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**QUICK REFERENCE INDEX**

<b>A GENERAL INFORMATION</b>	GI General Information
<b>B ENGINE</b>	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
<b>C HYBRID</b>	
<b>D TRANSMISSION &amp; DRIVE-LINE</b>	TM Transaxle & Transmission
	DLN Driveline
	FAX Front Axle
	RAX Rear Axle
<b>E SUSPENSION</b>	FSU Front Suspension
	RSU Rear Suspension
	SCS Suspension Control System
	WT Road Wheels & Tires
<b>F BRAKES</b>	BR Brake System
	PB Parking Brake System
	BRC Brake Control System
<b>G STEERING</b>	ST Steering System
	STC Steering Control System
<b>H RESTRAINTS</b>	SB Seat Belt
	SBC Seat Belt Control System
	SR SRS Airbag
	SRC SRS Airbag Control System
<b>I VENTILATION, HEATER &amp; AIR CONDITIONER</b>	VTL Ventilation System
	HA Heater & Air Conditioning System
	HAC Heater & Air Conditioning Control System
<b>J BODY INTERIOR</b>	INT Interior
	IP Instrument Panel
	SE Seat
	ADP Automatic Drive Positioner
<b>K BODY EXTERIOR, DOORS, ROOF &amp; VEHICLE SECURITY</b>	DLK Door & Lock
	SEC Security Control System
	GW Glass & Window System
	PWC Power Window Control System
	RF Roof
<b>L DRIVER CONTROLS</b>	EXT Exterior
	BRM Body Repair
	MIR Mirrors
	EXL Exterior Lighting System
	INL Interior Lighting System
	WW Wiper & Washer
	DEF Defogger
	HRN Horn
<b>M ELECTRICAL &amp; POWER CONTROL</b>	PWO Power Outlet
	BCS Body Control System
	LAN LAN System
	PCS Power Control System
	CHG Charging System
	PG Power Supply, Ground & Circuit Elements
<b>N DRIVER INFORMATION &amp; MULTIMEDIA</b>	MWI Meter, Warning Lamp & Indicator
	WCS Warning Chime System
<b>O CRUISE CONTROL &amp; DRIVER ASSISTANCE</b>	AV Audio, Visual & Navigation System
	CCS Cruise Control System
	DAS Driver Assistance System
<b>P MAINTENANCE</b>	MA Maintenance

**A**  
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# FOREWORD

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This manual contains maintenance and repair procedure for the 2011 INFINITI QX56.

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

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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.



INFINITI®

**QUICK REFERENCE CHART QX56**  
**ENGINE TUNE-UP DATA (VK56VD)**

PFP:00000

ELS0003W

Engine model		VK56VD
Firing order		1-8-7-3-6-5-4-2
Idle speed A/T (In "P or N" position)	rpm	600 ± 50
Ignition timing (BTDC at idle speed)		12° ± 2°
CO% at idle		0.7 - 9.9 % and engine runs smoothly
Tensions of drive belt		Auto adjustment by auto tensioner
Radiator cap relief pressure	kPa (kg/cm <sup>2</sup> , psi)	
	Standard	108.2 - 127.8 (1.1 - 1.3, 15.7 - 18.5)
	Limit	98 (1.0, 14)
Cooling system leakage testing pressure	kPa (kg/cm <sup>2</sup> , psi)	186 (1.9, 27)
Compression pressure	kPa (kg/cm <sup>2</sup> , psi)/rpm	
	Standard	1,667 (17, 242)/200
	Minimum	1,226 (12.5, 178)/200
	Differential limit between cylinders	98 (1.0, 14)/200
Spark plug (Iridium-tipped type)	Make	NGK
	Standard type	DILKAR7B11
	Gap (Standard)	mm (in) 1.1 (0.043)

**FRONT WHEEL ALIGNMENT**

ELS0003X

Item		Standard	
Measurement wheel		Left side	Right side
Camber Degree minute (Decimal degree)	Minimum	-0°45' (-0.75°)	-0°55' (-0.91°)
	Nominal	0° 00' (0.00°)	-0°10' (-0.17°)
	Maximum	0° 45' (0.75°)	0° 35' (0.58°)
	Left and right difference	0° 33' (0.55°) or less	
Caster Degree minute (Decimal degree)	Minimum	2° 20' (2.34°)	2° 40' (2.67°)
	Nominal	3° 05' (3.08°)	3° 25' (3.42°)
	Maximum	3° 50' (3.83°)	4° 10' (4.16°)
	Left and right difference	0° 45' (0.75°) or less	
Kingpin inclination Degree minute (Decimal degree)	Minimum	—	—
	Nominal	13° 20' (13.33°)* <sup>1</sup>	13° 25' (13.42°)* <sup>1</sup>
	Maximum	—	—
Toe-in	Total toe-in Distance	Minimum	In 1.4 mm (0.055 in)
		Nominal	In 2.4 mm (0.094 in)
		Maximum	In 3.4 mm (0.134 in)
	Toe angle (left wheel or right wheel) Degree minute (Decimal degree)	Minimum	In 0° 03' (0.05°)
		Nominal	In 0° 05' (0.08°)
		Maximum	In 0° 07' (0.11°)

\*1: The minimum value and maximum value is the same as the nominal value.

Measure value under unladen\*<sup>2</sup> conditions.

\*2: Fuel, engine coolant and lubricant are full. Spare tire, jack, hand tools and mats are in designated positions.

**REAR WHEEL ALIGNMENT**

ELS0003Y

Item		Standard	
Camber Degree minute (Decimal degree)	Minimum	-1° 00' (-1.00°)	
	Nominal	-0° 30' (-0.50°)	
	Maximum	0° 00' (0.00°)	
	Left and right difference	0° 45' (0.75°) or less	
Toe-in	Total toe-in Distance	Minimum	0 mm (0 in)
		Nominal	In 3.4 mm (0.134 in)
		Maximum	In 6.8 mm (0.268 in)
	Toe angle (left wheel or right wheel) Degree minute (Decimal degree)	Minimum	0° 00' (0.00°)
		Nominal	In 0° 07' (0.12°)
		Maximum	In 0° 14' (0.23°)

Measure value under unladen\* conditions.

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

**BRAKE PEDAL**

Unit : mm (in)

Item	Standard
Brake pedal height	168.5 (6.63) – 178.5 (7.03)
Depressed brake pedal height [Depressing 490 N (50 kg, 110 lb) while turning the engine ON]	100 (3.94) or more

**FRONT DISK BRAKE**

Unit : mm (in)

Item		Limit
Brake pad	Wear thickness	1.5 (0.059)
	Wear thickness	28.5 (1.122)
Disc rotor	Thickness variation (measured at 8 positions)	0.015 (0.0006)
	Runout (with it attached to the vehicle)	0.053 (0.0021)

**REAR DISK BRAKE**

Unit : mm (in)

Item		Limit
Brake pad	Wear thickness	2.0 (0.079)
	Wear thickness	18.0 (0.709)
Disc rotor	Thickness variation (measured at 8 positions)	0.015 (0.0006)
	Runout (with it attached to the vehicle)	0.05 (0.0020)

**REFILL CAPACITIES**

ELS00040

UNIT	Liter	US measure	
Fuel tank	98.4	26 gal	
Engine Coolant ( With reservoir tank ) at MAX level	14.9	15-6/8 qt	
Engine oil	Drain and refill		
	With oil filter change	6.5	6-7/8 qt
	Without oil filter change	6.2	6-4/8 qt
	Dry engine (Overhaul)	7.6	8 qt
Transmission	10.0	10-5/8 qt	
Transfer	1.5	3-1/8 pt	
Final drive	Front	0.75	1-5/8 pt
	Rear	1.75	3-3/4 pt
Power steering system	1.0	7/8 qt	
Air conditioning system	Compressor oil	0.21	7.1 fl oz
	Refrigerant	1.05 kg	2.32 lb