

Edition: August 2014
Revision: January 2015
Publication No. SM15E00V37U0

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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

TM Transaxle & Transmission

DLN Driveline

FAX Front Axle

RAX Rear Axle

FSU Front Suspension

RSU Rear Suspension

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 Automatic Drive Positioner

DLK Door & Lock

SEC Security Control System

GW Glass & Window System

PWC Power Window Control System

RF Roof

EXT Exterior

BRM Body Repair

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

AV Audio, Visual & Navigation System

CCS Cruise Control System

DAS Driver Assistance System

DMS Drive Mode System

MA Maintenance

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FOREWORD

This manual contains maintenance and repair procedure for the 2015 INFINITI Q50.

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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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 comments.*

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

If no, what page number(s)? _____ *Note: Please include a copy of each page, marked with your comments.*

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What information should be included in INFINITI Service Manuals to better support you in servicing or repairing customer vehicles?

DATE: _____ YOUR NAME: _____ POSITION: _____

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QUICK REFERENCE CHART Q50
ENGINE TUNE-UP DATA (VQ37VHR)

PFP:00000

Engine model		VQ37VHR
Firing order		1-2-3-4-5-6
Idle speed (In "P" or "N" position)	rpm	650 ± 50
Ignition timing (BTDC at idle speed) (In "P" or "N" position)		10° ± 2°
Tensions of drive belt		Belt tension is not necessary, as it is automatically adjusted by drive belt auto-tensioner.
Radiator cap relief pressure	kPa (kg/cm ² , psi)	
Standard		122.3 - 151.7 (1.2 - 1.5, 18 - 22)
Limit		107 (1.1, 16)
Cooling system leakage testing pressure	kPa (kg/cm ² , psi)	200 (2.04, 29)
Compression pressure	kPa (kg/cm ² , psi)/rpm	
Standard		1,667 - 2,354 (17 - 24, 242 - 341)/200
Minimum		1,226 (12.5, 178)/200
Differential limit between cylinders		98 (1.0, 14)/200
Spark plug (Iridium-tipped type)	Make	DENSO
	Standard type	FXE24HR11
	Gap (Nominal)	1.1 (0.043)

FRONT WHEEL ALIGNMENT

ELS0003X

2WD (Suspension Base type)

Item		Standard	
Camber Degree minute (Decimal degree)	Minimum	−1° 10′ (−1.16°)	
	Nominal	−0° 25′ (−0.42°)	
	Maximum	0° 20′ (0.33°)	
	Left and right difference	0° 30′ (0.50°) or less	
Caster Degree minute (Decimal degree)	Minimum	3° 20′ (3.34°)	
	Nominal	4° 40′ (4.62°)	
	Maximum	6° 00′ (6.00°)	
	Left and right difference	0° 30′ (0.50°) or less	
Kingpin inclination Degree minute (Decimal degree)	Minimum	6° 40′ (6.67°)	
	Nominal	7° 25′ (7.42°)	
	Maximum	8° 10′ (8.16°)	
Toe-in	Total toe-in Distance	Minimum	Out 1 mm (Out 0.03 in)
		Nominal	In 1 mm (In 0.04 in)
		Maximum	In 3 mm (In 0.11 in)
	Total toe-angle Degree minute (Decimal degree)	Minimum	Out 0° 04′ 48″ (Out 0.08°)
		Nominal	In 0° 04′ 48″ (In 0.08°)
		Maximum	In 0° 14′ 24″ (In 0.24°)

Measure value under unladen* conditions.

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

2WD (Suspension Sport type)

Item		Standard	
Tire size	Front	245/40 R19	245/40 R19
	Rear		265/35 R19
Camber Degree minute (Decimal degree)	Minimum	-1° 05' (-1.08°)	
	Nominal	-0° 20' (-0.33°)	
	Maximum	0° 25' (0.41°)	
	Left and right difference	0° 30' (0.50°) or less	
Caster Degree minute (Decimal degree)	Minimum	3° 20' (3.34°)	3° 25' (3.42°)
	Nominal	4° 40' (4.62°)	4° 45' (4.75°)
	Maximum	6° 00' (6.00°)	6° 05' (6.08°)
	Left and right difference	0° 30' (0.50°) or less	
Kingpin inclination Degree minute (Decimal degree)	Minimum	6° 35' (6.59°)	
	Nominal	7° 20' (7.33°)	
	Maximum	8° 05' (8.08°)	
Toe-in	Total toe-in Distance	Minimum	Out 1 mm (Out 0.03 in)
		Nominal	In 1 mm (In 0.04 in)
		Maximum	In 3 mm (In 0.11 in)
	Total toe-angle Degree minute (Decimal degree)	Minimum	Out 0° 04' 48" (Out 0.08°)
		Nominal	In 0° 04' 48" (In 0.08°)
		Maximum	In 0° 14' 24" (In 0.24°)

Measure value under unladen* conditions.

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

AWD

Item		Standard	
Camber Degree minute (Decimal degree)	Minimum	−1° 20′ (−1.33°)	
	Nominal	−0° 35′ (−0.58°)	
	Maximum	0° 10′ (0.16°)	
	Left and right difference	0° 30′ (0.50°) or less	
Caster Degree minute (Decimal degree)	Minimum	2° 55′ (2.92°)	
	Nominal	4° 15′ (4.25°)	
	Maximum	5° 35′ (5.58°)	
	Left and right difference	0° 30′ (0.50°) or less	
Kingpin inclination Degree minute (Decimal degree)	Minimum	6° 45′ (6.75°)	
	Nominal	7° 30′ (7.50°)	
	Maximum	8° 15′ (8.25°)	
Toe-in	Total toe-in Distance	Minimum	Out 1 mm (Out 0.03 in)
		Nominal	In 1 mm (In 0.04 in)
		Maximum	In 3 mm (In 0.11 in)
	Total toe-angle Degree minute (Decimal degree)	Minimum	Out 0° 04′ 48″ (Out 0.08°)
		Nominal	In 0° 04′ 48″ (In 0.08°)
		Maximum	In 0° 14′ 24″ (In 0.24°)

Measure value under unladen* conditions.

*: 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° 40′ (−1.66°)	
	Nominal	−1° 10′ (−1.17°)	
	Maximum	−0° 40′ (−0.67°)	
Toe-in	Total toe-in Distance	Minimum	0 mm (0 in)
		Nominal	In 2.8 mm (In 0.110 in)
		Maximum	In 5.6 mm (In 0.220 in)
	Total toe-angle Degree minute (Decimal degree)	Minimum	0° 00′ (0.00°)
		Nominal	In 0° 14′ (In 0.23°)
		Maximum	In 0° 28′ (In 0.46°)

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	183.0 - 193.0 (7.20 - 7.60)
Depressed brake pedal height [Depressing 490 N (50 kg, 110 lb) while turning the engine ON]	126.0 (4.96) or more

FRONT DISC BRAKE**2 Piston Type**

Unit: mm (in)

Item		Limit
Brake pad	Wear thickness	1.5 (0.059)
	Wear thickness	26.0 (1.024)
Disc rotor	Thickness variation (measured at 8 positions)	0.015 (0.0006)
	Runout (with it attached to the vehicle)	0.035 (0.0014)

4 Piston Type

Unit: mm (in)

Item		Limit
Brake pad	Wear thickness	2.0 (0.079)
	Wear thickness	30.0 (1.181)
Disc rotor	Thickness variation (measured at 8 positions)	0.015 (0.0006)
	Runout (with it attached to the vehicle)	0.035 (0.0014)

REAR DISC BRAKE**1 Piston Type**

Unit: mm (in)

Item		Limit
Brake pad	Wear thickness	2.0 (0.079)
	Wear thickness	14.0 (0.551)
Disc rotor	Thickness variation (measured at 8 positions)	0.015 (0.0006)
	Runout (with it attached to the vehicle)	0.055 (0.0022)

2 Piston Type

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)	0.055 (0.0022)

REFILL CAPACITIES

ELS00040

UNIT		Liter	US measure
Fuel tank		75.6	20 gal
Engine coolant capacity [With reservoir tank ("MAX" level)]	With pressurized radiator reservoir tank	10.9	11-4/8 qt
	With non-pressurized radiator reservoir tank	10.4	11 qt
Engine oil	Drain and refill		
	With oil filter change	4.9	5-1/8 qt
	Without oil filter change	4.6	4-7/8 qt
	Dry engine (Overhaul)	5.7	6 qt
Transmission		9.2	9-3/4 qt
Transfer		1.0	2-1/8 pt
Final drive	Front	0.65	1-3/8 pt
	Rear	1.05	2-1/4 pt
Power steering system		1.0	1-1/8 qt
Air conditioning system	Compressor oil	0.09	3.04 fl oz
	Refrigerant	0.5 kg	1.1 lb