

Published Manual Number/ECN: HUPDDR0300/99507N

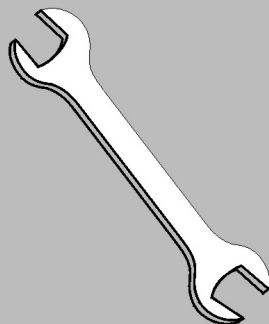
- Publishing System: TPAS
- Access date: 1/24/01
- Document ECN's: Exact



Kit Instruction—

KUPDDR0300

KUPDDR0400



Please Read

About the Manual Identifying Information on the Cover

The front cover displays pertinent identifying information for this manual. Most important, are the published manual number (part number) /ECN (date code). Generally, when a replacement manual is furnished, it will have the same published manual number, but the latest available ECN. This provides the user with the latest information applicable to his machine. Similarly all documents comprising the manual will be the latest available as of the date the manual was printed, **even though older ECN dates for those documents may be listed in the table of contents.**

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References to Yellow Troubleshooting Pages

This manual may contain references to "yellow pages." Although the pages containing troubleshooting procedures are no longer printed on yellow paper, troubleshooting instructions, if any, will be contained in the easily located "Troubleshooting" chapter or section. See the table of contents.

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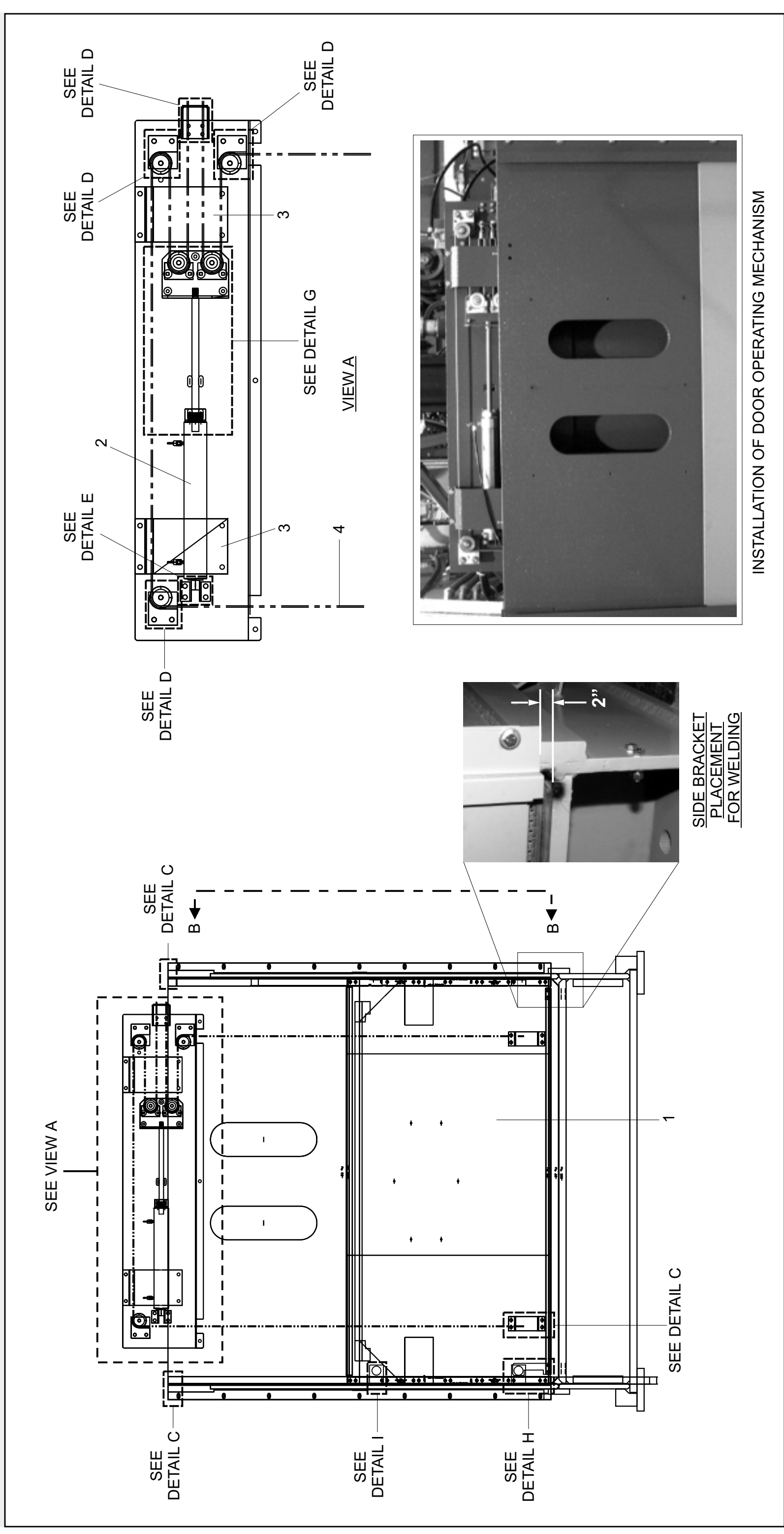
**Press Unload Door
MP2501, MP2601, MP2606**

BMP970065/2000375V
(Sheet 1 of 4)



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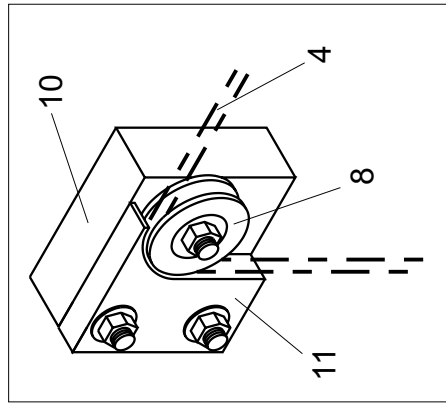
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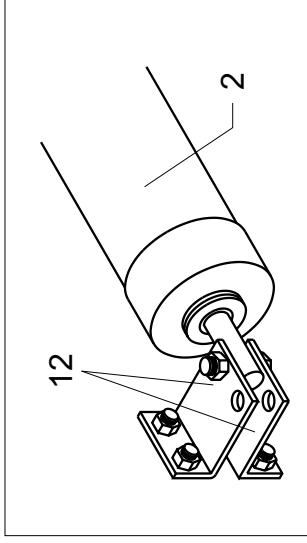


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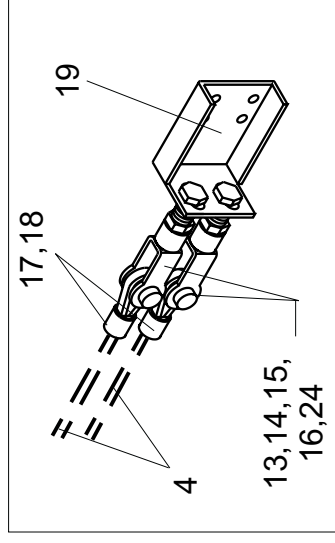
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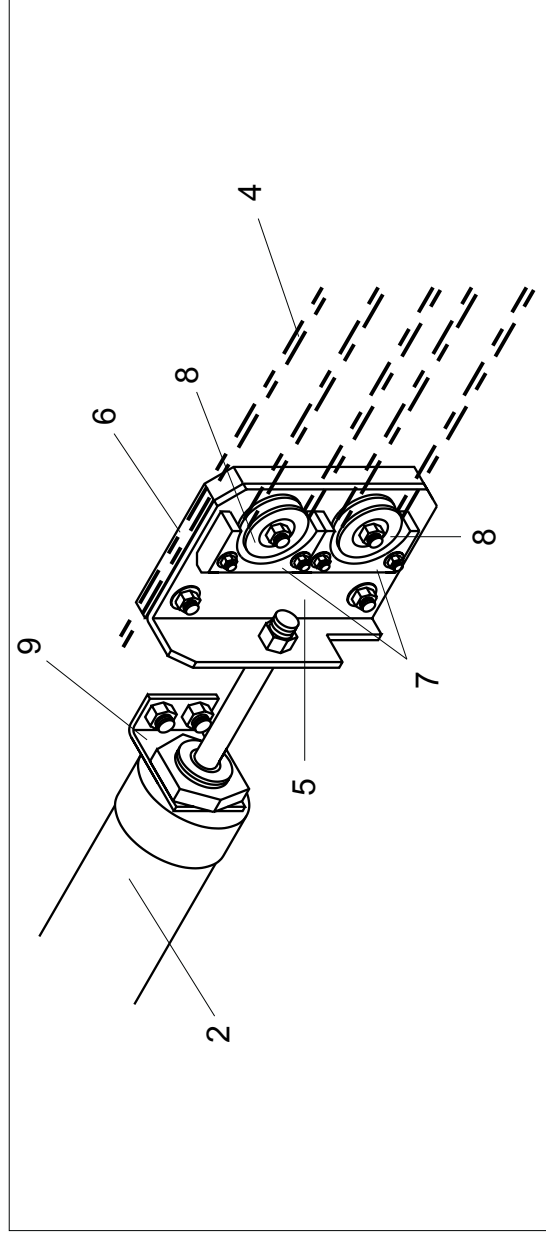
DETAIL D
PULLEY AND GUIDE
RIGHT SHOWN - LEFT OPPOSITE



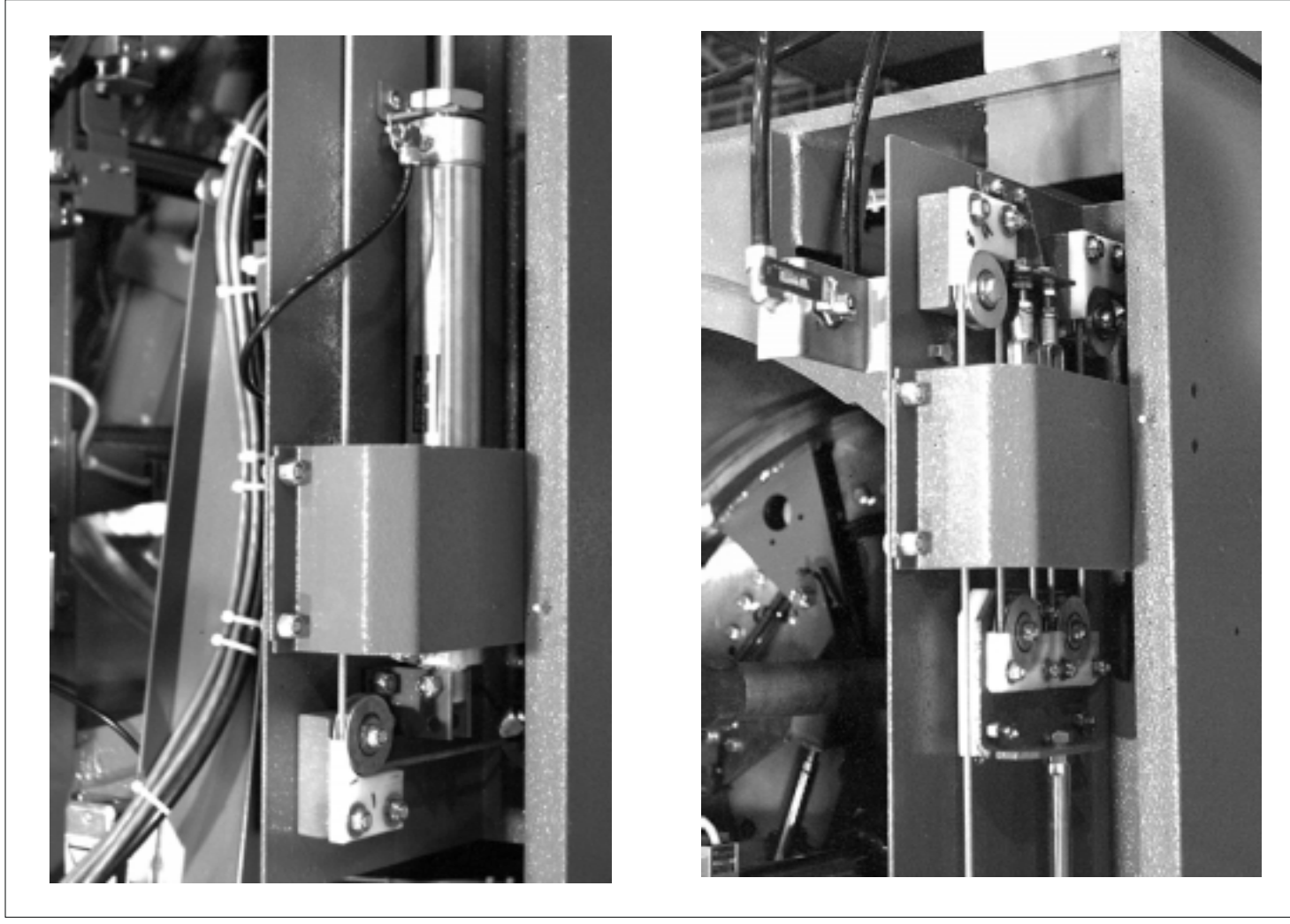
DETAIL E
AIRCYLINDER REAR MOUNT



DETAIL F
CABLE ADJUST MOUNT



DETAIL G
AIRCYLINDER FRONT MOUNT AND PULLEY BRACKET



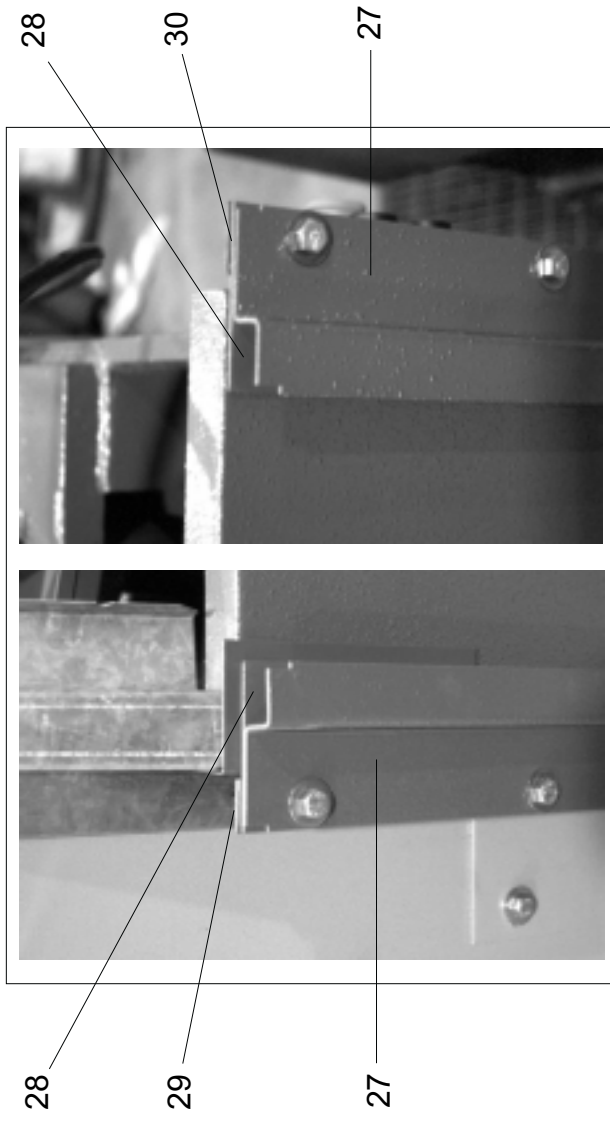
DOOR OPERATING MECHANISM

Press Unload Door
MP2501, MP2601, MP2606

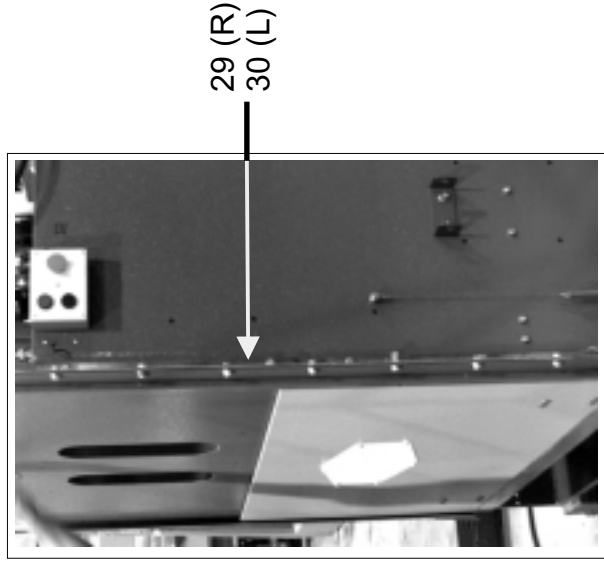
BMP970065/2000375V
 (Sheet 3 of 4)

MILNOR
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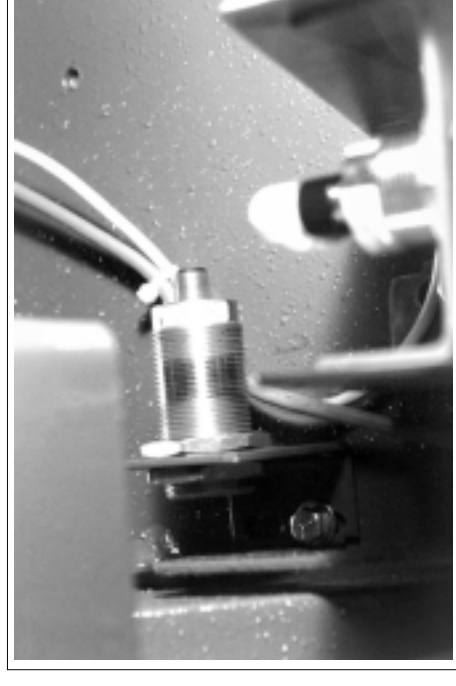
Litho in U.S.A.



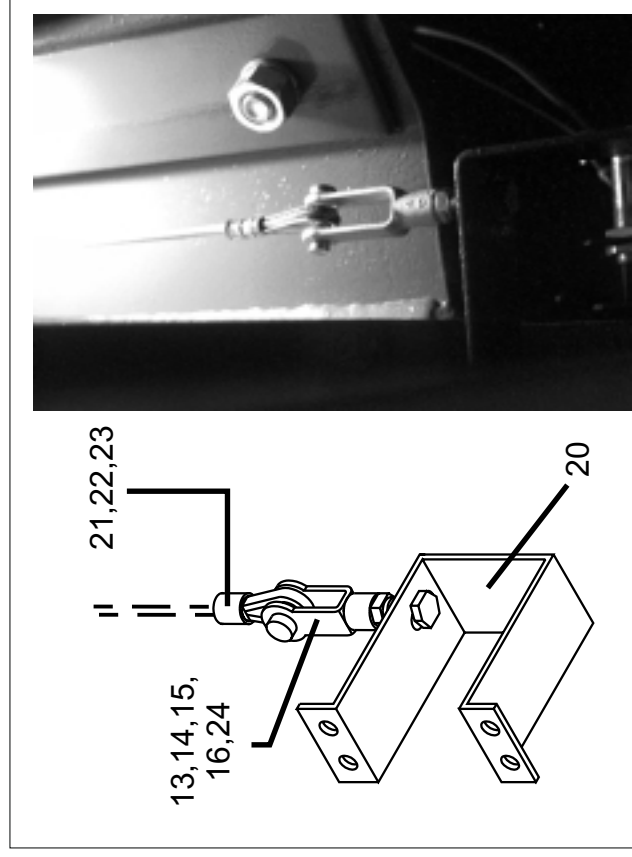
DETAIL C
 DOOR TRACKS - LEFT AND RIGHT



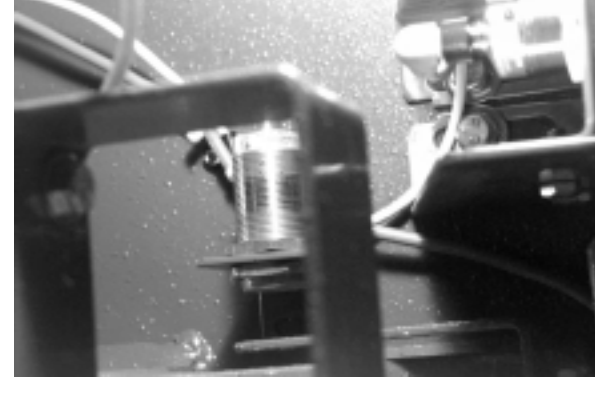
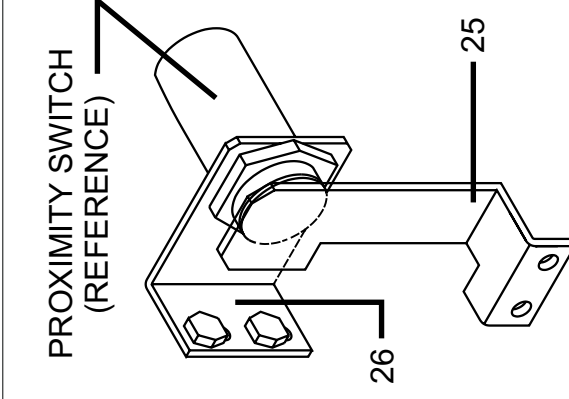
VIEW B
 DOOR INSTALLATION



DETAIL I
 UPPER DOOR PROXIMITY SWITCH



DETAIL H
 DOOR LIFT BRACKET - LEFT SIDE (RIGHT SIDE OPPOSITE)



DETAIL H
 DOOR PROXIMITY SWITCH AND TARGET





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Parts List—Press Unload Door
Find the correct assembly first, then find the needed components. The item letters (A, B, C, etc.) assigned to assemblies are referred to in the "Used In" column to identify which components belong to an assembly. The item numbers (1, 2, 3, etc.) assigned to components relate the parts list to the illustration.

Used In	Item	Part Number	Description	Comments
			ASSEMBLIES	
all	A	A72CG006	95000Z UNLD DOOR ASSY 50 KG PRESS	REFERENCE ONLY
all	B	A73CG005	94000Z UNLOAD DOOR ASSY 60 KG PRESS	REFERENCE ONLY
all	C	A72AC002	95000Z UNLD DOOR ACYL ASSY 50KG PRES	REFERENCE ONLY
all	D	A73AC001	95000Z UNLD DOOR ACYL ASSY 60KG PRES	REFERENCE ONLY
			COMPONENTS	
A	1A	07 30144	95063D UNLD DOOR-50 KG PRESS	50KG ONLY
B	1B	07 30120	94527D UNLOAD DOOR PRESS 60K	60KG ONLY
C	2A	27C216	01Z AIR CYL 2"BORE X 10"STROKE	50KG ONLY
D	2B	27C218	01Z AIR CYL 2"BORE X 13"STROKE	60KG ONLY
all	3	07 30129	94527C AIRCYLINDER MNT PLT SUP BRKT	
all	4	27A964	CABLE #3126-G-N-6 *	
all	5	07 30128	94527C UNLOAD DOOR ROD END BRKT	
all	6	07 30128A	95253B UHMW SPACER-ROD END BRKT	
all	7	07 40937	94272B UHMW PULLEY GUIDE AIRCYL	
all	8	27A965	PULLEY-ZC.PLATED-CPS650	
all	9	07 30127	94527B UNLOAD DOOR AIRCYL MNT FRNT	
all	10	07 30140	94527B UNLOAD DOOR PULLEY SPACER	
all	11	07 40935A	94517# UHMW PULLEY CABLE GUIDE PRES	
all	12	07 30125	94527B UNLOAD DOOR AIRCYL REAR MNT	
all	13	17A010	ADJ CLEVIS MACHINED 3/8-16 ZNC PLT	
all	14	17A030	CLEVISPIN 3/8"X1+3/32"DRILLED	
all	15	15H040	STDCOTTERPIN 1/8X3/4 ZINCPL	
all	16	15K105	HXCAPSCR 3/8-16UNC2A1.25 GR5 PLATED	
all	17	27A962	THIMBLE #AN100-6	
all	18	27A963	LOOP SLEEVE # 7125-A	
all	19	07 30126	95426B UNLOAD DOOR CABLE ADJUST MNT	
all	20A	07 30130	94527C UNLOAD DOOR LIFT BRKT RT	
all	20B	07 30130A	94527# UNLOAD DOOR LIFT BRKT LFT	
all	21	27A951	1/16" SS WIRE ROPE THIMBLE	
all	22	27A952	01Z 1/16" OVAL SLEEVE S/S	

Parts List, cont.—Press Unload Door (Option)

Used In	Item	Part Number	Description	Comments
all	23	27A953	CABLE-AIRCRAFT 1/16SS7X7REDCV *	
all	24	15G205	HXNUT 3/8-16UNC2B ZINC GR2	
all	25A	07 30142	95056B UNLOAD DOOR TARGET PRESS	
all	25B	07 30142A	95056# UNLD DOOR TARGET PRESS-R	
all	26	07 20761	94407B PROX SWITCH BRKT	
A	27A	07 30146	95063D UNLD DOOR OUTSIDE TRACK 50K	50KG ONLY
B	27B	07 30122	94527D UNLOAD DOOR OUTSIDE TRACK 60	60KG ONLY
A	28A	07 30147	95063D UNLD DOOR INSIDE TRACK 50K	50KG ONLY
B	28B	07 30123	94527D UNLOAD DOOR INSIDE TRACK 60	60KG ONLY
A	29A	07 30145	95337C UNLD DOOR MNT LEG 50K-RT	50KG ONLY
B	29B	07 30124	94527D UNLOAD DOOR MNT LEG 60K RT	60KG ONLY
A	30A	07 30145A	95337# UNLD DOOR MNT LEG 50K-L	50KG ONLY
B	30B	07 30124A	94527# UNLOAD DOOR MNT LEG 60K LFT	60KG ONLY

MSSM0960AE/9950AV
INSTRUCTIONS FOR KITS
KUPDDR0300 (50 KG)
AND
KUPDDR0400 (60 KG)
2-STAGE PRESS
DISCHARGE SAFETY DOOR RETROFIT
PAGE 1 OF 8
DECEMBER 8, 1999

PREPARATIONS

Understand and Avoid Safety Hazards

**DANGER:
ELECTROCUTION AND ELECTRICAL BURN HAZARDS**

Contact with high voltage will electrocute or burn you. Power switches on the machine and the control box do not eliminate these hazards. High voltage is present on the machine unless the main machine power disconnect is OFF.

- Do not service the machine unless qualified and authorized.
- Keep bystanders well clear of the machine.
- Lock off and tag out power at the main machine disconnect before servicing.

**DANGER:
ENTANGLE, CRUSH, AND SEVER HAZARDS**

These operations require personnel to work in and around areas of the machine where there is a possibility of becoming entangled with electrical wiring, air tubing, or machine parts. Certain machine parts can move in such a way as to crush or sever limbs or cause other serious injuries. In particular, the main press bell is capable of descending even with all machine power off.

- NEVER climb on, touch, or reach into assemblies in or above the press frame unless main power has been locked OFF and tagged out at the external disconnect box, and then only for maintenance.
- ALWAYS ensure all personnel are clear of the press, all press side doors are closed, and all guards are in place prior to returning power to the machine.

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NOTE

READ THESE INSTRUCTIONS AND VERIFY ALL PARTS BEFORE STARTING!

Overview

These retrofit instructions provide information for field-installing discharge safety doors on Milnor 50 KG and 60 KG 2-stage laundry presses which use the MK1 controller. These instructions are applicable to either type of press.

This retrofit consists of the following operations:

- 1) Attach the door tracks, air cylinder, and pulley mechanism to the machine frame;
- 2) Remove, modify, and reinstall the existing front cover plate;
- 3) Mount the door assembly to the door tracks;
- 4) Connect the 3/16" wire rope cables to the door lift brackets;
- 5) Mount the two (2) proximity switch brackets and switches;
- 6) Connect the air cylinder to the press pneumatic system;
- 7) Connect the proximity switches to the appropriate electrical circuits;
- 8) Change the system operating software by replacing one EPROM and reprogram the controller;
- 9) Test the system.

To accomplish this retrofit the following skills are required:

- 1) Welding (electric arc);
- 2) Basic mechanical assembly;
- 3) Pneumatic tubing and piping assembly;
- 4) Electrical/electronic wiring.

The following tools and equipment will be required:

- 1) Basic hand tools for mechanical assembly and electrical wiring;
- 2) Electric drill and bits (up to and including 1/2" diameter);
- 3) Electric arc welding equipment;
- 4) Portable grinder or disc sander;
- 5) 1/8" diameter plastic pneumatic tubing and fittings.

The Milnor service department estimates that this retrofit can be done by skilled personnel in eight (8) man-hours (that is, two men/four hours, or four men/two hours, etc.). This estimate is based on Milnor's experience with previous retrofits of this type.

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Check the Kit Contents – First, verify that you have the correct kit for your type of press. If your press is a 50 KG (Model MP5031), the correct kit is KUPDDR0300. If your press is a 60 KG (Model MP6031 or MP6036), the correct kit is KUPDDR0400. Then, verify that your kit contains the components listed below. Contact the Milnor Parts Department in the event that any components are missing or damaged.

The following component list is for kit KUPDDR0300, for 50 KG presses. The kit for 60 KG presses, KUPDDR0400, is identical except as shown. Where a part is unique to the 50 KG or the 60 KG press, respectively, it is noted.

To simplify installation the discharge door and its associated components are supplied as follows:

- 1) Air cylinder/pulleys/cable/mounting plate (preassembled);
- 2) Door/fittings/brackets/glide strips (preassembled);
- 3) Door tracks and front cover plate (individual components);
- 4) Proximity switches, brackets, and targets (individual components);
- 5) Electrical (EPROM)

For a detailed breakdown of the component parts which make up the individual kit assemblies refer to BMP970065, Press Unload Door (Option), in the Press Service Manual. A copy is included with the retrofit kit(s).

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 INSTRUCTIONS FOR KITS
 KUPDDR0300 (50 KG)
 AND
 KUPDDR0400 (60 KG)
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KIT KUPDDR0300 (50 KG)

<u>QTY</u>	<u>PART NUMBER</u>	<u>PART NAME/DESCRIPTION</u>
1	A72CG006	Unload Door Assembly 50 KG Press
1	01-10429X	Nameplate – Move Press Up/Down – ISO
1	BMP970065	Press Unload Door (Option)
2	09RPS30ADS	Proximity Switch 30 MM No DC Shield
2	09RPSDC005	Connector Straight Female DC 3A/300V 5 MM
1	96N0010H	Shuttle Valve, ½” 4-Way
2	KZAVNC0137	1/8” Air Pilot Valve Kit, 3-way NC, 120v/50/60Hz
1	07-30145	Unload Door Mounting Leg 50 KG – Right
1	07-30145A	Unload Door Mounting Leg 50 KG – Left
4	07-20862A	Cover and Guard Bracket
10	15N204A	5/16” flat head screws
8	15K039	Hex Head Cap Screw ¼-20UNC2AX3/4 GR5 ZN/CD
8	15G165	Hexnut ¼-20UNC2B GR2 ZN
8	15U183	Lockwasher External Tooth ¼” US Std ZN
1	97A989L	Countersinking Drill Bit, ¾”

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KIT KUPDDR0400 (60 KG)

<u>QTY</u>	<u>PART NUMBER</u>	<u>PART NAME/DESCRIPTION</u>
1	A73CG005	Unload Door Assembly 60 KG Press
1	01-10429X	Nameplate – Move Press Up/Down – ISO
1	BMP970065	Press Unload Door (Option)
2	09RPS30ADS	Proximity Switch 30 MM No DC Shield
2	09RPSDC005	Connector Straight Female DC 3A/300V 5 MM
1	96N0010H	Shuttle Valve, ½” 4-Way
2	KZAVNC0137	1/8” Air Pilot Valve Kit, 3-way NC, 120v/50/60Hz
1	07-20124	Unload Door Mounting Leg 60 KG – Right
1	07-20124A	Unload Door Mounting Leg 60 KG – Left
4	07-20862A	Cover and Guard Bracket
10	15N204A	5/16” flat head screws
8	15K039	Hex Head Cap Screw ¼-20UNC2AX3/4 GR5 ZN/CD
8	15G165	Hexnut ¼-20UNC2B GR2 ZN
8	15U183	Lockwasher External Tooth ¼” US Std ZN
1	97A989L	Countersinking Drill Bit, ¾”

CAUTION

If your press uses a 24VAC control circuit, contact the Milnor Service Department for required changes.

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NOTE

Preparations – Prior to beginning this retrofit it is necessary to perform the following operations in the sequence listed:

- 1) Using manual functions, retract the sled to the rearward (home) position;
- 2) Using manual functions, lower the prepress tamper assembly to the full-down position;
- 3) Using manual functions, raise the main press bell. Position the two (2) safety stands under the lip of the main bell. See the Press Safety Manual;
- 4) Before removing the old version of the operating software, it is **STRONGLY RECOMMENDED** that you copy **ALL** of the configuration data so that you will have a starting point when reprogramming the processor (see instructions below);
- 5) Turn off power to the machine at the press electrical panel;
- 6) Turn off power to the machine at the main facility disconnect and lock off and tag out;
- 7) Turn off the press air supply and disconnect the main air supply hose from the press, then bleed air from the press pneumatic system.

Access the Program Mode – To access the program mode, turn the program/run keyswitch to *program*. Press the stop/start button – this will enter configuration mode. For more information see “Programming and Configuring...” in the press controller reference manual.

Install the Door Tracks – Locate the door tracks to the sides of the machine by aligning the top of each inside track with the top of the press frame as shown in Figures 2 and 3. Mark the sides of the press frame to provide guidelines for removing paint from the press frame in preparation for welding. Grind and/or sand the press frame in the marked areas where the tracks are to be welded. Tack weld, then final weld the tracks to the press frame. Grind and/or sand welds and touch up paint as required. Install the inner and outer door tracks per Figures 2 and 3 using the fasteners supplied with the kit.

Install the Lift Cylinder and Pulley Mechanism – Locate the lift cylinder and pulley mechanism (preassembled) as shown in Figure 1. The mounting plate’s center hole lines up with the centerline of the press front cover plate’s middle hole. Mark the position for the three (3) mounting plate attach holes and drill through. Drill holes through for mounting the upper support brackets, (2) places per bracket, and attach the brackets using the bolts, nuts, and washers supplied with the kit.

Remove, Modify, and Reinstall the Cover Plate – Remove the machine’s existing cover plate and remove the MILNOR logo from the cover plate – the logo will not be reinstalled. Using the countersink bit provided with the retrofit kit, countersink the cover plate (8) places to accommodate the new 5/16” flathead screws supplied with the kit. Reinstall the cover plate to the machine using eight (8) flathead screws. If the heads of the screws are not flush with or slightly below the surface of the cover plate, it will be necessary to countersink the screw holes in the machine frame. Remove the cover plate and countersink the mounting holes in the machine frame (8) places as required. Reinstall the cover plate. Repeat this step as required until the cover plate fasteners are flush with or slightly below the surface of the cover plate.

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Mount the Door to the Tracks – Loosen nine (9) bolts on one track assembly and remove the outer door track (it doesn't matter which one). Insert the door assembly into the track on the opposite side. Replace the outer door track previously removed and tighten all nine (9) bolts snug. Manually slide the door up and down a few times to check for binding and misalignment. Adjust as necessary.

Attach the Lift Cable to the Door – Attach the two (2) lifting cable clevises to the door lift brackets per Figure 6. Raise the door manually and insert the two (2) safety pins through the door tracks to hold the door in the open position.

Mount the Proximity Switches and Brackets – Locate the two (2) proximity switch brackets 2" (51 MM) back from the inside edge of the door track. The brackets mount on the side of the press on which the electrical panels are mounted. See Figures 4 and 5. Each bracket's center hole (for mounting the proximity switch body) should be centered to and parallel to the targets mounted on the door when the door is in the full up and full down positions. Install the proximity switches in the brackets. Install the proximity switch targets on the same side of the door as the proximity switches are mounted. Adjust the locking nuts on the threaded body of each switch so that the front face of the switch is ¼" (6.35 MM) from its target. See Figure 5.

Install the Air Pilot Valves – Attach the two (2) electrically-operated pilot air valves to the press main air manifold. Install the shuttle valve and attach to the pilot air valves, door cylinder, and oil collector assembly per the schematic, Figure 7.

Connect Signal Outputs – Connect signal output wires per the following directions:

MK1 controls – connect signal output wires as follows:

- Raise discharge door to 2MTA5-8 and 2MTA5-9;
- Lower discharge door to 2MTA5-5 and 2MTA5-6.

Connect Signal Inputs – connect signal input wires per the following directions:

MK1 controls – connect signal input wires as follows:

- Discharge door up to 1MTA3-2;
- Discharge door down MUX MTA38-10.

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Make a Backup Copy of All Configuration Data – Prior to removing and replacing the software EPROM make a backup copy of all system configuration data if you have not already done so. To do this it is necessary to turn on electric power to the machine at the main facility disconnect. Prior to operating the machine ensure that all doors are closed, all machine guards are in place, and that all personnel are well clear of the machine. When complete, turn off press power at the main facility disconnect.

Install New Software – New software (**Version 86389**) is required to automatically operate the discharge door. Before installation, verify that all electrical power to the press has been locked OFF and tagged out at the main facility disconnect and that the press power has been turned off at the press main control panel. Using proper handling procedures for ESD (Electrostatic Discharge) sensitive electronic components, remove the existing EPROM from the motherboard and install the new EPROM provided with the retrofit kit. Make sure that the new EPROM is positioned correctly (observe the position of the index notch in the body of the EPROM chip) before removing the existing chip, and that all pins seat fully in their correct socket positions. **BE CAREFUL NOT TO BEND THE PINS ON THE EPROM!**

Test the Machine – Test the function of the discharge door by performing the following operations in the sequence listed:

- 1) Turn on press power at the main facility disconnect.
- 2) Reconnect the facility air supply hose to the machine and turn on the air supply at the facility supply valve.
- 3) Reprogram the press controller using the configuration data saved previously.
- 4) Using manual functions, raise the main press bell and remove the two (2) safety stands.
- 5) Remove the two (2) safety pins from the unload door tracks.
- 6) Using manual functions, verify that the door functions properly.
- 7) Return the press to normal (automatic) operation.

If any problems are encountered, contact the Milnor Service Department at (504)467-9591, Extension 75.