The **U.S. D**epartment **O**f **E**nergy

Office **o**f **E**nergy **E**fficiency **A**nd **R**enewable **E**nergy's

National **A**lternative **F**uels **H**otline

Heavy-Duty Vehicle and Engine Resource Guide

FOR ADDITIONAL INFORMATION CONTACT THE HOTLINE
800-423-1DOE • 703-528-3500
FAX: 703-528-1953
EMAIL: hotline@afdc.nrel.gov

Introduction

Engine manufacturers are moving forward when it comes to alternative fuel engine technology. This model year (MY96), heavy-duty engine manufacturers are offering a number of natural gas models with additional models nearing production. Electric vehicle manufacturers have several products available with new models nearing completion. Although Caterpillar is the only manufacturer offering propane as a fuel option, Detroit Diesel Corp. (DDC) will be demonstrating a prototype model in 1996, and Cummins will release a model within MY96. Many manufacturers are offering natural gas engines in response to California Air Resource Board's strict bus emission standards which are effective MY96.

Caterpillar, Cummins and DDC already have dedicated natural gas models that meet the proposed federal emission standards set for year 2004 . All the manufacturers providing natural gas options are surpassing the 1996 federal emissions standards.

Likewise, the electric and fuel cell buses are receiving considerable publicity for their ability to eliminate tons of toxic air emissions. Although these two fuel systems are considerably more expensive, several transit agencies are purchasing zero emission demonstration vehicles with the anticipation that the technology will become more economical as technology evolves and infrastructure grows.

Although production seems to centering around natural gas and electric engines, there is a mounting demand to place propane medium and heavy-duty vehicles on the road. The Propane Vehicle Council, the National Propane Gas Association and several other organizations agreed to cost-share much of the heavy-duty propane engine developments. Caterpillar is currently offering a propane version of its G3306 engine family. Cummins anticipates selling its B5.9G Series with a propane option by late MY96. DDC has a demonstration model in operation and has not yet announced when it will be offered.

DDC discontinued offering its 6V-92TA which can run on methanol or ethanol. Although the engine could meet future standards, there has not been any demand due to high fuel cost. According to several representatives of the alcohol fuels industry, future heavy-duty alcohol fuel applications may come in the form of fuel cells, similar to the bus system designed by Georgetown University.

Other alternative fuels, such as biodiesel and di-methyl ether, are currently being tested in heavy duty engines. Recently, the U.S. Department of Energy proposed defining biodiesel (non-blended) as an alternative fuel under the Energy Policy Act, furthering the recognition of biodiesel as an alternative fuel.

For more information, please contact the National Alternative Fuels Hotline at 800-423-1DOE.

Table 1. Emission Standards (g/bhp-hr)

Standard	NMHC	CO	NOx	PM
1996 CARB Bus	1.2	15.5	4.0	0.05
1996 CARB Truck	1.2	15.5	5.0	0.10
1994-7 EPA Diesel	1.3	15.5	5.0	0.10
1998 EPA Diesel	1.3	15.5	4.0	0.10
1996 EPA Bus	1.3	15.5	5.0	0.05
1998 EPA Bus	1.3	15.5	4.0	0.05
2004 EPA Proposed	1.3	15.5	2.0	0.05
2004 EPA, CARB, OEM Option A	*	15.5	2.4*	0.05
2004 EPA, CARB, OEM Option B	0.5**	15.5	2.0**	0.05

* HC (NMHC) + NOx combind standard.
** NMHC + NOx combined standard and a NMHC cap of 0.5 g/bhp-hr.

Table 2

Heavy and Medium Duty Natural Gas Vehicles

(available or nearing development)

*Vehicle range is determined by fuel tank size, driving patterns, and geographic/weather conditions (@=average)

Vehicle Type	OEM/Model	Engine Used	Range*	Availability
Medium Duty Truck	Ottawa, YT-50	Cummins 5.9L	8hours	1996
Medium Duty Truck	Freightliner, FL50, FL60, FL70	Cummins 5.9L	N/A	1996
Medium Duty Truck	Kenworth, T300	Cummins 8.3L	N/A	Late 1996
Medium Duty Truck	Ford F-700	Ford 7-liter V-8 (LPG) Cummins 8.3L	N/A	1996
Heavy Truck	Kenworth, T8000	Cummins L10	2-300@	1996
Heavy Truck	Peterbilt, 320	Cummins L10 (LNG)	N/A	1996
Heavy Truck	Volvo GM	Cummins L10	N/A	TBD
Heavy Truck	Freightliner	Cummins L10	N/A	TBD
Heavy Truck	Ford, 8000	Cummins 8.3L	N/A	1996
Heavy Truck	Western Star, 4964S	Caterpillar 3306 (LPG) Cummins L10	2-300 @	1996 N/A
Heavy Truck	Navistar, 8000 Series	T-444NG Detroit Diesel 30G	N/A	(Prototype)
Locomotive	Morrison Knudson	Caterpillar 3516	N/A	(In Development)
Refuse Hauler	Volvo-GM, WXLL64	Cummins L-10	N/A	Available in 1996
Refuse Hauler	Crane Carrier Co., LET	Cummins L-10	N/A	1996
Refuse Hauler	Peterbilt, 320	Cummins L-10	N/A	1996
Refuse Hauler	Mack Trucks, Inc.	Mack E-7 12L (LNG)	N/A	(In Development)
School Bus	Blue Bird TC/2000 FE (front engine) TC/2000 RE (rear engine) All American FE & RE CV200 FE	Hercules 5.6L John Deere 8.1L Cummins 5.9L GM 7.0L	N/A	N/A
School Bus	Carpenter, Counselor	Hercules 5.6L	N/A	N/A
School Bus	Navistar International 3800-218", 254" and 276" wheelbase	T-444 N.G.	N/A	(Prototype)
School Bus	Thomas Built Saf-T-Liner MVP	Cummins 5.9L, 8.3L	2-300@	1996
School Bus	Matthews-upfits 10 yr. + Navistar Chassis-254/Conventional wheelbase to Vista cowl-Natural Gas. New Thomas body	Hercules 5.6L Cummins 5.9L	225 @	1996
Step Van	Freightliner Custom, MT-10NG, MT-12NG, MT-13NG, MT-14-19NG	Cummins, B5.9G	N/A	Available in 1996
Step Van	Oshkosh Truck Corp. MT-10NG, MT-12NG, MT-13NG, MT-14-19NG	Hercules 3.7L Cummins 5.9 L	N/A	(In Development) (In Development)
Spotting Truck	SISU USA, Inc. TT100	Hercules 5.6L, Cummins 5.9L	N/A	1996
Shuttle Trolley	Specialty Vehicle Manufacturing 3000T, 3000 Deluxe, 2000 Tow Motor Tug	Cummins 5.9L Hercules 5.6L	N/A	1996
Street Sweeper	Athey M9C/Mobile	Hercules 5.6L; Detroit Diesel 30G	N/A	N/A
Transit Shuttle	GC-II Pacer Sentry	460 CID GM 7.4L 454 CID	N/A	N/A
Transit Shuttle	Metrotrans Corp. 29' and 35' Eurotrans	Hercules 5.6L	N/A	1996
Transit Shuttle	Spartan Motors, Low Floor	Cummins, B5.9	N/A	1996 (prototype)
Transit Shuttle	North American Transit 29" 71/2" Unique Design Transit Vehicle (UDTV)	Hercules 5.6L	N/A	1996

Vehicle Type	OEM/Model	Engine Used	Range*	Availability
Transit	American Ikarus, Inc. Ikarus 416/LNG 436/LNG Articulated	Cummins L-10 Detroit Diesel S-50G	N/A	1996
Transit (1)	Orion Bus Company Orion 5/CNG (30', 35' &40') Orion 2/CNG 26' Para-transit, handicapped accessible	Cummins L-10 Detroit Diesel 50G	200@	1996
Transit (1)	Flxible Corporation METRO	Cummins L-10 Detroit Diesel 50G	350-400 @	1996

Source: Gas Research Institute, supplemented by the National Alternative Fuels Hotline
(1) = equipped with particulate traps

Table 3
Heavy and Medium duty Electric Vehicles
(available or nearing completion)

Vehicle Type	OEM/Model	Propulsion System	Batteries	Availability
School Bus	APS System	N/A	N/A	TBA
School Bus	Thomas Built Buses, Inc.	Hughes Power Control System	Sealed Lead Acid, 320 volts	1996
School Bus	Blue Bird Corp.	Westinghouse	GNB Lead Acid	1996
Transit Bus	U.S. Electricar	Advanced DC motors	Lead Acid 120 volts	1996
Transit Bus	APS Systems/Villager	AC Rexroth mtors	320 volt DC 78 kwh	TBA
Transit Bus	APS Systems/22-Foot	Chloride traction controller, DC motor	Ni-Cad.	TBA
Transit Bus	APS Systems/35-Foot Electric Bus	Hughes controller	SAFT Ni-Cad, 112 6 volt, 360 amp hr.	1996
Transit Bus	El Dorado National	Hughes Power Control System high speed AC induction motors	Trojan Lead Acid, 320 volt	Demonstration
Transit Bus	Bus Manufacturing USA/22-Foot Med. Duty Battery/hybrid Bus	Chloride controller, Nelco DC traction motor	Chloride Motive Power, 325 amp hr.	1996
Transit Bus	Specialty Vehicle Manf. Corp./5122	Nelco traction motor	Trojan Industrial Lead Acid	1996
Transit Bus	Advanced Vehicle Systems/22 foot	GE	Trojan, Chloride	1996
Transit Bus	Ballard Power Systems	Hydrogen Fuel Cell	N/A	1996 Prototype
Transit Bus	Specialty Vehicle Manf. Corp. /5131	Hughes Power Control System	Trojan Industrial Lead Acid; 160 volts; 72 kwh	1996
Transit Bus	Matthews/ETAF	Advanced DC	Lead Acid	1997

Table 4. Available Alternative Fuel Engines

Engine	Type	Available	Fuel type	CC	Emissions	NMHC	CO	NOx	PM	Displacement	Horsepower	Torque
Caterpiliar, Inc (See Power Systems Associates for more Caterpillar product offerings)												
3306	HD	1996	CNG or LNG	Y	CARB, ULEV	0.7	6.3	0.7	.02	638.7 ci, 10.5 L	250@2100	820@1200 rpm
3306	HD	1996	LPG	Y	CARB, ULEV	0.7	6.3	0.7	.02	638.7 ci, 10.5 L	235@2100	800@1200 rpm
Cummins Engine Company												
B5.9G	MD	1994	CNG or LNG	Y	ULEV, TLEV	0.6	5.4	0.9	0.02	359 ci, 5.9 L	195@ 2800 rpm	420@ 1600 rpm
B5.9G	MD	1994	LPG	Y	ULEV, TLEV	0.6	5.4	0.9	0.02	359 ci., 5.9 L	150@ 2500 rpm	375@ 1500 rpm
L10	HD	1994	CNG or LNG	N	CARB, ULEV*	N/A	N/A	N/A	N/A	611 ci, 10 L	280-300@ 2100 rpm	900@ 1300 rpm
C8.3-250G	MD	R&D	CNG or LNG	Y	ULEV (targeted)	N/A	N/A	N/A	N/A	8.3 L	250@ 2400 rpm	750@1400 rpm
M11-340G	HD	R&D	CNG or LNG	N	ULEV (targeted)	N/A	N/A	N/A	N/A	661 ci, 11L	340@2100 rpm	1050@ 300 rpm
Detroit Diesel Corporation												
30G	MD	1995	CNG or LNG	N/A	LEV	3.5*	3.4	3.5*	0.05	444 ci, 7.3 L	210@2400 rpm	485@1500 rpm
50G 260 hp	HD	1994	CNG or LNG	N	CARB	0.6	2.5	1.9	0.03	8.5L, 4 cycle	250@2100 rpm 260@2100 rpm	780@1200 rpm
50G 275 hp	HD	1994	CNG or LNG	N	CARB	0.6	2.5	2.7	0.03	8.5L, 4 cycle	275@2100 rpm	890@1200 rpm
50G	HD	R&D	LPG	N	CARB	N/A	N/A	N/A	N/A	8.5 L, 4 cycle	250@2100 rpm	890@1200 rpm
60G	HD	1997	CNG or LNG	N	CARB	N/A	N/A	N/A	N/A	12.7 L, 4 cycle	350-400@2100 rpm	1450 (peak)
Hercules Engine Company												
GTA 3.7	MD	1996	CNG	N/A	CARB, ULEV	0.6	2.7	3.1	0.08	226 ci.,3.7 L	130@2800 rpm	285@1600 rpm
GTA 5.6	HD	1996	CNG	N/A	CARB, ULEV	0.9	2.8	2.0	0.10	339 ci.,5.6 L	190@2800 rpm	460@1500 rpm
John Deere												
6081H	HD	1995	CNG	N/A	ULEV	0.34	2.36	2.17	.055	8.1 L	250@2200 rpm	800@1350 rpm

Mack Trucks												
E7G325	HD	1997	LNG	N	CARB	N/A	2.8	2.5	0.10	12 L	350@1800 rpm	1370@1250rpm
Navistar International												
T444	MD	1995	CNG	N/A	CARB	N/A	N/A	N/A	N/A	444 ci, 7.3 L	210@2400 rpm	N/A
Power Systems Associates (Power Systems Associates, a Caterpillar distributor, has modified the following engines to perform as a dual fuel gas system)												
3126G	MD	1996	DFNG	N Y	CARB LEV	N/A	N/A	N/A	N/A	439 ci, 7.2L	190-250@2400 rpm	700@1500rpm
3176BG	HD	1995	DFNG	N Y	CARB LEV	N/A	N/A	N/A	N/A	629 ci, 10.3L	270-350@2100 rpm	1050@1200rpm
C-10	HD	1996	DFNG	N Y	CARB LEV	N/A	N/A	N/A	N/A	629 ci, 10.3L	280-350@2100 rpm	1050@1200rpm
C-12	HD	1996	DFNG	N Y	CARB LEV	N/A	N/A	N/A	N/A	732 ci, 12L	350-425@2100 rpm	1250@1200rpm
3406EG	HD	1997	DFNG	N Y	CARB LEV	N/A	N/A	N/A	N/A	893 ci, 14.6L	400-475@2100 rpm	1450@1200rpm

***combined reading of nox+nmhc**

Electric Vehicle Manufacturers

Hughes Power Control Systems (Electric)

Drive train	Type	Available	Battery	Battery Voltage	Battery Capacity	Power Rating	Range	Speed	GVWR	Frame	Applications
Electric motor/battery	MD or HD	1995	Sealed Lead Acid	320-Vdc	90 kW-hr. @ 80% D.O.D.	120kW (160-210 HP)	70-75 miles per charge	55 MPH (MAX)	36,200 lb.	Thomas Built Buses Saf-T-Liner EV	School bus

Westinghouse (Electric)

Drive train	Type	Available	Battery	Battery Voltage	Battery Capacity	Power Rating	Range	GVWR	Applications
Westinghouse	HD	1995	Sealed Lead Acid	336	4 packs (112 batteries)	234 bhp	80 miles per charge	34,000	School bus

Glossary of Acronyms

CARB: California Air Resources Board
CC: Catalytic converter
ci.: Cubic inch
CNG: Compressed natural gas
CO: Carbon monoxide
DFNG: Dual-fuel Natural Gas
EPA: Environmental Protection Agency
HD: Heavy duty vehicle
L: Liter
LNG: Liquified natural gas
LPG: Liquified petroleum gas
MD: Medium duty vehicle
N/A: Information not available
NMHC: Non methane hydrocarbons
NOx: Oxides of Nitrogen
PM: Particulate matter
ULEV: Ultra low emission vehicle
***** Combind NMHC and NOx emssions
# With a catalyst

Heavy Duty Engine Contacts

Caterpillar, Inc.
Steve McCormick
P.O. Box 610, Moseville, IL 61552-0610
Phone: (309) 578-4929
Fax: (309) 578-2053

Cummins Engine Company
Carl Koontz, Director Alternate Fuel Services
Steve Goss, Automotive Marketing Support
M/C-40915 or M/C 60610
Columbus, IN 47202-3005
Phone: (812) 377-7624 or 6920
Fax: (812) 377-5532 or 1309

Detroit Diesel Corporation
Stanley Miller, Manager
Alternative Fuel Technology
13400 Outer Drive West, Detroit, MI 48329-4001
Phone: (313) 592-7046
Fax: (313) 592-5604

Hercules Engine Company
Danny Higgins, Alternative Fuels
101 - 11th Street, S.E., Canton, OH 44707
Phone: (330) 454-5631
Fax: (330) 454-1030

Hughes Power Control Systems
Bill Clayton
Thomas Built Buses
1408 Courtesy Road, High Point, NC 27260
Phone: (910) 889-4871
Fax: (910) 889-2589

John Deere
Joby Javellana, Product/Market Manager
Deere Power Systems Group
P.O. Box 5100, Waterloo, IA 50704-5100
Phone: (319) 292-5348
Fax: (319) 292-5075

Mack Trucks Inc.
Bill Dougherty, Vice President of Marketing
2100 Mack Boulevard, Box M, Allentown, PA 18105
Phone: (610) 709-3296
Fax: (610) 709-2380

Heavy Duty Engine Contacts

Navistar International
John Haggard, Navistar Engine Division
10400 West North Ave, Melrose Park, IL 60160
Phone: (708) 865-4154
Fax: (708) 865-3330

Power Systems Associates
Kevin W Campbell, North American Business Manager
Dual Fuel Engines
P.O. Box 7044, Los Angeles, CA 90020
Phone: (310) 463-6033
Fax: (310) 699-7971

Westinghouse
Roland Gray (Westinghouse contact)
Blue Bird Corp.
3920 Arkwright Road, Macon, GA 31012
Phone: (912) 757-7108
Fax: (912) 474-9131

Medium And Heavy Duty Truck Manufacturers

Crane Carrier Company
Ruben Brown,
1925 N. Sheridan, Tulsa OK 74115
Phone: (918) 836-1651
Fax: (918) 832-7348
Crane manufactures refuse haulers

Freightliner
Debbie Nicholson
6135 NE 80th Avenue, Portland, OR 97218-4033
Phone: (503) 735-8000
Fax: (503) 735-7327

Ford Commercial Truck Division
Mark Bently, Marketing Planner
6800 Executive Plaza Drive, Suite 950
Dearborne, MI 48126
Phone: (313) 323-9708
Fax: (313)

Kenworth
Evan Campbell
10630 NE 38th Place, Kirkland, WA 98033-7928
Phone: (206) 828-5000
Fax: (206) 828 5999

Medium And Heavy Duty Truck Manufacturers

Mack Trucks Inc.
Bill Dougherty, Vice President of Marketing
2100 Mack Boulevard, Box M, Allentown, PA 18105
Phone: (610) 709-3296
Fax: (610) 709 2380

Navistar International
John Haggard, Navistar Engine Division
10400 West North Ave, Melrose Park, IL 60160
Phone: (708) 865-4154
Fax: (708) 865-3330

Oshkosh Truck Corporation
Ron Ziebell, Head of Engineering
2307 Oregon Street, Oshkosh, WI 54901-6964
Phone: (414) 235-9150
Fax: (414) 233-9610

Ottawa Truck Inc.
Joe Haster
415 East Dundee Street, Ottawa, KS 66067-1543
Phone: (913) 242-2200
Fax: (913) 242-6117

Peterbilt Motors Company
Marketing Offices
1700 Woodrook Street, Denton, TX 76205-7864
Phone: (817) 591-4000
Fax: (817) 591-4091
Engineering Department
Jim Mayfield, Senior Project Engineer
3200 Airport Road, Denton, TX 76202-0550
Phone: (817) 566-7752
Fax: (817) 566-7744

SISU USA Inc.
Henry Lamb, Operation
1301 Cherokee Trace, White Oak, TX 75693-5490
Phone: (903) 759-5490
Fax: (903) 297-8166

Volvo GM Heavy Truck Corporation
Bill Brubaker, Vice President of Manufactoring
Dublin, VA 24084
Phone: (540) 674-4181
Fax: (540) 674-7499

Western Star
Howard Cunning
2076 Enterprise Way, Kelowna, BC V1Y6H8
Phone: (604) 860-3319
Fax: (604) 868-6210

Bus and Truck Information Sources

American Bus Association
Kenneth Ryan, Office Manufactoring
1100 New York Ave., NW, Suite 1050
Washington, DC 20005
Phone: (202) 842-1645
Fax: (202) 842-0850

American Trucking Association
Tim McGrath
2200 Mill Road, Alexandria, VA 22314-4677
Phone: (703) 838-1966
Fax: (703) 838-0291

California Energy Commission
Bob Aldridge
Safe School Bus and Clean Fuel Demonstration Program
1516 Ninth Street, Sacramento, CA 95814
Phone: (916) 654-4989
Fax: (916) 654-4420

Electric Transit Vehicle Institute
Rick Hitchcock, President
John Capell, Executive Director
1617 Wilcox Blvd, Chattanooga, TN 37406
Phone: (423) 622-3884
Fax: (423) 622-0744
Non-profit corporation involved with electric transit bus development and demonstration.

National Alternative Fuels Hotline
P.O. Box 12316, Arlington, VA 22209
Phone: 800-423-1DOE
Fax: (703) 528-1953
"Alternative Fuel Transit Buses: Interim Results from the National Renewable Energy Laboratory's Vehicle Evaluation Program, First Report May 1995"

Southern California Edison
Dean Taylor
Electric Transportation Division
P.O. Box 800, Rosemead, CA 91770
Phone: (818) 302-8513
Fax: (818) 302-1328
Involved with electric school bus demonstration program with CALSTART. Offers a guide to funding sources for electric battery-powered buses.

Bus and Truck Information Sources

Truck Manufacturers Association
William Leasure
1225 New York Avenue, Suite 300, Washington, DC 20005
Phone: (202) 638-7825
Fax: (202) 737-3742

U.S. Dept. of Energy, Office of Alternative Fuels
Steve Goguen, Heavy Duty Truck Program
1000 Independence Ave., SW, Room 5G086
Washington, DC 20585
Phone: (202) 586-8044
Fax: (202) 586-1600

U.S. Environmental Protection Agency
Phil Carlson, Urban Buses
National Vehicle and Fuel Emissions Laboratory
2565 Plymouth Road, Ann Arbor, MI 48105
Phone: (313) 668-4270

Transit And School Bus Manufacturers

APS Systems
Gene Polido, Head of Engineering
3535 West 5th Street, Oxnard, CA 93030-6403
Phone: (805) 984-0300
Fax: (805) 984-

Advanced Vehicle Systems Inc.
Joe Ferguson, President
3101 Parker Lane, Chattanooga, TN 37419-1708
Phone: (423) 821-3146
Fax: (423) 821-0042

American Ikarus Inc.
Rich Himes
530 New Los Angeles Ave., Suite 205
Moorpark, CA 93021
Phone: (805) 529-5080
Fax: (805) 529-3858
American Ikarus Inc. offers a 40-foot and 60-foot articulated bus with a LNG Cummins L10 or Detroit Diesel Series 50 engine. The company supplied 62 LNG buses to the Houston Metropolitan Transit Authority.

Ballard Power Systems, Inc.
Jim Balcom, Manager of Manufactoring
107-980 W. 1st St., North Vancouver, BC V7P 3N4 CANADA
Phone: (604) 454-0900
Fax: (604) 986-3262
Ballard has developed a hydrogen fuel cell transit bus to be offered to transit operators for demonstration purposes in 1996-97.

Blue Bird Corporation
Roland Gray
P.O. Box 927, Fort Valley, GA, 31030-0937
Phone: (912) 757-7108
Fax: (912) 474-9131
Offers a 72-passenger electric school bus in partnership with Westinghouse Electric. Also developing a natural gas bus with John Deere.

Champion Motor Coach, Inc.
Tim Farney
331 Graham Road, P.O. Box 158, Imlay City, MI 48444
Phone: (800) 776-4943
Fax: (810) 724-7748
Champion's Centurion, Challenger, and Commander model transit and shuttle buses are available for conversion to natural gas at a nearby upfitter.

Chance Coach, Inc.
Richard Carlon
4219 W. Irving St., Witchita, KS, 67209
Phone: (316) 942-7411
Fax: (316) 942-0401
Chance Coach offers a rubber tire streetcar trolley that runs on a Cummins CNG engine.

Eldorado National Co.
Gentry Shaw
13900 Sycamore Way, Chino, CA 91710
Phone: (909) 591-9557
Fax: (909) 591-5285
ElDorado offers transit buses that run on CNG, LNG, electricity, and hybrid technologies.

Flxible Corp.
Dave Kossler
970 Pittsburgh Drive, Delaware, OH, 43015
Phone: (614) 362-2607
Fax: (614) 362-2658
Flxible Corp. offers a CNG and LNG option for its 30-, 35- and 40-foot transit buses.

Gillig Corp.
5800 Clawiter Rd., Hayward, CA 94545
Phone: (510) 785-1500
Fax: (510) 785-6819

Transit And School Bus Manufacturers

Matthews Buses
Bryan Henke, Engineering
Alternative Fuels Division
Route 9, Ballston Spa, NY 12020-9809
Phone: (518) 584-2400
Fax: (518) 584- 5607
Matthews specializes in repowering old buses by reusing the chassis and custom building to order

Metrotrans Bus Company
Deborah Colston
Alternative Fuels Division
301 South Perimeter Park Drive Suite 100
Nashville, TN 37211
Phone: (615) 781-4222
Fax: (615) 781-4274

NEOPLAN, USA
Joyce Surprise
700 Gottlob Auwaerter Dr, LaMar, CA 81052
Phone: (719) 336-3256
Fax: (719) 336-7291
40-60-foot transit busses using Detroit Diesel or CNG.

North American Transit Inc.
7334 Blanco Rd, Suite 200
San Antonio, TX 78205-1351
Phone: (210) 366-4411
Fax: (210) 366

Nova Bus Inc.
Jim McDowell
Director of Advanced Research and Engineering
P.O. Box 5670 RIAC
Roswell, NM, 88202-5670
Phone: (505) 347-2011
Fax: (505) 347-7535
Nova has CNG option for its RTS transit bus.

Orion Bus Company
Bob Kullman
Manager of Engineering
Base Road, Oriskany, NY 13424
Phone: (315) 768-8101
Fax: (315) 768-3970
The Orion and Orion II buses are all available in a natural gas option. These range from 22-foot to 40-foot buses.

Specialty Vehicle Manufacturing Corp .
Rich Krantz
9250 Washburn Road, Downey, CA 90241
Phone: (310) 904-3434
Fax: (310) 904-3439
This arm of the Specialty Vehicle company manufacturers several electric shuttle buses, trolleys, and step vans, and is working on a school bus prototype.

Specialty Vehicle Inc.
Nancy Munoz
16371 Gothard Ave., Suite C, Huntington Beach, CA 92647
Phone: (714) 848-8455
Fax: (714) 848-2114
Specialty Vehicle Inc. offers 14 different products of trolleys, trams, and buses that run on propane.

Thomas Built Buses Inc.
Ron Moore
P.O. Box 2450, High Point, NC, 27261
Phone: (910) 889-4871
Fax: (910) 889-2589
Thomas Built offers a CNG school or commercial applications bus with a Cummins 6BG engine. It also has a prototype electric bus that could be made available to interested fleet managers.

U.S. Electricar
Mike Brace, Head Engineer
5350 Skylane Blvd.
Santa Rosa, California 95403
Phone: (707) 525-3248
Fax: (415) 656-2401
Manufactures electric transit and shuttle buses.