Tech Notes for testing ACSxxx Drives

- Follow test procedure in associated testing manual. The I\O testing is outlined here for ease. Make certain to do all hi-pot and resistance checks prior to applying power.
- Make sure first thing to Backup the Customers drive if possible. Save in the ABB drives backup folder on the desktop of the test PC. Use the drive serial number as a name.
- Connect the ABB ACS I\O box to control board.

Analog I\O testing

1. Set AI1 and AI2 dipswitches both off on the control board. Return them to customers setting after all testing is complete.
2. Set AI1 and AI2 *MINIMUMS* to 0% and *MAXIMUMS* to 100%. Group 13 parameters 01/02/04/05.
3. Set AO1 *CONTENT SEL* to AI1 and AO2 *CONTENT SEL* to AI2. Group 15 parameters 01 and 07.
4. Connecting a meter to the AO1 and AO2 and AGN jacks on the I\O box to verify voltage varies from 0 to 10 Vdc on both AO's when you move the AI Trim Pot from fully CCW to fully CW. This varies both AI's mapped to both AO's from 0 to 100%. Thus testing all AI's and AO's PDQ.
5. There is no need to change anything back as we will load a test default parameter set before spinning a motor.

Digital Input and Relay testing

1. Set Group 10 parameters *EXT1 COMMAND* and *EXT2 COMMAD* parameter to NOT SEL. They are parameters 01/02.
2. Set Group 16 parameter *RUN ENABLE* to NOT SEL. It is parameter 01.
3. Set Group 14 *RELAY OUTPUT*(1-3) to DI1. These are parameter 01/02/03.
4. Flip switch DI1 to the on position. All 3 relays should transition from Open to Closed. Repeat this step for DI 1-6. Repeating steps 3 and 4.
5. All Relays and Digital inputs are tested PDQ.
6. There is no need to change anything back as we will load a test default parameter set before spinning a motor.

Loading Test Parameters for the Motor Control Panel

1. Go Offline. You do not need to upload or download any parameters.
2. Close the parameter window that loaded when you powered up the drive.
3. Go to *File* and select *Open*. In the ABB drive backup\testing setup folder open the appropriate file for the drive type and motor HP you are testing.
4. Keep drive offline for this part.
5. Under *Drive\Parameters and signals* click download all.
6. You can now take the drive online and test its operation.
7. Restore drive from customers backup.
8. Upload parameters to the ACP before powering down for shipping.

Main Circuit testing without control box

1. You can remove the ABB ACS control box if you want but it is not necessary.
2. Disconnect the serial cable from the PC and connect the ACP.
3. Clear the Panel missing fault if it occurs.
4. Go to Group *1 EXT1 COMMANDS* and set it to *Keypad*.
5. You can now hit start and ramp up the drive from the keypad. Test by instructions in the appropriate test procedure.
6. After completion you will need to reload the customers backup to the ACP or directly to the drive. Then upload from the control board back into the ACP before power down.