

**30-9A**

**AB TEST RACK  
 DIGITAL PRESSURE SWITCH  
 Alternate Source**

*(Replaces Service Bulletin 30-9, dated May 2007)*

**June 2007**



PN 0660601



PN 0665924 – Pressure Switch  
 PN 0665942 – Pressure Switch (0665924)  
 With Power Adapter Cable (0665947)  
 and RCA Cable (0665934)

**AB Test Rack - Alternate Digital Pressure Switch**

## 1.0 Background

The original AB Rack Digital Pressure Switch (PN 0660601), ITT 800P was replaced with ITT 801P and both are no longer available. Wabtec has approved an alternative Digital Pressure Switch (PN 0665924) for use with the AB Test Rack in place of the ITT Digital Pressure Switch.

**NOTE:** The New Digital Pressure Switch (PN 0665924) has been approved for use from 0 to 100 PSI.

**NOTE:** The New Digital Pressure Switch (PN 0665924) does **NOT** have a deadband like the ITT switch, therefore the pressures are set to exactly what you are measuring. For example: Measuring from 70 to 50 PSI the ITT would have been set to 72 & 50 PSI, but the New switch will be set to 70 & 50 PSI. This applies to all pressure settings throughout the test specifications.

**NOTE:** The New Digital Pressure Switch (PN 0665924) can **NOT** be substituted as a master pressure gauge.

The following three sections describe the zeroing / setup, calibration and range settings of the Digital Pressure Switch (PN 0665924).

### Section 2.0 – Pressure Switch Zeroing / Setup

This section should be done prior to each use to ensure the Digital Pressure Switch is zeroed and in the correct mode.

**NOTE:** If at any time during use the zero point shifts, re-zero the Digital Pressure Switch according to section 2.0.

### Section 3.0 – Calibration

This section should only be done when calibration is required, at least once every 6 months.

**NOTE:** Calibration of the Digital Pressure Switch (PN 0665924) **MUST** follow the procedure outlined in section 3.0.

### Section 4.0 – Changing Pressure Switch Range Settings

This section is done any time the pressure settings are required to change.

## 2.0 Pressure Switch Zeroing / Setup

- 2.1 Ensure that the switch calibration is current.
- 2.2 Allow at least a 30 minute warm up period after the switch is plugged in and on.
- 2.3 After the 30 minute warm up, ensure that NO pressure is applied to the switch for at least 60 seconds and re-zero if the display does not read 0.0.

**NOTE: If at any time during use the zero point shifts, re-zero the Digital Pressure Switch according to steps 2.3 and 2.3.1.**

- 2.3.1 To ZERO the switch (if not already reading 0.0), press and hold both the UP and DOWN arrow buttons simultaneously and continuously for 3 seconds.
- 2.4 During pressure display mode, press and hold the SET (blue) button continuously for 3 seconds, the current units will be displayed
- 2.5 UNITS: Press the UP or DOWN arrow button until **PSi** is displayed
  - 2.5.1 Press the SET button again
- 2.6 DISPLAY COLOR: : Press the UP or DOWN arrow button until **Sor** is displayed
  - 2.6.1 Press the SET button again
- 2.7 OPERATION MODE: Press the UP or DOWN arrow button until **Wnd** is displayed
  - 2.7.1 Press the SET button again
- 2.8 OUTPUT MODE: Press the UP or DOWN arrow button until **no** is displayed (Normally Open)
  - 2.8.1 Press the SET button again
- 2.9 RESPONSE TIME: Press the UP or DOWN arrow button until **2.5** is displayed
  - 2.9.1 Press the SET button again
- 2.10 The Pressure is displayed again

END OF INITIAL SET UP

### 3.0 Calibration

**NOTE:** Calibration of the Digital Pressure Switch (PN 0665924) **MUST** follow the procedure outlined in section 3.0.

**NOTE:** The calibration frequency of the Digital Pressure Switch (PN 0665924) is no longer than 6 Months.

**NOTE:** The master gauge used to calibrate this switch must have an accuracy of at least 0.05% full scale.

**NOTE:** The Digital Pressure Switch (PN 0665924) has been approved for use from 0 to 100 PSI.

- 3.1 Allow for at least a 30 minute warm up period after the Switch is plugged in and powered ON
- 3.2 Remove any pressure from the Pressure Switch and wait a minimum of 60 seconds
- 3.3 To ZERO the switch (if not already reading 0.0), press and hold both the UP and DOWN arrow buttons simultaneously and continuously for 3 seconds
- 3.4 Set the pressure on the regulator to read 80.0 PSI on the master gauge
- 3.5 If not reading 80.0, press and hold the SET and DOWN arrow buttons simultaneously and continuously for 3 seconds
- 3.6 The display should flash between **FSt** and the current pressure reading
- 3.7 Press the UP or Down arrow button until the display reads 80.0
- 3.8 Press the SET button
- 3.9 The display will flash between **FSC** and the percentage deviation (this is only for reference)
- 3.10 Press the SET button to return to the Pressure Display Mode
- 3.11 Adjust the regulator from 0 to 100 PSI in 10 PSI increments and compare to master. The Pressure Switch can not be out more than 0.4 PSI

END OF CALIBRATION

## 4.0 Changing Pressure Switch Range Settings

**NOTE:** No operation within 10 seconds after the Set Value Change Mode was selected will result in an automatic setting of the value appearing in the display window and will go back to the Set Value Indication Mode.

**NOTE:** The New Digital Pressure Switch (PN 0665924) has been approved for use from 0 to 100 PSI.

**NOTE:** The New Digital Pressure Switch (PN 0665924) does **NOT** have a deadband like the ITT switch, therefore the pressures are set to exactly what you are measuring. For example: Measuring from 70 to 50 PSI the ITT would have been set to 72 & 50 PSI, but the New switch will be set to 70 & 50 PSI. This applies to all pressure settings throughout the test specifications.

### 4.1 Low Pressure Limit:

- 4.1.1 From the *Pressure Display Mode*, press the SET (blue) button once to enter the *P1 Set Value Indication Mode* - P\_1 and the current Low Pressure Setting will flash
- 4.1.2 Press the Down Arrow Button (right) once to enter the *P1 Set Value Change Mode* - the right side number will flash
- 4.1.3 Press the UP or DOWN arrow button until correct number (for low pressure setting) is displayed
- 4.1.4 Press the SET (blue) button once - the middle number will flash
- 4.1.5 Press the UP or DOWN arrow button until the correct number (for low pressure setting) is displayed
- 4.1.6 Press the SET (blue) button again - the left side number will flash
- 4.1.7 Press the UP or DOWN arrow button until the correct number (for low pressure setting) is displayed
- 4.1.8 Press and hold the SET button for 3 seconds to return to the *P1 Set Value Indication Mode* - P\_1 and the current Low Pressure Setting will flash

### 4.2 High Pressure Limit:

- 4.2.1 Press the SET button once again to enter the *P2 Set Value Indication Mode* - P\_2 and the current high pressure setting will flash.

- 4.2.2 Press the Down Arrow Button (right) once to enter the *P2 Set Value Change Mode* - the right side number will flash
- 4.2.3 Press the UP or DOWN arrow button until correct number (for high pressure setting) is displayed
- 4.2.4 Press the SET (blue) button once - the middle number will flash
- 4.2.5 Press the UP or DOWN arrow button until the correct number (for high pressure setting) is displayed
- 4.2.6 Press the SET (blue) button again - the left side number will flash
- 4.2.7 Press the UP or DOWN arrow button until the correct number (for high pressure setting) is displayed
- 4.2.8 Press and hold the SET button for 3 seconds to return to the *P2 Set Value Indication Mode* - P\_2 and the current High Pressure Setting will flash

### 4.3 Hysteresis

- 4.3.1 Press the SET button once - **H** and the current setting will flash – This must be set to 0.0
  - 4.3.1.1 If the value is 0.0, press the SET button and proceed to 4.3.2
  - 4.3.1.2 If not set to 0.0, press the DOWN arrow button once and set value to 0.0 using the same procedure as the low and high pressure setting – After adjustment, press the SET button
- 4.3.2 The pressure will now be displayed

END OF PRESSURE SWITCH RANGE SETTINGS

END OF SERVICE BULLETIN