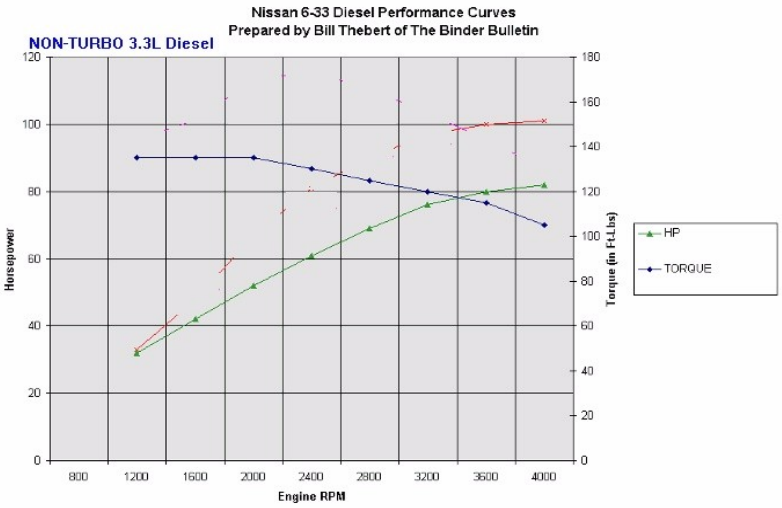
	31" tires	235's	235's	235's	35's	235's
Gears:	**4.88**	**3.31**	**3.54**	**4.10**	**4.56**	**2.72**
Tires:	30.35	28.88	28.88	28.88	35.00	28.88
tach	mph	mph	mph	mph	mph	mph
1000	18.50	25.96	24.27	20.96	22.83	31.59
1100	20.35	28.55	26.70	23.05	25.12	34.75
1200	22.20	31.15	29.12	25.15	27.40	37.90
1300	24.05	33.74	31.55	27.24	29.68	41.06
1400	25.90	36.34	33.98	29.34	31.97	44.22
1450	26.83	37.64	35.19	30.39	33.11	45.80
1500	27.75	38.94	36.41	31.43	34.25	47.38
1550	28.68	40.23	37.62	32.48	35.39	48.96
1600	29.60	41.53	38.83	33.53	36.54	50.54
1650	30.53	42.83	40.05	34.58	37.68	52.12
1700	31.45	44.13	41.26	35.62	38.82	53.70
1750	32.38	45.42	42.47	36.67	39.96	55.28
1800	33.30	46.72	43.69	37.72	41.10	56.86
1850	34.23	48.02	44.90	38.77	42.24	58.44
1900	35.15	49.32	46.11	39.82	43.39	60.02
1950	36.08	50.62	47.33	40.86	44.53	61.60
2000	37.00	51.91	48.54	41.91	45.67	63.17
2050	37.93	53.21	49.75	42.96	46.81	64.75
2100	38.85	54.51	50.97	44.01	47.95	66.33
2150	39.78	55.81	52.18	45.05	49.09	67.91
2200	**40.70**	57.11	53.40	46.10	**50.24**	69.49
2250	41.63	58.40	54.61	47.15	51.38	71.07
2300	42.56	59.70	55.82	48.20	52.52	72.65
2350	43.48	61.00	57.04	49.25	53.66	74.23
2400	44.41	62.30	58.25	50.29	54.80	75.81
2450	45.33	**63.59**	**59.46**	**51.34**	55.94	**77.39**
2500	46.26	64.89	60.68	52.39	57.09	78.97
2550	47.18	66.19	61.89	53.44	58.23	80.55
2600	48.11	67.49	63.10	54.48	59.37	82.13
2650	49.03	68.79	64.32	55.53	60.51	83.71
2700	49.96	70.08	65.53	56.58	61.65	85.29
2750	**50.88**	71.38	66.74	57.63	**62.79**	86.87
2800	51.81	72.68	67.96	58.68	63.94	88.44
2850	52.73	73.98	69.17	59.72	65.08	90.02
2900	53.66	75.28	70.38	60.77	66.22	91.60
2950	54.58	76.57	71.60	61.82	67.36	93.18
3000	55.51	77.87	72.81	62.87	68.50	94.76
3050	56.43	79.17	74.03	63.91	69.64	96.34
3100	57.36	80.47	75.24	64.96	70.79	97.92
3150	58.28	81.76	76.45	66.01	71.93	99.50
3200	59.21	83.06	77.67	67.06	73.07	101.08
3250	**60.13**	84.36	78.88	68.11	**74.21**	102.66
3300	61.06	85.66	80.09	69.15	75.35	104.24
3350	61.98	86.96	81.31	70.20	76.50	105.82
3400	62.91	88.25	82.52	71.25	77.64	107.40
3450	63.83	89.55	83.73	72.30	78.78	108.98
3500	64.76	90.85	84.95	73.34	79.92	110.56
3550	65.68	92.15	86.16	74.39	81.06	112.14
3600	66.61	93.45	87.37	75.44	82.20	113.71
3650	67.53	94.74	88.59	76.49	83.35	115.29
3700	68.46	96.04	89.80	77.54	84.49	116.87
3750	69.38	97.34	91.01	78.58	85.63	118.45
3800	70.31	98.64	92.23	79.63	86.77	120.03

q

current tires are about 30" 8.00x16.75
will use J10 axles - 3.54 gears from '80 J10, D44 front, Model 20 rear
will use 235/75R15 tires
will remove rear bed and bumpers - replace with lighter material



Specs and load numbers
Overall Length - 170"
Width - 94"
Height - 78"
Curb Weight - 6060lbs
Ground Clearance - 6.5"
Fuel Tank - 20 Gal
Operating Temp Range - -25 F to +125 F
Max Drawbar Pull - 4000lbs
Tax Towed Load
Level Ground - 40,000 pounds
3% Grade - 25,000 pounds
5% Grade -20,000 pounds
Brakes
Brakes - Vacuum Assist Hydralic
Front - Disc
Rear - Drum
Steering - Hydraulically Assisted, Variable Rotation
Ratio - 13/16 to 1

Engine
Type - 4 Cycle Diesel
Model - Nissan SD-33
Oil Cap - 7.9 Quarts (7.5L)
Number of Cylinders - 6
Bore (Inches) - 83
Stroke (Inches) - 3.94
Compression Ratio - 20.8 to 1
Total Displacement - 3.3L
Number of Main Bearings - 4
Wheel Size
Wheel Size - 16.5 X 6.75
Tire - 800 X 16.5 (Tubeless, Bias Ply)
Ply - 10
Pressure - Front (55 Psi) Rear (75 Psi)

Transmission
Model -TF 727 (Big Block blot pattern)
Fluid Cap - 8.5 Pints (Dextron II)
Gear Ratio
First - 2.45 to 1
Second - 1.45 to 1
Third - 1.00 to 1
Reverse - 2.20 to 1
Transfer Case - AMC (NP) 198
Reduction Ratio - 2.61 to 1
Fluid Cap - 6.0 Pints (Dextron II)
Axle
Front Axle - Dana 44DF
Rear Axle - Dana 70-24 (Full Floating)
Reduction Ratio - 4.88 to 1
Differential - Hypoid Limited Slip
Fluid Cap 6.75 Pints (80W-140)

http://home.earthlink.net/~calicosmith/sd-33info.htm

The SD-33 was originally a joint-venture between Chrysler and Nissan. I'm not sure on the details, but I'd guess that Chrysler wanted to help Nissan out (this was before Japanese car companies had a decent foothold in the United States). The engine was designed originally for the Nissan Patrol, as well as forklifts, but the fuel crisis of the '70's was in full swing, and International-Harvester was looking for a small, high-economy diesel to put in their Scouts. I'm not sure why they chose the SD-33 instead of making their own engine, but that's what they did. At some point after IH started using the diesels in some Scouts, Chrysler let Nissan work on their own. To anyone who has a diesel Scout, the yellow engines were joint Chrysler/Nissan built, and the blue engines (most blue engines are SD-33T's, but not all of them) were made by Nissan on their own. I don't have a list of specifications for the SD-33, but I do have the specs for the SD-33T below. The SD-33 is lacking a turbocharger, and therefore has less horsepower/torque numbers, but otherwise, they are similar engines. The SD-33 puts out 92 horsepower, while the SD-33T puts out 101 horsepower and 175 ft-lbs of torque. Here's the information on the SD-33T:

GENERAL

TYPE: 4-cycle, water-cooled diesel
COMBUSTION: Swirl Chamber, pre-combustion chamber type
CYLINDERS: 6, in-line, vertical
BORE x STROKE: 83x100mm (3.27x3.94in.)
PISTON DISPLACEMENT: 3246cc (3.2 litres, 198 cubic inches)
COMPRESSION RATIO: 20.8 : 1
WEIGHT (DRY): Approx. 305 kg (about 672 lbs)
ASPIRATION: Turbocharger, max. output approx. 6.5psi

DESIGN FEATURES

CYLINDER BLOCK
High-strength cast iron with replaceable dry liners.
CYLINDER HEAD
One-piece high-strength cast iron; special cast-iron valve inserts are shrink-fitted.
CRANKSHAFT
Drop-forged steel with balance weights; all main and connecting rod bearing surfaces are induction-hardened.
PISTON AND RINGS
Aluminum alloy piston for high strength, lightweight and good heat conductivity; three compression and two oil control rings are chrome-plated for long service life.
CAMSHAFT
High-quality cast iron; lobes are specially processed to improve hardness and durability.
BEARINGS
Precision type, steel-backed trimetal shell; five main bearings.
VALVES
Overhead valves; one intake and exhaust per cylinder; made of special heat-resistant steel; exhaust valve with stellite-treated surface.

STANDARD EQUIPMENT

Flywheel Housing.....SAE No. 4
Flywheel.....SAE for 8-inch drive-ring-type overcenter clutch
Injection Pump.....Bosch A-type, in-line plunger, forced circulation
Governor.....RSV, mechanical all-speed governor, within 10% speed change
Timer.....Automatic centrifugal type
Injection Nozzle.....Bosch throttle type
Fuel Feed Pump.....Bosch piston type driven by injection pump camshaft
Fuel Filter.....Replaceable cartridge type with overflow valve
Air Cleaner.....Replaceable dry-paper-element type
Exhaust Manifold.....Flange type, rear side-facing outlet
Oil Pump.....Gear type
Oil Filter.....Full-flow, replaceable cartridge type
Oil Pan.....Pressed-steel plate, rear sump type; capacity: high 5.5/(1.2 imp gal.) (appx. 11 quarts)
Oil Cooler.....Flat-tube type

Cooling Fan.....380mm (14.96 in.)-dia. 4-blade steel fan, suction type, belt-driven; speed ratio: 1.18
Water Pump.....Centrifugal type, belt-driven; capacity: 110/min. at 3200 rpm
Thermostat.....Wax pellet type
Alternator.....12-volt-35 amp.
Starter Motor.....12-volt-1.8 kW
Starting Aid.....Pencil type preheating glow plug for each cylinder

YEAR	model	wheelbase	length	width	height	spring perch front - OD	spring perch rear - OD	track f	track r
1985	Grand Wag	108.7	186.4	74.8	66.4	34.5	47	59.4	57.8
1983	spring perch re	118.8	194	78.9	69	34.5	54	63.3	63.8
1986	CJ-10A	86	170	94	78	34.5	47		
DIFFERENCE:		**-22.7**	**-16.4**	19.2	11.6	0	0	-59.4	-57.8

Overall Length - 170"
Width - 94"
Height - 78"
Curb Weight - 6060lbs
Ground Clearance - 6.5"

turning circle	tailgate	min. clearance (rear axle)	overhang front	overhang rear	approach angle	departure angle	curb weight
37.7	54.9	7.7	31.3	46.4	30	21	4500
40.6	57.2	7.5	31.3	43.9			
		6.5					6060
	-54.9	-1.2	-31.3	-46.4	-30	-21	1560

	31" tires	31" tires	235's
Gears:	**4.88**	**12.74**	**3.31**
Tires:	30.35	30.35	28.88
tach	mph	mph	mph
1000	18.50	7.09	25.96
1100	20.35	7.80	28.55
1200	22.20	8.51	31.15
1300	24.05	9.22	33.74
1400	25.90	9.92	36.34
1450	26.83	10.28	37.64
1500	27.75	10.63	38.94
1550	28.68	10.99	40.23
1600	29.60	11.34	41.53
1650	30.53	11.70	42.83
1700	31.45	12.05	44.13
1750	32.38	12.41	45.42
1800	33.30	12.76	46.72
1850	34.23	13.11	48.02
1900	35.15	13.47	49.32
1950	36.08	13.82	50.62
2000	37.00	14.18	51.91
2050	37.93	14.53	53.21
2100	38.85	14.89	54.51
2150	39.78	15.24	55.81
2200	**40.70**	**15.60**	57.11
2250	41.63	15.95	58.40
2300	42.56	16.30	59.70
2350	43.48	16.66	61.00
2400	44.41	17.01	62.30
2450	45.33	17.37	**63.59**
2500	46.26	17.72	64.89
2550	47.18	18.08	66.19
2600	48.11	18.43	67.49
2650	49.03	18.79	68.79
2700	49.96	19.14	70.08
2750	**50.88**	**19.49**	71.38
2800	51.81	19.85	72.68
2850	52.73	20.20	73.98
2900	53.66	20.56	75.28
2950	54.58	20.91	76.57
3000	55.51	21.27	77.87
3050	56.43	21.62	79.17
3100	57.36	21.98	80.47
3150	58.28	22.33	81.76
3200	59.21	22.68	83.06
3250	**60.13**	**23.04**	84.36
3300	61.06	23.39	85.66
3350	61.98	23.75	86.96
3400	62.91	24.10	88.25
3450	63.83	24.46	89.55
3500	64.76	24.81	90.85
3550	65.68	25.17	92.15
3600	66.61	25.52	93.45
3650	67.53	25.87	94.74
3700	68.46	26.23	96.04
3750	69.38	26.58	97.34
3800	70.31	26.94	98.64

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