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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	
	AT Automatic Transmission	
C TRANSMISSION/ TRANSAXLE		
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	
	RSU Rear Suspension	
E SUSPENSION	WT Road Wheels & Tires	
	BR Brake System	
	PB Parking Brake System	
F BRAKES	BRC Brake Control System	
	PS Power Steering System	
	SB Seat Belts	
G STEERING	SRS Supplemental Restraint System (SRS)	
H RESTRAINTS	BL Body, Lock & Security System	
	GW Glasses, Window System & Mirrors	
	RF Roof	
	EI Exterior & Interior	
	IP Instrument Panel	
	SE Seat	
	ATC Automatic Air Conditioner	
J AIR CONDITIONER		
K ELECTRICAL	SC Starting & Charging System	
	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	
	L MAINTENANCE	
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FOREWORD

This manual contains maintenance and repair procedure for the 2006 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 adjustment	
Alternator and power steering oil pump belt	7 (0.28)	4 - 5 (0.16 - 0.20)	3.5 - 4.5 (0.138 - 0.177)	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)	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 lubricant oil full. Spare tire, jack, hand tools and mats are 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 lubricant oil full. Spare tire, jack, hand tools and mats are in designated positions.

BRAKE

ELS0003Z

Front brake	Pad repair limit thickness	2.0 mm (0.079 in)
	Rotor repair limit thickness	32.0 mm (1.260 in)
Rear brake	Pad repair limit thickness	2.0 mm (0.079 in)
	Rotor repair limit thickness	14.0 mm (0.551 in)
Brake pedal height (from dash lower panel top surface)		161.5 - 171.5 mm (6.358 - 6.752 in)
Depressed pedal height*		More than 95 mm (3.74 in)

* : Under a 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