



# FOREWORD

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This manual contains maintenance and repair procedure for the 2015 INFINITI QX50.

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®



**PLEASE HELP MAKE THIS SERVICE MANUAL BETTER!**

**INFINITI**®

Your comments are important to INFINITI and will help us to improve our Service Manuals.

Use this form to report any issues or comments you may have regarding our Service Manuals.

Please print this form and type or write your comments below. Mail or fax to:

Nissan North America, Inc.  
Technical Service Information  
39001 Sunrise Drive, P.O. Box 9200  
Farmington Hills, MI USA 48331  
FAX: (248) 488-3880

**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.*

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**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.*

Please describe the issue or problem in detail: \_\_\_\_\_

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**Is the organization of the manual clear and easy to follow? (circle your answer) YES NO**

Please comment: \_\_\_\_\_

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

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DATE: \_\_\_\_\_ YOUR NAME: \_\_\_\_\_ POSITION: \_\_\_\_\_

DEALER: \_\_\_\_\_ DEALER NO.: \_\_\_\_\_ ADDRESS: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE/PROV./COUNTRY: \_\_\_\_\_ ZIP/POSTAL CODE: \_\_\_\_\_

**QUICK REFERENCE CHART QX50**  
**ENGINE TUNE-UP DATA (VQ37VHR)**

PFP:00000

ELS0003W

Engine model		VQ37VHR
Firing order		1-2-3-4-5-6
Idle speed No load* (In P or N position)	rpm	650 ± 50
Ignition timing (BTDC at idle speed) No load* (In P or N position)		10° ± 5°
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 <sup>2</sup> , 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 <sup>2</sup> , psi)	157 (1.6, 23)
Compression pressure	kPa (kg/cm <sup>2</sup> , psi)/200 rpm	
	Standard	1,667 - 2,354 (17 - 24, 242 - 341)
	Minimum	1,226 (12.5, 178)
	Differential limit between cylinders	98 (1.0, 14)
Spark plug (Iridium-tipped type)	Make	DENSO
	Standard type	FXE24HR11
	Gap(Nominal)	mm (in) 1.1 (0.043)

\*: Under the following conditions

- A/C switch: OFF
- Electric load: OFF (Lights, heater fan & rear window defogger)
- Steering wheel: Kept in straight-ahead position

**FRONT WHEEL ALIGNMENT**  
**2WD**

ELS0003X

Item		Standard	
Camber Degree minute (Decimal degree)	Minimum	-0° 40' (-0.66°)	
	Nominal	0° 05' (0.08°)	
	Maximum	0° 50' (0.83°)	
	Left and right difference	0° 33' (0.55°) or less	
Caster Degree minute (Decimal degree)	Minimum	3° 30' (3.50°)	
	Nominal	4° 15' (4.25°)	
	Maximum	5° 00' (5.00°)	
	Left and right difference	0° 39' (0.65°) or less	
Kingpin inclination Degree minute (Decimal degree)	Minimum	6° 05' (6.09°)	
	Nominal	6° 50' (6.83°)	
	Maximum	7° 35' (7.58°)	
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° 05' (-1.08°)	
	Nominal	-0° 20' (-0.33°)	
	Maximum	0° 25' (0.41°)	
	Left and right difference	0° 33' (0.55°) or less	
Caster Degree minute (Decimal degree)	Minimum	3° 25' (3.42°)	
	Nominal	4° 10' (4.17°)	
	Maximum	4° 55' (4.91°)	
	Left and right difference	0° 39' (0.65°) 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.

**REAR WHEEL ALIGNMENT**

ELS0003Y

Item		Standard	
Camber Degree minute (Decimal degree)	Minimum	-1° 05' (-1.08°)	
	Nominal	-0° 35' (-0.58°)	
	Maximum	-0° 05' (-0.09°)	
Toe-in	Total toe-in Distance	Minimum	0 mm (0 in)
		Nominal	In 2.9 mm (In 0.114 in)
		Maximum	In 5.8 mm (In 0.228 in)
	Total toe-angle Degree minute (Decimal degree)	Minimum	0° 00' (0.00°)
		Nominal	In 0° 14' 24" (In 0.24°)
		Maximum	In 0° 28' 12" (In 0.47°)

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	Without DCA	171.5 – 181.5 (6.75 – 7.15)
	With DCA	158.4 – 195.4 (7.30 – 7.69)
Clearance between the stop lamp switch and ASCD brake switch threaded end and the stopper rubber	0.74 – 1.96 (0.0291 – 0.0772)	
Brake pedal play	3.0 – 11.0 (0.118 – 0.433)	
Depressed brake pedal height [Depressing 490 N (50 kg, 110 lb) while turning the engine ON]	Without DCA	114.0 (4.49) or more
	With DCA	120.8 (4.76) or more

**FRONT DISC BRAKE**

Unit: mm (in)

Item		Limit
Brake pad	Wear thickness	2.0 (0.079)
	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)

\*To check if rotor imbalance, rotor runout or rotor deformation is occurred.

**REAR DISC BRAKE**

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)

\*To check if rotor imbalance, rotor runout or rotor deformation is occurred.

REFILL CAPACITIES

ELS00040

UNIT		Liter	US measure
Fuel tank		Applox. 76	20 gal
Engine Coolant ( With reservoir tank ) at MAX level		8.6	9-1/8 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	A/T	9.2	9-3/4 qt
Transfer		1.0	2-1/8 pt
Final drive	Front	0.65	1-3/8 pt
	Rear	1.4	3 pt
Power steering system		1.0	1-1/8 qt
Air conditioning system	Compressor oil	0.15	5.07 fl oz
	Refrigerant	0.55 kg	1.21 lb