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P/N 011200
INSTRUCTIONS

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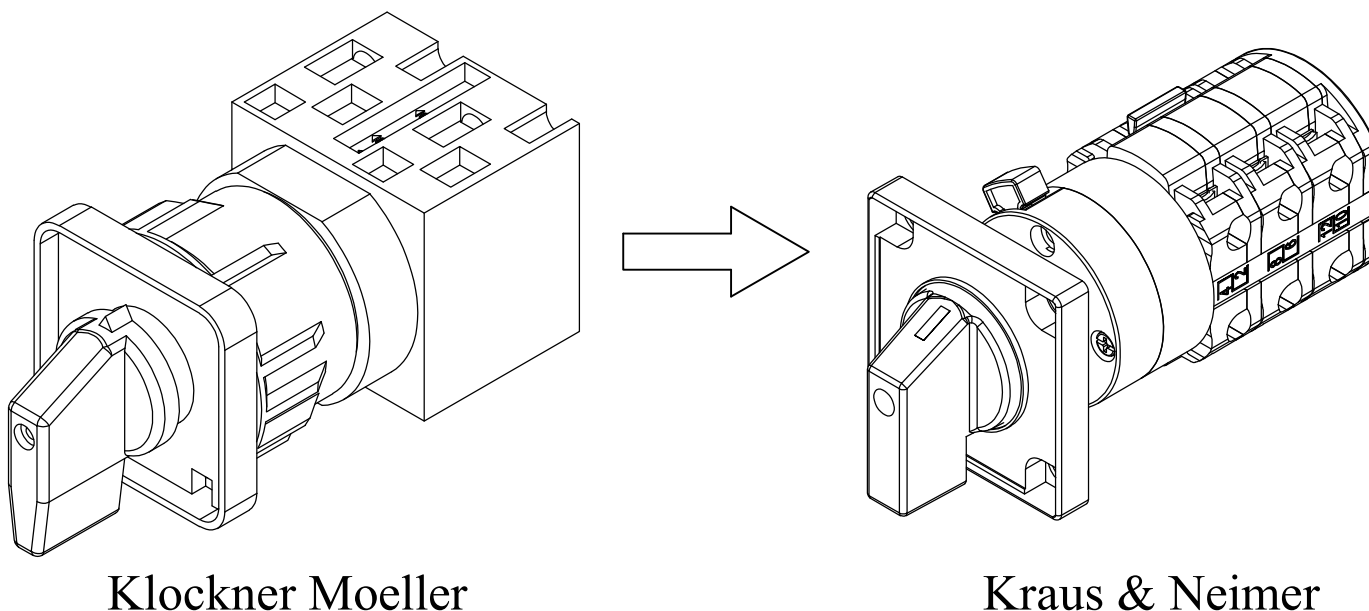
DO70 & DO120
PRIOR TO 8/2003

FEBRUARY 2022

011200 Retrofit Instructions

The following instructions describe how to replace a Klockner Moeller cam switch (left) with a Kraus & Neimer cam switch (right) on the machine(s) listed below.

DISCONNECT POWER TO THE MACHINE BEFORE MODIFICATION.



Klockner Moeller

Kraus & Neimer

Applies to Serial Numbers:
DO70: 1183M0703 & Prior
DO120: 1070M0803 & Prior

Switch Differences

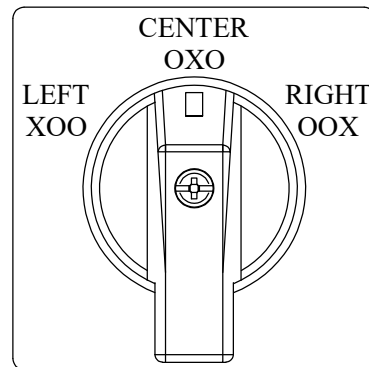
The key difference between the Klockner Moeller switches (013580/013585) and the Kraus & Neimer switches (011200) are the contact numbers and internal jumpers.

The charts below show the difference in contact closures and jumpers.

KLOCKNER MOELLER

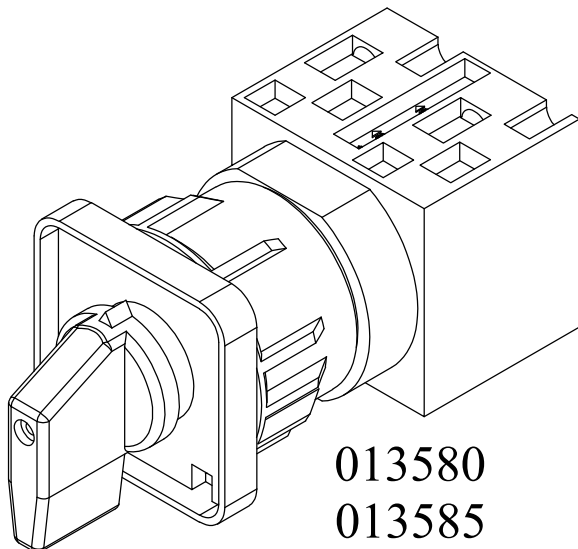
CONTACT	CLOSURE
1 - 2	XOO
3 - 4	XOO
5 - 6	OXO
7 - 8	OOX
9 - 10	OOX
11 - 12	N/A
REMOVABLE JUMPERS	1 - 7
	2 - 10
	3 - 9
	4 - 8

CLOSURES

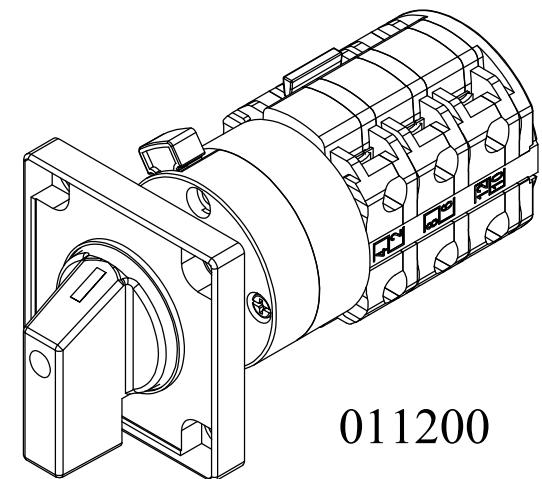


KRAUS & NEIMER

CONTACT	CLOSURE
1 - 2	XOO
3 - 4	OOX
5 - 6	OOX
7 - 8	XOO
9 - 10	OXO
11 - 12	XOO
PERMANENT JUMPERS	2 - 4
	6 - 8
REMOVABLE JUMPERS	1 - 5
	3 - 7



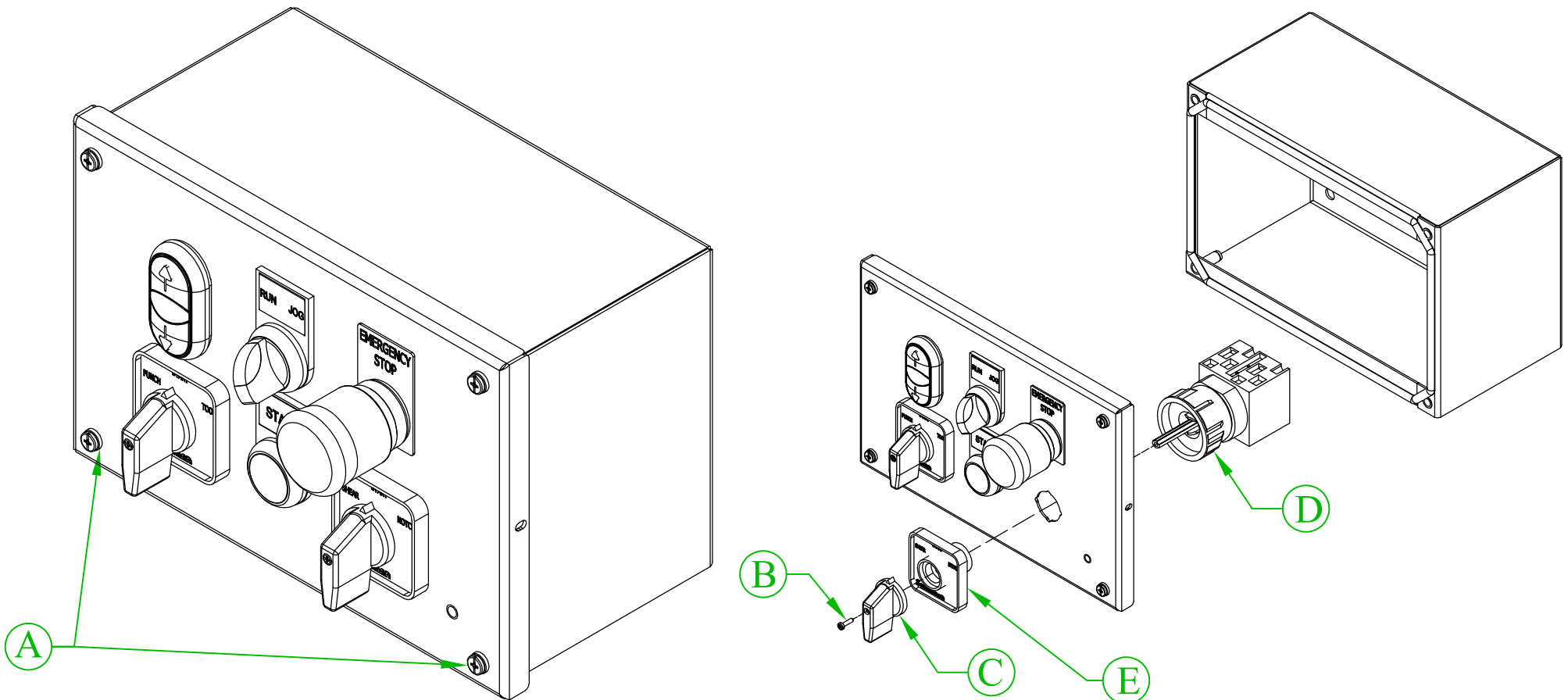
013580
013585



011200

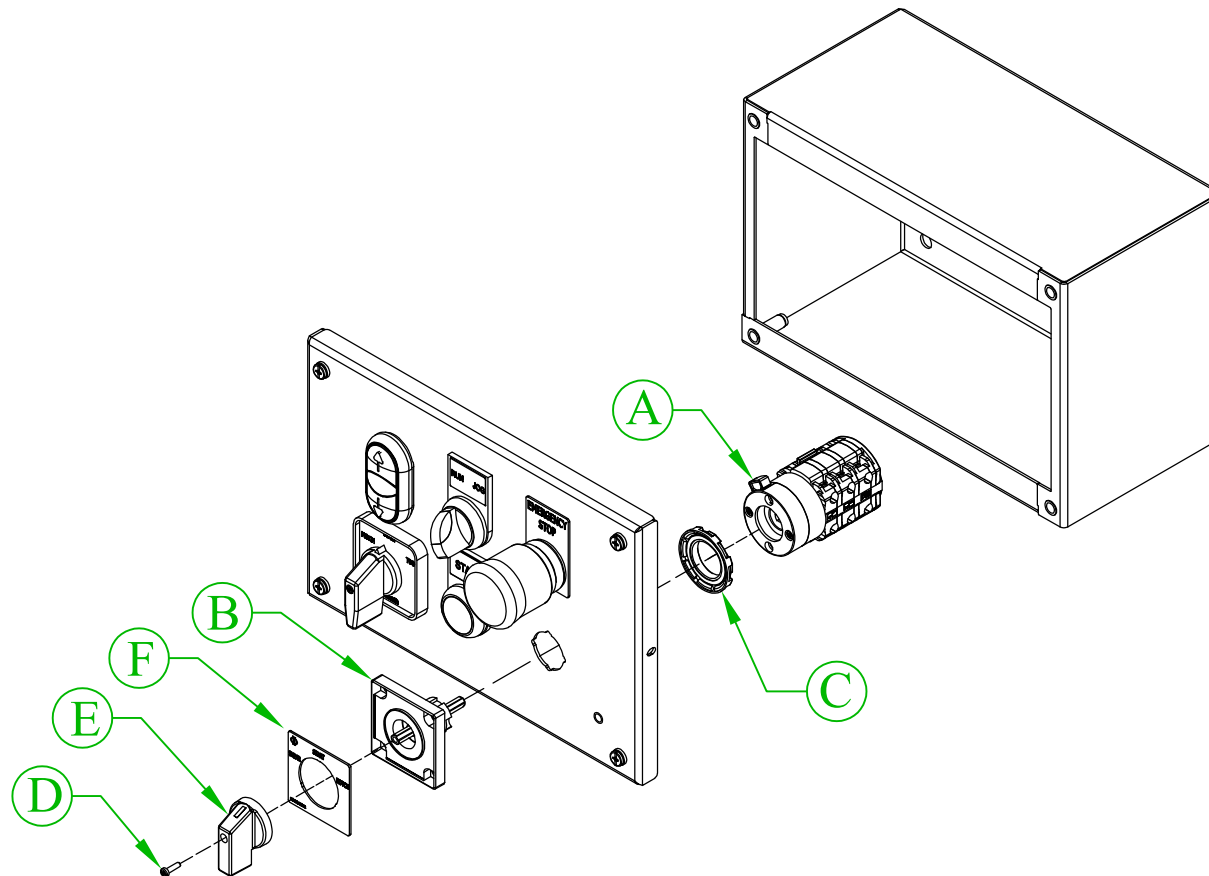
Switch Removal

1. Remove power from the machine. Turn the main power disconnect in the lower panel to the OFF position.
2. Open the remote control panel lid by loosening the (4) retaining screws (A).
3. Carefully pull out on the panel lid to gain access to the internal controls
4. Loosen the screw (B) retaining the knob of the cam switch to be replaced. Remove knob (C).
5. Unscrew the large nut (D) of the cam switch from the back side of the panel.
6. Remove the legend plate holder (E) from the panel. The switch will now be free to remove from the lid.
7. The switch will contain a variety of wires that have printed number labels, and some that may not. The schematic on the following page represents a standard machine and the locations of wires for each switch (1SS and 2SS).
8. Note the location of each wire, adding labels if necessary, and remove all wires from the switch.



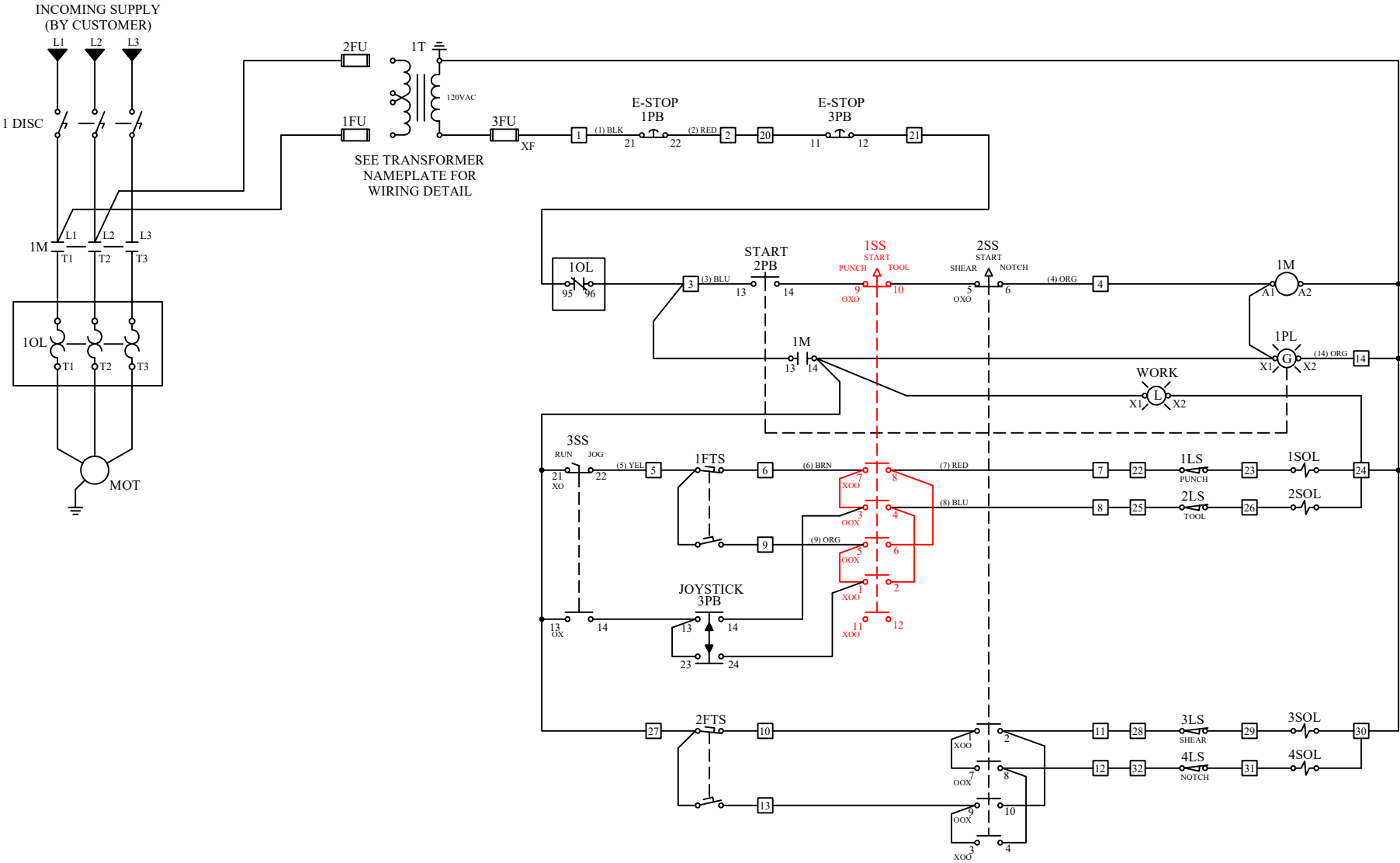
Switch Replacement

1. Press the red release handle (A) on the new switch to separate the knob/legend holder from the switch.
2. Install the legend holder (B) into the panel and fasten with nut (C) from backside.
3. Remove the screw (D) retaining the knob. Remove knob (E).
4. Install the legend plate(s) (F) sold separately (P/N 011212 & 011213). Re-install knob.
5. Wire the new switch(s) according to the schematics on the following pages specific to the switch being replaced. NOTE THE NUMBERS ON THE NEW SWITCH DO NOT CORRESPOND WITH THE OLD SWITCH. Leave all jumpers in place.
6. Align the switch with the stem of the knob, and press the switch onto the knob assembly. The arrow on the back of the switch will be pointing upwards. When aligned, the switch will snap into place.



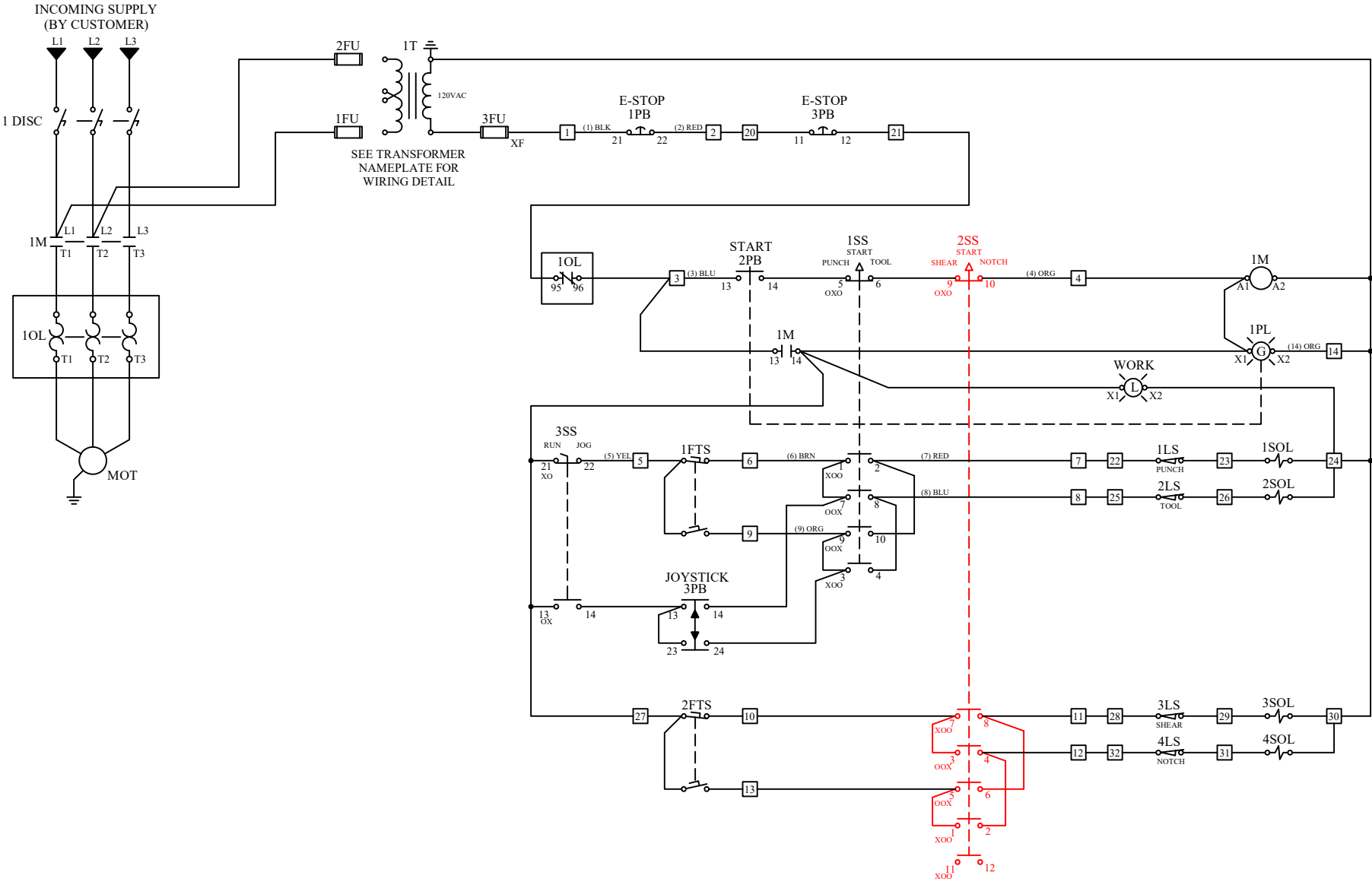
Punch/Start/Tool Retrofit Diagram

PROVIDE MAXIMUM UPSTREAM PROTECTION PER NEC CODE 430-52 AND TABLE 430-152



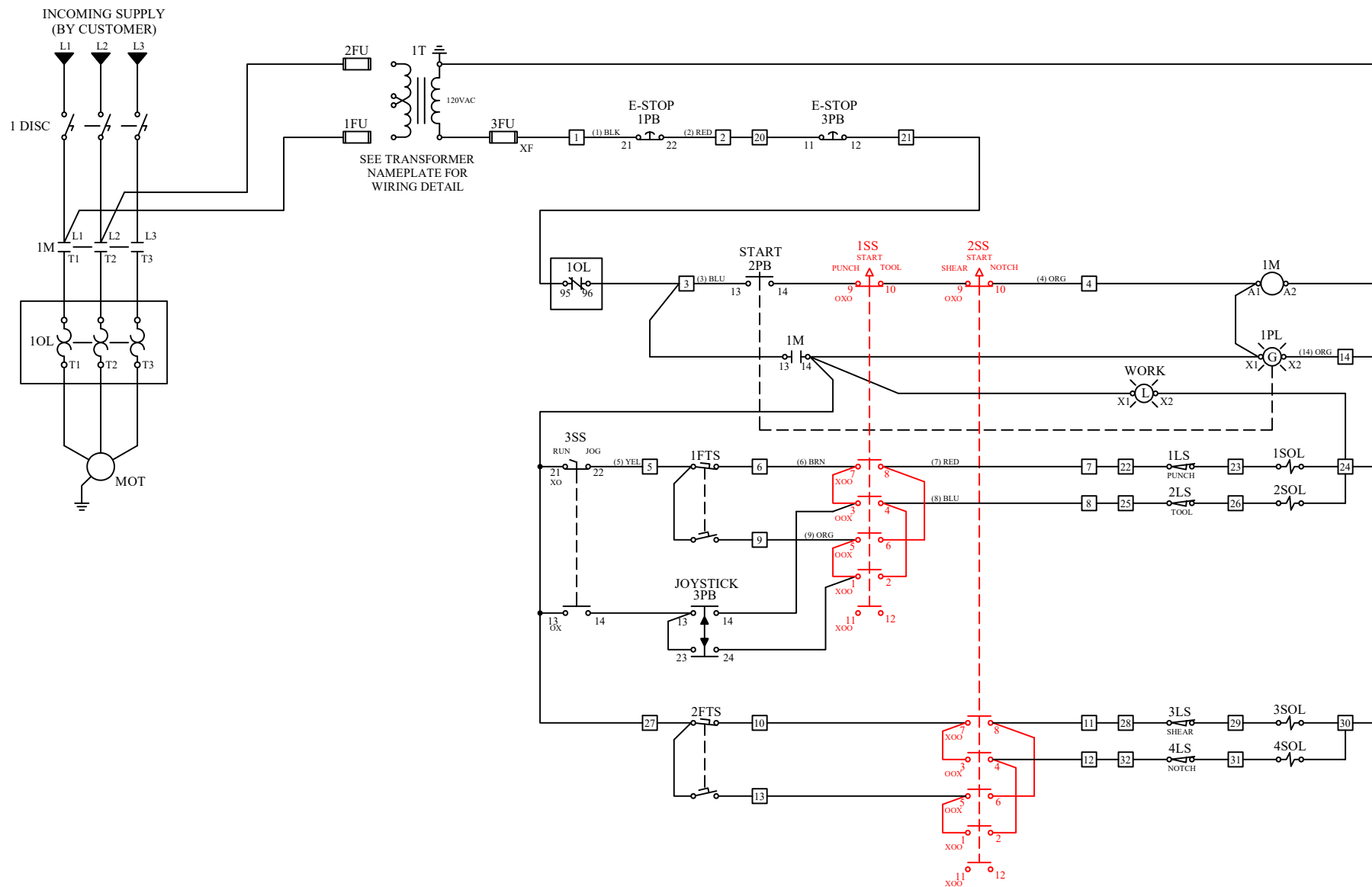
Shear/Start/Notch Retrofit Diagram

PROVIDE MAXIMUM UPSTREAM PROTECTION PER NEC CODE 430-52 AND TABLE 430-152



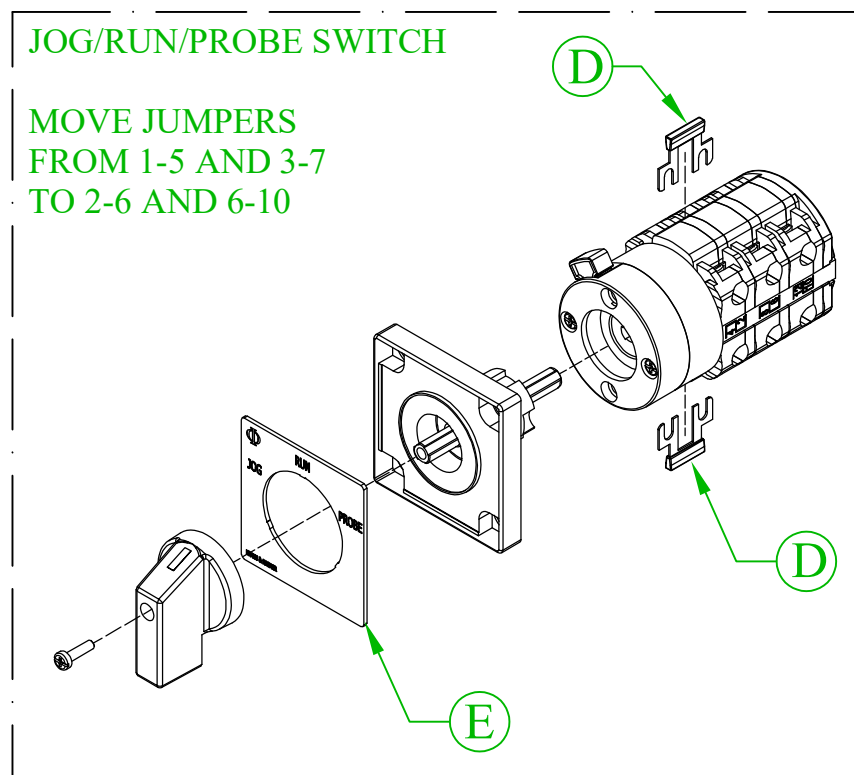
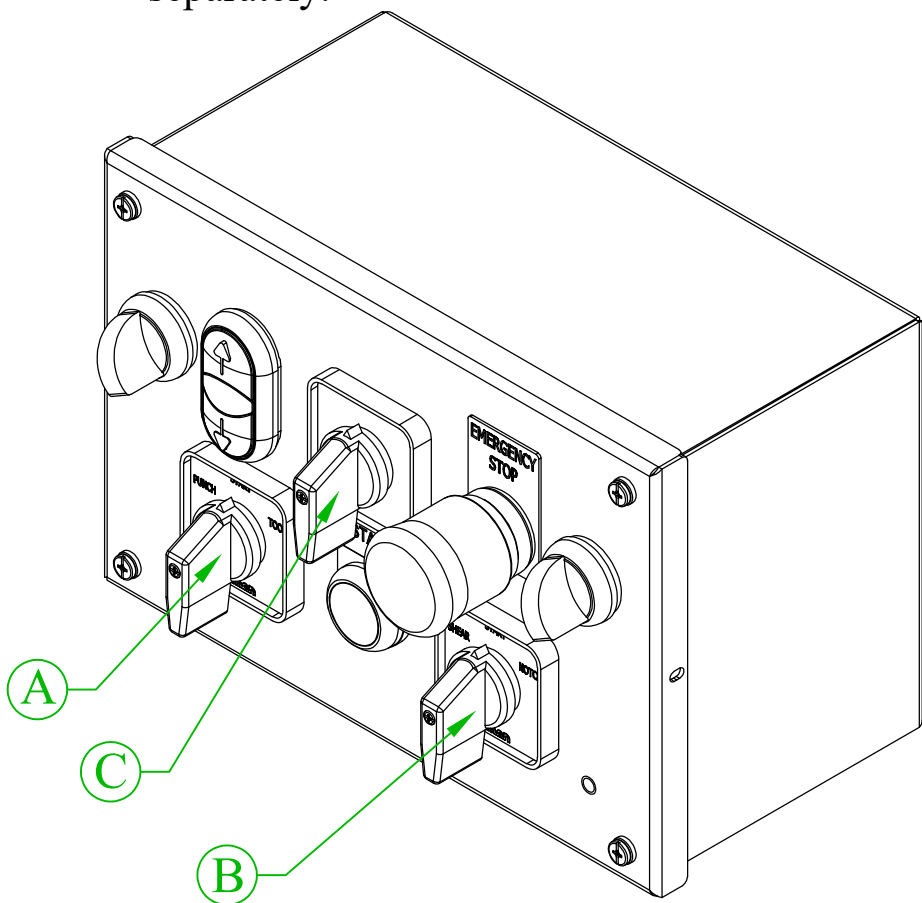
Both Switch Retrofit

PROVIDE MAXIMUM UPSTREAM
PROTECTION PER NEC CODE 430-52
AND TABLE 430-152



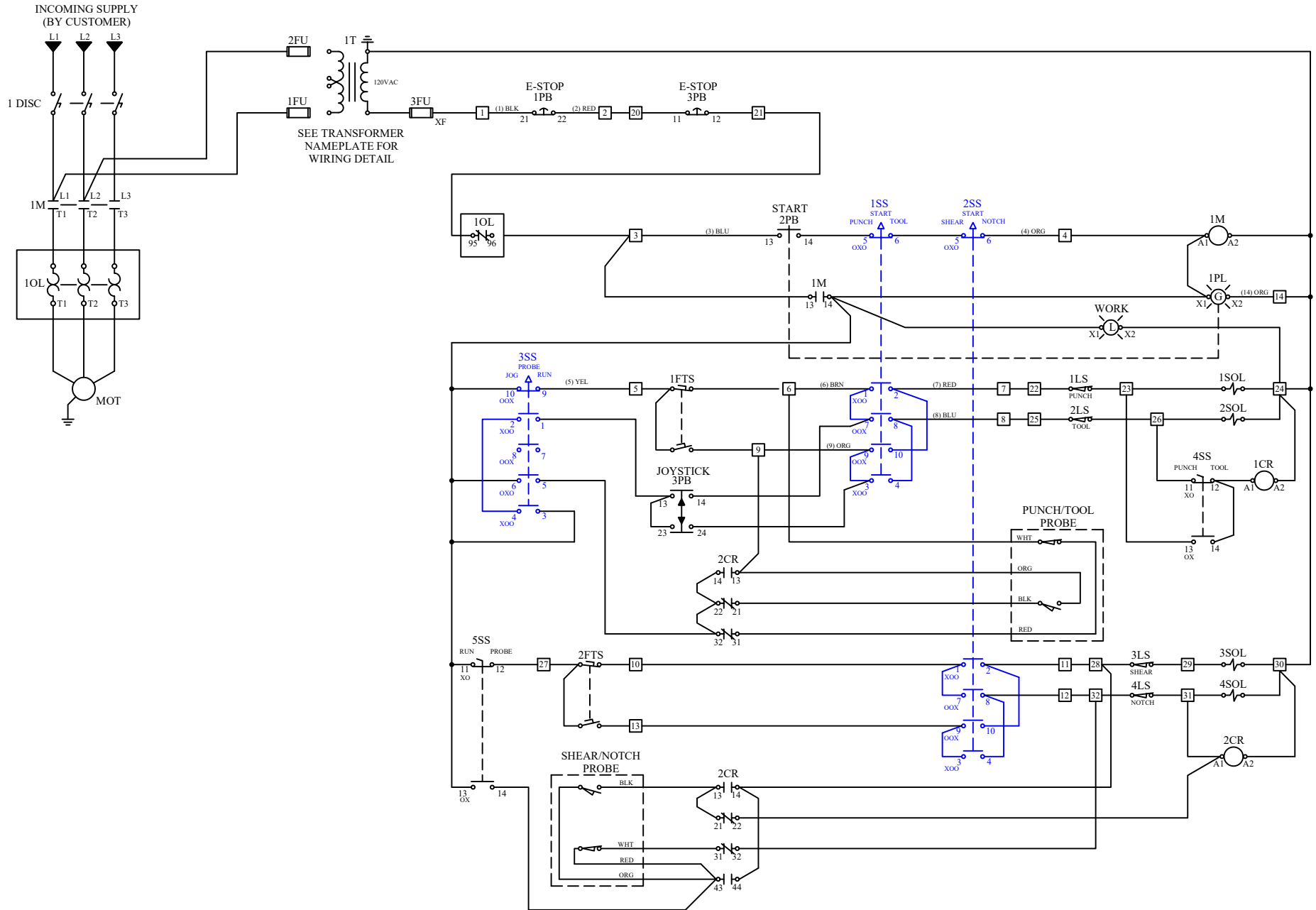
Backgauge (Probe) Retrofit Instructions

1. If the machine features an electric backgauge (probe), the remote control panel will contain multiple other selector switches as shown below left. Follow the instructions on [Page 3](#) for removal of the old switch to be replaced. See the schematic on the following page for original wire locations.
2. If replacing the PUNCH/START/TOOL switch (A) or the SHEAR/START/NOTCH switch (B), follow the instructions on [Page 5](#) for replacement and follow the schematic on [Pages 11-12](#) specific to the switch being replaced for wiring locations.
3. If replacing the **JOG/PROBE/RUN** switch (C), it will be necessary to **move the jumpers (D) from 1-5 and 3-7 to 2-6 and 6-10**. Follow the schematic on [Page 13](#) for wiring placement. Note: the operation of the replacement switch will now be JOG/RUN/PROBE. The legend plate P/N 011211 (E) for this switch is sold separately.



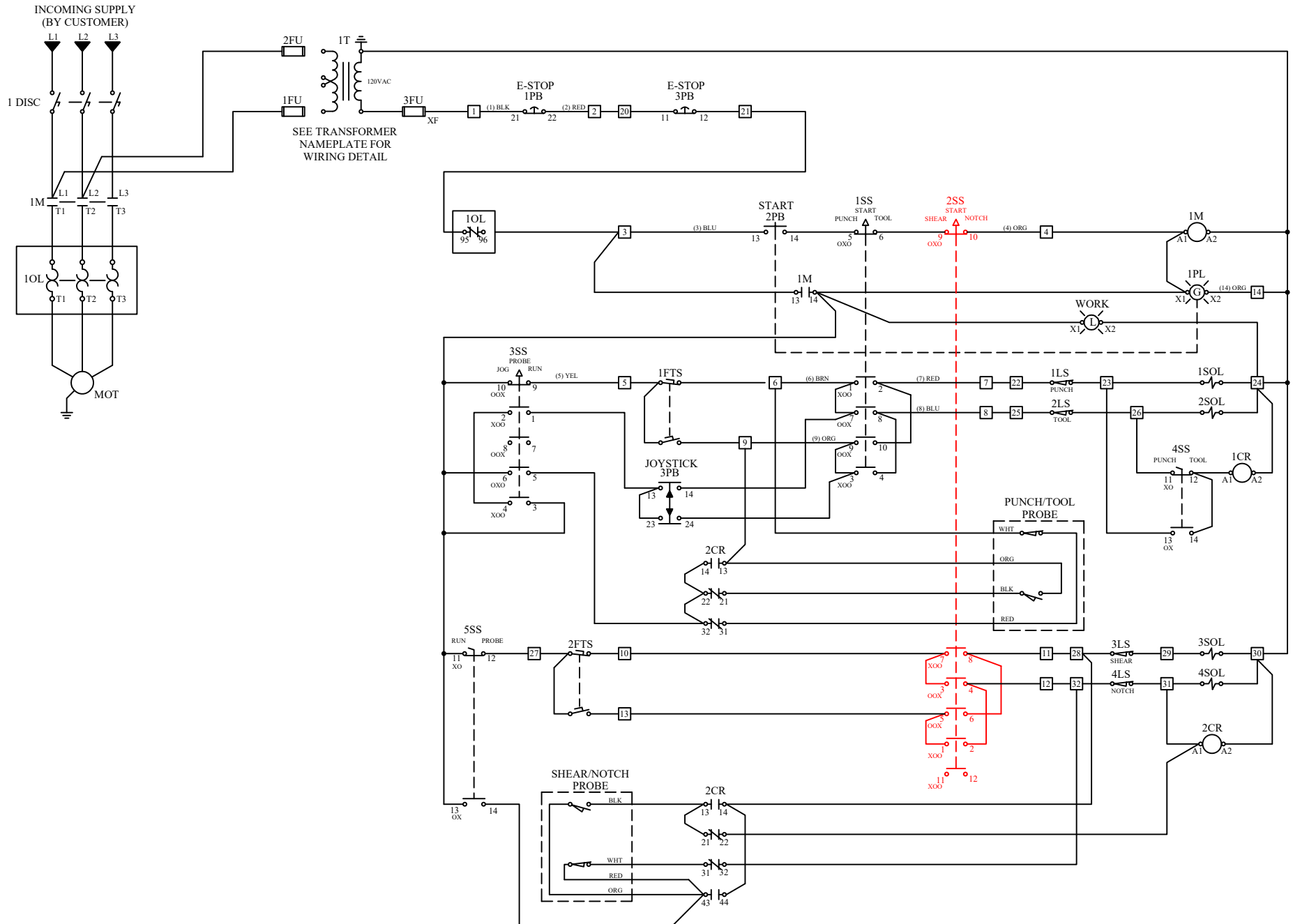
Original Diagram w/ Probe

PROVIDE MAXIMUM UPSTREAM
PROTECTION PER NEC CODE 430-52
AND TABLE 430-152



Shear/Start/Notch Retrofit Diagram w/ Probe

PROVIDE MAXIMUM UPSTREAM
PROTECTION PER NEC CODE 430-52
AND TABLE 430-152



Jog/Run/Probe Retrofit Diagram

PROVIDE MAXIMUM UPSTREAM
PROTECTION PER NEC CODE 430-52
AND TABLE 430-152

