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INFINITI®
Q70
MODEL Y51 SERIES

QUICK REFERENCE INDEX

FOREWORD

This manual contains maintenance and repair procedure for the 2015 INFINITI Q70.

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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PLEASE HELP MAKE THIS SERVICE MANUAL BETTER!

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?

_____

_____

_____

_____

DATE: _____ YOUR NAME: _____ POSITION: _____

DEALER: _____ DEALER NO.: _____ ADDRESS: _____

CITY:_____ STATE/PROV./COUNTRY: _____ ZIP/POSTAL CODE: _____

QUICK REFERENCE CHART Q70

PFP:00000

ENGINE TUNE-UP DATA (VQ37VHR)

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.
Radiater 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)	157 (1.6, 23)
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)	mm (in)	1.1 (0.043)

ENGINE TUNE-UP DATA (VK56VD)

Engine model			VK56VD
Firing order			1-8-7-3-6-5-4-2
Idle speed (In “P” or “N” position)		rpm	600 ± 50
Ignition timing (BTDC at idle speed) (In “P” or “N” position)			11° ± 2°
Tensions of drive belt			Belt tension is not necessary, as it is automatically adjusted by drive belt auto-tensioner.
Radiater 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)	157 (1.6, 23)
Compression pressure		kPa (kg/cm^2, psi)/rpm	
	Standard		1,667 (17, 242)/200
	Minimum		1,422 (14.5, 206)/200
	Differential limit between cylinders		98 (1.0, 14)/200
Spark plug (Iridium-tipped type)	Make		NGK
	Standard type		DILKAR7B11
	Gap	mm (in)	
	Standard		1.1 (0.043)
	Limit		1.25 (0.049)

FRONT WHEEL ALIGNMENT

ELS0003X

2WD

Item			Standard	
Wheel size			18 inch	20 inch
Camber Degree minute (Decimal degree)		Minimum	–0° 55′ (–0.91°)	–1° 00′ (–1.00°)
		Nominal	–0° 10′ (–0.17°)	–0° 15′ (–0.25°)
		Maximum	0° 35′ (0.58°)	0° 30′ (0.50°)
		Left and right difference	0° 33′ (0.55°) or less	
Caster Degree minute (Decimal degree)		Minimum	3° 10′ (3.17°)	
		Nominal	4° 30′ (4.50°)	
		Maximum	5° 50′ (5.83°)	
		Left and right difference	0° 39′ (0.65°) or less	
Kingpin inclination Degree minute (Decimal degree)		Minimum	6° 25′ (6.42°)	6° 30′ (6.50°)
		Nominal	7° 10′ (7.17°)	7° 15′ (7.25°)
		Maximum	7° 55′ (7.91°)	8° 00′ (8.00°)
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	–0° 50′ (–0.83°)
		Nominal	–0° 05′ (–0.08°)
		Maximum	0° 40′ (0.66°)
		Left and right difference	0° 33′ (0.55°) or less
Caster Degree minute (Decimal degree)		Minimum	2° 40′ (2.67°)
		Nominal	4° 00′ (4.00°)
		Maximum	5° 20′ (5.33°)
		Left and right difference	0° 39′ (0.65°) or less
Kingpin inclination Degree minute (Decimal degree)		Minimum	6° 20′ (6.34°)
		Nominal	7° 05′ (7.08°)
		Maximum	7° 50′ (7.83°)
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	
Axle type			2WD	AWD
Camber Degree minute (Decimal degree)		Minimum	–1° 30′ (–1.50°)	–1° 00′ (–1.00°)
		Nominal	–1° 00′ (–1.00°)	–0° 30′ (–0.50°)
		Maximum	–0° 30′ (–0.50°)	0° 00′ (0.00°)
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	170.5 - 180.5 (6.71 - 7.11)
Depressed brake pedal height [Depressing 490 N (50 kg, 110 lb) while turning the engine ON]	110.32 (4.34) or more

FRONT DISC BRAKE

2 Piston Type

Unit: mm (in)

Item		Limit
Brake pad	Wear thickness	2.0 (0.079)
Disc rotor	Wear thickness	26.0 (1.024)
	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)
Disc rotor	Wear thickness	30.0 (1.181)
	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)
Disc rotor	Wear thickness	14.0 (0.551)
	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)
Disc rotor	Wear thickness	18.0 (0.709)
	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				76.0	20 gal
Engine coolant (With reservoir tank) at MAX level		VQ37VHR			
		With pressurized radiator reservoir tank		9	9-1/2 qt
		With non-pressurized radiator reservoir tank		8.4	8-7/8 qt
		VK56VD		10.9	11-4/8 qt
Engine oil	VQ37VHR	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
	VK56VD	Drain and refill			
		With oil filter change	2WD	6.0	6-3/8 qt
			AWD	6.1	6-4/8 qt
		Without oil filter change	2WD	5.7	6 qt
			AWD	5.8	6-1/8 qt
		Dry engine (Overhaul)		7.2	7-5/8 qt
Transmission		VQ37VHR		9.2	9-3/4 qt
		VK56VD		10	10-5/8 qt
Transfer				1.0	2-1/8 pt
Final drive	Front			0.65	1-3/8 pt
	Rear	VQ37VHR		1.4	3 pt
		VK56VD		1.15	2-3/8 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