- W	QUICK REFERENCE INDEX	
Edition: July 2006 Revision: July 2006	A GENERAL INFORMATION	Gl General Information
Publication No. SM7E-1Z50U0	B ENGINE	EM Engine Mechanical
Tublication No. CM72 125000	B ENGINE	LU Engine Lubrication System
		CO Engine Cooling System
		EC Engine Control System
		FL Fuel System
		EX Exhaust System
		ACC Accelerator Control System
	C TRANSMISSION/	CVT CVT
	TRANSAXLE	
	D DRIVELINE/AXLE	TF Transfer
		PR Propeller Shaft
		RFD Rear Final Drive
NISSAN		FAX Front Axle
		RAX Rear Axle
MURANO	E SUSPENSION	FSU Front Suspension
MODEL Z50 SERIES		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 & Mir- rors
		RF Roof
		El Exterior & Interior
		IP Instrument Panel
		SE Seat
		AP Adjustable Pedal
	J AIR CONDITIONER	ATC Automatic Air Conditioner
	K ELECTRICAL	SC Starting & Charging System
	R LLLCTRICAL	LT Lighting System
		DI Driver Information System
		WW Wiper, Washer & Horn
		BCS Body Control System
		LAN LAN System
		AV Audio Visual, Navigation & Tele-
		phone 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 2007 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.

NISSAN MOTOR CO., LTD.

### **QUICK REFERENCE CHART MURANO**

# 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 rpm CVT (In "P" or "N" position)		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			
	Deflection adjustment		Unit: mm (in)	Tension adjust	Unit: N (kg, lb)	
Drive Belt	Used belt			Used belt		
	Limit	After adjustment	New belt	Limit	After adjustment	New belt
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)			_	I
Radiater cap relief pressu	ıre	kPa (kg/cm² , psi)				
Standard		78 - 98 (0.8 - 1.0, 11 - 14)				
	Limit			59	(0.6, 9)	
Cooling system leakage testing pressure kPa (kg/cm², psi)		157 (1.6, 23)				
Compression pressure		kPa (kg/cm <sup>2</sup> , 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		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		
			1° 45′ (1.75°)	1° 50′ (1.83°)	
Caster		Nominal	2° 30′ (2.50°)	2° 35′ (2.58°)	
Degree minute (Decimal degree)		Maximum	3° 15′ (3.25°)	3° 20′ (3.33°)	
			45' (0.75°) or less		
Kingpin inclination Degree minute (Decimal degree)		Minimum	13° 35′ (13.58°)		
		Nominal	14° 20′ (14.33°)		
Degree minute (Decim	Degree minute (Decimal degree)		15° 05′ (15.08°)		
	Distance	Minimum	-0.5 mm (-0.02 in)		
		Nominal	0.5 mm (0.02 in)		
Total toe-in		Maximum	1.5 mm (0.06 in)		
		Minimum	-1' (-0.02°)		
	Angle (left wheel or right wheel)  Degree minute (Decimal degree)	Nominal	1′ (0.02°)		
	Degree minute (Decimal degree)	Maximum	3′ (0.05°)		
	Inside	MInimum	34° 30′ (34.5°)		
Wheel turning angle (Full turn)	Degree minute (Decimal degree)	Nominal	38° 00′ (38.0°)		
		Maximum	39° 00′ (39.0°)		
(i dii tuiri)	Outside	N	31° 30′ (31.5°)		
	Degree minute (Decimal degree)	Nominal			

<sup>\*:</sup> Fuel, engine coolant and lubricant are oil full. Spare tire, jack, hand tools and mats are 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	Minimum	1.4 mm (0.055 in)
		Nominal	3.2 mm (0.126 in)
		Maximum	5.0 mm (0.197 in)
	Angle (left wheel or right wheel) Degree minute (Decimal degree)	Minimum	3′ (0.05°)
		Nominal	7′ (0.12°)
		Maximum	11′ (0.18°)

<sup>\*:</sup> Fuel, engine coolant and lubricant are oil full. Spare tire, jack, hand tools and mats are in designated positions.

**BRAKE** ELS0003Z Front brake 2.0mm (0.079 in) Pad repair limit thickness Rotor wear limit 26.0 mm (1.024 in) Rear brake Pad repair limit thickness 2.0 mm (0.079 in) Rotor wear limit 14.0 mm (0.551 in) Brake pedal height 199.5 - 209.5 mm (7.85 - 8.25 in) Depressed pedal height\* More than 120 mm (4.72 in)

#### **REFILL CAPACITIES**

ELS00040

UNIT		Liter	US measure
Fuel tank		82	21-5/8 gal
Coolant ( With reservoir tank at "MAX" level )		9.1	9-5/8 qt
	Drain and refill		
Engine	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

<sup>\*:</sup> Under a force of 490 N(50 kg, 110 lb) with engine running.