



CITY AND COUNTY OF SAN FRANCISCO
San Francisco Municipal Transportation Agency
Request for Proposals
THE PROCUREMENT OF
30-Foot, 40-FOOT AND 60-FOOT LOW FLOOR
DIESEL HYBRID COACHES

Proposal Section	Title	Bid Submission Requirements
11-B	Maintenance and Operations Manuals	Provide a brief description of the manuals and the format used based upon Section 9.2 of the Technical Specifications-Volume 2. Include a brief description of what will be provided for the computerized maintenance management system as described in Section 9.2.9 of the Technical Specifications-Volume 2. Include excerpts from current manuals to give SFMTA an indication of your capabilities. Supply a proposed delivery schedule, keyed to bus deliveries, for all manuals. Describe how manuals and their updates will be conveyed to SFMTA through on-line capability.

New Flyer's Publications professionals combine extensive, hands-on technical experience with exceptional writing, illustrating and publishing skills to create the industry's benchmark in maintenance manuals. Please refer to the attached description of our publications organization, their process and sample manuals.

Flyer Publications mandate is to **create, publish and maintain accurate build specific technical manuals** for each bus build. These build specific technical manuals provide the customers and other end users with accurate reference information required to support the effort in maintaining the buses in service. New Flyer Publications has produced over 1000 manual set projects (both in hard copy and electronic format) and has established the bus industry standard to meet for technical manuals.

Organizational Structure

The New Flyer Publications organization is one of the largest technical publishing organizations in Western Canada and employs 28 full time staff. Our organization includes the right balance of electronic publishing experts and technical content Authors. Our highly skilled publishing specialists have many years experience in both traditional and new electronic publishing in the bus or aircraft manufacturing industry.

New Flyer Publications has also recognized the importance of three key areas to stay ahead of the competition and provide industry leading technical manuals. This resulted in the creation of specialized teams in 2011 in order to support each key area.

- **PLM Team**

PLM or “Product Lifecycle Management” is a key company initiative which involves the creation of tools and processes required to maintain all product related information from a central library. Publications PLM team are currently working with engineering on a single source database publishing solution which will not only allow us to use engineering 3D data management tools but also publish technical manuals in a more efficient process.

- **PM (Preventive Maintenance)**

Comprehensive, accurate and the timely supply of preventive maintenance information are important to ensure bus components and systems are maintained properly when buses arrive at the customer sites. Performing this work will extend the life of those components. New Flyer Publications has a dedicated and very experienced Technical Editor whom works with New Flyer Engineering and the component OEMs identifying and detailing all Bus PM activities. This information is provided to the customer along with a list of PM related replacement parts before the first bus is delivered.

- **Update Team**

After the technical manuals are published and delivered, product change is regular part of an ongoing lifecycle process. The dedicated New Flyer Update Team records and evaluates product changes and determines the requirement for technical manual update notification in the form of either Manual Bulletins or actual updated replacement pages.

Qualifications

New Flyer Publications staff are qualified and experienced in all forms of technical manual publishing. Our staff consists of highly qualified and dedicated Management, Project Coordinators, Technical Editors, Technical Writers, Technical Illustrators, Data Management Technicians, 3D modelers and XML publishing specialists

Name	Role	Years Exp.	Qualification/Exp.	Level
Mike Monsigneur	Director	30	Management/Publish Design/Writing/Illust/Engineering Tech	1
Ronald Lent	Publications Manager	25	QA/Management/Publish	2
Christopher Friesen	Sr. Technical Editor (Service Manuals)	6	Leadership/Elect Tech/Tech Writer	3
Carlos Manalang	Lead Technical Illustrator	25	Technical Illustration/Leadership	3
Haidee Ramirez	Sr. Technical Editor (Updates)	7	Industrial Design/BOM Tech/Leadership	3
Pat Santa	Project Coordinator (Publishing)	19	Desktop Publishing/Leadership	3
Gerald Teranishi	Project Coordinator (PLM)	20	Publishing/3D Illust/Leadership/BOM Tech	3
Senada Trivunac	Sr. Technical Editor (Data Management)	25	Engineering Tech/Leadership/QA/BOM Tech	3
Brian Wiebe	Sr. Technical Editor (PM)	25	Engineering Tech/QA/Tech Writer	3
Alex Aguirre	Technical Editor	5	Elect Tech/BOM Tech	4
Lance Pabon	Sr. Technical Illustrator	30	Technical Illustration/Leadership	4
Keith Strong	XML Publishing Specialist (PLM)	5	XML Design/Web Design/Publishing	4
Emerson Abdon	Data Management Technician	5	Manuf Planning/BOM Tech	5
Chris Cale	Graphic Illustrator	19	Graphic/Technical Illust	5
Ken Clegg	Data Management Technician	12	Data Research/BOM Tech	5
Joseph Eserio	Data Management Technician	8	Elect Tech/BOM Tech	5
Maureen Farjardo	Data Management Technician	4	Manuf Planning/BOM Tech	5
Ron Grzenda	Technical Writer (Updates)	10	Engineering Tech/QA	5
Glen Hoban	Desktop Publisher Operator	15	Desktop Publishing	5
Kurt Jakob	Technical Writer	23	Engineering Tech/Tech Writing/Tech Illust	5
Osmundo Mansilla	Technical Illustrator	10	Technical Illustration	5
Brian Maskiw	Sr. Technical Illustrator	8	3D Model/Technical Illustration	5
Robert Mount	Technical Illustrator	10	3D Model/Technical Illustration	5
Guy Olivier	Technical Illustrator	20	3D Model/Technical Illustration	5

Name	Role	Years Exp.	Qualification/Exp.	Level
Stan Penner	Business Analyst (PLM)	32	Business Analyst/Data Base Design/BOM	5
Olga Russo	Data Management Technician	6	Engineering Tech/BOM Tech	5
Kelly Wilson	Desktop Publisher Operator	16	Desktop Publishing	5

Authority Level	Description
1	Departmental contractual, financial resolution and approval. Also final decision on all matters
2	All Publishing Project related issue resolution and approval
3	Team & Product content develop, change and approval
4	Individual task and Team QA change and approval
5	Individual task and QA perform

Extended Technical Support

Our Technical Writers and Editors have extensive bus system technical knowledge however when required, our staff will seek additional information and verification from New Flyer's engineering and technical service support staff. This "extended" support capability provides an additional layer of accuracy and quality control critical for ensuring our customer's success in maintaining their bus fleet.

External Support

When technical publishing projects require more external expertise or resources, the Publications Management team will engage with third party solution providers to ensure project expectations are met. Aside from contract technical writing and illustration, New Flyer works with a professional technical language translation service provider.

Publishing Process Highlights

New Flyer publishes every manual set project by following our proven standard publishing process. These processes and procedures allow our staff to complete an accurate and build specific technical manual set for each bus build or Lot. Below is an outline of the major steps.

- **Review of Publications Deliverables**

Performed by the Director at contract award stage, is critical to ensure that all aspects of the project that have been specified and agreed to are identified and recorded for inclusion into each publishing project. This also allows for accurate scheduling which in turn ensures on-time delivery. These specifications are explained to the Manager and subject coordinators to ensure expectations are understood.

- **Project Scheduling**

Performed by management on a monthly basis and includes setting of publishing milestone dates as well as estimated customer delivery dates. Established dates are continually reviewed with manual production as well as bus production to ensure changes are made when required.

- **Pre-research & Source Data Verification**

Two weeks before the start of manual production, the Technical Editors perform a build specific BOM download. It is interrogated and compared to existing publications manual data on a high level. This data gathering allows for identification of all major components, new components or revisions to existing designs requiring new information for task distribution.

- **Materials and OEM manual ordering**

Performed immediately after pre-production meeting by the Publications Manager who ensures manual building supplies and are acquired before start of manual production. OEM component supplier manuals are researched and ordered following specification guidelines then scheduled for delivery.

- **Detailed Research**

Build specific manual data research is performed by the data management team two weeks before illustration and writing of Service and Parts manual content are started. DMT staff interrogate full detailed download of the build specific BOM using ORACLE and compare with existing manual data in detail. Both New Flyer and OEM supplier engineering 3-D models are compared to existing manual content resulting in template mark-ups which form the new content for the build specific manuals. These research packages are submitted for review by editor and forwarded on to Technical writers and Illustrators.

- **Manual Content Production**

Manual content creation is performed by technical illustrators and writers with technical editors reviewing manual content for approval. Desktop publishers compile this content into the page layout templates and final overall edit is performed by the Manager who will review all manuals for compliance to New Flyer Publication standards.

- **Quality Control**

New Flyer is committed to lead the industry in quality assurance and continuous improvement. As an ISO 9001, ISO 14001, and OHSAS 18001 certified company, all procedures and processes are properly defined and documented. Dedicated editing and project coordination staff operates on a daily basis within our system of checks and controls.

- **Publishing Output**

A final check for consistency, format and completeness is performed to the final before paper and PDF output. Hardcopy output and assembly are performed in-house. This allows for further quality control checks on the hard copy output ensuring customer receives a quality product. If special parts manual lists are required, a combined XML file is made of the entire parts manual and delivered to the customer.

- **Bus Manual PDF**

A PDF version of the Bus Manuals are output from the authoring files, external links created, and test DVD is burned for quality check. After all checks are passed the DVD label and artwork is completed, DVD copies are burned for both customer and internal service support staff.

- **Shipping**

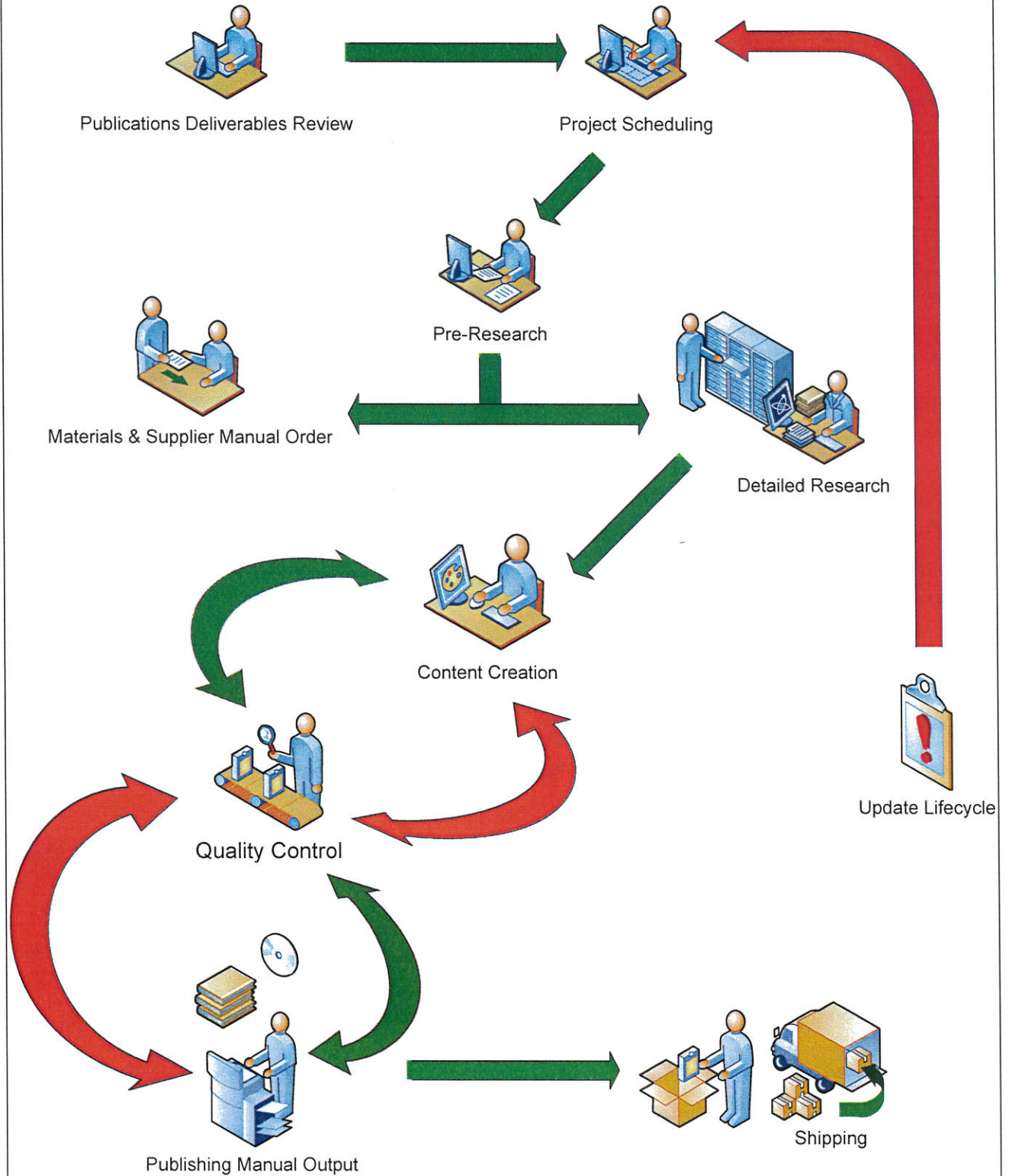
After hard copy manuals and electronic manuals are output, they are properly boxed and shipped using the appropriate carrier depending on the established delivery dates from the schedule. Shipping documentation is created and used for follow-up with customer to ensure on-time delivery of deliverables.

- **Update Lifecycle**

Once a manual is published and delivered to the customer, all issues that are identified from any source (ECO, ITS, OEM supplier notification, field service) are recorded into our database as an "Update Issue". All appropriate information on each issue is recorded and a paper copy with any associated mark-up or other paper document is filed. The Technical Editor of the Data Management Team will assess update issues for release to affected customers as a manual bulletin or updated manual pages and DVDs. New Flyer can supply electronic bulletins or updated pages via e-mail or DVD. These updates or bulletins are released to the customer based on the urgency of each issue.

High Level Publishing Process Flow

June 12, 2012



Bus Parts Manuals

- ❑ Delivery Timeframe is variable depending on size of bus build and contract requirements. Normally, one week after last bus delivery but draft manuals with first bus delivery are also available.
- ❑ Provides detailed info on components and systems required to order replacements parts. Recently given an A+ rating by NYCTA
- ❑ Includes all component installations and some major component subassembly breakdowns such as axles, HVAC units, pumps, etc.
- ❑ Major component OEM supplier published manuals such as Engine, and Transmission are purchased and supplied separately.
- ❑ Clear and easy to understand isometric & perspective line art illustrations on the left side. Well defined parts listing itemizing all serviceable parts on the right side. Numerical index, alpha index and section TOCs included.
- ❑ Section structure is the same as the Service Manual structure (Sect 1: Front Axle, Sect 2: Rear axle etc)
- ❑ Content created by tech research staff is derived from each build specific BOM, engineering models and drawings and OEM component manuals. Technical Editors review content for accuracy and quality before final output.
- ❑ Printed on regular letter size 3 hole paper and inserted into durable plastic post style binders for easy update management.
- ❑ Approx 1400 pages in size

Bus Service Manuals

- ❑ Delivery Timeframe is variable depending on size of bus build and contract requirements. Normally, one week after last bus delivery but draft manuals with first bus delivery are also available.
- ❑ Provides detailed info on component Preventive Maintenance, removal, disassembly, repair and installation. A preliminary PM section document is sent to the customer before the buses are delivered to ensure key PM tasks are identified and performed.
- ❑ Also includes equipment and system description, safety, operation and troubleshooting information.
- ❑ References to major component OEM supplier published manuals such as Engine, Transmission and HVAC for detailed tech info on these components. These are purchased from the component supplier and supplied separately.
- ❑ Clear and easy to understand isometric & perspective line art illustrations

- ❑ Content created by our technical writers is derived from each build specific BOM, engineering models and drawings, PLC program and OEM component manuals. Senior Technical Editors review new content for accuracy and quality before final output.
- ❑ Printed on regular letter size 3 hole paper and inserted into durable plastic post style binders for easy update management.
- ❑ Approx 1300 pages in size

Bus Operator's Guides

- ❑ Delivered to customer 10 business days before first bus delivery
- ❑ Written and published by our Technical Writers, this document describes all the bus equipment, operating principles of the equipment and informs the driver on all safety and emergency features.
- ❑ Senior Technical Editors review each operator guide project for accuracy and quality before final output.
- ❑ Content is derived from each build specific BOM, engineering models and drawings, PLC program and OEM component manuals.
- ❑ Printed in color and on regular letter size 3 hole paper and inserted into a clear front plastic duo tang style cover for easy update management.
- ❑ Approx 110 pages in size.

Bus Systems Drawings Manuals

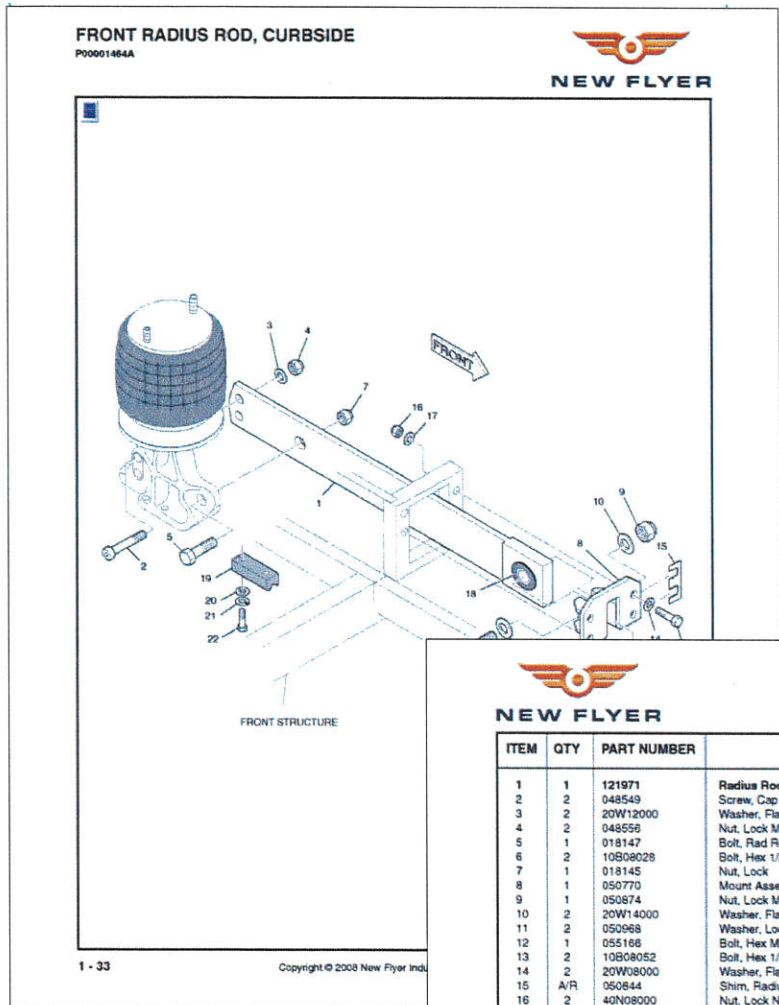
- ❑ Delivery Timeframe is variable depending on size of bus build and contract requirement. Normally with first bus delivery for electrical schematics and then last bus delivery for remaining drawings.
- ❑ Provides overall information on bus Major Systems in the form of 11x17 system layout drawings and schematics. Optional print on waterproof plastic synthetic paper is available. Each manual includes;
 - Major Component Layout (details major components on the bus)
 - Air System (overall & separate air line systems)
 - Electrical wiring diagrams, schematics and harnesses (engineering)
 - Hydraulic System (all cooling and mechanical systems)
 - HVAC System (components and lines)

- PLC Multiplexing System (network cables and I/O component locations)

Bus Transit Information Viewer (TIV) DVD

- New Flyer published manuals and drawings in electronic format on CD or DVD.
- The TIV uses documents converted into the industry standard Adobe ® Acrobat PDF format which is viewed with zero cost Adobe Reader software.
- Customized “home page”, linked TOCs to corresponding pages and bookmarks created for quick and easy document navigation.
- Customized CD labels and Jewel Case provided for easy identification.
- Delivery Timeframe is variable depending on size of bus build and contract requirement. Normally with Parts and Service manual delivery.
- High-speed full text searches can be made for a specific manual or across all manuals.
- Zoom into illustrations for greater detail
- Print any page
- Copy and paste info into other documents
- Tutorials and help files
- Some OEM supplier incl. (dest sign, Vansco, Aux Heater, Engine Parts)

Example of the Parts Manual



FRONT RADIUS ROD, CURBSIDE
P00001464A

NEW FLYER

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	121971	Radius Rod, Front (Incl. 18)
2	2	048549	Screw, Cap M18 x 80 mm
3	2	20W12000	Washer, Flat Hardened 3/4"
4	2	048556	Nut, Lock M18
5	1	018147	Bolt, Rad Rod Attaching
6	2	10S06028	Bolt, Hex 1/2" - 13 UNC x 1 3/4" Lg.
7	1	018145	Nut, Lock
8	1	050770	Mount Assembly, Radius Rod
9	1	050874	Nut, Lock M24 x 1.5
10	2	20W14000	Washer, Flat Hardened 7/8"
11	2	050968	Washer, Lock Plate
12	1	055166	Bolt, Hex M24 x 1.5 mm x 90 mm Lg.
13	2	10B08052	Bolt, Hex 1/2" - 13 UNC x 3 1/4" Lg.
14	2	20W08000	Washer, Flat Hardened 1/2"
15	A/R	050844	Shim, Radius Rod
16	2	40N08000	Nut, Lock Nylon 1/2" - 13 UNC
17	4	20W08000	Washer, Flat Hardened 1/2"
18	1	6322936	Bushing, Radius Rod
19	1	8112182	Bumper, Suspension
20	2	20W06000	Washer, Flat Hardened 3/8"
21	2	30W06000	Washer, Lock Spring Type 3/8"
22	2	10B06012	Bolt, Hex 3/8" - 16 UNC x 3/4" Lg.
23	1	096994	Cover, Radius Rod Bracket
24	M/B	055701	Adhesive, SIKKA 221 White
25	M/B	056388	Adhesive, SIKKA 252 White

Rev. A - 30/12/2008 Copyright © 2008 New Flyer Industries Canada ULC 1 - 34

Example of the Service Manual



NEW FLYER

RADIUS RODS

4.5.2.2. RH Radius Rod

1. Raise the vehicle. Refer to the General Information Section of this manual for procedure.
2. Remove access cover from the lower front curbside wheel well.
3. Disconnect leveling valve link and pull down on leveling valve arm to drain air from springs.
4. Loosen and remove two M18 Allen head bolts retaining rear part of radius rod to air spring support. See "Fig. 1-37: Removing & Installing Right Radius Rod" on page 43.

5. Loosen and remove shoulder bolt and nut retaining radius rod to front of spring support.
6. Remove four bolts retaining radius rod mount to frame.

NOTE:

Shims inserted between the frame and radius rod mount assemblies are used for alignment of the axle to the vehicle. Mark shim location and quantity for reassembly.

This adjustment is initially set at the factory and should not have to be modified unless the vehicle has been structurally damaged or the axle or radius rod has been replaced.

7. Slide radius rod and mount forward and out through access hole in wheel well.

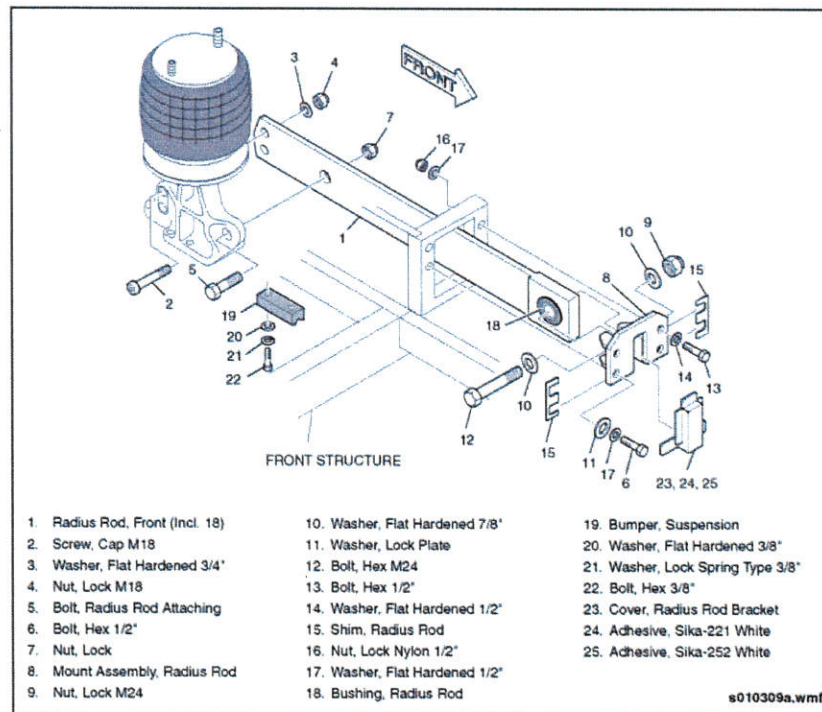




Fig. 1-37: Removing & Installing Right Radius Rod

Example of an Operator's Guide



NEW FLYER

CAPITAL METRO - AUSTIN
OPERATOR'S GUIDE
DIESEL 40FT. LOW FLOOR TRANSIT BUS




This operator's guide is effective for only those coaches with the following Identification Numbers:

SR1322

Vehicle Identification Number	Unit Number
5FYDSFV0X8C034939	2063
5FYDSFV068C034940	2064
5FYDSFV088C034941	2065
5FYDSFV0X8C034942	2066
5FYDSFV018C034943	2067
5FYDSFV038C034944	2068
5FYDSFV058C034945	2069
5FYDSFV078C034946	2070

Rev. A - 16/12/2008 Copyright © 2008 New Flyer Industries Canada ULC



NEW FLYER

SAFETY INFORMATION

2. SAFETY INFORMATION

Safety Procedures

Do not drive the vehicle if:

- Indicators, instruments or gauges show that a major vehicle operating system is malfunctioning.
- Exhaust fumes seep into the passenger compartment.
- Beneath the vehicle, puddles of engine oil, hydraulic fluid, or coolant have formed.
- Seating stanchions and grab rails are loose or damaged.
- Driving mirrors are broken, missing or cannot be properly adjusted.
- Any exterior or interior light is broken, discolored, or malfunctioning.

Report the occurrence of any of the above to maintenance personnel so the vehicle can be serviced before beginning revenue service.

- Do not operate the vehicle without fastening the seat-belt.
- Make sure obstructions do not block or interfere with your safe range of driving and operating vision.
- Have any debris or garbage removed from the passenger area and the doors. This is important to eliminate any foot obstructions that could cause tripping or falling.
- Make sure all exterior and interior access doors and panels are securely shut and latched.
- Do not smoke around the fuel storage areas, the fuel filling area or during refueling. Do not smoke in areas where fuel, hydraulic fluid, transmission oil or any other flammable fluid has leaked.

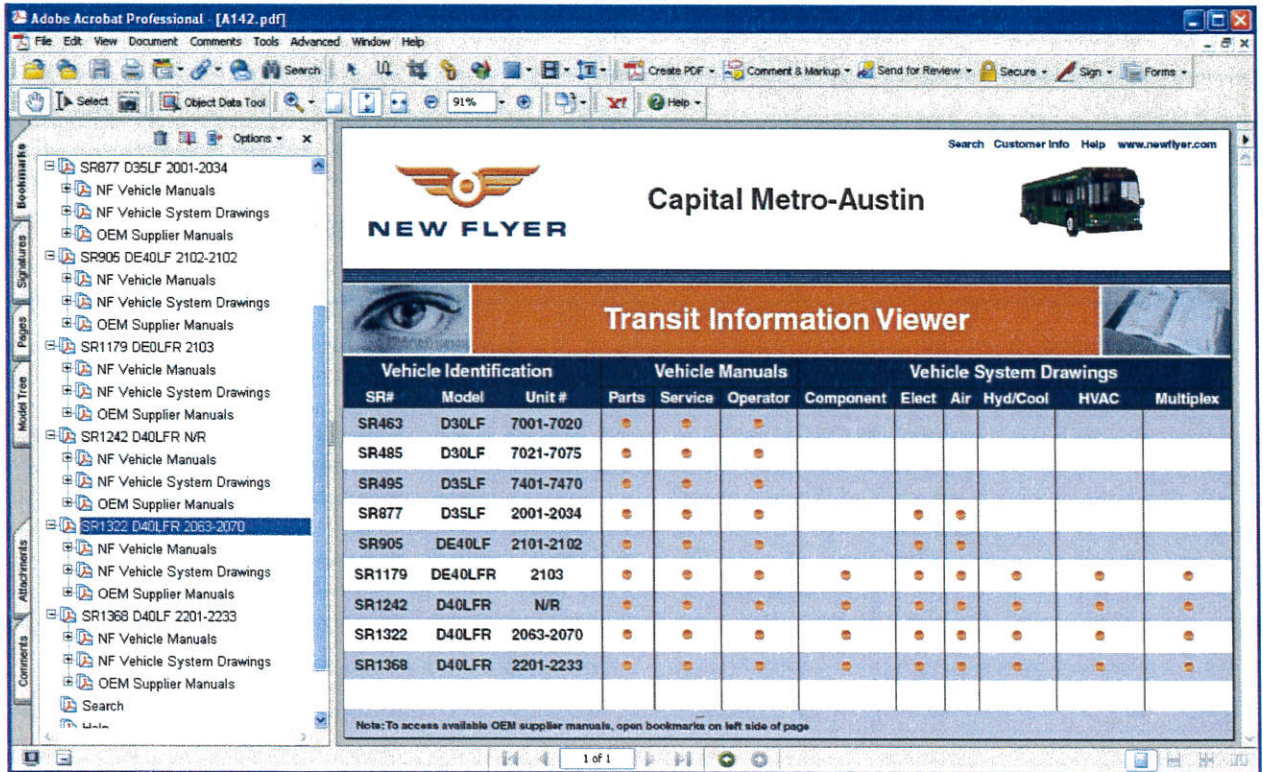
Safety Equipment

A hand-held fire extinguisher is located behind the driver's barrier. Use the extinguisher only after the vehicle is in a safe location, and all passengers are evacuated. Use only if there is no risk to your personal safety.

Safety triangles are located behind the driver's seat. Position these triangles at the front and rear of the vehicle to warn other drivers during emergency situations.

Rev. A - 16/12/2008 Copyright © 2008 New Flyer Industries Canada ULC 7

Example of the TIV



Capital Metro-Austin

Transit Information Viewer

Vehicle Identification			Vehicle Manuals			Vehicle System Drawings					
SR#	Model	Unit #	Parts	Service	Operator	Component	Elect	Air	Hyd/Cool	HVAC	Multiplex
SR463	D30LF	7001-7020	•	•	•						
SR485	D30LF	7021-7075	•	•	•						
SR495	D35LF	7401-7470	•	•	•						
SR877	D35LF	2001-2034	•	•	•		•	•			
SR905	DE40LF	2101-2102	•	•	•		•	•			
SR1179	DE40LFR	2103	•	•	•	•	•	•	•	•	•
SR1242	D40LFR	N/R	•	•	•	•	•	•	•	•	•
SR1322	D40LFR	2063-2070	•	•	•	•	•	•	•	•	•
SR1368	D40LFR	2201-2233	•	•	•	•	•	•	•	•	•

Note: To access available OEM supplier manuals, open bookmarks on left side of page



NEW FLYER

Transit Information Viewer

WMATA Washington

Revision: A207.15
June 1, 2009

SR759, SR814, SR1060,
SR1086/1128, SR1096,
SR1151/1166, SR1263/1355,
SR1265, SR1264

Copyright © 2009
New Flyer Industries Canada ULC.

DVD



Example of a System Layout Drawing

