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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	
	STR	Starting System	
	ACC	Accelerator Control System	
C ELECTRIC POWER TRAIN			
D TRANSMISSION & DRIVELINE			
	TM	Transaxle & Transmission	
	DLN	Driveline	
	FAX	Front Axle	
	RAX	Rear Axle	
E SUSPENSION	FSU	Front Suspension	
	RSU	Rear Suspension	
	WT	Road Wheels & Tires	
F BRAKES	BR	Brake System	
	PB	Parking Brake System	
	BRC	Brake Control System	
G STEERING	ST	Steering System	
	STC	Steering Control System	
H RESTRAINTS	SB	Seat Belt	
	SBC	Seat Belt Control System	
	SR	SRS Airbag	
	SRC	SRS Airbag Control System	
I VENTILATION, HEATER & AIR CONDITIONER	VTL	Ventilation System	
	HA	Heater & Air Conditioning System	
	HAC	Heater & Air Conditioning Control System	
J BODY INTERIOR	INT	Interior	
	IP	Instrument Panel	
	SE	Seat	
	ADP	Automatic Drive Positioner	
K BODY EXTERIOR, DOORS, ROOF & VEHICLE SECURITY	DLK	Door & Lock	
	SEC	Security Control System	
	GW	Glass & Window System	
	PWC	Power Window Control System	
	RF	Roof	
		EXT	Exterior
	BRM	Body Repair	
L DRIVER CONTROLS	MIR	Mirrors	
	EXL	Exterior Lighting System	
	INL	Interior Lighting System	
	WW	Wiper & Washer	
	DEF	Defogger	
	HRN	Horn	
M ELECTRICAL & POWER CONTROL	PWO	Power Outlet	
	BCS	Body Control System	
	LAN	LAN System	
	PCS	Power Control System	
	CHG	Charging System	
	PG	Power Supply, Ground & Circuit Elements	
N DRIVER INFORMATION & MULTIMEDIA	MWI	Meter, Warning Lamp & Indicator	
	WCS	Warning Chime System	
	SN	Sonar System	
	AV	Audio, Visual & Navigation System	
O CRUISE CONTROL & DRIVER ASSISTANCE	CCS	Cruise Control System	
	DAS	Driver Assistance System	
	DMS	Drive Mode System	
P MAINTENANCE	MA	Maintenance	



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A
B
D
E
F
G
H
I
J
K
L
M
N
O
P

FOREWORD

This manual contains maintenance and repair procedure for the 2013 INFINITI M.

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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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

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**QUICK REFERENCE CHART M
ENGINE TUNE-UP DATA (VQ37VHR)**

PPF:00000

Engine model		VQ37VHR
Firing order		1-2-3-4-5-6
Idle speed (In "P" or "N" position)	rpm	650 ± 50
Ignition timing (BTDC at idle speed) (In "P" or "N" position)		10° ± 2°
Tensions of drive belt		Belt tension is not necessary, as it is automatically adjusted by drive belt auto-tensioner.
Radiator cap relief pressure	kPa (kg/cm ² , psi)	
	Standard	122.3 - 151.7 (1.2 - 1.5, 18 - 22)
	Limit	107 (1.1, 16)
Cooling system leakage testing pressure	kPa (kg/cm ² , psi)	157 (1.6, 23)
Compression pressure	kPa (kg/cm ² , psi)/rpm	
	Standard	1,667 - 2,354 (17 - 24, 242 - 341)/200
	Minimum	1,226 (12.5, 178)/200
	Differential limit between cylinders	98 (1.0, 14)/200
Spark plug (Iridium-tipped type)	Make	DENSO
	Standard type	FXE24HR11
	Gap (Nominal) mm (in)	1.1 (0.043)

ENGINE TUNE-UP DATA (VK56VD)

Engine model		VK56VD	
Firing order		1-8-7-3-6-5-4-2	
Idle speed (In "P" or "N" position)	rpm	600 ± 50 (Without 4WAS) 675 ± 50 (With 4WAS)	
Ignition timing (BTDC at idle speed) (In "P" or "N" position)		11° ± 2°	
Tensions of drive belt		Belt tension is not necessary, as it is automatically adjusted by drive belt auto-tensioner.	
Radiator cap relief pressure	kPa (kg/cm ² , psi)		
	Standard	122.3 - 151.7 (1.2 - 1.5, 18 - 22)	
	Limit	107 (1.1, 16)	
Cooling system leakage testing pressure	kPa (kg/cm ² , psi)	157 (1.6, 23)	
Compression pressure	kPa (kg/cm ² , psi)/rpm		
	Standard	1,667 (17, 242)/200	
	Minimum	1,422 (14.5, 206)/200	
	Differential limit between cylinders	98 (1.0, 14)/200	
Spark plug (Iridium-tipped type)	Make	NGK	
	Standard type	DILKAR7B11	
	Gap mm (in)		
		Standard	1.1 (0.043)
	Limit	1.25 (0.049)	

FRONT WHEEL ALIGNMENT
2WD

ELS0003X

Item		Standard	
Wheel size		18 inch	20 inch
Camber Degree minute (Decimal degree)	Minimum	-0° 55' (-0.91°)	-1° 00' (-1.00°)
	Nominal	-0° 10' (-0.17°)	-0° 15' (-0.25°)
	Maximum	0° 35' (0.58°)	0° 30' (0.50°)
	Left and right difference	0° 33' (0.55°) or less	
Caster Degree minute (Decimal degree)	Minimum	3° 10' (3.17°)	
	Nominal	4° 30' (4.50°)	
	Maximum	5° 50' (5.83°)	
	Left and right difference	0° 39' (0.65°) or less	
Kingpin inclination Degree minute (Decimal degree)	Minimum	6° 25' (6.42°)	6° 30' (6.50°)
	Nominal	7° 10' (7.17°)	7° 15' (7.25°)
	Maximum	7° 55' (7.91°)	8° 00' (8.00°)
Toe-in	Total toe-in Distance	Minimum	Out 1 mm (Out 0.03 in)
		Nominal	In 1 mm (In 0.04 in)
		Maximum	In 3 mm (In 0.11 in)
	Total toe-angle Degree minute (Decimal degree)	Minimum	Out 0° 04' 48" (Out 0.08°)
		Nominal	In 0° 04' 48" (In 0.08°)
		Maximum	In 0° 14' 24" (In 0.24°)

Measure value under unladen* conditions.

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

AWD

Item		Standard	
Camber Degree minute (Decimal degree)	Minimum	-0° 50' (-0.83°)	
	Nominal	-0° 05' (-0.08°)	
	Maximum	0° 40' (0.66°)	
	Left and right difference	0° 33' (0.55°) or less	
Caster Degree minute (Decimal degree)	Minimum	2° 40' (2.67°)	
	Nominal	4° 00' (4.00°)	
	Maximum	5° 20' (5.33°)	
	Left and right difference	0° 39' (0.65°) or less	
Kingpin inclination Degree minute (Decimal degree)	Minimum	6° 20' (6.34°)	
	Nominal	7° 05' (7.08°)	
	Maximum	7° 50' (7.83°)	
Toe-in	Total toe-in Distance	Minimum	Out 1 mm (Out 0.03 in)
		Nominal	In 1 mm (In 0.04 in)
		Maximum	In 3 mm (In 0.11 in)
	Total toe-angle Degree minute (Decimal degree)	Minimum	Out 0° 04' 48" (Out 0.08°)
		Nominal	In 0° 04' 48" (In 0.08°)
		Maximum	In 0° 14' 24" (In 0.24°)

Measure value under unladen* conditions.

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

REAR WHEEL ALIGNMENT

ELS0003Y

Item		Standard	
Axle type		2WD	AWD
Camber Degree minute (Decimal degree)	Minimum	-1° 30' (-1.50°)	-1° 00' (-1.00°)
	Nominal	-1° 00' (-1.00°)	-0° 30' (-0.50°)
	Maximum	-0° 30' (-0.50°)	0° 00' (0.00°)
Toe-in	Total toe-in Distance	Minimum	0 mm (0 in)
		Nominal	In 2.9 mm (In 0.114 in)
		Maximum	In 5.8 mm (In 0.228 in)
	Total toe-angle Degree minute (Decimal degree)	Minimum	0° 00' (0.00°)
		Nominal	In 0° 14' 24" (In 0.24°)
		Maximum	In 0° 28' 12" (In 0.47°)

Measure value under unladen* conditions.

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

BRAKE PEDAL

Unit: mm (in)

Item	Standard
Brake pedal height	170.5 - 180.5 (6.71 - 7.11)
Depressed brake pedal height [Depressing 490 N (50 kg, 110 lb) while turning the engine ON]	110.32 (4.34) or more

FRONT DISC BRAKE

2 Piston Type

Unit: mm (in)

Item		Limit
Brake pad	Wear thickness	2.0 (0.079)
	Wear thickness	26.0 (1.024)
Disc rotor	Thickness variation (measured at 8 positions)	0.015 (0.0006)
	Runout (with it attached to the vehicle)	0.035 (0.0014)

4 Piston Type

Unit: mm (in)

Item		Limit
Brake pad	Wear thickness	2.0 (0.079)
	Wear thickness	30.0 (1.181)
Disc rotor	Thickness variation (measured at 8 positions)	0.015 (0.0006)
	Runout (with it attached to the vehicle)	0.035 (0.0014)

REAR DISC BRAKE

1 Piston Type

Unit: mm (in)

Item		Limit
Brake pad	Wear thickness	2.0 (0.079)
Disc rotor	Wear thickness	14.0 (0.551)
	Thickness variation (measured at 8 positions)	0.015 (0.0006)
	Runout (with it attached to the vehicle)	0.055 (0.0022)

2 Piston Type

Unit: mm (in)

Item		Limit
Brake pad	Wear thickness	2.0 (0.079)
Disc rotor	Wear thickness	18.0 (0.709)
	Thickness variation (measured at 8 positions)	0.015 (0.0006)
	Runout (with it attached to the vehicle)	0.055 (0.0022)

REFILL CAPACITIES

ELS00040

UNIT		Liter	US measure		
Fuel tank		75.6	20 gal		
Engine coolant (With reservoir tank) at MAX level	VQ37VHR	8.4	8-7/8 qt		
	VK56VD	10.9	11-4/8 qt		
Engine oil	VQ37VHR	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	
	VK56VD	Drain and refill			
		With oil filter change	2WD	6.0	6-3/8 qt
			AWD	6.1	6-4/8 qt
		Without oil filter change	2WD	5.7	6 qt
AWD			5.8	6-1/8 qt	
	Dry engine (Overhaul)	7.2	7-5/8 qt		
Transmission	VQ37VHR	9.2	9-3/4 qt		
	VK56VD	10	10-5/8 qt		
Transfer		1.0	2-1/8 pt		
Final drive	Front	0.65	1-3/8 pt		
	Rear	VQ37VHR	1.4	3 pt	
		VK56VD	1.15	2-3/8 pt	
Power steering system		1.0	1-1/8 qt		
Air conditioning system	Compressor oil	0.15	5.07 fl oz		
	Refrigerant	0.55 kg	1.21 lb		