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FX35/FX45

MODEL S50 SERIES



INFINITI®

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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
	ACC Accelerator Control System
C TRANSMISSION/ TRANSAXLE	AT Automatic Transmission
D DRIVELINE/AXLE	TF Transfer
	PR Propeller Shaft
	FFD Front Final Drive
	RFD Rear Final Drive
	FAX Front Axle
	RAX Rear Axle
	FSU Front Suspension
E SUSPENSION	RSU Rear Suspension
	WT Road Wheels & Tires
	BR Brake System
F BRAKES	PB Parking Brake System
	BRC Brake Control System
	PS Power Steering System
G STEERING	SB Seat Belts
H RESTRAINTS	SRS Supplemental Restraint System (SRS)
	BL Body, Lock & Security System
I BODY	GW Glasses, Window System & Mirrors
	RF Roof
	EI Exterior & Interior
	IP Instrument Panel
	SE Seat
	ATC Automatic Air Conditioner
	SC Starting & Charging System
J AIR CONDITIONER	LT Lighting System
	DI Driver Information System
	WW Wiper, Washer & Horn
	BCS Body Control System
	LAN LAN System
	AV Audio Visual, Navigation & Telephone System
	ACS Auto Cruise Control System
	PG Power Supply, Ground & Circuit Elements
	MA Maintenance
K ELECTRICAL	
L MAINTENANCE	

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B

C

D

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FOREWORD

This manual contains maintenance and repair procedure for the 2008 INFINITI FX35/FX45.

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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QUICK REFERENCE CHART FX35/FX45

PFP:00000

ENGINE TUNE-UP DATA (VQ35DE)

ELS0003W

Engine model				VQ35DE		
Firing order				1-2-3-4-5-6		
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)				15° ± 5°		
Drive Belt	Deflection adjustment		Unit: mm (in)	Tension adjustment		Unit: N (kg, lb)
	Used belt		New belt	Used belt		New belt
	Limit	After adjustment		Limit	After adjust- ment	
Alternator and power steering oil pump belt	7 (0.28)	7 - 8 (0.28 - 0.31)	6 - 7 (0.24 - 0.28)	294 (30, 66)	730 - 818 (74.5 - 83.5, 164 - 184)	838 - 926 (85.5 - 94.5, 188 - 208)
A/C compressor belt	12 (0.47)	9 - 10 (0.35 - 0.39)	8 - 9 (0.31 - 0.35)	196 (20, 44)	348 - 436 (35.5 - 44.5, 78 - 98)	470 - 559 (47.9 - 57.0, 106 - 126)
Applied pushing force	98N (10kg, 22lb)			—		
Radiator cap relief pressure			kPa (kg/cm ² , psi)			
Standard				78 - 98 (0.8 - 1.0, 11 - 14)		
Limit				59 (0.6, 9)		
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			PLFR5A-11		
	Hot type			PLFR4A-11		
	Cold type			PLFR6A-11		

ENGINE TUNE-UP DATA (VK45DE)

Engine model	VK45DE	
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)	12° ± 5°	
Tensions of drive belts	Auto adjustment by auto tensioner	
Radiator cap relief pressure	kPa (kg/cm ² , psi)	
Standard	78 - 98 (0.8-1.0 , 11-14)	
Limit	59 (0.6, 9)	
Cooling system leakage testing pressure		
kPa (kg/cm ² , psi)	157 (1.6, 23)	
Compression pressure	kPa (kg/cm ² , psi)/rpm	
Standard	1,320 (13.5, 191) /300	
Minimum	1,130 (11.5, 164) /300	
Spark plug	Standard type	PLFR5A-11
	Hot type	PLFR4A-11
	Cold type	PLFR6A-11

FRONT WHEEL ALIGNMENT (Unladen*)

ELS0003X

Camber	Degree minute (Decimal degree)	Minimum	-1° 29' (-1.48°)
		Nominal	-0° 44' (-0.73°)
		Maximum	0° 01' (0.02°)
		Left and right difference	45' (0.75°) or less
Caster	Degree minute (Decimal degree)	Minimum	3° 02' (3.03°)
		Nominal	3° 47' (3.78°)
		Maximum	4° 32' (4.53°)
		Left and right difference	45' (0.75°) or less
Kingpin inclination	Degree minute (Decimal degree)	Minimum	12° 20' (12.33°)
		Nominal	13° 05' (13.08°)
		Maximum	13° 50' (13.83°)
Total toe-in	Distance	Minimum	0.6 mm (0.024 in)
		Nominal	1.6 mm (0.063 in)
		Maximum	2.6 mm (0.102 in)
	Angle (left wheel or right wheel) Degree minute (Decimal degree)	Minimum	0° 01' (0.02°)
		Nominal	0° 04' (0.06°)
		Maximum	0° 06' (0.10°)
Wheel turning angle (Full turn)	Inside Degree minute (Decimal degree)	Minimum	32° 00' (32.0°)
		Nominal	35° 00' (35.0°)
		Maximum	36° 00' (36.0°)
	Outside Degree minute (Decimal degree)	Nominal	30° 00' (30.0°)

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

REAR WHEEL ALIGNMENT (Unladen*)

ELS0003Y

Camber Degree minute (Decimal degree)		Minimum	-1° 18' (-1.30°)
		Nominal	-0° 48' (-0.80°)
		Maximum	- 0° 18' (- 0.30°)
Total toe-in	Distance	Minimum	2.4 mm (0.09 in)
		Nominal	4.7 mm (0.19 in)
		Maximum	7.0 mm (0.28 in)
	Angle (left wheel or right wheel) Degree minute (Decimal degree)	Minimum	0° 05' (0.08°)
		Nominal	0° 10' (0.17°)
		Maximum	0° 15' (0.25°)

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

BRAKE

ELS0003Z

Front brake	Pad repair limit	2.0 mm (0.079 in)
	Rotor wear limit	32.0 mm (1.260 in)
Rear brake	Pad repair limit	2.0 mm (0.079 in)
	Rotor wear limit	14.0 mm (0.551 in)
Pedal free height		161.5 - 171.5 mm (6.358 - 6.752 in)
Pedal depressed height*		More than 95 mm (3.74 in)

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

REFILL CAPACITIES

ELS00040

UNIT		Liter	US measure
Fuel tank		90	23 - 3/4 gal
Coolant (With reservoir tank)	VQ35DE	8.6	9 - 1/8 qt
	VK45DE	10.0	10 - 5/8 qt
Engine (VQ35DE)	Drain and refill		
	With oil filter change	4.7	5 qt
	Without oil filter change	4.4	4 - 5/8 qt
	Dry engine (Overhaul)	5.4	5 - 3/4 qt
Engine (VK45DE)	Drain and refill		
	With oil filter change	5.8	6 - 1/8 qt
	Without oil filter change	5.2	5 - 1/2 qt
	Dry engine (Overhaul)	7.0	7 - 3/8 qt
Transmission	A/T	10.3	10 - 7/8 qt
Transfer		1.25	2 - 5/8 pt
Differential carrier	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	0.18	6.0 fl oz
	Refrigerant	0.55 kg	1.21 lb

