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NISSAN XTERRA

MODEL N50 SERIES

QUICK REFERENCE INDEX

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GI General Information
EM Engine Mechanical
LU Engine Lubrication System
CO Engine Cooling System
EC Engine Control System
FL Fuel System
EX Exhaust System
STR Starting System
ACC Accelerator Control System
HBC Hybrid Control System
HBB Hybrid Battery System
CL Clutch
TM Transaxle & Transmission
DLN Driveline
FAX Front Axle
RAX Rear Axle
FSU Front Suspension
RSU Rear Suspension
SCS Suspension Control System
WT Road Wheels & Tires
BR Brake System
PB Parking Brake System
BRC Brake Control System
ST Steering System
STC Steering Control System
SB Seat Belt
SBC Seat Belt Control System
SR SRS Airbag
SRC SRS Airbag Control System
VTL Ventilation System
HA Heater & Air Conditioning System
HAC Heater & Air Conditioning Control System
INT Interior
IP Instrument Panel
SE Seat
ADP Autodrive Positioner System
AP Adjustable Pedals
DLK Door & Lock
SEC Security Control System
GW Glass & Window System
PWC Power Window Control System
RF Roof
EXT Exterior
BRM Body Repair Manual
MIR Mirrors
EXL Exterior Lighting System
INL Interior Lighting System
WW Wiper & Washer
DEF Defogger
HRN Horn
PWO Power Outlet
BCS Body Control System
LAN LAN System
PCS Power Control System
CHG Charging System
PG Power Supply, Ground & Circuit Elements
MWI Meter, Warning Lamp & Indicator
WCS Warning Chime System
SN Sonar System
AV Audio, Visual & Navigation System
CCS Cruise Control System
MA Maintenance

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FOREWORD

This manual contains maintenance and repair procedure for the 2010 NISSAN XTERRA GCC.

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.



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Technical Publications Department



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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:

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

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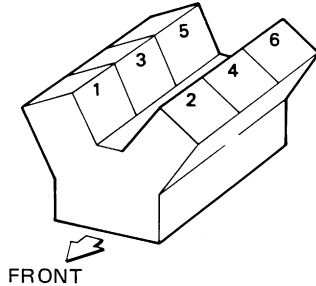
QUICK REFERENCE CHART: XTERRA GCC

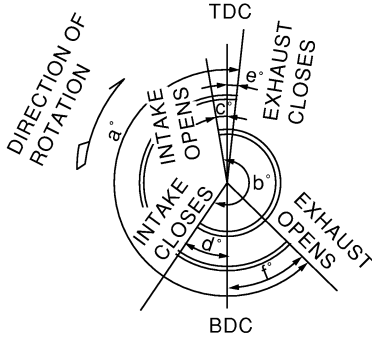
Engine Tune-up Data

INFOID:000000005806122

GENERAL SPECIFICATIONS

Cylinder arrangement		V-6
Displacement $\text{cm}^3(\text{cu in})$		3,954 (241.30)
Bore and stroke mm (in)		95.5×92.0 (3.76×3.622)
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
Compression pressure $\text{kPa (kg/cm}^2, \text{psi)/300 rpm}$	Standard	1,275 (13.0, 185)
	Minimum	981 (10.0, 142)
	Differential limit between cylinders	98 (1.0, 14)

Cylinder number	 SEM713A
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Valve timing (Intake valve timing control - "OFF")	 PBIC0187E
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Unit: degree

a	b	c	d	e	f
244	240	-4	64	6	58

DRIVE BELT

Tension of drive belts	Auto adjustment by auto tensioner
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SPARK PLUG

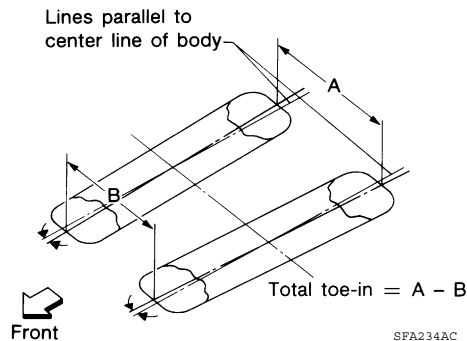
Make	NGK
Standard type*	PLFR5A-11
Gap (nominal)	1.1 mm (0.043 in)

*: Always check with the Parts Department for the latest parts information

Front Wheel Alignment (Unladen*1)

INFOID:000000005806121

Camber *4 Degree minute (decimal degree)	Minimum	-0° 15' (-0.25°)
	Nominal	0° 30' (0.50°)
	Maximum	1° 15' (1.25°)
	Cross camber	0° 45' (0.75°) or less
Caster *4 Degree minute (decimal degree)	Minimum	2° 0' (2.00°)
	Nominal	2° 45' (2.75°)
	Maximum	3° 30' (3.50°)
	Cross caster	0° 45' (0.75°) or less
Kingpin inclination Degree minute (decimal degree)	Nominal	12° 45' (12.75°)



Total toe-in	Distance (A - B)	Minimum	2.1 mm (0.08 in)
		Nominal	3.1 mm (0.12 in)
		Maximum	4.1 mm (0.16 in)
	Angle (left wheel or right wheel) Degree minute (decimal degree)	Minimum	0° 5' (0.08°)
		Nominal	0° 7' (0.12°)
		Maximum	0° 09' (0.15°)
Wheel turning angle (full turn)	Inside Degree minute (Decimal degree)		33° 40' - 35° 40' *2 (33.67° - 35.67°)
	Outside Degree minute (Decimal degree)		29° 54' - 31° 54' *3 (29.90° - 31.90°)

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

*2: Target value 35° 40' (35.67°)

*3: Target value 31° 54' (31.90°)

*4: 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.

General Specification (Rear)

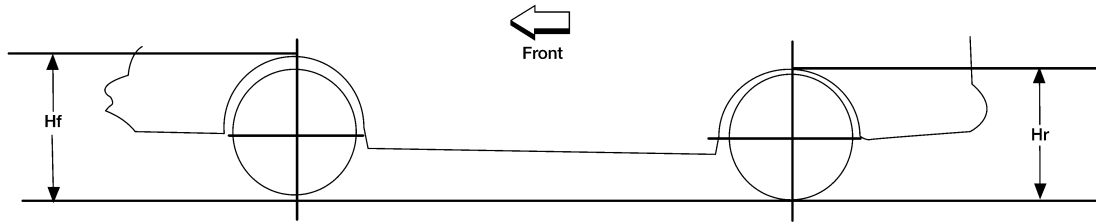
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Suspension type	Rigid axle with semi-elliptic leaf springs
Shock absorber type	Double-acting hydraulic

Wheelarch Height (Unladen*¹)

INFOID:000000005806120

Unit: mm (in)



LEIA0085E

Tire size	P265/70R16	P265/76R16	P265/65R17
Front wheelarch height (Hf)	858 (33.78)	870 (34.25)	859 (33.82)
Rear wheelarch height (Hr)	892 (35.12)	904 (34.59)	892 (35.12)

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

Brake Specifications

INFOID:000000005806117

Unit: mm (in)

Front brake	Brake model	CLZ33VB
	Rotor outer diameter × thickness	296 × 28 (11.654 × 1.102)
	Pad Length × width × thickness	140 × 50.5 × 10.0 (5.512 × 1.988 × 0.394)
	Cylinder bore diameter (each)	46.4 (1.83)
Rear brake	Brake model	CLZ14VA
	Rotor outer diameter × thickness	286 × 18.0 (11.260 × 0.709)
	Pad Length × width × thickness	87.6 × 34 × 11.0 (3.449 × 1.339 × 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 (8.465)

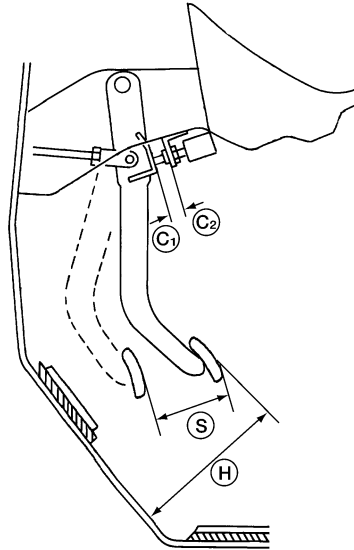
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Brake Pedal

INFOID:000000005806118

Unit: mm (in)



AWFIA0557ZZ

Pedal free height (H)	M/T	174.7 (6.88)
	A/T	182.1 (7.17)
Pedal full stroke (S)		153 (6.02)
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)

Front Disc Brake

INFOID:000000005806115

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

INFOID:000000005806116

Brake model		CLZ14VA
Brake pad	Standard thickness (new)	11.0 mm (0.433 in)
	Repair limit thickness	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)

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Fluids and Lubricants

INFOID:000000005806114

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)		10.2 ℓ	10 3/4 qt	9 qt
Manual transmission gear oil		4.18 ℓ	4 3/8 qt	3 5/8 qt
Automatic transmission fluid (ATF)		10.3 ℓ	10 7/8 qt	9 1/8 qt
Rear final drive oil	C200	1.6 ℓ	3 3/8 pt	2 7/8 pt
	M226	2.01 ℓ	4 1/4 pt	3 1/2 pt
Transfer fluid		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
Brake and clutch fluid		—	—	—
Multi-purpose grease		—	—	—
Brake grease		—	—	—
A/C system refrigerant		0.70 ± 0.05 kg	1.54 ± 0.11 lb	1.54 ± 0.11 lb
A/C system oil		180 m ℓ	6.1 fl oz	6.3 fl oz