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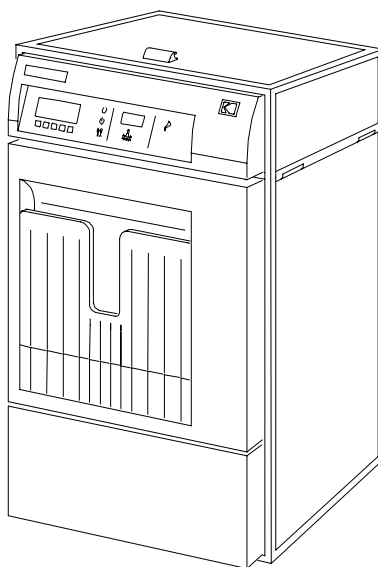
Supersedes 246615

4/92

# INSTALLATION INSTRUCTIONS

for the

## *Kodak X-Omat 480 RA Processor*



H108\_0318BA

#### PLEASE NOTE

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#### CAUTION



This equipment includes parts and assemblies sensitive to damage from electrostatic discharge. Use caution to prevent damage during all service procedures.

#### WARNING

To avoid hazardous conditions, keep floors and floor coverings around your *Kodak X-Omat* Processors and associated drains clean and dry at all times. Any accumulation of fluids from mixing tanks, drain lines, etc., should be cleaned up immediately. In the event of an accumulation of liquid due to backup, overflow, or other malfunctions of the drain associated with your *X-Omat* Processor, call a plumber or other contractor to correct any problem with the drain. Kodak accepts no responsibility or liability whatsoever for the serviceability of any drain connected to or associated with a *Kodak X-Omat* Processor. Such drains are the sole responsibility of the customer.

#### IMPORTANT

If local codes require seismic mountings, order SEISMIC KIT 261413. The SEISMIC KIT includes all parts necessary to secure one PROCESSOR.

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## Unpacking the Processor

### Removing the Packing Material

- [1] Cut the bands around the outside of the shipping carton.
- [2] Remove the shipping carton from the PROCESSOR.
- [3] Remove the internal CARDBOARD from the top of the PROCESSOR.
- [4] Remove the TOP COVER from the PROCESSOR.
- [5] Remove:
  - DEVELOPER/FIXER CROSSOVER
  - FIXER/WASH CROSSOVER
  - DETECTOR CROSSOVER
  - SQUEEGEE ASSEMBLY.
- [6] Remove the PACKING MATERIAL covering the RACK HANDLES.
- [7] Remove the CARDBOARD from between the WASH RACK and the WASH TANK.

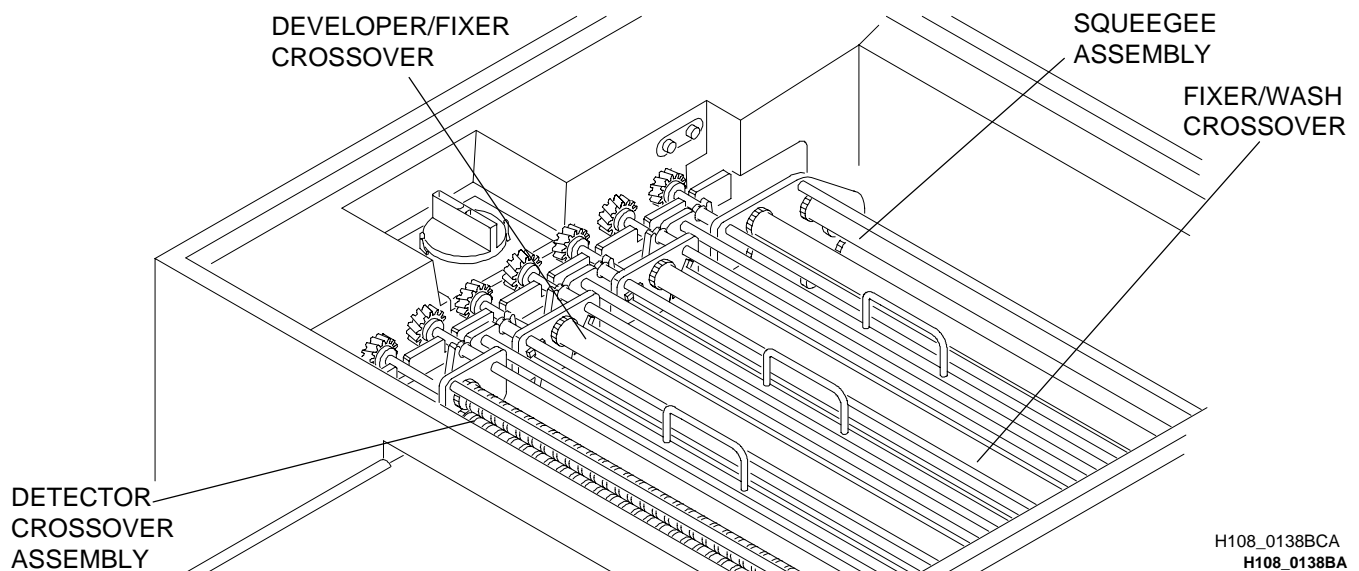
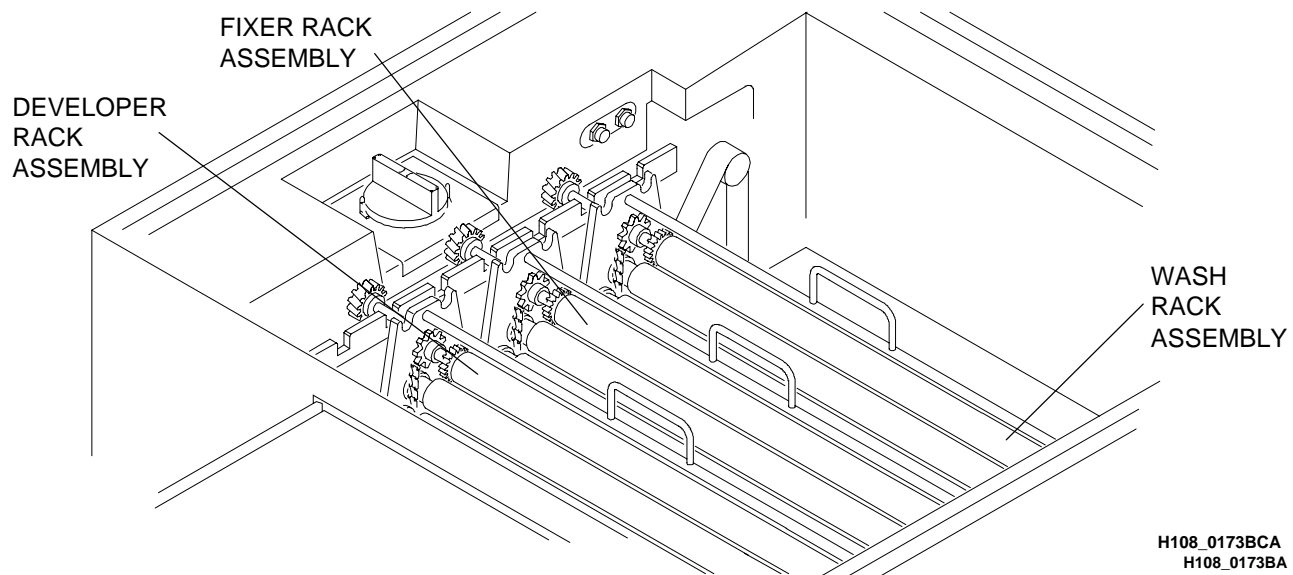


Figure 1 Crossover Identification

**[8]** Remove:

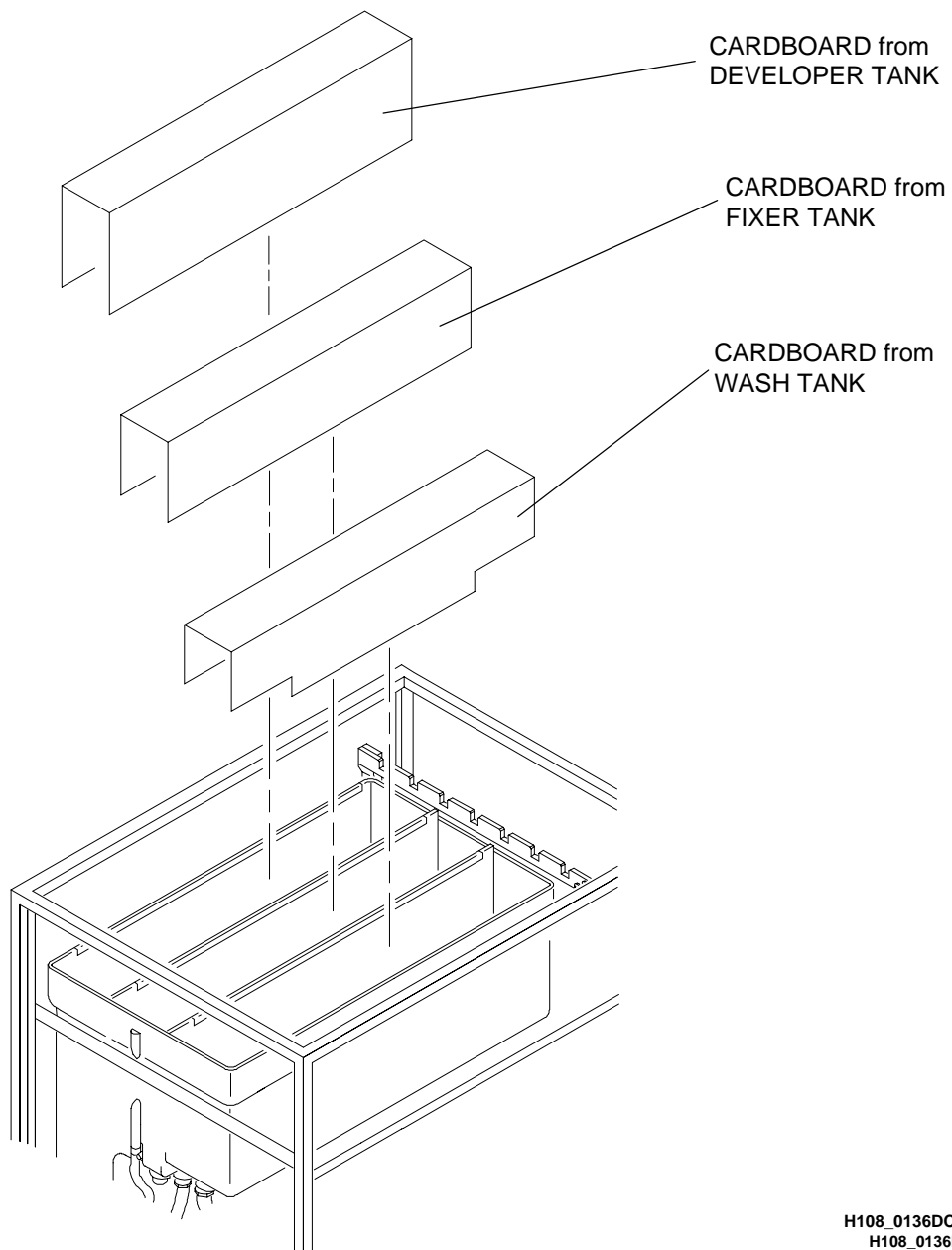
- DEVELOPER RACK
- FIXER RACK
- CARDBOARD from around each RACK
- WASH RACK.



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**Figure 2 Rack Identification**

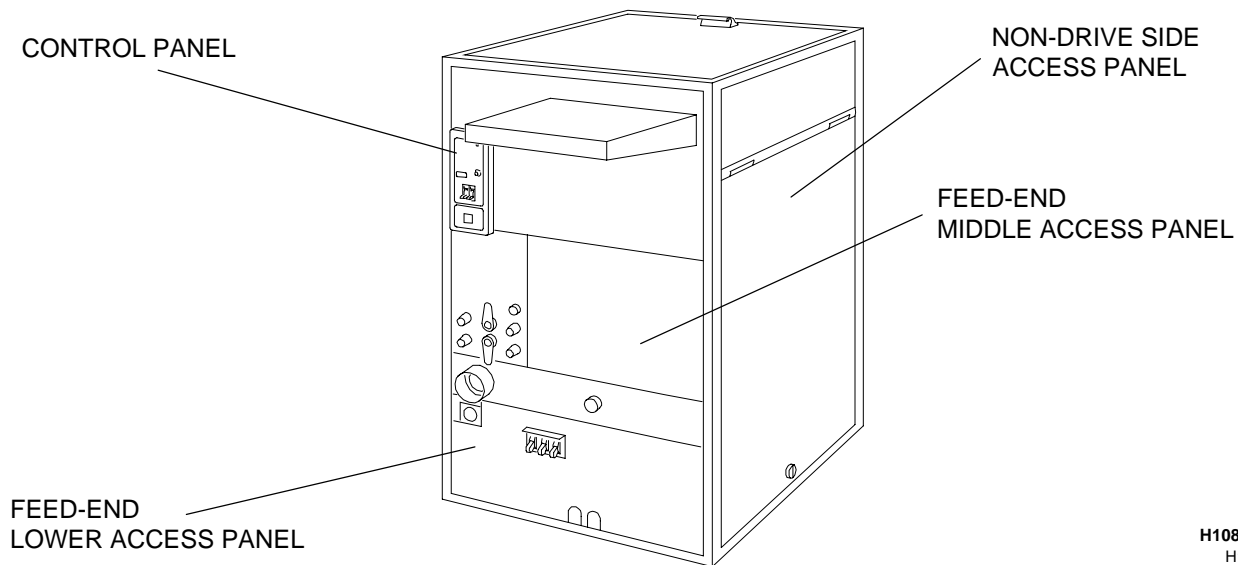
- [9] Remove the CARDBOARD from inside the bottom of the DEVELOPER, FIXER, and WASH TANKS.



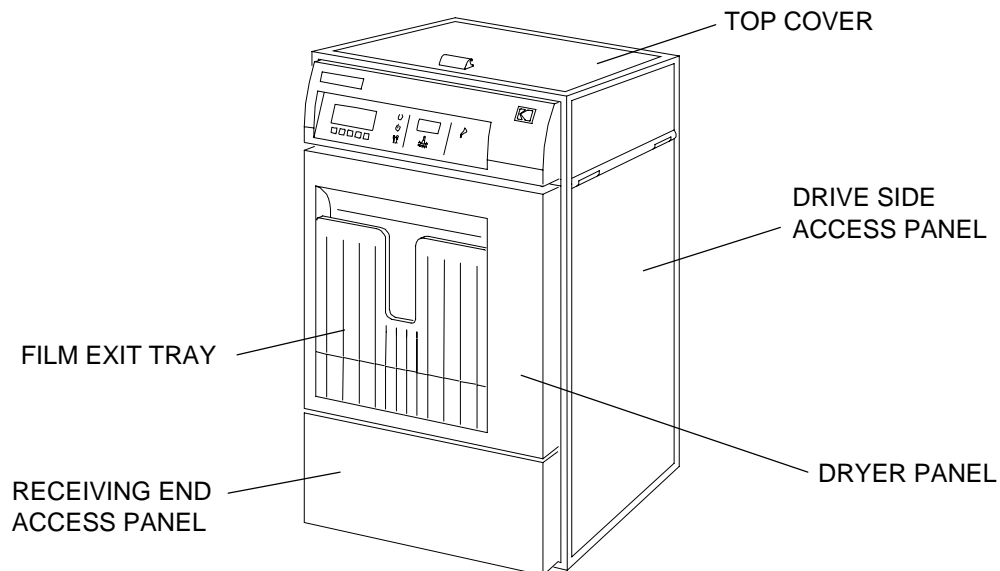
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H108\_0136DA

**Figure 3 Removing Cardboard from the Processor Tanks**

- [10] Remove:
- DRYER PANEL
  - RECEIVING-END ACCESS PANEL.
- [11] Remove the wrapped items from inside the front of the PROCESSOR and keep them for later installation.
- [12] Remove the NON-DRIVE SIDE ACCESS PANEL from the PROCESSOR.

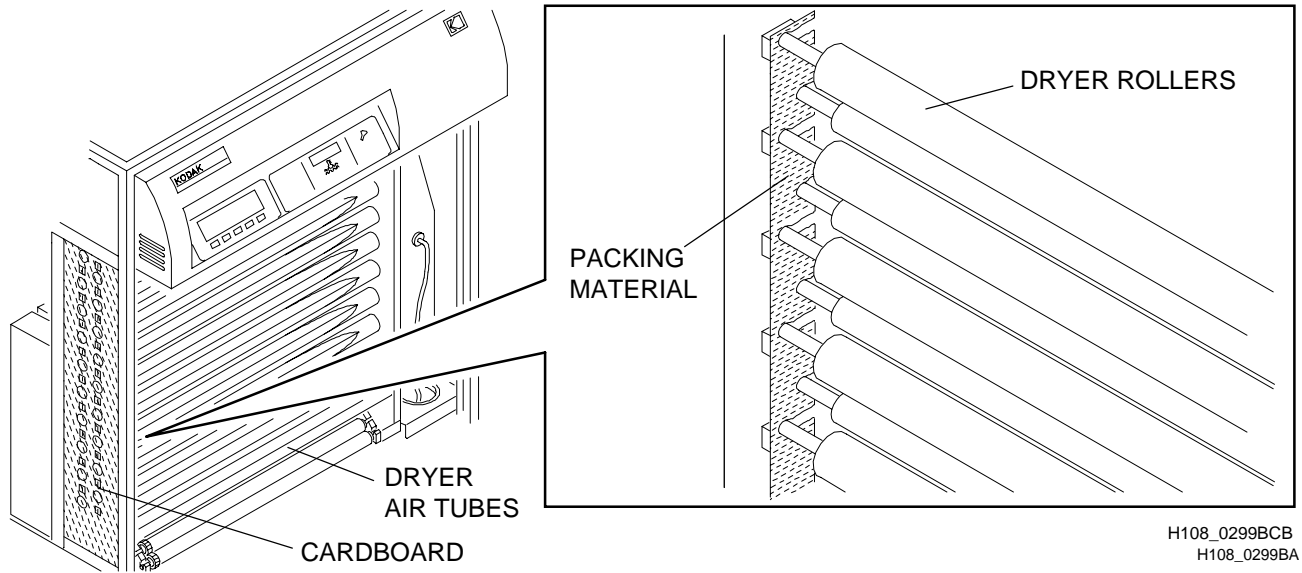


**Figure 4 Feed-End View of Processor**



**Figure 5 Receiving-End View of Processor**

- [13] From the non-drive side of the PROCESSOR, remove the CARDBOARD securing the ends of the DRYER ROLLERS.
- [14] Remove the 10 AIR TUBES, on the outside of the DRYER, to access the PACKING MATERIAL around the SHAFTS of the DRYER ROLLERS.
- [15] Remove the PACKING MATERIAL.
- [16] Insert the 10 AIR TUBES into the side of the DRYER. Place the flat side of the AIR TUBES up.



**Figure 6 Removing Cardboard from the Dryer Air Tubes**

**NOTE**

If you are unpacking the PROCESSOR anywhere other than in its final destination, make sure to either install all removed parts or pack them carefully with the PROCESSOR for transport.

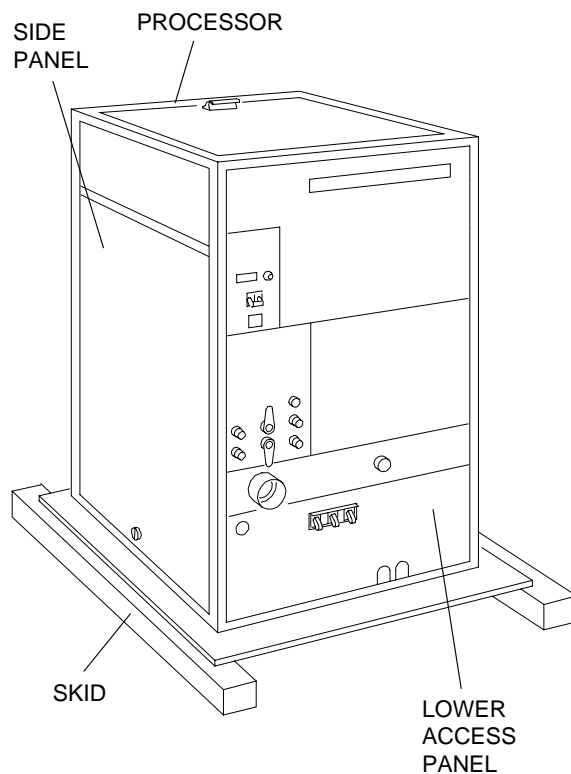
## Installing the Processor

### Removing the Processor from the Skid

#### **WARNING**

- The PROCESSOR weighs over 194 kg (427 lb). Use 2 persons when installing the LEVELING SCREWS and moving the PROCESSOR into position.
- The PROCESSOR is not fastened to the SKID. Use care when moving the SKID.

**[1]** Move the PROCESSOR, on the SKID, as close as possible to the position of installation.



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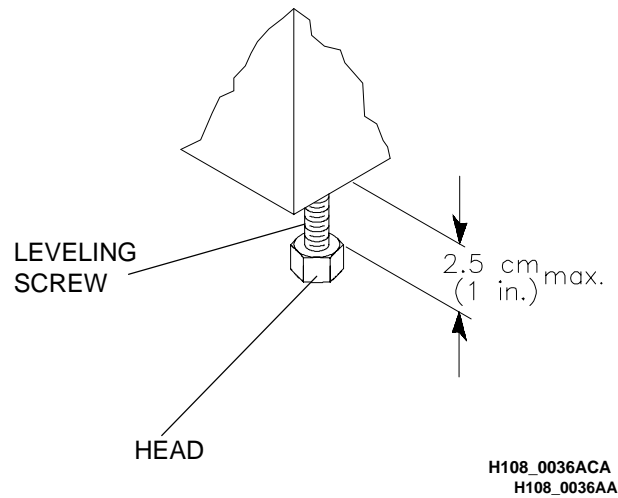
**Figure 7 Processor Mounted on Skid**

- [2] Remove the FEED-END, LOWER ACCESS PANEL and the 2 side ACCESS PANELS from the PROCESSOR for easier access.
- [3] Move the PROCESSOR so that one corner is off the SKID.



To prevent damage the LEVELING SCREWS and the PROCESSOR during installation, do not allow more than a 2.5 cm (1 in.) clearance between the bottom of the PROCESSOR and the HEAD of the LEVELING SCREW.

- [4] Insert a LEVELING SCREW into the corner of the PROCESSOR that is off the SKID.



**Figure 8 Leveling Screw**

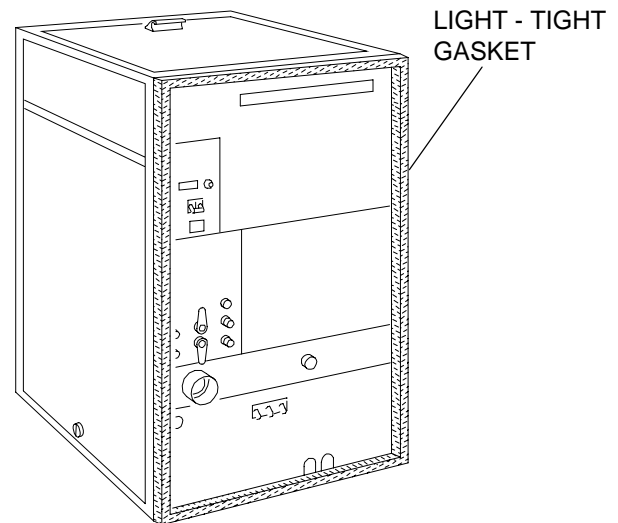
- [5] Move another corner of the PROCESSOR from the SKID.
- [6] Insert a LEVELING SCREW into that corner of the PROCESSOR.
- [7] Remove the PROCESSOR from the SKID.
- [8] Carefully install the remaining 2 LEVELING SCREWS.

## Installing the Light-Tight Gasket

- [1] Install the self-adhesive LIGHT-TIGHT GASKET onto the end of the PROCESSOR (receiving end or feed end) that will be against the darkroom wall.

### CAUTION

Do not stretch the GASKET.

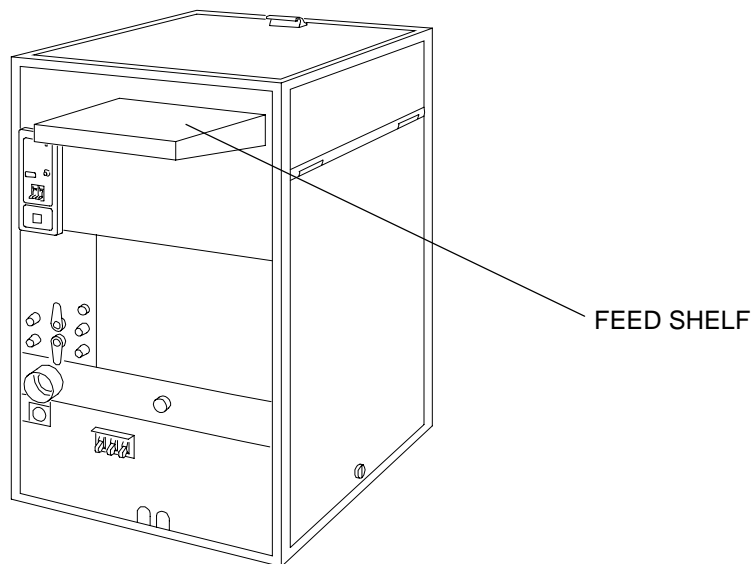


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H108\_0032AA

Figure 9 Installing the Light-Tight Gasket

## Installing the Feed Shelf

- [1] Install the FEED SHELF. Use the following, but do not tighten the SCREWS.
- 5 WASHERS
  - 5 LOCK WASHERS
  - 5 SCREWS



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H108\_0319BA

Figure 10 Installing the Feed Shelf

[2] Install the FILM GUIDE. Use the following, but do not tighten the WING NUTS.

- 3 WASHERS
- 3 WING NUTS.

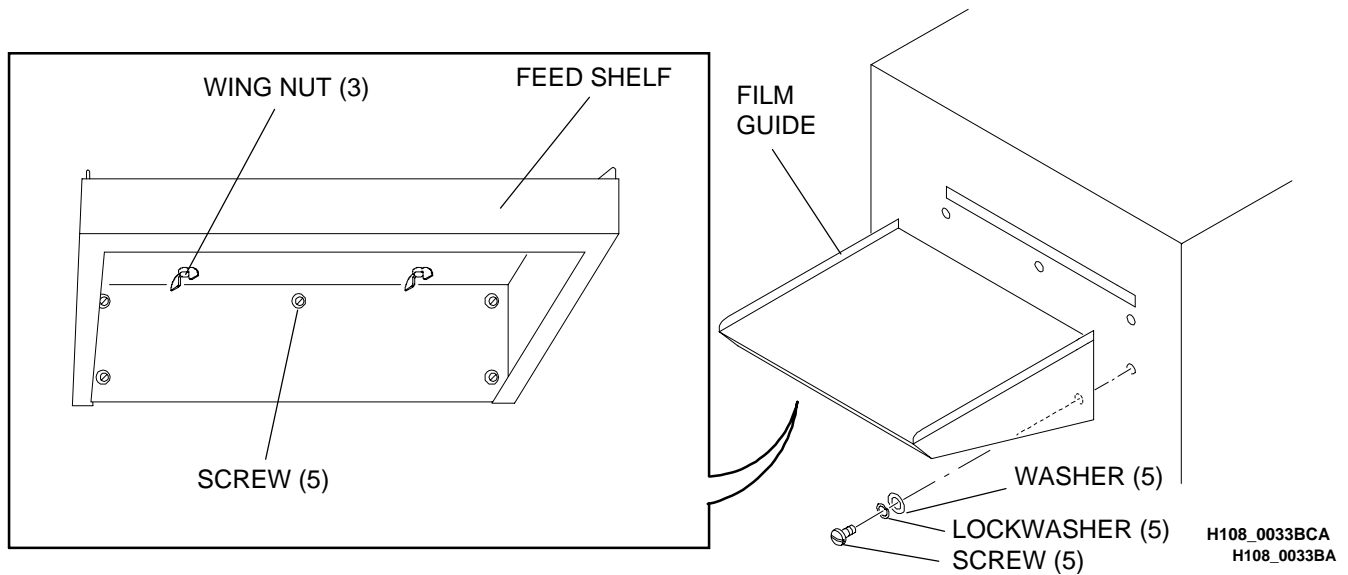


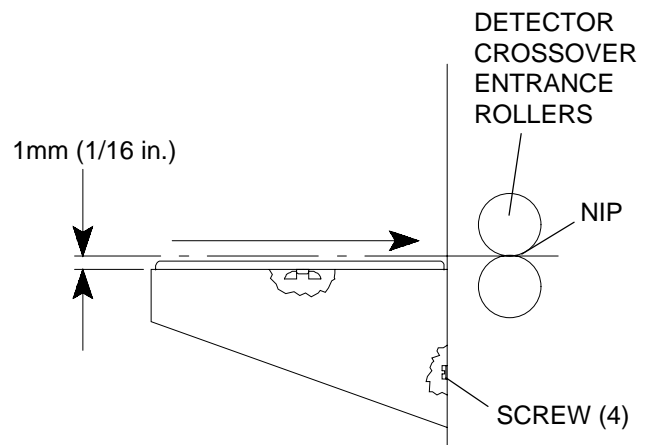
Figure 11 Installing the Feed Shelf

#### Adjusting the Height of the Feed Shelf

- [1] Adjust the position of the FEED SHELF so that it is approximately 1 mm (1/16 in.) lower than and parallel to the NIP of the DETECTOR CROSSOVER ROLLERS.
- [2] When the height is adjusted correctly, tighten the 5 SCREWS as shown.

#### NOTE

Do not tighten the WING NUTS.



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H108\_0038AA

Figure 12 Adjusting the Feed Shelf

## Aligning the Film Guide

- [1] Insert a 35 x 43 cm (14 x 17 in.) film into the FILM GUIDE.
- [2] Use the edges of the film to align the FILM GUIDE at a 90° angle with the DETECTOR CROSSOVER ASSEMBLY.
- [3] Tighten the 3 WING NUTS.

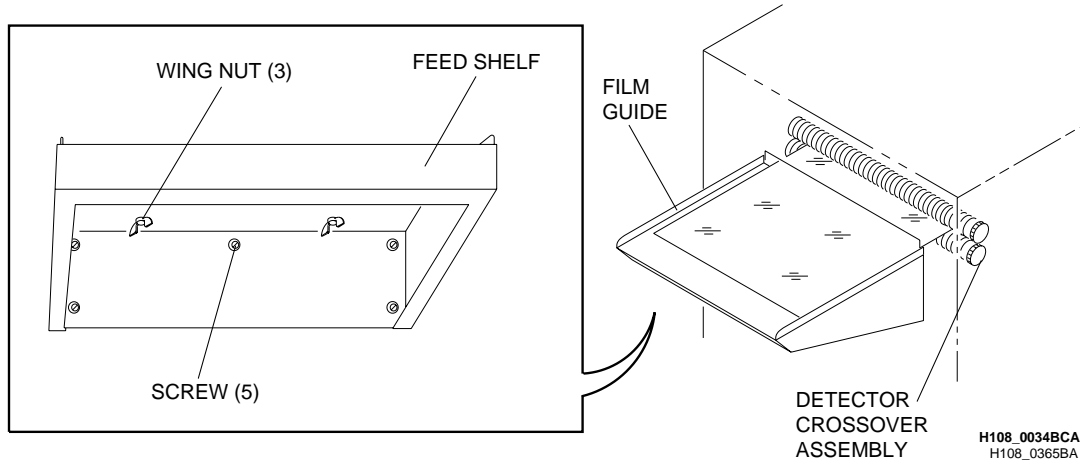


Figure 13 Aligning the Film Guide

## Installing the Light Shield on Stand-alone Units

- [1] Align the holes in the LIGHT SHIELD with the holes for the 2 SCREWS.
- [2] Install the 2 LOCK WASHERS, WASHERS, and SCREWS through the LIGHT SHIELD and into the PROCESSOR.

### NOTE

The SCREWS, WASHERS, and LOCK WASHERS are provided in the PRE-PACK.

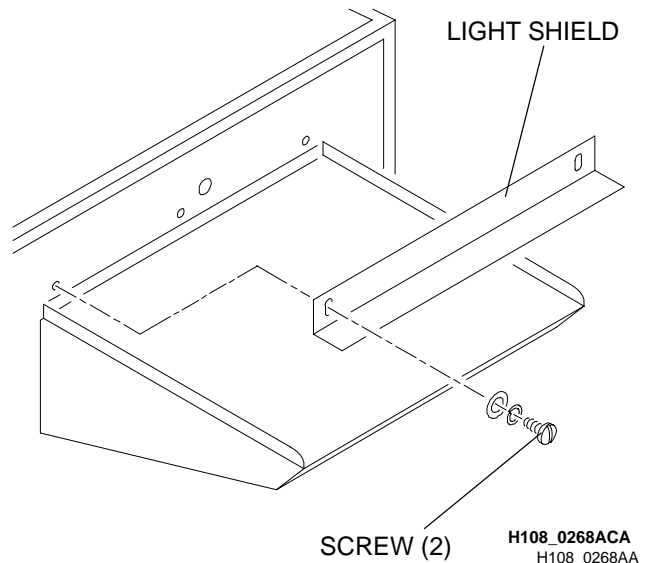


Figure 14 Installing the Light Shield

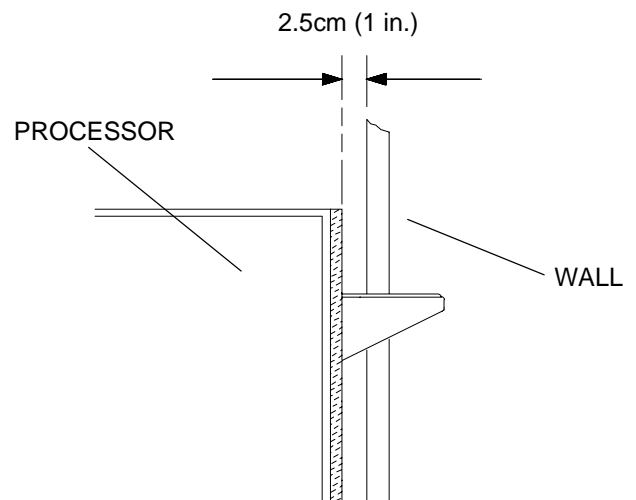
## Moving the Processor into Position

- [1] Move the PROCESSOR within approximately 2.5 cm (1 in.) of the wall.
- [2] Install the 4 FLOOR PLATES under the 4 LEVELING SCREWS.

### NOTE

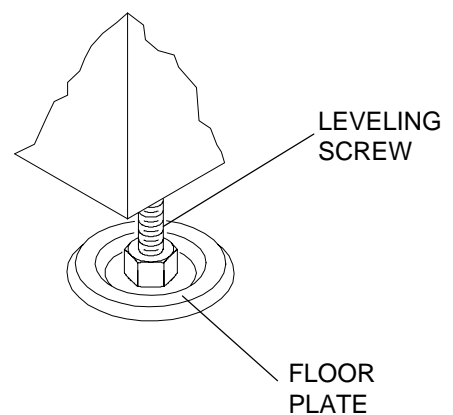
If installing a SEISMIC KIT, use the FLOOR PLATES provided with the SEISMIC KIT.

- [3] Check that the LIGHT-TIGHT GASKET is tight against the wall. Compress the LIGHT-TIGHT GASKET to approximately 10 mm ( $\frac{3}{8}$  in.).



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Figure 15 Positioning the Processor



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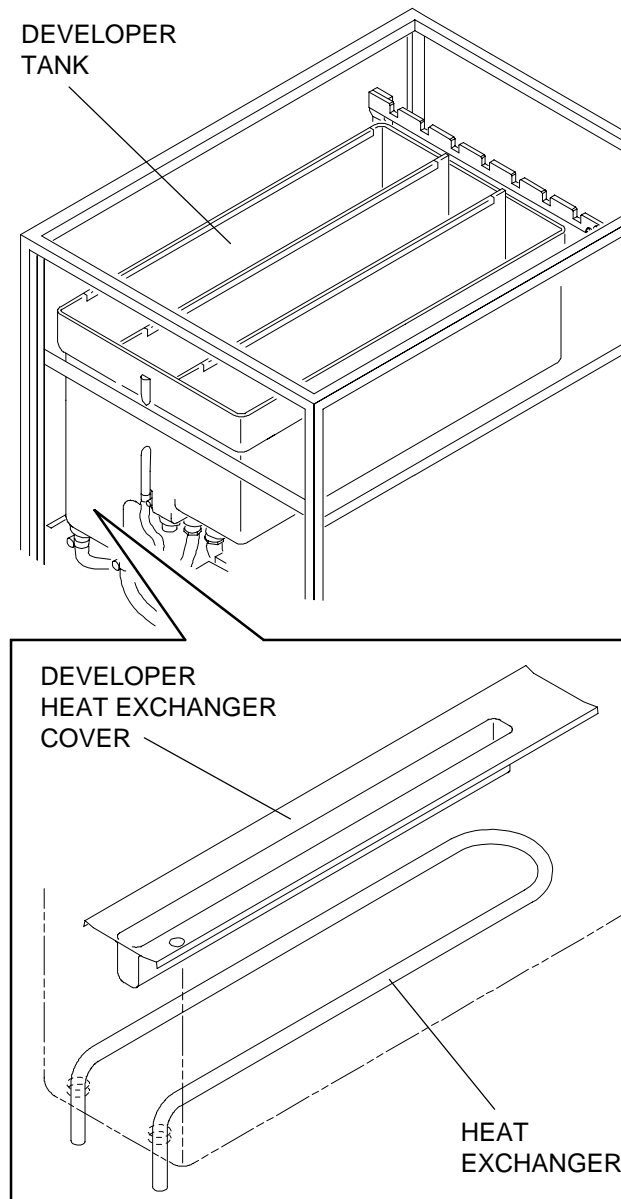
Figure 16 Installing the Floor Hardware

## Installing the Heat Exchanger Cover and Racks

- [1] Unwrap the items removed during the unpacking procedure.
- [2] Install the DEVELOPER HEAT EXCHANGER COVER into the bottom of the DEVELOPER TANK.

### NOTE

Check that the DEVELOPER HEAT EXCHANGER COVER is pushed completely down.

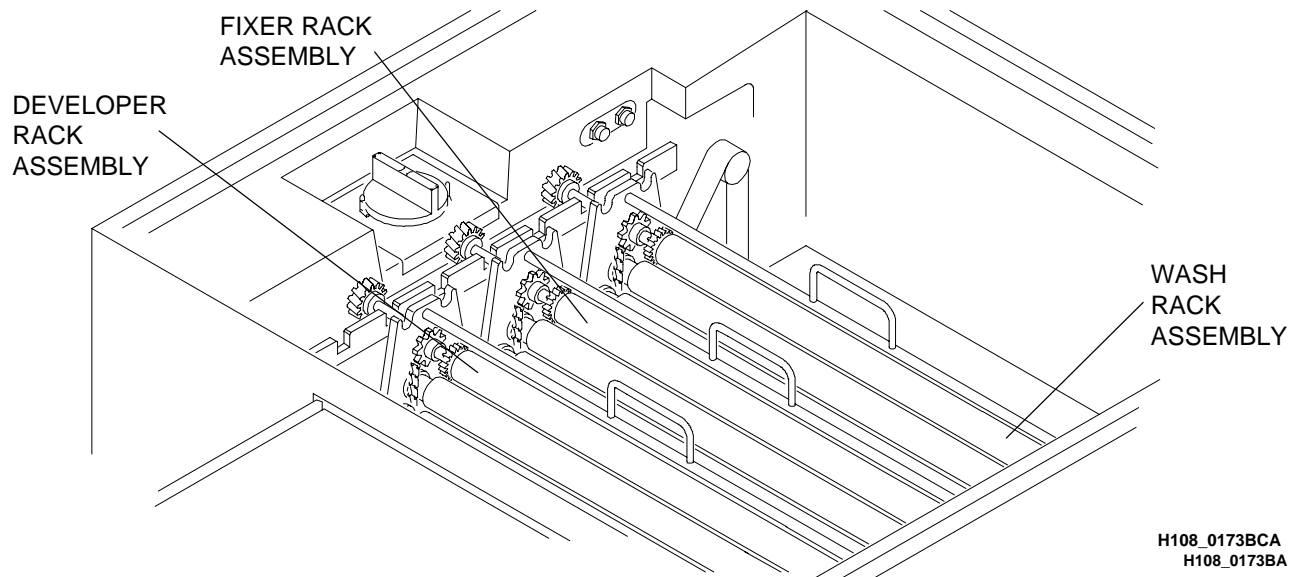


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H108\_0118CA

Figure 17 Installing the Developer Heat Exchanger Cover

**[3]** Install:

- DEVELOPER RACK ASSEMBLY
- FIXER RACK ASSEMBLY
- WASH RACK ASSEMBLY

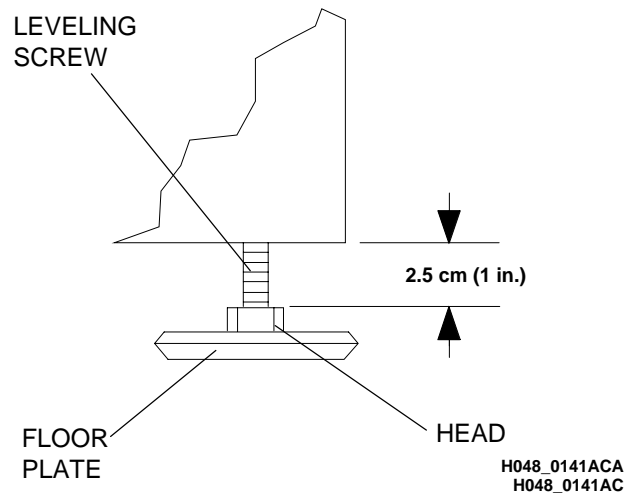


**Figure 18 Installing the Racks**

**Leveling the Processor**

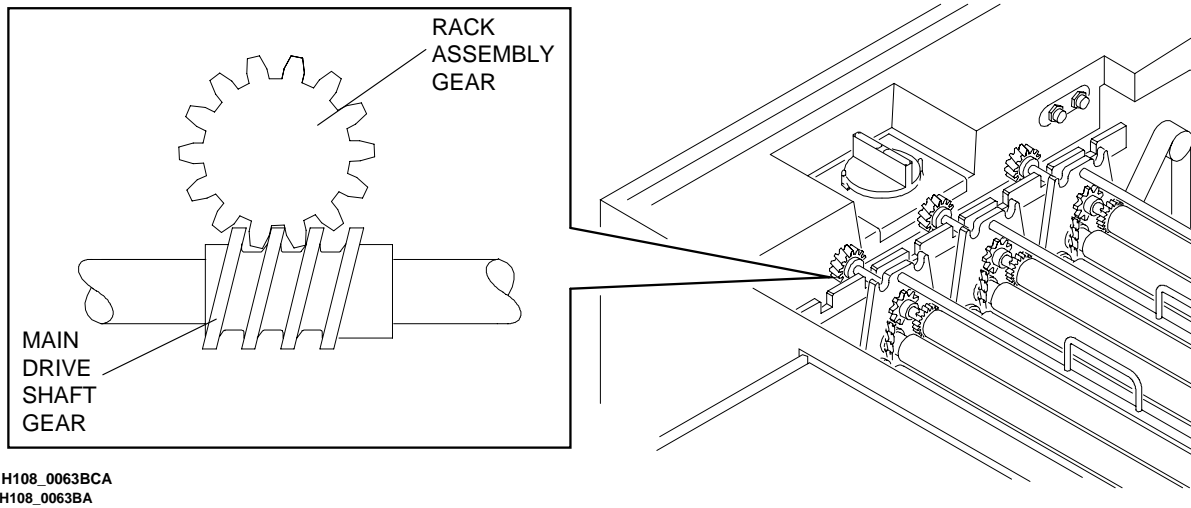
**CAUTION**

To prevent damage to the LEVELING SCREWS and the PROCESSOR, do not allow more than a 2.5 cm (1 in.) clearance between the bottom of the PROCESSOR and the HEAD of the LEVELING SCREW.



**Figure 19 Adjusting the Leveling Screws**

- [1] Check that the RACKS are in their correct positions and that the GEARS of the RACK ASSEMBLIES engage with the GEARS of the MAIN DRIVE SHAFT.

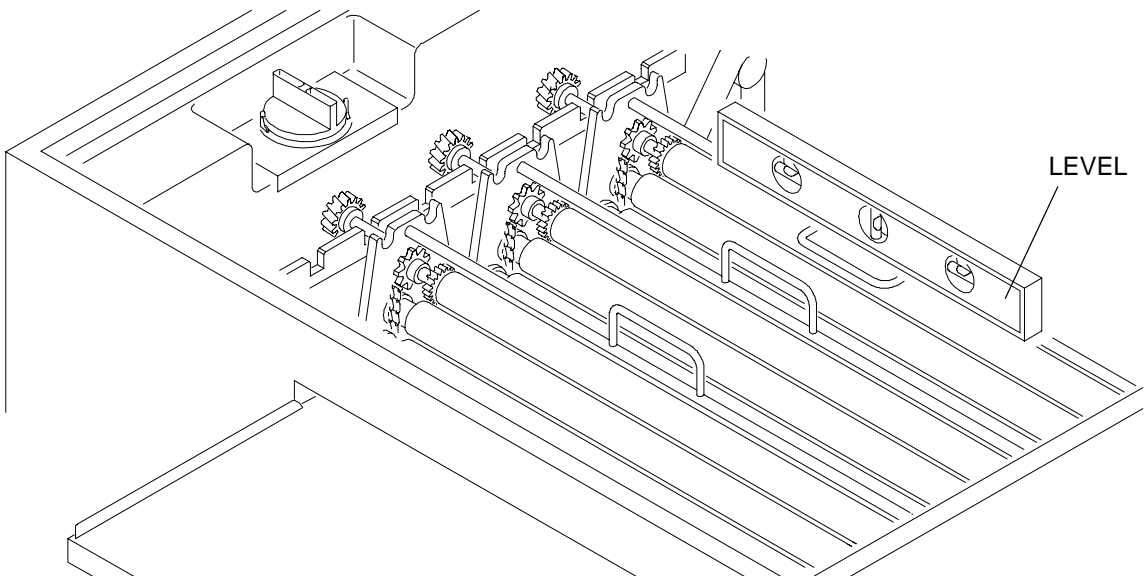


**Figure 20 Positioning the Racks and Gears**

**CAUTION**

The edge of the LEVEL could cause damage to the surface of the ROLLERS.

- [2] Place a LEVEL as shown in the figure. Adjust the LEVELING SCREWS to level the PROCESSOR from side to side.



**Figure 21 Leveling the Processor Side to Side**

- [3] Place a LEVEL as shown in the figure. Adjust the LEVELING SCREWS to level the PROCESSOR from front to back.

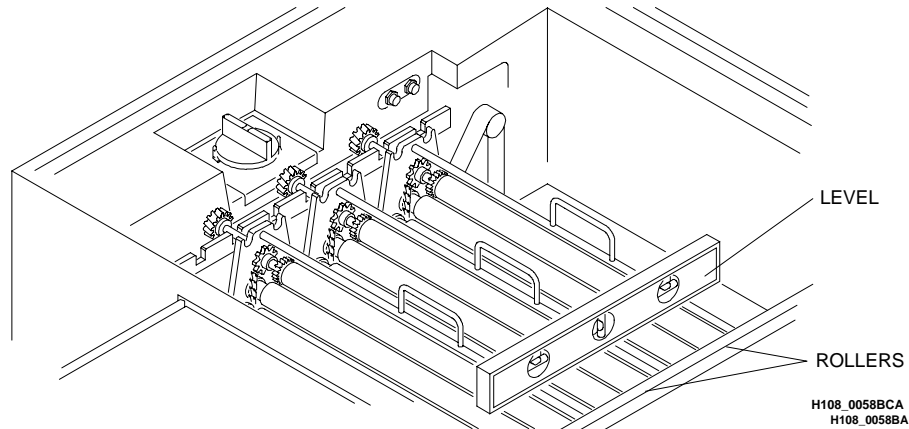


Figure 22 Leveling the Processor Front to Back

- [4] Install the Seismic Kit, if required.

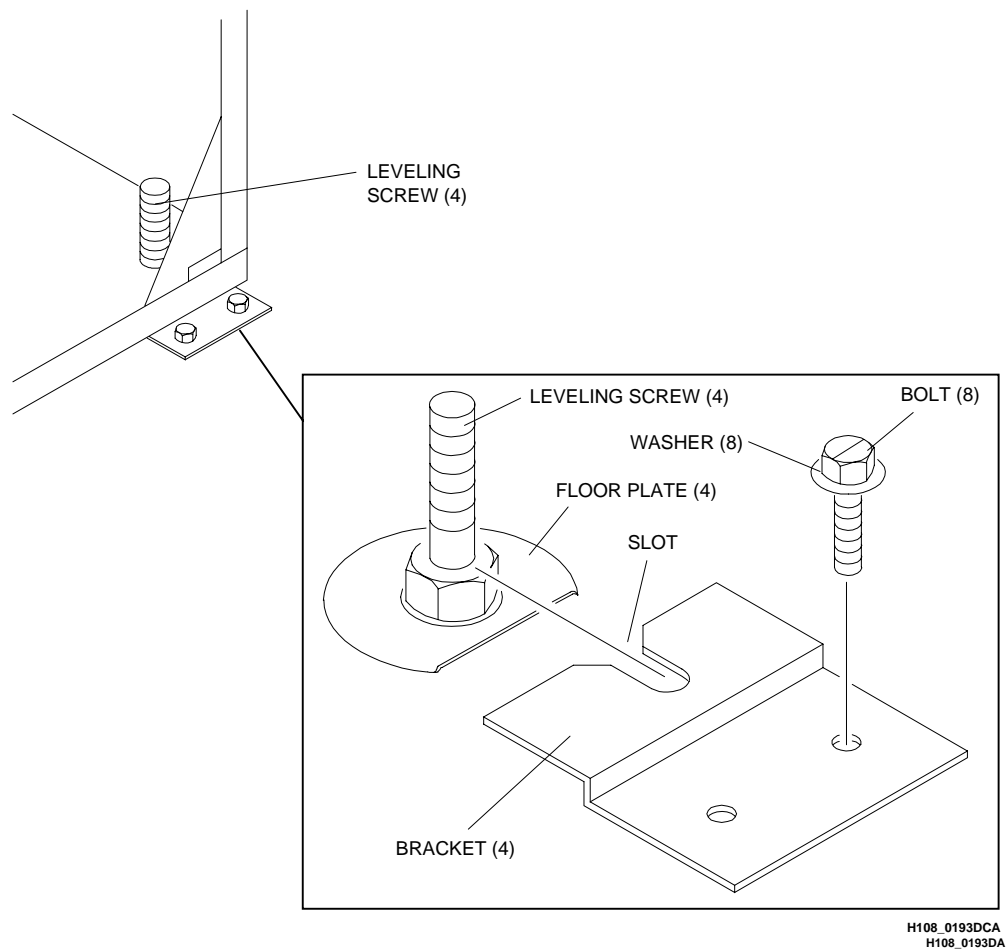


Figure 23 Installing the Seismic Kit

## Installing the Crossovers and Squeegee Assemblies

[1] Install:

- DEVELOPER/FIXER CROSSOVER
- FIXER/WASH CROSSOVER
- DETECTOR CROSSOVER ASSEMBLY
- SQUEEGEE ASSEMBLY.

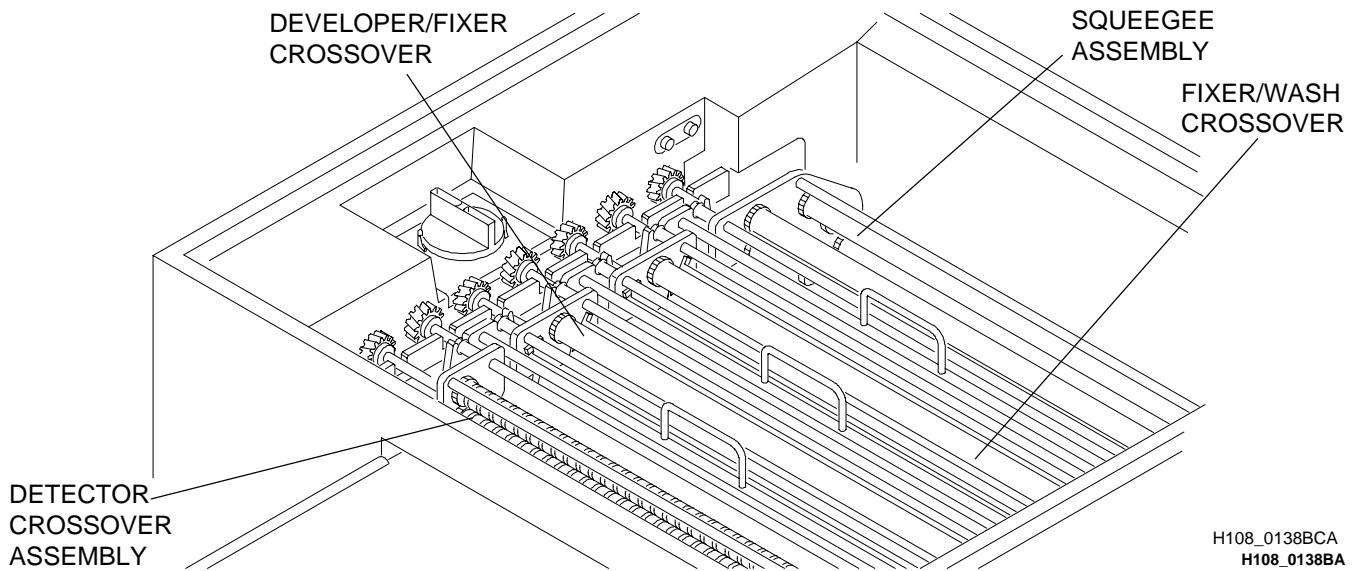


Figure 24 Installing the Crossovers and Squeegee Assemblies

## Connecting the Wash Water Hose

- [1] Connect the WASH WATER HOSE from the QUICK DISCONNECT to the FIXER/WASH CROSSOVER.

### NOTE

The WASH WATER HOSE and the CLAMP required for the installation are packed with the PROCESSOR in the separate PRE-PACK CARTON.

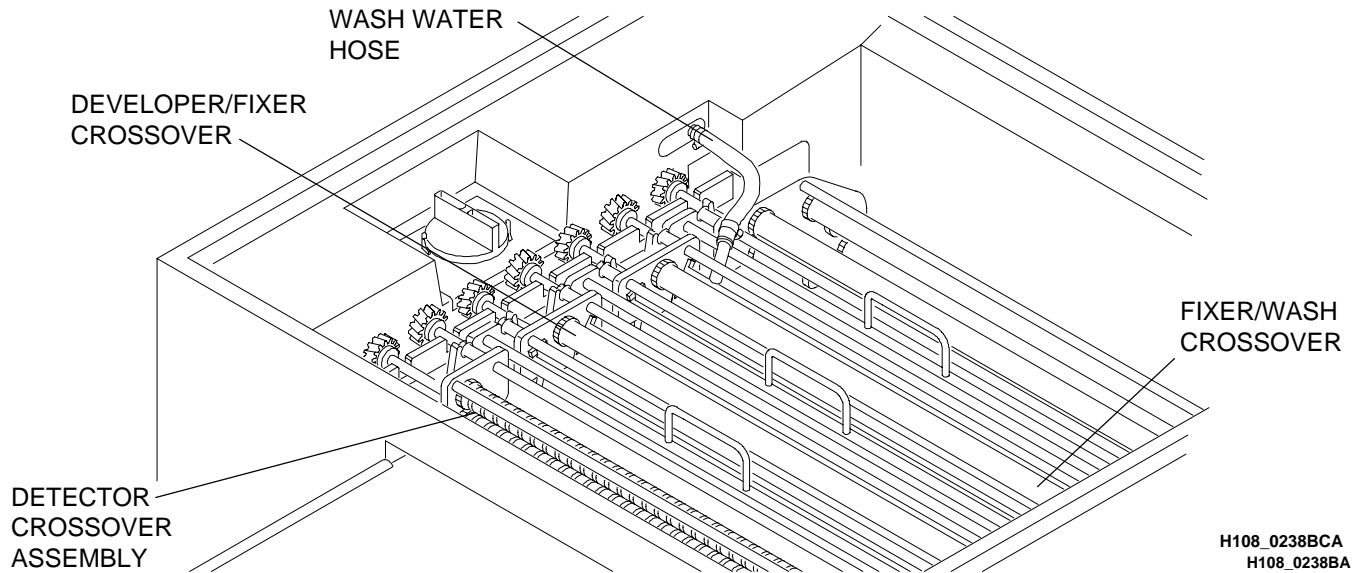


Figure 25 Connecting the Wash Water Hose

- [2] Install the EVAPORATION COVERS.

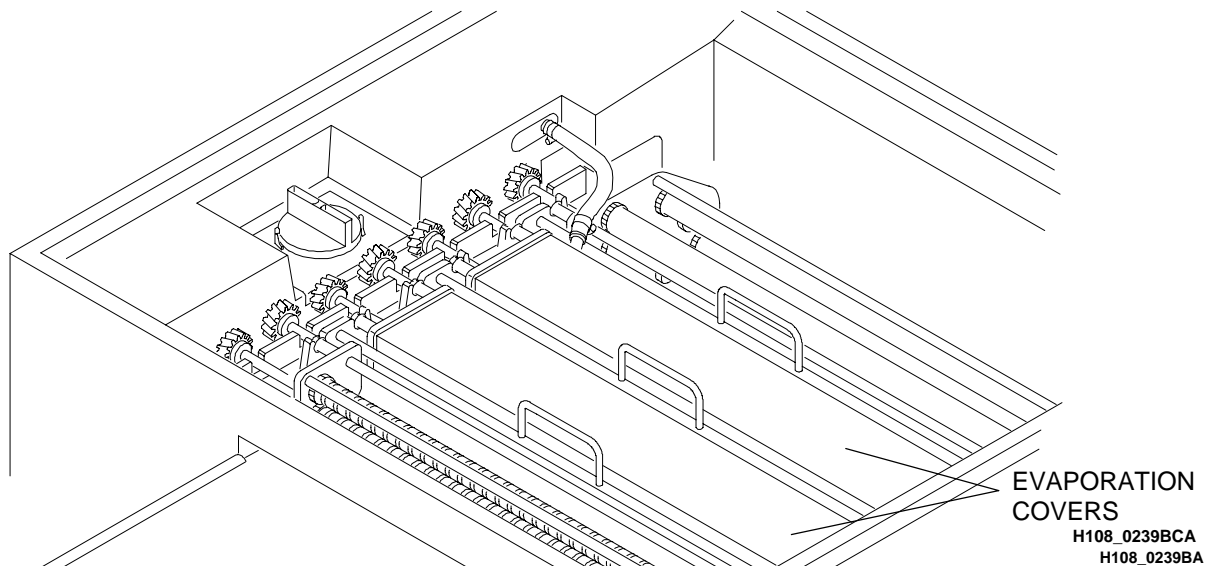


Figure 26 Installing the Evaporation Covers

## Connecting the Processor

### Connecting the Jumpers at Terminal Strip TB2

- [1] Remove the FEED-END LOWER ACCESS PANEL from the PROCESSOR.
- [2] Open the TRANSFORMER BOX COVER.
- [3] Determine the supply voltage to be applied to the PROCESSOR.
- [4] Using the “Supply Voltage Connection Tables” and the “Diagrams for Terminal Strip TB2” on pages ?? through ??, do the following to make the connections:
  - (a) Connect the METAL JUMPERS.
  - (b) Connect the WIRE JUMPERS.

#### NOTE

The METAL JUMPERS and WIRE JUMPERS are provided in the PRE-PACK CARTON.

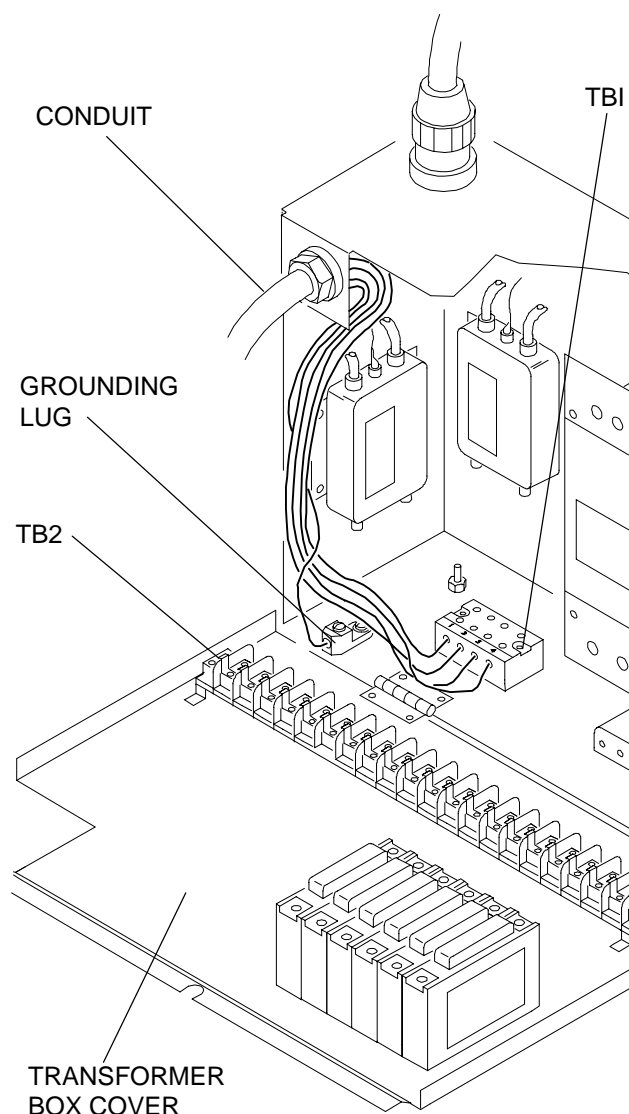
- [5] Route the wires neatly so that the wires do not become pinched or scraped when the TRANSFORMER BOX COVER is closed.

### Connecting the Wiring to the Terminal Strip TB1

#### WARNING

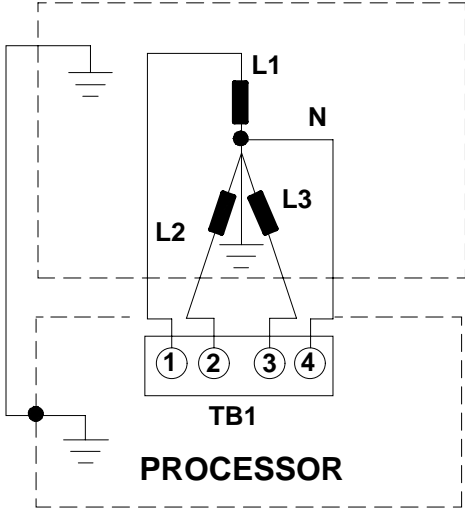
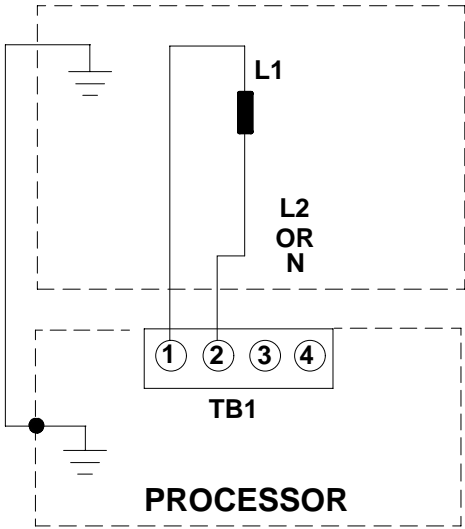
Dangerous Voltage

- [6] Move the wall power switch to the “OFF” position.
- [7] Using the “Supply Voltage Connection Tables” on pages ?? through ??, connect the main input power wires to TERMINAL STRIP TB1 and to the GROUNDING LUG. Wiring must meet all local codes.
- [8] Close the TRANSFORMER BOX COVER.
- [9] Install the FEED-END LOWER ACCESS PANEL onto the PROCESSOR.



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H108\_0056CA

Figure 27 Transformer Box Interior

POWER SYSTEM	NOMINAL SUPPLY VOLTAGE	FREQUENCY (Hz)	CONNECTION DIAGRAM
<b>3 Phase 4 Wire Plus Earth Ground</b>  <p>The diagram shows a three-phase star (wye) connection. Three lines labeled L1, L2, and L3 are connected to a central neutral point. A neutral wire (N) extends from this point to a terminal block labeled TB1. The terminal block has four terminals: 1, 2, 3, and 4. Terminals 1, 2, and 3 are connected to the L1, L2, and L3 lines respectively. Terminal 4 is connected to the neutral wire (N). The entire assembly is labeled 'PROCESSOR'.</p>	120/208	60 SEE NOTE	A
	127/220	50 SEE NOTE	B
	220/380	50 SEE NOTE	K
	230/400	50 SEE NOTE	L
	240/415	50 SEE NOTE	M
<b>Single Phase 2 Wire Plus Earth Ground</b>  <p>The diagram shows a single-phase connection. A line labeled L1 is connected to terminal 1 of the terminal block TB1. A neutral wire labeled L2 OR N is connected to terminal 2 of the terminal block TB1. The terminal block has four terminals: 1, 2, 3, and 4. Terminals 3 and 4 are not connected. The entire assembly is labeled 'PROCESSOR'.</p>	200	50/60 SEE NOTE	C
	220	50/60 SEE NOTE	D
	230	50/60 SEE NOTE	E
	240	50/60 SEE NOTE	F

**NOTE**  
Set the **SWITCH** at the back of the **DEVELOPER** and **FIXER** **REPLENISHMENT PUMPS B3 and B4** to the correct frequency.

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Figure 28 Supply Voltage Connection Table

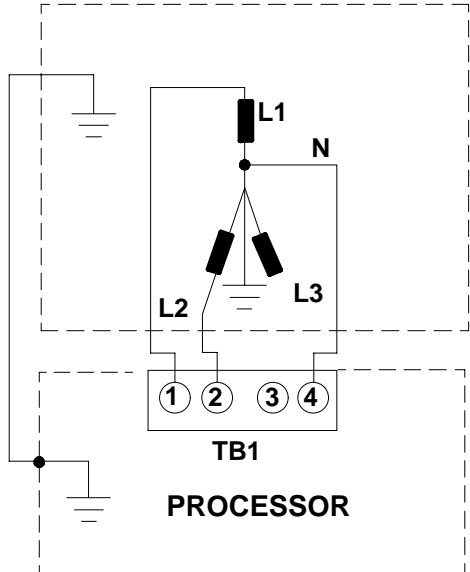
POWER SYSTEM	NOMINAL SUPPLY VOLTAGE	FREQUENCY (Hz)	CONNECTION DIAGRAM
<b>Single Phase 3 Wire Plus Earth Ground</b> 	100/200	50/60 SEE NOTE	G
<b>Single Phase 3 Wire Plus Earth Ground</b> 	120/240	50/60 SEE NOTE	H
<b>3 Phase 3 Wire Plus Earth Ground</b> 	200	50/60 SEE NOTE	J

**NOTE**

Set the SWITCH at the back of the DEVELOPER and FIXER REPLENISHMENT PUMPS B3 and B4 to the correct frequency.

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Figure 29 Supply Voltage Connection Table, Continued

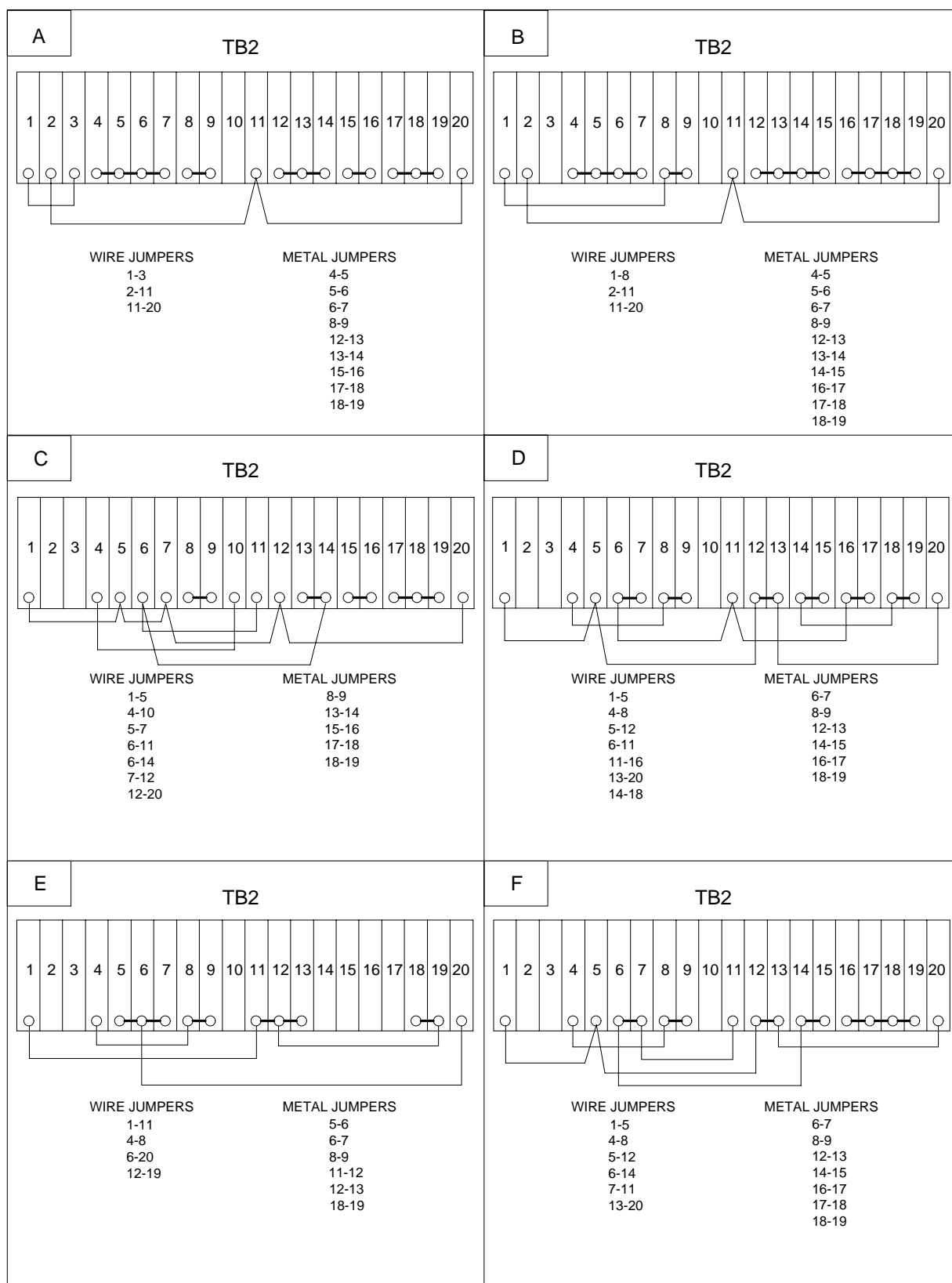
POWER SYSTEM	NOMINAL SUPPLY VOLTAGE	FREQUENCY (Hz)	CONNECTION DIAGRAM
<b>3 Phase</b> <b>3 Wire</b> <b>Plus Earth Ground</b> 	<b>120/208</b>	<b>60</b> SEE NOTE	<b>N</b>
	<b>127/220</b>	<b>50</b> SEE NOTE	<b>O</b>
	<b>220/380</b>	<b>50</b> SEE NOTE	<b>P</b>
	<b>230/400</b>	<b>50</b> SEE NOTE	<b>R</b>
	<b>240/415</b>	<b>50</b> SEE NOTE	<b>S</b>

**NOTE**

Set the **SWITCH** at the back of the **DEVELOPER** and **FIXER** **REPLENISHMENT PUMPS B3 and B4** to the correct frequency.

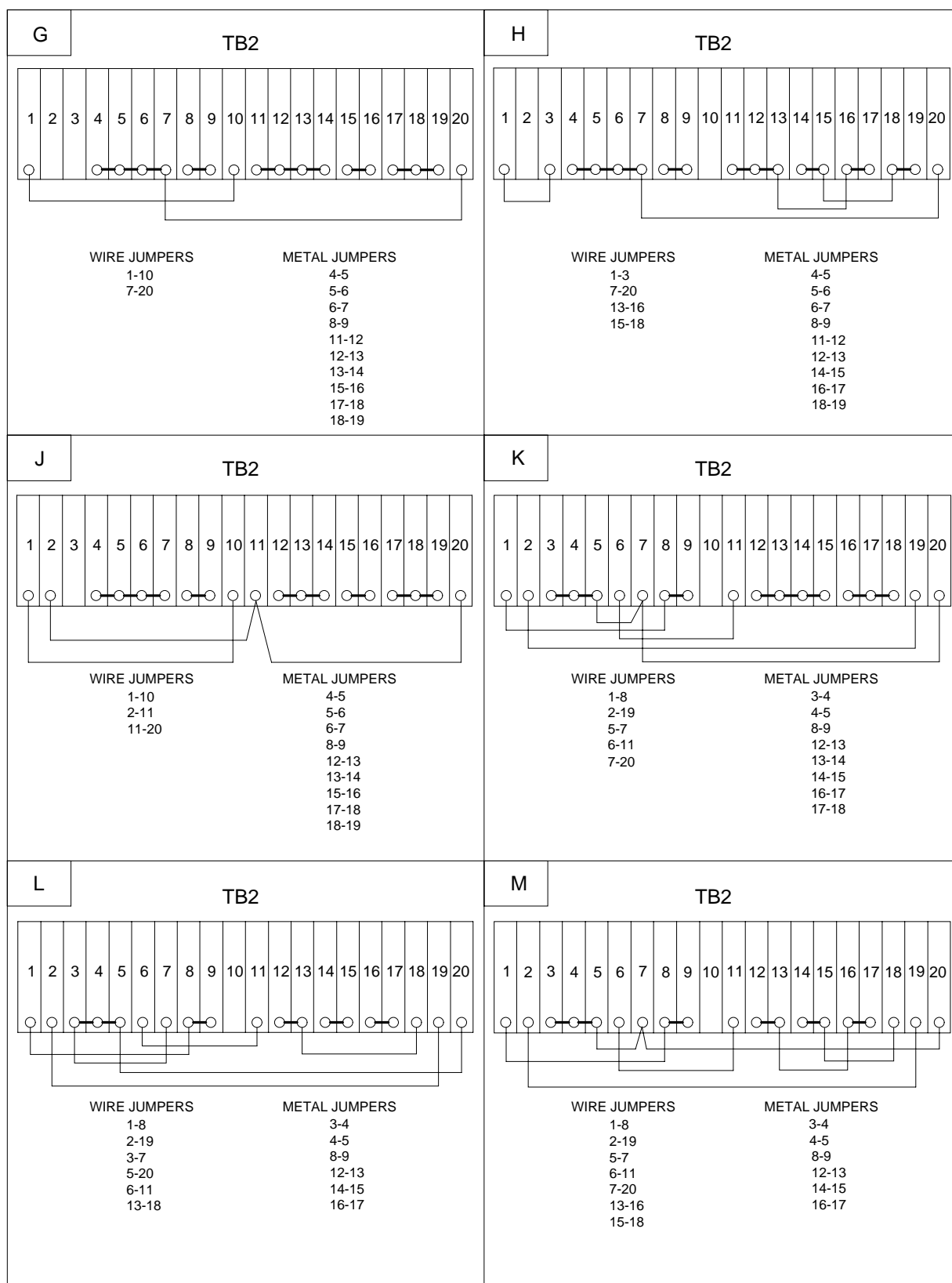
H108\_9025EC

**Figure 30 Supply Voltage Connection Table, Continued**



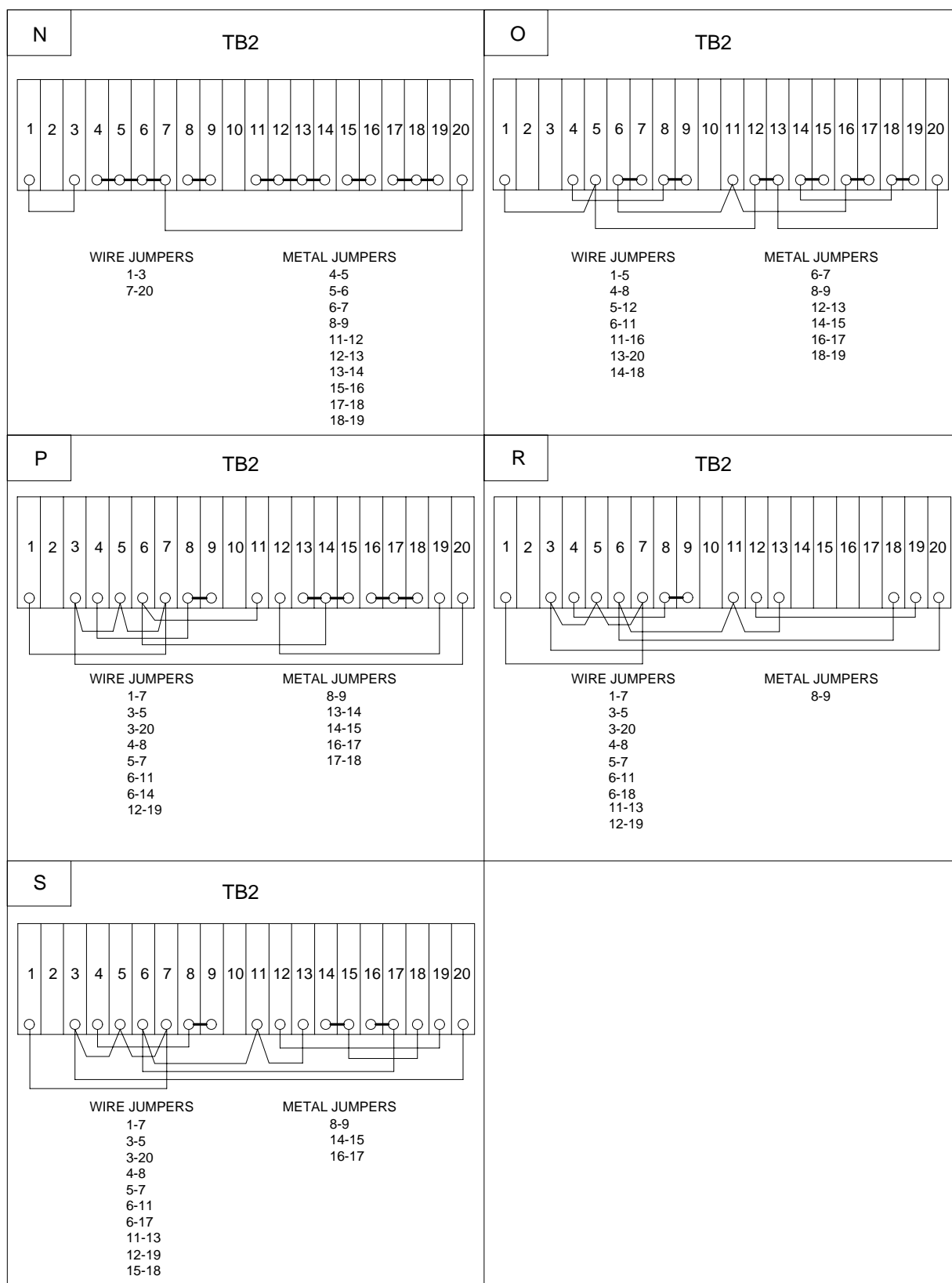
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**Figure 31 Diagrams for Terminal Strip TB2**



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**Figure 32 Diagrams for Terminal Strip TB2, Continued**



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**Figure 33 Diagrams for Terminal Strip TB2, Continued**

## Operating the Processor at 50 Hz

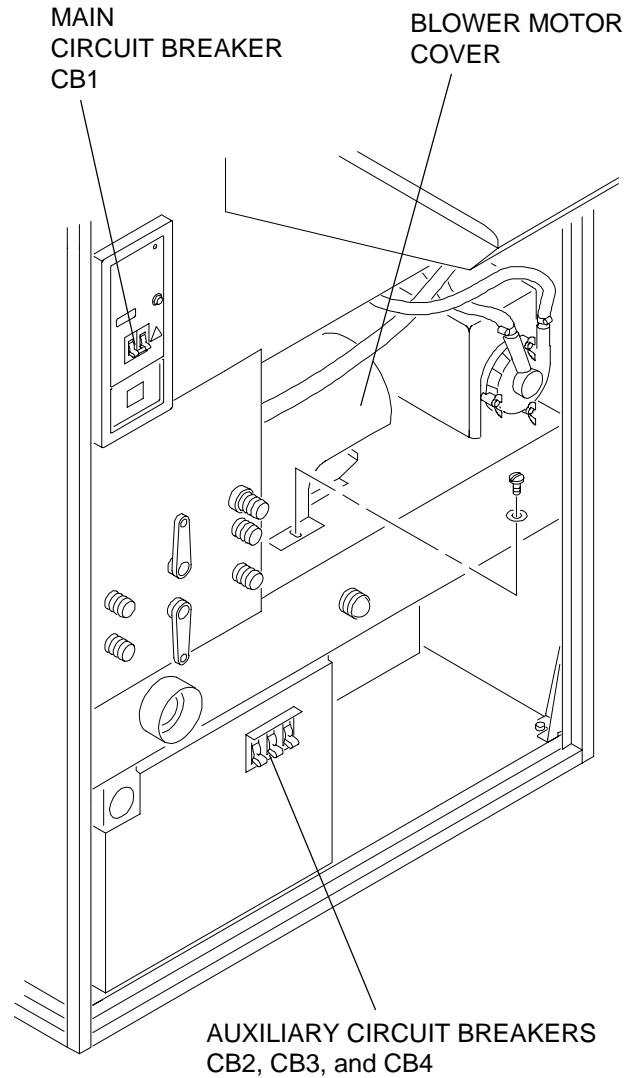
### NOTE

The PROCESSOR is shipped for 60 Hz operation. Do the following procedure for 50 Hz operation. If the Japanese language is a requirement, also see “Changing to the Japanese Language” on page ??.

### WARNING

Dangerous Voltage

- [1] Move the wall power switch to the “OFF” position.
- [2] Move the MAIN CIRCUIT BREAKER CB1 and AUXILIARY CIRCUIT BREAKERS CB2, CB3, and CB4 to the “O” position.
- [3] Remove the FEED-END MIDDLE ACCESS PANEL from the PROCESSOR.
- [4] Remove the BLOWER MOTOR COVER.



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H108\_0125CA

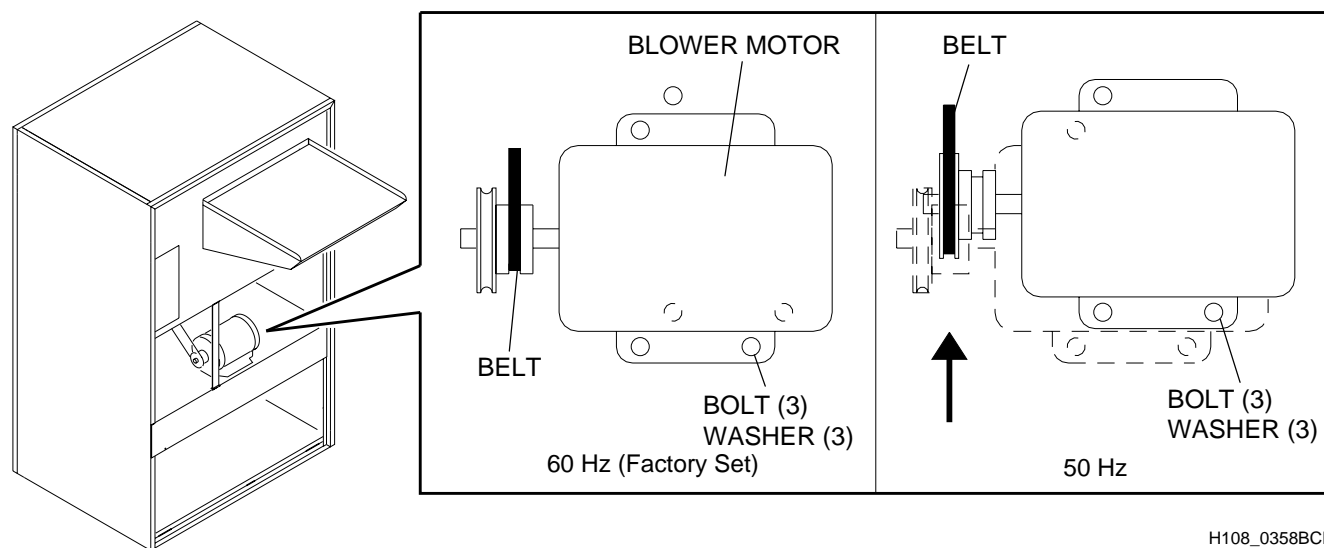
**Figure 34 Deenergizing the Processor**

- [5] Remove the 3 BOLTS and WASHERS that hold the BLOWER MOTOR.
- [6] Move the BLOWER MOTOR to the 50 Hz position.
- [7] Install, but do not tighten the 3 BOLTS and WASHERS.

**IMPORTANT**

It is not necessary to loosen the SETSCREWS on the PULLEY. If the SETSCREWS are loosened, use SEALANT TL-2390 on the SETSCREWS.

- [8] Move the BELT from the small PULLEY to the large PULLEY.



H108\_0358BCB  
H108\_0358BA

**Figure 35 Moving the Blower Motor to the 50 Hz Position**

- [9] Adjust the position of the BLOWER MOTOR for correct alignment and tension of the BELT.

**NOTE**

The BELT has the correct tension if no loud noises occur from the BELT when the PROCESSOR is energized.

- [10] Tighten the 3 BOLTS.

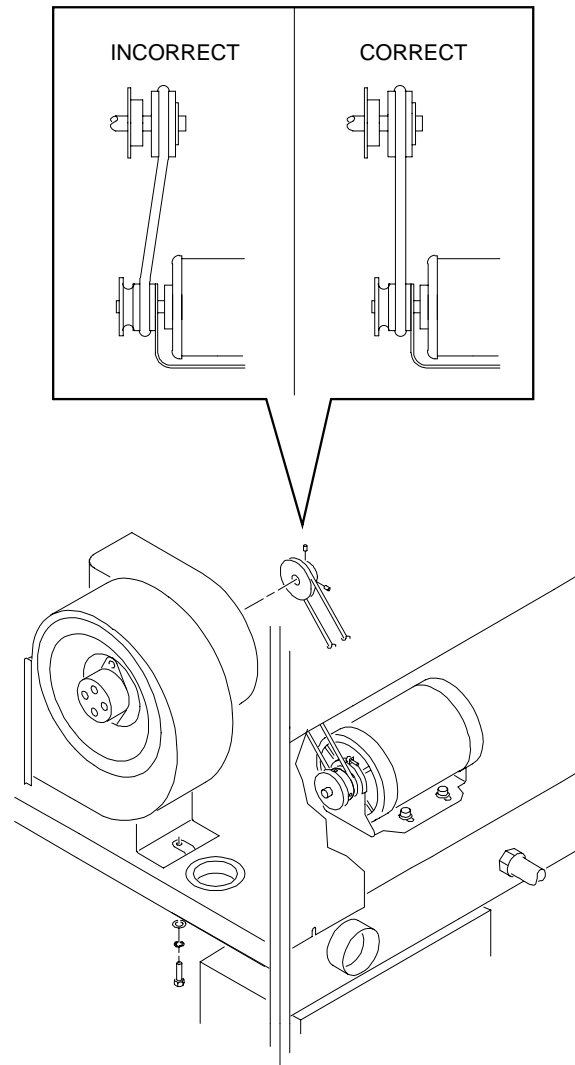
**WARNING**

Do not place hands or fingers near the moving parts.

- [11] Move the wall power switch to the "ON" position.
- [12] Energize the PROCESSOR by moving the MAIN CIRCUIT BREAKER CB1 and the AUXILIARY CIRCUIT BREAKERS CB2, CB3, and CB4 to the "I" position.
- [13] Check for correct tension and alignment of the BELT.
- [14] If it is necessary to adjust the BLOWER MOTOR:
- Deenergize the PROCESSOR by moving the MAIN CIRCUIT BREAKER CB1 to the "O" position.
  - Make the adjustment.
- [15] Do steps ?? through ?? until the BLOWER MOTOR is adjusted correctly.
- [16] To continue with the remaining steps, deenergize the PROCESSOR by moving the MAIN CIRCUIT BREAKER CB1 to the "O" position.
- [17] Install the BLOWER MOTOR COVER.
- [18] Install the FEED-END, MIDDLE ACCESS PANEL onto the PROCESSOR.
- [19] At the back of the REPLENISHMENT PUMPS B3 and B4, pull out and move the SWITCHES to the 50 Hz position.

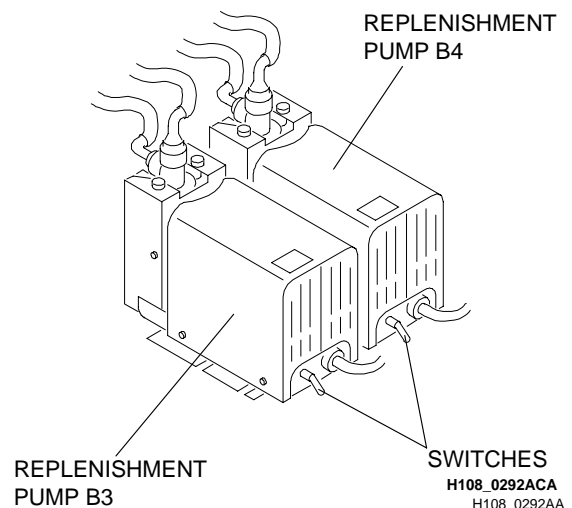
**NOTE**

It might be necessary to loosen the hardware and move the REPLENISHMENT PUMPS to access the SWITCHES.



H108\_0074CA

**Figure 36 Aligning the Blower Motor Pulley**



H108\_0292ACA  
H108\_0292AA

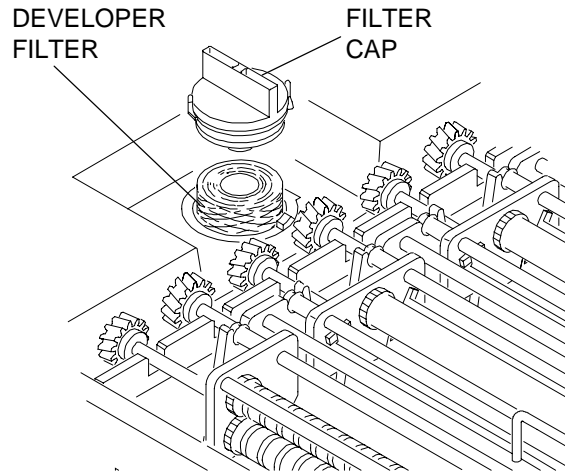
**Figure 37 Setting the Switch to 50 Hz**

## Changing to the Japanese Language

To change either to or from a Japanese display, do a software download. See the User Manual for Software Diagnostics Publication No. 636719.

### Installing the Developer Filter

- [1] Remove the FILTER CAP and install the new DEVELOPER FILTER.
- [2] Install the FILTER CAP.



H108\_0068ACA  
H108\_0068AA

**Figure 38 Installing a New Developer Filter**

### Connecting the Drains

The PROCESSOR can drain developer, fixer, and water separately. The PROCESSOR is shipped with a separate FIXER OVERFLOW/TANK DRAIN, AUXILIARY FIXER TANK DRAIN, DEVELOPER OVERFLOW/TANK DRAIN, and AUXILIARY DEVELOPER TANK DRAIN. See Figure ??.

#### **WARNING**

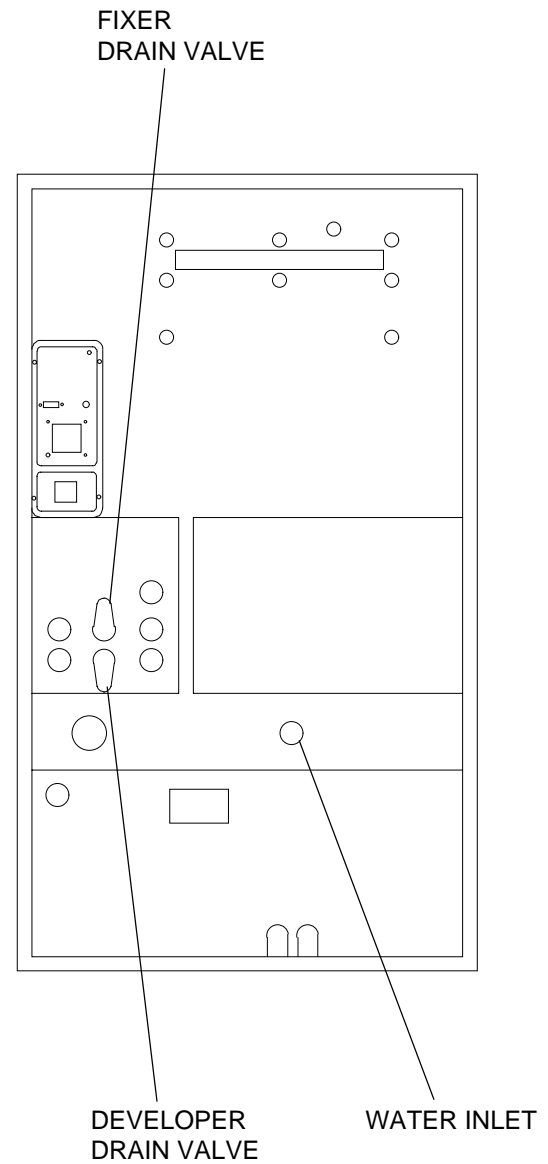
- DRAINS must be made of chemically resistant, non-corrosive material. Use PVC or equivalent.
  - The DRAIN must have a minimum diameter of 7.6 cm (3 in.) and be free of obstruction.
  - Drain service must comply with all local codes.
- [1] Remove the three 1.9 cm ( $\frac{3}{4}$  in.) HOSES from the PRE-PACK CARTON. Connect the 3 HOSES to the DEVELOPER, FIXER, and WASH WATER DRAINS on the FEED END of the PROCESSOR.
  - [2] Route the tubing as required. Wash water waste can be routed directly to the BUILDING DRAIN. Do not make a solid connection between the WASH WATER DRAIN and the FLOOR DRAIN.

## Connecting the Water

### IMPORTANT

Before doing these steps, see the Site Specifications for information about water pressure and materials.

- [1] Install the plumbing to the WATER INLET.
- [2] Check that the FIXER and DEVELOPER DRAIN VALVES are closed.



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H108\_0004CA

**Figure 39 Making the Mechanical Connections**

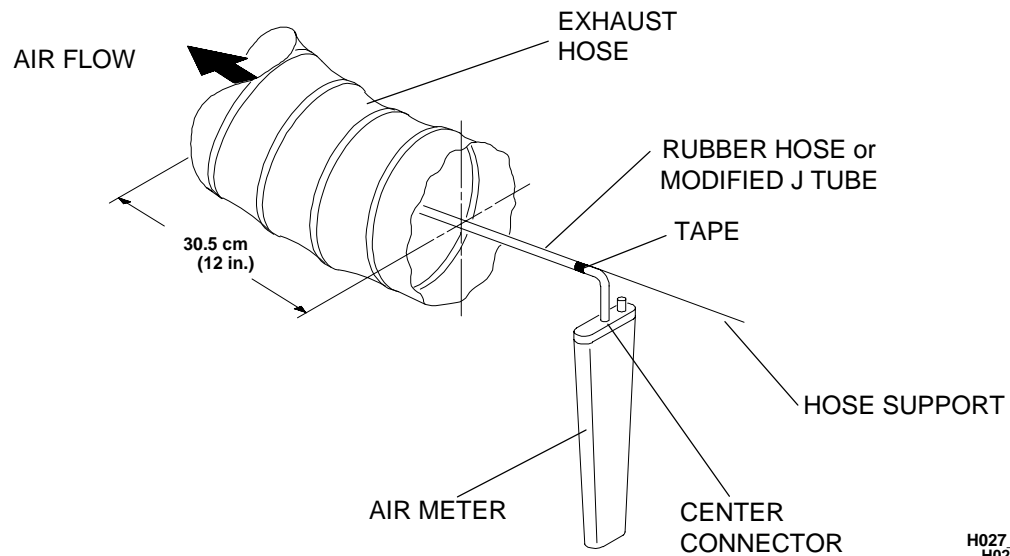
## Connecting the Exhaust

- [1] Connect 7.6 cm (3 in.) ELBOWS and rigid DUCT or flexible EXHAUST HOSE between the EXHAUST PORT on the PROCESSOR and the BUILDING EXHAUST DUCT.

### NOTE

Do not make a solid connection at the BUILDING END. Do not connect the EXHAUST DUCT to the PROCESSOR at this time.

- [2] Measure the static pressure in the DUCT using a modified J TUBE (CHECK TUBE 592380) and AIR METER TL-2431. Make the measurement with the end of the CHECK TUBE 30.5 cm (12 in.) from the end of the DUCT to be connected to the PROCESSOR.



H027\_0100BCA  
H027\_0100BA

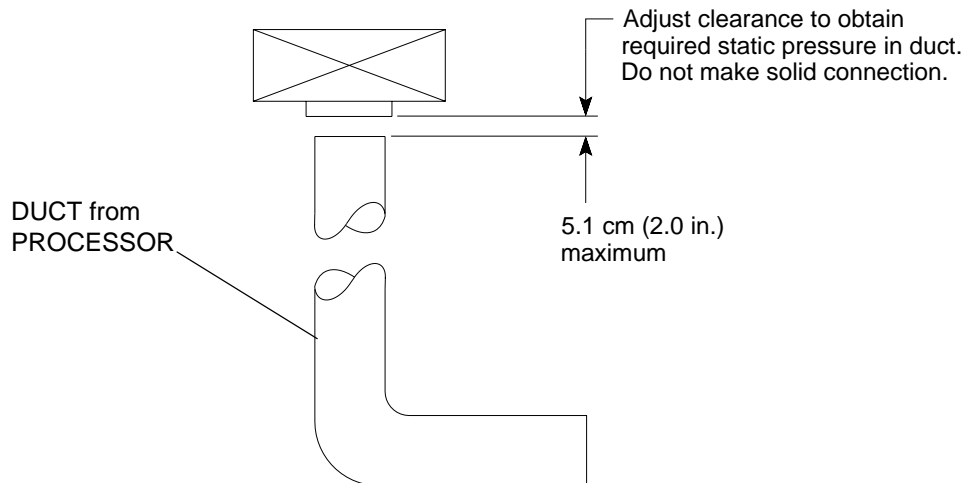
**Figure 40 Measuring the Static Pressure**

- [3] To obtain the correct static pressure, as shown in Table 1, adjust the clearance at the BUILDING END of the DUCT. See Figure ??.

**Table 1 Static Pressures**

Duct Diameter	Negative Static Pressure, (Water Head)	
	MIN	MAX
7.6 cm (3 in.)	0.76 mm (0.03 in.)	1.02 mm (0.04 in.)
10.2 cm (4 in.)	0.25 mm (0.01 in.)	0.51 mm (0.02 in.)

- [4] Connect the DUCT to the PROCESSOR.



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H108\_0008BA

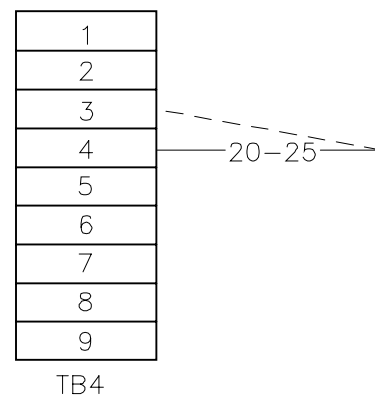
**Figure 41 Connecting the Processor Exhaust to the Building Exhaust**

### Connecting the Exhaust Fan for Continuous Operation

#### NOTE

The PROCESSOR is shipped with the exhaust fan wired for intermittent operation while the PROCESSOR is energized. Intermittent has proven to be the more economical mode of operation and causes the least amount of wear on the PROCESSOR. For the exhaust fan to operate continuously, do the following:

- [1] Move the wall power switch to the "OFF" position.
- [2] Move CB1 to the "O" position.
- [3] Remove the DRYER PANEL and RECEIVING END ACCESS PANEL.
- [4] Open the ELECTRICAL BOX COVER.
- [5] Disconnect wire 20-25 from TB4-4 and connect it to TB4-3.
- [6] Close the ELECTRICAL BOX COVER.
- [7] Install the DRYER PANEL and RECEIVING END ACCESS PANEL.
- [8] Move the wall power switch to the "ON" position.
- [9] Move CB1 to the "I" position.



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**Figure 42 Wiring for Continuous Operation of the Exhaust Fan**

## Installing the Grommets and Replenishment Tubes

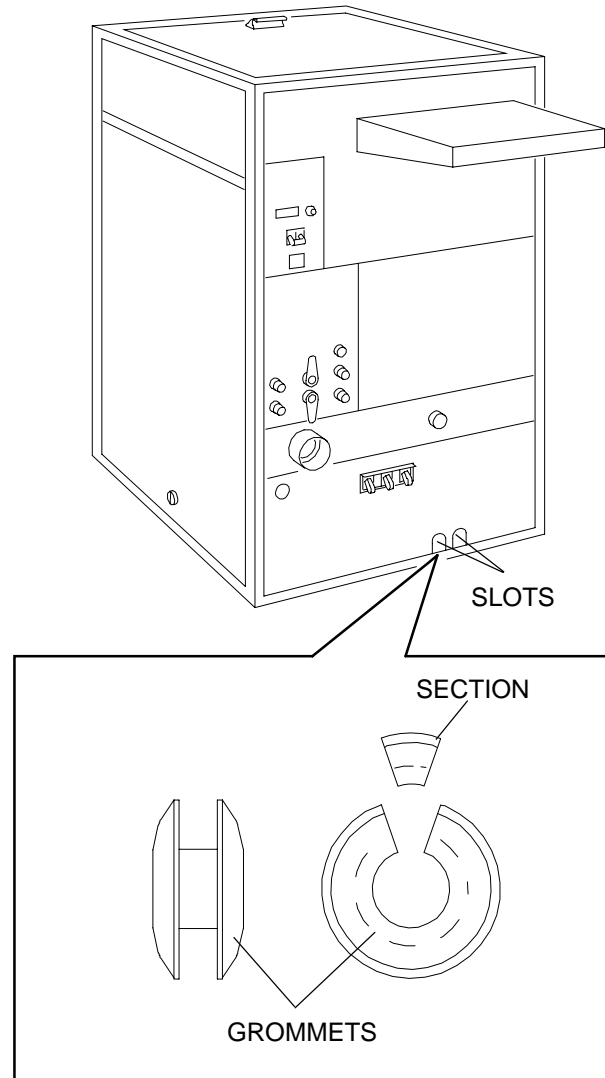
### CAUTION

Prevent contaminating the processing solutions. Do the following procedure to connect the DEVELOPER REPLENISHMENT TUBE to the DEVELOPER REPLENISHMENT TANK, **then**, do the same procedure to connect the FIXER REPLENISHMENT TUBE.

- [1] Insert the REPLENISHMENT TUBE through one of the SLOTS in the feed end of the PROCESSOR. See Figure ??. (The tubing is not supplied.)

### NOTE

- Only thick-walled TUBING will withstand the high suction of the REPLENISHMENT PUMPS.
  - REPLENISHMENT TUBES may instead be inserted into the holes in the bottom of the PROCESSOR. For additional information, see the procedure on page ??.
- [2] Install a GROMMET onto the REPLENISHMENT TUBE. If necessary, remove a section of the GROMMET.
  - [3] Compress the GROMMET and insert it into the SLOT.



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H108\_0016CA

Figure 43 Installing the Grommets Into the Slots

## Installing the Replenishment Tubes Through Alternate Inlets

### CAUTION

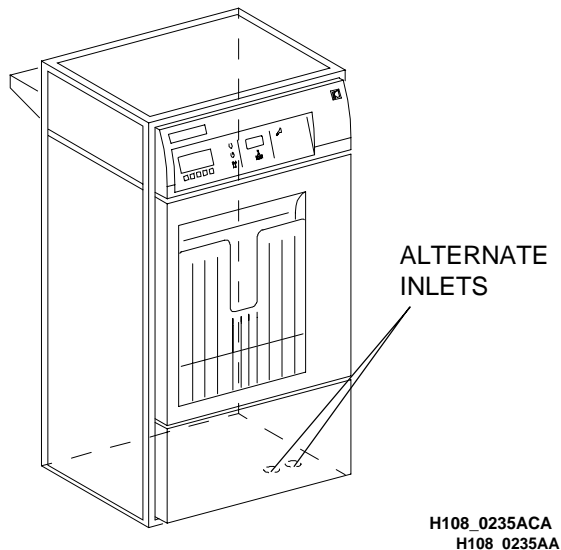
Prevent contaminating the processing solutions. Do the following procedure to connect the DEVELOPER REPLENISHMENT TUBE to the DEVELOPER REPLENISHMENT TANK, **then**, do the same procedure to connect the FIXER REPLENISHMENT TUBE.

- [1] Insert the REPLENISHMENT TUBE through one of the holes in the bottom of the PROCESSOR. The tubing is not supplied.

### NOTE

Only thick-walled TUBING will withstand the high suction of the REPLENISHMENT PUMPS.

- [2] Install a GROMMET onto the REPLENISHMENT TUBE. If necessary, remove a section of the GROMMET.
- [3] Compress the GROMMET and insert it into the hole in the bottom of the PROCESSOR.



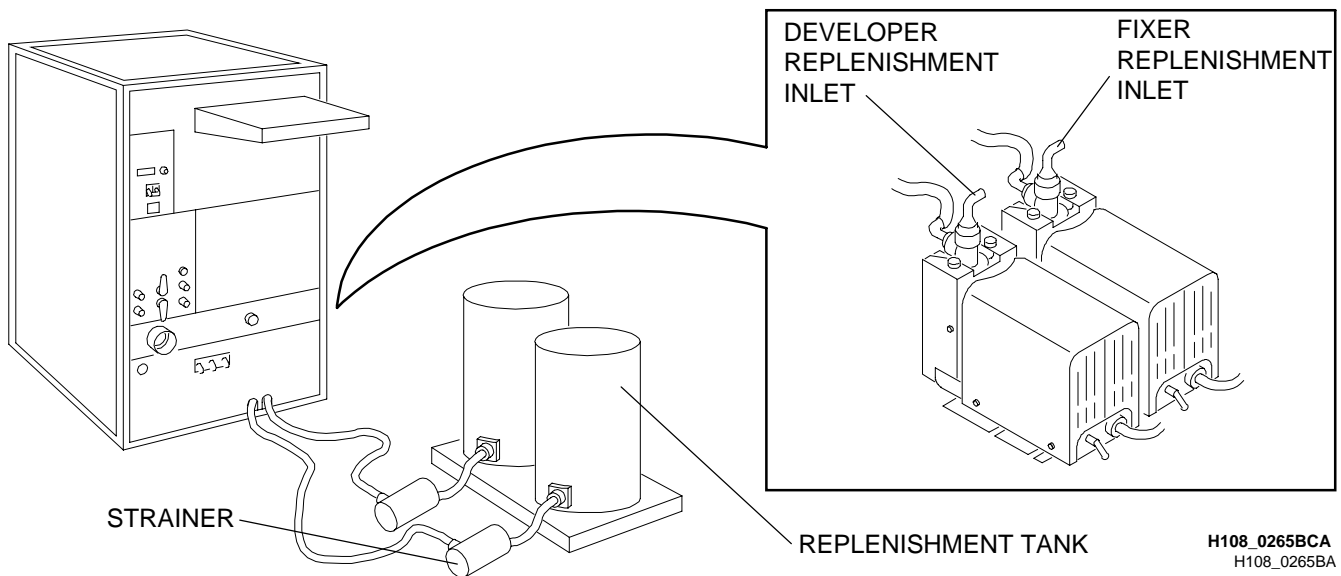
**Figure 44 Using the Alternate Inlets for the Replenishment Tubes**

## Connecting the Replenishment Tanks

### IMPORTANT

- Because this PROCESSOR has very high pumping rates, check that the tubing is straight and no obstructions exist.
- Connect the DEVELOPER REPLENISHMENT TUBE first, **then**, connect the FIXER REPLENISHMENT TUBE.

- [1] Install one end of the STRAINER into the TUBING leading from the REPLENISHMENT TANK.
- [2] Install the other end of the STRAINER into the TUBING leading into the PROCESSOR.
- [3] Connect the TUBING from the REPLENISHMENT INLET on the REPLENISHMENT PUMP to the REPLENISHMENT TANK.
- [4] After following the above procedures for the installation of the DEVELOPER REPLENISHMENT TUBE, repeat the above procedures for the installation of the FIXER REPLENISHMENT TUBE.



**Figure 45 Installing the Replenishment Tubing**

## Final Check-Out

### Setting Up Initial Operating Parameters

Below are a few questions regarding your custom needs of the *Kodak X-Omat* Processor. These questions are designed to help you determine your initial setup operating parameters. Over a period of time, you may wish to revise these operating conditions; the PROCESSOR has extensive built-in capabilities that allow easy adaptations to your changing needs. For now however, record your current operating needs to determine the best initial setup of parameters to meet your daily operating requirements.

- [1] Approximately how many sheets of film will the PROCESSOR be processing daily?

This data helps determine either an Automatic or Flooded Replenishment Mode initial setting. Contact your Kodak representative for assistance in selecting the Replenishment Mode.

- [2] Will the PROCESSOR be operating at the K/RA cycle?

If the PROCESSOR will be operating at the K/RA cycle, RA chemicals are required for the set up of the replenishment tanks.

- [3] Will the PROCESSOR be connected to another piece of equipment for either input or output, or will it be a stand-alone unit?

This factor determines whether the Safelight Receptacle Mode is set for Safelight or Accessory.

- [4] Which language do you prefer for the display messages?

Available languages include: Danish, Dutch, English, Finnish, French, German, Italian, Japanese, Norwegian, Portuguese, Spanish, and Swedish. Japanese is available by downloading software. See the User Manual for Software Diagnostics, Publication No. 636719.

- [5] Do you prefer the temperature and transport speed display units to be metric (Centigrade and cm/min) or English (Fahrenheit and in./min)?

- [6] During Standby, do you prefer that the transport rollers run continually or at intervals?

The Continuous Mode drives the transport system at a low speed (34 in./min.). This continuous movement prevents the rollers from drying out and helps eliminate film artifacts. The Interval Mode drives the rollers only periodically.

- [7] Will the PROCESSOR be operating with accessory equipment such as a film feeder or a multi-loader?

When using accessory equipment the Temperature Lockout must be "OFF", allowing the PROCESSOR to accept film even when the developer temperature deviates from the specified temperature range.

Setting the Temperature Lockout to "ON" automatically disables the transport system when the developer temperature deviates from the specified temperature range. The transport system remains disabled until the temperature of the developer is back within range.

- [8] Will the PROCESSOR be processing roll film?

Roll film is normally processed in the STD cycle with RP chemicals, using a leader. The *Kodak X-Omat* 480 RA Processor Roll Film Kit, CAT No. 160 6318, should be installed for correct operation of the PROCESSOR.

When processing lengths of film from 4.55 to 152 m (15 to 500 ft), the *Kodak* Roll Film Take-Up, Model 11, CAT No. 118 6899, should be installed. When processing film that is shorter than 4.55 m (15 ft), manual tension is required as the film is feeding into or exiting from the PROCESSOR to eliminate wandering and looping of the film through the film transport.

For further guidance in the selection of PROCESSOR options, refer to the Operator Manual.

Now, continue with the System Check-out procedure that follows.

## System Check-Out

### Blower Motor Check

#### IMPORTANT

- The following procedure must be completed by a qualified service person after the installation of the PROCESSOR is complete.
- For this procedure all ACCESS PANELS including the TOP COVER must be removed from the PROCESSOR. See Figures ?? through ?? on page ?? for ACCESS PANEL locations.

- [1] Remove the BLOWER MOTOR COVER. Check that the BLOWER MOTOR and BELT are in the correct position for 50 Hz or 60 Hz operation.

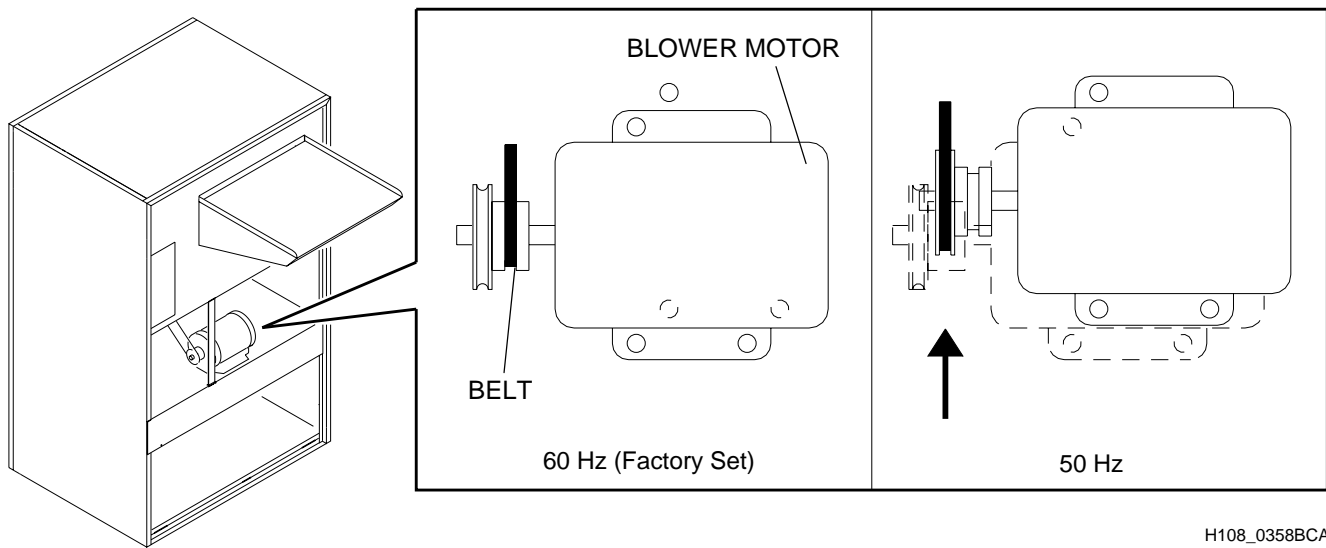
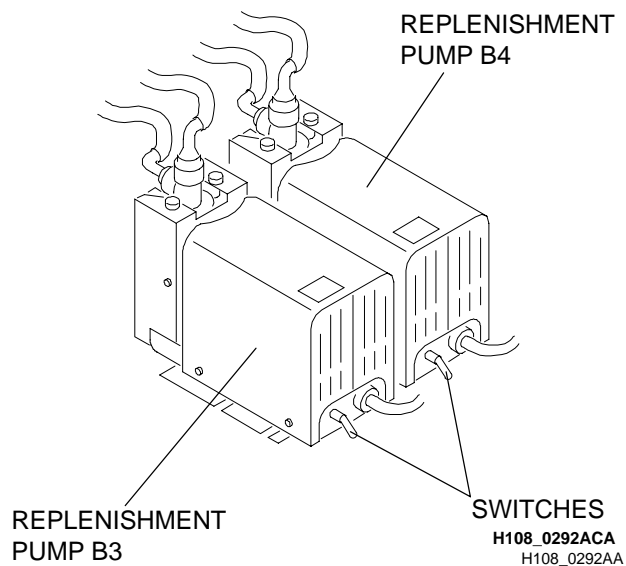
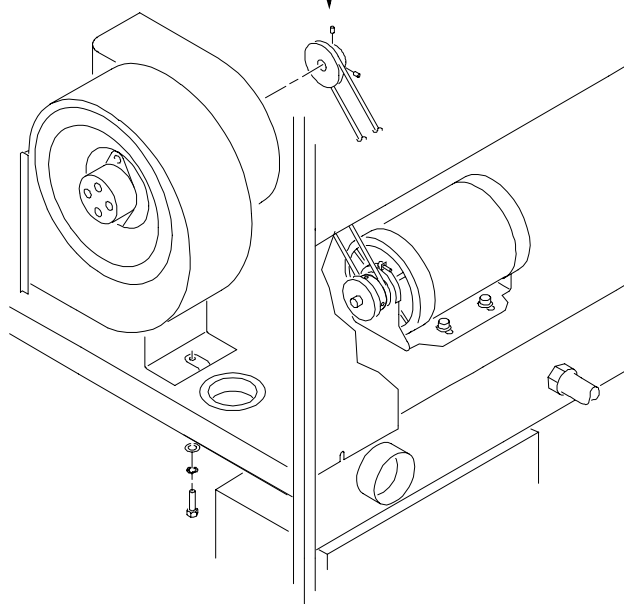
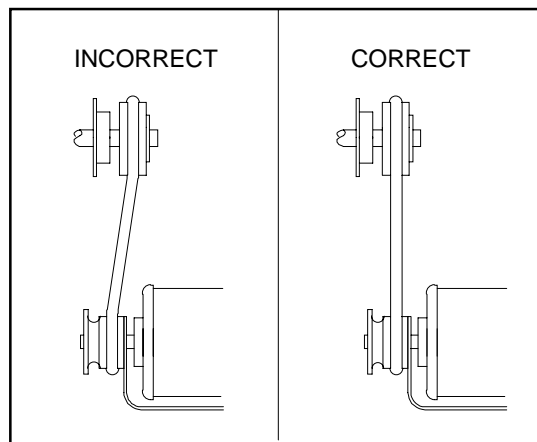


Figure 46 50 and 60 Hz Blower Motor Operation

- [2] Check that the BELT is straight.
- [3] Install the BLOWER MOTOR COVER.
- [4] Check that the SWITCHES on REPLENISHMENT PUMPS B3 and B4 are at the correct setting for either 50 Hz or 60 Hz operation.



**Figure 47 Setting 50 or 60 Hz Operation**



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**Figure 48 Aligning the Blower Motor Pulley**

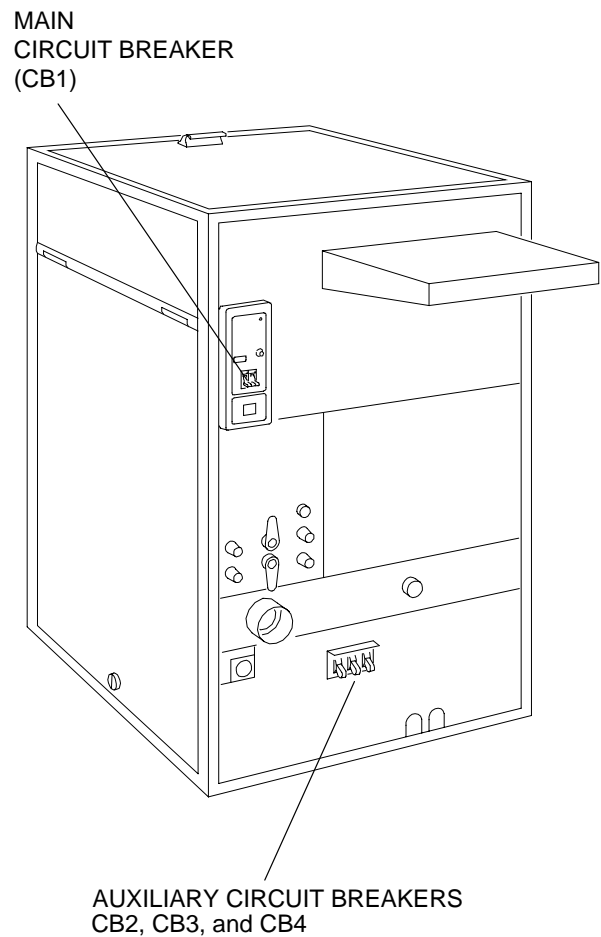
## Leakage Check

- [1] Fill the DEVELOPER, FIXER, and WASH TANKS to the overflow level with water.

### CAUTION

To allow correct operation of the LEVEL SENSING PROBES, check that the level of the solutions is equal at both the drive and non-drive sides of the DEVELOPER and FIXER TANKS. The solution must cover the LEVEL SENSING PROBES, located on the non-drive side, at the top edge of the TANK ASSEMBLY. When the LEVEL SENSING PROBES are not covered with solution, error codes E032 and E033 can occur and replenishment solution is wasted.

- [2] To provide for conduction of the SOLUTION LEVEL SENSORS—
  - (a) Add 3 ounces of developer to the DEVELOPER TANK.
  - (b) Add 3 ounces of fixer to the FIXER TANK.
- [3] Move AUXILIARY CIRCUIT BREAKERS CB2, CB3, and CB4 to the "I" position.
- [4] Move the MAIN CIRCUIT BREAKER CB1 to the "I" position.



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H108\_0320CA

**Figure 49 Location of Circuit Breakers**

- [5] Install the TOP COVER of the PROCESSOR.
- [6] Check the PROCESSOR for leakage in the following areas:
  - (a) RECIRCULATION PUMP FITTINGS
  - (b) REPLENISHMENT PUMP CHECK VALVES
  - (c) TANK FITTINGS
  - (d) THERMOWELL ASSEMBLIES
  - (e) PLUMBING FIXTURES
  - (f) DRAIN VALVES
- [7] Check that the OVERFLOW HOSES are draining water from the TANKS.
- [8] Check that the DEVELOPER REPLENISHMENT HOSE and the FIXER REPLENISHMENT HOSE are connected to the correct plumbing fittings.
- [9] Check that the correct REPLENISHMENT PUMP is operating.

#### **Miscellaneous Components Check**

- [1] Check that the following components operate:
  - (a) DRYER BLOWER MOTOR
  - (b) WATER SOLENOID - Listen for the sound of water entering the PROCESSOR.
  - (c) EXHAUST FAN.

#### **Display Panel Check**

- [1] Check that the green "Ready" light on the DISPLAY PANEL illuminates after the PROCESSOR has been allowed to warm-up for approximately 15 minutes at 26°C (72°F) ambient conditions and 26°C (72°F) water temperature.
- [2] Check that the DEVELOPER temperature illuminated on the DISPLAY PANEL is in the operating range between 35° and 38.3°C (95° and 101°F).

#### **Transport Check**

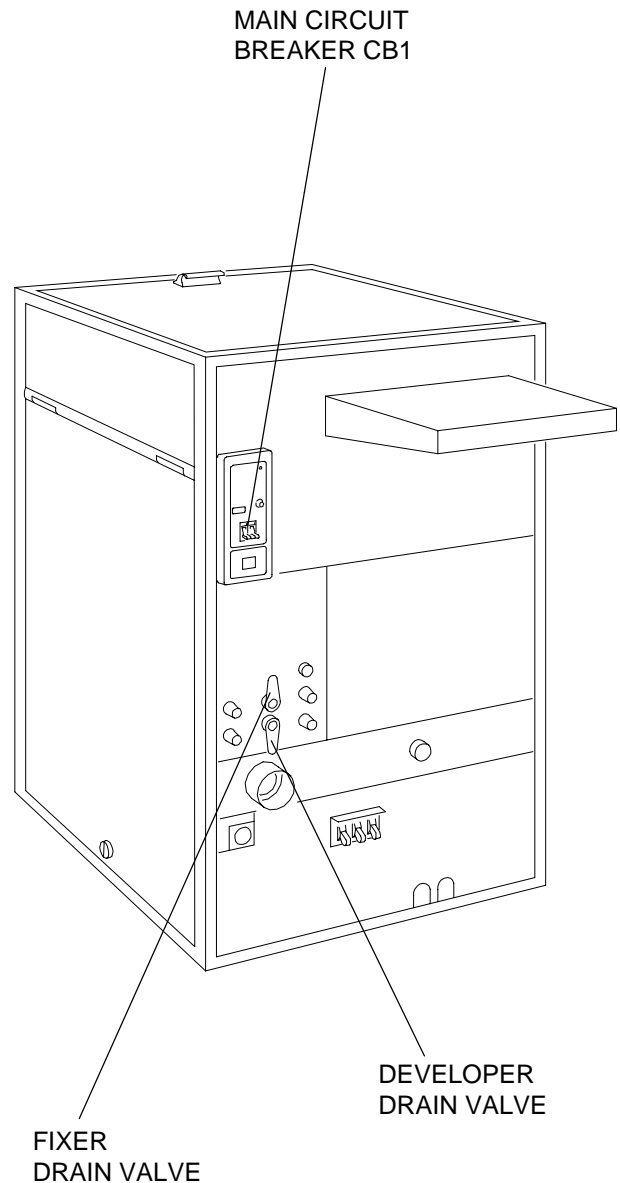
Feed one sheet of **processed** 35 x 43 cm (14 x 17 in.) film into the PROCESSOR to check that the transport system and the REPLENISHMENT PUMPS operate correctly.

## Final Steps

- [1] Deenergize the PROCESSOR by moving the MAIN CIRCUIT BREAKER CB1 to the “O” position.
- [2] Drain the TANKS of water by opening the FIXER and DEVELOPER DRAIN VALVES.
- [3] Close the FIXER and DEVELOPER DRAIN VALVES.
- [4] Install the 6 ACCESS PANELS.
- [5] Do the setup procedures. See the “Setting up the Processor” section of the Operator Manual.

### IMPORTANT

After the PROCESSOR has been in regular use for 1 or 2 days, again check all fittings for leakage. If necessary, tighten any loose connections.



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**Figure 50 Feed-End View of Processor**

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