## Initial Setup

**Remove the unit from the carton and place it on a suitable tabletop. Unlatch the cover and set it aside. Using the lift handle, lift up on the display until the gas springs are fully extended. Make sure all switches on the two failure mode switch panels and the ignition switch on the front of the display are turned down or OFF. Plug the power cord into a 110 VAC outlet and turn the power supply to the ON position.**

## General Information and Operation

**This system is designed to operate and troubleshoot the anti-lock, traction control, wheel speed sensors and ECU (Electronic Control Unit). The pneumatic portion of this system is non-functional. The entire ABS related components are mounted on the front of the display with the power supply, wheel speed and J-1939 diagnostic simulator. The ABS/ATC failure switches are mounted in the compartment behind.**

**To start the operation, turn the ignition switch to the ON position. The ABS/ATC system will go thru its self check, commonly known as the chuff test. If there are no failures in the system the ABS light will go off and the ATC light will stay on. The system needs to know the stop light circuit is working and you need to depress the brake switch on the face of the panel. When depressed the brake lights should light and the ATC light will go off.**

### ABS Event:

**You are now ready to drive the vehicle. Depress the throttle pedal to about 1/3 travel and hold for 3 seconds. Note the wheel speed acceleration to 60 MPH. After you let the wheel speed stabilize for a few seconds, depress the brake switch to simulate a stop on ice. The wheel speed will drop from 60 MPH to 20 MPH in one second and the four wheel modulator will cycle to a stop. This**

**occurs every time wheel speed reaches 60 MPH and the stop light switch is depressed.**

**Traction Event:**

**To create a traction event depress the throttle pedal to the full travel position. The drive axle wheels will cycle left to right until you see movement on the steer axle. At this time the traction event drops out and the wheel speed accelerates to 60 MPH. Again, depress the stop light switch to start the ABS simulation.**

## Failure and Diagnostics

**Diagnostics:**

**Failure analysis retrieval can be accomplished by one of two methods: An ABS toggle switch and warning light, or a laptop computer. These are located on the dash switch panel. When the toggle is held for several seconds the ABS light will read out a series of blinks to tell you what type of failure have occurred. Both Bendix and Wabco have software available to troubleshoot with the use of a laptop computer. I recommend this method for troubleshooting be used as it provides specific points of failure along with vehicle mileage, wheel speed information, a list of all current faults, with history and much more.**

**You can obtain a free software download from Bendix, and all the necessary Service Data Manuals by going to www.bendix.com . Note: All Service Data Manuals are referenced in the software while troubleshooting. Meritor/Wabco has similar features on their website. www.meritorwabco.com.**

**In addition to a laptop computer you will need a diagnostic interface adapter to connect from the computer to the J-1587 diagnostic connector on the display switch panel. My recommendation is the USB-Link Part # SKU: 125032 by Nexiq Technologies. Go to www.nexiq.com for additional information.**

**Troubleshooting:**

**To begin troubleshooting select one or several of the 38 switch failures by turning the switch to the up position. Not all failures will turn the ABS light ON. Some may not show up until you turn the ignition switch off and then back on. For example, if there is a power failure the light is inoperable and will not come on and the failure will be evidenced by the lack of a chuff test. Having been in this industry for 43 years troubleshooting and training brake systems, I included most all the typical faults I received complaints on and all are legitimate. All service data information can be found on line by going to the Bendix or Meritor/Wabco websites.**

**For quotes or additional information reply to larry.gilles@llfab.com.**

**Straight Truck / School Bus**
**Bendix EC-60**
**ABS/ATC System with 28 failure modes**


Streight Truck / School Bus - Bendix EC-60