



AMETEK Instrument Cluster Replacement

UPDATE

Models Affected: Vision 2011 – Current, All American, TX3, TX4, 2010 – Current

Service Update SU1702 supersedes SU1603 when replacing an ACTIA instrument cluster with an AMETEK instrument cluster. The AMETEK instrument cluster is a direct replacement for ACTIA instrument clusters. No wiring changes are required.

Important – It is highly recommended that Blue Bird dealer service centers install replacement instrument clusters. The replacement instrument cluster MUST be installed in the bus being serviced to complete the service mode set up steps.

Service Mode Set Up Steps

Replacement clusters are shipped from Blue Bird in Service Mode. The cluster will remain in Service Mode until the odometer value is set. Prior to setting the odometer, the following set up procedure MUST be performed.

Plug the bus harness connectors to the replacement cluster and turn the key to the ignition position. The cluster will start at Step 1 and display the following questions in the LCD.

Step 1: “IS THIS THE INITIAL INSTALLATION FOR OEM PRODUCTION?”

Press the bottom button by the “X” to indicate “No”, and go to Step 2.

Step 2: “IS THIS VEHICLE A BBCV, D3, OR T3?”

Press the top button to indicate “BBCV”. If the top button is pressed, complete Steps 3 thru 5. Press the middle button to indicate “D3”, or Press the bottom button to indicate “T3”. If the middle or bottom button is pressed, Skip Steps 3 thru 5, and see instructions shown on Page 2.

Step 3: “ENSURE THAT THE VEHICLE PARK BRAKE IS SET AND PRESS ENTER.”

Press the bottom button by the “✓” to indicate “Enter”.
The LCD will display “DETECTING PARK BRAKE SWITCH”. Once the switch is detected, go to Step 4.

Step 4: “SET THE HIGH IDLE SWITCH TO ON AND PRESS ENTER.”

Press the bottom button by the “✓” to indicate “Enter”.
The LCD will display “DETECTING HIGH IDLE SWITCH”. Once the switch is detected, go to Step 5.

Step 5: “SET THE HIGH IDLE SWITCH TO OFF.”

When the cluster sees the High Idle Switch input 25 status change, the cluster LCD will display “Service Set Odometer”, See instructions shown on Page 2.

S U 1 7 0 2

S E R V I C E U P D A T E



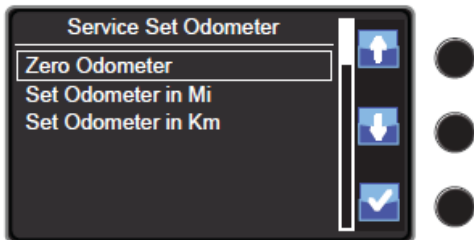
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Warning – U.S. Federal Law requires that the odometer accurately display the vehicle’s actual mileage. It is the responsibility of the person installing the cluster to make sure the mileage entered into the odometer correctly matches the vehicle’s actual mileage. Once odometer is set, the Service Set Gauge screen will not be seen again and the odometer value cannot be changed.

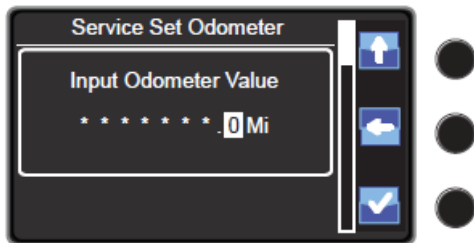
Setting the Units

Prior to setting the odometer value the technician must indicate to the gauge whether English (miles) or metric (kilometers) units are being set. To change, press the Up or Down button to scroll to the proper unit and press the bottom button by the “✓” to select. **Do not select Zero Odometer.**

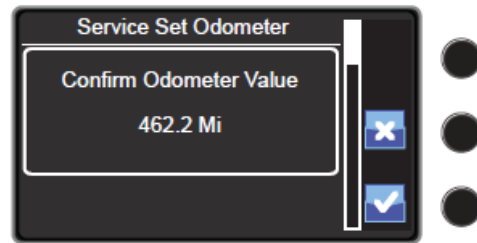
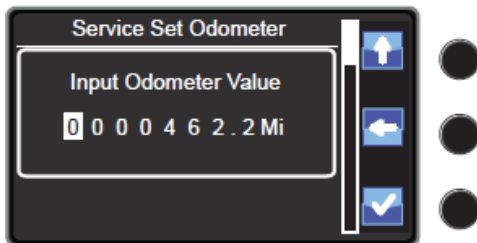


Setting the Odometer Value

Selecting “Set Odometer in Mi” or “Set Odometer in Km” displays an Input Odometer Value screen.



Each digit is set by using the Top button to scroll through the digits 0 – 9. Pressing the Middle button stores the digit and displays the next digit to be set. The following screen shows 462.2 programming into the odometer.



Once all required digits have been set press the bottom button “✓” and the Confirm Odometer Value screen will be displayed. Pressing the bottom button “✓” will confirm the mileage and display the Drive Mode screen, while pressing middle button “X” will take you back to the Input Odometer Value screen. Note, the preceding zeros shown in the display do not need to be set. The remaining asterisks will display as zeros once the odometer value is confirmed.

Important – Be sure the odometer mileage is correct before pressing the bottom “✓” button.

S U I 7 0 2

S E R V I C E U P D A T E



Based on features ordered for the bus and or customer preference, certain configurable features **MUST** be enabled or disabled to function properly. Review Vantage production order to confirm features installed. Configuration changes should **ONLY** be made by qualified service technicians.

Configuration Menu

Turn ignition key off. Press and hold the top and middle buttons while turning the ignition key on to enter the Configuration Menu. In this menu, configurable features can be Enabled or Disabled. To change a feature configuration with the buttons scroll up or down to it and then press the bottom button to change the configuration. This menu auto exits after 20 seconds of no activity. If the cluster has less than 25 miles, all menu selections can be changed using the buttons. After 25 miles, some items can only be modified by entering a password for the Configuration Lock feature (see section below for detail).

Configuration Menu	
Value	Description
On	Buzzer Time Out
On	Turn Signal Click
Off	Ammeter Display
Enabled	Applied/Suspension Air
Disabled	Battery Controlled Lift
Disabled	Seat Belt Logic
Enabled	Headlight Alert
Enabled	Lift Not Stowed Alert
Bar Graph	Fuel Economy

Odometer ≤ 25 Miles

Configuration Menu	
Value	Description
Locked	Configuration Lock
On	Buzzer Time Out
On	Turn Signal Click
Off	Ammeter Display
Disabled	Applied/Suspension Air
Disabled	Battery Controlled Lift
Disabled	Seat Belt Logic
Enabled	Headlight Alert
Enabled	Lift Not Stowed Alert

Odometer > 25 Miles

Configuration Lock

Selecting this option will allow the user to enter a password using the buttons on the cluster in order to unlock the configurations above that lock out after 25 miles to make selected configurations accessible temporarily. The first digit will highlight and characters will be incremented or decremented by pressing the top and middle buttons respectively. Pressing the bottom button will advance to the next character. After all characters are entered pressing the bottom button will attempt to unlock the cluster using the currently entered password. If the password is correct, all items will be available. If no configuration item is selected before the menu times-out in 20 sec the cluster will reset and the password must be re-entered to unlock the configuration items again. Password is “1927” to unlock password protected configurations.

Configuration Menu	
Enter Password	
0 0 0 0	
Locked	Configuration Lock
	Service Odometer



Buzzer Time Out

Default Value = On – Customer Preference

When this configuration is “On” the Buzzer 1 audible alarm (normally continuous) would be allowed to timeout in 15 seconds if the engine speed is < 400 RPM. When this configuration is “Off” the Buzzer 1 audible alarm will not time out.

Turn Signal Click

Default Value = On – Customer Preference

When this configuration is “On” the turn signal will use the simulated relay click audible sound. When this configuration is “Off” there will be no sound for the turn signal.

Ammeter Display

Default Value = Off – Production Order Feature (On when gauge feature 40280-02 is ordered).

When this configuration is “On” the Ammeter value is shown in the display below the Voltmeter.

When this configuration is “Off” only the Voltmeter is shown.

Applied/Suspension Air

Default Value = Disabled – Production Order Feature (Enabled when gauge feature 40280-05 or 40280-12 is ordered).

When this configuration is “Enabled” the software is configured to display Applied Front and Rear Air Pressure (for Air Brake System) or Suspension Air (for Hydraulic Brake System). When Disabled, Applied Air/Suspension Air are NOT displayed.

Battery Controlled Lift

Default Value = Disabled – Production Order Feature (Enabled when W/C lift feature 31045-02 is ordered).

When this configuration is “Enabled” the wheelchair lift and related functions will operate with ignition off. When this configuration is “Enabled” it affects the logic of several of the outputs.

When this configuration is “Disabled” the wheelchair lift and related functions will operate only with the ignition on.

Seatbelt Logic

Default Value = Disabled – Production Order Feature (Auto ENABLES if pin 32 is pulled Low).

When this configuration is “Enabled” the Seatbelt alarm and lamp logic will apply. If it is “Disabled” this logic will not apply and no alarm or lamp will be triggered in this case. When “Disabled”, and the seatbelt input is pulled low, the cluster will automatically enable the configuration.



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Headlight Alert (Audible)

Default Value = Enabled – Customer Preference

The Headlight On audible alarm can be Enabled/Disabled using the configuration menu.

The display message will always show when the trigger condition is present.

Lift Not Stowed Alert

Default Value = Enabled – Customer Preference

The Lift Not Stowed audible alarm can be Enabled/Disabled using the configuration menu.

The display message will always show when the trigger condition is present.

Fuel Economy

Default Value = Bar Graph – Customer Preference

The Fuel Economy feature can be changed to display a Numeric value instead of the Bar Graph.

Increased Speaker Volume

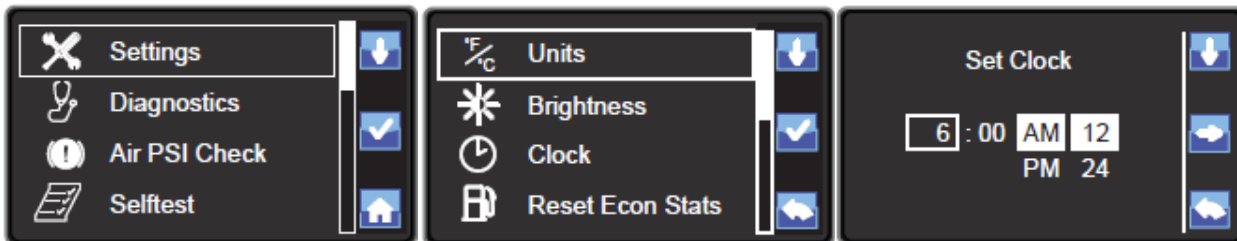
Default Value = Normal – Customer Preference

When feature is set for Normal, the Alarm Speaker will be set to 80% of maximum volume.

When feature is set for Maximum, the Alarm Speaker will be set to 100% of maximum volume.

Set Clock

Ignition “on”, park brake “set”, hold the bottom button for more than 3 seconds, the cluster will enter a “Settings and Diagnostics” menu. Scroll to “Settings” and press the middle button by the “✓” to select. Press the top button to scroll to Clock and press the middle button “✓” to select.



Selecting the menu item Clock will allow the user to set the clock. “Hours” will be the first selection upon entering the screen and will be highlighted. Press the top button to adjust the hour setting. Pressing the middle button will cycle the current selection between minutes, AM/PM, and the 12/24 display mode. Once a selected item is highlighted, the upper button can be used to increase the setting. Hours and Minutes will increment, rolling over at 12 for hours and 59 for minutes. Pressing the bottom button will save the changes and return to the previous menu.

Please refer to your Blue Bird Service Manual and Drivers Handbook for additional service and operational information.