

Thank You ...and Congratulations!

We at Blue Bird Corporation wish to thank you for your investment of trust in Blue Bird quality, and congratulate you on your operation of Blue Bird's flagship models; the All American RE and All American FE. Blue Bird Engineering continually strives to make serviceability a designed-in feature of both Forward Engine and Rear Engine models.

Blue Bird Strength; Blue Bird Innovation

Blue Bird pioneered the modern D-Type ("transit") school bus platform and takes great pride in its robust performance, rugged reliability, and heavy duty versatility. The ALL AMERICAN is also all-Blue Bird; both Rear Engine and Forward Engine chassis are built from the ground up at the same Fort Valley, Georgia plant which builds their famous school bus bodies.

The ALL AMERICAN FE and ALL AMERICAN RE, together with their Type C BLUE BIRD VISION, and Type A and Type B MICRO BIRD siblings, comprise a complete line of rugged, built-from-the-ground-up pupil transportation vehicles, providing an ideal fit for any specific school route needs.

First conceived in 1948, the Blue Bird ALL AMERICAN line benefits from over 54 years of continual refinement and modernization. Mated to Blue Bird's renowned school bus body construction standards, the ALL AMERICAN remains the standard by which all transit school buses are measured, and continues to lead the industry in technology, safety, and practical innovation.

Built to purpose. Built to last. Built to bring to your operation maximum economy, efficiency, versatility, and rugged reliability.

Backed By Blue Bird

Blue Bird provides all the behind-the-scenes support you depend upon for success in your school transportation operation:

Blue Bird Authorized Dealers.

Blue Bird administers its full range of Customer Services through a nationwide network of local or regional Blue Bird Authorized Dealers. The Dealer through whom your bus was purchased should always be your first point of contact for information and assistance. Contact information for your dealer is located on the back cover of this manual.

Blue Bird School Bus Support

Your Blue Bird Dealer is equipped and staffed to handle your service-related issues, and also has immediate and direct access to Blue Bird's own factory-based Customer Support. All Blue Bird Support Representatives are true Blue Bird technical experts with long histories at the Blue Bird plants where your buses are built.

Blue Bird School Bus Training

The Training staff of Blue Bird Customer Service conducts an ongoing program of Field Service, Factory Service, and Focussed Training classes and seminars, to ensure that service technicians of Dealers are always up-to-date on the latest service information and techniques. Some of these training classes are open to the service personnel of customers.

Blue Bird Parts Sales

Blue Bird's modern Service Parts facility ships parts directly from the home plant in Fort Valley, Georgia to Blue Bird Authorized Dealers and Blue Bird Bus Spec and Bus Care centers nationwide. Blue Bird Parts Sales consists of modern warehousing facilities, efficient ordering and inventory control systems, and expert technical staff who know your bus inside and out. Service Parts also publishes its own parts catalogs, available for customer purchase.

Blue Bird Technical Publications

Blue Bird Driver's Handbooks and Service Manuals are produced and continually updated by a full-time in-house staff with full access to manufacturing assembly lines and Blue Bird Engineering. Additional manuals are available for purchase through your Blue Bird Authorized Dealer.

Blue Bird Commercial Bus Warranty

For your convenience and efficiency, warranty claims are handled at the local Dealer level, as are all other Customer Services. Be assured that your Blue Bird is backed by one of the strongest factory warranties in the industry, and that factory-based Bus Warranty representatives are in constant contact with your local dealer about your warranty issues.



Reporting Safety Defects

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying Blue Bird.

If NHTSA receives similar complaints, it may open an investigation and, if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or Blue Bird Corporation.

To contact NHTSA, you may call the Vehicle Safety Hotline toll-free at:

1-888-327-4236 (TTY: 1-800-424-9153)

or go to:

<http://www.safercar.gov>

or write to:

Administrator, NHTSA,

400 Seventh

Street, SW., Washington, DC 20590

You can also obtain other information about motor vehicle safety from:

<http://www.safercar.gov>

About This Manual

This manual is a reference intended for use by qualified mechanical technicians performing maintenance and service procedures on the Blue Bird ALL AMERICAN bus. Blue Bird Technical Publications endeavors to continuously improve the value of its manuals. Your comments and suggestions are welcome and we value the feedback we receive from our users. Send your comments to:

*Blue Bird Body Company
Attn: Technical Publications Dept
P.O. Box 937
Fort Valley, Georgia 31030*

Safety Precautions

Throughout this manual are precautions labeled Warnings and Cautions, and set in the style shown here:

WARNING *The Warning designation is generally used for precautions which, if not properly observed while performing the related procedures or handling materials, could result in serious personal injury or death.*

CAUTION *The Caution designation is generally used for precautions which, if not properly observed while performing the related procedures or handling materials, could result in damage to the bus or its equipment.*

This manual is intended for use by qualified professional service technicians who understand and observe all appropriate safety precautions and procedures associated with mechanical work on heavy vehicles. The user of this manual must read and abide by all safety warnings noted not only in this manual, but also on the labels and documentation for all tools, materials, and parts used.

Scope and Content

In the design of the ALL AMERICAN, Blue Bird Engineering has utilized many carefully selected and precisely matched top quality components from some of the most respected names in heavy-duty vehicle industries. Blue Bird designs and configures the systems in which these components are used, but does not manufacture the components themselves. The primary scope of this manual, therefore, is to provide service information about the Blue Bird vehicle itself, i.e.; the systems which Blue Bird designs and builds, but not on the inner workings of purchased components.

Obvious examples are the Cummins or Caterpillar engine and Allison transmission. Although this manual includes general maintenance information (such as fluid change intervals), mechanical information about the engine and transmission is beyond the scope of this manual. Refer to Cummins or Caterpillar, and Allison manuals which were delivered with the bus, and/or contact the manufacturers and their service outlets for additional information. Your Blue Bird Dealer can assist you in determining specific documents needed, and by providing appropriate contacts.



Organization

The bulk of this manual is arranged in topic chapters, each beginning with a general overview followed by more specific component-level information and, where appropriate, troubleshooting and/or maintenance guidelines.

Like the engine and transmission, many of the bus's system components are not manufactured by Blue Bird. But the understanding of major components is essential to understanding and servicing the system. As a courtesy to our customers, this manual includes many component-specific service documents, obtained directly from the components' manufacturers. These documents are reprinted as appendixes located at the end of the appropriate topic chapters. Because the documents are printed unmodified and in their entirety, each appendix carries its own page numbering within the border of the reduced page. To clearly differentiate these supplemental documents from Blue Bird-authored material, and to provide margin markings to aid the reader in location and navigation, they are reprinted at a slight reduction. The right margin of appendix pages carries the same style page numbering as the rest of the manual. These larger number markings bleed off the right edge to provide a visual index referenced to the Table of Contents. The large page numbers are also the ones referenced in the Index.

The appendixes have a similar marking arrangement across the bottom margin to provide a handy visual indication of the page range of each appendix.

Using the Appendixes

It is important that the user of this manual bear in mind that the appendixes are component manuals and other documentation reprinted with permission in their entirety, and therefore may contain generic and/or additional information not exclusively specific to the Blue Bird ALL AMERICAN. For example, a component-specific document may include general service information covering several models of the manufacturer's product line; including, but not limited to the particular model used in the Blue Bird ALL AMERICAN. The technician must make certain to refer to the section(s) of the appendixes appropriate to the unit being serviced.

Vendor-supplied component documents used in the appendixes may also provide detailed rebuild or reconditioning information which Blue Bird does not recommend. In the interest of safety assurance, Blue Bird policy is to replace—not to rebuild—components such as valves, hydraulic cylinders, etc. Blue Bird assumes no responsibility for disassembly/repair procedures described in the vendor-supplied publications. If in doubt, call your Blue Bird Dealer for advice.

The information contained in this manual is the most current available at the time of publication. Blue Bird follows a policy of continuous product improvement and reserves the right to make product changes without notice and without incurring liability. Also, school buses are built according to a range of differing state specifications and customer-requested options. If any apparent discrepancies are encountered between the material in this manual and the bus(es) being serviced, consult with your Blue Bird Dealer and/or the specific component's manufacturer before proceeding.

About the TechReference CD

While Blue Bird TechPubs recognizes the practical convenience of physical manuals in the shop, and endeavors to continue improving its technical publications in print form, we also want Blue Bird technicians to be able to utilize the advantages of electronic documentation.

The companion TechReference Compact Disk included with this book contains this service manual in handy electronic form as well as additional materials which will be of value to the service technician. Manuals on the CD are saved in Acrobat Portable Document Format (PDF). PDF files can be opened, viewed, navigated, searched, and printed using the freely-distributed Adobe Reader program. For your convenience, the installer for the version of Adobe Reader current at the time of publication is also included on the CD. You may also download the most current version of Adobe Reader via the internet at www.Adobe.com.

You may use the PDF version of the manual by either reading it directly from the CD, or by reading it from copies of the files on your computer's internal hard disk. (Reading from the CD will be somewhat slower than using a copy on your hard disk, but is still reasonable for most users.)

In compiling the PDF version of this manual, Blue Bird TechPubs has taken advantage of Acrobat's hyperlink features to provide quick and easy navigation. The manual chapters and appendixes are separate cross-linked files which can be jumped between by simply clicking the links in the Bookmarks tab of the Adobe Reader window.

At various places throughout the printed manual are CD icons which refer to materials contained on the CD. In the PDF manual, the CD icons are actually hyperlink buttons which, if clicked, will take you to the referenced material. (Use Adobe Reader's Back button to return to the previous location.)

The efficiency of electronic distribution via PDF has also allowed us to include these additional materials:

Drivers Handbook

The Drivers Handbook for the Blue Bird ALL AMERICAN is included on the CD. This may be used to provide copies of the Operator's Manual to all the drivers in your operation, while leaving the print copy in the bus, or for home or in-office reference.

Additional Component Service Documents

Some chapters of the Service Manual on the CD may contain additional component-manufacturer documents which are not practical for reprinting in the printed manual. For example, the entire Bendix Steering Gear manual is on the TechReference CD as an appendix to the Steering chapter.

Service Bulletins or Updates

Depending upon time of publication, some issues of the TechReference CD may include Service Bulletins or Service Updates which were released between releases of the printed manual.



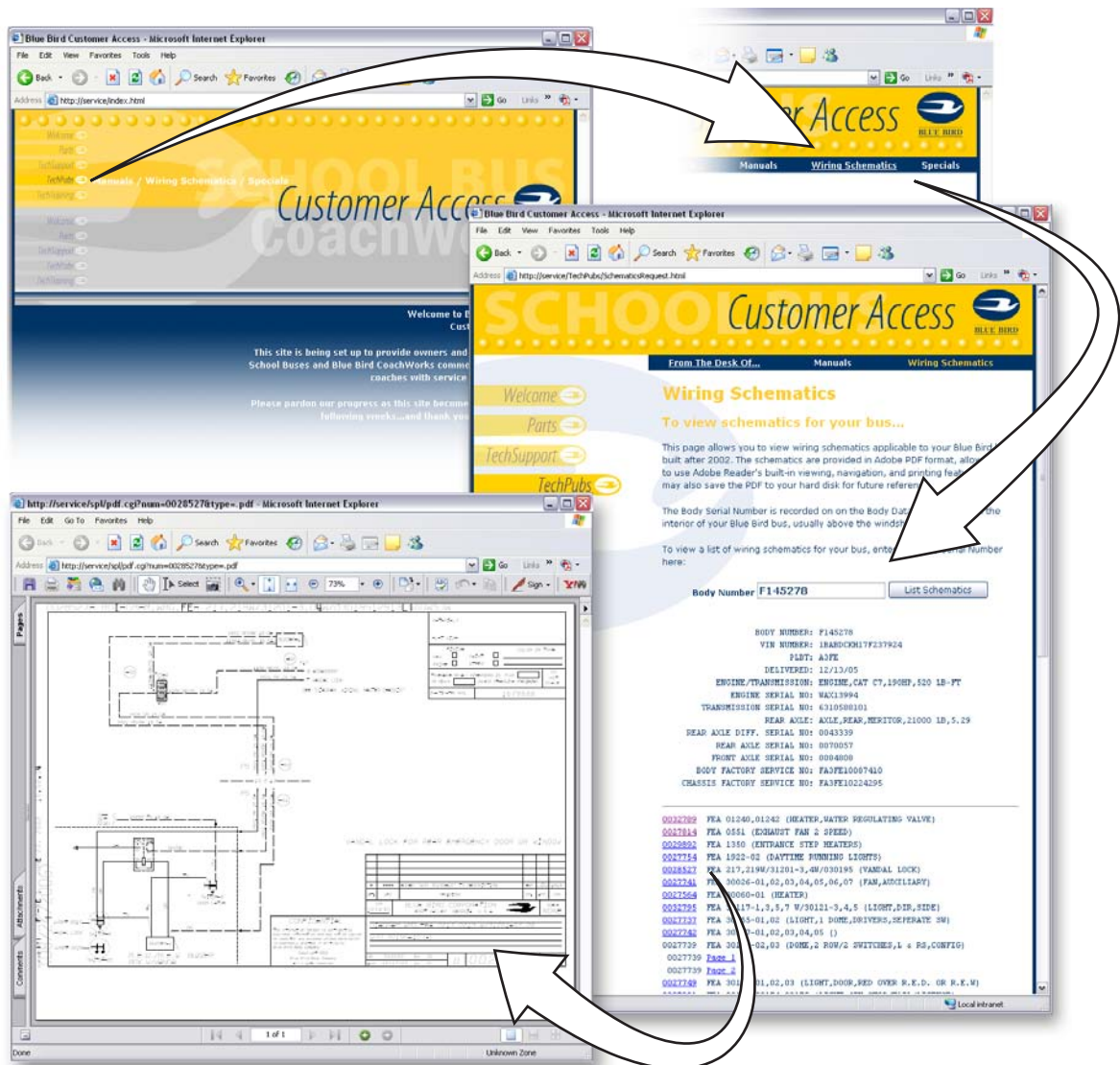
Electrical Schematics

This printed manual contains the main wiring schematics which are most commonly needed in troubleshooting, and which apply to the majority Blue Bird ALL AMERICAN buses. However, the wide range of available options for Blue Bird buses yields a large number of additional wiring diagrams pertaining to specific features.

Blue Bird Technical Communications provides a web page at which you can view additional wiring schematics for your bus at its Customer Access web site:

<http://service.blue-bird.com>

Click on the TechPubs link; then on the Wiring Schematics link. Enter the Body Number for your bus. You will be presented a list of wiring schematics. The schematic drawing numbers are links which can be opened in Adobe® Reader™ to browse, zoom, pan, or print the drawing.



Wiring Schematics

To view schematics for your bus...

This page allows you to view wiring schematics applicable to your Blue Bird bus built after 2002. The schematics are provided in Adobe PDF format, allowing you to use Adobe Reader's built-in viewing, navigation, and printing features. You may also save the PDF to your hard disk for future reference.

The Body Serial Number is recorded on the Body Data Plate, located on the interior of your Blue Bird bus, usually above the windshield.

To view a list of wiring schematics for your bus, enter the Body Serial Number here:

Body Number

BODY NUMBER: F14527B
 VIN NUMBER: 1BARDCH817F23924
 FLEET: ASFE
 DELIVERED: 12/13/05
 ENGINE/TRANSMISSION: ENGINE, CAT C7, 190HP, 520 LB-FT
 ENGINE SERIAL NO: WAC13994
 TRANSMISSION SERIAL NO: 4310900101
 REAR AXLE: AXLE, REAR, MERITOR, 21000 LB, 5.29
 REAR AXLE DIFF. SERIAL NO: 0043339
 REAR AXLE SERIAL NO: 0070057
 FRONT AXLE SERIAL NO: 0004000
 BODY FACTORY SERVICE NO: FA3FE10067410
 CHASSIS FACTORY SERVICE NO: FA3FE10224295

0022709 FEA 01240,01242 (HEATER, WATER REGULATING VALVE)
 0022819 FEA 0551 (EXHAUST FAN 2 SPEED)
 0022862 FEA 1350 (EXTRANCE STEP SEATERS)
 0027154 FEA 1922-02 (DAYTIME RUNNING LIGHTS)
 0028527 FEA 217,219W/31201-3, 4W/030195 (VANDAL LOCK)
 0027341 FEA 30026-01,02,03,04,05,06,07 (FAN, AUXILIARY)
 0027568 FEA 30060-01 (HEATER)
 0028229 FEA 3119-1,3,5,7 W/30121-3,4,5 (LIGHT, DOP, SIDE)
 0027157 FEA 30-01,02 (LIGHT,1 BOMB,101VENS,SEPERATE SW)
 0027282 FEA 30-01,02,03,04,05 ()
 0027739 FEA 30-02,03 (DOME,2 ROW/2 SWITCHES,1 e RS,CONTIG)
 0027739 Page 1
 0027739 Page 2
 0027280 FEA 30-01,02,03 (LIGHT, DOP, RED OVER R. R.D. OR R.E.W)