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	<b>WT Road Wheels &amp; Tires</b>
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	<b>SRS Supplemental Restraint System (SRS)</b>
<b>I BODY</b>	<b>BL Body, Lock &amp; Security System</b>
	<b>GW Glasses, Window System &amp; Mirrors</b>
	<b>RF Roof</b>
	<b>EI Exterior &amp; Interior</b>
	<b>IP Instrument Panel</b>
	<b>SE Seat</b>
	<b>J AIR CONDITIONER</b>
<b>K ELECTRICAL</b>	<b>SC Starting &amp; Charging System</b>
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	<b>DI Driver Information System</b>
	<b>WW Wiper, Washer &amp; Horn</b>
	<b>BCS Body Control System</b>
	<b>LAN LAN System</b>
	<b>AV Audio-Visual System</b>
	<b>ACS Auto Cruise Control System</b>
	<b>PG Power Supply, Ground &amp; Circuit Elements</b>
	<b>L MAINTENANCE</b>

**A**

**B**

**C**

**D**

**E**

**F**

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# FOREWORD

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This manual contains maintenance and repair procedure for the 2009 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

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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

PF0:00000

ENGINE TUNE-UP DATA (VQ35DE)

ELS0003W

Engine model		VQ35DE				
Firing order		1-2-3-4-5-6				
Idle speed	rpm	650 ± 50				
A/T (In "P" or "N" position)						
Ignition timing (BTDC at idle speed)		15° ± 5°				
A/T (In "P" or "N" position)						
CO% at idle		0.7 - 9.9% and engine runs smoothly				
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	12 (0.47)	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 <sup>2</sup> , psi)				
Standard				78 - 98 (0.8 - 1.0, 11 - 14)		
Limit				59 (0.6, 9)		
Cooling system leakage testing pressure						
kPa (kg/cm <sup>2</sup> , psi)				157 (1.6, 23)		
Compression pressure		kPa (kg/cm <sup>2</sup> , 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°		
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 <sup>2</sup> , psi)	Standard	
		78 - 98 (0.8 - 1.0, 11 - 14)	
	Limit	59 (0.6, 9)	
Cooling system leakage testing pressure			
	kPa (kg/cm <sup>2</sup> , psi)	157 (1.6, 23)	
Compression pressure	kPa (kg/cm <sup>2</sup> , 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' (3.84°)	3° 05' ( 3.09° )
	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 Distance	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° 00' (0.00°)	
		Nominal	In 0° 03' (0.05°)	
		Maximum	In 0° 06' (0.10°)	

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**2009**

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' (-1.17°)	-1° 20' (-1.34°)	-0° 40' (-0.67°)
	Nominal	-0° 40' (-0.67°)	-0° 50' (-0.83°)	-0° 10' (-0.17°)
	Maximum	-0° 10' (-0.16°)	-0° 20' (-0.33°)	0° 20' (0.33°)
Toe-in	Total toe-in Distance	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° 00' (0.00°)	
		Nominal	In 0° 07' (0.12°)	
		Maximum	In 0° 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 )	VQ35DE	8.9
	VK45DE	10.4
Engine (VQ35DE)	Drain and refill	
	With oil filter change	4.7
	Without oil filter change	4.4
	Dry engine (Overhaul)	
Engine (VK45DE)	Drain and refill	
	With oil filter change	5.5
	Without oil filter change	4.9
	Dry engine (Overhaul)	

**QUICK REFERENCE CHART M35/M45****2009**

UNIT		Liter	US measure	
Transmission	A/T	5A/T	10.3	10 - 7/8 qt
		7A/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