

Edition: June 2009
Publication No. SM0E-1Y50U0



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GI General Information

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

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

WT Road Wheels & Tires

BR Brake System

PB Parking Brake System

BRC Brake Control System

PS Power Steering System

STC Steering Control System

SB Seat Belts

SRS Supplemental Restraint System (SRS)

BL Body, Lock & Security System

GW Glasses, Window System & Mirrors

RF Roof

EI Exterior & Interior

IP Instrument Panel

SE Seat

ATC Automatic Air Conditioner

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 System

ACS Auto Cruise Control System

PG Power Supply, Ground & Circuit Elements

MA Maintenance

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FOREWORD

This manual contains maintenance and repair procedure for the 2010 INFINITI M35/M45.

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®

QUICK REFERENCE CHART M35/M45

PFP:00000

ENGINE TUNE-UP DATA (VQ35HR)

ELS0003W

Engine model	VQ35HR
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°
CO% at idle	0.7 - 9.9% and engine runs smoothly
Tensions of drive belt	Auto adjustment by auto tensioner
Radiator cap relief pressure kPa (kg/cm ² , psi)	
Standard	108 - 127 (1.1 - 1.3, 16 - 18)
Limit	88 (0.9, 13)
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 (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°	
CO% at idle	0.7 - 9.9% and engine runs smoothly	
Tensions of drive belts	Auto adjustment by auto tensioner	
Radiator cap relief pressure	kPa (kg/cm ² , psi)	
Standard	78.2 - 98.8 (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

Axle		2WD		AWD
Tire		245/45R18	245/40R19	245/45R18
Camber Degree minute (Decimal degree)	Minimum	-1° 00' (-1.00°)		
	Nominal	-0° 15' (-0.25°)		
	Maximum	0° 30' (0.50°)		
	Left and right difference	33' (0.55°) or less		
Caster Degree minute (Decimal degree)	Minimum	3° 45' (3.75°)	3° 50' (3.83°)	3° 05' (3.08°)
	Nominal	4° 30' (4.50°)	4° 35' (4.58°)	3° 50' (3.83°)
	Maximum	5° 15' (5.25°)	5° 20' (5.33°)	4° 35' (4.58°)
	Left and right difference	39' (0.65°) or less		
Kingpin inclination Degree minute (Decimal degree)	Minimum	6° 30' (6.50°)		
	Nominal	7° 15' (7.25°)		
	Maximum	8° 00' (8.00°)		
Toe-in	Total toe-in	Minimum	0 mm (0 in)	
		Nominal	In 1 mm (0.04 in)	
		Maximum	In 2 mm (0.08 in)	
	Toe angle (left wheel or right wheel) Degree minute (Decimal degree)	Minimum	0' (0°)	
		Nominal	In 3' (0.05°)	
		Maximum	In 6' (0.10°)	

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Axle			2WD		AWD
Tire			245/45R18	245/40R19	245/45R18
Wheel turning angle (Full turn)	Inside Degree minute (Decimal degree)	Minimum	36°20' (36.3°)		39°45' (39.8°)
		Nominal	39°20' (39.3°)		42°45' (42.8°)
		Maximum	40°20' (40.3°)		43°45' (43.8°)
	Outside Degree minute (Decimal degree)	Nominal	33° 25' (33.4°)	33° 20' (33.3°)	32° 30' (32.5°)

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

REAR WHEEL ALIGNMENT (Unladen*)

ELS0003Y

Axle			2WD		AWD
Tire			245/45R18	245/40R19	245/45R18
Camber Degree minute (Decimal degree)		Minimum	-1° 10' (-1.16°)	-1° 20' (-1.33°)	-0° 40' (-0.66°)
		Nominal	-0° 40' (-0.67°)	-0° 50' (-0.83°)	-0° 10' (-0.17°)
		Maximum	-0° 10' (-0.17°)	-0° 20' (-0.33°)	0° 20' (0.33°)
Toe-in	Total toe-in	Minimum	In 0.1 mm (0.004 in)		
		Nominal	In 2.8 mm (0.110 in)		
		Maximum	In 5.5 mm (0.217 in)		
	Toe angle (left wheel or right wheel) Degree minute (Decimal degree)	Minimum	0' (0°)		
		Nominal	In 7' (0.12°)		
		Maximum	In 14' (0.23°)		

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

BRAKE

ELS0003Z

Front brake	Repair limit thickness	2.0 mm (0.079 in)
	Wear limit	26.0 mm (1.024 in)
Rear brake	Repair limit thickness	2.0 mm (0.079 in)
	Wear limit	14.0 mm (0.551 in)
Brake pedal height		157 - 167 mm (6.18 - 6.57 in)
Depressed pedal height*		90 mm (3.54 in) or more

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

REFILL CAPACITIES

ELS00040

UNIT		Liter	US measure
Fuel tank		76	20 - 1/8 gal
Coolant (With reservoir tank)	VQ35HR	9.2	9 - 6/8 qt
	VK45DE	10.4	11 qt
Engine (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 qt
Engine (VK45DE)	Drain and refill		
	With oil filter change	5.5	5 - 3/4 qt
	Without oil filter change	4.9	5 - 1/8 qt
	Dry engine (Overhaul)	6.7	7 - 1/8 qt

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UNIT		Liter	US measure
Transmission	5 A/T	10.3	10 - 7/8 qt
	7 A/T	9.2	9 - 3/4 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	0.15	5.03 fl oz
	Refrigerant	0.55 kg	1.21 lb