

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 one of the most innovative vehicles in pupil transportation; the Blue Bird Vision. Throughout the Vision's design process, Blue Bird Engineering placed special emphasis on serviceability. We trust you will find the Vision to be as advantageous a bus to maintain as it is to operate.

Blue Bird Strength; Blue Bird Innovation

The Blue Bird Vision is the first C-Type ("conventional") school bus built specifically for pupil transportation. While most C-type school buses are built upon truck chassis, the Vision's chassis is purpose-built at Blue Bird's Fort Valley, Georgia plant, as are the chassis of Blue Bird's larger All American transit-type buses.

The BLUE BIRD VISION together with its ALL AMERICAN FE and ALL AMERICAN RE 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.

As a completely new design benefiting from Blue Bird's experience in both School and Commercial bus products, the Vision incorporates several technologies new to Blue Bird school buses, ranging from its distinctive high-visibility cowl profile to its Multiplex electrical system and intelligent micro processor instrumentation. Mated to a rugged school bus body built according to Blue Bird's renowned construction standards, the Vision is both excitingly fresh and reassuringly familiar.

Built to purpose. Built to last. Built to bring to your operation a new level of economy, efficiency, 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 Distributors.

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

Blue Bird School Bus Support

Your Blue Bird Distributor 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 Distributors 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 Distributors 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 Distributor.

Blue Bird Commercial Bus Warranty

For your convenience and efficiency, warranty claims are handled at the local Distributor 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 distributor about your warranty issues.



Contacts and Regulatory Matter

National Highway Transportation & Safety Administration (NHTSA)

If you feel your new Blue Bird Vision has a safety issue that could cause a crash or personal injury, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) with the information. You should also notify Blue Bird Body Company immediately so that it can evaluate the situation or condition.

If NHTSA receives more information of a similar nature, it may open an investigation into the matter. If NHTSA determines there is a common safety defect in a group of buses, it may issue an order for a recall. NHTSA will not, however, become involved in an individual issue between the owner/operator, distributor and/or Blue Bird Body Company.

To contact NHTSA, call the Auto Safety Hotline toll free at 1.800.424.9393 (outside the Washington, DC area). In the Washington, DC area, call 366.0123. The NHTSA may also be contacted in writing at the following address:

*NHTSA
US Department of Transportation
Washington, DC 20590*

About This Manual

This manual is a reference intended for use by qualified mechanical technicians performing maintenance and service procedures on the Blue Bird Vision 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:

■ ■ ■ ■ ■ *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.*

■ ■ ■ ■ ■ *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 Vision, 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.

The most obvious examples are the Caterpillar C7 engine and Allison PTS 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 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 Distributor can assist you in determining specific documents you may need, 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 un-modified 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 re-printed 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 Vision. 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 Vision. 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 Distributor 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 Distributor 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 Vision 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 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

The printed manual contains the major wiring schematics which are most commonly needed in troubleshooting, and which apply to the majority Blue Bird Vision buses. However, the wide range of available options for Blue Bird buses yields a large number of additional wiring diagrams pertaining to specific features. These additional schematics are included on the TechReference CD.

All the electrical schematics on the CD are cross-linked to a common list of Bookmarks. Thus, when using the CD you can jump directly to any wiring schematic from any other. Some large schematics occupy several sheets. Where circuits reach the edge of a sheet, notes reference the corresponding locations on other sheets. On the CD, these notes are highlighted yellow and are active hyperlinks which, when clicked, open the referenced sheet and zoom to the associated grid square. See the Electrical Chapter for more information.

Vision MPX Simulator

The TechReference CD contains a special learning tool, the Vision MPX Simulator. This is a standalone self-running program which imitates the behavior of the Vision's Multiplex Module, and is one of the programs used by Blue Bird Trainers in their Factory and Field Service Training Schools. It is included to help you become quickly familiar with the functioning of Ladder Logic and other aspects of the Multiplex System. Although this is not a PDF file like the other documents on the CD, links to it are provided in the PDF of the Service Manual. When one of these links is clicked the MPX module will open in its own window. The MPX Simulator does not require Acrobat or any other program; you may use it standalone by navigating directly to it on the CD, or by copying it to a convenient location on your hard disk. See the Multiplex chapter for more information about the MPX Simulator.

