



Vector Drive - Upgrade - Installation

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Four (4) Service kits have been created to cover Vector Drive upgrades for all Brushless Servo CNC variations. Select the appropriate kit by matching Machine model, SL/VF, as well as motor HP, 10/20. Note as listed in this document the 10HP Vector Drive is also known as the 20/15 while the 20HP Vector Drive is also known as the 40/30.

<u>HAAS P/N</u>	<u>DESCRIPTION</u>
93-0034	VF 10 HP SD-VD RETRO KIT BL
93-0035	SL 10 HP SD-VD RETRO KIT BL
93-0036A	SL 20 HP SD-VD RETRO KIT BL
93-0037	VF 20 HP SD-VD RETRO KIT BL

Minimum requirements:

- Brushless controls only.
- MOCON 'K' or later, with 10.03A firmware or later for mills or Lathes (Mocon Boot ROM).
- CNC software 9.29 or later for mills, 2.20 or later for Lathes.

Notes concerning backward compatibility.

- Vector Drive upgrade kits are only available for Brushless Servo Control machines.
- Replace Mocon CCA if required supply with 11.05 firmware and upgrade software as necessary.
- In order to update parameters, run the parameter checker on the old parameter list but select the Haas vector drive option. Change parameters as shown in the report generated by the checker.
- The Transformer-to-Vector Drive wire harness may have to be reworked to fit on the main transformer's terminal blocks. Cut off the ring (or spade) lugs on the transformer's side and strip the insulation 1/2".
- In order to fit the 20HP vector drive on the subplate, it is necessary to remove the wire channels located on the far right-hand side and below where the drive will be installed.
- The foot pattern of the Haas vector drive is different from the previous spindle drive. Drill and tap 4x1/4-20 holes to install the vector drive. The dimensions between holes are specified in Figure B. The 20HP and 10HP versions of the drives have different patterns. Use the correct pattern for the drive being installed.

Retrofit instructions

- Remove all the control and power cables connected to the spindle drive. This includes also the spindle load meter cable.
- Remove the spindle drive and the regen resistor assembly. When retrofitting a 20HP machine, remove the brake unit. Figure A shows a control cabinet before retrofit.
- Install the Haas vector drive, regen box, and all the cables specified in each BOM.
- Check and set the parameters.

- The incoming power should be given special considerations when upgrading the machine with the Haas vector drive. The table below shows the different wire sizes for their respective applications.

Application	Incoming Power
230V 10 HP	6 - 8 AWG 6 AWG preferred
480V 10 HP	10 - 12 AWG 10 AWG preferred
230V 20 HP	2 - 4 AWG 2 AWG preferred
480V 20 HP	6 - 8 AWG 6 AWG preferred

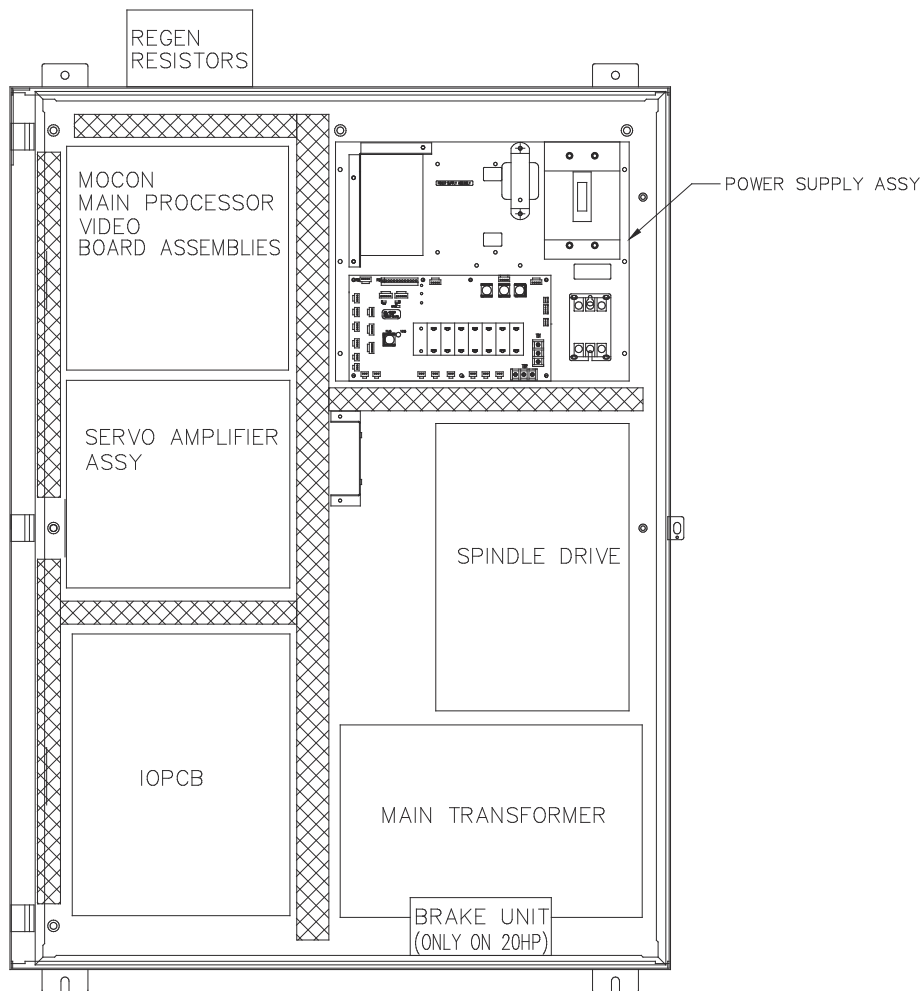


Figure A

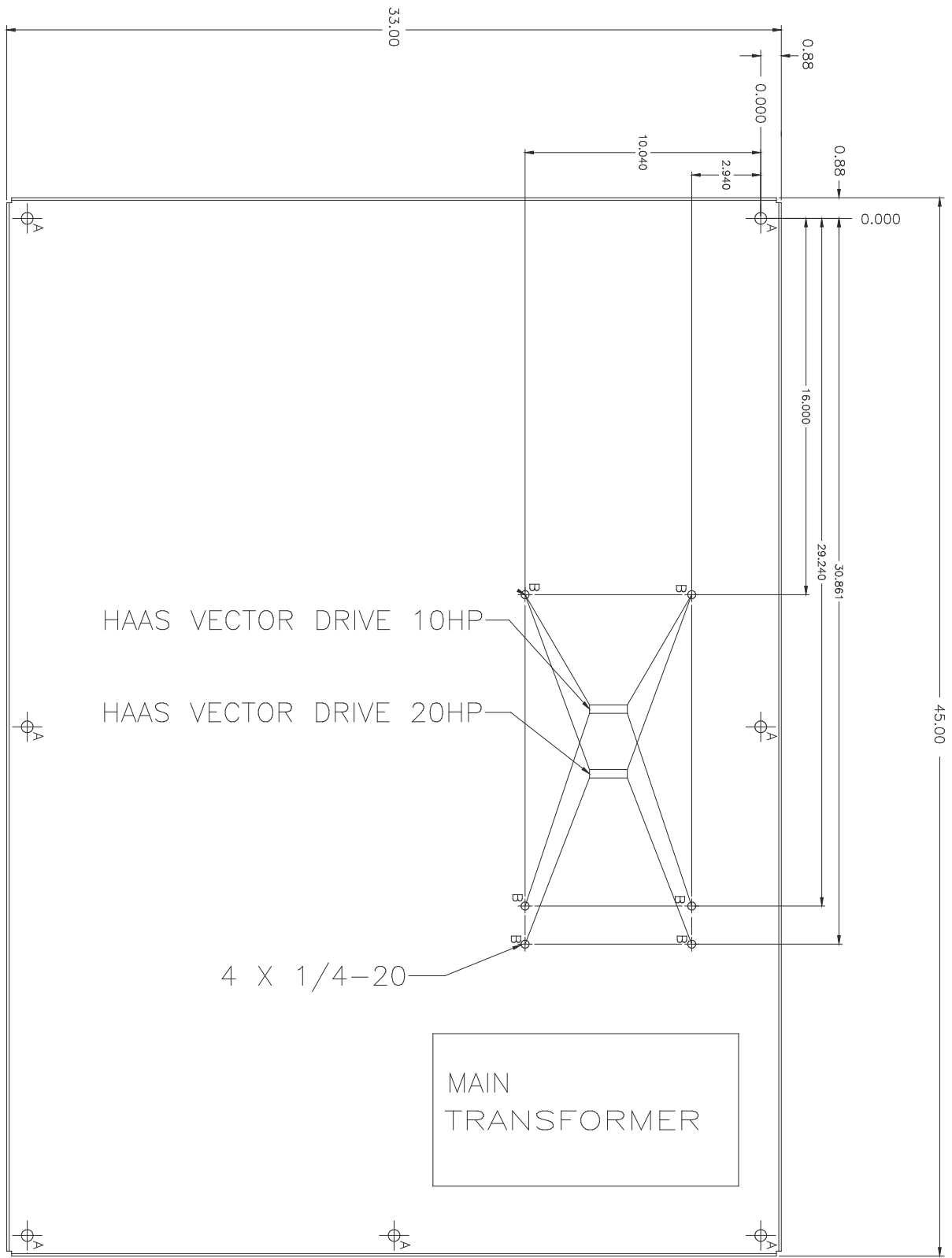


Figure B