TABLE NO. TWELVE (12)
24-PASSENGER BUS CHASSIS
[SEE PARAGRAPH B.1.2.: REDUCED PASSENGER CAPACITY]

Refer to General Requirements, Page 7

24-Passenger ITEM	**1997 Min. Rqmts.**	**GMC/Chevrolet P31042/P31442 P31062**	**Navistar 3600 Navistar 3400**
GVWR, lbs.	**14500**	14500	16500/ 16500
GAWR, lbs. Front	**5000**	5000	6000 6000
GAWR, lbs. Rear	**11000**	11000	10500 10500
Axle Capacity, lbs. Front	**5000**	5000	6000 6000
Axle Capacity, lbs. Rear	**11000**	11000	13500 13500
Wheelbase, in.	**133/152**	133/157	138/152 154
Chassis Length, in.	**As Shown**	238.8/262.8	268.8/274.8 259.8
Track, in. Front	**65.2**	65.2	81.0 81.0
Track, in. Rear	**66.7**	66.7	82.0 82.0
Gasoline Engine, L[1]	****[2]**	5.7L-V8	*[1] *[1]
SAE Gross Horsepower	****[2]**	180	*[1] *[1]
SAE Gross Torque, lb-ft	****[2]**	295	*[1] *[1]
Transmission: Automatic, Gears	**4 spd**	4L80E/A4OD	AT-542/545 AT-542/545
Transmission: Manual, Fwd. Gears	**4 spd**	NA	NA NA
Tires, Steel Belted Radial	**Tubeless**		
Size & Load Range	**As Shown**	8.00R19.5E	225-70R19.5 225/70R19.5F
Wheels, Rear	**Dual**	Dual	Dual Dual
Alternator, Amperes	**100**	100	100 105

[1]* See diesel engine, Option No. 8.

[2] See minimum power requirements in Paragraph F.5.3.4.**

Diesel Engines [Option No. 8]

24-Passenger ITEM	1997 Min. Rqmts.	Navistar 3600 Navistar 3400
Engine Displacement, L.	**[1]	7.3T-V8 T-4474E
SAE Gross Horsepower	**[1]	175 175
SAE Gross Torque, lb-ft.	**[1]	430 430
[1]**See minimum power requirements in Paragraph F.5.3.4.		

Engines listed on this page are approved to meet or exceed power requirements under normal operating conditions. Other engines must be submitted for approval by the School Bus Committee [See Paragraph F.5.3.4].

24-PASSENGER BUS BODIES

The following bodies are available on semi-forward control or stripped chassis:

24-Passenger ITEM	1997 Min. Rqmts.	Blue Bird Mini-Bird MB-20	Carpenter Cadet	Thomas Minotaur GP/Vista	MidBus/ SC 429 SC 529	US Bus GP/Eagle
Interior Headroom, in.	73	74/77	77	73	79	78
Interior Width, in.	90	90.5	90	90	90	91
Service Door	As Shown	Tall	Tall	Tall	Tall	Tall

TABLE NO. THIRTEEN (13)
35-PASSENGER CONVENTIONAL BUS[34]
[SEE PARAGRAPH B.1.2.: REDUCED PASSENGER CAPACITY]

Refer to General Requirements, Page 7

CHASSIS		B	N	F
35-Passenger Conv. ITEM	**1997 Min. Rqmts.**	**Blue Bird CV200**	**Navistar 3800*[1] 3600*[1] 3400*[1]**	**Ford B800*[1]**
GVWR, lbs.	**21500**	23100	21500 21500 19500	23000
GAWR, lbs. Front	**6000**	8100	6000 6000 6000	8000
GAWR, lbs. Rear	**15000**	15000	15500 15500 13500	15000
Axle Capacity, lbs. Front	**6000**	8100	6000 6000 6000	8000
Axle Capacity, lbs. Rear	**15000**	15000	15500 15500 15500	15000
Wheelbase, in.	**151**	157/175	152 170 170	151
Cowl-to-Axle, in.	**127**	133/151	127 127 102	127
Cowl-to-Frame End, in.	**217**	223/244	217 217 188	231
Gasoline Engine CID**[2]	***[3]	6.0L-V8	*1 *1 *1	*1
SAE Gross Horsepower	***[3]	225	*1 *1 *1	*1
SAE Gross Torque, lb-ft.	***[3]	340	*1 *1 *1	*1
Transmission: Automatic, Gears/Model	**4 spd**	AT-545	AT-545 AT-545 AT-545	AT-545
Transmission: Manual, Fwd. Gears	**5 spd**	M5	M5 M5 NA	M5

[34] **Buses ordered in this capacity (35-Passenger) may be either Conventional or Semi-forward control configuration, at the option of the vendor, unless otherwise specified in the Invitation for Bid.**

Brakes: Front Disc Rotor, in.	**As Shown**	14.75 x1.34	15 x 1.44 15 x 1.44 15 x 1.44	15.38 x 1.53
Brakes: Rear Lining, in.	**As Shown**	14.75 x1.34	15 x 1.44 15 x 1.44 15 x 1.44	15.00 x 6.00
Tires, Steel Belted Radial	**Tubeless**			
Size & Load Range	**9R22.5F**	9R22.5F	9R22.5F 9R22.5F 225/70R19.5F	9R22.5F
Wheels: Rear	**Dual**	Dual	Dual Dual Dual	Dual
Wheels: Rim Size, in.	**6.75**	7.5	6.75 6.75 6.75	6.75
[1]**Furnished with diesel engine only, Option No. 8.**				
[2]***See diesel engine, Option No. 8.**				
[3]****See minimum power requirements in Paragraph F.5.3.4.**				

NOTE: This gasoline engine is available in a bi-fuel (CNG/Gasoline) mode. See Option 3A.

DIESEL ENGINES [Option No. 8]

35-Passenger ITEM	1997 Min. Rqmts.	Blue Bird CV200	Navistar 3600/3800 3400	Ford B800
Engine Displacement, L.	***[1]	6.6T-I6	7.3T-V8 T-444E	5.9T-I6
SAE Gross Horsepower	***[1]	170	175 175	160
SAE Gross Torque, lb-ft.	***[1]	420	430 430	400
GAWR, Front	**6000**	8100	6000 6000	8000
[1]***See minimum power requirements in Paragraph F.5.3.4.**				

Engines listed on this page are approved to meet or exceed power requirements under normal operating conditions. Other engines must be submitted for approval by the School Bus Committee [See Paragraph F.5.3.4.]

35-PASSENGER CONVENTIONAL BODIES

The following Body/Chasis combination are available as indicated:

BODIES	AmTran	Blue Bird	Carpenter	Thomas	MidBus
Models	SS-17	1808	SB1808	0510/0511/0600	SC-629
Chassis Available	N, F	B, N, F	N, F	N-S, N, F	N

TABLE NO. FOURTEEN (14)
47-PASSENGER CONVENTIONAL BUS[35]
[SEE PARAGRAPH B.1.2.: REDUCED PASSENGER CAPACITY]

Refer to General Requirements, Page 7

CHASSIS		B	N	F
47- Passenger Conv. ITEM	**1997 Min. Rqmts.**	**Blue Bird CV200**	**Navistar 3800*[1] 3600*[1] 3400*[1]**	**Ford B800*[1]**
GVWR, lbs.	**21500**	23100	21500 21500 21500	23000
GAWR, lbs. Front	**6000**	8100	6000 6000 6000	8000
GAWR, lbs. Rear	**15000**	15000	15500 15500 15500	15000
Axle Capacity, lbs. Front	**6000**	8100	6000 6000 6000	8000
Axle Capacity, lbs. Rear	**15000**	15000	15500 15500 15500	15000
Wheelbase, in.	**193**	193	193 193 202	193
Cowl-to- Axle, in.	**168**	169	168 168 134	169
Cowl-to-Frame End, in.	**274**	279	274 274 246	280
Gasoline Engine CID**[2]	***[3]	6.0L-V8	*1 *1 *1	*1
SAE Gross Horsepower	***[3]	225	*1 *1 *1	*1
SAE Gross Torque, lb-ft.	***[3]	340	*1 *1 *1	*1
Transmission: Automatic, Gears/Model	**4 spd**	AT-545	AT-545 AT-545 AT-545	AT-545
Transmission: Manual, Fwd. Gears	**5 spd**	M5	M5 M5 NA	M5

[35] **Buses ordered in this capacity (47-Passenger) may be either Conventional or Semi-forward Control configuration, at the option of the vendor, unless otherwise specified in the Invitation for Bid.**

Brakes: Front Disc Rotor, in.	**As Shown**	14.75 x 1.34	15 x 1.44 15 x 1.44 15 x 1.44	15.38 x 1.53
Brakes: Rear Lining, in.	**As Shown**	14.75 x 1.34	15 x 1.44 15 x 1.44 15 x 1.44	15.00 x 6.00
Tires, Steel Belted Radial	**Tubeless**			
Size & Load Range	**9R22.5F**	9R22.5F	9R22.5F 9R22.5F 225/70R 19.5F	9R22.5F
Wheels: Rear	**Dual**	Dual	Dual Dual Dual	Dual
Wheels: Rim Size, In.	**6.75**	7.5	6.75 6.75 6.75	6.75
[1]**Furnished with diesel engine only, Option No. 8.**				
[2]**See diesel engine, Option No. 8.**				
[3]**See minimum power requirements in Paragraph F.5.3.4.**				

NOTE: This gasoline engine is available in a bi-fuel (CNG/Gasoline) mode. [See Option 3A].

DIESEL ENGINES [Option No. 8]

47-Passenger ITEM	**1997 Min. Rqmts.**	**Blue Bird CV200**	**Navistar 3600/3800 3400**	**Ford B800**
Engine Displacement, L.	***[1]	6.6T-I6	7.3T-V8 T-4444	5.9T-I6
SAE Gross Horsepower	***[1]	170	175 175	160
SAE Gross Torque, lb-ft.	***[1]	420	430 430	400
GAWR, Front	**6000**	8100	6000 6000	8000
[1]***See minimum power requirements in Paragraph F.5.3.4.				

Engines listed on this page are approved to meet or exceed power requirements under normal operating conditions. Other engines must be submitted for approval by the School Bus Committee [See Paragraph F.5.3.4].

47-PASSENGER CONVENTIONAL BODIES

The following Body/Chassis combinations are available as indicated:

BODIES	AmTran	Blue Bird	Carpenter	Thomas	MidBus
Models	SS-22	2311	SB2304	0701/0710	SC829
Chassis Available	N, F	B, N, F	N, F	N-S, N, F	N

TABLE NO. FIFTEEN (15)
47-PASSENGER FORWARD CONTROL BUS[36]
[SEE PARAGRAPH B.1.2.: REDUCED PASSENGER CAPACITY]

Refer to General Requirements, Page 7

CHASSIS		B	S	N	T-A
47- Passenger ITEM	**1997 Min. Rqmts.**	**Blue Bird TCFE**	**Carpenter Counselor**	**NIC Genesis**	**Thomas Saf-T-Liner MVP-EF**
GVWR, lbs.	**26500**	26500	30000	29500	30000
GAWR, lbs. Front	**11340**	11340	12080	12000	11340
GAWR, lbs. Rear	**15500**	15500	19000	17500	19000
Axle Capacity, lbs. Front	**12000**	12000	12080	12000	13200
Axle Capacity, lbs. Rear	**17000**	17000	19000	17500	19000
Wheelbase, in.	**132**	132	143	144	136
Cowl-to-Axle, in.	**NA**	NA	NA	NA	NA
Cowl-to-Frame End, in.	**NA**	NA	NA	NA	NA
Gasoline Engine CID***[1]	****[2]	7.0L-V8	**[3]	**[3]	**[3]
SAE Gross Horsepower	****[2]	235	**[3]	**[3]	**[3]
SAE Gross Torque, lb-ft.	****[2]	385	**[3]	**[3]	**[3]
Transmission: Automatic, Gears/Model	**4 spd**	AT-545	AT-545	AT-545	AT-545
Transmission: Manual, Fwd. Gears	**5 spd**	M5	NA	NA	NA
Brakes: Front Disc Rotor, in.[4]	**As Shown**	15 x 1.438	15.4 x 2.88	15 x 1.44	16.5 x 5
Brakes: Rear Lining, in.	**As Shown**	15 x 1.438	15.4 x 2.88	15 x 1.44	16.5 x 7
Tires, Steel Belted Radial	**Tubeless**				
Size & Load Range	**10R22.5F**	10R22.5G	10R22.5G	10R22.5G	10R22.5G
Wheels: Rear	**Dual**	Dual	Dual	Dual	Dual
Wheels: Rim Size, in.	**7.5**	7.5	8.25	8.25	7.50

[1]***See diesel engine, Option No. 8.

[2]****See minimum power requirements in Paragraph F.5.3.4.

[3]**Furnished with diesel engine only, Option No. 8.

[4]**Furnished with air brakes only.

NOTE: This gasoline engine is available in a bi-fuel (CNG/Gasoline) mode. [See Option 3A].

DIESEL ENGINES [Option No. 8]

47-Passenger ITEM	1997 Min. Rqmts.	Blue Bird TC2000	Carpenter	NIC Genesis	Thomas MVP-EF
Engine Displacement, L.	***[1]	5.9T-I6	5.9T-I6	7.6T-I6	5.9T-I6
SAE Gross Horsepower	***[1]	190	190	175	190
SAE Gross Torque, lb-ft.	***[1]	475	475	430	475
GAWR, Front	**11340**	11340	12080	12000	11340

[1]***See minimum power requirements in Paragraph F.5.3.4.

[36] Buses ordered in this capacity (47-Passenger) may be either Conventional or Semi-forward Control configuration, at the option of the vendor, unless otherwise specified in the Invitation for Bid.

Engines listed on this page are approved to meet or exceed power requirements under normal operating conditions. Other engines must be submitted for approval by the School Bus Committee, [See Paragraph F.5.3.4.].

DEDICATED CNG ENGINES [Option No. 3A]

59-Passenger ITEM	1997 Min. Rqmts.	Hercules	GM/Stewart-Stevenson (mono/bi-fuel versions)
Engine Displacement, L.	***[1]	5.6L	7.0L
SAE Gross Horsepower	***[1]	190	195
SAE Gross Torque, lb-ft.	***[1]	440	315
GAWR, Front	As Shown	13200	11340
[1]***See minimum power requirements in Paragraph F.5.3.4.			

47-PASSENGER FORWARD CONTROL BODIES

The following Body/Chasis combinations are available as indicated:

BODIES	AmTran	Blue Bird	Carpenter	Thomas
Models	IS2700	TCFE2504	027-2609	O9O8
Chassis Available	N, S	B	C	T-A

TABLE NO. SIXTEEN (16)
53-PASSENGER CONVENTIONAL BUS[37]
[SEE PARAGRAPH B.1.2.: REDUCED PASSENGER CAPACITY]

Refer to General Requirements, Page 7.

CHASSIS		B	N	N-S	F
53-Passenger Conv. ITEM	**1997 Min. Rqmts.**	**Blue Bird CV200**	**NIC 3800*[1]**	**NIC-SEMI****** **3600**	**Ford B800***
GVWR, lbs.	**21500**	23100	21500	21500	23000
GAWR, lbs. Front	**6000**	8100	6000	6000	8000
GAWR, lbs. Rear	**15000**	15000	15500	15500	15000
Axle Capacity, lbs. Front	**6000**	8100	6000	6000	8000
Axle Capacity, lbs. Rear	**15000**	15000	15500	15500	15000
Wheelbase, in.	**211**	211	218	218	217
Cowl-to-Axle, in.	**187**	187	193	193	193
Cowl-to-Frame End, in.	**305**	307	305	305	323
Gasoline Engine CID**[2]	***[3]	6.0L-V8	*[1]	*[1]	*[1]
SAE Gross Horsepower	***[3]	225	*[1]	*[1]	*[1]
SAE Gross Torque, lb-ft.	***[3]	340	*[1]	*[1]	*[1]
Transmission: Automatic, Gears/Model	**4 spd**	AT-545	AT-545	AT-545	AT-545
Transmission: Manual, Fwd. Gears	**5 spd**	M5	M5	M5	M5
Brakes: Front Disc Rotor, in.	**As Shown**	14.75 x 1.34	15 x 1.44	15 x 1.44	15.38 x 1.53
Brakes: Rear Lining, in.	**As Shown**	14.75 x 1.34	15 x 1.44	15 x 1.44	15.00 x 6.0 0
Tires, Steel Belted Radial	**Tubeless**				
Size & Load Range	**9R22.5F**	9R22.5F	9R22.5F	9R22.5F	9R22.5F
Wheels: Rear	**Dual**	Dual	Dual	Dual	Dual
Wheels: Rim Size, in.	**6.75**	7.5	6.75	6.75	6.75

[1]***Furnished with diesel engine only, Option No. 8.**

[2]****See diesel engine, Option No. 8.**

[3]*****See minimum power requirements in Paragraph F.5.3.4.**

NOTE: This gasoline engine is available in a bi-fuel (CNG/Gasoline) mode. [See Option 3A].

DIESEL ENGINES [Option No. 8]

53-Passenger ITEM	1997 Min. Rqmts.	Blue Bird CV200	NIC 3600/3800	Ford B800
Engine Displacement, L.	***[1]	6.6T-I6	7.3T-V8	5.9T-I6
SAE Gross Horsepower	***[1]	170	175	160
SAE Gross Torque, lb-ft.	***[1]	420	430	400
GAWR Front	**6000**	8100	6000	8000

[1]*****See minimum power requirements in Paragraph F.5.3.4.**

Engines listed on this page are approved to meet or exceed power requirements under normal operating conditions. Other engines must be submitted for approval by the School Bus Committee [See Paragraph F.5.3.4.]..

PASSENGER CONVENTIONAL BODIES

[37] **Buses ordered in this capacity (53-Passenger) may be either Conventional or Semi-forward Control configuration, at the option of the vendor, unless otherwise specified in the Invitation for Bid.**

The following Body/Chassis combinations are available as indicated:

BODIES	AmTran	Blue Bird	Carpenter	Thomas
Models	SS-24	2508	SB2508	0801/0810
Chassis Available	N, F	B, N, F	N, F	N-S, N, F

TABLE NO. SEVENTEEN (17)
53-PASSENGER FORWARD CONTROL BUS
[SEE PARAGRAPH B.1.2.: REDUCED PASSENGER CAPACITY]

Refer to General Requirements, Page 7

CHASSIS		B	S	N	T-A
53-Passenger ITEM	**1997 Min. Rqmts.**	**Blue Bird TCFE**	**Carpenter Counselor**	**NIC Genesis**	**Thomas Saf-T-Liner MVP-EF**
GVWR, lbs.	**27800**	27800	30000	30000	30000
GAWR, lbs. Front	**11340**	11340	12080	12000	11340
GAWR, lbs. Rear	**17000**	17000	19000	17500	19000
Axle Capacity, lbs. Front	**12000**	12000	12080	12000	13200
Axle Capacity, lbs. Rear	**17000**	17000	19000	17500	19000
Wheelbase, in.	**136**	146	143	144	136
Cowl-to-Axle, in.	**NA**	NA	NA	NA	NA
Cowl-to-Frame End, in	**NA**	NA	NA	NA	NA
Gasoline Engine, L.**[1]	***[2]	7.0L-V8	****[3]	****[3]	****[3]
SAE Gross Horsepower	***[2]	235	****[3]	****[3]	****[3]
SAE Gross Torque, lb-ft.	***[2]	385	****[3]	****[3]	****[3]
Transmission: Automatic, Gears/Model	**4 spd**	AT-545	AT-545	AT-545	AT-545
Transmission: Manual, Fwd. Gears	**5 spd**	M5	NA	NA	NA
Brakes: Front Disc Rotor, in.	**As Shown**	15 x 1.438	14.75 x 2.5	15 x 1.44	16.5 x 5
Brakes: Rear Lining, in.	**As Shown**	15 x 1.438	15.4 x 2.88	15 x 1.44	16.5 x 7
Tires, Steel Belted Radial	**Tubeless**				
Size & Load Range	**10T22.5F**	10R22.5G	11R22.5G	11R22.5G	10R22.5G
Wheels: Rear	**Dual**	Dual	Dual	Dual	Dual
Wheels: Rim Size, in.	**7.50**	7.50	8.25	8.25	7.50

[1] ****See diesel engine, Option No. 8.**

[2] *****See minimum power requirements in Paragraph F.5.3.4.**

[3] **Furnished with diesel engine only, Option No. 8.**

NOTE: This gasoline engine is available in a bi-fuel (CNG/Gasoline) mode. [See Option No. 3A]

DIESEL ENGINES [Option No. 8]

53-Passenger ITEM	1997 Min. Rqmts.	Blue Bird TCFC	Carpenter	NIC Genesis	Thomas MVP-EF
Engine Displacement, L.	***[1]	5.9T-I6	5.9T-I6	7.6T-I6	59T-I6
SAE Gross Horsepower	***[1]	190	190	175	190
SAE Gross Torque, lb-ft	***[1]	475	475	430	475
GAWR, Front	**11340**	11340	12080	21000	11340

[1] *****See minimum power requirements in Paragraph F.5.3.4.**

Engines listed on this page are approved to meet or exceed power requirements under normal operating conditions. Other engines must be submitted for approval by the School Bus Committee [See Paragraph. F.5.3.4.].

DEDICATED CNG ENGINES [Option No. 3A]

59-Passenger ITEM	1997 Min. Rqmts.	Hercules	GM/Stewart-Stevenson (Mono/Bi-fuel versions)
Engine Displacement, L.	***[1]	5.6L	7.0L
SAE Gross Horsepower	***[1]	190	195
SAE Gross Torque, lb-ft.	***[1]	440	315
GAWR, Front	As Shown	13200	11340

[1] ***See minimum power requirements in Paragraph F.5.3.4.

Engines listed on this page are approved to meet or exceed power requirements under normal operating conditions. Other engines must be submitted for approval by the School Bus Committee [See Paragraph F.5.3.4.].

53-PASSENGER FORWARD CONTROL BODIES

The following Body/Chassis combinations are available as indicated:

BODIES	AmTram	Blue Bird	Carpenter	Thomas
Models	17IS2806	TCFE2701	027-2711	9080
Chassis Available	N, S	B	C	T-A

TABLE NO. EIGHTEEN (18)
59-PASSENGER CONVENTIONAL BUS[38]
[SEE PARAGRAPH B.1.2.: REDUCED PASSENGER CAPACITY]
(Full Air Brake Standard)

Refer to General Requirements, Page 7

CHASSIS		B	N	N-S	F
59-Passenger Conv. ITEM	1997 Min. Rqmts.	Blue Bird CV200	NIC 3800	NIC-SEMI****35 3600*1	Ford B800*1
GVWR, lbs.	25500	26180	25500	25500	26500
GAWR, lbs. Front	8000	8100	8000	8000	9000
GAWR, lbs. Rear	17500	18080	17500	17500	17500
Axle Capacity, lbs. Front	8000	8100	8000	8000	9000
Axle Capacity, lbs. Rear	17500	19000	17500	17500	17500
Wheelbase, in.	236	241	236	236	237
Cowl-to-Axle, in.	211	217	211	211	213
Cowl-to-Frame End, in.	329	342	329	329	345
Gasoline Engine, L. **2	***3	6.0L-V8	*1	*1	*1
SAE Gross Horsepower	***3	225	*1	*1	*1
SAE Gross Torque, lb-ft.	***3	340	*1	*1	*1
Transmission: Automatic, Gears/Model	4 spd	AT-545	AT-545	AT-545	AT-545
Transmission: Manual, Fwd. Gears	5 spd	M5	M5	M5	M5
Brakes: Front Disc Rotor, in.	As Shown	15.00 x 4.0 0	15.00 x 4.0 0	15.00 x 4.0 0	15.00 x 4.0 0
Brakes: Rear Lining, in.	As Shown	16.50 x 7.00	16.50 x 7.00	16.50 x 7.00	16.50 x 7.00
Tires, Steel Belted Radial	Tubeless				
Size & Load Range	10R22.5F	10R22.5F	10R22.5F	10R22.5F	10R22.5F
Wheels: Rear	Dual	Dual	Dual	Dual	Dual
Wheels: Rim Size, in.	7.5	7.5	7.5	7.5	7.5

[1] *Furnished with diesel engine only, Option No. 8.

[2] **See diesel engine, Option No. 8.

[3] ***See minimum power requirements in Paragraph F.5.3.4.

NOTE: This gasoline engine is available in a bi-fuel (CNG/Gasoline) mode. [See Option No. 3A]

DIESEL ENGINES [Option No. 8]

59-Passenger ITEM	1997 Min. Rqmts.	Blue Bird CV200	NIC 3600/3800	Ford B800
Engine Displacement, L.	***1	6.6T-I6	7.3T-V8	5.9T-I6
SAE Gross Horsepower	***1	190	175	160
SAE Gross Torque, lb-ft.	***1	420	430	400
GAWR, Front	8000	8100	8000	9000

[1]***See minimum power requirements in Paragraph F.5.3.4.

Engines listed on this page are approved to meet or exceed power requirements under normal operating conditions. Other engines must be submitted for approval by the School Bus Committee [See Paragraph F.5.3.4].

[38] Buses ordered in this capacity (59-Passenger) may be either Conventional or Semi-forward Control configuration, at the option of the vendor, unless otherwise specified in the Invitation for Bid.

59-PASSENGER CONVENTIONAL BODIES

The following Body/Chassis combinations are available as indicated:

BODIES	AmTran	Blue Bird	Carpenter	Thomas
Models	SS-26	2800	SB2800	0901/0910
Chassis Available	N, F	B, N, F	N, F	N-S, N, F

TABLE NO. NINETEEN (19)
59-PASSENGER FORWARD CONTROL DIESEL BUS
[SEE PARAGRAPH B.1.2.: REDUCED PASSENGER CAPACITY]
(Full Air Brake Standard)

Refer to General Requirements, Page 7

CHASSIS		B	N	T	S	T-A
59- Passenger FC ITEM	**1997 Min. Rqmts.**	**Blue Bird TCFE/TCRE*[1] **[2]**	**NIC Genesis RE***[3]**	**Thomas Saf-T-Liner MVP-ER***[3]**	**Carpenter Counselor**	**Thomas Saf-T-Liner MVP-EF**
GVWR, lbs.	**27800**	27800/30340	29500	28380	30000	30000
GAWR, lbs. Front	**11340**	11340/11340	12000	13200	12080	13200
GAWR, lbs. Rear	**17000**	17000/19000	17500 19000	19000	19000	19000
Axle Capacity, lbs. Front	**12000**	12000/12000	12000	13200	18080	13200
Axle Capacity, lbs. Rear	**17000**	17000/19000	17500 19000	19000	19000	19000
Wheelbase, in.	**155**	160/193	162/168	181	164	155
Engine Displacement, L.	*[1]	5.9T-I6	7.6T-I6/ 7.3-V8	5.9T-I6	5.9T-I6	5.9T-I6
SAE Gross Horsepower	*[1]	190	175	190	190	190
SAE Gross Torque, lb-ft.	*[1]	475	430	475	475	475
Transmission**[2]: Automatic, Gears/Model	**4 spd**	MT-643	AT-545	MT-643/ AT-545	MT643/ AT-545	MT-643/ AT-545
Transmission**[2]: Manual, Fwd. Gears	**5 spd**	M5	NA	M5	NA	NA
Brake Lining, in. Front	**As Shown**	15.0 x4	15.0 x4	15.0 x4	16.5 x 5	16.5 x 5
Brake Lining, in. Rear	**As Shown**	16.5 x 7	16.5 x 7	16.5 x 7	16.5 x 7	16.5 x 7
Tires, Steel Belted Radial	**Tubeless**					
Size & Load Range	**10R22.5F**	10R22.5G	11R22.5G	10R22.5F	11R22.5G	10R22.5G
Wheels: Rear	**Dual**	Dual	Dual	Dual	Dual	Dual
Wheels: Rim Size, in.	**7.5**	7.5	8.25	7.5	8.25	7.5

[1] ***See minimum power requirements in Paragraph F.5.3.4.***

[2] ****Direct in fourth gear (automatic); direct in fifth gear (manual).***

[3] *****Rear Engine.***

Engines listed on this page are approved to meet or exceed power requirements under normal operating conditions. Other engines must be submitted for approval by the School Bus Committee [See Paragraph F.5.3.4].

DEDICATED CNG ENGINES [Option No. 3A]

59-Passenger ITEM	1997 Min. Rqmts.	Hercules	GM/Stewart-Stevenson Blue Bird (Mono/Bi-fuel versions)
Engine Displacement, L.	***[1]	5.6L	7.0L
SAE Gross Horsepower	***[1]	190	195
SAE Gross Torque, lb-ft.	***[1]	440	315
GAWR, Front	**As Shown**	13200	10300

[1] *****See minimum power requirements in Paragraph F.5.3.4.***

59-PASSENGER FORWARD CONTROL BODIES

The following Body/Chassis combinations are available as indicated:

BODIES	AmTran	Blue Bird	Carpenter	Thomas
Models	IS3009 RE30011	TCFE2905 TCFE3204	027-2908	1109/1008/110H
Chassis Available	N	B	C	T, T-A

TABLE NO. TWENTY (20)
65-PASSENGER CONVENTIONAL BUS[39]
[SEE PARAGRAPH B.1.2.: REDUCED PASSENGER CAPACITY]
(Full Air Brake Standard)

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CHASSIS		B	N	N-S	F
65-Passenger Conv. ITEM	1997 Min. Rqmts.	Blue Bird CV200	NIC 3800	NIC-Semi****[38] 3600*[1]	Ford B800*[1]
GVWR, lbs.	**26500**	27080	27500	27500	26500
GAWR, lbs. Front	**9000**	9000	10000	10000	9000
GAWR, lbs. Rear	**17500**	18080	17500	17500	17500
Axle Capacity, lbs. Front	**9000**	9000	10000	10000	9000
Axle Capacity, lbs. Rear	**17500**	19000	17500	17500	17500
Wheelbase, in.	**254**	259	254	254	255
Cowl-to-Axle, in.	**229**	235	229	229	231
Cowl-to-Frame End, in.	**359**	370	359	359	378
Gasoline Engine, L.**[2]	***[3]	6.0L-V8	*[1]	*[1]	*[1]
SAE Gross Horsepower	***[3]	225	*[1]	*[1]	*[1]
SAE Gross Torque, lb-ft.	***[3]	340	*[1]	*[1]	*[1]
Transmission: Automatic, Gears/Model	**4 spd**	AT-545	AT-545	AT-545	AT-545
Transmission: Manual, Fwd. Gears	**5 spd**	M5	M5	M5	M5
Brakes: Front Disc Rotor, in.	**As Shown**	15.00 x 4.00	15.0 x 4.00	15.0 x 4.00	15.0 x 4.00
Brakes: Rear Lining, in.	**As Shown**	16.50 x 7.00	16.50 x 7.00	16.50 x 7.00	16.50 x 7.00
Tires, Steel Belted Radial	**Tubeless**				
Size & Load Range	**10R22.5F**	10R22.5F	10R22.5F	10R22.5F	10R22.5F
Wheels: Rear	**Dual**	Dual	Dual	Dual	Dual
Wheels: Rim Size, in.	**7.5**	7.5	7.5	7.5	7.5

[1] ***Furnished with diesel engine only, Option No. 8.**

[2] ****See diesel engine, Option No. 8.**

[3] *****See minimum power requirements in Paragraph F.5.3.4.**

NOTE: This gasoline engine is available in a bi-fuel (CNG/Gasoline) mode. [See Option 3A].

DIESEL ENGINES [Option No. 8]

65-Passenger ITEM	1997 Min. Rqmts.	Blue Bird CV200	NIC 3600/3800	Ford B800
Engine Displacement, L.	***[1]	6.6T-I6	7.3T-V8	5.9T-I6
SAE Gross Horsepower	***[1]	170	175	160
SAE Gross Torque, lb-ft.	***[1]	420	430	400
GAWR, Front	**9000**	9000	10000	9000

[1] *****See minimum power requirements in Paragraph F.5.3.4.**

[39] **Buses ordered in the capacity (65-Passenger) may be either Conventional or Semi-forward Control configuration, at the option of the vendor, unless otherwise specified in the invitation for Bid.**

Engines listed on this page are approved to meet or exceed power requirements under normal operating conditions. Other engines must be submitted for approval by the School Bus Committee [See Paragraph F.5.3.4].

65-PASSENGER CONVENTIONAL BODIES

The following Body/Chasis combinations are available as indicated:

BODIES	AmTran	Blue Bird	Carpenter	Thomas
Models	SS-29	3004	SB3004	1001/1010
Chassis Available	N, F	B, N, F	N, F	N-S, N, F

TABLE NO. TWENTY-ONE (21)
65-PASSENGER FORWARD CONTROL DIESEL BUS
[SEE PARAGRAPH B.1.2.: REDUCED PASSENGER CAPACITY]
(Full Air Brake Standard)

Refer to General Requirements, Page 7

CHASSIS		B	N	T	S	T-A
65-Passenger FC ITEM	**1997 Min. Rqmts.**	**Blue Bird TCFE/TCR E*[1]**	**NIC Genesis RE*[1]**	**Thomas Saf-T-Liner MVP-ER*[1]**	**Carpenter Counselor**	**Thomas Saf-T-Liner MVP-EF**
GVWR, lbs.	**27800**	27800/ 30340	29000 30000	28380	30000	30000
GAWR, lbs. Front	**10300**	11340/ 11340	12000	10300	12080	11340
GAWR, lbs. Rear	**17000**	17000/ 19000	17500 19000	18080	19000	19000
Axle Capacity, lbs. Front	**12000**	12000	12000	13200	12080	13200
Axle Capacity, lbs. Rear	**17000**	17000/ 19000	17500 19000	19000	19000	19000
Wheelbase, in.	**174**	174/221	180/222	181	185	174
Diesel Engine Displacement, L.	****[2]**	5.9T-I6	7.6T-I6 7.3-V8	5.9T-I6	5.9T-I6	5.9T-I6
SAE Gross Horsepower	****[2]**	190	175	190	190	190
SAE Gross Torque, lb-ft.	****[2]**	475	430	475	475	475
Transmission***[3]: Automatic, Gears/Model	**4 spd**	AT-545/ MT-643	AT-545	MT643/ AT-545	MT643/ AT-545	MT643/ AT-545
Transmission***[3]: Manual, Fwd. Gears	**5 spd**	M5		M5	NA	NA
Brake Lining, in. Front	**As Shown**	15.0 x 4	15.0 x 4	15.0 x 4	16.5 x 5	16.5 x 5
Brake Lining, in. Rear	**As Shown**	16.5 x 7	16.5 x 6	16.5 x 7	16.5 x 7	16.5 x 7
Tires, Steel Belted Radial	**Tubeless**					
Size & Load Range	**10R22.5F**	10R22.5G	11R22.5G	10R22.5F	11R22.5G	10R22.5G
Wheels: Rear	**Dual**	Dual	Dual	Dual	Dual	Dual
Wheels: Rim Size, in.	**7.5**	7.5	8.25	7.5	8.25	7.5

[1] ***Rear Engine.**

[2] ****See minimum power requirements in Paragraph F.5.3.4.**

[3] *****Direct in fourth gear (automatic); direct in fifth gear (manual).**

Engines listed on this page are approved to meet or exceed power requirements under normal operating conditions. Other engines must be submitted for approval by the School Bus Committee [See Paragraph F.5.3.4].

DEDICATED CNG ENGINES [Option No. 3A]

65-Passenger ITEM	1997 Min. Rqmts.	Hercules	GM/Stewart-Stevenson Blue Bird (Mono/Bi-fueled versions)
Engine Displacement, L.	***[1]	5.6L	7.0L
SAE Gross Horsepower	***[1]	190	195
SAE Gross Torque, lb-ft.	***[1]	440	315
GAWR, Front	As Shown	132000	11340

[1] ***See minimum power requirements in Paragraph F.5.3.4.

65-PASSENGER FORWARD CONTROL BODIES

The following Body/Chassis combinations are available as indicated:

BODIES	AmTran	Blue Bird	Carpenter	Thomas
Models	RE3302/IS3300	3007/3204	027-3207	1209/1108/120H
Chassis Available	N	B	C	T, T-A

TABLE NO. TWENTY-TWO (22)
71S-PASSENGER CONVENTIONAL BUS[40]
[SEE PARAGRAPH B.1.2.: REDUCED PASSENGER CAPACITY]
(Short Wheelbase, Full Air Brake Standard)

Refer to General Requirements, Page 7

CHASSIS		N	N-S	F	B
71S-Passenger Conv. ITEM	**1997 Min. Rqmts.**	**NIC 3800**	**NIC-Semi ****37 3600*1**	**Ford B800*1**	**Blue Bird CV200**
GVWR, lbs.	28000	28000	28000	28000	28000
GAWR, lbs. Front	9000	10000	10000	9000	9000
GAWR, lbs. Rear	19000	19000	19000	19000	19000
Axle Capacity, lbs. Front	9000	10000	10000	9000	9000
Axle Capacity, lbs. Rear	19000	19000	19000	19000	19000
Wheelbase, in.	254	254	254	255	274
Cowl-to-Axle, in.	229	229	229	231	250
Cowl-to-Frame End, in.	349	349	349	378	405
Gasoline Engine, L.**2	***3	*1	*1	*1	6.0L-V8
SAE Gross Horsepower	***3	*1	*1	*1	225
SAE Gross Torque, lb-ft.	***3	*1	*1	*1	340
Transmission: Automatic, Gears/Model	**4 spd**	AT-545	AT-545	AT-545	AT-545
Transmission: Manual, Fwd. Gears	**5 spd**	M5	M5	M5	M5
Brakes: Front Disc Rotor, in.	**As Shown**	15.0 x 4.00	15.0 x 4.00	15.0 x 4.00	15.0 x 4.00
Brakes: Rear Lining, in.	**As Shown**	16.50 x 7.00	16.50 x 7.00	16.50 x 7.00	16.50 x 7.00
Tires, Steel Belted Radial	**Tubeless**				
Size & Load Range	**11R22.5G**	11R22.5G	11R22.5G	11R22.5G	11R22.5G
Wheels: Rear	**Dual**	Dual	Dual	Dual	Dual
Wheels: Rim Size, in.	**8.25**	8.25	8.25	8.25	8.25
[1] ***Furnished with diesel engine only, Option No. 8.**					
[2] ****See diesel engine, Option No. 8.**					
[3] *****See minimum power requirements in Paragraph F.5.3.4.**					

NOTE: This gasoline engine is available in a bi-fuel (CNG/Gasoline) mode. [See Option 3A].

DIESEL ENGINES [Option No. 8]

71S-Passenger ITEM	1997 Min. Rqmts.	NIC 3600/3800	Ford B800	Blue Bird CV200
Engine Displacement, L.	***1	7.3T-V8	5.9T-I6	6.6T-I6
SAE Gross Horsepower	***1	175	160	170
SAE Gross Torque, lb-ft.	***1	430	400	420
GAWR, Front	**9000**	1000	9000	9000
[1] *****See minimum power requirements in Paragraph F.5.3.4.**				

[40] **Buses ordered in this capacity (71 S-Passenger) may be either Conventional or Semi-forward Control configuration, at the option of the vendor, unless otherwise specified in the Invitation for Bid.**

Engines listed on this page are approved to meet or exceed power requirements under normal operating conditions. Other engines must be submitted for approval by the School Bus Committee [See Paragraph F.5.3.4].

71S-PASSENGER CONVENTIONAL BODIES

The following Body/Chassis combinations are available as indicated:

BODIES	AmTran	Carpenter	Thomas	Blue Bird
Models	SS-31	SB3201	1100/1101	3201
Chassis Available	N, F	N, F	N, F	B, N, F

TABLE NO. TWENTY-THREE (23)
71L-PASSENGER CONVENTIONAL BUS[41]
[SEE PARAGRAPH B.1.2.: REDUCED PASSENGER CAPACITY]
(Long Wheelbase, Full Air Brake Standard)

Refer to General Requirements, Page 7

CHASSIS		B	N	N-S	F
71L-Passenger Conv. ITEM	**1997 Min. Rqmts.**	**Blue Bird CV200**	**NIC 3800**	**NIC-Semi****[38] **3600*[1]**	**Ford B800***
GVWR, lbs.	**28000**	28000	28000	28000	28000
GAWR, lbs. Front	**9000**	9000	10000	10000	9000
GAWR, lbs. Rear	**19000**	19000	19000	19000	19000
Axle Capacity, lbs. Front	**9000**	9000	10000	10000	9000
Axle Capacity, lbs. Rear	**19000**	19000	19000	19000	19000
Wheelbase, in.	**274**	274	276	276	275
Cowl-to-Axle, in.	**250**	250	251	251	251
Cowl-to-Frame End, in.	**387**	405	387	387	387
Gasoline Engine, L.**[2]	***[3]	6.0L-V8	*[1]	*[1]	*[1]
SAE Gross Horsepower	***[3]	225	*[1]	*[1]	*[1]
SAE Gross Torque, lb-ft.	***[3]	340	*[1]	*[1]	*
Transmission: Automatic, Gears/Model	**4 spd**	AT-545	AT-545	AT-545	AT-545
Transmission: Manual, Fwd. Gears	**5 spd**	M5	M5	M5	M5
Brakes: Front Disc Rotor, in.	**As Shown**	15.00 x 4.00	15.00 x 4.00	15.00 x 4.00	15.00 x 4.00
Brakes: Rear Lining, in.	**As Shown**	16.50 x 7.00	16.50 x 7.00	16.50 x 7.00	16.50 x 7.00
Tires, Steel Belted Radial	**Tubeless**				
Size & Load Range	**11R22.5G**	11R22.5G	11R22.5G	11R22.5G	11R22.5G
Wheels: Rear	**Dual**	Dual	Dual	Dual	Dual
Wheels: Rim Size, in.	**8.25**	8.25	8.25	8.25	8.25
[1] ***Furnished with diesel engine only, Option No. 8.**					
[2] ****See diesel engine, Option No. 8.**					
[3] *****See minimum power requirements in Paragraph F.5.3.4.**					

NOTE: This gasoline engine is available in a bi-fuel (CNG/Gasoline) mode. [See Option 3A].

DIESEL ENGINES [Option No. 8]

71L-Passenger ITEM	1997 Min. Rqmts.	Blue Bird CV200	NIC 3600/3800	Ford B800
Engine Displacement, L.	***[1]	6.6T-I6	7.3T-V8	5.9T-I6
SAE Gross Horsepower	***[1]	170	175	175
SAE Gross Torque	***[1]	420	430	420
GAWR, Front	**9000**	9000	10000	9000
[1] *****See minimum power requirements in Paragraph F.5.3.4.**				

[41] **Buses ordered in this capacity (71 L-Passenger) may be either Conventional or Semi-forward Control configuration, at the option of the vendor, unless otherwise specified in the Invitation for Bid.**

Engines listed on this page are approved to meet or exceed power requirements under normal operating conditions. Other engines must be submitted for approval by the School Bus Committee [See Paragraph F.5.3.4].

71L-PASSENGER CONVENTIONAL BODIES

The following Body/Chassis combinations are available as indicated:

BODIES	AmTran	Blue Bird	Carpenter	Thomas
Models	SS31	3310	SB3201	1101/1110
Chassis Available	N, F	B, N, F	N, F	N-S, N, F

TABLE NO. TWENTY-FOUR (24)
71-PASSENGER FORWARD CONTROL DIESEL BUS
[SEE PARAGRAPH B.1.2.: REDUCED PASSENGER CAPACITY]
(Full Air Brake Standard)

Refer to General Requirements, Page 7

CHASSIS		B	N	T	S	T-A
71-Passenger FC ITEM	**1997 Min. Rqmts.**	**Blue Bird TCFE/ TCRE*[1]**	**NIC Genesis RE*[1]**	**Thomas MVP-ER*[1]**	**Carpenter Counselor**	**Thomas Saf-T-Liner MVP-ER**
GVWR, lbs.	**27800**	27800/ 30340	29500 30000	30000	30000	30000
GAWR, lbs. Front	**11340**	11340	12000	11000	12080	11340
GAWR, lbs. Rear	**17000**	17000/ 19000	17500 19000	19000	19000	19000
Axle Capacity, lbs. Front	**12000**	12000	12000	13200	12080	13200
Axle Capacity, lbs. Rear	**17000**	17000/ 19000	17500 19000	19000	19000	19000
Wheelbase, in.	**193**	195/249	198/222	238	199	193
Diesel Engine Displacement, L.	**[2]	5.9T-I6	7.6T-I6 7.3-V8	5.9T-I6	5.9T-I6	5.9T-I6
SAE Gross Horsepower	**[2]	190	190	190	190	190
SAE Gross Torque, lb-ft.	**[2]	475	485	475	475	475
Transmission***[3]: Automatic, Gears/Model	**4 spd**	AT-545/ MT-643	AT-545	MT643/ AT-545	MT643/ AT-545	MT643/ AT-545
Transmission***[3]: Manual, Fwd. Gears	**5 spd**	M5	NA	M5	NA	NA
Brake Lining, in. Front	**As Shown**	15.0 x 4	15.0 x 4	15.0 x 4	16.5 x 5	16.5 x 5
Brake Lining, in. Rear	**As Shown**	16.5 x 7	16.5 x 7	16.5 x 7	16.5 x 7	16.5 x 7
Tires, Steel Belted Radial	**Tubeless**					
Size & Load Range	**10R22.5G**	10R22.5G	11R22.5G	10R22.5G	10R22.5G	10R22.5G
Wheels: Rear	**Dual**	Dual	Dual	Dual	Dual	Dual
Wheels: Rim Size, in.	**7.5**	7.5	8.25	7.5	8.25	7.5

[1] ***Rear Engine.**

[2] ****See minimum power requirements in Paragraph F.5.34.**

[3] *****Direct in fourth gear (automatic); direct in fifth gear (manual).**

Engines listed on this page are approved to meet or exceed power requirements under normal operating conditions. Other engines must be submitted for approval by the School Bus Committee [See Paragraph F.5.3.4].

DEDICATED CNG ENGINES [Option No. 3A]

71-Passenger ITEM	1997 Min. Rqmts.	Hercules	GM/Stewar-Stevenson Blue Bird (Mono/Bi-fueled versions)
Engine Displacement, L.	***[1]	5.6L	7.0L
SAE Gross Horsepower	***[1]	190	195
SAE Gross Torque, lb-ft.	***[1]	440	315
GAWR, Front	**As Shown**	13200	11340

[1] *****See minimum power requirements in Paragraph F.5.3.4.**

71-PASSENGER FORWARD CONTROL BODIES

The following Body/Chassis combinations are available as indicated:

BODIES	AmTran	Blue Bird	Carpenter	Thomas
Models	IS3503 RE3505	TCFE3408 TCRE3700	027-3404	1903/1208/130H
Chassis Available	N	B	C	T/ T-A

TABLE NO. TWENTY-FIVE (25)
77-PASSENGER CONVENTIONAL BUS[42]
[SEE PARAGRAPH B.1.2.: REDUCED PASSENGER CAPACITY]
(Full Air Brake Standard)

Refer to General Requirements, Page 7

CHASSIS		B	N	F
77-Passenger Conv. ITEM	**1997 Min. Rqmts.**	**Blue Bird CV200**	**NIC 3800/3600**	**Ford B800*[1]**
GVWR, lbs.	**28000**	28000	28000	28000
GAWR, lbs. Front	**9000**	9000	10000	9000
GAWR, lbs. Rear	**19000**	19000	19000	19000
Axle Capacity, lbs. Front	**9000**	9000	10000	9000
Axle Capacity, lbs. Rear	**19000**	19000	19000	19000
Wheelbase, in.	**274**	274	276	275
Cowl-to-Axle, in.	**250**	250	251	251
Cowl-to-Frame End, in.	**387**	405	387	387
Gasoline Engine, L. **[2]	***[3]	6.0L-V8	*[1]	*[1]
SAE Gross Horsepower	***[3]	225	*[1]	*[1]
SAE Gross Torque, lb-ft.	***[3]	340	*[1]	*[1]
Transmission****[4]: Automatic, Gears/Model	**4 spd**	AT-545	AT-545	AT-545
Transmission****[4]: Manual, Fwd. Gears	**5 spd**	M5	M5	M5
Brake Lining, in. Front	**As Shown**	15.0 x 4	15.0 x 4	15.0 x 4
Brake Lining, in. Rear	**As Shown**	16.5 x 7	16.5 x 7	16.5 x 7
Tires, Steel Belted Radial	**Tubeless**			
Size & Load Range	**11R22.5G**	11R22.5G	11R22.5G	11R22.5G
Wheels: Rear	**Dual**	Dual	Dual	Dual
Wheels: Rim Size, in.	**8.25**	8.25	8.25	8.25

[1] ***Furnished with diesel engine only, Option No. 8.**

[2] ****See diesel engine, Option No. 8.**

[3] *****See minimum power requirements in Paragraph F.5.3.4.**

[4] ******Direct in fourth gear (automatic); direct in fifth gear (manual).**

NOTE: This gasoline engine is available in a bi-fuel (CNG/Gasoline) mode. (See Option 3A.)

DIESEL ENGINES [Option No. 8]

77-Passenger Conv. ITEM	1997 Min. Rqmts.	Blue Bird CV200	NIC 3800	Ford B800
Engine Displacement, L.	***[1]	6.6T-I6	7.3T-V8	5.9T-I6
SAE Gross Horsepower	***[1]	170	175	175
SAE Gross Torque, lb-ft.	***[1]	420	430	420

[1] *****See minimum power requirements in Paragraph F.5.3.4.**

Engines listed on this page are approved to meet or exceed power requirements under normal operating conditions. Other engines must be submitted for approval by the School Bus Committee [See Paragraph F.5.3.4].

77-PASSENGER CONVENTIONAL BODIES

[42] **Buses ordered in this capacity (77-Passenger) may be either Conventional or Semi-forward control configuration, at the option of the vendor, unless otherwise specified in the Invitation for Bid.**

The following Body/Chassis combinations are available as indicated:

BODIES	AmTran	Blue Bird	Carpenter	Thomas
Model	SS-33	3310	SB3405	1200/1201
Chassis Available	N, F	B, N, F	N, F	N, F

TABLE NO. TWENTY-SIX (26)
77-PASSENGER FORWARD CONTROL DIESEL BUS
[SEE PARAGRAPH B.1.2.: REDUCED PASSENGER CAPACITY]
(Full Air Brake Standard)

Refer to General Requirements, Page 7

CHASSIS		B	N	T	S	T-A
77-Passenger FC ITEM	**1997 Min. Rqmts.**	**Blue Bird All American TCFC/RE*[1]**	**NIC Genesis RE*[1]**	**Thomas MVP-ER*[1]**	**Carpenter Counselor**	**Thomas Saf-T-Liner MVP-EF**
GVWR, lbs.	**30000**	35480/ 30000	30000	30000	32200	30000
GAWR, lbs. Front	**11000**	12480/ 12000	12000	11000	12080	11340
GAWR, lbs, Rear	**19000**	23000/ 19000	19000	19000	19000	19000
Axle Capacity, lbs. Front	**12000**	13200/ 12000	12000	13200	13200	13200
Axle Capacity, lbs. Rear	**19000**	23000/ 19000	19000	19000	19000	19000
Wheelbase, in.	**212**	220/277/21 6	216/249	238	227	212
Diesel Engine Displacement, L.	**[2]	8.3T-I6/5.9 T-I6	7.6T-I6 7.3-V8	5.9T-I6	5.9T-I6	5.9T-I6
SAE Gross Horsepower	**[2]	210/190	190	190	190	190
SAE Gross Torque, lb-ft.	**[2]	605/484	485	475	475	475
Transmission***[3]: Automatic, Gears/Model	**4 spd**	MT-643[4]/ AT-545	AT-545	MT-643/ AT-545	MT-643[4]	MT-643/ AT-545
Transmission***[3]: Manual, Fwd. Gears	**5 spd**	M5	NA	M5	NA	NA
Brake Lining, in. Front	**As Shown**	15.0 x 4	15.0 x 4	15.0 x 4	16.5 x 5	16.5 x 5
Brake Lining, in. Rear	**As Shown**	16.5 x 7	16.5 x 7	16.5 x 7	16.5 x 7	16.5 x 7
Tires, Steel Belted Radial	**Tubeless**					
Size & Load Range	**10R22.5G**	11R.22.5G	11R22.5G	10R22.5G	11R22.5G	10R22.5G
Wheels: Rear	**Dual**	Dual	Dual	Dual	Dual	Dual
Wheels: Rim Size, in.	**7.5**	8.25	8.25	7.5	8.25	7.5

[1] *Rear Engine.

[2] **See minimum power requirements in Paragraph F.5.3.4.

[3] ***Direct in fourth gear (automatic); direct in fifth gear (manual).

[4] Equal or, as required.

Engines listed on this page are approved to meet or exceed power requirements under normal operating conditions. Other engines must be submitted for approval by the School Bus Committee [See Paragraph F.5.3.4].

DEDICATED CNG ENGINES [Option No. 3A]

77-Passenger ITEM	1997 Min. Rqmts.	Hercules	GM/Stewart-Stevenson Blue Bird (Mono/Bi-fueled versions)
Engine Displacement, L.	***[1]	5.6L	7.0L
SAE Gross Horsepower	***[1]	190	195
SAE Gross Torque, lb-ft.	***[1]	440	315
GAWR, Front	**As Shown**	13200	12000
[1] ***See minimum power requirements in Paragraph F.5.3.4.			

77-PASSENGER FORWARD CONTROL BODIES

The following Body/Chassis combinations are available as indicated:

BODIES	AmTran	Blue Bird	Carpenter	Thomas
Models	IS3706 RS3708	AAFC3611 TCRE3700 TCRC3700	027-3608	1309/1308/130H
Chassis Available	N	B	C	T/T-A

TABLE NO. TWENTY-SEVEN (27)
83-PASSENGER FORWARD CONTROL DIESEL BUS
[SEE PARAGRAPH B.1.2.: REDUCED PASSENGER CAPACITY]
(Front Engine, Full Air Brake Standard)

Refer to General Requirements, Page 7

CHASSIS		B	S	N	T-A
83-Passenger FC (Front Engine) ITEM	**1997 Min. Rqmts.**	**Blue Bird TCFC/AAFC**	**Carpenter Counselor**	**NIC Genesis RE**	**Thomas Saf-T-Liner MVP-EF**
GVWR, lbs.	**32200**	34200/ 36200	34200	32200	32200
GAWR, lbs. Front	**13200**	13200	13200	13200	13200
GAWR, lbs. Rear	**19000**	23000	21000	19000	19000
Axle Capacity, lbs. Front	**13200**	13200	13200	13200	13200
Axle, Capacity, lbs. Rear	**19000**	23000	21000	19000	19000
Wheelbase, in.	**229 nom.**	237/242	241	234/276	231
Engine Displacement, L.	*[1]	8.3T-I6	5.9T-I6	7.6T-I6 7.3-V8	5.9T-I6
SAE Gross Horsepower	*[1]	210	210	190	210
SAE Gross Torque, lb-ft.	*[1]	60	520	485	520
Transmission, Automatic**[2]	**MT-643**	MT-643	MT-643	MT-643	MT-643
Brake Lining, in. Front	**As Shown**	16.5 x 5	16.5 x 5	16.5 x 5	16.5 x 5
Brake Lining, in. Rear	**As Shown**	16.5 x 7	16.5 x 7	16.5 x 7	16.5 x 7
Tires, Steel Belted Radial	**Tubeless**				
Size & Load Range	**11R22.5H**	11R22.5H	11R22.5H	11R22.5H	11R22.5G
Wheels: Rear	**Dual**	Dual	Dual	Dual	Dual
Wheels: Rim Size, in.	**8.25**	8.25	8.25	8.25	8.25
[1] ***See minimum power requirements in Paragraph F.5.3.4.**					
[2] ****Direct in fourth gear.**					

Engines listed on this page are approved to meet or exceed power requirements under normal operating conditions. Other engines must be submitted for approval by the School Bus Committee [See Paragraph F.5.3.4].

DEDICATED CNG ENGINES [Option No. 3A]

83-Passenger ITEM	1997 Min. Rqmts.	Hercules	GM/Stewart-Stevenson Blue Bird (Mono/Bi-fueled versions)
Engine Displacement, L.	***[1]	5.6L	7.0L
SAE Gross Horsepower	***[1]	190	195
SAE Gross Torque, lb-ft.	***[1]	440	315
GAWR, Front	**As Shown**	13200	12000
[1] *****See minimum power requirements in Paragraph F.5.3.4.**			

83-PASSENGER (FRONT ENGINE) BODIES

The following Body/Chassis combinations are available as indicated:

BODIES	AmTran	Blue Bird	Carpenter	Thomas
Models	IS3909 RE3911	3904/3903	027-3900	1408
Chassis Available	N	B	C	T-A

TABLE NO. TWENTY-EIGHT (28)
83-PASSENGER FORWARD CONTROL DIESEL BUS
[SEE PARAGRAPH B.1.2.: REDUCED PASSENGER CAPACITY]
(Rear Engine. Full Air Brake Standard)

Refer to General Requirements, Page 7

83-Passenger FC (Rear Engine) ITEM	1997 Min. Rqmts.	Blue Bird All American AARE3903	Blue Bird TCRE3904	Thomas Saf-T-Liner MVP-ER 1405/140H	Carpenter Counselor RE	Genesis RE3911
GVWR, lbs.	**36200**	36200	36200	36200	36200	36200
GAWR, lbs. Front	**13200**	13200	13200	13200	13200	13200
GAWR, lbs. Rear	**23000**	23000	23000	23000	23000	23000
Axle Capacity, lbs. Front	**13200**	14600	13200	13200	13200	13200
Axle Capacity, lbs. Rear	**23000**	23000	23000	23000	23000	23000
Wheelbase, in.	**267**	270	277	267	280	276
Engine Displacement, L.	*[1]	8.3T-I6	5.9T-I6	8.3T-I6	5.9T-I6	7.3-V8
SAE Gross Horsepower	*[1]	210	210	210	210	210
SAE Gross Torque, lb-ft.	*[1]	605	484	605	520	605
Transmission, Automatic **[2]	**MT-643**	MT-643	MT-643	MT-643	MT-643	MT-643
Brake Lining, in. Front	**As Shown**	16.5 x5	16.5 x 5	16.5 x 6	16.5 x 5	16.5 x 6
Brake Lining, in. Rear	**As Shown**	16.5 x 7	16.5 x 7	16.5 x 8.6	16.5 x 7	16.5 x 8.5
Tires, Steel Belted Radial	**Tubeless**					
Size & Load Range	**11R22.5H**	11R22.5H	11R22.5H	11R22.5H	11R22.5H Frt. 12R22.5H Rear	11R22.5G
Wheels: Rear	**Dual**	Dual	Dual	Dual	Dual	Dual
Wheels: Rim Size, in.	**8.25**	8.25	8.25	8.25	8.25	8.25
[1] ***See minimum power requirements in Paragraph F.5.3.4.**						
[2] ****Direct in fourth gear.**						

Engines listed on this page are approved to meet or exceed power requirements under normal operating conditions. Other engines must be submitted for approval by the School Bus Committee [See Paragraph F.5.3.4].

DEDICATED CNG ENGINES [Option No. 3A]

83-Passenger ITEM	1997 Min. Rqmts.	Hercules
Engine Displacement, L.	***[1]	5.6L
SAE Gross Horsepower	***[1]	190
SAE Gross Torque, lb-ft.	***[1]	440
GAWR, Front	**As Shown**	13200
[1] ***See minimum power requirements in Paragraph F. 5.3.4.		

G. WHEELCHAIR LIFT SPECIFICATION

FLOOR-MOUNTED WHEELCHAIR LIFT, ELECTRIC (HYDRAULIC OR MECHANICAL)

G.1. GENERAL REQUIREMENTS: When so specified in the Invitation for Bid [See Option No.'s 33, 34, and 35], the 15- through 77-passenger school buses shall be equipped with a wheelchair lift meeting the following requirements. All parts which are not specifically mentioned, that are necessary for the unit to be complete and ready for operation, or which are normally furnished as standard equipment, shall be furnished by the successful bidder. All parts shall conform in strength, quality, and workmanship to industry standards. All wheelchair positions shall be forward facing.

1.1. GENERAL DESIGN: The lift furnished for these options [See Option No.'s 33, 34, and 35] shall be a floor-mounted, twelve (12) volt DC electric-hydraulic or electric-mechanical operated wheelchair lift with a minimum eight-hundred pounds (800 lbs.) lifting capacity. The vertical lift (platform travel) shall be a minimum of thirty inches (30"). The unit shall be self-contained and mounted directly to the existing bus body floor.

1.2. DOORS, SPECIAL SERVICE: One or two (1 or 2) special side doors with windows in each door shall be provided as follows:

1.2.1. Design: The special service door (s) may be the standard double swing-out doors or sliding door (with glass) furnished by the chassis manufacturer on vehicles used for converted van buses or the special service doors shall be constructed of zinc-coated steel (G-60) with a minimum thickness of 0.396 inches meeting ASTM A-525. Doors may be either standard widths or as required for the lift furnished. The doors shall extend from the window header to the bottom of the floor line. Doors shall be water- and weather-tight when closed and the lift is in the travel position.

1.2.2. Door Holding Device: A means (device) shall be provided to hold the swing-out type door (s) in the fully opened position.

1.2.3. Door Operation: The opening and closing operation of the door (s) may be manual, vacuum, pneumatic, or electrical. Controls for doors other than those manually operated shall be located in the driver's compartment and designed for easy manual opening in case of an emergency. [See Paragraph G.1.8.].

1.2.4. Drip Rails: Full length drip rails shall be furnished over the special service doors to direct water away from the doors.

1.2.5. Header Board: The head impact area on the inside at the top of the special service door shall be protected by an energy absorbing, padded header board, three inches (3") wide and one inch (1") thick, extending the full width of the door to prevent injury when accidentally impacted.

1.2.6. Installation: Doors constructed by the body manufacturer shall be installed using piano or butt type hinges and attached to body by means of rivets or bolts, nuts, and lock washers. Neither metal screws nor self-tapping bolts are acceptable except for alignment purposes; when used for this purpose these types of fasteners shall be tack-welded at the head.

1.2.7. **Rub Rails:** Exterior side (s) of special service doors shall have two (2) rub rails with end caps installed at approximately the same level as the side rub rails. Rub rail installation shall be in accordance with the requirements outlined in Paragraphs C.2.9 and E.2.10.

1.3. **ELECTRICAL SYSTEM:** All wiring and wiring connectors used in the construction of the wheelchair lift shall meet the requirements of SAE J561:

1.3.1. **Alternator:** Wheelchair lift-equipped buses shall be provided with alternators with the following performance for the following sizes of school buses:

1.3.1.1. **Fifteen-passenger (15-) Through 20-passenger Buses:** "Type A" and ""Type B"" buses equipped with wheelchair lifts shall have alternators with a minimum electrical output of one-hundred amperes (100 amps) and one-hundred-thirty amperes (130 amps), respectively.

1.3.1.2. **Twenty-four-passenger (24-) Through 77-passenger Buses:** A minimum output rating of one-hundred-thirty amperes (130 amps).

1.3.2. **Electrical Insulation:** Any component such as the motor, electric wiring, switches, and any connections or parts likely to pose a safety hazard, shall be enclosed in insulated housing (s) to protect passengers and equipment.

1.3.3. **Motor:** The motor shall be a heavy-duty, twelve (12) volt DC type, equipped with shaft bearings.

1.4. **ELECTROMECHANICAL SYSTEMS:** Electromechanical hydraulic lift systems shall be furnished with worm screw or similar device for lift action.

1.5. **FRAME AND RELATED COMPONENTS:**

1.5.1. **Frame:** Frame of lift shall be constructed of heavy-duty steel and designed to support the platform extension, toeboard, and other parts necessary for proper operation, plus a minimum of eight-hundred pounds (800 lbs.) of additional weight. An aluminum frame may be substituted for steel provided the wheelchair lift warranty is upgraded [See Paragraph A.10.4.9.].

1.5.2. **Platform, Automatic Folding Type:**

1.5.2.1. **Design:** The platform shall be of sturdy construction and covered with minimum one-eighth inch (1/8") safety plate steel or one-eighth inch (1/8") expanded metal (open grate) with maximum three-fourth inch (3/4") openings. The lift platform shall have a minimum thirty inch (30") clear, usable width, unobstructed by the required handrail [See Paragraph G.1.5.2.2.). The minimum clear length of the platform between the outer edge barrier and the inner edge shall be forty inches (40"). Any portion of platform in the folded (travel) position which obstructs window vision shall be covered with expanded metal.

1.5.2.2. **Hand Rail:** The lift platform shall be equipped with at least one (1) handrail for security. The handrail shall be approximately twenty-five-and-three-fourth inches (25-3/4") in height and a minimum eighteen inches (18") in length and designed to fold when in stowed position so as not to add to the overall lift projection into the bus.

1.5.2.3. **Lift Action:** Action of the lift must be power-up and controlled descent with slow (gentle) movement. Design of the platform shall be such that it will be level at all times during the raising and lowering action. A load switch shall be installed on the platform to prevent accidental folding while loading wheelchair passengers.

1.5.2.4. **Safety Rails:** The platform shall be equipped with safety rails on both sides of minimum one-eighth inch (1/8") steel and one inch (1") high. The front of the lift shall have a folding type safety rail not less than three inches (3") in height. Safety rail folding action may be either manual or automatic.

1.5.2.5. **Toeboard:** A toeboard shall be furnished that is angled at approximately eight degrees (8°) below the horizontal.

1.6. **HYDRAULIC SYSTEM AND RELATED COMPONENTS:** Electric-hydraulic wheelchair lifts shall be furnished with a hydraulic system for lift operation. The components shall include, but not be limited to, the following:

1.6.1. **Hoses and Fittings:** Hose, hose fittings, and hydraulic fittings shall meet the requirements of SAE J517, J516, and J514, respectively, for nominal size (s) furnished.

1.6.2. **Hydraulic Cylinders:** Hydraulic cylinders shall be installed for lift operations. Piston rod diameter of each cylinder shall be not less than three-fourth inch (3/4"). Cylinders shall have a minimum of thirty-four inches (34") of extension action and shall be capable of lifting a minimum of eight-hundred pounds (800 lbs.) in addition to the weight of the lift.

1.6.3. **Hydraulic Fluid Reservoir:** A reservoir for hydraulic fluid shall be furnished and installed in an accessible location to allow easy checking of the fluid level and filling as necessary. Fluid capacity and type shall be as recommended by the lift manufacturer.

1.6.4. **Hydraulic Valves:** The system shall provide valves for the following actions:

1.6.4.1. **Override Action:** A bypass valve (or other means) shall be provided to prevent the lifting of the bus by over extending the hydraulic cylinders.

1.6.4.2. **Power Failure:** The system shall also be equipped with either a relief valve or other mechanical means for raising or lowering the wheelchair platform in case of power failure.

1.6.4.3. **Speed:** Adjustable valves shall be provided to control the raising and lowering speed of the lift.

1.6.5. **Weather/Dust Protection:** Exposed hydraulic cylinders, pumps, and any other parts requiring protection from the weather, or dust, or any other foreign objects for proper durable operation shall be properly sealed.

1.7. **MOUNTING AND INSTALLATION:** Installation shall be such that vibrations will be minimal. The wheelchair lift shall be installed by the bus body manufacturer or authorized dealer for lift manufacturers.

1.7.1. **Fuel Access Port:** [See Paragraph E.3.1.] A fuel access port is required on all 35- through 83-passenger buses except front wheelchair equipped buses.

1.7.2. **Level Test:** The sides of any bus provided with a wheelchair lift shall be within plus or minus two inches (± 2") of each other when measured from comparable points on each side to the ground with the bus empty and parked on a level hard surface (such as concrete). Chassis springs and suspension shall be adjusted as necessary to provide a level bus when the additional weight of a wheelchair lift is installed [See Paragraphs A.4.5., D.1.1., and F.1.1.].

1.7.3. **Mounting:** The lift shall be mounted on the front right (curb) side [See Option No. 33] rear curb-side [See Option No. 34] or front or rear [See Option No. 35] of the school bus body floor and securely bolted in place[43] . Floor frame shall be reinforced as required to support the lift and load. Lift shall be positioned approximately thirty-six inches (36") behind the main entrance door for the 18- and 24- through 77-passenger buses leaving sufficient space for one (1) regular bus seat or one (1) wheelchair. If the body is designed so space specified above is not available, the lift shall be mounted as far forward as practical to minimize floor space loss. (Tail pipe may be routed anywhere between the frame rails to provide sufficient clearance for the lift.)

1.8. **OPERATING CONTROLS AND SAFETY DEVICES:**

1.8.1. **Operating Switches:** Controls for each movement of the lift shall be through a remote pendant-type control (or equivalent) which has automatic return-to-off switches. Electrical cables shall be good quality copper, covered by heavy-duty rubberized sheath and of sufficient length to allow operation of the lift from inside and outside of bus.

1.8.2. **Warning and Safety Devices:**

1.8.2.1. **Safety Switch:** A safety switch shall be installed at or near the service door to prevent operation of the lift except when all special service doors are substantially open.

1.8.2.2. **Warning Light:** A flashing amber signal light, mounted near the other dashboard instruments, shall warn the driver when the ignition switch is activated and the special service doors are open or ajar, i.e., not completely closed.

G.2. **OTHER REQUIREMENTS:** Wheelchair lift-equipped school buses shall also be provided with the following:

[43] School District may specify rear curb side mounting of lift and wheelchair positions for the 18- and 24- through the 77-passenger buses only and mounted as above [See Option No. 34] in order to place the required minimum thirty inch (30") wide aisle in the rear portion of the bus [See Paragraphs C.2.12.4.1. and E.2.13.5.1.]. This will increase the seating capacity for regular passengers in the front section since a narrower aisle, minimum twelve inches (12"), may be used in this area. This option is recommended only for those buses which will have a regular attendant in addition to the driver.

2.1. **FLOOR COVERING:** The floor in the wheelchair area and the area in the lift entryway shall be smooth and free of projections. Aisle floor covering shall be the same as required in Paragraph E.2.7.

2.2. **FLOORING:** Any plywood flooring used to cover the existing steel floors (e.g., See Paragraph C.2.5.2.) on wheelchair-equipped buses shall be CDX grade.

2.3. **INTERIOR LAMP, LIFT COMPARTMENT:** The lift compartment shall have one (1) interior lamp installed in the roof panel above the center of the lift compartment; or one (1) lamp shall be installed in the roof panels on each side of the lift door to illuminate the platform entryway area. The lamp (s) shall be minimum fifteen (15) candlepower each and shall be one (1) of the approved lamps listed in Paragraph E.1.7.4.2.

2.4. **SECUREMENT SYSTEM LITERATURE:** The following information shall be provided with each vehicle equipped with a securement system:

2.4.1. Detailed instructions, including a parts list, regarding installation and use of the system.

2.4.2. Detailed instructions, including a diagram, regarding the proper placement and positioning of the system, including correct belt angles.

2.5. **PAINTING:** The interior and exterior of the special service doors lifts shall be primed and painted in accordance with the painting requirements in Paragraph E.1.10. as follows:

2.5.1. **Interior:** The interior of the special service door (s) of wheelchair lifts shall be painted to match the manufacturer's standard interior color of the bus on which it is installed.

2.5.2. **Exterior:** The exterior of special service doors shall be primed and painted in accordance with painting requirements in Paragraph E.1.10.

2.6. **UNIVERSAL HANDICAP SYMBOLS:** School buses with wheelchair lifts shall display the Universal Handicapped Symbols on the front of one (1) side and the rear of the other side below the window line of the bus. These emblems shall be white on a blue background, shall not exceed twelve inches (12") in size, and may be of a high intensity reflectorized material meeting U.S. Department of Transportation FHWA FP-85 Standards.

G.3. SECUREMENT SYSTEM FOR MOBILE SEATING DEVICE/OCCUPANT:

3.1. The school bus body shall be designed for positioning and securement of mobile seating devices and occupants in a forward-facing orientation. Securement system hardware and attachment points for the forward-facing system shall be provided.

3.2. Mobile seating device securement system shall utilize four (4) point tie-downs, with a minimum of two (2) body floor attachment points located at the rear of the space designated for the mobile seating devices and a minimum of two (2) body floor attachment points at the front of the space.

3.3. A "Type II" Occupant Securement System shall provide for securement of the occupant's pelvic lap area and upper torso area.

3.4. The mobile seating device/occupant securement system shall be successfully, dynamically sled-tested at a minimum impact speed/force of thirty miles per hour (30

mph/20 G'S). The dynamic test shall be performed using system components and hardware (including attachment hardware) which are identical to the final installation in type, configuration, and positioning. The body structure at the attachment points may be simulated for the purpose of the sled test, but the simulated structure used to pass the sled test may not exceed the strength of the attachment structures to be used in the final body installation. The mobile seating device used for test purposes shall be a fifth percentile (50%) male test dummy as specified in FMVSS Part 571.208, S6.1.2, 6.1.3, and 6.1.4. The test dummy shall be retained within the securement system throughout the test and forward excursion shall be such that no portion of the test dummy's head or knee pivot spouts passes through a vertical transverse plane intersecting the forward-most point of the floor space designated for the mobile seating device. All hardware shall remain positively attached throughout the test and there shall be no failure of any component. Each mobile seating device belt assembly including attachment hardware and anchorages shall be capable of withstanding a force of not less than two-thousand-five-hundred pounds (2,500 lbs.). This will provide equal mobile seating device securement when subjected to forces generated by forward, rear or side impact.

3.5. Occupant securement belt assemblies and anchorages shall also be certified to meet the requirements of FMVSS No.'s 209 and 210.

3.6. The occupant securement system must be designed to be attached to the bus body either directly or in combination with the mobile seating device securement system, by a method which prohibits the transfer of weight or force from the mobile seating device to occupant in the event of an impact.

3.7. All securement system attachments or coupling hardware not permanently attached shall be a "positive latch" type to prohibit accidental disconnecting.

3.8. All attachment or coupling systems designed to be connected or disconnected frequently shall be accessible and operable without the use of tools or other mechanical assistance.

3.9. All securement system hardware and components shall be free of sharp or jagged areas and shall be of a non-corrosive material or treated to resist corrosion.

3.10. The occupant securement system shall be made of materials which do not stain, soil, or tear an occupant's clothing.

3.11. No mobile seating device securement system hardware shall be placed so that a mobile seating device can be placed blocking access to lift door.

G.4. **SUPPORT EQUIPMENT AND ACCESSORIES:** The following is recommended by the National Standards for School Buses for support equipment and accessories. It is included here for the information of school districts. The following are not required to be provided by the body manufacturer unless specified in the Invitation for Bid.

4.1. **SUPPORT EQUIPMENT SECUREMENT:** Portable student support equipment or special accessory items shall be secured at the mounting location to withstand a pulling force of five (5) times the weight of the item, or shall be retained in an enclosed, latched compartment. Such special items, if used, shall meet specifications and/or include the following:

4.1.1. **Belt Cutter:** The bus shall contain a belt cutter for use in emergencies, including evacuations. The belt cutter should be designed to eliminate the possibility of the

operator or others being cut during use, and should be secured in a location of safekeeping such as a first aid kit.

4.1.2. Crutches, Walkers, Canes, and Similar Devices: These items to be secured as specified above.

4.1.3. Medical Support Equipment: These items include oxygen bottles, ventilators, and other items. These items shall be secured as specified above.

H. AIR CONDITIONING SPECIFICATIONS

H.1. SPECIAL REQUIREMENTS: Unless otherwise noted, all school buses ordered with air conditioning shall be furnished with the following:

1.1. ALTERNATOR: "Type A" and "Type B" buses equipped with air conditioning shall be furnished with an alternator with a minimum output rating of one-hundred amperes (100 amps) and one-hundred-thirty amperes (130 amps), respectively. "Type C" and "Type D" buses equipped with air conditioning shall be furnished with an alternator with a minimum output rating of one-hundred-thrity amperes (130 amps). "Type A" and "Type B", "Type C", and "Type D" buses equipped with air conditioning and wheelchair lifts shall be furnished with alternators with a minimum output rating of one-hundred-thirty amperes (130 amps) and one-hundred-sixty amperes (160 amps), respectively.

1.2. INSULATION: Minimum five-eighth inch (5/8") nominal thickness plywood shall be installed over the existing or manufacturer's standard steel floor for insulation [See Paragraph C.2.5.]. Air-conditioned buses shall have the equivalent of one-and-one-half inches (1-1/2") of Fiberglas or other insulation in the ceilings and walls including the interior of hat-shaped bows. The insulation shall have a minimum R-factor value of 5.77.

1.3. TINTING: The windshield and all windows of air-conditioned school buses shall be tinted to reduce the heat load of the system, meeting the requirements of Option No. 13 for dark tinting. (NOTE: It is not necessary to order Option 13; it must be furnished.)

1.4. WHITE ROOF: When so specified in the Invitation for Bid [See Option No. 38], the roofs of buses equipped with air conditioning shall be painted white, meeting the requirements of Option No. 38 and Paragraphs C.1.4.2. and E.1.4.1.

1.5. EXTRA COOLING: When so specified in the Invitation for Bid [See Option No. 2], additional cooling may be ordered for 15- through 71-passenger school buses. This is intended for use in buses operated under severe conditions (e.g., buses with handicapped lifts where the doors remain open for long periods of time, buses operated in urban areas with slow, stop-and-go traffic, etc.). Ordering this option will provide a Btu/hr. capacity equal to the next passenger-capacity category, as shown in Table No. Twenty-nine (29). (For example, an 18-passenger school bus with this option would be furnished with a fifty-three-thousand (53,000) Btu/hr. capacity air conditioning system instead of the standard forty-thousand (40,000) Btu/hr. unit)

H.2. GENERAL AND PERFORMANCE REQUIREMENTS: Air-conditioning systems furnished to meet the requirements of this specification shall be the mechanical vapor compression refrigeration type. Each air conditioning system shall have sufficient power for simultaneous cooling, circulating, cleaning, and dehumidifying the air. The refrigerant for the system must be nontoxic, nonflammable, and nonexplosive. The air conditioning system shall be manufactured to conform to the requirements of SAE J639. Air conditioning units furnished under this specification shall be of the current year's production. Details not specifically defined herein shall be in accordance with the manufacturer's standard commercial practice for products of this type. Table Twenty-nine No. (29) lists the components and the appropriate ratings required by this specification:

TABLE TWENTY-NINE (29)
MINIMUM AIR CONDITIONING COMPONENT REQUIREMENTS

Bus Size	Capacity BTU/hr.	Air Flow CFM	Compressor (s)/ No.	Condenser (s) Location/No.	Evaporators Location/No.
15-passenger	19,000	1,000	1	1--skirt mtd. (or eng. comp.)	1--Front & Rear
16-20-passenger	40,000	1,200	1	1--skirt mtd.	1-- Rear (no dash unit included)
24-35-passenger	53,000	1,300	1	1	1--Rear
47-passenger	78,000	1,900	2	2	1--Rear
53-71-passenger[1]	84,000	2,000	2	2	2--1 each side, staggered
77-83-passenger[1]	108,000	2,400	2	2	2--1each side, staggered
[1] Except rear engine buses may be single units provided they meet or exceed the BTU/cfm requirement.					

2.1. CONTROLS: A control box or panel, which shall be located in the driver's compartment, shall be permanently installed to house inside temperature and fan speed controls. The control box or panel shall be positioned so that the driver shall be able to operate the air conditioning controls while seated in the driver's seat and operating the bus. The fan (s) (blower) shall have a minimum of two (2) operating speeds ("off" is not considered an operating speed).

2.2. INSTALLATION:

2.2.1. Installing Dealer: Installation of the air conditioning system (s) shall be by the bus body company or by an authorized factory air conditioning dealer who normally stocks, sells, installs, and services a unit of the type being furnished.

2.2.2. Workmanship: Poor, shoddy installation will be grounds for immediate rejection of the complete bus.

2.2.3. Protection of Components: Any skirt-mounted air conditioning component or component mounted underneath the bus shall be provided with means of protecting these components from mud or road debris.

NOTE: No installation of any air conditioning units or systems shall, under any circumstances, void the chassis manufacturer's engine warranty.

H.3. COMPONENTS: The following is a list of components required for air conditioning systems [See Paragraph H.2.]. Any parts or components not specifically mentioned below, but which are required to provide a complete operating unit, or which are standard for the model offered, shall be included:

3.1. BLOWER UNIT: The blower unit shall be of heavy-duty, commercial design and shall circulate air over the evaporator (s) to cool the passenger compartment. Fans shall be of the centrifugal or axial type and quiet in operation. Unless they are self-contained, fan motor (s) shall have bearings of the permanent lubrication type and designed to operate on the twelve (12) volt DC system of the school bus. The blower unit (s) shall not increase the ambient noise level of the unloaded school bus while parked with the engine idling more than five (5) decibels when measured in the center of the bus.

3.2. **COMPRESSORS**[44]: Compressors shall be of the air conditioning or chassis manufacturer's standard design. Lubrication of all moving parts shall be accomplished automatically. An automatic (electric) clutch shall be provided on each compressor. The compressor size shall be as required to meet the performance requirements above. Compressor (s) shall be compatible with the engine speed.

3.3. **CONDENSERS:** The condenser (s) shall be as recommended by the manufacturer of the unit. The air conditioning manufacturers shall use their standard condenser fabrication and installation practices.

3.4. **DASH OUTLETS:** Unless otherwise specified in the Invitation for Bid, air conditioners on 16- through 19-passenger school buses will not have in-dash air outlets. In-dash outlets are required on 15-passenger buses equipped with air conditioning.

3.5. **EVAPORATOR (COOLING COIL):** Air conditioning manufacturers shall use standard cooling coil, fabrication and installation practices.

3.6. **REFRIGERANT DRYER:** A dryer with a minimum of ten ounce (10 oz.) of desiccant shall be installed in the refrigerating circuit. The system shall be designed and installed in accordance with the manufacturer's standard practice to insure optimum performance and ease of service/replacement.

H.4. **TESTING:** Testing shall be done by, or at the direction of, the General Services Commission and/or the receiving school district. Tests shall be performed on buses furnished. In the event the bus air conditioning system fails to meet or exceed all conditions and requirements of this specification, the cost of the test shall be borne by the supplier.

H.5. **OTHER REQUIREMENTS:**

5.1. **AVAILABILITY OF SERVICE AND REPAIR PARTS:** An adequate supply of repair parts normally required for most maintenance and warranty repair shall be carried in stock within the State of Texas. Bidder shall include with each bid, or have on file with the Purchasing Division of this Commission, a list of factory-authorized companies or individuals, and their addresses, who stock repair parts and who can perform service on the products furnished.

NOTE: Requirement in Paragraph A.10.4.1. The air conditioning manufacturer shall have service facilities available in each of the five (5) zones within the State of Texas that stock repair parts normally required for warranty service and regular repair [See Figure No. Three (3)].

5.2. **INTRODUCTION BOOKS:** One (1) copy of complete maintenance and operating instructions shall accompany each air conditioned bus upon delivery. If a parts list is required by the school district the district should contact the vendor supplying the equipment.

5.3. **LABELING:** Each air conditioning unit shall have affixed a legible and durable nameplate with the following information:

5.3.1. Name and address of the manufacturer.

[44] **Compressors shall be geared so that their speed does not exceed the manufacturer's maximum recommended sustained speeds at a road speed of sixty miles per hour (60 mph) in high gear.**

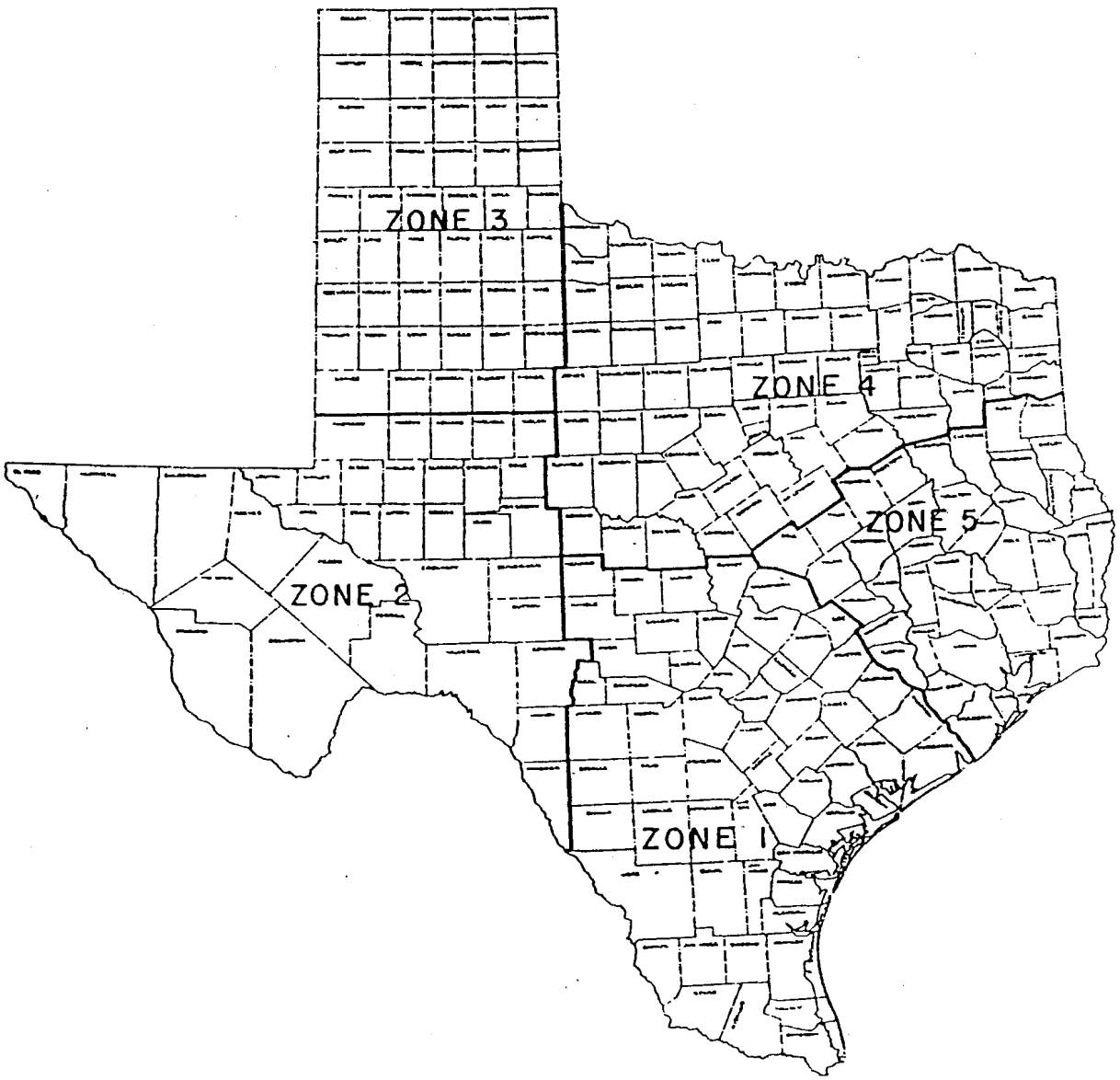
5.3.2. Cooling Capacity of the installed unit (in Btu/hr.), based upon the smallest rating of any component in the system.

5.3.3. Recirculation and ventilation of air quantity in (CFM).

5.4. **WARRANTY:** The complete air conditioning system, including all components, shall be warranted for a period of one (1) year, unlimited mileage, from the date of delivery.

FIGURE No. THREE (3)

REQUIRED SERVICE FACILITY ZONES WITHIN THE STATE OF TEXAS



I.1. **AVAILABILITY OF SPECIFICATIONS:** Copies of this specification may be obtained by calling or writing:

Bid Services
General Services Commission
P.O.Box 13047
Austin, TX 78711-3047
(512) 463-3416

FOR ASSISTANCE

SCHOOL BUSES

NOTE TO SCHOOL DISTRICTS: You may want to communicate with the Commission using this form to describe problems you are having with your school buses. However, you should first attempt to have the complaint corrected by the body vendor or chassis dealer, whichever is applicable. Refer to Paragraph A.10.4. for a list of the names and titles of individuals in the various organizations to contact for service. Then, if you are not satisfied with the repairs of corrections made, or if nothing is done to alleviate the problem, please use a copy of the following form to inform the Commission.

DATE:

SCHOOL DISTRICT NAME:
CITY:
ZIP:
CONTACT NAME:
AREA CODE & PHONE NUMBER:

PASSENGER CAPACITY (Circle One): 15 16 18 19 20 24 35 47 53 59 65 71 71 77 83

BODY MAKE (Check One):

Blue Bird	Chevrolet	Dodge	Ford	GMC
Thomas	Navistar	Crane Carrier	Transi Corp	

FIRM OR DEALER NAME:

NAME OF PERSON CONTACTED:

STATE NATURE OF COMPLAINT OR PROBLEM
(Be specific, use additional sheets, if necessary)

Mail To: "Purchaser U"
General Services Commission
P.O. Box 13047
Austin, TX 78711-3047

THREE (3) MONTH TEST OF NEW SCHOOL BUS ENGINES

NOTE TO SCHOOL DISTRICT: It would be helpful in our deliberation on approval of school bus engines if the attached dorm could be completed at the end of the test period on the bus engine you have agreed to test and evaluate. Please add any information that you think may be significant. In this test we believe that different drivers should be allowed to drive the bus and give their opinions of its suitability for school bus use.

NEW ENGINE EVALUATION
(Complete or Check Appropriate Item)

District Name:		
Begin Date:		
End Date:		
Engine Manufactures Name:		
Chassis Manufactures Name:		
Body Manufactures Name:		
Engine Size:		
Engine Type:	Gasoline	Gasoline (Mono)
	Diesel (Mono)	
	Naturally Aspirated	Turbocharged
	Dedicated Alternative Fuel	
Alternative Fuel Type:	Compressed Natural Gas (CNG)	Mono or Bi
	Liquefied Natural Gas (LNG)	Mono or Bi
	Liquefied Petroleum Gas (LPG)	Mono or Bi
Transmission:	Manual	Automatic
Brakes:	Air	Hydraulic
Air Conditioner		
Wheelchair Lift		
Luggage Rack:	Top	Bottom

TESTS

Loaded with approximately one-hundred-twenty pounds (120 lbs.) for each passenger space with an approximate one-hundred-fifty pound (150 lb.) driver, please conduct the following five (5) tests. Please note if criteria different from that recommended are used.

1. Acceleration: Zero to fifty miles per hour (0 -- 50 mph) in sixty (60) seconds or less: From a standing start on a level stretch of asphalt or concrete highway, record with a stop watch the time required to reach fifty miles per hour (50 mph).
   Record _____ time in seconds rounded to the nearest 0.1 second.

2[45]. Grade of one-and-one-half percent (1.5%) minimum at fifty miles per hour (50 mph): From a running start, drive the bus at fifty miles per hour (50 mph) up a grade of approximately one-and-one-half percent (1.5%). Most federal highways have maximum grades of three percent (3%) except overpasses which are steeper.

[45] Grades of 1.5% and 5.0% rise 1.5 and 5.0 feet, respectively, in a 100 foot distance.

THREE (3) MONTH TEST OF NEW SCHOOL BUS ENGINES
(Continued)

Record the speed at the summit. _____ Miles per hour.

3.[45] Grade of five percent (5%) minimum at twenty-five miles per hour (25 mph): From a running start, drive the bus at twenty-five miles per hour (25 mph) up a grade of approximately five percent (5%). Most state highways have maximum grades of seven percent (7%).
Record the speed at the summit. _____ Miles per hour.

4. Startability -- Twenty percent (20%): If possible locate a grade of approximately twenty degrees (20°). (Your local Highway Department engineering may be able to help you locate grades.) Park the bus on the foot of the hill facing upward then start the engine and drive up the hill. If no twenty percent (20%) grade is available, use the steepest hill in the district.
Estimate grade _____ %.

5. Speed -- Fifty-five miles per hour (55 mph): With the engine speed governor connected and operating, determine if the bus will reach a minimum of fifty-five miles per hour (55 mph) on a level stretch of asphalt or concrete highway.
Check One: Complies: _____ Yes or, _____ No.

Documentation

6. **Record** the hubodometer reading at the beginning and end of a two-- or three-- (2- or 3-) month period and the amount of fuel used.
Calculate the overall fuel consumption _____ Miles per gallon.

7. **Document** any warranty work or other repairs required on the test bus.

_____

8. **Note** regular maintenance performed and any unusual problems such as excessive oil consumption or fluid leaks.

_____

Operation on a Regular Route

Miles:	**Record** Average Daily Mileage:
Acceleration:	Adequate or Poor
Running Temperatures:	Normal or Hot
Oil Consumption:	**Record** Miles/qt.
Starting:	Normal or Hard to Start
Adequate Power Fully Loaded?	Yes or No
Regular Route Fuel Consumption:	**Record** Miles/gal.
Comments:	

Operation on an Activity Trip

Maintain 50 MPH Loaded?	Yes or No
Comments Related to Loaded Speed:	
Oil Consumption:	**Record** Miles/qt.
Activity Trip Fuel Consumption:	**Record** Miles/gal.
Maximum Lawful Speed Up Steepest Hill:	**Record** MPH.
Power:	Normal or Under Powered.
List any problems or comments concerning operation on an Activity Trip:	

Is this engine suitable for transportation needs in your District? _____ Yes or, _____ No

Required Signatures

_____ _____

Superintendent **Date**

_____ _____

Transportation Director **Date**

Thank you for your cooperation and assistance in providing written results of the engine test and the recommendations of your Administration, Drivers and Mechanics.

TEXAS SCHOOL BUS COMMITTEE

Sam Dixon, Texas Education Agency
Dan Roberts, Texas Association for Pupil Transportation
Tommy Crowe, General Services Commission
Bill Kyser, Texas Association for Pupil Transportation
Debbie Goertz, Texas Department of Public Safety

Return To: General Services Commission
Central Procurement Services
P. O. Box 13047
Austin, TX 78711-3047

OPEN MARKET

School Bus Purchase Requisition

Texas Specification No. 070-SB-96

Effective 3/96

GENERAL SERVICES COMMISSION

Purchasing Division

P. O. Box 13047

Austin, Texas 78711-3047

Attention: Purchaser U

District Name _____

County District No. _____

GSC Req. #_____

Estimated Total $_____

Typed Name and Title of Contact Person Telephone _____	Mailing Address Bus Delivery Address if Different from Above

Typed Name of Superintendent	Date	Telephone	Signature

NOTE: THE SIGNATURE OF THE SUPERINTENDENT IS REQUIRED TO PROCESS THIS REQUISITION.

School Districts have the right to review the bids received prior to award in order to determine funds availability. Please note time constraints relative to this review process (see Par. B.2.1.4.)

Do you wish to review bids received? _____Yes _____No (Referrals may delay delivery thirty (30) days or more.)

Instructions: For information on bus options, see the current *Texas School Bus Specifications*. The completed form should be submitted as indicated below. For further information, contact Purchaser "U" (512) 463-3369.

Section 1 - Bus Requirements

Quantity_____ Automatic Transmission _____Yes _____No Type: _____ Conventional

Size:_____ __Passenger School Bus (For 24 thru 77 passengers) _____Forward Control

See Par. B.1.2 for Reduced Passenger Capacities)

Section II - Regular Bus Options: Check all regular options to be included

____ 1. **Air conditioning**, standard cooling
____ 2. **Air conditioning**, extra cooling (n/a for 77-83 pass. buses)
____3. **Alternative fuel engines, O.E.M. Supplied** (Select from A or B)
____3A. **Compressed Natural Gas (CNG)**
___mono ___bi fuel
____3B. **Liquefied Petroleum Gas (LPG)**
____ 4. **Alternator**, Increased Capacity
____ 5. **Axle, Rear, Two Speed** (24-71 pass. buses only) (N/A with automatic transmission)
____ 6. **Brakes, Hydraulic** (59-77-pass, buses only)
____ 7. **Chassis, Long Wheelbase** conventional 24 and 71 pass. only).
____ 8. **Diesel Engine.** Minimum HP _____.
____ 9. **Differential, No-spin** (24-71 pass. buses only)
____10. **Door, Powered Service** (n/a with automotive type door)
____11. **Door, Service, Automotive** sedan-type, manually Side Mounted (24-71 pass. buses only; with ____ wheelchair positions. Will reduce seating capacity.
____12. **Fuel Tank, Increased Capacity** (15-24 83 pass. buses only).
___13. **Glazing, Dark Tint Passenger Slide Windows** (min. 30%, max. 40% light transmittance).
____14. **Heater, Rear** (auxiliary)
____15. **Knee Spacing** (maximum; requires deleting one row (6 positions) of seats which will reduce seating capacity).
____16. **Laminated Safety Plate Glass**
____17. **Low Profile Tires** (24-83 pass. buses only)
____18. **Mud Flaps**, with Brackets, Mounted
____19. **Reflective Material**
____ 20. **School Name Lettering** (type EXACTLY as required:_____
____ 21. **Seat Backs, Increased Height**
____ 22. **Seat Belts** (standard on all 15-20 passenger buses)
____ 23. **Security System Lock**, All Doors
____ 24. **Sound Abatement Insulation**
____ 25. **Student Safety Crossing Gate**
____ 26. **Strobe Light**, roof-mounted
____ 27. **Tachograph**
____ 28. **Tachometer** (to indicate engine RPM)
____ 29. **Tires, Mud and Snow Tread**
____ 30. **Tool Compartment**
____ 31. **Wheel, Spare** (without carrier and tire/tube)
____32. **Wheel, Spare, Mounted** (with carrier, but without tire/tube)
____ 33. **Wheelchair Lift, Folding Platform Type, Front Curb Side Mounted** (24-71 pass. buses only; with ____ wheelchair positions. Will reduce seating capacity.
____ 34. **Wheelchair Lift, Folding Platform Type, Rear Curb Side Mounted** (24-71 pass. buses only; with ____ wheelchair positions. Will reduce seating capacity.

District Name _____ County District No. _____

____ 35. **Wheelchair Lift, Folding Platform Type, Right Curb Side Mounted** (15-20 pass. buses only; with ____ wheelchair positions. Will reduce seating capacity.
____ 36. **Wheelchair Restraints, Webbed-belt Type** (15-71 passenger buses only.)
____ 37. **Windshield Wipers, Intermittent**
____ 38. **White Roof**
____ 39. **Windows, Push-out**, additional, for emergency exit. Indicate extra number requested, per side _____.
____ 40. **Passenger Seats**, specialized with integral child restraint system (indicate number of seats desired) ____.

NOTES: ***Discard all previous additions of this form***. Use only this form to order school buses. NA means Not Available/Not Applicable. Forward this form and any attachments to GSC at the address shown above.

SECTION III - Special Options:
List any requested additional options that do not appear in current state specifications.

A. _____ F. _____

B. _____ G. _____

C _____ H. _____

D. _____ I. _____

E. _____ J. _____

APPROVED PRODUCTS LIST -- SCHOOL BUS ENGINES

LEGEND: **C** = Conventional Bus. **FC** = Forward Control Bus, **FE** = Front Engine Bus, **RE** = Rear Engine Bus. **SC** = Short Wheelbase Conventional Bus, **LC** = Long Wheelbase Conventional Bus.

MANUFACTURER **GASOLINE ENGINES CAPACITY**

	15	16	18	19	20	24	35	47	53	59C	59FC	65C	65FC	71SC	71LC	71FC	77C	77FC	83FE	83RE
DODGE																				
Displacement	5.9L		5.9L																	
SAE Gross hp	190		190																	
Axle Ratio	3.54		3.54																	
Trans. Auto.***	A727		A727																	
G.M.C.																				
Displacement	5.7L	5.7L	5.7L	5.7L	5.7L	5.7L	6.0L	6.0L	6.0L	6.0L	7.0L	6.0L	7.0L	6.0L	6.0L	7.0L	6.0L	7.0L		
SAE Gross hp	201	201	201	201	201	201	225	225	225	225	255	215	255	215	215	255	215	255		
Axle Ratio							7.17	7.17	7.17	7.17	**	7.17	**	7.17	7.17	**	7.17	**		
Tran. Auto.***	400	400	400	400	400	400	AT545	AT545	AT545	AT545	AT545	AT545	AT545	AT545	AT545	AT545	AT545	AT545		

MANUFACTURER **NATURAL GAS ENGINES (OEM--FURNISHED) CAPACITY**

	15	16	18	19	20	24	35	47	53	59C	59FC	65C	65FC	71SC	71LC	71FC	77C	77FC	83FE	83RE
HERCULES																				
Displacement							5.6T	5.6T	5.6T	5.6T	5.6T	5.6T	5.6T	5.6T	5.6T	5.6T				
SAE Gross hp							190	190	190	190	190	190	190	190	190	190				
Axle Ratio							**	**	**	**	**	**	**	**	**	**				
Trans. Auto.***							AT545	AT545	AT545	AT545	AT545	AT545	AT545	AT545	AT545	AT545				
TECOGN/GMC (7.0L-mono-fuel) - Bluebird/Stewart & Stevenson (6.01 bi- and mono-fuel) Displacement																				
SAE Gross hp							6.0L	7.0L	6.0L	6.0L	7.0L	6.0L	7.0L	6.0L	6.0L	7.0L	6.0L	7.0L	7.0L	7.0L
Axle Ratio							210	195	210	210	195	210	195	210	210	195	210	195	195	195
Trans, Auto.***							**	**	**	**	**	**	**	**	**	**	**	**	**	**
							AT545	AT545	AT545	AT545	AT545	AT545	AT545	AT545	AT545	AT545	AT545	AT545*	MT643	MT643

APPROVED PRODUCTS LIST -- SCHOOL BUS ENGINES

LEGEND: C = Conventional Bus, **FC** = Forward Control Bus, **FE** = Front Engine Bus, **RE** = Rear Engine Bus, **SC** = Short Wheelbase Conventional Bus, **LC** = Long Wheelbase Conventional Bus.

MANUFACTURER **DIESEL GAS ENGINES CAPACITY**

	15	16	18	19	20	24	35	47	53	59C	59FC	65C	65FC	71SC	71LC	71FC	77C	77FC	83FE	83RE
CATERPILLAR Displacement SAE Gross hp Axle Ratio Trans. Auto.***[1]							6.6T 170-200 **[2] AT545	6.6T 170-200 ** AT545	6.6T 170-200 ** AT545	6.6T 170-200 ** AT545		6.6T 170-200 ** AT545		6.6T 170-200 ** AT545	6.6T 170-200 ** AT545		6.6T 170-200 ** AT545			
CUMMINS/ FORD DIESEL Displacement SAE Gross hp Axle Ratio Trans, Auto.***							5.9T 160-190 ** AT545	5.9T 160-190 ** AT545	5.9T 160-190 ** AT545	5.9T 160-190 ** AT545	5.9T 180 ** AT545	5.9T 160-190 ** AT545	5.9T 180 ** AT545	5.9T 160-190 ** AT545	5.9T 160-190 ** AT545	5.9T 180 ** AT545	5.9T 160-190 ** AT545	5.9T 190 ** MT643	8.3T 235 ** MT643	8.3T 235 ** MT643
FORD/NAVISTAR Displacement SAE Gross hp Axle Ratio Trans, Auto.***	7.3N 180 **	7.3N 180 **	7.3N 180 **																	
GENERAL MOTORS Displacement SAE Gross hp Axle Ratio Trans, Auto.***	6.5 160-V8 A4OD	6.5 160-V8 A4OD	6.5 160-V8 A4OD	6.5 160-V8 A4OD	6.5 160-V8 A4OD	6.5 160-V8 A4OD														
N.I.C. (T444E) Displacement SAE Gross hp Axle Ratio Trans, Auto.***						7.3T 160-230 ** AT542/5	7.3T 160-230 ** AT545	7.3T 160-230 ** AT545	7.3T 160-230 ** AT545	7.3T 160-230 ** AT545	7.3T 175-230 AT545	7.3T 160-230 ** AT545	7.3T 175-230 AT545	7.3T 160-230 ** AT545	7.3T 160-230 ** AT545	7.3T 160-230 AT545	7.3T 160-190 ** AT545	7.3T 160-230 AT545	7.3T 190-230 MT545	7.3T 190-230 MT545
N.I.C. (DT466) Displacement SAE Gross hp Axle Ratio Trans, Auto.***							7.6T 170-230 ** AT545	7.6T 170-230 ** AT545	7.6T 170-230 ** AT545	7.6T 170-230 ** AT545	7.6T 170-230 ** AT545	7.6T 170-230 ** AT545	7.6T 1170-230 ** AT545	7.6T 170-230 ** AT545	7.6T 170-230 ** AT545	7.6T 170-230 ** AT545	7.6T 170-230 ** AT545	7.6T 230 ** MT643	7.6T 230 ** MT643	7.6T 190-230 MT545

[1]** Rear axle ratio, as required.

[2]*** Minimum acceptable transmission listed. Transmission MUST be adequately matched with engine torque and approved by the engine manufacturer.

APPROVED PRODUCTS LIST -- SCHOOL BUS BODIES

Bus Size	Configuration/Mfg.	Blue Bird	Carpenter	Collins	Mid Bus	Thomas	U.S. Bus	Van Com	Ward (Amtran)
15	Van Conversion or Cutaway	Micro Bird	-	Bantam Econobus Super Bantam	Guide	0402 0412	Universe	V-15	VSS
16	Commercial Cutaway	Micro Bird MB-20	SCL1706 SCL1801	-	Guide	0406	SturdiBus	-	VSS
18	Van Conversion	-	-	Bantam Super Bantam	Guide	-	SturdiVan	V-18	-
19	Commercial Cutaway	Micro Bird MB-20	SCL1706 SCL1801	Super Bantam Grand Bantam	Guide	-	SturdiBus	-	VSS
20	Stripped Chassis	Mini Bird MB-20	WSCV1808	Grand Bantam	-	0404, 0417 0407	Eagle	-	VSS
24	Conventional Cutaway Semi-Fwd-Control	2103 2307 MB-20	WSCV2100 WSCV2107 -	-	-	0500 041G 0501	Eagle	-	-
35	Conventional Semi-Fwd-Control	1808, 2005	SB1808	-	-	0510, 0600 0501	Eagle	-	SS-17
47	Forward Control Conventional Semi-Fwd-control	TC2000 2304 -	SFT2902 SB2304 -	-	-	0908 0710 0701	-	-	IS SS-22
53	Forward Control Conventional Semi-Fwd-control	TC2000 2508 -	SFT2902 SB2508 -	-	-	0908 0810 0801	-	-	IS SS-24
59	Forward Control Conventional Semi-Fwd-control	TC2000 2800, 2807 -	SFT3303 SB2800 -	-	-	1105/110H 0910 0901	-	-	IS SS-26
65	Forward Control Conventional Semi-Fwd-control	TC2000 3004, 3011 -	SFT3303 SB3004 -	-	-	120H/1205, 1108 1010 1001	-	-	IS SS-29
71S	Forward Control Conventional Semi-Fwd-control	TC2000 3201 -	SFT3507 SB3201 -	-	-	1100 1101	-	-	IS SS-31
71L	Forward Control Conventional Semi-Fwd-control	3208 -	SB3201 -	-	-	1110 1101	-	-	IS SS-31
77	Forward Control Conventional Semi-Fwd-control	3604, 3611 3310 -	SFT3711 SB3405 -	-	-	130H, 1308 1200 1201	-	-	IS SS-33
83	Forward Control	3,907	SFT3906/SPT3908	-	-	1318, 1405/140H	-	-	IS

GENERAL INDEX

TEXAS SCHOOL BUS SPECIFICATION
1997 – MODEL YEAR

Zone Service Managers and Representatives (For Chassis Warranty)	12