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NISSAN PATHFINDER

MODEL R51 SERIES

QUICK REFERENCE INDEX

FOREWORD

This manual contains maintenance and repair procedures for the 2006 NISSAN PATHFINDER.

In order to assure your safety and the efficient functioning of the vehicle, this manual should be read thoroughly. It is especially important that the PRECAUTIONS in the GI section be completely understood before starting any repair task.

All information in this manual is based on the latest product information at the time of publication. The right is reserved to make changes in specifications and methods at any time without notice.

IMPORTANT SAFETY NOTICE

The proper performance of service is essential for both the safety of the technician and the efficient functioning of the vehicle.
The service methods in this Service Manual are described in such a manner that the service may be performed safely and accurately.
Service varies with the procedures used, the skills of the technician and the tools and parts available. Accordingly, anyone using service procedures, tools or parts which are not specifically recommended by NISSAN must first be completely satisfied that neither personal safety nor the vehicle's safety will be jeopardized by the service method selected.

NISSAN NORTH AMERICA, INC.
Technical Publications Department
Gardena, California

PLEASE HELP MAKE THIS SERVICE MANUAL BETTER!

Your comments are important to NISSAN and will help us to improve our Service Manuals.

Use this form to report any issues or comments you may have regarding our Service Manuals.

Please print this form and type or write your comments below. Mail or fax to:

Nissan North America, Inc.
Technical Service Information
39001 Sunrise Drive, P.O. Box 9200
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SERVICE MANUAL: Model: _____ **Year:** _____

PUBLICATION NO. (Refer to Quick Reference Index): _____

Please describe any Service Manual issues or problems in detail:

Page number(s) _____ *Note: Please include a copy of each page, marked with your comments.*

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Are the trouble diagnosis procedures logical and easy to use? (circle your answer) YES NO

If no, what page number(s)?_____*Note: Please include a copy of each page, marked with your comments.*

Please describe the issue or problem in detail: _____

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Is the organization of the manual clear and easy to follow? (circle your answer) YES NO

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What information should be included in NISSAN Service Manuals to better support you in servicing or repairing customer vehicles?

_____

_____

_____

_____

DATE: _____ YOUR NAME: _____ POSITION: _____

DEALER: _____ DEALER NO.: _____ ADDRESS: _____

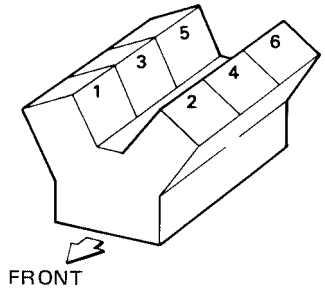
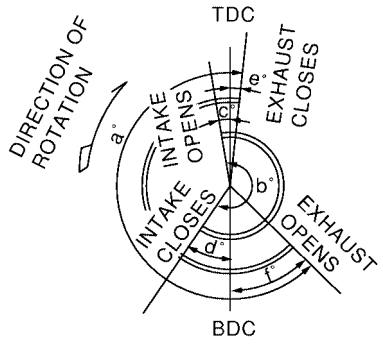
CITY:_____ STATE/PROV./COUNTRY: _____ ZIP/POSTAL CODE: _____

QUICK REFERENCE CHART: PATHFINDER

PFP:00000

Engine Tune-Up Data

ELS000YK

Cylinder arrangement		V-6
Displacement		3,954 cm^3 (241.30 in^3)
Bore and stroke		95.5 × 92.0 mm (3.76 × 3.622 in)
Valve arrangement		DOHC
Firing order		1-2-3-4-5-6
Number of piston rings	Compression	2
	Oil	1
Number of main bearings		4
Compression ratio		9.7:1
Compression pressure	Standard	1,275 kPa (13.0 kg/cm^2 , 185 psi)/300 rpm
	Minimum	981 kPa (10.0 kg/cm^2 , 142 psi)/300 rpm
	Differential limit between cylinders	98 kPa (1.0 kg/cm^2 , 14 psi)/300 rpm
Cylinder number		 SEM713A
Valve timing (Intake valve timing control - “OFF”)		 PBIC0187E

Unit: degree

a	b	c	d	e	f
244°	240°	–4°	64°	6°	58°

QUICK REFERENCE CHART: PATHFINDER

2006

Drive Belt Deflection and Tension

Tension of drive belts	Auto adjustment by auto tensioner

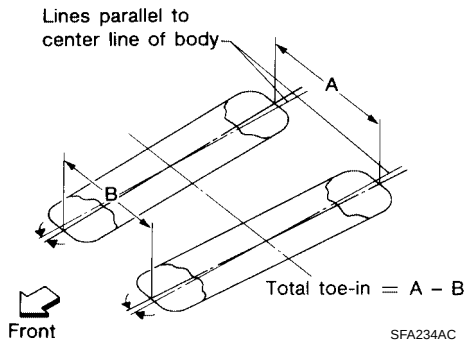
Spark Plugs (Double Platinum Tipped)

Make	NGK
Standard type	PLFR5A-11
Hot type	PLFR4A-11
Cold type	PLFR6A-11
Gap (nominal)	1.1 mm (0.043 in)

Front Wheel Alignment (Unladen*1)*6

ELS00112

Drive type		2WD	4WD
Camber Degree minute (decimal degree)	Minimum	-0° 30′ (-0.50°)	-0° 15′ (-0.25°)
	Nominal	0° 15′ (0.25°)	0° 30′ (0.50°)
	Maximum	1° 00′ (1.00°)	1° 15′ (1.25°)
	Cross camber	0° 45′ (0.75°) or less	0° 45′ (0.75°) or less
Caster Degree minute (decimal degree)	Minimum	2° 15′ (2.25°)	2° 00′ (2.00°)
	Nominal	3° 0′ (3.00°)	2° 45′ (2.75°)
	Maximum	3° 45′ (3.75°)	3° 30′ (3.50°)
	Cross caster	0° 45′ (0.75°) or less	0° 45′ (0.75°) or less
Kingpin inclination Degree minute (decimal degree)	Nominal	13° 0′ (13.00°)	12° 45′ (12.75°)



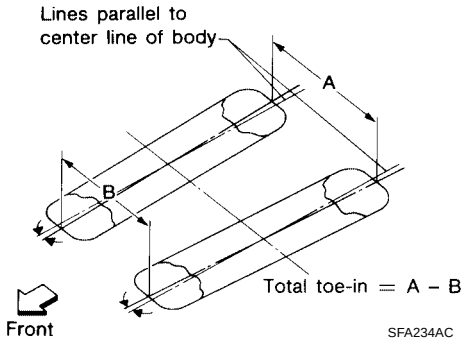
Total toe-in	Distance (A – B)	Minimum	2.1 mm (0.08 in)	2.1 mm (0.08 in)
		Nominal	3.1 mm (0.12 in)	3.1 mm (0.12 in)
		Maximum	4.1 mm (0.16 in)	4.1 mm (0.16 in)
	Angle (left wheel or right wheel) Degree minute (decimal degree)	Minimum	0° 5′ (0.08°)	0° 5′ (0.08°)
		Nominal	0° 7′ (0.12°)	0° 7′ (0.12°)
		Maximum	0° 9′ (0.15°)	0° 9′ (0.15°)
Wheel turning angle (full turn)	Inside Degree minute (decimal degree)		33° 26′ – 35° 26′ *2 (33.43° – 35.43°)	33° 33′ – 35° 33′ *4 (33.60° – 35.60°)
	Outside Degree minute (decimal degree)		29° 22′ – 31° 22′ *3 (29.37° – 31.37°)	29° 38′ – 31° 38′ *5 (29.73° – 31.73°)

*1: Fuel, radiator coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.
*2: Target value 35° 26′ (35.43°)
*3: Target value 31° 22′ (31.37°)
*4: Target value 35° 33′ (35.55°)
*5: Target value 31° 38′ (31.63°)
*6: Some vehicles may be equipped with straight (non-adjustable) lower link bolts and washers. In order to adjust camber and caster on these vehicles, first replace the lower link bolts and washers with adjustable (cam) bolts and washers.

Rear Wheel Alignment (Unladen*[1])

ELS000ZS

Camber Degree minute (decimal degree)	Minimum	- 0° 32′ (- 0.53°)
	Nominal	- 0° 2′ (- 0.03°)
	Maximum	0° 28′ (0.47°)



Total toe-in	Distance (A - B)	Minimum	- 1.4 mm (- 0.055 in)
		Nominal	1.9 mm (0.075 in)
		Maximum	5.2 mm (0.205 in)
		Cross toe	0 ± 2 mm (0 ± 0.079 in)
	Angle (left, right) Degree minute (decimal degree)	Minimum	- 0° 3' (-0.05°)
		Nominal	0° 4' (0.07°)
		Maximum	0° 11' (0.18°)

Brake

ELS000ZT

Unit: mm (in)

Front brake	Brake model	CLZ33VB
	Rotor outer diameter × thickness	296 × 28 (11.654 × 1.102)
	Pad Length × width × thickness	111.0 × 73.5 × 10.0 (4.73 × 2.894 × 0.394)
	Cylinder bore diameter	46.4 (1.83)
Rear brake	Brake model	CLZ14VB
	Rotor outer diameter × thickness	308 × 18 (12.126 × 0.709)
	Pad Length × width × thickness	83.0 × 33.0 × 11.0 (3.268 × 1.299 × 0.433)
	Cylinder bore diameter	38.1 (1.50)
Control valve	Valve model	Electric brake force distribution
Brake booster	Booster model	C215T
	Diaphragm diameter	215 (8.46)
Recommended brake fluid		Genuine NISSAN Super Heavy Duty Brake Fluid or equivalent DOT 3 (US FMVSS No. 116)

Disc Brake - Repair Limits

ELS001O4

FRONT DISC BRAKE

Unit: mm (in)

Brake model		CLZ33VB
Brake pad	Standard thickness (new)	10.0 (0.394)
	Repair limit thickness	2.0 (0.079)
Disc rotor	Standard thickness (new)	28.0 (1.102)
	Repair limit thickness	26.0 (1.024)
	Maximum uneven wear (measured at 8 positions)	0.015 (0.0006)
	Runout limit (with it attached to the vehicle)	0.05 (0.0020)

REAR DISC BRAKE

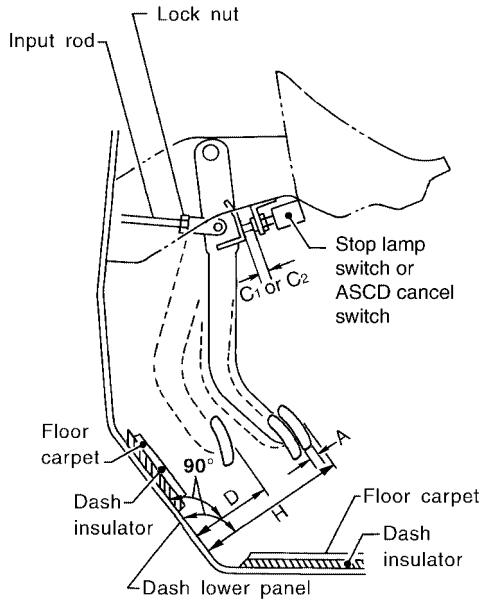
Unit: mm (in)

Brake model		CLZ14VB
Brake pad	Standard thickness (new)	11.0 (0.433)
	Repair limit thickness	2.0 (0.079)
Disc rotor	Standard thickness (new)	18.0 (0.709)
	Repair limit thickness	16.0 (0.630)
	Maximum uneven wear (measured at 8 positions)	0.015 (0.0006)
	Runout limit (with it attached to the vehicle)	0.07 (0.0028)

Brake Pedal

ELS000ZV

Unit: mm (in)



WFIA0160E

Free height "H"	182.1 - 192.1 (7.17 - 7.56)
Depressed pedal height ("D" [under a force of 490 N (50 kg, 110 lb) with engine running]	105 - 115 (4.13 - 4.53)
Clearance between pedal stopper and threaded end of stop lamp switch and ASCD switch "C_1 " or "C_2 "	0.74 - 1.96 (0.029 - 0.077)
Pedal play "A"	3 - 11 (0.12 - 0.43)

QUICK REFERENCE CHART: PATHFINDER

2006

Refill Capacities

ELS000YO

Description		Capacity (Approximate)		
		Metric	US measure	Imp measure
Fuel		80 ℓ	21 1/8 gal	17 5/8 gal
Engine oil Drain and refill	With oil filter change	5.1 ℓ	5 3/8 qt	4 1/2 qt
	Without oil filter change	4.8 ℓ	5 1/8 qt	4 1/4 qt
Dry engine (engine overhaul)		6.3 ℓ	6 5/8 qt	5 1/2 qt
Cooling system (with reservoir at MAX level)	Without rear A/C	10.2 ℓ	2 3/4 gal	2 1/4 gal
	With rear A/C	13.4 ℓ	3 1/2 gal	3 gal
Automatic transmission fluid (ATF)		10.3 ℓ	10 7/8 qt	9 1/8 qt
Rear final drive oil		1.4 ℓ	3 pt	2 1/2 pt
Transfer fluid	ATX14B	3.0 ℓ	3 1/8 qt	2 5/8 qt
	TX15B	2.0 ℓ	2 1/8 qt	1 3/4 qt
Front final drive oil		0.85 ℓ	1 3/4 pt	1 1/2 pt
Power steering fluid (PSF)		1.0 ℓ	2 1/8 pt	1 3/4 pt
Windshield washer fluid		4.5 ℓ	1 1/4 gal	1 gal
A/C system refrigerant	Without rear A/C	0.70 ± 0.05 kg	1.54 ± 0.11 lb	1.54 ± 0.11 lb
	With rear A/C	0.85 ± 0.05 kg	1.87 ± 0.11 lb	1.87 ± 0.11 lb
A/C system oil	Without rear A/C	180 mℓ	6.1 fl oz	6.3 fl oz
	With rear A/C	210 mℓ	7.1 fl oz	7.4 fl oz