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INFINITI

MODEL H15
SERIES

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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
P	MAINTENANCE	MA	Maintenance
Q	INDEX	IDX	Alphabetical Index

FOREWORD

This manual contains maintenance and repair procedures for the INFINITI QX30, model H15 series.

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 INFINITI must first be completely satisfied that neither personal safety nor the vehicle's safety will be jeopardized by the service method selected.

NISSAN INTERNATIONAL SA

Service Engineering Section

Paris, France

INFINITI®

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Please describe any Service Manual issues or problems in detail:

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

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

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QUICK REFERENCE CHART QX30

PFP:00000

ENGINE TUNE-UP DATA (1.6L TURBO ENGINE)

ELS0003W

Engine model		1.6L TURBO ENGINE
Firing order		1-3-4-2
Idle speed A/T (In “P or N” position)	rpm	700
Ignition timing (BTDC at idle speed)		(-10°) - (+35°)
Tension of drive belt		Belt tension is not necessary, as it is automatically adjusted by drive belt auto-tensioner.
Cap relief pressure	kPa (kg/cm^2, psi)	
	Standard (Stage1)	130.0 - 150.0 (1.33 - 1.53, 18.85 - 21.75)
	Standard (Stage2)	190.0 - 210.0 (1.94 - 2.14, 27.55 - 30.45)
	Testing pressure	140.0 (1.42, 20.30)
Leakage testing pressure	kPa (kg/cm^2, psi)	140.0 (1.42, 20.30)
Compression pressure	kPa (kg/cm^2, psi)	
	Standard	1,200 (12.24, 174)
	Minimum	850 (8.67, 123)
	Differential limit between cylinders	150 (1.53, 21.75)
Spark plug (Iridium-tipped type)	Make	NGK
	Standard type*	SILZKFR8C7S

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

ENGINE TUNE-UP DATA (2.0L TURBO ENGINE)

ELS0003W

Engine model		2.0L TURBO ENGINE
Firing order		1-3-4-2
Idle speed A/T (In “P or N” position)	rpm	700
Ignition timing (BTDC at idle speed)		(-10°) - (+35°)
Tension of drive belt		Belt tension is not necessary, as it is automatically adjusted by drive belt auto-tensioner.
Cap relief pressure	kPa (kg/cm^2, psi)	
	Standard (Stage1)	130.0 - 150.0 (1.33 - 1.53, 18.85 - 21.75)
	Standard (Stage2)	190.0 - 210.0 (1.94 - 2.14, 27.55 - 30.45)
	Testing pressure	140.0 (1.42, 20.30)
Leakage testing pressure	kPa (kg/cm^2, psi)	140.0 (1.42, 20.30)
Compression pressure	kPa (kg/cm^2, psi)	
	Standard	1,200 (12.24, 174)
	Minimum	850 (8.67, 123)
	Differential limit between cylinders	150 (1.53, 21.75)
Spark plug (Iridium-tipped type)	Make	NGK
	Standard type*	SILZKFR8C7S

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

FRONT WHEEL ALIGNMENT

1.6L TURBO ENGINE

Item			Standard
Camber Degree minute (Decimal degree)		Minimum	–1° 35′ (–1.58°)
		Nominal	–0° 50′ (–0.83°)
		Maximum	–0° 05′ (–0.09°)
		Left and right difference*1	–0° 30′ (–0.50°) - 0° 30′ (0.50°)
Caster Degree minute (Decimal degree)		Minimum	5° 30′ (5.50°)
		Nominal	6° 15′ (6.25°)
		Maximum	7° 00′ (7.00°)
		Left and right difference*1	–0° 30′ (–0.50°) - 0° 30′ (0.50°)
Kingpin inclination Degree minute (Decimal degree)		Minimum	9° 45′ (9.75°)
		Nominal	10° 30′ (10.50°)
		Maximum	11° 15′ (11.25°)
Toe-in	Total toe-in Distance	Minimum	In 0.7 mm (0.028 in)
		Nominal	In 2.7 mm (0.106 in)
		Maximum	In 4.7 mm (0.185 in)
	Total toe-angle Degree minute (Decimal Degree)	Minimum	In 0° 9′ 00″ (In 0.15°)
		Nominal	In 0° 13′ 48″ (In 0.23°)
		Maximum	In 0° 18′ 36″ (In 0.31°)

Measure value under unladen*2 conditions.

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

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

2.0L TURBO ENGINE (2WD MODELS)

Item			Standard	
Grade			Except Sport	Sport
Camber Degree minute (Decimal degree)		Minimum	–1° 35′ (–1.58°)	–1° 45′ (–1.75°)
		Nominal	–0° 50′ (–0.83°)	–1° 00′ (–1.00°)
		Maximum	–0° 05′ (–0.09°)	–0° 15′ (–0.25°)
		Left and right difference*1	–0° 30′ (–0.50°) - 0° 30′ (0.50°)	
Caster Degree minute (Decimal degree)		Minimum	5° 30′ (5.50°)	5° 50′ (5.84°)
		Nominal	6° 15′ (6.25°)	6° 35′ (6.58°)
		Maximum	7° 00′ (7.00°)	7° 20′ (7.33°)
		Left and right difference*1	–0° 30′ (–0.50°) - 0° 30′ (0.50°)	
Kingpin inclination Degree minute (Decimal degree)		Minimum	9° 45′ (9.75°)	9° 55′ (9.92°)
		Nominal	10° 30′ (10.50°)	10° 40′ (10.67°)
		Maximum	11° 15′ (11.25°)	11° 25′ (11.41°)
Toe-in	Total toe-in Distance	Minimum	In 1.7 mm (0.067 in)	
		Nominal	In 2.7 mm (0.106 in)	
		Maximum	In 3.7 mm (0.146 in)	
	Total toe-angle Degree minute (Decimal degree)	Minimum	In 0° 9′ 00″ (In 0.15°)	In 0° 8′ 24″ (In 0.14°)
		Nominal	In 0° 13′ 48″ (In 0.23°)	In 0° 13′ 12″ (In 0.22°)
		Maximum	In 0° 18′ 36″ (In 0.31°)	In 0° 18′ 00″ (In 0.30°)

Measure value under unladen*2 conditions.

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

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

2.0L TURBO ENGINE (AWD MODELS)

Item			Standard
Camber Degree minute (Decimal degree)		Minimum	–1° 15′ (–1.25°)
		Nominal	–0° 30′ (–0.50°)
		Maximum	0° 15′ (0.25°)
		Left and right difference*1	–0° 30′ (–0.50°) - 0° 30′ (0.50°)
Caster Degree minute (Decimal degree)		Minimum	5° 10′ (5.17°)
		Nominal	5° 55′ (5.92°)
		Maximum	6° 40′ (6.66°)
		Left and right difference*1	–0° 30′ (–0.50°) - 0° 30′ (0.50°)
Kingpin inclination Degree minute (Decimal degree)		Minimum	9° 25′ (9.42°)
		Nominal	10° 10′ (10.17°)
		Maximum	10° 55′ (10.91°)
Toe-in	Total toe-in Distance	Minimum	In 0.7 mm (0.028 in)
		Nominal	In 2.7 mm (0.106 in)
		Maximum	In 4.7 mm (0.185 in)
	Total toe-angle Degree minute (Decimal degree)	Minimum	In 0° 9′ 00″ (In 0.15°)
		Nominal	In 0° 13′ 48″ (In 0.23°)
		Maximum	In 0° 18′ 36″ (In 0.31°)

Measure value under unladen*2 conditions.

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

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

REAR WHEEL ALIGNMENT

1.6L TURBO ENGINE

Item			Standard
Camber Degree minute (Decimal degree)		Minimum	–1° 15′ (–1.25°)
		Nominal	–0° 45′ (–0.75°)
		Maximum	–0° 15′ (–0.25°)
Toe-in	Total toe-in Distance	Minimum	Out 1.1 mm (Out 0.043 in)
		Nominal	In 0.4 mm (In 0.016 in)
		Maximum	In 1.9 mm (In 0.075 in)
	Total toe-angle Degree minute (Decimal degree)	Minimum	Out 0° 02′ 24″ (Out 0.04°)
		Nominal	In 0° 01′ 48″ (In 0.03°)
		Maximum	In 0° 06′ 00″ (In 0.10°)

Measure value under unladen* conditions.

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

2.0L TURBO ENGINE (2WD MODELS)

EXCEPT CANADA

Item			Standard	
Grade			Except Sport	Sport
Camber Degree minute (Decimal degree)		Minimum	–1° 15′ (–1.25°)	–1° 45′ (–1.75°)
		Nominal	–0° 45′ (–0.75°)	–1° 15′ (–1.25°)
		Maximum	–0° 15′ (–0.25°)	–0° 45′ (–0.75°)
Toe-in	Total toe-in Distance	Minimum	Out 1.1 mm (Out 0.043 in)	Out 0.3 mm (Out 0.012 in)
		Nominal	In 0.4 mm (In 0.016 in)	In 1.2 mm (In 0.047 in)
		Maximum	In 1.9 mm (In 0.075 in)	In 2.7 mm (In 0.106 in)
	Total toe-angle Degree minute (Decimal degree)	Minimum	Out 0° 02′ 24″ (Out 0.04°)	In 0° 01′ 48″ (In 0.03°)
		Nominal	In 0° 01′ 48″ (In 0.03°)	In 0° 06′ 00″ (In 0.10°)
		Maximum	In 0° 06′ 00″ (In 0.10°)	In 0° 10′ 12″ (In 0.17°)

Measure value under unladen* conditions.

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

CANADA

Item			Standard	
Grade			Except Sport	Sport
Camber Degree minute (Decimal degree)		Minimum	–1° 15′ (–1.25°)	–1° 45′ (–1.75°)
		Nominal	–0° 45′ (–0.75°)	–1° 15′ (–1.25°)
		Maximum	–0° 15′ (–0.25°)	–0° 45′ (–0.75°)
Toe-in	Total toe-in Distance	Minimum	Out 1.2 mm (Out 0.047 in)	Out 0.3 mm (Out 0.012 in)
		Nominal	In 0.3 mm (In 0.012 in)	In 1.2 mm (In 0.047 in)
		Maximum	In 1.8 mm (In 0.071 in)	In 2.7 mm (In 0.106 in)
	Total toe-angle Degree minute (Decimal degree)	Minimum	Out 0° 02′ 24″ (Out 0.04°)	In 0° 01′ 48″ (In 0.03°)
		Nominal	In 0° 01′ 48″ (In 0.03°)	In 0° 06′ 00″ (In 0.10°)
		Maximum	In 0° 06′ 00″ (In 0.10°)	In 0° 10′ 12″ (In 0.17°)

Measure value under unladen* conditions.

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

2.0L TURBO ENGINE (AWD MODELS)

EXCEPT CANADA

Item			Standard
Camber Degree minute (Decimal degree)		Minimum	–1° 20′ (–1.33°)
		Nominal	–0° 50′ (–0.83°)
		Maximum	–0° 20′ (–0.34°)
Toe-in	Total toe-in Distance	Minimum	Out 1.0 mm (Out 0.039 in)
		Nominal	In 0.5 mm (In 0.020 in)
		Maximum	In 2.0 mm (In 0.079 in)
	Total toe-angle Degree minute (Decimal degree)	Minimum	Out 0° 01′ 48″ (Out 0.03°)
		Nominal	In 0° 02′ 24″ (In 0.04°)
		Maximum	In 0° 06′ 36″ (In 0.11°)

Measure value under unladen* conditions.

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

CANADA

Item			Standard	
Grade			Base	Premium
Camber Degree minute (Decimal degree)		Minimum	–1° 15′ (–1.25°)	–1° 20′ (–1.33°)
		Nominal	–0° 45′ (–0.75°)	–0° 50′ (–0.83°)
		Maximum	–0° 15′ (–0.25°)	–0° 20′ (–0.34°)
Toe-in	Total toe-in Distance	Minimum	Out 1.1 mm (Out 0.043 in)	Out 1.0 mm (Out 0.039 in)
		Nominal	In 0.4 mm (In 0.016 in)	In 0.5 mm (In 0.020 in)
		Maximum	In 1.9 mm (In 0.075 in)	In 2.0 mm (In 0.079 in)
	Total toe-angle Degree minute (Decimal degree)	Minimum	Out 0° 01′ 48″ (Out 0.03°)	
		Nominal	In 0° 02′ 24″ (In 0.04°)	
		Maximum	In 0° 06′ 36″ (In 0.11°)	

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

EXCEPT SPORT MODELS

Unit: mm (in)

Item	Standard
Brake pedal height	152.8 – 162.8 (6.02 – 6.41)

SPORT MODELS

Unit: mm (in)

Item	Standard
Brake pedal height	152.7 – 162.7 (6.01 – 6.41)

FRONT DISC BRAKE

1.6L TURBO ENGINE

Unit: mm (in)

Item		Limit
Brake pad	Wear thickness	2.0 (0.079)
Disc rotor	Wear thickness	25.4 (0.1000)

2.0L TURBO ENGINE

Except Sport grade

Unit: mm (in)

Item		Limit
Brake pad	Wear thickness	2.0 (0.079)
Disc rotor	Wear thickness	27.4 (1.079)

Sport grade

Unit: mm (in)

Item		Limit
Brake pad	Wear thickness	2.0 (0.079)
Disc rotor	Wear thickness	28 (1.10)

REAR DISC BRAKE

1.6L TURBO ENGINE

Unit: mm (in)

Item		Limit
Brake pad	Wear thickness	2.0 (0.079)
Disc rotor	Wear thickness	8.3 (0.327)

2.0L TURBO ENGINE

Unit: mm (in)

Item		Limit
Brake pad	Wear thickness	2.0 (0.079)
Disc rotor	Wear thickness	8.3 (0.327)

REFILL CAPACITIES

UNIT			Liter	US measure
Fuel tank	2WD		50	13-2/8 gal
	AWD		56	14-6/8 gal
Engine coolant (With reservoir tank) at MAX level			7.6	8 qt
Engine oil	Drain and refill			
	With oil filter change	1.6L TURBO ENGINE	5.8	6-1/8 qt
		2.0L TURBO ENGINE	5.6	5-7/8 qt
	Without oil filter change		—	—
	Dry engine (Overhaul)		—	—
Transmission	2WD		4.85	5-1/8 qt
	AWD		5.25	5-1/2 qt
Final drive			0.74	6/8 qt
Power steering system			—	—
Air conditioning system	Compressor oil		0.12	4.1 fl oz
	Refrigerant		0.65 kg	1.43 lb