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INFINITI

JX

MODEL L50 SERIES

QUICK REFERENCE INDEX

FOREWORD

This manual contains maintenance and repair procedure for the 2013 INFINIT JX.

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®
NISSAN NORTH AMERICA, INC.

INFINITI®

PLEASE HELP MAKE THIS SERVICE MANUAL BETTER!

Your comments are important to INFINITI and will help us to improve our Service Manuals.

Use this form to report any issues or comments you may have regarding our Service Manuals.

Please print this form and type or write your comments below. Mail or fax to:

Nissan North America, Inc.
Technical Service Information
39001 Sunrise Drive, P.O. Box 9200
Farmington Hills, MI USA 48331
FAX: (248) 488-3880

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.*

_____

_____

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_____

Are the trouble diagnosis procedures logical and easy to use? (circle your answer) YES NO

If no, what page number(s)?_____*Note: Please include a copy of each page, marked with your comments.*

Please describe the issue or problem in detail: _____

_____

_____

_____

Is the organization of the manual clear and easy to follow? (circle your answer) YES NO

Please comment: _____

_____

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What information should be included in INFINITI Service Manuals to better support you in servicing or repairing customer vehicles?

_____

_____

_____

_____

DATE: _____ YOUR NAME: _____ POSITION: _____

DEALER: _____ DEALER NO.: _____ ADDRESS: _____

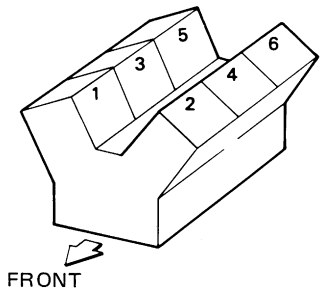
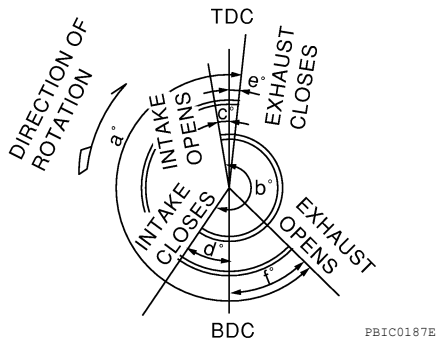
CITY:_____ STATE/PROV./COUNTRY: _____ ZIP/POSTAL CODE: _____

QUICK REFERENCE CHART: JX

Engine Tune-up Data

INFOID:0000000008498641

GENERAL SPECIFICATIONS

Cylinder arrangement		V-6
Displacement cm^3 (cu in)		3,498 (213.45)
Bore and stroke mm (in)		95.5 x 81.4 (3.760 x 3.205)
Valve arrangement		DOHC
Firing order		1-2-3-4-5-6
Number of piston rings	Compression	2
	Oil	1
Number of main bearings		4
Compression ratio		10.6:1
Compression pressure kPa (kg/cm^2, psi)/300 rpm	Standard	1,275 (13.0, 185)
	Minimum	981 (10.0, 142)
	Differential limit between cylinders	98 (1.0, 14)
Cylinder number	 SEM713A	
Valve timing (Valve timing control - “OFF”)	 PBIC0187E	

Unit: degree

a	b	c	d	e	f
240	240	−10	70	10	50

Drive Belt

INFOID:0000000008498642

DRIVE BELT

Tension of drive belt	Belt tension is not necessary, as it is automatically adjusted by drive belt auto-tensioner.

Spark Plug

INFOID:0000000008498643

SPARK PLUG

Unit: mm (in)

Make		DENSO
Standard type*		FXE22HR11
Gap	Standard	1.1 (0.043)

*: Always check with the Parts Department for the latest parts information.

Front Wheel Alignment

INFOID:0000000008498640

UNITED STATES

Item			Standard	
Measurement wheel			Left side	Right side
Camber Degree minute (Decimal degree)		Minimum	–1° 00′ (–1.00°)	–1° 15′ (–1.25°)
		Nominal	–0° 15′ (–0.25°)	–0° 30′ (–0.50°)
		Maximum	0° 30′ (0.50°)	0° 15′ (0.55°)
		Left and right difference*1	–0° 15′± 0° 33′ (0° 25′± 0.55°)	
Caster Degree minute (Decimal degree)		Minimum	3° 55′ (3.92°)	4° 15′ (4.25°)
		Nominal	4° 40′ (4.67°)	5° 00′ (5.00°)
		Maximum	5° 25′ (5.41°)	5° 45′ (5.75°)
		Left and right difference*1	0.30′ (0.50°) Maximum	
Kingpin inclination Degree minute (Decimal degree)		Minimum	11° 55′ (11.92°)	12° 10′ (12.17°)
		Nominal	12° 40′ (12.67°)	12° 55′ (12.92°)
		Maximum	13° 25′ (13.41°)	13° 40′ (13.67°)
Toe-in	Total toe-in Distance	Minimum	Out 0.6 mm (0.024 in)	
		Nominal	In 1.4 mm (0.055 in)	
		Maximum	In 3.4 mm (0.134 in)	
	Toe angle (left wheel or right wheel) Degree minute (Decimal degree)	Minimum	0° 3′ 36″ (-0.06°)	
		Nominal	0° 6′ 14″ (0.10°)	
		Maximum	0° 15′ 36″ (0.26°)	

Measure value under unladen conditions (Fuel, engine coolant and lubricant are full. Spare tire, jack, hand tools and mats are in designated positions).

*1: A difference when assuming the left side a standard.

CANADA

Item			Standard	
Measurement wheel			Left side	Right side
Camber Degree minute (Decimal degree)		Minimum	–1° 00′ (–1.00°)	–1° 15′ (–1.25°)
		Nominal	–0° 15′ (–0.25°)	–0° 30′ (–0.50°)
		Maximum	0° 30′ (0.50°)	0° 15′ (0.25°)
		Left and right difference*1	–0° 15′± 0° 33′ (0° 25′± 0.55°)	
Caster Degree minute (Decimal degree)		Minimum	3° 55′ (3.92°)	4° 15′ (4.25°)
		Nominal	4° 40′ (4.67°)	5° 00′ (5.00°)
		Maximum	5° 25′ (5.41°)	5° 45′ (5.75°)
		Left and right difference*1	0.30′ (0.50°) Maximum	

Item			Standard	
Kingpin inclination Degree minute (Decimal degree)		Minimum	11° 55′ (11.92°)	12° 10′ (12.17°)
		Nominal	12° 40′ (12.67°)	12° 55′ (12.92°)
		Maximum	13° 25′ (13.41°)	13° 40′ (13.67°)
Toe-in	Total toe-in Distance	Minimum	Out 0.6 mm (0.024 in)	
		Nominal	In 1.4 mm (0.055 in)	
		Maximum	In 3.4 mm (0.134 in)	
	Toe angle (left wheel or right wheel) Degree minute (Decimal degree)	Minimum	0° 3′ 36″ (-0.06°)	
		Nominal	0° 6′ 14″ (0.10°)	
		Maximum	0° 15′ 36″ (0.26°)	

Measure value under unladen conditions. (Fuel, engine coolant and lubricant are full. Spare tire, jack, hand tools and mats are in designated positions).

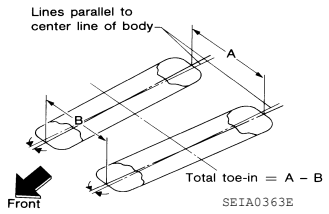
*1: A difference when assuming the left side a standard.

Rear Wheel Alignment

INFOID:0000000008498638

UNITED STATES AND CANADA

Item			Standard



Camber Degree minute (Decimal degree)		Minimum	–1° 20′ (–1.33°)
		Nominal	–0° 35′ (–0.58°)
		Maximum	–0° 10′ (–0.16°)
Toe-in	Total toe-in Distance (A-B)	Minimum	Out 0.8 mm (0.031 in)
		Nominal	In 2.2 mm (0.087 in)
		Maximum	In 5.2 mm (0.205 in)
	Angle left wheel or right wheel Degree minute (Decimal degree)	Minimum	0° 2′ 24″ (-0.04)
		Nominal	0° 9′ 36″ (0.16°)
		Maximum	0° 21′ 36″ (0.36°)

Measure value under unladen conditions (Fuel, engine coolant and lubricant are full. Spare tire, jack, hand tools and mats are in designated positions.

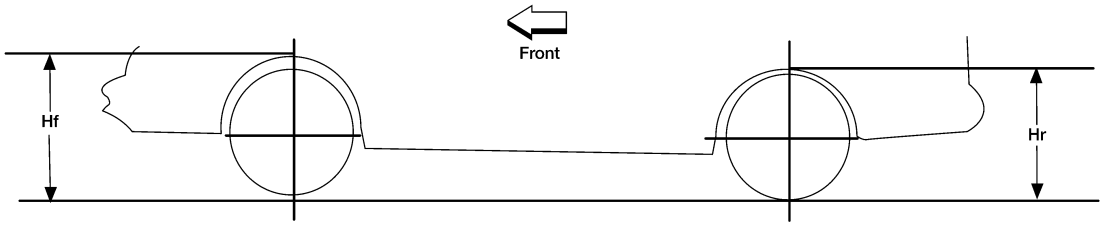
Wheelarch Height

INFOID:0000000008498639

UNITED STATES

Item	Standard					
Axle type	2WD			AWD		
Wheel size	235/65R18		235/55R20	235/65R18		235/55R20
Grade	Base	Premium		Base	Premium	
Front (Hf)	823 mm (32.40 in)	822 mm (32.36 in)	821 mm (32.32 in)	822 mm (32.36 in)	822 mm (32.36 in)	821 mm (32.32 in)

Item	Standard					
Axle type	2WD			AWD		
Wheel size	235/65R18		235/55R20	235/65R18		235/55R20
Grade	Base	Premium		Base	Premium	
Rear (Hr)	828 mm (32.60 in)	827 mm (32.56 in)	826 mm (32.52 in)	827 mm (32.56 in)	827 mm (32.56 in)	826 mm (32.52 in)

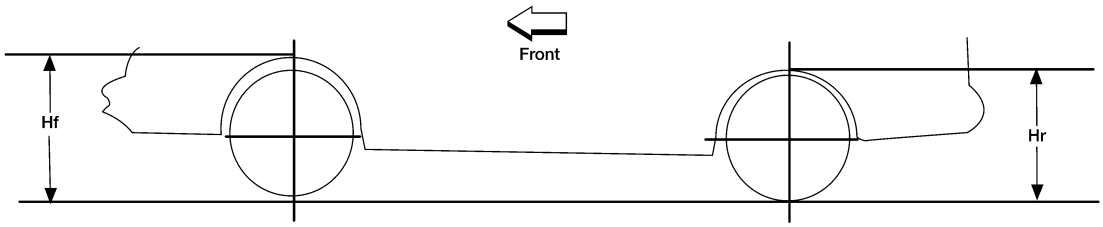


LEIA0085E

Measure value under unladen conditions. (Fuel, engine coolant and lubricant are full. Spare tire, jack, hand tools and mats are in designated positions).

CANADA (AWD)

Item	Standard		
Wheel size	235/65R18		235/55R20
Grade	Base	Premium	
Front (Hf)	823 mm (32.40 in))	822 mm (32.36 in)	821 mm (32.32 in)
Rear (Hr)	828 mm (32.60 in)	827 mm (32.56 in)	826 mm (32.52 in)



LEIA0085E

Measure value under unladen* conditions. (Fuel, engine coolant and lubricant are full. Spare tire, jack, hand tools and mats are in designated positions).

Brake Specifications

INFOID:0000000008498636

Unit: mm (in)

Front brake	Cylinder bore diameter	45.0 (1.772) × 2
	Pad length × width × thickness	131.4 (5.173) × 53.0 (2.087) × 10.0 (0.394)
	Rotor outer diameter × thickness	320.0 (12.598) × 28.0 (1.102)
Rear brake	Cylinder bore diameter	42.86 (1.6874)
	Pad length × width × thickness	83.0 (3.268) × 33.0 (1.299) × 8.5 (0.335)
	Rotor outer diameter × thickness	308 (12.126) × 16.0 (0.630)
Master cylinder	Cylinder bore diameter	26.99 (1.063)
Control valve	Valve type	Electric brake force distribution

Brake Pedal

INFOID:0000000008498637

Unit: mm (in)

Item	Standard
Brake pedal height (H_1)	204 – 224 (8.03 – 8.82)
Clearance (A) between brake pedal bracket, stop lamp switch and ASCD cancel switch contact ends	0.20 – 1.96 (0.0079 – 0.0772)
Depressed brake pedal height (H_2) [Depressing 490 N (50 kg, 110 lb) while turning the engine ON]	75.1 (2.96)

Front Disc Brake

INFOID:0000000008498634

Unit: mm (in)

Item		Limit
Brake pad	Wear thickness	2.0 (0.079)
Disc rotor	Wear thickness	26.0 (1.024)
	Thickness variation (measured at 8 positions)	0.008 (0.0003)
	Runout (with disc rotor attached to the vehicle)	0.040 (0.0016) or less

Rear Disc Brake

INFOID:0000000008498635

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)	0.020 (0.0008)
	Runout (with disc rotor attached to the vehicle)	0.050 (0.0020) or less

Fluids and Lubricants

INFOID:0000000008498633

Description		Capacity (Approximate)		
		Metric	US measure	Imp measure
Fuel		74.0 ℓ	19-1/2 gal	16-1/4 gal
Engine oil Drain and refill	With oil filter change	4.8 ℓ	5-1/8 qt	4-1/4 qt
	Without oil filter change	4.5 ℓ	4-3/4 qt	4 qt
	Dry engine (Overhaul)	5.3 ℓ	5-5/8 qt	4-5/8 qt
Cooling system (with reservoir at MAX level)		9.6 ℓ	10-1/8 qt	8-1/2 qt
CVT fluid		10.2 ℓ	10-3/4 qt	9 qt
Differential gear oil	Rear	0.5 ℓ	1 pt	7/8 pt
Transfer fluid		0.31 ℓ	5/8 pt	1/2 pt
Power steering fluid (PSF)		—	—	—
Brake fluid		—	—	—
Multi-purpose grease		—	—	—
Windshield washer fluid		4.6 ℓ	4-7/8 qt	4 qt
Air conditioning system refrigerant		0.85 ± 0.05 kg	1.87 ± 0.1 lb	1.87 ± 0.1 lb
Air conditioning system oil		180 mℓ	6.1 fl oz	6.3 fl oz