



BY JOHNSON CONTROLS

Service Information

File In/With:	160.00-M1 and 160.00-M4	SI0298	
		New	1214
Equipment Affected:	ALL TM AND VSD MODEL OPTISPEED COMPRESSOR DRIVES		
GATE DRIVER TEST MODE			

BACKGROUND:

The TM and VSD model drives have a method to test the gate drivers. The harmonic filter never had this feature. This feature was recently added to the harmonic filter.

REQUIREMENTS

A new filter logic board is required to provide for this new feature. The part number of the harmonic filter logic board is 031-02932-XXX. The X stands for the many different line numbers used in the different models of drives. The new board must have revision level of 'A' or later for this feature to be available.

METHOD TO RUN THE TEST

When the drive is not running, the test button on the drive logic board is pressed and held for as long as the test is required. When the test button is pressed the drive logic board, and the harmonic filter logic board will enter a test mode in which the gate driver output on the logic boards will be tested. Along with testing the logic board's output, the gate drive boards mounted near or on top of the IGBT's will be tested as well.

Work on this equipment should only be done by properly trained personnel who are qualified to work on this type of equipment. Failure to comply with this requirement could expose the worker, the equipment and the building and its inhabitants to the risk of injury or property damage.

The instructions on this service bulletin are written assuming the individual who will perform this work is a fully trained HVAC & R journeyman or equivalent, certified in refrigerant handling and recovery techniques, and knowledgeable with regard to electrical lock out/tag out procedures. The individual performing this work should be aware of and comply with all Johnson Controls, national, state and local safety and environmental regulations while carrying out this work. Before attempting to work on any equipment, the individual should be thoroughly familiar with the equipment by reading and understanding the associated service literature applicable to the equipment. If you do not have this literature, you may obtain it by contacting a Johnson Controls Service Office.

Should there be any question concerning any aspect of the tasks outlined in this bulletin, please consult a Johnson Controls Service Office prior to attempting the work. Please be aware that this information may be time sensitive and that Johnson Controls reserves the right to revise this information at any time. Be certain you are working with the latest information.

TEST OPERATION

When this test button is depressed, the six output LED's on the drive logic board will alternately light the three plus (+) LED's, then the three minus (-) LED's. At the same time, the LED's on the drive and harmonic filter gate driver boards will also alternate between dim and bright intensity.

Several conditions can inhibit this test function:

- If any OSCD fault exists.
- If the unit is in pre-charge.
- If the SCR trigger is enabled.
- If the OSCD unit is running.
- A 4 minute timer is part of this function to ensure that the DC Link Voltage is discharged to a safe level. This timer must time out before the Test Button will function.

Below is the location of the test button on the drive logic board.

