

Edition: September 2010
Revision: December 2011
Publication No. SM1E-1S51U2

QUICK REFERENCE INDEX



A GENERAL INFORMATION	GI General Information
B ENGINE	EM Engine Mechanical
	LU Engine Lubrication System
	CO Engine Cooling System
	EC Engine Control System
	FL Fuel System
	EX Exhaust System
	STR Starting System
C ELECTRIC POWER TRAIN	ACC Accelerator Control System
D TRANSMISSION & DRIVELINE	TM Transaxle & Transmission
	DLN Driveline
	FAX Front Axle
	RAX Rear Axle
E SUSPENSION	FSU Front Suspension
	RSU Rear Suspension
	SCS Suspension Control System
	WT Road Wheels & Tires
F BRAKES	BR Brake System
	PB Parking Brake System
	BRC Brake Control System
G STEERING	ST Steering System
	STC Steering Control System
H RESTRAINTS	SB Seat Belt
	SBC Seat Belt Control System
	SR SRS Airbag
	SRC SRS Airbag Control System
I VENTILATION, HEATER & AIR CONDITIONER	VTL Ventilation System
	HA Heater & Air Conditioning System
	HAC Heater & Air Conditioning Control System
J BODY INTERIOR	INT Interior
	IP Instrument Panel
	SE Seat
	ADP Automatic Drive Positioner
K BODY EXTERIOR, DOORS, ROOF & VEHICLE SECURITY	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
L DRIVER CONTROLS	INL Interior Lighting System
	WW Wiper & Washer
	DEF Defogger
	HRN Horn
M ELECTRICAL & POWER CONTROL	PWO Power Outlet
	BCS Body Control System
	LAN LAN System
	PCS Power Control System
	CHG Charging System
	PG Power Supply, Ground & Circuit Elements
N DRIVER INFORMATION & MULTIMEDIA	MWI Meter, Warning Lamp & Indicator
	WCS Warning Chime System
O CRUISE CONTROL & DRIVER ASSISTANCE	AV Audio, Visual & Navigation System
	CCS Cruise Control System
	DAS Driver Assistance System
P MAINTENANCE	MA Maintenance

All Rights Reserved. No part of this Service Manual may be reproduced or stored in a retrieval system, or transmitted in any form, or by any means, electronic, mechanical, recording or otherwise, without the prior written permission of NISSAN MOTOR CO., LTD.

A

B

D

E

F

G

H

I

J

K

L

M

N

O

P

FOREWORD

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

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.



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.*

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: _____

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

Please comment: _____

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 FX

PFP:00000

ENGINE TUNE-UP DATA (VQ35HR)

Engine model		VQ35HR
Firing order		1-2-3-4-5-6
Idle speed A/T (In "P" or "N" position)	rpm	675 ± 50
Ignition timing (BTDC at idle speed) A/T (In "P" or "N" position)		15° ± 5°
Tensions of drive belt		Auto adjustment by 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)	157 (1.6, 23)
Compression pressure	kPa (kg/cm ² , psi)/rpm	
Standard		1,275 (13.0, 185)/300
Minimum		981 (10.0, 142)/300
Spark plug	Standard type	FXE22HR11

ENGINE TUNE-UP DATA (VK50VE)

Engine model		VK50VE
Firing order		1-8-7-3-6-5-4-2
Idle speed A/T (In "P" or "N" position)	rpm	650 ± 50
Ignition timing (BTDC at idle speed) A/T (In "P" or "N" position)		17° ± 2°
Tensions of drive belt		Auto adjustment by 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)	157 (1.6, 23)
Compression pressure	kPa (kg/cm ² , psi)/rpm	
Standard		1,667 (17, 242)/200
Minimum		1,226 (12.5, 178)/200
Spark plug	Standard type	FXE22HR11

FRONT WHEEL ALIGNMENT (Unladen*)

2WD

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	2° 55′ (2.92°)	
	Nominal	3° 40′ (3.67°)	
	Maximum	4° 25′ (4.41°)	
	Left and right difference	0° 39′ (0.65°) or less	
Kingpin inclination Degree minute (Decimal degree)	Minimum	7° 55′ (7.92°)	
	Nominal	8°40′ (8.67°)	
	Maximum	9° 25′ (9.41°)	
Toe-in	Total toe-in Distance	Minimum	In 1 mm (0.04 in)
		Nominal	In 2 mm (0.08 in)
		Maximum	In 3 mm (0.11 in)
	Toe angle (left wheel or right wheel) Degree minute (Decimal Degree)	Minimum	In 0° 02′ 12″ (0.04°)
		Nominal	In 0° 04′ 24″ (0.07°)
		Maximum	In 0° 06′ 36″ (0.11°)

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	2° 55′ (2.92°)	
	Nominal	3° 40′ (3.67°)	
	Maximum	4° 25′ (4.41°)	
	Left and right difference	0° 39′ (0.65°) or less	
Kingpin inclination Degree minute (Decimal degree)	Minimum	7° 55′ (7.92°)	
	Nominal	8°40′ (8.67°)	
	Maximum	9° 25′ (9.41°)	
Toe-in	Total toe-in Distance	Minimum	In 1 mm (0.04 in)
		Nominal	In 2 mm (0.08 in)
		Maximum	In 3 mm (0.11 in)
	Toe angle (left wheel or right wheel) Degree minute (Decimal Degree)	Minimum	In 0° 02′ 12″ (0.04°)
		Nominal	In 0° 04′ 24″ (0.07°)
		Maximum	In 0° 06′ 36″ (0.11°)

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 (Unladen*)

Item		Standard		
Tire size		265/60R18	265/50R20	265/45R21
Camber Degree minute (Decimal degree)	Minimum	-1° 40' (-1.66°)		
	Nominal	-1° 10' (-1.16°)		
	Maximum	-0° 40' (-0.67°)		
Toe-in	Total toe-in Distance	Minimum	0 mm (0 in)	
		Nominal	In 3.2 mm (0.126 in)	In 3.1 mm (0.122 in)
		Maximum	In 6.4 mm (0.252 in)	In 6.2 mm (0.244 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

Front brake	Pad repair limit		2.0 mm (0.079 in)
	Rotor wear limit	2 piston type	32.0 mm (1.260 in)
		4 piston type	30.0 mm (1.181 in)
Rear brake	Pad repair limit		2.0 mm (0.079 in)
	Rotor wear limit	1 piston type	14.0 mm (0.551 in)
		2 piston type	18.0 mm (0.709 in)
Brake pedal height	Without DCA		171.5 - 181.5 mm (6.75 - 7.15 in)
	With DCA		185.4 - 195.4 mm (7.30 - 7.69 in)
Pedal depressed height*	Without DCA		114.0 mm (4.49 in) or more
	With DCA		120.8 mm (4.76 in) or more

* : Under force of 490 N (50 kg, 110 lb) with engine running.

STEERING ANGLE

Unit: Degree minute (Decimal degree)

Item		Standard
Inner wheel	Minimum	38°00' (38.0°)
	Nominal	41°00' (41.0°)
	Maximum	42°00' (42.0°)
Outer wheel	Nominal	32°15' (32.3°)

REFILL CAPACITIES

UNIT			Liter	US measure
Fuel tank			90	23 - 3/4 gal
Engine coolant capacity [With reservoir tank ("MAX" level)]	VQ35HR		9.2	9 - 3/4 qt
	VK50VE		11	11 - 5/8 qt
Engine oil capacity (VQ35HR)	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	6.5 qt
Engine oil capacity (VK50VE)	Drain and refill			
	With oil filter change		6.7	7 - 1/8 qt
	Without oil filter change		5.8	6 - 1/8 qt
	Dry engine (Overhaul)		7.2	7 - 5/8 qt
Transmission	A/T	VQ35HR	9.2	9 - 3/4 qt
		VK50VE	11.3	12 qt
Transfer			1.0	2 - 1/8 pt
Differential gear	Front		0.65	1 - 3/8 pt
	Rear	VQ35HR	1.4	3 pt
		VK50VE	1.75	3 - 3/4 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