A GENERAL INFORMATION		
	GI General Information	
B ENGINE	EM Engine Mechanical	
	LU Engine Lubrication System	
	CO Engine Cooling System	
	EC Engine Control System	
	FL Fuel System	
	EX Exhaust System	
	ACC Accelerator Control System	
C TRANSMISSION/	CL Clutch	
TRANSAXLE	MT Manual Transmission	
	AT Automatic Transmission	
D DRIVELINE/AXLE	TF Transfer	
	PR Propeller Shaft	
	FFD Front Final Drive	
	RFD Rear Final Drive	
	FAX Front Axle	
	RAX Rear Axle	
E SUSPENSION	FSU Front Suspension	
	RSU Rear Suspension	
	WT Road Wheels & Tires	
F BRAKES	BR Brake System	
	PB Parking Brake System	
	BRC Brake Control System	
G STEERING	PS Power Steering System	
H RESTRAINTS	SB Seat Belts	
	SRS Supplemental Restraint System (SRS)	
I BODY	BL Body, Lock & Security System	
	GW Glasses, Window System & Mirrors	
	El Exterior & Interior	
	IP Instrument Panel	
	SE Seat	
J AIR CONDITIONER	MTC Manual Air Conditioner	
K ELECTRICAL	SC Starting & Charging System	
	LT Lighting System	
	DI Driver Information System	
	WW Wiper, Washer & Horn	
	BCS Body Control System	
	LAN LAN System	
	AV Audio Visual & Telephone System	
	ACS Auto Cruise Control System	
	PG Power Supply, Ground & Circuit Elements	
L MAINTENANCE	MA Maintenance	
M INDEX	IDX Alphabetical Index	
	 C TRANSMISSION/ TRANSAXLE D DRIVELINE/AXLE E SUSPENSION F BRAKES G STEERING H RESTRAINTS I BODY J AIR CONDITIONER K ELECTRICAL L MAINTENANCE 	LUEngine Lubrication SystemCOEngine Cooling SystemECEngine Control SystemFLFuel SystemACCAccelerator Control SystemACCAccelerator Control SystemCTRANSMISSION/ TRANSAXLEMTManual TransmissionDDRIVELINE/AXLEPRPropeller ShaftFFDFront Final DriveFAXFront Final DriveFAXFront AxleRSURear Final DriveFAXFront AxleRSURear SuspensionWTRoad Wheels & TiresFBRAKESBRBrake SystemBCStretering SystemGSTEERINGHRESTRAINTSSBSeat BeltsSRSSupplemental Restraint System (SRS)IBODYBLBody, Lock & Security SystemGWGlasses, Window System & MirrorsEExterior & InteriorIPInstrument PanelSESeatJAIR CONDITIONERKELECTRICALLMTCMAUIO Visual & Telephone SystemGVGlasses, Window SystemMWWiper, Washer & HornBCSBody Control SystemAUIO Visual & Telephone SystemAUIO Visual & Charging SystemLMAINTENANCEMA Maintenance

© 2006 NISSAN NORTH AMERICA, INC.

All rights reserved. No part of this Service Manual may be reproduced or stored in a retrieval system, or transmitted in any form, or by any means, electronic, mechanical, photo-copying, recording or otherwise, without the prior written permission of Nissan North America, Inc.

FOREWORD

This manual contains maintenance and repair procedures for the 2007 NISSAN Xterra.

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

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 Manua	ls.
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 Farmington Hills, MI USA 48331	
FAX: (248) 488-3910	
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 ca	ommonte
rage number(s) Note. Flease include a copy of each page, marked with your cl	Jiiiiieiiis.
Are the trouble diagnosis presedures legical and easy to use? (sincle your ensurer)	
Are the trouble diagnosis procedures logical and easy to use? (circle your answer) YES If no, what page number(s)?	
Please describe the issue or problem in detail:	
Is the organization of the manual clear and easy to follow? (circle your answer) YES	NO
Please comment:	
What information should be included in NISSAN Service Manuals to better support you in ser	vicing or
repairing customer vehicles?	
DATE: YOUR NAME: POSITION:	
DEALER: DEALER NO.: ADDRESS:	
CITY: STATE/PROV./COUNTRY: ZIP/POSTAL CODE:	

QUICK REFERENCE CHART: XTERRA Engine Tune-Up Data

PFP:00000

ELS0029V

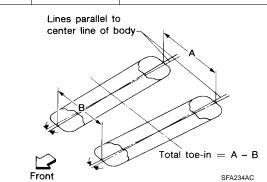
Cylinder arrangemen	ıt			V	-6
Displacement				3,954 cm ³ (241.30 in ³)	
Bore and stroke				95.5 × 92.0 mm	$(3.76 \times 3.622 \text{ in})$
Valve arrangement				DOHC	
Firing order				1-2-3	-4-5-6
Number of piston ring	ns	Compression 2			2
-	-	Oil		1	
Number of main bear	rings				4
Compression ratio					7:1
- ·		Standard			/cm ² , 185 psi) / 300 om
Compression pressu	re	Minimum		981 kPa (10.0 kg/cm	² , 142 psi) / 300 rpm
		Differential limit betw	een cylinders	98 kPa (1.0 kg/cm ²	² , 14 psi) / 300 rpm
			FRONT	SEM713A	
Valve timing (Intake valve timing c	xontrol - "OFF")		POTATION OF POTATION OF POTATION OF POSE INTAKE	Solution of the Coses	
	xontrol - "OFF")		POTATION OF POTATION OF POTATION OF PUTAKE	Solution of the Coses	
	control - "OFF")	C	POTATION OF POTATION OF POTATION OF POSE INTAKE	Solution of the Coses	Unit: degree

Drive Belt Deflection and Tension Tension of drive belt Auto adjustment by auto-tensioner Spark Plugs (Double Platinum Tipped) Make NGK Standard type PLFR5A-11 Gap (nominal) 1.1 mm (0.043 in)

Wheel Alignment (Unladen*1)*6

ELS0029W

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



Total toe-in	Distance (A – B)		Minimum	3.0 mm (0.12 in)	3.0 mm (0.12 in)
			Nominal	4.0 mm (0.16 in)	4.0 mm (0.16 in)
			Maximum	5.0 mm (0.20 in)	5.0 mm (0.20 in)
				0° 7′ (0.12°)	0° 7′ (0.12°)
	Angle (left wheel or right wheel) Degree minute (decimal degree)		Nominal	0° 9′ (0.15°)	0° 9′ (0.15°)
			Maximum	0° 11′ (0.18°)	0° 11′ (0.18°)
Wheel turning angle (full turn) Outside		Inside Degree minute (De	cimal degree)	33° 27′ – 35° 27′ * ² (33.45° – 35.45°)	33° 41′ – 35° 41′ * ⁴ (33.68° – 35.68°)
		Outside Degree minute (Decimal degree)		29° 25′ – 31° 25′ * ³ (29.42° – 31.42°)	29° 57′ – 31° 57′ * ⁵ (29.95° – 31.95°)

*1: Fuel, radiator coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.

*2: Target value 35° 27' (35.45°)

*3: Target value 31° 25' (31.42°)

*4: Target value 35° 41' (35.68°)

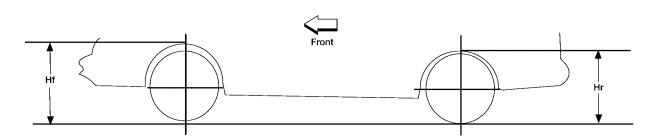
*5: Target value 31° 57' (31.95°)

*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.

Wheelarch Height (Unladen*¹)

EESOO1SE Unit: mm (in)

LEIA0085E



Engine type			VQ40DE		
Drive type	2V	VD		4WD	
Applied models	X and S	SE	X and S	O/R	SE
Tire size	265/70R16	265/65R17	265/70R16	265/75R16	265/65R17
Front wheelarch height (Hf)	839 (33.03)	841 (33.11)	858 (33.78)	870 (34.25)	859 (33.82)
Rear wheelarch height (Hr)	872 (34.33)	872 (34.33)	892 (35.12)	904 (35.59)	892 (35.12)

*1: Fuel, radiator coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.

Brake

ELS0029X 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 × 11.88 (4.73 × 2.894 × 0.468)	
	Cylinder bore diameter	51 (2.01)	
Rear brake	Brake model	CLZ14VB	
	Rotor outer diameter × thickness	286 × 18.0 (11.260 × 0.709)	
	Pad Length \times width \times 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 FRONT DISC BRAKE

	-	Unit: mm (in)
Brake model		CLZ33VB
Brake pad	Standard thickness (new)	11.88 (0.468)
Блаке раб	Repair limit thickness	2.0 (0.079)
	Standard thickness (new)	28.0 (1.102)
Disc rotor	Repair limit thickness	26.0 (1.024)
DISC TOLOI	Maximum uneven wear (measured at 8 positions)	0.015 (0.0006)
	Runout limit (with it attached to the vehicle)	0.05 (0.0020)

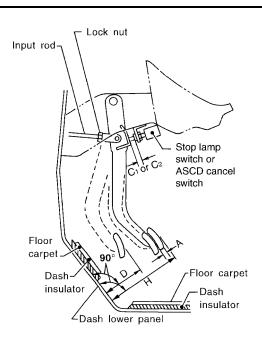
ELS0029Y

Brake model		CLZ14VB
Brake pad Standard thickness (new) Repair limit thickness		11.0 mm (0.433 in)
		2.0 mm (0.079 in)
Disc rotor	Standard thickness (new)	18.0 mm (0.709 in)
	Repair limit thickness	16.0 mm (0.630 in)
	Maximum uneven wear (measured at 8 positions)	0.015 mm (0.0006 in)
Runout limit (with it attached to the vehicle)		0.05 mm (0.0020 in)

Brake Pedal

EL\$0029Z

Unit: mm (in)



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 "C1 $$ " or "C2 $$ "	0.74 - 1.96 (0.029 - 0.077)
Pedal play "A"	3 - 11 (0.12 - 0.43)

Refill Capacities

ELS002A0

Description		Capacity (Approximate)			
		Metric	US measure	Imp measure	
		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	10.2 <i>l</i>	2 3/4 gal	2 1/4 gal	
Automatic transmission fluid (ATF)		10.3 l	10 7/8 qt	9 1/8 qt	
Manual transmission fluid (MTF) (6 M/T model)	2WD	3.98 l	8 3/8 pt	7 pt	
	4WD	4.18 l	8 7/8 pt	7 3/8 pt	

Description		Capacity (Approximate)			
		Metric	US measure	Imp measure	
Rear final drive oil	C200		1.6 <i>l</i>	3 3/8 pt	2 7/8 pt
	M226		2.01 l	4 1/4 pt	3 1/2 pt
Transfer fluid	TX15B		2.0 l	2 1/8 qt	1 3/4 qt
Front final drive oil		0.85 <i>l</i>	1 3/4 pt	1 1/2 pt	
Power steering fluid (PSF)		1.0 <i>l</i>	2 1/8 pt	1 3/4 pt	
Windshield washer fluid		4.5 ℓ	1 1/4 gal	1 gal	
A/C system refrigerant		$0.70\pm0.05~\text{kg}$	$1.54\pm0.11~\text{lb}$	$1.54\pm0.11~\text{lb}$	
A/C system lubricant		180 m ℓ	6.1 fl oz	6.3 fl oz	