Request for Pre-Offer Change or Approved Equal

This form must be used for requested clarifications, changes, substitutes or approval of items equal to items specified with a brand name and must be submitted as far in advance of the Due Date, as specified in "Questions, Clarifications and Omissions."

City of Greenville, North Carolina
BID #16-17-31

Request #: 1
Proposer: New Flyer of America Inc.
RFP Section: Price Adjustments, Price Adjustments
Page: 13

Questions/clarification or approved equal:

New Flyer requests approval to modify the following section to read:

. ."Trucks and Bus Bodies." **Notwithstanding anything else to the contrary contained herein, in the event that a price adjustment is required in respect of changes that are mandatory as a result of legislation or regulations that become effective after the date of the proposal submission, such price adjustment shall be negotiated in good faith by the City of Greenville and the Contractor.**

Reviston provides for required price adjustments in event of changes in regulations.

Agency action:

☐ Approved ☑ Denied
☐ See addendum ☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 2
Proposer: New Flyer of America Inc.
RFP Section: Delays, Delays
Page: 15

Questions/clarification or approved equal:

New Flyer requests approval to modify the following section to read:

...only if the delay **was due to the neglect or failure of the City of Greenville, or such other event beyond its control including but not limited to**, ~~relates~~ to a natural disaster, **floods, fires, acts of** war **or terrorism**, or strikes, **labor shortages, or lock-outs or shortages or loss of transportion**. ~~and was substantially and in fact the cause for the Contractor to miss the established delivery dates.~~

...

...and the duration of the extension, **acting reasonably**. The City of Greenville shall notify the Contractor of his decision in writing, **and upon acceptance, the time for completion of the work and/or the delivery dates shall be extended by the City of Greenville by a reasonable period of time after such event of delay has ended in order that the Contractor may complete the work or deliver the buses.**

Revisions clarifies force majeure provision.

Agency action:	☑ Approved	☐ Denied
	☐ See addendum	☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 3
Proposer: New Flyer of America Inc.
RFP Section: Documents, Delivery
Page: 16

Questions/clarification or approved equal:

New Flyer requests approval to provide build-specific technical manuals according to the below earliest possible schedule:

- Bus Operator's Guides - With First Bus Delivery
- Bus Service and Parts Manuals - 10 Business Days After First Bus Delivery
- OEM Major Component Supplier Manuals - 10 Business Days After First Bus Delivery

Manuals are build specific; changes and modifications may occur up to bus line exit, and therefore we offer the above best possible schedule

Agency action:

- ☑ Approved
- ☐ Denied
- ☐ See addendum
- ☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 4
Proposer: New Flyer of America Inc.
RFP Section: Documents, Updates
Page: 16

Questions/clarification or approved equal:

New Flyer requests approval to provide updates to New Flyer published bus technical manuals only. This does not include OEM component supplier manuals. It is the responsibility of each OEM component supplier to maintain the content in their documents.

Bus Parts Manuals are maintained for a period of 12 years, all other Bus technical manuals are maintained for a period of 6 years. Bus manuals can be updated with either revised PDF files on DVD or manual bulletins depending on the urgency of the issue. Manual Bulletins are delivered in PDF format via email.

Agency action:	☑ Approved	☐ Denied
	☐ See addendum	☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 5
Proposer: New Flyer of America Inc.
RFP Section: Documents, Manual Content
Page: 16

Questions/clarification or approved equal:

New Flyer requests approval to provide the New Flyer published bus manuals which include information on all components however, for more detailed information on major components such as Engine, Transmission, HVAC etc New Flyer will purchase and supply the OEM supplier published manuals.

Agency action:

☑ Approved ☐ Denied
☐ See addendum ☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

This form must be used for requested clarifications, changes, substitutes or approval of items equal to items specified with a brand name and must be submitted as far in advance of the Due Date, as specified in "Questions, Clarifications and Omissions."

City of Greenville, North Carolina
BID #16-17-31

Request #: 6
Proposer: New Flyer of America Inc.
RFP Section: Indemnification, Indemnification
Page: 17

Questions/clarification or approved equal:

New Flyer requests approval to modify the following section to read.

...and all **proven third party** liabilities, damages, claims, demands, liens, encumbrances, judgments...reasonable attorney's fees...subcontractors and suppliers.~~; and (2)...~~*[delete entire remainder of the paragraph except the following sentence.]* Each party shall promptly... or other proceeding thereunder. ~~The Contractor shall have sole...~~*[delete remainder of the paragraph].*

The obligations...caused ~~solely~~ by the negligent ..

Revisions remove defense provision in indemnity and limits indemnity to **proven** third party losses

Agency action:

☐ Approved ☑ Denied
☐ See addendum ☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 7
Proposer: New Flyer of America Inc.
RFP Section: Materials/Accessories, Materials/Accessories
Page: 17

Questions/clarification or approved equal:
New Flyer requests approval to modify the following section to read

...construction of the bus, **on a commercially reasonable industry standard**. This provision...

Revisions adds reasonableness standard.

Agency action:	☑ Approved	☐ Denied
	☐ See addendum	☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 8
Proposer: New Flyer of America Inc
RFP Section: Buy America Audit, Buy America Audit
Page: 19

Questions/clarification or approved equal:

New Flyer requests approval to add the following paragraph to the Buy America Audit section:

The City of Greenville and its representatives and agents agree to enter into a confidentiality agreement with the Contractor prior to commencing an audit, review or analysis in order to protect and maintain the confidentiality of the Contractor's information.

Revision provides for a confidentiality agreement in the event of an audit to protect New Flyer's proprietary interests.

Agency action:	☑ Approved	☐ Denied
	☐ See addendum	☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 9
Proposer: New Flyer of America Inc.
RFP Section: Post-Delivery and Final Acceptance, Post-Delivery and Final Acceptance
Page: 22

Questions/clarification or approved equal:

New Flyer requests approval to add the below as last sentence of the first paragraph:

The acceptance process shall be performed in accordance with the section of the contract entitled "Acceptance of Bus".

Revision cross-references the earlier acceptance provision, for certainty in the contract.

Agency action:	☑ Approved	☐ Denied
	☐ See addendum	☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

This form must be used for requested clarifications, changes, substitutes or approval of items equal to items specified with a brand name and must be submitted as far in advance of the Due Date, as specified in "Questions, Clarifications and Omissions."

City of Greenville, North Carolina
BID #16-17-31

Request #: 10
Proposer: New Flyer of America Inc.
RFP Section: Certificate of Acceptance, Certificate of Acceptance
Page: 22

Questions/clarification or approved equal:

New Flyer requests that bid document be altered to Delete paragraph on Conditional Acceptance, and replace it with the following :

Conditional Acceptance: If the City of Greenville conditionally accepts a bus, the City of Greenville shall pay the purchase price to the Contractor in respect of such conditionally accepted bus, but shall be entitled to withhold from the purchase price therefor an amount equal to the cost of rectifying the identified deficiencies, as determined by the City of Greenville and the Contractor, acting reasonably. The City of Greenville shall be entitled to withhold such amount until the deficiency relating to such withheld amount is corrected to the satisfaction of the City of Greenville acting reasonably.

Revision adds **reasonableness** to the bus acceptance terms.

If a bus is conditionally accepted , it can be put into revenue service and Greenville will pay the purchase price, witholding a **reasonable** amount.

Agency action:	☑ Approved	☐ Denied
	☐ See addendum	☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 11
Proposer: New Flyer of America Inc.
RFP Section: License to Subject Data, License to Subject Data
Page: New

Questions/clarification or approved equal:

New Flyer Requests to modify the section to read:

All "subject data", including specifications, technical data, records and reports, engineering drawings (including shop drawings and working drawings), manuals and instruction materials and computer or microprocessor software that is delivered or specified to be delivered under the contract shall remain the property of the Contractor; provided however, the City of Greenville shall have a royalty-free, non-exclusive, non-transferable and irrevocable license to use such subject data only for the purposes of operating and maintaining the buses.

Revision provides for clarification of license of City to use subject data. The said "subject data" is the IP of New Flyer and is the core of it's business. We are able to provide the City license to access and use the "subject data" for the purpose of operating and maintaining the buses.

Agency action:

- ☑ Approved
- ☐ Denied
- ☐ See addendum
- ☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 12
Proposer: New Flyer of America Inc.
RFP Section: Access to Onboard Operational Data
[NOTE: Only applicable NF Connect], Access to Onboard Operational Data
Page: New

Questions/clarification or approved equal:

New Flyer requests approval to modify the section to read:

The City of Greenville grants the Contractor the right to inspect, examine, download, and otherwise obtain any information or data available from components provided by the Contractor, including, but not limited to, any electronic control modules or other data-collection devices, to the extent necessary to enable the Servcie Provider to perform reliability maintenance analysis, corrective action and/or other engineering-type work for the buses.

Please note that this is only applicable to New Flyer Connect System and is requested in order to better service the City. We ask for access to on-board data on electronic and data-collection devices for maintenance, corrective action and engineering-type purposes.

Agency action:

- ☑ Approved
- ☐ Denied
- ☐ See addendum
- ☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 13
Proposer: New Flyer of America Inc.
RFP Section: INSIDE NOISE ABATEMENT.
Page: 23

Questions/clarification or approved equal:

New Flyer requests approval to provide a bus in which the noise level in the driver's area does not exceed 78 dBA.

Agency action:	☑ Approved	☐ Denied
	☐ See addendum	☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 14
Proposer: New Flyer of America Inc
RFP Section: OUTSIDE NOISE ABATEMENT,
Page: 23

Questions/clarification or approved equal:
External: New Flyer can provide the following:
Idle Sound Levels @ 5,500 rpm (max EMP fan speeds):
Curbside = 68 dB
Streetside = 83 dB
Pull-away sound levels @ 5,500 rpm (max EMP fan speeds):
Curbside = 72 dB
Streetside = 84 dB
All values above are measured values. All measurements are +/- 5db, should be added to the sound level measurements shown above due to discrete audible frequencies, and are measured in accordance to APTA procurement guide standards.

Agency action:
☑ Approved ☐ Denied
☐ See addendum ☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 15
Proposer: New Flyer of America Inc.
RFP Section: COOLING SYSTEM.
Page: 25

Questions/clarification or approved equal:

New Flyer requests approval to provide an EMP MH4 radiator with electric fans.

New Flyer is proposing this system to lower Life-Cycle Costs as result of improved fuel economy, reduced maintenance and greater up-time.

Please review Attachment E for additional information on the proposed cooling system

Agency action:

☑ Approved ☐ Denied
☐ See addendum ☐ See response below

Agency response:

NEW FLYER

NEW FLYER | Xcelsior

SALES INFORMATION BULLETIN

#231-005 | Model: Xcelsior | Lengths: 35', 40', & 60' | Propulsions: Diesel & CNG (excluding 60') Hybrid with ISL Engine

EMP Electric Cooling System-MH4 4GX4336DG

Value Proposition

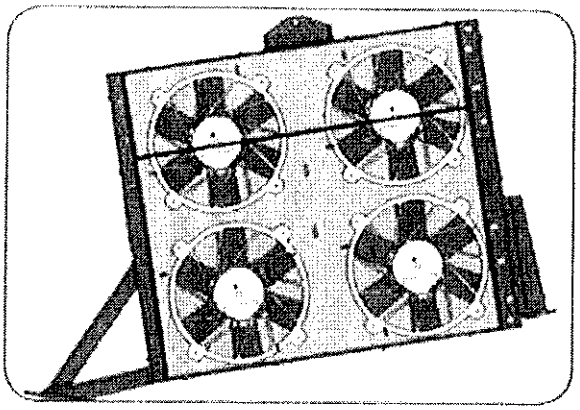
Lower Life-Cycle Costs as result of improved fuel economy, reduced maintenance and greater up time

Product Features

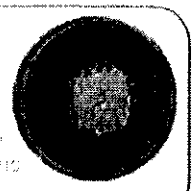
- Four 15" fans and motors are maintenance free
- One piece welded shroud assembly
- Heat exchangers are high performance, rugged aluminum bar/plate with fully machined cast and welded tanks
- EMP FIL APTA specified fans with finger guard (passes IQA tests with this guard). Brushless motor with integrated controller. Robust aluminum shroud and controller body, maintenance free
- Simplified harness with no address resistors and 57% less signal wires than previous model
- EMP Thermal Management Controller (TMC) J1939 CAN communication to vehicle, engine, transmission or hybrid drive (if equipped)
- TMC is capable of tracking 103 items for the life of the vehicle
- EMP has service tool with full dashboard
- Full diagnostics package
- Hybrid applications require roof mounted cooler

Benefits

- **Better Cooling Performance:** EMP's all-electric cooling meets all performance specifications and demonstrates better cooling performance at slower engine speeds than conventional hydraulic systems.
- **Improved Fuel Economy:** Customers have reported 5%-7% reduction in fuel consumption over conventional hydraulic cooling systems.
- **Increased System Reliability:** Electric cooling systems do not have the same inherent risk of reliability concerns such as hydraulic leaks. In addition, EMP offers a lower fin count than other e-fan systems, which reduces heat exchanger clogging.
- **Ease of Maintenance:** EMP's electric cooling system incorporates brushless motor with an integrated controller that is maintenance free. In addition, the system incorporates a reverse fan feature for cleaning the radiator.

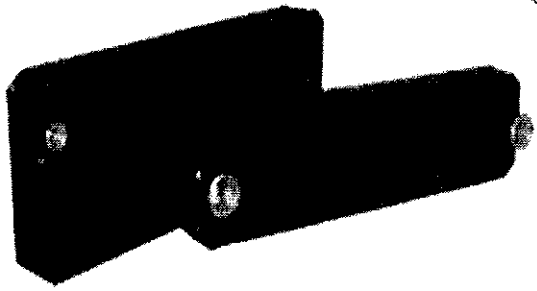


MH4 4GX4336DG
4 fans (15")
Full Diagnostic



FIL 15" Electric Fans

TMC Fan Controllers



Optimized Radiator and CAC

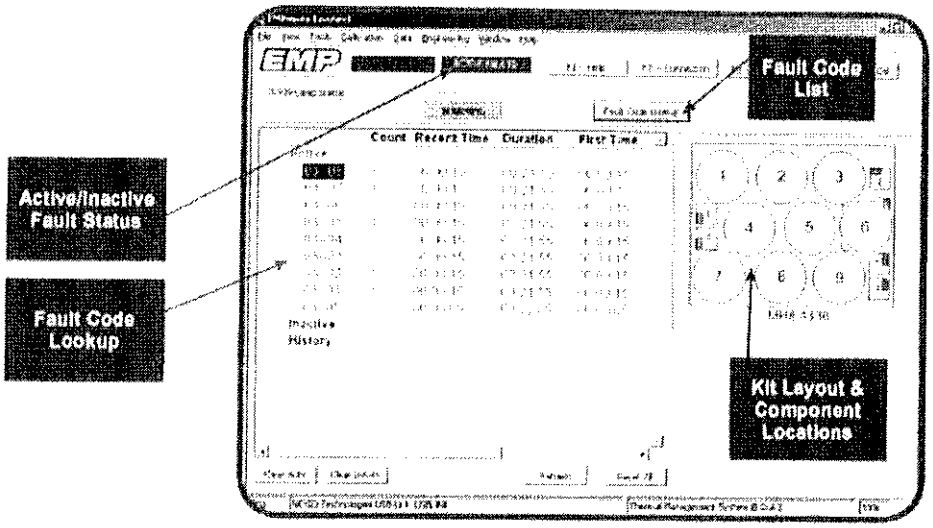
NEW FLYER

NEW FLYER | Xcelsior®

SALES INFORMATION BULLETIN

Full Diagnostics

As an optional feature, an E-Link & full diagnostics package is available with the EMP cooling system. With this diagnostics package technicians can analyze valuable information related to individual fans, controllers and fuses via pc based software as shown below.



Operations/Procedures

The electronic cooling system is an electric-only fan system that replaces the traditional hydraulic driven mechanical fan. The system is electronically controlled to cool both charged intake air and engine coolant separately.

The electric fans are divided into 2 groups:

1. Engine coolant fans
2. Shared fans

The fans operate at variable speeds and intervals as dictated by the Electronic Fan Controller. The system is independent of engine speed and control, is capable of providing full-load cooling at engine idle and reduces the likelihood of engine compartment fires by eliminating the hydraulic fan system.

Maintenance is easy with a manual reverse feature. The manual reverse system allows the fans to turn in the opposite direction. Instead of sucking air into the radiator, the reverse fan pushes the air from the engine compartment to the outside, resulting in the removing of dirt and debris accumulated in the radiator fins.

NEW FLYER

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SALES INFORMATION BULLETIN

Service/Repair

Cleaning

In the event that the engine overheats and the water level and thermostat operation have been found to be satisfactory, it may be necessary to clean and flush the entire cooling system. To do so, remove scale formation by using a reputable and safe de-scaling solvent. Immediately after using the de-scaling solvent, neutralize the system with a neutralizer.

Reverse flushing

After the radiator has been thoroughly cleaned, it should be reverse flushed. Reverse flushing is accomplished by hot water, under pressure, being forced through the cooling system in a direction opposite to the normal flow of coolant. It will loosen and force deposits out.

Miscellaneous cooling checks

In addition to the above cleaning procedures, the other components of the cooling system should be checked periodically to keep the engine operating at peak efficiency. The cooling system hoses, thermostats and surge tank pressure cap should be checked and replaced if found to be defective.

When water connection seals and hoses are installed, be sure the connecting parts are properly aligned and the seal or hose is in its proper position before tightening the clamps. All external leaks should be corrected as soon as detected.

The fan shroud must be properly positioned and tight against the radiator core to prevent recirculation of air which may lower the cooling efficiency.

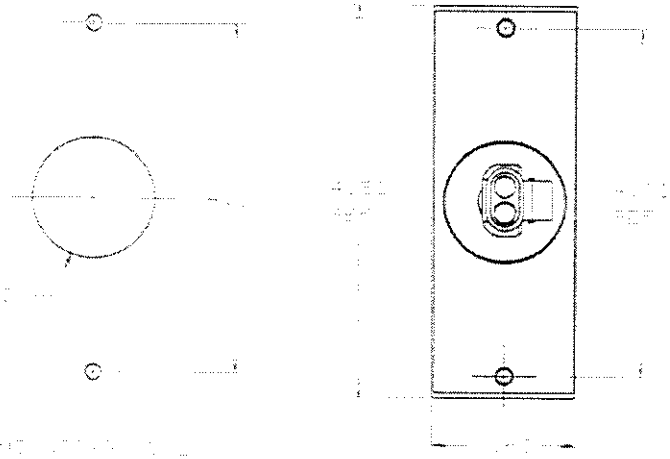
Maintenance

Refer to the Preventive Maintenance Section of the New Flyer Maintenance manual for scheduled maintenance intervals and requirements (EMP Troubleshooting Manual).

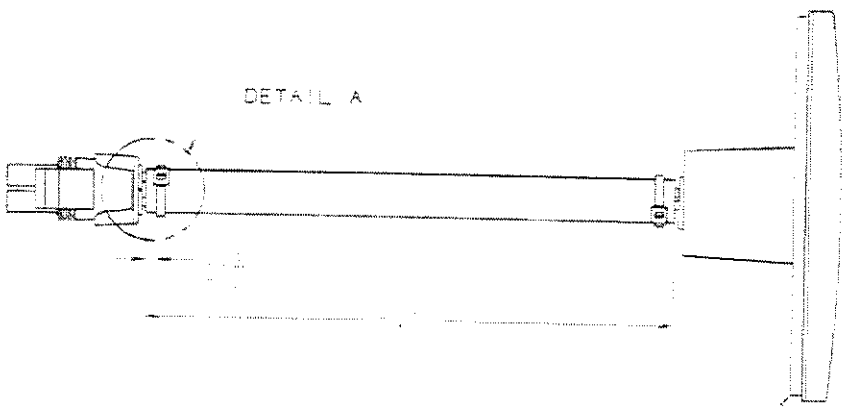
Warranty

- Base warranty is 3 year/150,000 miles.
- Extended warranty packages available.

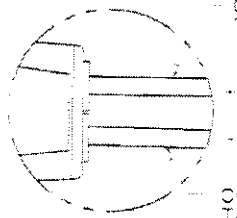
NOTE: FOR INSTALLATION DRAWINGS PLEASE REFER TO ATTACHED MRP BOM SHEET FOR PARTS LISTING



DETAIL A



GASKET



CONNECT RED WIRE TO PIN A

CONNECT BLACK WIRE TO PIN B

DETAIL A

DO NOT SCALE DRAWING			
DIMENSIONS IN [illegible] ARE IN m.m.			
THD ANGLE			
DRAWN BY			
LUKE KRAYNYK			
DATE (DD-MM-YY)	REV	DESCRIPTION	ECO
29-SEP-16			

MATERIAL	UNSPEC'D TOLS.	DEC. IN.
	.X	±.12
WEIGHT	.XX	±.06
	.XXX	±.03
	HOLE DIA.	±.015
	BEND RADII	±.03
	ANGLE TOL.	±1°
TREATMENT	SIMILAR TO	
NONE		

TITLE

ASSY-MARK LAMP AMB LED

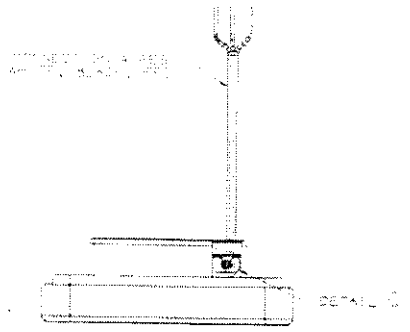
NEWLYTE

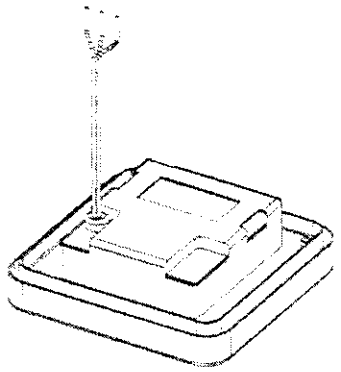
PART Nº

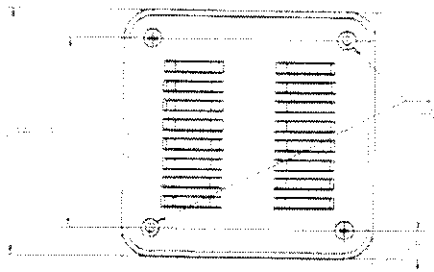
052949

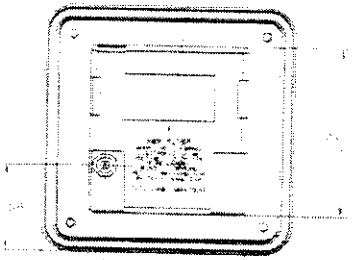
SCALE 1 : 1 | C | SHEET 1 OF 1

REPORT ALL ERRORS TO ENG. DEPT.









Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 16
Proposer: New Flyer of America Inc.
RFP Section: COOLING SYSTEM,
Page: 25

Questions/clarification or approved equal:

NF requests approval to remove the requirement for a water filter. Per latest input from Cummins, a water filter is no longer required as modern coolants contain anti-corrosion additives, rendering the water filter redundant.

Please Review Attachment F for additional information and confirmation

Agency action:	☑ Approved	☐ Denied
	☐ See addendum	☐ See response below

Agency response:

To connect the intake air temperature/pressure sensor with the engine harness, a jumper wiring harness is required. The jumper wiring harness is available from Cummins in 4 ft, 7 ft, or 10 ft lengths. The engine harness breakout connector for the intake temperature/pressure sensor is located below the turbocharger. For additional details please refer to AEB 15.140.

E. Turbocharger System

An electronically actuated variable geometry turbocharger (VGT) water-cooled design is used on ISL9 2013 engines, now with a smaller frame size. The 12 V VGT is machined from solid (MFS) compressor wheel. The 24 V VGT is also a MFS compressor wheel. No OEM plumbing and wiring is required to support this VGT control. The electronic turbocharger actuator will have increased torque capability and avoids the need for external coolant lines. The actuator will continue to be mounted on the top of the turbocharger.

Five turbocharger locations will be offered: Low Mount Rear Out (LMRO, aLMRO), Middle Mount Rear Out (MMRO), and High Mount Rear Out (HMRO, HMRO-SF). Please see GCE for additional details on these locations and offerings.

The turbocharger compressor exhaust outlet pipe connection is a full marmon designed for 103 mm (3.5 in) diameter tubing. The air transfer connections (IT option) are all carry over from the ISL2010 engine. Additional details can be found on GCE.

F. Exhaust Gas Recirculation (EGR) System

The ISL9 2013 engine is equipped with a cooled EGR system, similar to the ISL2010 engine with valve durability improvements. The EGR control valve is mounted on cold side of the engine. The EGR components (valve body, plumbing, etc.) surface temperature can reach over 218 °C (425 °F) during normal operation. Some components will be wrapped to minimize the impact on the OEM components. Care should be taken in routing OEM components, such as harnesses, hose and other heat sensitive hardware near these components.

G. Compressed Air System and Accessory Drives

Cummins/Wabco single cylinder 18.7 CFM air compressor with balanced pressure reduction valve and 125 ft-lb drive through torque capability is continued on the ISL9 2013 engine. The air compressor has an 11-tooth, SAE A Rear Flange and supports either natural aspiration or turbocharged aspiration applications.

Additionally, Cummins/Wabco single cylinder 18.7 CFM air compressor with 155 ft-lb drive through torque capability is available on the ISL9 2013 engine. The air compressor has a 13-tooth, SAE 22-4 spline, 101-2 rear flange (SAE B), and supports either natural aspiration or turbocharged aspiration applications. A Cummins/Wabco twin cylinder 30.4 CFM air compressor with a 13-tooth, 155 ft-lb/ 11-tooth, 125 ft-lb drive through torque option, turbocharged or naturally aspirated, is also available. No non-Cummins or OEM supplied air compressors are allowed.

The air discharge port is a M27 x 2 straight thread o-ring connection and is oriented to the back of the engine. Other discharge fitting options are available. Please check the option database on GCE for the available CD options, or contact your Cummins application engineer for further information.

Optional gear driven accessory drive (HD 9099) is available on the fuel pump side of the engine on the front gear housing when no air compressor is used. The drive runs at engine speed (1:1 ratio) and is clockwise rotation (viewed from the front of the engine). This is the same direction as the engine. The maximum torque capability of the drive is 240 Nm (180 lb-ft) at the accessory drive gear (82-2 rear flange with a 19-4 spline).

In order to provide the required drive torque, the spline shaft of the accessory must engage the spline drive on the engine properly. For more details, see AEB 20.11 "Automotive and Industrial Installation Requirements - Air Compressor Systems".

H. Cooling System

The coolant flow curves for the ISL9 2013 are shown on the GCE web site under ISL9 2013 Ratings. The maximum allowable top tank temperature will remain 107 °C (225 °F). The nominal setting for the radiator pressure cap must be a minimum of 103 Kpa (15 psi). A fully deaerating cooling system and a low coolant level sensor are required

The corrosion resistor (WF option) is not required on the ISL9 2013 engines. Cummins will not support engine-mounted corrosion resistor options However, optional, off-engine mounted, kitted WF options (filter, filter head, fittings, and bracket) is available. OEM's will have to provide the plumbing to complete the filter installation. OEM's may also install their own corrosion filter (remote mounted), provided it meets Cummins specifications See the ISL9 2013 installation drawing on the GCE website for details on supply location and return locations.

All coolants must meet the standards documented in AEB 99.01 "Engine Coolant Performance Specifications" The ISL9 2013 engine cooling system is compatible with extended life coolants without adding silicates

See the engine installation drawing for OEM connection details. See performance curves & datasheets for the heat rejection data.

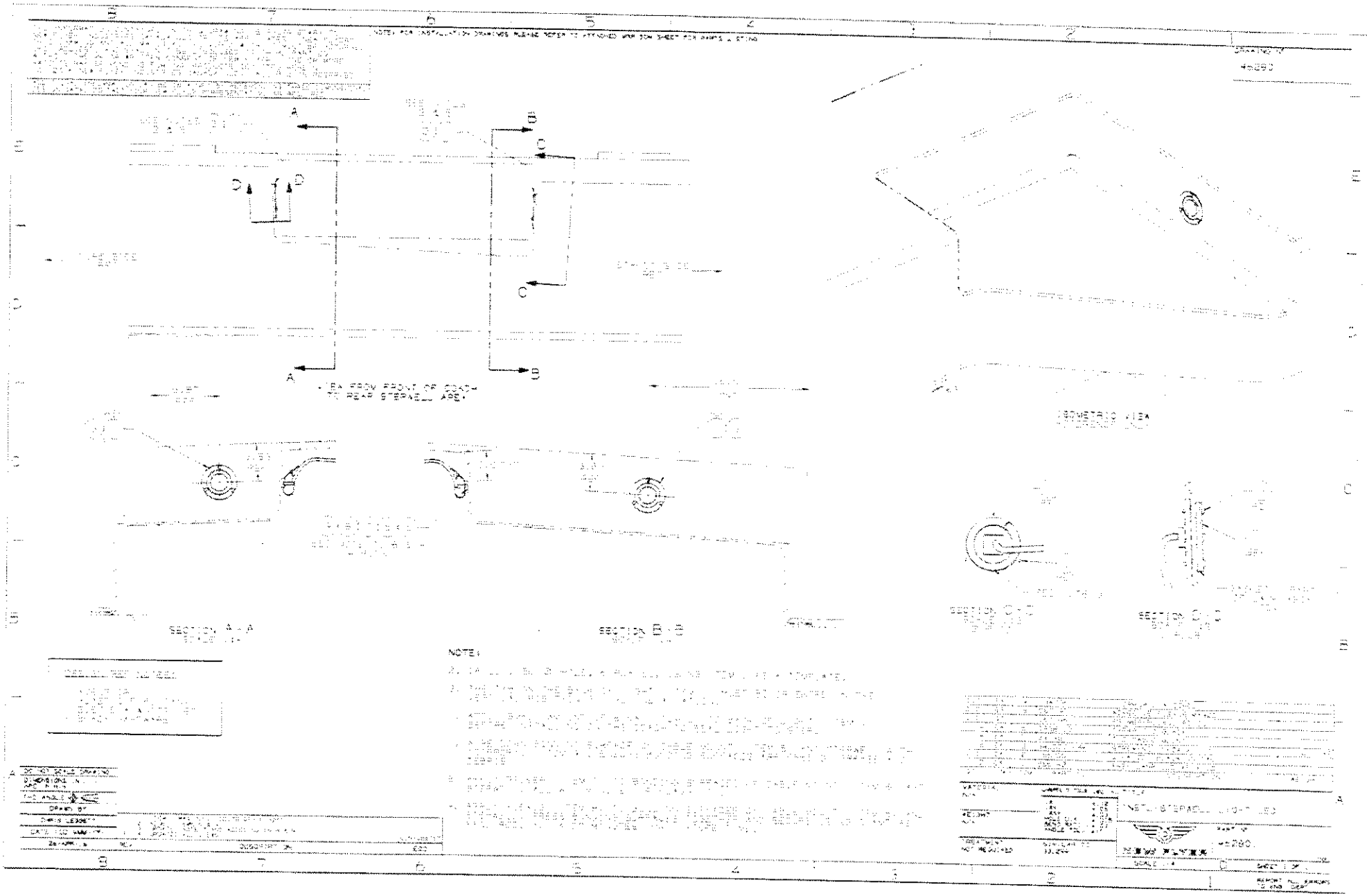
On the ISL9 2013 engine, there are two coolant vent ports on the HMRO turbo configuration option (one on the top front of the EGR cooler and the other on the top of the EVGT actuator) that must be vented to the radiator top tank. The vent line must be installed by the OEM. The VG turbo has a water-cooled bearing housing. The two engine coolant vents may be connected together to provide a single engine vent connection to the coolant tank. The MMRO and LMRO only have one vent location on top of the EGR cooler. See the ISL9 2013 installation drawing on the GCE website for the details. Coolant venting must comply with AEB 21.50.

The middle coolant ports along the top side of the cylinder head are not accessible for OEM use. Only the front and rear ports are available; the port size remains the same at 1/2 inch NPT on the top side of the cylinder head and 3/4 inch NPT on the rear of the cylinder head. Please see the ISL9 2013 installation drawings on the GCE website for additional details.

Cab heater supply is available from the upper port on the block at the rear of the engine and through the ports on the cylinder head The lower port on the block (3/4 inch NPT) is not available for cab heater supply. The coolant coming out the cab heater must be returned to the water inlet connection, close to the water pump. See the ISL9 2013 installation drawing on the GCE website for details on supply location and return locations.

The maximum draw of coolant from the engine towards accessories - (Cab heater, fuel tank heater, sleeper cab etc) is a maximum of 10 gpm @ 2200 rpm from the cylinder head ports combined A maximum of 20 gpm @ 2100 rpm can be drawn from the port on the cylinder block and cylinder head combined but should not exceed the max draw of 10 gpm @ 2100 from cylinder head ports. Air Compressor coolant flow, DEF coolant flow and TK bypass flow are excluded from this maximum flow requirement.

With the introduction of the SCR system, one of the ports that was previously available for customer use continues to be used to supply coolant to the SCR system. Coolant is then returned to the water pump inlet or water inlet connection. SCR coolant supply must comply with AEB 21.112 Figure 8: Cooling System ports illustrates that ports that will not be available to the OEM due to the introduction of SCR.



Request for Pre-Offer Change or Approved Equal

This form must be used for requested clarifications, changes, substitutes or approval of items equal to items specified with a brand name and must be submitted as far in advance of the Due Date, as specified in "Questions, Clarifications and Omissions."

City of Greenville, North Carolina
BID #16-17-31

Request #: 17
Proposer: New Flyer of America Inc.
RFP Section: COOLING SYSTEM,
Page: 25

Questions/clarification or approved equal:

NF requests approval to provide Ideal clamps. They are functionally equivalent to Otiker but from a different vendor.

Agency action:

☑ Approved ☐ Denied
☐ See addendum ☑ See response below

Agency response: Must Meet Spec Approval

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 18
Proposer: New Flyer of America Inc.
RFP Section: DRIVE SHAFT, DRIVE SHAFT
Page: 26

Questions/clarification or approved equal:

New Flyer requests approval to provide a 1710 series propeller shaft supplied by Prop Shaft Supply Inc. These products are similar in performance and use, however New Flyer doesn't presently work with Spicer. We request approval based on performance versus selection based on Brand Name.

Agency action:

☑ Approved ☐ Denied
☐ See addendum ☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 19
Proposer: New Flyer of America Inc.
RFP Section: HUBS, WHEELS AND TIRES, HUBS, WHEELS AND TIRES
Page: 26

Questions/clarification or approved equal:

New Flyer requests approval to provide Michelin XinCity Z size 305/70R22.5 tires, New Flyer's Xcelsior platform can only accommodate 305/70R22.5 tires. These tire dimentions are inherent to the bus design, changing tire size would essentially require a bottom up redesign of the bus (frame, body, drivetrain etc). The tire size are purposely selected to support the weight of the bus and provide riders a quiet and comfortable ride. The proposed tires have prooven reliable in revenue service on our North American Xcelsior(r) and MiDi(r) fleet couting aproximately 9000 buses.

Agency action:

☑ Approved ☐ Denied
☐ See addendum ☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 20
Proposer: New Flyer of America Inc.
RFP Section: HUBS, WHEELS AND TIRES,
Page: 26

Questions/clarification or approved equal:

NF requests approval to remove the requirement for a Hubodometer guard. The hubodometer does not protrude from the wheel, mitigating the risk of it being damaged.

Agency action:	☒ Approved	☒ Denied
	☐ See addendum	☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 21
Proposer: New Flyer of America Inc.
RFP Section: SUSPENSION, SUSPENSION
Page: 27

Questions/clarification or approved equal:

New Flyer requests approval to delete the requirement for Anti-Sway bars. Our Xcelsior model has passed the Altoona double Lane change test without the need for adding additional Anti-Sway bars. Anti-Sway bars add weight and decreased fuel efficiency and are therefore not recommended for the proposed application.

Agency action:

- ☑ Approved
- ☐ Denied
- ☐ See addendum
- ☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 22
Proposer: New Flyer of America Inc.
RFP Section: SUSPENSION.
Page: 27

Questions/clarification or approved equal:

New Flyer requests approval to provide kneeling functionality that is at the full discretion and control of the driver. The bellows do not automatically reinflate when the front door is closed.

Agency action:

- ☑ Approved
- ☐ Denied
- ☐ See addendum
- ☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 23
Proposer: New Flyer of America Inc.
RFP Section: STEERING,
Page: 27

Questions/clarification or approved equal:

New Flyer requests approval to provide the Sheppard M110 Steering Gear.

Sheppard Co., Inc. has a rich history and American manufacturing excellence. Located in Hanover, Pennsylvania.

Please review Attachment G for additional information on the offered Sheppard M110 steering gear

Agency action:

☑ Approved ☐ Denied
☐ See addendum ☐ See response below

Agency response:

SHEPPARD

M110

DESCRIPTION & CHART

The M110 is designed for heavy duty vocational truck and bus applications with a front axle rating between 16,000 and 20,000 lbs

Front Axle Range	6-10k lbs (2700-4500 kg)	10-14.6k lbs (4500-6600 kg)	10-14.6k lbs (4500-6600 kg)	14.6-18k lbs (6600-8200 kg)	14.6-18k lbs (6600-8200 kg)	18-23k lbs (8200-10400 kg)
Output Torque @ Rated Pressure & 90% Efficiency	35,058 in-lbf (3961 Nm)	45,436 in-lbf (5134 Nm)	46,345 in-lbf (5236 Nm)	59,300 in-lbf (6700 Nm)	59,760 in-lbf (6752 Nm)	78,825 in-lbf (8906 Nm)
Rated Pressure	2,683 psi (185 bar)	2,683 psi (185 bar)	2,350 psi (162 bar)	2,175 psi (150 bar)	2,756 psi (190 bar)	2,175 psi (150 bar)
Minimum Pump Flow @1.5 HWT/s	2.4 GPM (9.1 LPM)	3.0 GPM (11.4 LPM)	3.0 GPM (11.4 LPM)	3.5 GPM (13.2 LPM)	3.9 GPM (14.8 LPM)	4.8 GPM (18.2 LPM)
Pump Flow Range	2.4-3.4 GPM	3.0-4.0 GPM	3.0-4.0 GPM	3.5-4.5 GPM	3.9-4.9 GPM	4.8-5.8 GPM
Single Steering Gear	(9.1-12.9 LPM)	(11.4-15.1 LPM)	(11.4-15.1 LPM)	(13.2-17.0 LPM)	(14.8-18.5 LPM)	(18.2-22.0 LPM)
Ratio	16.9:1	16.9:1	18.9:1	23.0:1	16.9:1	23.0:1
Gear Travel	95°	95°	95°	100°	95°	96°
Normal System Operating Temperature	-40 to 220 °F (-40 to 104 °C)	-40 to 220 °F (-40 to 104 °C)	-40 to 220 °F (-40 to 104 °C)	-40 to 220 °F (-40 to 104 °C)	-40 to 220 °F (-40 to 104 °C)	-40 to 220 °F (-40 to 104 °C)
Not-To-Exceed Temperature	250 °F (121 °C)	250 °F (121 °C)	250 °F (121 °C)	250 °F (121 °C)	250 °F (121 °C)	250 °F (121 °C)
Output Shaft Diameter	2.00 in (50.8 mm)	2.00 in (50.8 mm)	2.00 in (50.8 mm)	2.25 in (57.2 mm)	2.25 in (57.2 mm)	2.50 in (63.5 mm)
Approximate Dry Weight	60 lbs (27.2 kg)	70 lbs (31.8 kg)	75 lbs (34.0 kg)	110 lbs (49.9 kg)	85 lbs (38.6 kg)	150 lbs (68.0 kg)
Pump Flow Range Dual Steering Gears @1.0 HWT/s & 90% Efficiency						
w/ MD83 Slave	4.0-5.5 GPM (15.1-20.8 LPM)	4.5-6.0 GPM (17.0-22.7 LPM)	4.6-6.1 GPM (17.4-23.1 LPM)	5.0-6.5 GPM (18.9-24.6 LPM)	5.3-6.8 GPM (20.1-25.7 LPM)	6.0-7.5 GPM (22.7-28.4 LPM)
w/ HD94 Slave	N/A	5.0-6.5 GPM (18.9-24.6 LPM)	5.1-6.6 GPM (19.3-25.0 LPM)	5.5-7.0 GPM (20.8-26.5 LPM)	5.5-7.0 GPM (20.8-26.5 LPM)	6.5-8.0 GPM (24.6-30.3 LPM)
w/ M100 Slave	N/A	N/A	5.3-6.8 GPM (20.1-25.7 LPM)	5.6-7.1 GPM (21.2-26.9 LPM)	N/A	6.6-8.1 GPM (25.0-30.7 LPM)
w/ M110 Slave	N/A	N/A	N/A	6.0-7.5 GPM (22.7-28.4 LPM)	N/A	7.0-8.5 GPM (26.5-32.2 LPM)
w/ SD110 Slave	N/A	N/A	N/A	6.5-8.0 GPM (24.6-30.3 LPM)	6.5-8.0 GPM (24.6-30.3 LPM)	7.3-8.8 GPM (27.6-33.3 LPM)
w/ XD120 Slave	N/A	N/A	N/A	N/A	N/A	8.0-9.5 GPM (30.3-36.0 LPM)
Output Torque Range @ Rated Pressure of Master Gear & 90% Efficiency						
w/ MD83 Slave	70,116 in-lbf (7922 Nm)	80,497 in-lbf (9095 Nm)	77,052 in-lbf (8706 Nm)	87,720 in-lbf (9911 Nm)	95,772 in-lbf (10821 Nm)	107,245 in-lbf (12117 Nm)
w/ HD94 Slave	N/A	90,878 in-lbf (10268 Nm)	86,144 in-lbf (9733 Nm)	96,133 in-lbf (10862 Nm)	106,435 in-lbf (12026 Nm)	115,661 in-lbf (13068 Nm)
w/ M100 Slave	N/A	N/A	92,690 in-lbf (10473 Nm)	102,194 in-lbf (11546 Nm)	N/A	121,719 in-lbf (13752 Nm)
w/ M110 Slave	N/A	N/A	N/A	118,600 in-lbf (13400 Nm)	N/A	138,125 in-lbf (15606 Nm)
w/ SD110 Slave	N/A	N/A	N/A	106,462 in-lbf (12029 Nm)	119,520 in-lbf (13504 Nm)	125,987 in-lbf (14235 Nm)
w/ XD120 Slave	N/A	N/A	N/A	N/A	N/A	157,650 in-lbf (17812 Nm)

Gear Options	Steer Axle Weight Rating									
	6-8k	10k	12k	13.2k	14.6k	16k	18k	20k	23k	>23k
MD83	X	X								
M100		X	X	X	X					
HD94		X	X	X	X					
M110					X	X	X			
SD110					X	X	X			
XD120							X	X	X	
Dual*						X	X	X	X	X

*Dual steering gear configurations

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 24
Proposer: New Flyer of America Inc.
RFP Section: STEERING, STEERING
Page: 28

Questions/clarification or approved equal:

New Flyer's grease fittings are not all accessible to allow a rigid tube end grease gun to be used. A flexible hose end will be required.

Agency action:

☑ Approved ☐ Denied
☐ See addendum ☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 25
Proposer: New Flyer of America Inc
RFP Section: FUEL TANK (DIESEL), FUEL TANK (DIESEL)
Page: 28

Questions/clarification or approved equal:

New Flyer requests approval to provide a fuel tank constructed of cross-linked polyethylene which still contains the necessary baffles required to control the moving of the liquid inside the tank.

The Xclesior(r) platform was designed with a guideline to reduce weight and improve fuel efficiency and choosing the polyethelene fuel tank serves that goal. The entire fuel system is compliant to APTA Whitebook guidelines and the tank comes with a 1yrs/50,000miles warranty

Please refer to Attachment D for additional information on the proposed Diesel Fuel Tank

Agency action:

- ☑ Approved
- ☐ Denied
- ☐ See addendum
- ☐ See response below

Agency response:

NEW FLYER

NEW FLYER Xcelsior®

SALES INFORMATION BULLETIN

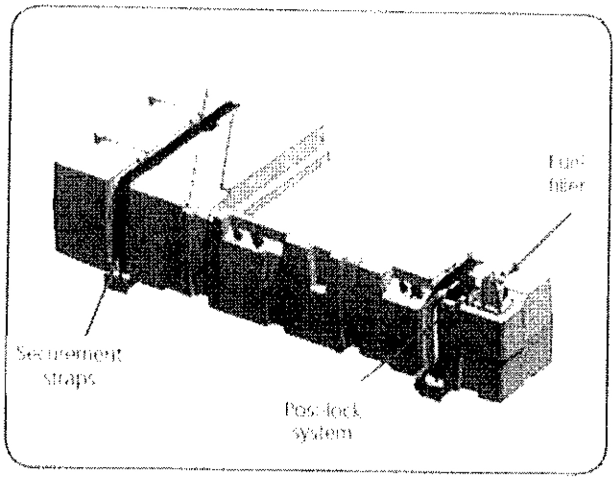
#241-003 | Model: Xcelsior® | Lengths: 35', 40' and 60' | Propulsions: Diesel, Diesel-electric

Polyethylene Diesel Fuel Tank

Product Features

The fuel system includes

- Single cross-linked polyethylene fuel tank
- Fuel lines and check valve
- Fuel filters
- Fuel pump
- Fuel filler

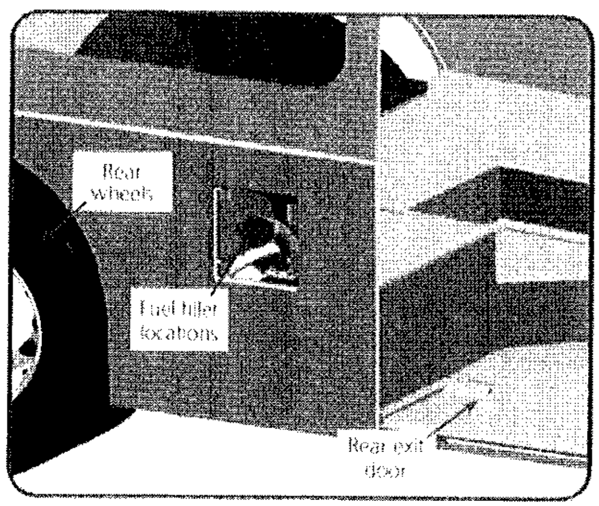


Fuel Tank

A single fuel tank is mounted transversely in the vehicle chassis, forward of the rear axle. A fuel filler neck assembly is bolted to the tank and provides mounting locations for the fuel-filler adapter, pressure relief valve, and fuel-level control valve. Fuel tank fill access is provided through a hinged door on the curbside of the vehicle. Supply and return fuel hoses connect the fuel tank with the engine.

The tank is constructed of cross-linked polyethylene with a nominal thickness of 0.300". The tank is internally baffled to prevent fuel sloshing regardless of fill level.

- All lengths of diesel buses come standard with a 125 useable US Gal (473 l)-size tank and holds up to 144 US gallons (545 l).
- Non-artic diesel-hybrid buses come standard with a 100 useable US Gal (378 l)-size tank and holds up to 144 US gallons (545 l).
- Artic diesel-hybrid buses come standard with a 125 useable US Gal (473 l)-size tank and holds up to 144 US gallons (545 l).



NEW FLYER

NEW FLYER Xcelsior™

SALES INFORMATION BULLETIN

The fuel tank assembly is securely mounted to the bus with two support channels on both sides and a tubular structure in the center. The fuel tank is mounted to the support channels by means of straps to prevent movement. The lightweight design of the tank and the design of the tank supports make the tank easy to remove for maintenance.

Fuel Lines

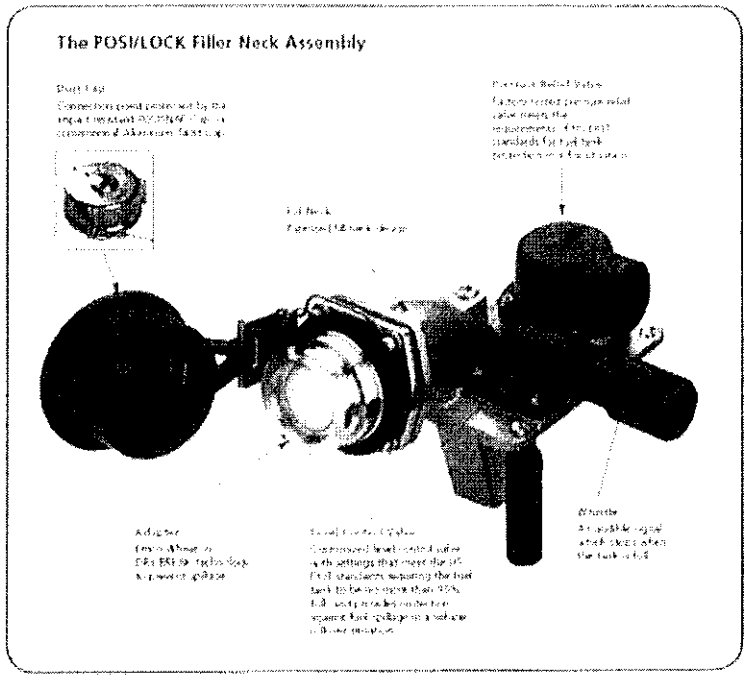
The Xcelsior™ bus comes standard with a biodiesel-compliant fuel system. The fuel lines from the fuel tank to the bulkhead are nylon fuel-grade tubing and orange in color in both .38" and .62" outer diameter. Fuel lines in the engine compartment are Eaton GH100 diesel and biodiesel compatible hoses. No copper fuel lines are used, only stainless steel.

Fuel Filters

The primary fuel filter is bracket-mounted on the outside of the engine compartment. The filter assembly consists of a filter head and a replaceable spin-on filter element, with a Water-in-Fuel sensor and water drain valve. The secondary fuel filter is bracket-mounted on the outside of the engine compartment. The filter assembly consists of a filter head and a replaceable spin-on filter element with a Water-in-fuel sensor and water drain valve.

Fuel Filler

By default, Xcelsior™ is offered with an Eaton FUELMASTER 10's automatic, dry-break fueling filler system although customers can request a non-pressure fill type system as an option. The dry-break fuel filler is located behind the rear door on the outside of the bus. The filler cap is recessed into the bus body behind a hinged access door. The filler accommodates a 1.5" diameter nozzle and a fill rate of 20 US gallons (75.5 L) per minute of foam-free fuel without spitting back or causing the nozzle to shut off before the tank is full. An audible signal indicates when the tank is essentially full.



NEW FLYER

NEW FLYER Xcelsior

SALES INFORMATION BULLETIN

Operations/Procedures

On engine start-up, the lift pump draws fuel from the fuel tank through a primary fuel filter. The low pressure side of the fuel pump discharges fuel through the fuel manifold, the secondary fuel filter and to the inlet of the high pressure fuel pump. High pressure fuel is delivered through a common fuel rail to the fuel injectors. Surplus fuel returns to the fuel tank through a return line.

Service/Maintenance

Replacement of the primary and secondary fuel filter is recommended every 6,180 miles (9,900 km), six months, or 500 operating hours, whichever comes first. Opening of the drain at the bottom of the fuel tank to drain off water and/or sediment is required every 30,000 miles (48,000 km). Every 60,000 miles (96,000 km) or twelve months, whichever comes first, all fuel tank mountings and brackets should be tightened. At the same time, the fuel tank cap seal, the breather hole in the cap, and the condition of the flexible fuel lines should be checked. A thorough inspection of all fuel hoses is required annually for cover damage and for damaged, worn, twisted, crimped, brittle, cracked or leaking lines. Replacement of all hoses in or out of machinery every five years or during major overhaul is recommended.

Examples of detailed maintenance and repair instructions from existing bus service manuals can be supplied upon request.

Warranty

Fuel system components are covered by a 1 year, 50,000 mile warranty.

Compliance

The Xcelsior® fuel system is compliant to APTA Whitebook guidelines. The fuel pickup location ensures continuous full power operation on a six percent upgrade for more than 15 minutes starting with no more than 25 US gallons (95 L) of fuel over the unusable amount in the tank for the 40' bus. The bus will operate at idle on a six percent downgrade for more than 30 minutes starting with no more than 10 US gallons (38 L) of fuel over the unusable amount in the tank.*

* Report TR09-35 Xcelsior® Fuel Tank 6% grade test

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 26
Proposer: New Flyer of America Inc.
RFP Section: FUEL TANK (DIESEL),
Page: 28

Questions/clarification or approved equal:

New Flyer requests approval to provide a permanent decal with the requested information that is not visible through the fuel fill door.

Agency action:

- ☑ Approved
- ☐ Denied
- ☐ See addendum
- ☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 27
Proposer: New Flyer of America Inc.
RFP Section: FUEL TANK (CNG).
Page: 29

Questions/clarification or approved equal:

NF requests approval to provide a galvanized steel frame.

Please review Attachment C for detailed information on the CNG rack.

Agency action:	☑ Approved	☐ Denied
	☐ See addendum	☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 28
Proposer: New Flyer of America Inc.
RFP Section: FUEL TANK (CNG). Storage Tanks
Page: 29

Questions/clarification or approved equal:

New Flyer requests approval to provide Type 4 All Carbon Fiber tanks manufactured by Agility Fuel Solutions.

Please refer to Attachment C for additional information

Agency action:	☑ Approved	☐ Denied
	☐ See addendum	☐ See response below

Agency response:

NEW FLYER

NEW FLYER Xcelsior

SALES INFORMATION BULLETIN

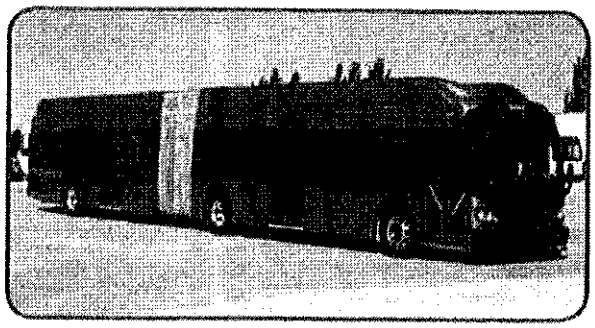
#241-001 | Model: Xcelsior® | Length: All | Propulsion: CNG

Fuel System - Compressed Natural Gas (CNG)

Product Features

New Flyer has more experience on the CNG bus technology than any other bus manufacturer in the industry. Our design has been proven in the industry with over 2,000 units delivered since 1994.

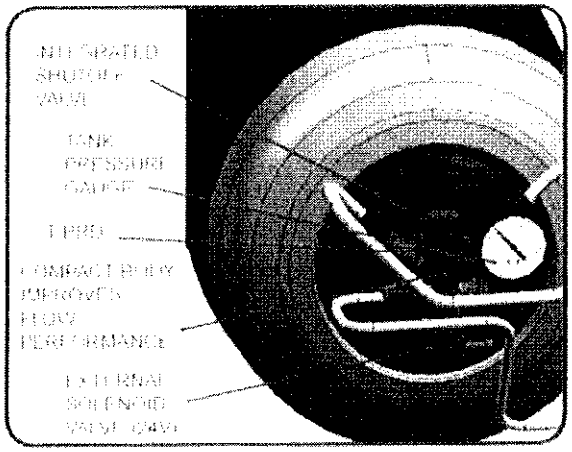
Our CNG system is designed specifically by New Flyer for our buses, which allows full product control. It is designed for 350 – 400 mile range and convenient, curbside fueling remains compatible with existing fueling procedures.



Tanks Storage

All proposed roof-mounted tanks are 15.7" OD x 120" long all carbon fiber cylinders manufactured by Agility® Fuel Solutions. Each cylinder has a capacity of 3295 standard cubic feet (SCF) at 3600 psi (USA) and 2881 SCF at 3000 psi (Canada, if applicable). This allows for fewer tanks.

Each cylinder has a OMB ESA solenoid valve installed at the neck to electronically control the fuel to the engine. The OMB ESA valve is the best available because of its simplified design with improved flow performance. The integrated manual shutoff valve is compact, ergonomic and easy to turn. The external 24V solenoid valve is easier to access and service. The OMB ESA also includes an in-valve temperature pressure relief device (T-PRD).



XCELSIOR TANK STORAGE SPECIFICATIONS

Number of Tanks	35' 5 or 6 tanks 40' 6 or 7 tanks 60' 8 tanks
Dimensions	15.7" OD x 120" long
Valves	Electrically controlled solenoid valve
Material	All Carbon Fiber (ACF)
Tank type	Type 4
Capacity per cylinder	3295 SCF at 3600 psi (USA) 2881 SCF at 3000 psi (Canada)
Manufacturer	Agility® Fuel Solutions
Certification	20 years

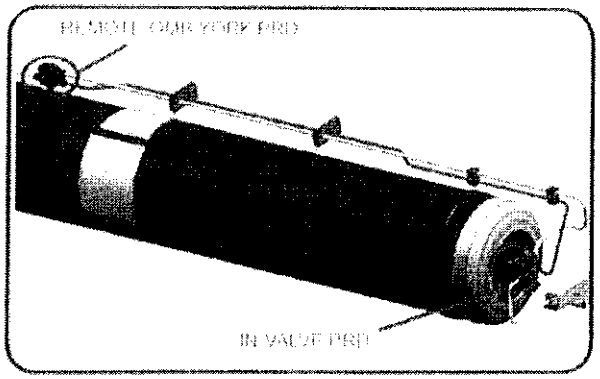
CYLINDER WEIGHT SPECIFICATIONS

Weight of Cylinder	160 lbs/cylinder
Weight of CNG at 70°F	152 lbs/cylinder at 3600 psi
Total Weight at 70°F	312 lbs/cylinder at 3600 psi

SCF = Standard Cubic Foot, PSI = Pounds Per Square Inch

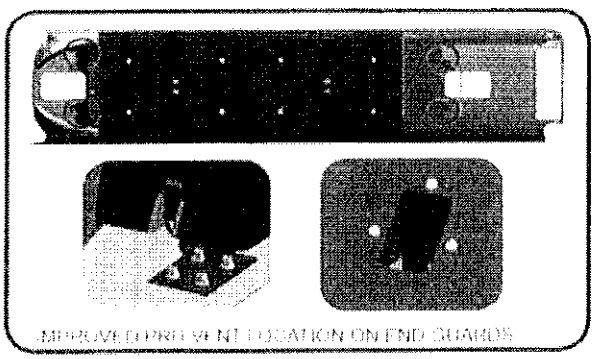
NEW FLYER

The system is equipped with a CNG Solenoid Fault Detection module (SFD). When active, the SFD module will constantly be checking the condition of the solenoid wiring and coils for either an open circuit or short circuit. If there is a fault situation, the SFD module will illuminate an LED on the front cover that corresponds to the solenoid circuit that has the problem. Furthermore, a common fault signal will be enabled. This fault signal is detected by the Bus I/O system and communicated to the driver. The SFD system will automatically reset itself once an open circuit has been repaired and corrected.



Two temperature-activated pressure relief devices (PRDs) protect each tank in accordance with the bonfire testing. One is a remote, OMB York PRD and the second is an in-valve PRD. Using the in-valve PRD reduced components, fittings and tubes while providing necessary safety in case of a thermal event. Having two PRDs per tank also isolates each individual tank for improved safety.

Safety is further improved by moving the location of the PRD vents from the side of the CNG rack to the end guards, which allows the vents to point vertically upward. In case of a thermal event, this will allow the CNG to vent straight up and away from any nearby objects. The vents are recessed in the rear end guards to protect the vent tube opening from blockage and damage.



PRD's are thermally activated, not pressure-activated and will activate at 220°F (110°C). Activation of the PRD will cause the gas in the tanks to escape through the tank PRD venting system.

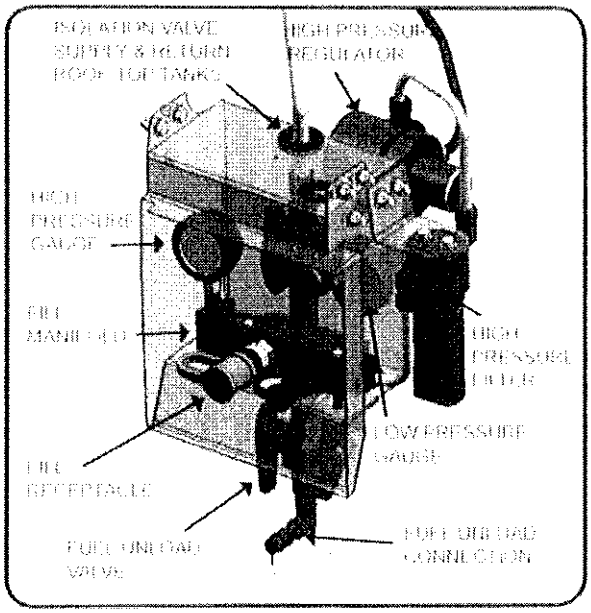
The fuel cylinders are secured in saddles with straps and are isolated with engineered rubber extrusions. They are enclosed in a tubeless shroud with top opening service doors along with end guards. The end guards protect the CNG cylinders from rupture in the event of an impact.

The roof-top racks and end guards that hold the fuel cylinders are made of carbon steel and are hot-dip galvanized using zinc for corrosion protection. Hot-dip galvanizing is a consistent, simple process application which provides a harder coating to resist chipping and scratching. In addition, hot-dip galvanizing has an expected life in excess of 18 years and does not generate hazardous waste during the application process.

The system is designed to allow for maximum a seven-minute fill (dependant on fill station - it needs to complement the design of the system).

Engine Compartment Components

Other components necessary to operate the CNG fuel system are located on the right-hand side of the engine compartment, mounted on the back side of the fill box panel. These components include a regulator, which is heated with engine coolant,



NEW FLYER

and a Raycor primary filter. A flexible hose delivers fuel to the engine, which is supplied by Titeflex and is certified to ANSI NGV 3.1 / CSA 12.3. The HE Coreflow regulator regulates the pressure from 3600 psi to 94 - 120 psi to fuel the engine. They are the standard in the industry.

Fill Box

The fuel-fill system consists of a Sherex 3640 Series receptacle, which is compatible with the Sherex 1000 Series nozzle. It complies to the NGV 1 standard profile which means you can use any manufacturer's NGV-1 nozzle and it will function.

A 1/4 turn manual shut-off valve isolates the roof tanks from the rest of the system which includes a Raycor high pressure primary filter, a 0-6000 psi pressure gauge and a 0-200 psi gauge. (All are compliant with ANSI NGV 3.1 / CSA 12.3 standard)

The fill panel has allowance for two fill receptacles. Provisions for fuel de-fueling is provided with a quick connect fitting.

Fuel Lines

All CNG fittings installed on New Flyer buses are made by Swagelok®, which are noted for being the best in the industry. All stainless steel lines are supported in accordance with NFPA52, do not touch one another or any steel lines and are labeled with yellow permanent self-adhesive decals. Tubing is bright annealed high-quality stainless 304 or 316 seamless conforming to ASTM A269 (a requirement of Swagelok).

The engine line is a Titeflex hose which also has a special resistant thermoplastic elastomer sleeve for corrosion protection, abrasion resistance and a suitable labeling surface.

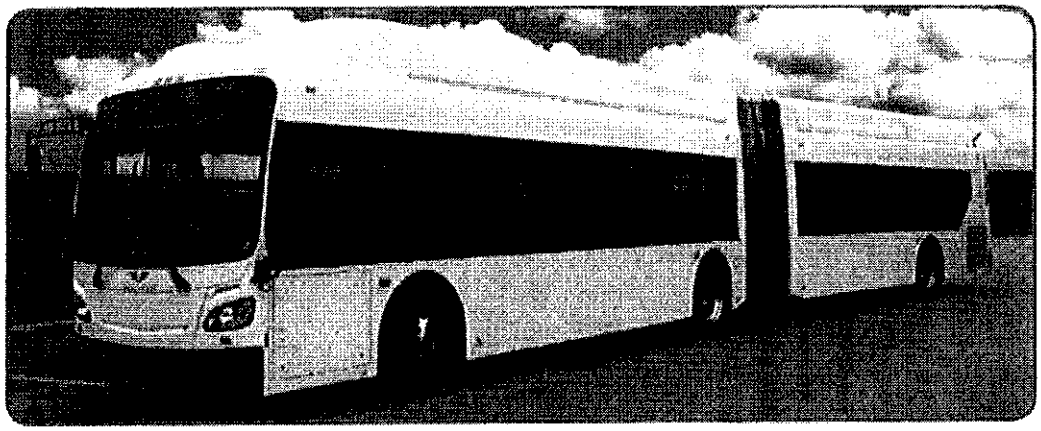
An SST distribution block manifold in the supply line helps optimize plumbing by reducing the number of tubes and fittings, as there is only one tube going to each tank from the distribution block. The block manifold is tested to withstand burst pressure and operational cycling pressures as per NGV 3.1 standards.

Benefits

Some of the key production staff has been with New Flyer since we started building CNG buses in 1994. They have a tremendous amount of knowledge which they are continually transferring to new employees, resulting in consistent and reliable installation of systems.

- New Flyer's CNG system is very robust and is proven by a demonstrated track record. New Flyer has over 7,000 buses in the field.
- The New Flyer system safety vent circuit of 2 PRD's per tank has passed the bonfire test.
- The system exceeds all CNG standards or requirements in these areas:
  - While not required by law or standard, New Flyer includes a safety standard of fire suppression in the engine compartment.
  - For safety purposes, we label all of the CNG fuel lines so that they are distinguishable from other lines in the bus.
  - The mounting of the roof-top modules are designed and tested to the 8g* directional load test per US and Canadian standards.

*g= gravity

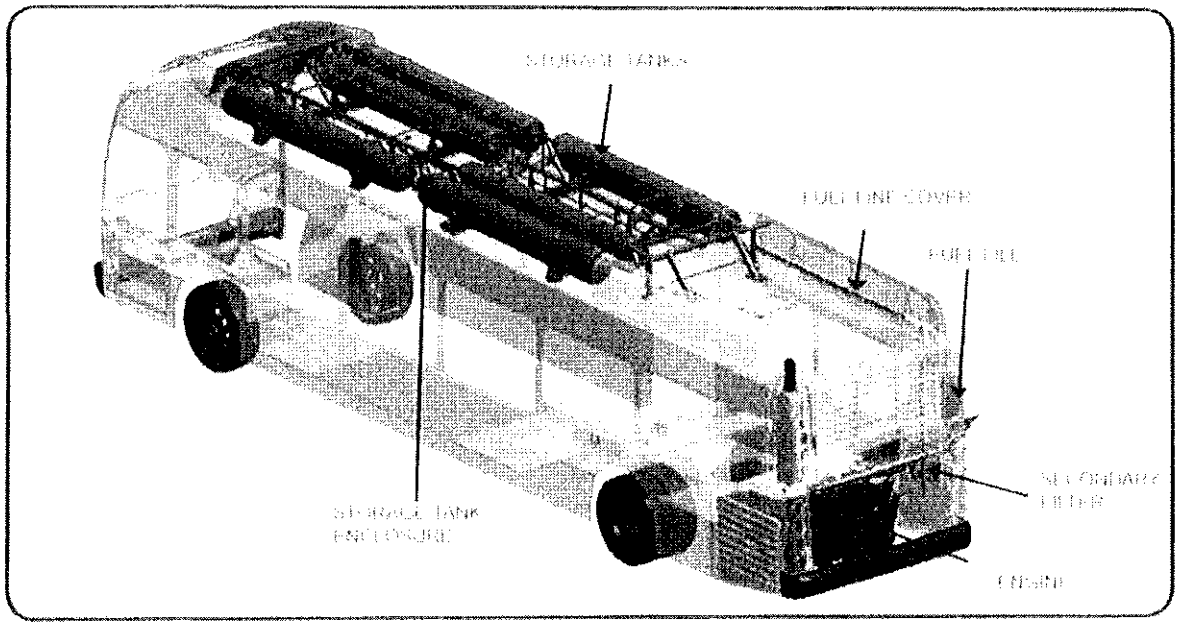


NEW FLYER

SALES INFORMATION BULLETIN

- The CNG tanks used from Agility Fuel Solutions are tested and certified for a 20 year life meeting the industry standard
- The PRD vent lines are rated at full system pressure (3600 psi)
- Relocating PRD vent location from the side to the end guards allows vents to point up vertically per NFPA 52, improving safety
- Several pressure tests are performed during production to ensure first-time quality
- The New Flyer-supplied low-pressure (120psi) side plumbing between the CNG regulator and engine meets the more stringent system pressure of 3600psi including the flexible line (hose)
- New Flyer established internal standards for SS tube handling during manufacturing to ensure clean, scratch-free products

- The modular roof-top system allows for variable tank quantity configurations for up to 5 tanks depending on bus length
- We use the tank strap-mounted CNG cylinders which allows for an even load distribution
- Galvanized tank racks have a life expectancy of over 18 years
- All of the main components are housed in or attached behind the side fill box and both the roof top package and side fill box are modular in design allowing for easier servicing
- The roof-top tank plumbing faces inward for impact protection and ease of service
- Simple design combined with a larger fuel line can achieve faster fill as verified on actual buses. Fill times are dependent on the fill station and capacity of bus fuel storage system
- For a 40' bus, the only flexible line (hose) is located on the low pressure side (120 psi) connecting chassis plumbing to engine fuel inlet, making it a more robust system. It uses a poly overwrapped hose that is non abrasive compared with the standard SS1 braid hose
- The overall plumbing system is very durable and simple in design and execution, leading to high performance and easy fabrication for first-time quality
- The fabrication and assembly of all CNG plumbing is all done in house allowing us to maintain a high standard of first-time quality
- The OMB ESA tank solenoid valve improves flow performance, while the integrated manual shut off valve is compact and easy-to-use.



NEW FLYER

- The hinges and latches on the roof-top doors are designed for the life of the bus.
- System has a lower particulate matter and NO_x when compared to standard diesel-propelled buses.

Operations

Fuel Fill System

The fuel fill receptacles are located in the engine compartment at the rear right-hand side of the bus and have an aluminum slam-latch exterior access door.

The basic sequence of events needed to the fuel delivery process is as follows:

1. During normal operation, the solenoid valve of each fuel cylinder assembly is open. CNG at high pressure is allowed to flow out each cylinder and merges to a main fuel supply line.
2. Through the main fuel supply line, CNG travels to the rear right of the vehicle and to a quarter-turn shut-off valve.
3. From the shut off valve, CNG travels to a fuel filler block containing a high pressure gauge and a refueling receptacle (a minimum of one receptacle is standard, a second receptacle is optional).
4. From the filler block, natural gas is directed into a primary filter before entering the pressure regulator that reduces line pressure from 3,600 psi (24,821 kPa) to approximately 94 – 120 psi (862 kPa).
5. The pressure-reduced gas passes through a secondary filter before entering the engine-controlled solenoid shut-off valve and the low-pressure regulator.
6. Metered amounts of gas are mixed with air at the intake manifold gas mixer for eventual combustion.

A proximity switch is installed at the fuel fill access door to detect when the fuel fill door is open. This interlock will prevent the bus from starting or shut down the engine if the bus is running when the fuel door is open. A dash indicator is used to notify the driver of the interlock engagement.

Fuel Unloading

Provisions are made to unload all of the fuel from the storage cylinders to a facility-based pressure gas line or storage facility. A 1/4 turn shutoff valve is connected to a 1/4" quick-connect stem fitting for fuel unloading.

Service/Repair

Maintenance inspection in accordance with recommendations from the major component manufacturer and New Flyer is required.

Warranty

New Flyer offers a one year warranty (50,000 miles) on the CNG tanks. The CNG enclosure, including the CNG tank cradles and fiber glass doors, has a three year warranty (150,000 miles).

Other

New Flyer complies with all of the following standards:

- NFPA 52 CNG Vehicular Natural Gas (NG) Fuel Systems Code (USA)
- CSA B109 Natural Gas for Vehicles Installation Code (Canadian)
- ANSI NGV 3.1/CSA 12.3 Fuel system Components for NG Powered Vehicles (USA & Canada)
- ANSI PRD 1 Pressure Relief Devices for NG Vehicle Fuel Containers (USA & Canada)
- ANSI NGV 2 Compressed Natural Gas Vehicle Fuel Containers (USA & Canada)

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 29
Proposer: New Flyer of America Inc.
RFP Section: FUEL TANK (CNG), CNG Accessibility
Page: 29

Questions/clarification or approved equal:

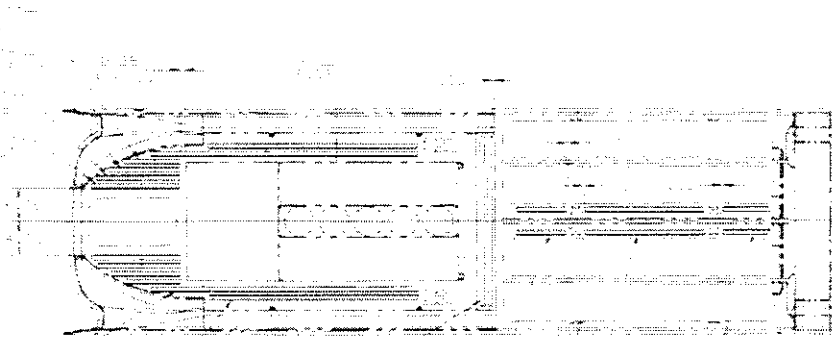
New Flyer requests approval to delete the center walkaway requirement. Since this is not a regular mantainance area, and due to the design of the proposed bus, there is not enough room to provide a center walkway between the tanks.

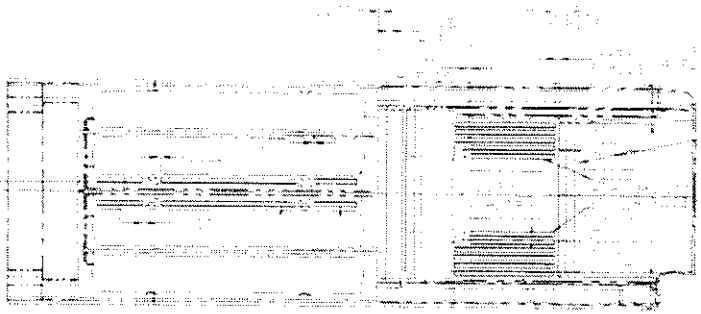
Please refer to Attachment A for drawings clearly identifying where the Safety Walk is provided on the proposed bus.

Agency action:

☑ Approved ☐ Denied
☐ See addendum ☐ See response below

Agency response:





Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 30
Proposer: New Flyer of America Inc.
RFP Section: FUEL TANK (CNG), CNG Capacity
Page: 29

Questions/clarification or approved equal:

New Flyer requests approval to provide the following tank configuration:
Standard Tank configuration shall be as follows:
Five Tanks (5) Tanks 15.7"diameter x 120" lengths
Capacity: 16,475 SCF
760 lbs of fuel
Diesel equivalent gallons:
Extended Range configuration shall be as follows:
Six (6) Tanks 15.7" diameter x 120" length
Capacity: 19,700 SCF
912lbs of fuel
Diesel equivalent gallons:

Agency action:

☑ Approved ☐ Denied
☐ See addendum ☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 31
Proposer: New Flyer of America Inc.
RFP Section: FUEL TANK (CNG),
Page: 30

Questions/clarification or approved equal:

New Flyer requests approval to provide pipe threads only where the pressure gauges are integrated to the system. This is the only interface available for our pressure gauges.

Please review Attachment C for additional information on the CNG fuel system

Agency action:	☑ Approved	☐ Denied
	☐ See addendum	☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 32
Proposer: New Flyer of America Inc.
RFP Section: FUEL FILL (DIESEL), FUEL FILL (DIESEL)
Page: 30

Questions/clarification or approved equal:

New Flyer requests approval to provide a standard twist cap. The flip cap does not provide a positive seal and is only available for pressure fill application, since the internal poppet valve prevents fuel from spilling. A gravity fill application is not compatible with a poppet valve and as such, a flip cap is not available for gravity fill.

Agency action:

- [x] Approved
- [ ] Denied
- [ ] See addendum
- [ ] See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 33
Proposer: New Flyer of America Inc.
RFP Section: FUEL FILL (DIESEL), FUEL FILL (DIESEL)
Page: 30

Questions/clarification or approved equal:

New Flyer requests approval to provide diesel grade nylon fuel lines running from the fuel tank to the engine bulkhead and stainless steel and GH100 hose combination lines in the engine compartment.

Agency action:	☑ Approved	☐ Denied
	☐ See addendum	☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 34
Proposer: New Flyer of America Inc.
RFP Section: AIR SYSTEM,
Page: 31

Questions/clarification or approved equal:

Drain valves are not located in a single access panel. They are located beneath the bus, near the sidewall and their locations are identified with decals

Agency action:

☐ Approved ☑ Denied
☐ See addendum ☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

This form must be used for requested clarifications, changes, substitutes or approval of items equal to items specified with a brand name and must be submitted as far in advance of the Due Date, as specified in "Questions, Clarifications and Omissions."

City of Greenville, North Carolina
BID #16-17-31

Request #: 35
Proposer: New Flyer of America Inc
RFP Section: AIR SYSTEM, AIR SYSTEM
Page: 31

Questions/clarification or approved equal:

New Flyer requests approval to provide the Gemini MDx Air Dryer.

Through extensive evaluation, New Flyer has determined the Haldex Gemini MDxTM all in one tandem air dryer/ separator module to be the best value for a transit bus.

Please refer to Attachment B for additional information on the Gemini MDx Air Dryer

Agency action:

☑ Approved ☐ Denied
☐ See addendum ☐ See response below

Agency response:

NEW FLYER

NEW FLYER Xcelsior

SALES INFORMATION BULLETIN

#210-001 | Model: Xcelsior® | Lengths: All | Propulsions: All

Gemini MDx™

Value Proposition

An adequate supply of clean, dry compressed air is critical to proper operation and extended component life for any vehicle with air brakes and pneumatic accessories. The heavy duty bus industry has many options when it comes to air dryers and contaminant separators and New Flyer has had experience with the majority of them. Through extensive evaluation, New Flyer has determined the Haldex Gemini MDx™ all in one tandem air dryer/ separator module to be the best value for a transit bus.

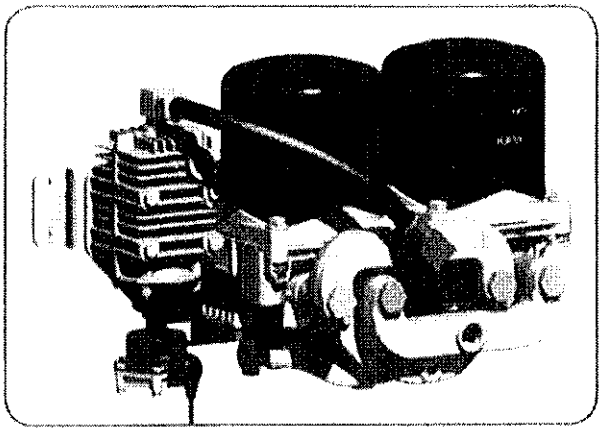
Product Features

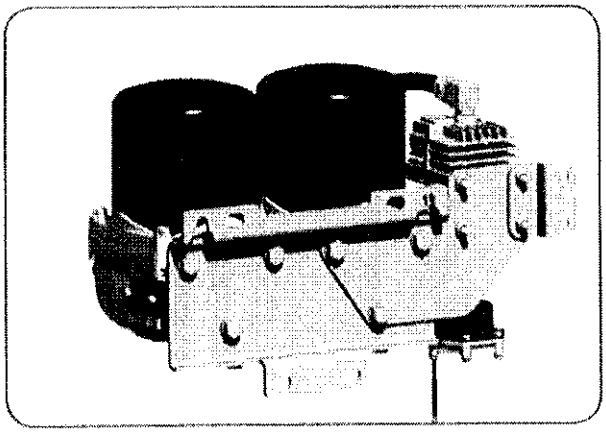
- High Drying Capacity (tandem parallel flow dryers)
- Effective contaminant removal (Pre-treatment step)
- 5 stage MTC+® desiccant technology
- Custom manifolds for parallel plumbing of two DRYest® dryers and a Consep® separator in a single module eliminate the need for multiple fittings and tubes (minimizing leak potential) and allow for maximum usage of valuable underbody space.
- Custom hang-on mounting bracket for easy installation, removal and bench-top servicing

Equipment & Operation

The Haldex Gemini MDx™ is composed of dual Haldex DRYest® air dryers working in parallel, packaged with a single Consep® Contaminant separator to create a single superior air treatment system.

The Consep® separator provides a pre-treatment step that condense and separate 90% of contaminants and then expels them via a heated automatic drain valve. This occurs prior to air entering the dryers, reducing the amount of contaminants exposed to the dryer, thereby extending desiccant and purge and check valve life. Next, the air flows through dual Haldex DRYest® dryers plumbed in parallel to handle the increased flow of the standard boosted twin cylinder air compressor. The DRYest® dryers feature 5 stage MTC+® desiccant technology, which removes the remainder of the contaminants and the vast majority of the moisture content, resulting in very low dew point air exiting the dryer package. Each dryer is also equipped with a purge valve to automatically expel the moisture and contaminants collected and to regenerate the desiccant at each governor unload cycle, as well as a heater to ensure proper operation in sub-freezing temperatures.





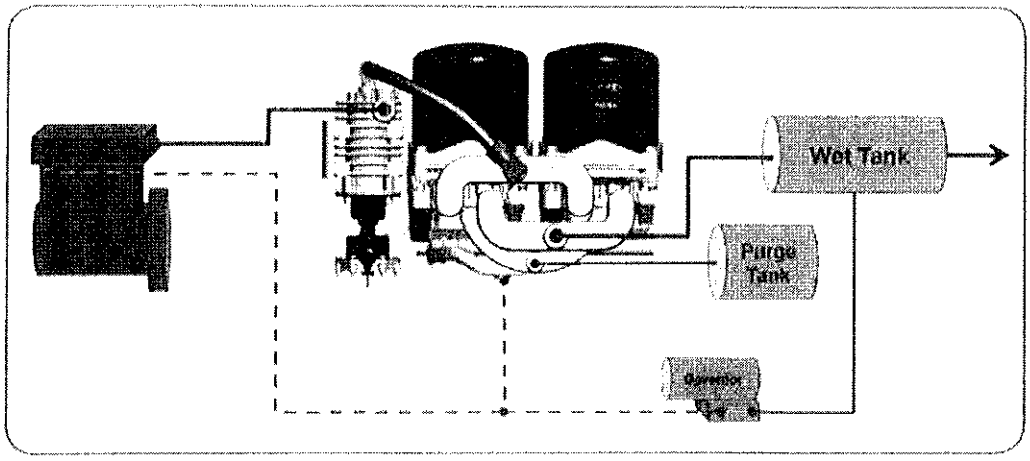
Gemini MDx Specifications

OEM	Haldex
Model	Gemini MDx
Capacity	70 SCFM
Minimum Purge Volume	600 in³
Heaters	2 Heaters x 30VDC/140W
Weight	49 lbs
Envelope, Inches	20W x 15H x 12D

NEW FLYER

NEW FLYER Xcelsior

SALES INFORMATION BULLETIN



Simplified illustration of MDx™ connections

Service/Repair

The Gemini MDx™ is designed with a custom hang-on style bracket to facilitate easy removal of the MDx™ module as a unit. This allows any servicing to be completed on a work bench and not underneath the bus, where it is awkward to work on and prone to having underbody debris falling into the dryer internals causing impaired performance. Each desiccant cartridge is retained by four bolts and is serviced as a replaceable unit, avoiding mess and difficulty in handling and reassembly, thereby reducing maintenance time. With the integrated Consep® separator, recommended desiccant cartridge replacement is now extended to 2 year intervals. It is also recommended to service purge and check valves at this interval, as well as the Consep® ADV. Haldex will be providing a complete Gemini MDx™ repair kit through New Flyer Service Parts that contain all parts necessary to service the entire module as a convenient single part number.

Warranty

The Gemini MDx™ warranty is 3 year or 150,000 miles (whichever occurs first), covering materials and workmanship, and includes parts and labor.

Testing

The Haldex DRYest® dryers themselves have proven themselves with many of our customers, including NYCT, LA Metro and MARTA to name just a few. Long-term testing (more than 3 years) has been conducted with very favorable results. Haldex has also completed a 1 year test program at NYCT which showed 90-94% of drying capacity still remained after 1 year/8500 hours/149,000 miles usage on articulated buses in Manhattan CBD revenue service.

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 36
Proposer: New Flyer of America Inc.
RFP Section: FRAME,
Page: 31

Questions/clarification or approved equal:

New Flyer requests approval to provide our standard Xcelsior structure that does not have the integrated side impact barriers. The hybrid (ferritic stainless/carbon steel combination) structural design has successfully completed the side impact crash-worthiness test without requiring the side impact barrier.

Agency action:

- ☑ Approved
- ☐ Denied
- ☐ See addendum
- ☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 37
Proposer: New Flyer of America Inc.
RFP Section: BODY AND UNDER FRAMING, BODY AND UNDER FRAMING
Page: 32

Questions/clarification or approved equal:

New Flyer requests approval to provide the exterior side panels made from 0.120-inch thick fiberglass and pier panels made from 0.08 inch aluminum which are bonded in place using adhesives, no rivets or sheet metal screws are used.

The corrosion resistant panels are bonded to the frame which allows for a smooth, hardware free exterior surface to enhance the stylized quality of the bus. The fibreglass surface makes for easier repairs of an area rather than removing the panel completely.

Agency action:

- ☑ Approved
- ☐ Denied
- ☐ See addendum
- ☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 38
Proposer: New Flyer of America Inc.
RFP Section: ROOF AND CEILING, ROOF AND CEILING
Page: 32

Questions/clarification or approved equal:

New Flyer requests approval to provide one (1) inch thick rigid, Polyisocyanurate foam, manufactured by an extrusion process. This insulation is used in the roof and side wall panels, curbside and street side. The insulation has an R-value of 7.0 (RSI=0.088) @ 75°F for a 1" cross section. Contains no CFCs.

The panels do not require a moisture wrapper as they are designed with inherent water repelling qualities such as low water vapor permeability, very low water absorption and do not sustain mold growth. The light weight insulation has high compressive strength and high thermal resistance

Please refer to the attached documentation.

Agency action:

- ☑ Approved
- ☐ Denied
- ☐ See addendum
- ☐ See response below

Agency response: OK

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 39
Proposer: New Flyer of America Inc.
RFP Section: BODY AND UNDER FRAMING,
Page: 32

Questions/clarification or approved equal:
New Flyer requests clarification on the scope of the vandal-resistant hardware requirement. Please specify which areas of the bus are to be equipped with vandal resistant hardware.

Agency action:

☐ Approved	☐ Denied
☐ See addendum	☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

This form must be used for requested clarifications, changes, substitutes or approval of items equal to items specified with a brand name and must be submitted as far in advance of the Due Date, as specified in "Questions, Clarifications and Omissions."

City of Greenville, North Carolina
BID #16-17-31

Request #: 40
Proposer: New Flyer of America Inc.
RFP Section: ROOF AND CEILING.
Page: 32

Questions/clarification or approved equal:
New Flyer requests approval to provide roof hatches without external handles.

Agency action:	☐ Approved	☑ Denied
	☐ See addendum	☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 41
Proposer: New Flyer of America Inc.
RFP Section: SUBFLOOR.
Page: 33

Questions/clarification or approved equal:

New Flyer requests approval to provide a composite rear step and flooring to the rear wheelhouse and plywood flooring aft of the rear wheelhouse.

Agency action:	☑ Approved	☐ Denied
	☐ See addendum	☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 42
Proposer: New Flyer of America Inc.
RFP Section: HVAC SYSTEMS, Front door Threshold heater
Page: 35

Questions/clarification or approved equal:

New Flyer requests approval to delete the requirement for an entrance door heater. Though available, New Flyer typically only provides this opinion for customers in extreme cold weather climate zones. The main HVAC system system would be sufficent heating the front door area in Greenville's climate zone

Agency action:

- ☐ Approved
- ☑ Denied
- ☐ See addendum
- ☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

This form must be used for requested clarifications, changes, substitutes or approval of items equal to items specified with a brand name and must be submitted as far in advance of the Due Date, as specified in "Questions, Clarifications and Omissions."

City of Greenville, North Carolina
BID #16-17-31

Request #: 43
Proposer: New Flyer of America Inc.
RFP Section: ACCESSIBILITY (COMPARTMENTS, PANELS, DOORS).
Page: 35

Questions/clarification or approved equal:

New Flyer requests approval to provide a vented streetside access panel over the radiator. This design promotes venting and cooling near the components in need of air flow. The curbside access panel is not vented as the components on the curbside of the engine receive adequate air flow without a vented panel.

Agency action:	☑ Approved	☐ Denied
	☐ See addendum	☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

This form must be used for requested clarifications, changes, substitutes or approval of items equal to items specified with a brand name and must be submitted as far in advance of the Due Date, as specified in "Questions, Clarifications and Omissions."

City of Greenville, North Carolina
BID #16-17-31

Request #: 44
Proposer: New Flyer of America Inc.
RFP Section: ACCESSIBILITY (COMPARTMENTS, PANELS, DOORS),
Page: 36

Questions/clarification or approved equal:

New Flyer requests approval to provide a battery access door that opens to the side. This is beneficial because it provides unimpeded access to the battery compartment, since the commpartment is located on the lower sidewall of the bus.

Agency action:

☑ Approved ☐ Denied
☐ See addendum ☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

This form must be used for requested clarifications, changes, substitutes or approval of items equal to items specified with a brand name and must be submitted as far in advance of the Due Date, as specified in "Questions, Clarifications and Omissions."

City of Greenville, North Carolina
BID #16-17-31

Request #: 45
Proposer: New Flyer of America Inc.
RFP Section: ACCESSIBILITY (COMPARTMENTS, PANELS, DOORS),
Page: 36

Questions/clarification or approved equal:

New Flyer requests approval to provide a radio compartment on the inside of the bus that is water resistant but isn't completely waterproof. SDS box being located at height above floor, so cleaning would not affect the electrical equipments in the SDS box. The SDS box is made of fiberglass and painted black to minimize the glare and reflections that may impact the driver's sightline(s).

Please review Attachment I for additional information on the SDS enclosure

Agency action:

☑ Approved ☐ Denied
☐ See addendum ☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

This form must be used for requested clarifications, changes, substitutes or approval of items equal to items specified with a brand name and must be submitted as far in advance of the Due Date, as specified in "Questions, Clarifications and Omissions."

City of Greenville, North Carolina
BID #16-17-31

Request #: 46
Proposer: New Flyer of America Inc.
RFP Section: MODESTY PANELS, MODESTY PANELS
Page: 36

Questions/clarification or approved equal:

New Flyer requests approval to delete the requirement for a modesty panel rear of the front door. On low floor bus the wheel-housing effectively blocks this area and passengers are seated rearward of the curbside wheel well.

Agency action:	☑ Approved	☐ Denied
	☐ See addendum	☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

This form must be used for requested clarifications, changes, substitutes or approval of items equal to items specified with a brand name and must be submitted as far in advance of the Due Date, as specified in "Questions, Clarifications and Omissions."

City of Greenville, North Carolina
BID #16-17-31

Request #: 47
Proposer: New Flyer of America Inc.
RFP Section: MODESTY PANELS, MODESTY PANELS
Page: 36

Questions/clarification or approved equal:

The communications box being proposed (Secure Diagnostic Station-SDS) acts as a barrier between the operator and the street-side front passenger seat which precludes the need for a separate barrier. It is made of fiberglass and painted black to minimize the glare and reflections that may impact the driver's sightline(s).

Agency action:

- ☑ Approved
- ☐ Denied
- ☐ See addendum
- ☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

This form must be used for requested clarifications, changes, substitutes or approval of items equal to items specified with a brand name and must be submitted as far in advance of the Due Date, as specified in "Questions, Clarifications and Omissions."

City of Greenville, North Carolina
BID #16-17-31

Request #: 48
Proposer: New Flyer of America Inc.
RFP Section: Passenger Signal Switch,
Page: 38

Questions/clarification or approved equal:

New Flyer requests approval to provide, as an alternative, a logic that prevents the chime from sounding repeatedly due to passenger stop request activation. The chime sounds for activation and does not sound again until the doors cycle, preventing repeated chiming. We would like to clarify that this switch is not an available option.

Agency action:

- ☑ Approved
- ☐ Denied
- ☐ See addendum
- ☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

This form must be used for requested clarifications, changes, substitutes or approval of items equal to items specified with a brand name and must be submitted as far in advance of the Due Date, as specified in "Questions, Clarifications and Omissions."

City of Greenville, North Carolina
BID #16-17-31

Request #: 49
Proposer: New Flyer of America Inc.
RFP Section: INSTRUMENT PANEL,
Page: 38

Questions/clarification or approved equal:

New Flyer requests approval to provide the warning and fault indicators integrated with the instrument panel

Review Attachment J - for additional information on the driver's controls

Agency action:

☑ Approved ☐ Denied
☐ See addendum ☐ See response below

Agency response:

NEW FLYER

NEW FLYER Xcelsior

SALES INFORMATION BULLETIN

#350-001 | Model: Xcelsior | Length: All | Propulsion: All

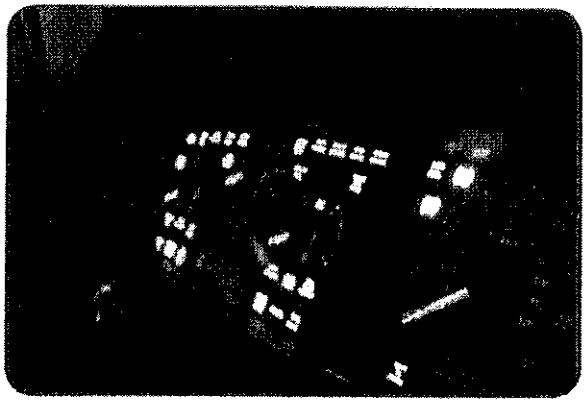
Driver's Controls

Instrument Panel

Xcelsior comes standard with the industry's first electronic instrument panel. The electronic instrument panel is proprietary to New Flyer and was designed by Parker-Vanco. This automotive-like cluster, housed in a more streamlined, contemporary dash, features integrated inputs, outputs, gauges, LCDs, tell-tales and user buttons. It has two CAN ports for built-in pocket gateway functionality and bridges the drivetrain J1939 to chassis J1939.

Additional features:

- USB device port
- Total of 27 inputs
  - 3 Wake Ups Active High
  - 12 Digital Active Low
  - 6 Digital Active High
  - 5 Analogs (3 Position Switch Settings)
  - 1 Frequency Input
- Total of 3 outputs
  - 2 High Side Outputs 2 A max.
  - 1 Low Side Output 2.5 A max.
- User-programmable routing table for passing or blocking of J1939 Messages
- User-programmable inputs, outputs, gauges, tell tales, and LCDs
- Uses a standard off-the-shelf USB A-B cable to communicate with a PC
- Uploading, downloading and diagnostics are all done from one point on the vehicle
  - The instrument cluster serves as built-in service tool
- Advanced Diagnostics
  - Real time diagnostics
  - All documentation is stored in the VMRS
  - Monitor all inputs and outputs from one location
  - Monitor analog voltage
  - "Force" inputs or outputs On or Off
  - Upload logs and error codes

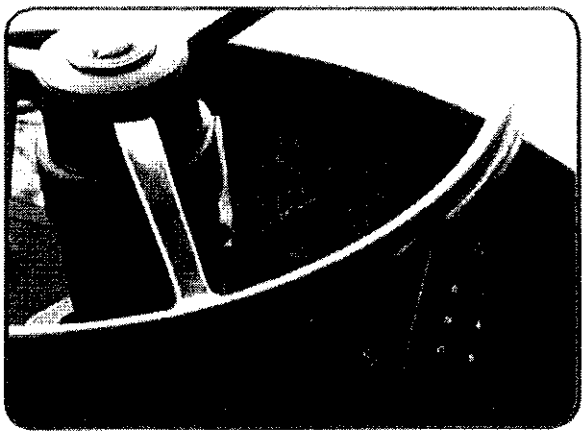


Steering Wheel

The steering wheel provided is a black hard plastic type with two spokes, 20 inches in diameter and with a center hub horn button.

Steering Column

The steering column is a 900 Series steering column manufactured by Douglas Autotech. A single-lever actuation system provides both tilt and telescoping action. The column tilts up and down in 21° and 7° increments.

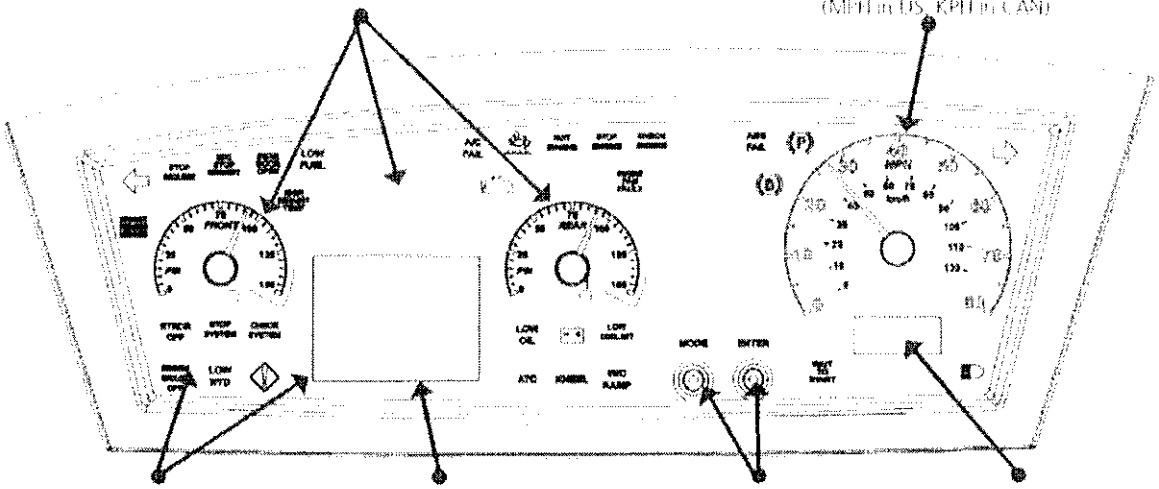


NEW FLYER

NEW FLYER Xcelsior™

SALES INFORMATION BULLETIN

Xcelsior Electronic Instrument Cluster



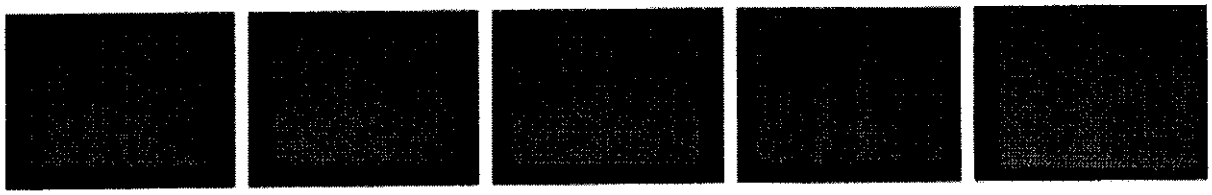
Tell Tales

- Up to 31 standard tell tales illuminate on dash
- Additional selected tell tales are programmed to display on LCD screen

LCD Screen

- Up to four LCD screens
- Each LCD screen displays between 1 to 4 gauges
- 2010 EPA regulation requires that an urea level gauge always be present and in the "1" position

Examples of LCD Screen Configurations



NEW FLYER

NEW FLYER Xcelsior™

SALES INFORMATION BULLETIN

Accelerator & Brake Pedals

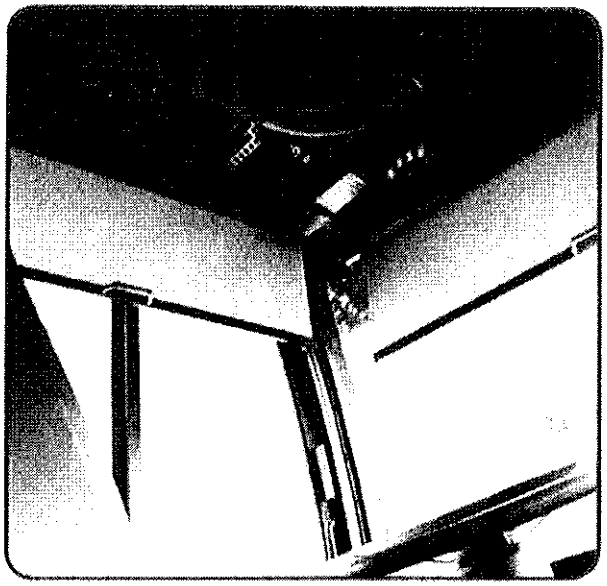
Both the accelerator and brake pedals are mounted to the driver's platform in the driver's area at a 45° angle. The brake valve is an EB with a pressure transducer.

Dimmer & Turn Switch

The turn signal's and dimmer switch have easy access for the driver. Both can be activated by floor mounted switches.

Overhead Recessed Panel

New Flyer has conveniently located a recessed panel on the upper left side of the driver to allow for various electronic features to be easily accessible by the driver. The cables will be concealed behind the panel and routed down the "B" post to the Secure Diagnostic Box behind the driver where the majority of the electronic equipment will be housed. The panel is hidden from the passengers' views.



Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 50
Proposer: New Flyer of America Inc
RFP Section: INSTRUMENT PANEL,
Page: 38

Questions/clarification or approved equal:

New Flyer would like to clarify that a test button is not available and not required because the primary panel goes through a test procedure upon start up.

Agency action:

☐ Approved ☐ Denied
☐ See addendum ☑ See response below

Agency response:

RFP requires the inclusion of a test button.

Request for Pre-Offer Change or Approved Equal

This form must be used for requested clarifications, changes, substitutes or approval of items equal to items specified with a brand name and must be submitted as far in advance of the Due Date, as specified in "Questions, Clarifications and Omissions."

City of Greenville, North Carolina
BID #16-17-31

Request #: 51
Proposer: New Flyer of America Inc.
RFP Section: BATTERY AND BATTERY STORAGE, BATTERY AND BATTERY STORAGE
Page: 40

Questions/clarification or approved equal:

New Flyer requests approval to provide a heavy duty 3/16" polyethylene plastic enclosure with a battery tray constructed of polyethylene plastic mounted on a stainless steel sub-frame for support location at the curbside rear of the bus. The tray easily slides out on stainless steel rollers.

Agency action:

☑ Approved ☐ Denied
☐ See addendum ☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

This form must be used for requested clarifications, changes, substitutes or approval of items equal to items specified with a brand name and must be submitted as far in advance of the Due Date, as specified in "Questions, Clarifications and Omissions."

City of Greenville, North Carolina
BID #16-17-31

Request #: 52
Proposer: New Flyer of America Inc.
RFP Section: BATTERY AND BATTERY STORAGE,
Page: 40

Questions/clarification or approved equal:

New Flyer requests approval to provide the jump start plug at the fusebox. The plug is accessible through a flip out access door on the curbside of the bus.

Agency action:

☑ Approved ☐ Denied
☐ See addendum ☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

This form must be used for requested clarifications, changes, substitutes or approval of items equal to items specified with a brand name and must be submitted as far in advance of the Due Date, as specified in "Questions, Clarifications and Omissions."

City of Greenville, North Carolina
BID #16-17-31

Request #: 53
Proposer: New Flyer of America Inc.
RFP Section: CHARGING SYSTEM, CHARGING SYSTEM
Page: 40

Questions/clarification or approved equal:

New Flyer requests approval to provide an air cooled EMP450 alternator rated at 450 amps 28 volts @2100rpm for the hybrid system installed with ISL engines. New Flyer uses the EMP450 alternator for our hybrid coaches installed with ISL engines because of the additional current draw required for the hybrid battery cooling fans installed on the roof of the coach. Also an electronic voltage regulator is mounted inside the fuse box.

Agency action:

- [x] Approved
- [ ] Denied
- [ ] See addendum
- [ ] See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

This form must be used for requested clarifications, changes, substitutes or approval of items equal to items specified with a brand name and must be submitted as far in advance of the Due Date, as specified in "Questions, Clarifications and Omissions."

City of Greenville, North Carolina
BID #16-17-31

Request #: 54
Proposer: New Flyer of America Inc
RFP Section: LIGHTING, Exterior Lighting
Page: 42

Questions/clarification or approved equal:

New Flyer requests approval to remove the requirement for exterior surface mount rectangular LED step well lamps. New Flyer meets the ADA exterior lighting requirements on our Xcelsior bus with our door baseplate lighting strip. New Flyer can provide a report to confirm compliance to the ADA requirment unpon request.

Agency action:

☐ Approved ☒ Denied
☐ See addendum ☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

This form must be used for requested clarifications, changes, substitutes or approval of items equal to items specified with a brand name and must be submitted as far in advance of the Due Date, as specified in "Questions, Clarifications and Omissions."

City of Greenville, North Carolina
BID #16-17-31

Request #: 55
Proposer: New Flyer of America Inc.
RFP Section: PUBLIC ANNOUNCEMENT SYSTEM, PUBLIC ANNOUNCEMENT SYSTEM
Page: 44

Questions/clarification or approved equal:

New Flyer requests approval to provide a balanced announcement system for the 35 ft bus which will have 6 (six) speakers interior passenger compartment.

Agency action:

- ☑ Approved
- ☐ Denied
- ☐ See addendum
- ☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

This form must be used for requested clarifications, changes, substitutes or approval of items equal to items specified with a brand name and must be submitted as far in advance of the Due Date, as specified in "Questions, Clarifications and Omissions."

City of Greenville, North Carolina
BID #16-17-31

Request #: 56
Proposer: New Flyer of America Inc.
RFP Section: FARE COLLECTION,
Page: 44

Questions/clarification or approved equal:

New Flyer requests approval to provide a 1 X 6 manual, dash-mounted passenger counter.

Agency action:

- ☑ Approved
- ☐ Denied
- ☐ See addendum
- ☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

This form must be used for requested clarifications, changes, substitutes or approval of items equal to items specified with a brand name and must be submitted as far in advance of the Due Date, as specified in "Questions, Clarifications and Omissions."

City of Greenville, North Carolina
BID #16-17-31

Request #: 57
Proposer: New Flyer of America Inc.
RFP Section: Warranties, EXCEPTIONS TO WARRANTY
Page: 46

Questions/clarification or approved equal:

New Flyer requests approval to provide that the warranty shall not apply to scheduled maintenance items, acts of nature, or normal consumables such as tires, belts, bulbs/tubes or items with progressive wear characteristics (bushings, wiper blades, friction surfaces).

Please refer to the attached consumables excluded document Attachment H.

Agency action:

- ☑ Approved
- ☐ Denied
- ☐ See addendum
- ☐ See response below

Agency response:

NEW FLYER

GENERAL WARRANTY STATEMENT FOR CONSUMABLE ITEMS

The warranty shall not apply to scheduled maintenance items, normal consumables, or items with progressive wear characteristics (bushings, friction surfaces). Nor shall it apply to items furnished by the Procuring Agency such as radios, fare boxes and other auxiliary equipment, except insofar as such equipment may be damaged by the failure of a part or component for which the Contractor is responsible. The following Items are considered CONSUMABLE Items and are **NOT** covered under the Base Warranty of the Bus:

- Windshield Wiper blades

- Filters, This includes, but not limited to
- engine oil filter,
- hydraulic oil filter,
- engine air intake filter,
- HVAC filters,
- and fresh air intake

- Belts
- Bushings (unless otherwise noted on suppliers document)

- Hardware, this includes all non-reusable, but not limited to
- nuts,
- bolts,
- screws,
- Washer's lock and star washers

- Lubricants, this includes, but not limited to
- all oils in engine,
- transmission,
- and axles

- All Brake friction material including, but not limited to
- Brake Linings

Request for Pre-Offer Change or Approved Equal

This form must be used for requested clarifications, changes, substitutes or approval of items equal to items specified with a brand name and must be submitted as far in advance of the Due Date, as specified in "Questions, Clarifications and Omissions."

City of Greenville, North Carolina
BID #16-17-31

Request #: 58
Proposer: New Flyer of America Inc.
RFP Section: Warranties, DETECTION OF DEFECTS
Page: 46

Questions/clarification or approved equal:

New Flyer agrees that The City of Greenville can perfrom the majority of warranty repairs with reimbursement from New Flyer, however, New Flyer would like to clarify that The following major component equipment suppliers (engine, transmission, HVAC and destination sign suppliers) mandate that all warranty repairs be performed by an authorized dealer of their components (and not New Flyer or The City of Greenville). If The City of Greenville elects to perform these repairs, without the written permission of the original equipment manufacturer, the warranty coverage may be voided. New Flyer will be available to work with The City of Greenville on major equipment repairs to ensure service quality expectations are met and work is conducted in an acceptable timeframe.

Agency action:

☑ Approved ☐ Denied
☐ See addendum ☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

This form must be used for requested clarifications, changes, substitutes or approval of items equal to items specified with a brand name and must be submitted as far in advance of the Due Date, as specified in "Questions, Clarifications and Omissions."

City of Greenville, North Carolina
BID #16-17-31

Request #: 59 **Proposer:** New Flyer of America Inc. **RFP Section:** Warranties, FLEET DEFECTS **Page:** 46
Questions/clarification or approved equal: New Flyer requests approval that The City of Greenville review the proportion of buses in fault for a fleet defect definition. Twenty five percent (25%) on a minimum of three (3) buses would allow The City of Greenville to declare a fleet defect if one (1) vehicle is in default. To be fair and reasonable, as determined in the Standard Bus Procurement Guidelines (SBPG), New Flyer suggests twenty-five percent (25%) on a minimum purchase of ten (10) buses in a single order.
Agency action: ☐ Approved ☑ Denied ☐ See addendum ☑ See response below
Agency response: [illegible] Section WR 14 DEFECTS states "in a minimum of fleet Size of twelve (12) or more buses. This request is denied, as the City of Greenville will not make or anticipates a minimum purchase of eight (8) [illegible]

Request for Pre-Offer Change or Approved Equal

This form must be used for requested clarifications, changes, substitutes or approval of items equal to items specified with a brand name and must be submitted as far in advance of the Due Date, as specified in "Questions, Clarifications and Omissions."

City of Greenville, North Carolina
BID #16-17-31

Request #: 60
Proposer: New Flyer of America Inc.
RFP Section: BATTERY AND BATTERY STORAGE, A stainless steel battery tray located in the front roadside of the bus under the driver's compartment shall be provided.
Page: 40

Questions/clarification or approved equal:

New Flyer provides a polyethylene battery tray supported by a stainless steel sub-frame, the enclosure is also polyethylene. This design is corrosion resistant, light weight and has proven to be extremely robust.

Please note that the batteries are supported by structural stainless steel U-channels. Sized to provide the correct support for 2 8d batteries or 4 GP 31 batteries.

Please Review Attachment K - Battery System SIB 260-001-X which provides further information the battery tray.

Agency action:

- ☑ Approved
- ☐ Denied
- ☐ See addendum
- ☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

This form must be used for requested clarifications, changes, substitutes or approval of items equal to items specified with a brand name and must be submitted as far in advance of the Due Date, as specified in "Questions, Clarifications and Omissions."

City of Greenville, North Carolina
BID #16-17-31

Request #: 61
Proposer: New Flyer of America Inc.
RFP Section: CHARGING SYSTEM, A Niehoff C803 or approved equal Alternator shall be provided sized to supply the entire nighttime operating electrical load of the bus while providing at least twenty (20) percent of its current output for battery charging when the battery is fully disch
Page: 40

Questions/clarification or approved equal:
New Flyer provides a 450 amp air cooled EMP alternator. Please see drawing 633371 for further information on the provided alternator.

Agency action:
☑ Approved ☐ Denied
☐ See addendum ☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

This form must be used for requested clarifications, changes, substitutes or approval of items equal to items specified with a brand name and must be submitted as far in advance of the Due Date, as specified in "Questions, Clarifications and Omissions."

City of Greenville, North Carolina
BID #16-17-31

Request #: 62
Proposer: New Flyer of America Inc.
RFP Section: ELECTRICAL COMPONENTS, The pull cords shall be accessible from the exit door area.
There shall be a lighted display sign which indicates "STOP REQUESTED" when the signal is activated.
Page: 41

Questions/clarification or approved equal:
Push button provided on exit door stanchion to initiate a stop request. See drawing 603903 for further information.

Agency action:
☑ Approved ☐ Denied
☐ See addendum ☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

This form must be used for requested clarifications, changes, substitutes or approval of items equal to items specified with a brand name and must be submitted as far in advance of the Due Date, as specified in "Questions, Clarifications and Omissions."

City of Greenville, North Carolina
BID #16-17-31

Request #: 63
Proposer: New Flyer of America Inc.
RFP Section: ELECTRICAL COMPONENTS, The volume on the chime shall be adjustable between 90 and 55 Db.
Page: 41

Questions/clarification or approved equal:

New Flyer provides a non adjustable chime that outputs 83 DBA when measured at a distance of 18". Please see drawing 438920 for further information on the provided chime. The chime is mounted behind the driver on the forward side of the SDS enclosure. Please see installation 438955 which clarifies the mounting location.

Agency action:

- ☑ Approved
- ☐ Denied
- ☐ See addendum
- ☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

This form must be used for requested clarifications, changes, substitutes or approval of items equal to items specified with a brand name and must be submitted as far in advance of the Due Date, as specified in "Questions, Clarifications and Omissions."

City of Greenville, North Carolina
BID #16-17-31

Request #: 64
Proposer: New Flyer of America Inc.
RFP Section: MULTIPLEXING, All vehicles shall be equipped with a Dinex or approved equal multiplexing system. The primary purpose of the multiplexing system is control of components necessary to operate the vehicle.
Page: 41

Questions/clarification or approved equal:

New Flyer provides a Vansco Multiplexing system with the following benefits:

- The Vansco modules are auto-programming making it very easy to replace or add multiplexing modules
- The Vansco Multiplexing system uses a single type of module minimizing required inventory
- The outputs on our system can drive loads up to 10 amps and are electronically self protected. This reduces the number of fuses or breakers required.
- The Vanso Multiplexing module has an IP rating of 66
- The Vanso Multiplexing module has a operating temperature range of -40F to 185F.

Please see Attackment L - SIB 284+286-X-001 for further information on the benefits of the Vansco Multiplexing system.

Agency action: ☑ Approved ☐ Denied ☐ See addendum ☐ See response below

Agency response:

NEW FLYER

XCELSIOR

SALES INFORMATION BULLETIN

#288-280-001 | Model: Xcelsior | Length: All | Propulsion: All

Multiplexing System

New Flyer uses superior multiplexing power provided by Parker Vansco.

- Vansco has more than 25 years of experience in developing state-of-the-art electronic control systems and components. It was acquired by Parker Hannifin in 2008.
- Parker Hannifin Corporation (NYSE: PH) is the world's leading diversified manufacturer of motion control technologies and systems, with annual sales exceeding $12 billion.

Product Features

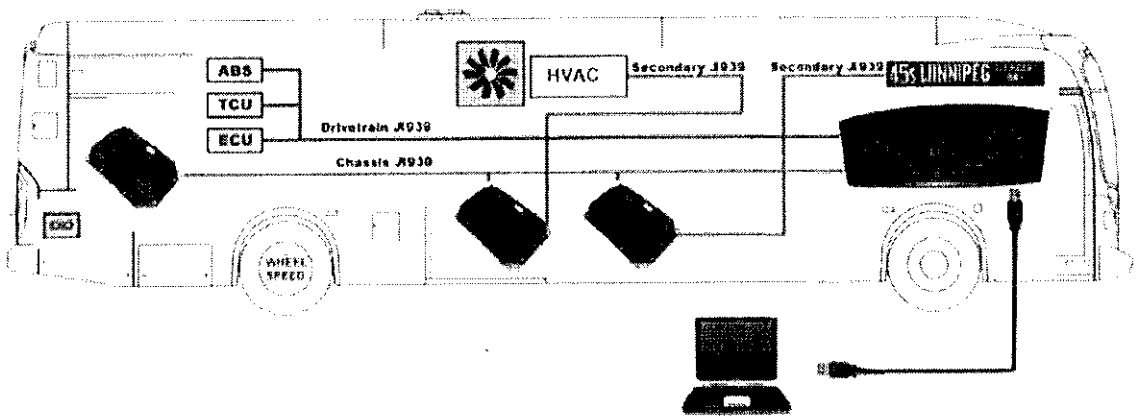
- Industry standard communications protocol and ladder logic software
- Single style auto-programming module controls all functions and reduces inventory (35' and 40' buses have six modules, a 60' bus has seven)
- Easy-to-use diagnostics software runs directly on your laptop in Windows, free lifetime upgrades
- In service on more than 10,000 New Flyer buses in North America

Multiplexing Module (VMM) System, also called Programmable Logic Controller (PLC), is utilized to:

- reduce wiring complexity
- minimize wiring costs
- simplify troubleshooting
- provide unparalleled reliability

Benefits

- **Multiplexing system uses industry standard CAN J1939 communications protocol**
- **Certified to J1455 environmental standard rating**
  - Rugged Parker Vansco module meets or exceeds all test requirements for temperature, electrical transients, EMC, pressure wash, and immersion
  - All solid state construction (no internal fuses) to ensure reliable, low maintenance system
- Industry standard ladder logic software
  - Ladder logic view for input and output relationships, real time diagnostics
  - I/O view defines all inputs, outputs
- **User friendly software runs in Windows (32 bit operating systems)**



NEW FLYER

XCELSIOR

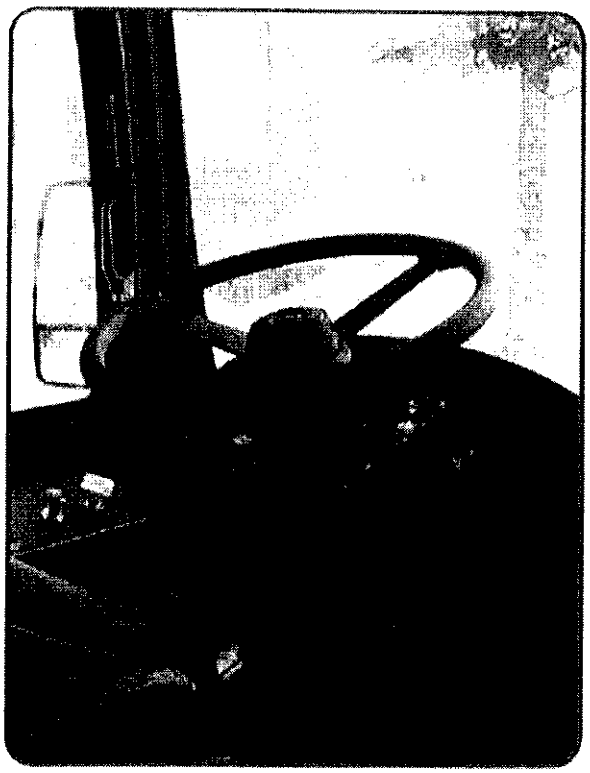
SALES INFORMATION BULLETIN

- **Easy-to use diagnostics**
  - Ladder logic and documentation can be uploaded directly to an internet enabled PC. system supports remote diagnostics across a LAN or the Internet
  - Multiplexing module can be configured to log a cycle count or a cumulative duration count for any input, output, or communication signal without adding components to the system
  - Free lifetime software license and upgrades
  - Basic diagnostics achieved through LEDs on module with Input/Output LEDs, Net LEDs, Power LED, Address LEDs
- **One style module to control all systems**
  - Reduces required inventory
  - All modules work independently, in the event of a failed module, others will still operate
- **Auto programming (Plug & Play) feature**

  Upon connection to a VMM system, the Parker Vansco Multiplexing Module auto-programs itself from the other modules. No programming tools, special exchange software or PC connections are required to exchange a module, it is "Plug and Play."
- **The multi-master system**

  Allows multiplexing modules within a system to store and execute a common ladder logic program, the multi-master system architecture facilitates distribution of critical functions and minimizes the number of different modules within a system
- **Internal gateway control**

  Ability to force gateway on or off through the software
- **Designed with familiar concepts to reduce training**
  - Same ladder logic
  - Same LED diagnostics
  - Features, such auto-programming and the multi-master system, reduce maintenance cost
- **Total system supplier**
  - New Flyer can supply a complete Parker Vansco system, comprising multiplexing modules and an instrument cluster (gauges, tell tales, and harnesses), or customers can select components that work with third party equipment
  - Custom electronic components (New Flyer, working with Parker Vansco, can design and manufacture custom components)
- **Superb service/warranty**
  - Parker Vansco has been installed on more than 10,000 New Flyer buses in North America
  - New Flyer's Service Organization coordinates warranty claims through iWarranty
  - New Flyer maintains extensive service networks and comprehensive in-house engineering resources
  - Three year/150,000 miles parts and labor warranty



NEW FLYER

XCELSIOR

SALES INFORMATION BULLETIN

Specifications

	Parker Vansco Module
CORE	
Micro Processor	Power PC
Flash	1 Mbyte up to 2 Mbyte
RAM	64 Kbyte up to 512 Kbyte
Eeprom	32 Kbyte
Bus Speed (Clock)	80 Mhz
COMMUNICATION CHANNELS	
CAN Buses	2
Wake on CAN	CAN Bus 1
COMMUNICATION PROTOCOL	
SAE J1939	Yes (2)
CAN	Yes (2)
Gateway Functionality	Yes
Router Functionality	No
RV-C Capable	No
GMLAN	No
J1708	No
RS232	No
Built in DLA capability	No
Diagnotic Messages (DM)	Yes
CAN Messages (User Definable)	Yes

	Parker Vansco Module
VISUAL DIAGNOSTICS	
Power LED	1
Network LED	2
Fault LED	-
Input LED	21
Output LED	15
SYSTEM ARCHITECTURE	
Master - Master	Yes
Single Part Solution	Yes
Mix and Match Controllers	Yes
SOFTWARE	
Software License Cost	No
Programming Modules	Program with PC for the first time, then if a unit is replaced, they Plug and Play each other.
Power Shedding	Yes
OTHER	
Module Addressing	5 dedicated inputs for addressing
Power Control	1 (AH)
Total Continuous Current per Controller	80 Amps
Total User Configurable Inputs	16
Total User Configurable Outputs	15

NEW FLYER

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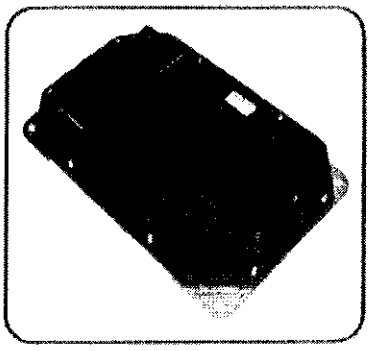
SALES INFORMATION BULLETIN

Parker Vansco VMM1615

- Total of 16 inputs
- Six switch (digital) inputs
  - One input with power control switched to high
  - Six programmable input switch high or low
- Eight analog / digital inputs
- One DC frequency input
- Total of 15 outputs
  - 6 outputs, 10 A max
  - 4 outputs, 5 A max
- 3 outputs, 2 x 2.5 A high side, 1 x 2.5A low side
  - 2 solid state outputs, 1 A max
  - Total Current 80 A max
  - 2 V or 24 V operation
  - Split power bus
  - 5V/8V Regulated Sensor Supply
- PWM outputs 1- 100%, 100 Hz
- Solid state switching and circuit protection
- Accurate current sense on selected outputs
- Internal power protection and conditioning
- 2 - CAN ports, 1 with wake on CAN, both J1939 communications protocol
- Built-in pocket gateway functionality



Parker Vansco Xcelsior Instrument Cluster

- Contemporary dash design with the industry's first standard electronic automotive-style instrument panel
- Integrated inputs, outputs, gauges, LCDs, tell tales, and user buttons in one drop-in package
- 2 CAN ports for built in pocket gateway functionality
- Bridges drivetrain J1939 to chassis J1939
- USB device port, uses a standard cable to communicate with a PC
- Total of 27 inputs
  - 3 Wake Ups Active High
  - 12 Digital Active Low
  - 6 Digital Active High
  - 5 Analogs (3 Position Switch Settings)
  - 1 Frequency Input
- Total of 3 outputs
  - 2 High Side Outputs 2 A max.
  - 1 Low Side Output 2.5 A max
- User programmable routing table for passing or Blocking of J1939 Messages
- User programmable inputs, outputs, gauges, tell tales, and LCDs
- Uses a standard off the shelf USB A-B cable to communicate with a PC
- Uploading, downloading and diagnostics are all done from two points on the vehicle (front & rear)
  - The instrument cluster serves as built-in service tool
- Advanced Diagnostics
  - Real time diagnostics
  - All documentation is stored in the VMMs
  - Monitor all inputs and outputs from one location
  - Monitor analog voltage
  - 'Force' inputs or outputs On or OFF
  - Upload logs and error codes

NEW FLYER

XCELSIOR

SALES INFORMATION BULLETIN

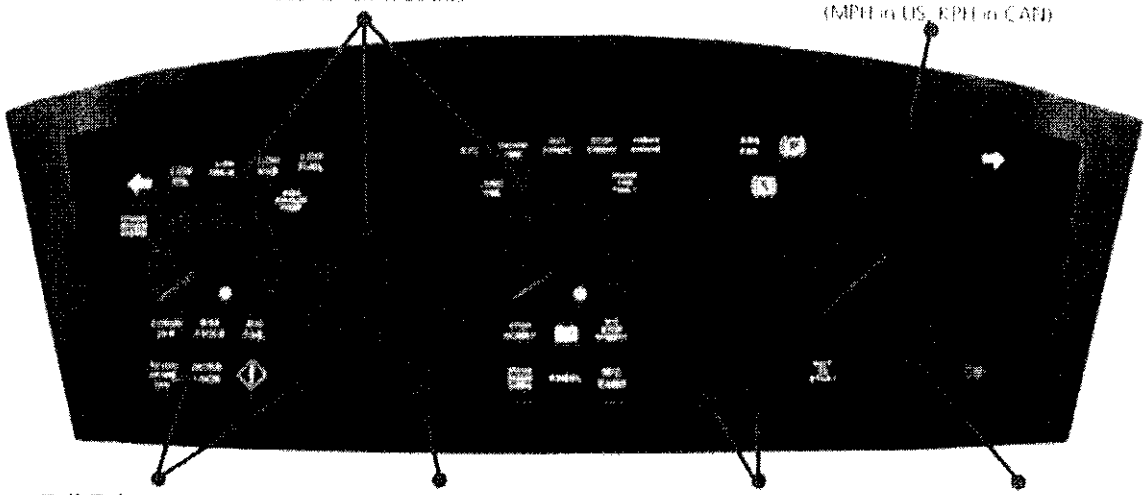
Xcelsior Electronic Instrument Cluster

Air Pressure Gauges

- Two gauges in 40 bars
- Third gauge positioned above LCD screen in 60 bars

Speedometer

(MPH in US, KPH in CAN)



Tell Tales

- Up to 31 standard tell tales illuminate on dash
- Additional selected tell tales are programmed to display on LCD screen

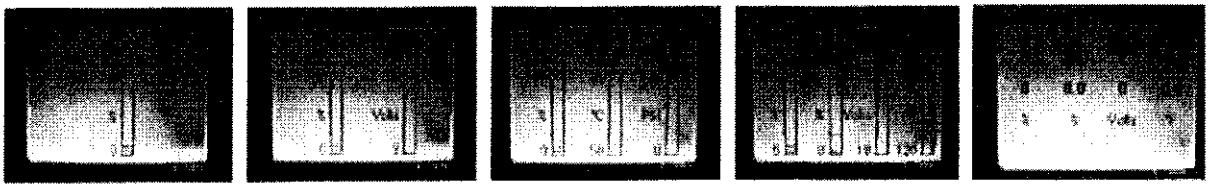
LCD Screen

- Up to four LCD screens
- Each LCD screen displays between 1 to 4 gauges
- 2010 EPA regulation requires that an urea level gauge always be present and in the "1" position

User Buttons

Odometer

Examples of LCD Screen Configurations



Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 65
Proposer: New Flyer of America Inc.
RFP Section: LIGHTING, The passenger interior lighting system shall be an I/O Controls or approved equal LED lighting system.
Page: 41

Questions/clarification or approved equal:

New Flyer provide TCB interior lighting and advertising panels. Please see Attachment M - SIB-277-001-X-LED for further information on the provided interior lighting.

Agency action:

☑ Approved ☐ Denied
☐ See addendum ☐ See response below

Agency response:

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City of Greenville, North Carolina
BID #16-17-31

Request #: 66
Proposer: New Flyer of America Inc.
RFP Section: LIGHTING, LED high and halogen low beam headlights are required and shall be controlled from a sealed, moisture-protected foot switch located on the floor in the driver's station.
Page: 42

Questions/clarification or approved equal:
The JW Speaker 12V headlights are halogen for the high beams and LED for the low beams. Please see Attachment N - SIB 273-001-X-LED-Headlights for further information on the headlights.

Agency action:
☑ Approved ☐ Denied
☐ See addendum ☐ See response below

Agency response:

NEW FLYER

XCELSIOR

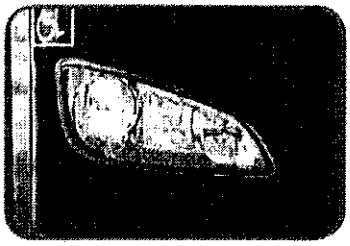
SALES INFORMATION BULLETIN

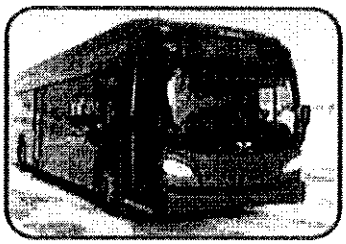
#273-001 | Model: Xcelsior | Lengths: All | Propulsions: All

LED Headlights

Product Features

New Flyer is the first North American OEM to offer LED Headlights to the transit industry. This new headlight assembly introduces LED low beam and an integrated turn signal. The high beam is still offered in an incandescent configuration to reduce cost of the assembly.





Benefits

- Maintenance cost savings is estimated at $2,860 over 12 years per bus which is more than a 50% reduction versus conventional incandescent lights. On a fleet size of 100 buses, this could represent a maintenance cost savings of $286,000 over 12 years.
- The brightness of the bulbs will not disturb the vision of opposing traffic.
- Improved front mask styling with an automotive look.

Service/Repair

The high-beam bulbs are the only serviceable components. New Flyer estimates minimal replacements of high-beam bulbs due to the duty cycle of a transit bus and the low usage of the high-beams in revenue service.

Warranty

Headlight assemblies are warranted for six years; however, these lights have been designed to last 12 years.

Testing

Headlights are certified compliant to FMVSS-108

ENVIRONMENTAL CHARACTERISTICS

Test standard:	SAE J2139
Sealing standard:	IP 66
Gasket:	Poron with PSA on one side

CONSTRUCTION CHARACTERISTICS

Lens Material:	Hard-coated polycarbonate
Base Material:	Polycarbonate
Reflector:	High-temperature Polycarbonate

COMPLIANCE CHARACTERISTICS

FMVSS/CMVSS 108:	High & Low Beam for DOT
SAE J 2261:	Turn signal
Reflector:	High-temperature Polycarbonate

ELECTRICAL CHARACTERISTICS

Nominal Voltage:	12 Vdc
Operating Voltage:	9-18 Vdc
Max current draw (LED) Low beam:	6.1A at 12 Vdc
Max current draw High Beam:	4.5A at 12 Vdc
Connection:	Integral connector
Light source: High Beam Low Beam Turn signal	 Halogen Model #H-11 LED light engine Discreet LED
Mating Connector: High beam bulb Low beam/turn signal	 Packard connector 8 pin Deutsch DT06-08SA
Transient Protection:	150 v for 10 pulses - 40 ms long pulses, 1 sec between pulses
Electrical Interference:	ECE regulation 10

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City of Greenville, North Carolina
BID #16-17-31

Request #: 67
Proposer: New Flyer of America Inc.
RFP Section: LIGHTING, All clearance and I.D. lights shall be flush mount LED type.
Page: 42

Questions/clarification or approved equal:

New Flyer provides clearance lights which aren't flush mounted. For further information see drawings 566866 and 052949.

Agency action:

- ☑ Approved
- ☐ Denied
- ☐ See addendum
- ☐ See response below

Agency response:

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City of Greenville, North Carolina
BID #16-17-31

Request #: 68
Proposer: New Flyer of America Inc.
RFP Section: LIGHTING, All electrical connections to the LED light shall be by wire coming from the light housing and terminated with a Packard Weather Pak connector.
Page: 42

Questions/clarification or approved equal:

New Flyer provides exterior lighting connections that are terminated with Deutsch or Packard connectors. Please see below for connector information:

Headlights

HIGH BEAM BULB - PACKARD CONNECTOR #12124817

LOW BEAM/TURN SIGNAL - 8 PIN DEUTSCH DT06-08SB

Taillights:

Packard connectors #12015792 or #12015793

Rear Center Stop Light:

Deutsch #DTMN06

Kneeling Light:

Packard #12015792

Marker Lights

Packard #12015792

Liscence Plate Light

Packard #12015792

Agency action:

☑ Approved ☐ Denied
☐ See addendum ☐ See response below

Agency response:

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City of Greenville, North Carolina
BID #16-17-31

Request #: 69
Proposer: New Flyer of America Inc.
RFP Section: LIGHTING, The brake lights shall be fabricated with the use of a current regulator circuit to the LED's that allows for operation of the device from an internal active regulator circuit that assures uniform illumination of all the LED down to 8 volts.
Page: 42

Questions/clarification or approved equal:

New Flyer supplies power to the brake lights through a Vansco multiplexing output. The outputs on our system can drive loads up to 10 amps and are electronically self protected. In the event of an issue with the circuit an indicator will illuminate on the dash and audible alarm will trigger.

Agency action:

☑ Approved ☐ Denied
☐ See addendum ☐ See response below

Agency response:

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City of Greenville, North Carolina
BID #16-17-31

Request #: 70
Proposer: New Flyer of America Inc.
RFP Section: LIGHTING, The bus shall be equipped with surface mount rectangular LED step well lamps mounted in accordance with the ADA
requirements.
Page: 43

Questions/clarification or approved equal:
New Flyer provides two round lights on the steps to the upper deck. Please see drawings 462801 and 266142 for further information.

Agency action:
☑ Approved ☐ Denied
☐ See addendum ☐ See response below

Agency response:

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City of Greenville, North Carolina
BID #16-17-31

Request #: 71
Proposer: New Flyer of America Inc
RFP Section: LIGHTING, The light shall be dual 12 and 24 volt.
Page: 43

Questions/clarification or approved equal:
The two round lights are 12V and not dual 12 volt and 24 volt. New Flyer supplies the correct voltage potential to the light.

Agency action:	☑ Approved	☐ Denied
	☐ See addendum	☐ See response below

Agency response:

Request for Pre-Offer Change or Approved Equal

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City of Greenville, North Carolina
BID #16-17-31

Request #: 72
Proposer: New Flyer of America Inc.
RFP Section: LIGHTING, The engine compartment shall utilize 3 12" white led strip lights that produce 300 lumens of light
Page: 43

Questions/clarification or approved equal:

New Flyer provides 4 LED lights in the engine compartment that output 409 lumens. The lights aren't strip lights. Please see drawings 616648 and 594639 for further information.

Agency action:

☑ Approved ☐ Denied
☐ See addendum ☐ See response below

Agency response: