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NISSAN
MURANO
MODEL Z50 SERIES

QUICK REFERENCE INDEX

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	
	CVT CVT	
C TRANSMISSION/ TRANSAXLE		
D DRIVELINE/AXLE	TF Transfer	
	PR Propeller Shaft	
	RFD Rear Final Drive	
	FAX Front Axle	
	RAX Rear Axle	
	FSU Front Suspension	
E SUSPENSION	RSU Rear Suspension	
	WT Road Wheels & Tires	
	BR Brake System	
F BRAKES	PB Parking Brake System	
	BRC Brake Control System	
	PS Power Steering System	
G STEERING		
H RESTRAINTS	SB Seat Belts	
	SRS Supplemental Restraint System (SRS)	
I BODY	BL Body, Lock & Security System	
	GW Glasses, Window System & Mirrors	
	RF Roof	
	EI Exterior & Interior	
	IP Instrument Panel	
	SE Seat	
	AP Adjustable Pedal	
	ATC Automatic Air Conditioner	
J 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, Navigation & Telephone System	
	ACS Auto Cruise Control System	
	PG Power Supply, Ground & Circuit Elements	
	L MAINTENANCE	MA Maintenance
	M INDEX	IDX Alphabetical Index

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FOREWORD

This manual contains maintenance and repair procedure for the 2006 NISSAN MURANO.

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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QUICK REFERENCE CHART MURANO
ENGINE TUNE-UP DATA (VQ35DE)

PFP:00000

ELS0003W

Engine model		VQ35DE				
Firing order		1-2-3-4-5-6				
Idle speed CVT (In "P" or "N" position)	rpm	650 ± 50				
Ignition timing (BTDC at idle speed) CVT (In "P" or "N" position)		15° ± 5°				
CO% at idle		0.7 - 9.9 % and engine runs smoothly				
Drive Belt	Deflection adjustment		Unit: mm (in)	Tension adjustment		Unit: N (kg, lb)
	Used belt		New belt	Used belt		New belt
	Limit	After adjustment		Limit	After adjustment	
Alternator and A/C compressor belt	7 (0.28)	4.2 - 4.6 (0.17 - 0.18)	3.7 - 4.1 (0.15 - 0.16)	294 (30, 66)	730 - 818 (74.5 - 83.5, 164 - 184)	838 - 926 (85.5 - 94.5, 188 - 208)
Power steering oil pump belt	11 (0.43)	7.3 - 8 (0.29 - 0.30)	6.5 - 7.2 (0.26 - 0.28)	196 (20, 44)	495 - 583 (50.5 - 59.5, 111 - 131)	603 - 691 (61.5 - 70.5, 135.6 - 155.4)
Applied pushing force	98N (10kg, 22lb)			—		
Radiator cap relief pressure		kPa (kg/cm ² , psi)				
Standard				78 - 98 (0.8 - 1.0, 11 - 14)		
Limit				59 (0.6, 9)		
Cooling system leakage testing pressure	kPa (kg/cm ² , psi)		157 (1.6, 23)			
Compression pressure		kPa (kg/cm ² , psi)/rpm				
Standard				1,275 (13.0, 185)/300		
Minimum				981 (10.0, 142)/300		
Spark plug	Make		NGK			
	Standard type		PLFR5A-11			
	Hot type		PLFR4A-11			
	Cold type		PLFR6A-11			
	Gap (Nominal)	mm (in)	1.1 (0.043)			

FRONT WHEEL ALIGNMENT (Unladen*)

ELS0003X

Axle			2DW	AWD
Camber	Degree minute (Decimal degree)	Minimum	- 1° 05' (- 1.08°)	
		Nominal	- 0° 20' (- 0.33°)	
		Maximum	0° 25' (0.41°)	
		Left and right difference	45' (0.75°) or less	
Caster	Degree minute (Decimal degree)	Minimum	1° 45' (1.75°)	1° 50' (1.83°)
		Nominal	2° 30' (2.50°)	2° 35' (2.58°)
		Maximum	3° 15' (3.25°)	3° 20' (3.33°)
		Left and right difference	45' (0.75°) or less	
Kingpin inclination	Degree minute (Decimal degree)	Minimum	13° 35' (13.58°)	
		Nominal	14° 20' (14.33°)	
		Maximum	15° 05' (15.08°)	
Total toe-in	Distance (A – B)	Minimum	- 0.5 mm (- 0.02 in)	
		Nominal	0.5 mm (0.02 in)	
		Maximum	1.5 mm (0.06 in)	
	Angle (left plus right)	Minimum	- 1' (- 0.02°)	
		Nominal	1' (0.02°)	
		Maximum	3' (0.05°)	
Wheel turning angle (Full turn)	Inside	Minimum	34° 30' (34.5°)	
		Nominal	38° 00' (38.0°)	
		Maximum	39° 00' (39.0°)	
	Outside	Nominal	31° 30' (31.5°)	

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

REAR WHEEL ALIGNMENT (Unladen*)

ELS0003Y

Camber	Degree minute (Decimal degree)	Minimum	- 1° 16' (- 1.27°)	
		Nominal	- 0° 46' (- 0.77°)	
		Maximum	- 0° 16' (- 0.27°)	
Total toe-in	Distance (A – B)	Minimum	1.4 mm (0.055 in)	
		Nominal	3.2 mm (0.126 in)	
		Maximum	5.0 mm (0.197 in)	
	Angle (left plus right)	Minimum	3' (0.05°)	
		Nominal	7' (0.12°)	
		Maximum	11' (0.18°)	

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

QUICK REFERENCE CHART MURANO

2006

BRAKE

ELS0003Z

Front brake	Pad wear limit	2.0 (0.079)
	Rotor repair limit	26.0 mm (1.024 in)
Rear brake	Pad wear limit	2.0 mm (0.079 in)
	Rotor repair limit	14.0 mm (0.551 in)
Pedal free height		199.5 - 209.5 mm (7.85 - 8.25 in)
Pedal depressed height*		120 mm (4.72 in)

* : Under force of 490 N(50 kg, 110 lb) with engine running.

REFILL CAPACITIES

ELS00040

UNIT		Liter	US measure
Fuel tank		82	21-5/8 gal
Coolant (With reservoir tank at "MAX" level)		9.2	9-3/4 qt
Engine	Drain and refill		
	With oil filter change	4.0	4-1/4 qt
	Without oil filter change	3.7	3-7/8 qt
	Dry engine (Overhaul)	5.0	5-1/4 qt
Transmission	CVT	10.2	10-6/8 qt
Transfer		0.31	5/8 pt
Differential carrier		0.55	1-1/8 pt
Power steering system		1.0	1-1/8 qt
Air conditioning system	Compressor oil	0.15	5.03 fl oz
	Refrigerant	0.525 kg	1.16 lb