	DESCRIPTION	PART NUMBER	QUANTITY
1	BASE PLATE	PLT-00094	1
2	SHCS .500-13 X 1.500 LG	SCR-00122	2
3	DOWEL PIN .500 DIA X 2.000 LG	PIN-00064	2
4	BUSHING BLOCK	BLK-00043	1
5	SLEEVE BEARING	BRG-00020	1
6	GREASE FITTING	FTG-00013	1
7	VALVE MTG. PLATE W/O PART SENSE	PLT-00306	1
*	VALVE MTG. PLATE W/ PART SENSE	PLT-00295	1
8	SHCS #10-32 X .500 LG	SCR-00202	4
9	SHCS #10-32 X .625 LG	SCR-00039	2
10	SOLENOID VALVE	VAL-00201	1
11	BRONZE MUFFLER	MUF-00002	2
12	MALE RUN TEE	TEE-00023	4
13	HOSE FITTING	FTG-00014	2
14	SELF-RETRACTING HOSE	HOS-00002	6 FT

* W/PART SENSE

15	CYLINDER MTG. PLATE	PLT-00311	1
16	SHCS .375-16 X 1.500 LG	SCR-00100	4
17	AIR CYLINDER	CYL-00114	2
18	SHUTTLE PLATE	PLT-00310	1
19	AIR HOSE	HOS-00027	5.33 FT
20	STREET ELBOW	ELL-00006	1
21	CYLINDER ADAPTOR	ADP-00023	2
22	FLAT WASHER .750	WAS-00029	2
23	HEX-HEAD .750-16 X 3.500 LG	SCR-00371	2
24	SHCS .375-16 X 1.250 LG	SCR-00099	8
25	LOCK-WASHER .375	WAS-00006	8
26	BRASS COUPLING	CPL-00006	3
27	BRASS REDUCER BUSHING	BUS-00025	1
28	ELEC. FITTING 90°	FTG-00041	1
29	REDUCER BUSHING	BUS-00018	2
30	ELEC. LOCK-NUT	NUT-00046	3

* W/PART SENSE

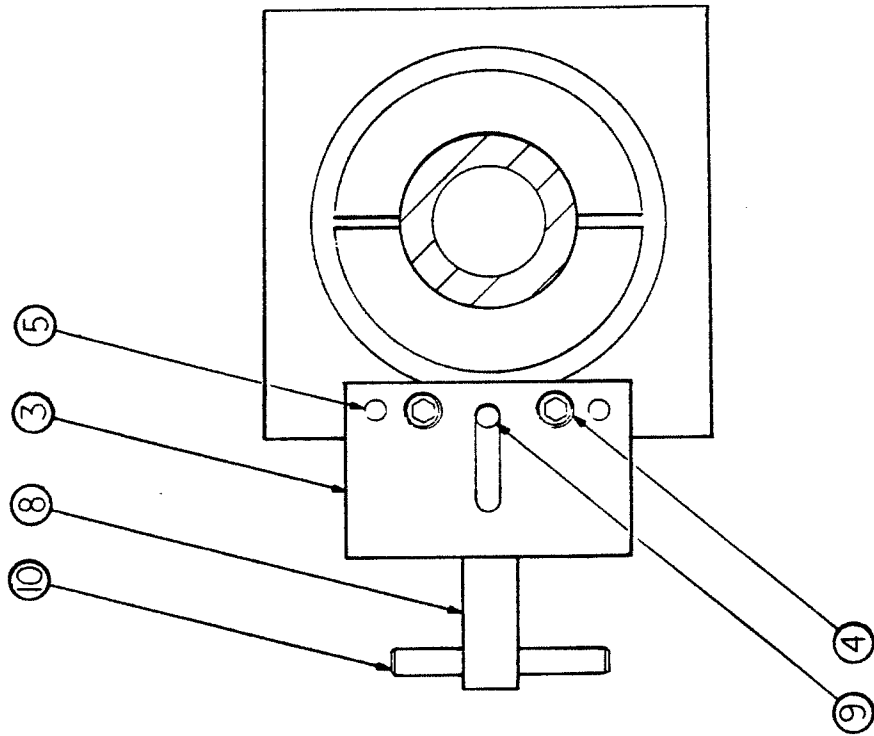
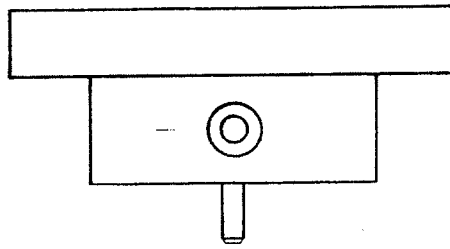
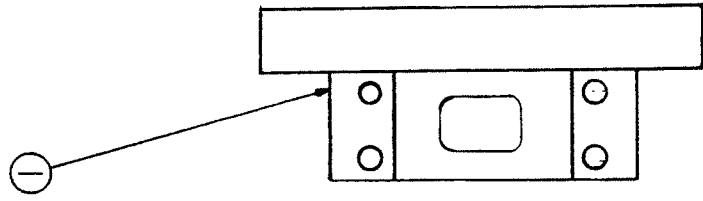
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* 31	REDUCER BUSHING	BUS-00013	3
* 32	REDUCER BUSHING ELEC.	BUS-00018	1
* 33	ELEC. FITTING	FTG-00021	2
* 34	CONDUIT .375	COD-00001	1 FT
* 35	COIL CABLE	CAB-00015	1
* 36	ELEC. LOCK-NUT	NUT-00042	1
* 37	ELEC. FITTING	FTG-00017	1

* W/PART SENSE



CMP-00056

CLAMP ASSEMBLY, ARM LOCK-OUT 6"CAM

NUMBER	DESCRIPTION	PART NUMBER	QUANTITY
1	CLAMP COLLAR	CLR-00013	1
2	SHCS .250-20 X 1.500 LG	SCR-00078	4
3	PIN GUIDE	GDE-00010	1
4	SHCS .375-16 X 1.750 LG	SCR-00101	2
5	DOWEL PIN .250 X 2.000	PIN-00040	2
6	JAM NUT .250-20	NUT-00021	4
7	SPRING PLUNGER	PLG-00003	1
8	LOCATING PIN	PIN-00129	1
9	DOWEL PIN .250 X 1.625 LG	PIN-00126	1
10	DOWEL PIN .375 X 3.000 LG	PIN-00058	1

BASIC TROUBLESHOOTING GUIDE FOR MARTIN CAM GRABBER

THIS GUIDE HAS BEEN PREPARED FOR THE BASIC MOTIONS OF THE MARTIN CAM GRABBER.

NO CHANGES SHOULD BE ATTEMPTED IN THE SEQUENCING PROGRAM AND SPECIAL CARE SHOULD BE TAKEN TO CHECK ALL LIMIT AND SAFETY SWITCHES TO FIND OPERATIONAL PROBLEMS.

1. GRABBER WILL NOT GRAB OR RELEASE PARTS.

- A. CHECK ELECTRICAL POWER TO PANEL.
- B. CHECK FOR AIR PRESSURE.
- C. MANUALLY ACTUATE SOLINOID TO SEE IF MARTIN PANEL IS RECEIVING AN EJECTOR FORWARD SIGNAL.
- D. IF AIR PRESSURE IS PRESENT AT SOLINOID, CHECK FOR AIR PRESSURE AT GRIPPER, IF AIR PRESSURE IS PRESENT AT GRIPPER, CHECK FOR STICKING GRIPPERS.

2. GRABBER WILL NOT STRIP PARTS.

- A. CHECK FOR ELECTRICAL POWER TO PANEL.
- B. CHECK FOR AIR PRESSURE.
- C. MANUALLY ACTUATE SOLINOID TO SEE IF MARTIN PANEL IS RECEIVING AN EJECTOR FORWARD SIGNAL.
- D. CHECK FOR BINDING AT CYLINDER.
- E. CHECK FOR LOOSE LOCKING COLLARS.

3. BEARING HEAD ASSEMBLY LOOSE THROUGH COMPLETE SECTION OF HELIX.

THIS CONDITION REQUIRES ADJUSTMENT OF THE BEARING HEAD ASSEMBLY ROLLERS.

- A. REMOVE HELIX COVER.
- B. REMOVE CAM BAR FROM UNIT.
- C. CLEAN HELIX AND BEARINGS.
- D. LOOSEN ALL LOCKING SET SCREWS LOCATED BETWEEN ROLLERS.
- E. SET SCREWS BENEATH LOCKING SET SCREWS CAN BE USED AS JACKING SCREWS TO WIDEN DISTANCE BETWEEN ROLLERS TO ALLOW A SNUG BUT FREE ROLLING CONDITION.

- F. TIGHTEN APPOSING JACKING SET SCREW AND REPLACE LOCKING SET SCREWS.

NOTE: ALL JACKING SET SCREWS MUST BE TIGHT BEFORE INSTALLING LOCKING SET SCREWS.

- G. TEST BAR IN HELIX TO BE SURE IT TRAVELS COMPLETE LENGTH OF TRAVEL SMOOTHLY AND WITHOUT FREE PLAY. REPEAT AS NECESSARY TO ELIMINATE FREE PLAY IN HELIX.
- H. INSTALL BEARING ASSEMBLY AND HELIX COVER.
- I. RETURN TO OPERATION.

4. BEARING HEAD ASSEMBLY LOOSE THROUGH ANY SHORT PORTION OF HELIX.

THIS CONDITION REQUIRES ADJUSTMENT OF THE CAM ASSEMBLY HELIX.

- A. REMOVE HELIX COVER.
- B. LOOSEN LOCKING COLLARS.
- C. REMOVE ARM ASSEMBLY.
- D. CLEAN HELIX AND ROLLERS.
- E. MOVE CAM BAR THROUGH ENTIRE LENGTH OF HELIX NOTING LOOSE SECTIONS.
- F. LOOSEN TWO CAP SCREWS THAT HOLD HELIX TO BINDER CLOSEST TO LOOSE SECTION.
- G. TURN TWO JACKING SET SCREWS NEXT TO CAP SCREWS 1/4 OF A TURN.
- H. TIGHTEN TWO CAP SCREWS.
- I. PUSH CAM BAR THROUGH HELIX TO TEST FOR SNUG BUT FREE TRAVEL. REPEAT AS NECESSARY TO ELIMINATE FREE PLAY IN HELIX.
- J. REPLACE CAM ASSEMBLY AND HELIX COVER.
- K. RETURN TO OPERATION.

GRABBER
LUBRICANT APPLICATION CHART

PART NAME	QTY.	LOCATION	METHOD	LUBRICANT TYPE	SERVICE FREQUENCY OPERATION HOURS
CAM FOLLOWERS	4	BEARING HEAD	GREASE FITTING	A	730 HOURS
HELIX TRACKS	4	CAM	WIPE ON GREASE	B	250 HOURS
BEARING	1	STRIPPER	GREASE FITTING	B	730 HOURS

LUBRICANTS

SUGGESTED LUBRICANT

TYPE

A
B

LITH EP-2 GREASE
LITH MOLY-2 GREASE

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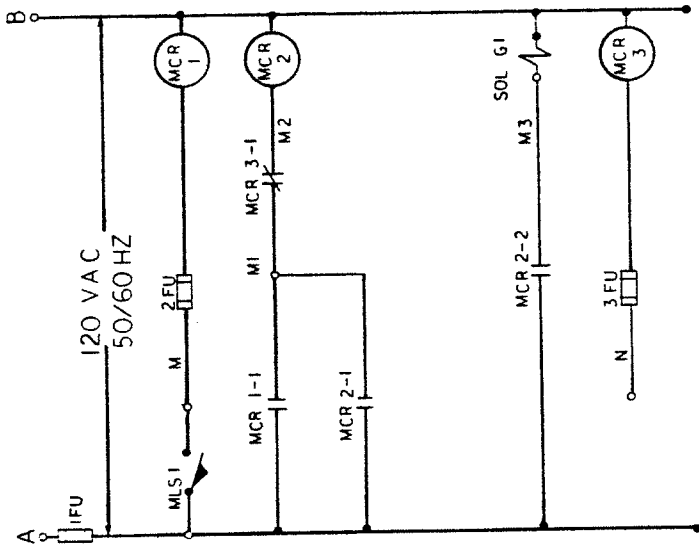
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**GRABBER
MAINTENANCE SCHEDULE**

WHEN TO CHECK	WHAT TO CHECK	HOW TO CHECK	REMARKS
DAILY	FILTER/REGULATOR	VISUALLY OBSERVE ANY COLLECTION OF DIRT PARTICLES	DRAIN AS NECESSARY
MONTHLY	ROLLER HEAD'S CAM FOLLOWERS	DEPLETION OF GREASE	APPLY GREASE SPARINGLY
	CAM TRACKS	DEPLETION OF GREASE	APPLY GREASE SPARINGLY

AN OBSERVER SHALL PERIODICALLY VERIFY THAT THE CAM SYSTEM IS PERFORMING SMOOTHLY.

ELECTRICAL SCHEMATIC



A - TO MACHINE POWER
B - TO MACHINE COMMON
M - SIGNAL TO HYD. EJECTOR FWD.
SOL. OR TO MLS I IF MECH
KNOCK OUTS
N - TO INJECTOR FWD. SOL.

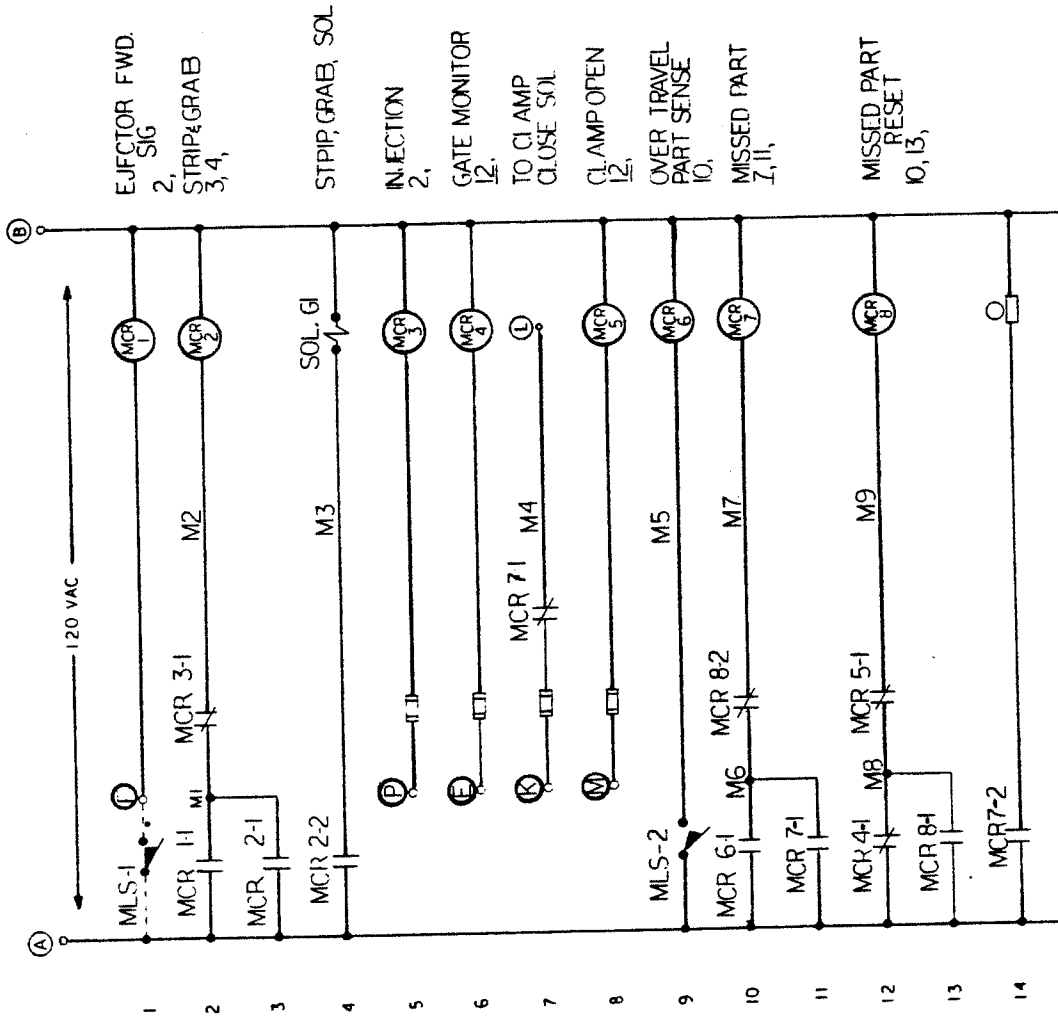
CYCLE 2

- (2) ARM GRABS SPRUE AND STRIPS OUT
- (3) ARM SWINGS OUT
- (4) ARM DROPS SPRUE AND RETURNS TO START POSITION



(1) ARM SWINGS IN

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- (A) PRESS 120 VAC HOT
- (B) PRESS 120 VAC NEU
- (C) GATE CLOSE SIG
- (D) HYD. EJECT. FWD SIG - MLS - 1 IF MECH EJECT IS USED
- (E) CLAMP CLOSE SIG FROM PRESS LOGIC
- (F) CLAMP CLOSE SIG TO PRESS VALVE
- (G) CLAMP OPEN SIG
- (H) INJECTION SIG

PNEUMATIC SCHEMATIC

