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FOREWORD

This manual contains maintenance and repair procedure for the 2012 INFINITI FX35/FX50.

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

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.





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. 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: ___ _____ STATE/PROV./COUNTRY: _____ ZIP/POSTAL CODE: ____

QUICK REFERENCE CHART FX35/FX50 ENGINE TUNE-UP DATA (VQ35HR)

PFP:00000

Engine model			VQ35HR
Firing order			1-2-3-4-5-6
Idle speed A/T (In "P" or "N	N" position)	rpm	675 ± 50
Ignition timing (I A/T (In "P" or "N	BTDC at idle speed) " position)		15° ± 5°
Tensions of driv	ve belt		Auto adjustment by auto tensioner
Radiator cap re	lief pressure	kPa (kg/cm², psi)	
	Standard		122.3 - 151.7 (1.2 - 1.5, 18 - 22)
	Limit		107 (1.1, 16)
Cooling system	leakage testing pressure	kPa (kg/cm², psi)	157 (1.6, 23)
Compression pr	ressure	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" pos	ition)	rpm	650 ± 50
Ignition timing (BTDC A/T (In "P" or "N" pos			15° ± 5°
Tensions of drive belt			Auto adjustment by auto tensioner
Radiator cap relief pro	essure	kPa (kg/cm², psi)	
	Standard		122.3 - 151.7 (1.2 - 1.5, 18 - 22)
	Limit		107 (1.1, 16)
Cooling system leaka	age testing pressure	kPa (kg/cm ² , psi)	157 (1.6, 23)
Compression pressur	re	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		
		Minimum	-1° 05′ (-1.08°)		
Camber Degree minute (Decimal degree)		Nominal	-0° 20′ (-0.33°)		
		Maximum	0° 25′ (0.41°)		
		Left and right difference	0° 33′ (0.55°) or less		
		Minimum	2° 55′ (2.92°)		
Caster		Nominal	3° 40′ (3.67°)		
Degree r	minute (Decimal degree)	Maximum	4° 25′ (4.41°)		
		Left and right difference	0° 39′ (0.65°) or less		
		Minimum	7° 55′ (7.92°)		
•	nclination ninute (Decimal degree)	Nominal	8°40′ (8.67°)		
Degree minute (Decimal degree)		Maximum	9° 25′ (9.41°)		
		Minimum	In 1 mm (0.04 in)		
	Total toe-in Distance	Nominal	In 2 mm (0.08 in)		
Toe-in		Maximum	In 3 mm (0.11 in)		
		Minimum	In 0° 02′ 12″ (0.04°)		
	Toe angle (left wheel or right wheel) Degree minute (Decimal Degree)	Nominal	In 0° 04′ 24″ (0.07°)		
	2 agreeata (2 dointal 2 agree)	Maximum	In 0° 06′ 36″ (0.11°)		

Measure value under unladen* conditions.

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	
		Minimum	2° 55′ (2.92°)	
Caster		Nominal	3° 40′ (3.67°)	
Degree minute (Decimal degree)		Maximum	4° 25′ (4.41°)	
		Left and right difference	0° 39′ (0.65°) or less	
		Minimum	7° 55′ (7.92°)	
	nclination ninute (Decimal degree)	Nominal	8°40′ (8.67°)	
_ og. oo	a.o (2 coa. dog.co)	Maximum	9° 25′ (9.41°)	
		Minimum	In 1 mm (0.04 in)	
Toe-in -	Total toe-in Distance	Nominal	In 2 mm (0.08 in)	
		Maximum	In 3 mm (0.11 in)	
		Minimum	In 0° 02′ 12″ (0.04°)	
	Toe angle (left wheel or right wheel) Degree minute (Decimal Degree)	Nominal	In 0° 04′ 24″ (0.07°)	
	= 19.11 (= 00a. 2 0g.00)	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.

^{*:} 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	Tire size			265/45R21
M		Minimum	-1° 40′ (-1.66°)		
	Camber Degree minute (Decimal degree)		-1° 10′ (-1.16°)		
2 og. oo			-0° 40′ (-0.67°)		
		Minimum	0 mm (0 in)		
	Total toe-in Distance	Nominal	In 3.2 mm (0.126 in) In 3.1 mm (0.		In 3.1 mm (0.122 in)
Toe-in		Maximum	In 6.4 mm (0.252 in) In		In 6.2 mm (0.244 in)
Toe		Minimum	0° 00′ (0.00°)		
	Toe angle (left wheel or right wheel) Degree minute (Decimal Degree)	Nominal	In 0° 07′ (0.12°)		
		Maximum	In 0° 14′ (0.23°)		

Measure value under unladen* conditions.

BRAKE

	Pad repair limit		2.0 mm (0.079 in)	
Front brake	Rotor wear	2 piston type	32.0 mm (1.260 in)	
	limit	4 piston type	30.0 mm (1.181 in)	
	Pad repair limit		2.0 mm (0.079 in)	
Rear brake	Rotor wear	1 piston type	14.0 mm (0.551 in)	
	limit	2 piston type	18.0 mm (0.709 in)	
Pedal free height	Without DCA		171.5 - 181.5 mm (6.75 - 7.15 in)	
redai nee neigni	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	
	Minimum	38°00′ (38.0°)	
Inner wheel	Nominal	41°00′ (41.0°)	
	Maximum	42°00′ (42.0°)	
Outer wheel Nominal		32°15′ (32.3°)	

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

REFILL CAPACITIES

UNIT			Liter	US measure
Fuel tank			90	23 - 3/4 gal
Coolant (Mith recompositions)	VQ35H	IR	9.2	9 - 3/4 qt
Coolant (With reservoir tank)	VK50V	Έ	11	11 - 5/8 qt
	Drain a	and refill		
Engine (MOSELIE)		With oil filter change	4.9	5 - 1/8 qt
Engine (VQ35HR)		Without oil filter change	4.6	4 - 7/8 qt
	Dry en	gine (Overhaul)	5.7	6 qt
	Drain and refill			
F (\(\(\(\(\(\(\(\) \) \) \)	With oil filter change		6.7	7 - 1/8 qt
Engine (VK50VE)	Without oil filter change		5.8	6 - 1/8 qt
	Dry engine (Overhaul)		7.2	7 - 5/8 qt
Transmission	Λ/Τ	VQ35HR	9.2	9 - 3/4 qt
Transmission	A/T	VK50VE	11.3	12 qt
Transfer			1.0	2 - 1/8 pt
	Front		0.65	1 - 3/8 pt
Differential gear	D	VQ35HR	1.4	3 pt
	Rear VK50VE		1.75	3 - 3/4 pt
Power steering system		1.0	1 - 1/8 qt	
	Compressor oil		0.15	5.07 fl oz
Air conditioning system	Refrigerant		0.55 kg	1.21 lb