

Change Bulletin

No: CB022

Rev: 0

Date: 20 November 2007

Description:

Modifications to Active Brake Control for ER950 based ECI900 top drives



Tesco Corporation
6204 – 6A Street SE
Calgary, AB. T2H 2B7
Phone: (403) 692 5700
www.tescocorp.com

BACKGROUND INFORMATION:

It has been identified that Active Braking code 20.13, which is currently being used in the ECI product line with first generation (ER950/EI900) DRS drives, is not operating correctly. Deficiencies are as follows:

- Does not activate unwind mode correctly
- Does not activate Active Braking correctly
- Designates code as 20.07 in labview

TESCO engineering contacted DRS regarding this issue and DRS has modified the embedded code and released it as a new version called 20.14. The new embedded code 20.14 includes unwind and active brake control and is based on the same logic as MD500 active brake version 41.50. The new code turns the brake resistors on in the following conditions, reference DRS document "Release 20.14 for ECI900 based top-drive" for further clarification:

- If bus voltage exceeds 790V (voltage release level is 760V)
- During unwind mode
- 2 seconds after the drive is disabled (for DC bus discharging purposes)
- If motor rpm exceeds 4000 rpm in forward
- If drive is in reverse and the motor shaft speed exceeds -600 rpm



Member# M90066
Tesco's permit to practice# P06505

AFFECTED PRODUCT:

All ECI900 top drives, with first generation (ER950/EI900) DRS drives, that have been retrofitted with Active Brake control. (TESCO part # 17967S, Kit, Retrofit, Active Brake Control, ER950)

ACTION REQUIRED:

Without proper unwind protection, stress to the systems power electronics may occur during certain down-hole conditions. At the earliest possible instance a review should be conducted of which ECI900 top drives have been retrofitted with Active Brake control and the following actions should be taken:

- Install Connect Interlock Relay as per drawing 98000049 Rev 3, Speed & Torque Analog Control, TESCO 500 EC Unit:
 - Qty 1 – TPN 670030 Relay, Zone 2, ss, 24Vdc, 1 Form c, 6A
 - Qty 1 – TPN 0823 Clamp, end, wht, f/rail, TS35
 - Qty 1 – TPN 0825 Plate, partition, gry, f/terminal, wk 4/u
 - Qty 16 – TPN 0809 Wire, TEW, 600V, 105°C, #14, 1C, Blk, Strand, Tinned
 - Qty 15 – TPN 12464 Wire, TEW, 600V, 105°C, #14, 1C, Blu, Strand, Tinned
 - Qty 1 – TPN 9475 CHIP, PROGRAMMED, REV.2, F/CCBThese components may be purchased from After Market Sales and Service
- Load embedded code 20.14 into commercial control board (CCB). Contact the Engineering department to obtain these codes.
- Perform active brake function test as per TESCO Work Instruction WI-017967S

REFERENCE MATERIAL:

The following documents and drawings are required for reference when performing this modification: I-17967S, 98000049, WI-017967S, and WI-017968

Contact your local TESCO Parts and Service Center for further information regarding this bulletin and or supply of affected components noted above.