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NISSAN

NP300

MODEL D23 SERIES

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
C ELECTRIC POWER TRAIN	ACC	Accelerator Control System
D TRANSMISSION & DRIVELINE	CL	Clutch
	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
H RESTRAINTS	SB	Seat Belt
	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
K BODY EXTERIOR, DOORS, ROOF & VEHICLE SECURITY	DLK	Door & Lock
	SEC	Security Control System
	GW	Glass & Window System
	PWC	Power Window Control System
	EXT	Exterior
	BRM	Body Repair Manual
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	CCS	Cruise Control System
P MAINTENANCE	MA	Maintenance

A

B

C

D

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FOREWORD

This manual contains maintenance and repair procedures for the 2017 NISSAN NP300 MODEL D23 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 NISSAN must first be completely satisfied that neither personal safety nor the vehicle's safety will be jeopardized by the service method selected.



**NISSAN MEXICANA, S.A. DE C.V.
AFTER SALES DEPARTMENT
SERVICE TECHNICAL DEVELOPMENT DIVISION
MEXICO D.F.**



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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

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: _____

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

DATE: _____ YOUR NAME: _____ POSITION: _____

DEALER: _____ DEALER NO.: _____ ADDRESS: _____

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

QUICK REFERENCE CHART: NP300

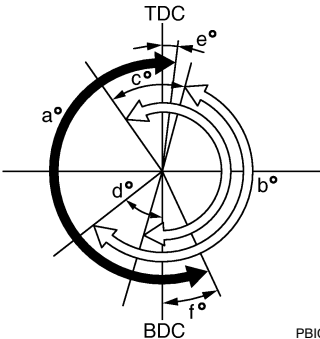
Engine Tune-up Data: QR25DE

INFOID:0000000014742669

GENERAL SPECIFICATIONS

Engine type		QR25DE
Cylinder arrangement		In-line 4
Displacement	cm ³ (cu in)	2,488 (151.82)
Bore and stroke	mm (in)	89.0 x 100.0 (3.504 x 3.937)
Valve arrangement		DOHC
Firing order		1-3-4-2
Number of piston rings	Compression	2
	Oil	1
Compression ratio		10.0
Compression pressure kPa (bar, kg/cm ² , psi)/250 rpm	Standard	1,410 (14.1, 14.4, 204.7)
	Minimum	1,220 (12.2, 12.1, 176.3)
	Differential limit between cylinders	100 (1.0, 1.0, 14)

Unit: degree

Valve timing						
	a	b	c	d	e	f
	212	224	8 (-12)	52 (32)	7	25

() : Valve timing control "ON"

Drive belt

INFOID:0000000014742668

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

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Unit: mm (in)

Make	DENSO
Standard type	FXE20HE11
Spark plug gap (Nominal)	1.1 (0.043)

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Engine Tune-up Data: YD25DDTi

INFOID:0000000014742666

GENERAL SPECIFICATION

Cylinder arrangement		In-line 4
Displacement	Unit: cm ³ (cu in)	2,488 (151.82)
Bore and stroke	Unit: mm (in)	89.0 x 100 (3.504 x 3.937)
Valve arrangement		DOHC
Firing order		1-3-4-2
Number of piston rings	Compression	2
	Oil	1
Number of main bearings		5
Compression ratio		15
Compression pressure Unit: kPa (bar, kg/cm ² , psi)/200 rpm	Standard	2,800 (28, 28.56, 406)
	Minimum	2,200 (22, 22.44, 319)
	Differential limit between cylinders	450 (4.5, 4.59, 65.3)

Drive belt

INFOID:0000000014742665

Belt Tension and Frequency

Location	Tension adjustment *		Unit: N (kg)	Frequency adjustment *			Unit: Hz
	Used belt		New belt	Used belt		New belt	
	Limit	After adjusted		Limit	After adjusted		
Drive belt	Belt tension is not necessary, as it is automatically adjusted by drive belt auto-tensioner.						
Power steering oil pump belt	240 (24.5)	532 - 588 (54.3 - 60.0)	760 - 840 (77.5 - 85.7)	162	245	290	

*: When engine is cold.

Engine Tune-up Data: YS23DDT/TS23DDTT (M9Y)

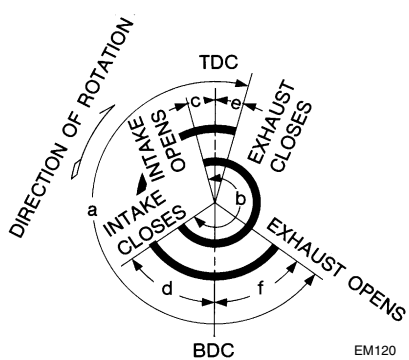
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GENERAL SPECIFICATIONS

Engine type		YS23DDT/YS23DDTT (M9T)
Cylinder arrangement		In-line 4
Displacement	cm ³ (cu in)	2,298 (140.22)
Bore and stroke	mm (in)	85.0 x 101.0 (3.346 x 3.976)
Valve arrangement		DOHC
Firing order		1-3-4-2
Number of piston rings	Compression	2
	Oil	1

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Compression ratio	15.5
Valve timing	

Unit: degree

a	b	c	d	e	f
198	187	- 11	18	- 17	35

Drive Belts

INFOID:0000000014742663

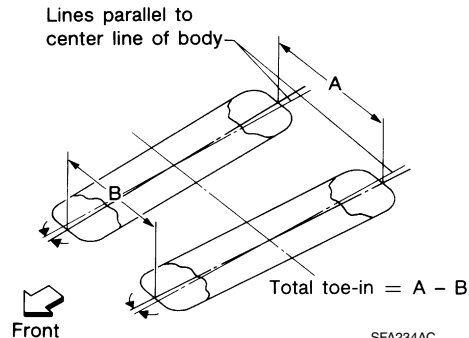
Tension of drive belt	Belt tensioning is not necessary, as it is automatically adjusted by drive belt auto-tensioner.
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Front Wheel Alignment (Unladen*1)

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MEXICO

Wheel diameter		15 in	16 in
Camber Degree minute (Decimal degree)	Minimum	-0°36' (-0.60°)	
	Nominal	0°9' (0.15°)	
	Maximum	0°54' (0.90°)	
	(LH) and (RH) difference*2	0° 45' (0.75°) or less	
Caster Degree minute (Decimal degree)	Minimum	1° 47' (1.78°)	
	Nominal	2° 32' (2.53°)	
	Maximum	3° 17' (3.28°)	
	(LH) and (RH) difference*2	0° 45' (0.75°) or less	
Kingpin inclination Degree minute (Decimal degree)	Minimum	12° 02' (12.03°)	
	Nominal	12° 32' (12.53°)	
	Maximum	13° 02' (13.03°)	



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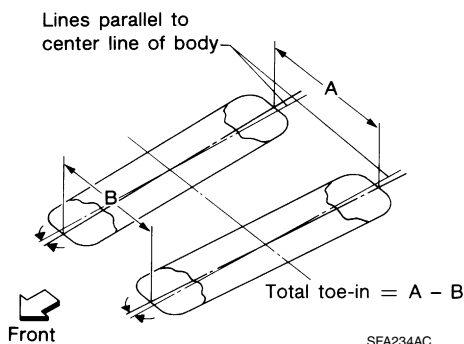
Wheel diameter			15 in	16 in
Total toe-in	Distance (A-B)	Minimum	In 3.5 mm (0.14 in)	In 4.0 mm (0.16 in)
		Nominal	In 4.5 mm (0.18 in)	In 5.0 mm (0.20 in)
		Maximum	In 5.5 mm (0.22 in)	In 6.0 mm (0.24 in)
	Angle (LH) and (RH) Degree minute (Decimal degree)	Minimum	In 0° 09' (0.15°)	
		Nominal	In 0° 11' (0.18°)	
		Maximum	In 0° 13' (0.22°)	

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

*2: The difference when assuming the (LH) side is the standard.

EXCEPT MEXICO

Camber Degree minute (Decimal degree)	Minimum	0°2' (0.03°)
	Nominal	0°47' (0.78°)
	Maximum	1°32' (1.53°)
	(LH) and (RH) difference*2	0° 45' (0.75°) or less
Caster Degree minute (Decimal degree)	Minimum	1° 11' (1.18°)
	Nominal	1° 56' (1.93°)
	Maximum	2° 41' (2.68°)
	(LH) and (RH) difference*2	0° 45' (0.75°) or less
Kingpin inclination Degree minute (Decimal degree)	Minimum	11° 11' (11.18°)
	Nominal	11° 41' (11.68°)
	Maximum	12° 11' (12.18°)



Total toe-in	Distance (A-B)	Minimum	In 3.6 mm (0.14 in)
		Nominal	In 4.6 mm (0.18 in)
		Maximum	In 5.6 mm (0.22 in)
	Angle (LH) and (RH) Degree minute (Decimal degree)	Minimum	In 0° 08' (0.13°)
		Nominal	In 0° 10' (0.17°)
		Maximum	In 0° 12' (0.20°)

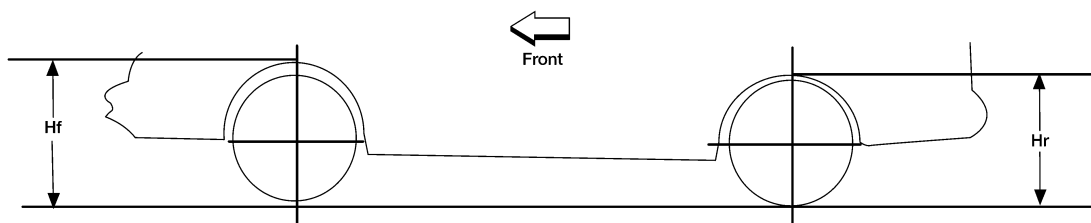
*1: Fuel, engine coolant and lubricants are full. Spare tire, jack, hand tools and mats are in designated positions.

*2: The difference when assuming the (LH) side is the standard.

Wheelarch Height (Unladen*)

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MEXICO

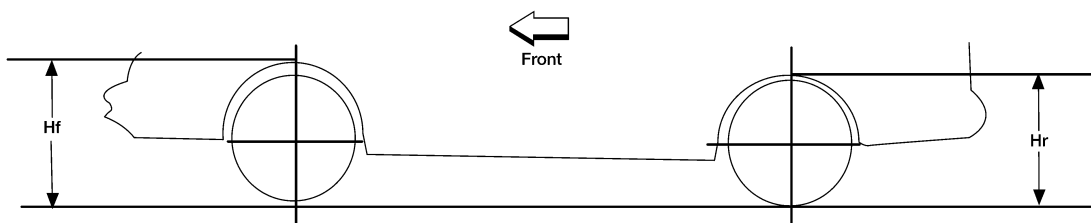


LEIA0085E

Body type	Narrow	Wide
Wheel diameter	15 in	16 in
Front (Hf)	844 mm $\pm$ 15 mm (33.23 in $\pm$ 0.59 in)	880 mm $\pm$ 15 mm (34.65 in $\pm$ 0.59 in)
Rear (Hr)	867 mm $\pm$ 15 mm (34.13 in $\pm$ 0.59 in)	907 mm $\pm$ 15 mm (35.71 in $\pm$ 0.59 in)

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

EXCEPT MEXICO



LEIA0085E

Engine type	YD25DDTi		YS23DDT/YS23DDTT (M9T)	
Wheel diameter	16 in	18 in	16 in	18 in
Front (Hf)	905 mm $\pm$ 15 mm (35.63 in $\pm$ 0.59 in)	909 mm $\pm$ 15 mm (35.79 in $\pm$ 0.59 in)	906 mm $\pm$ 15 mm (35.67 in $\pm$ 0.59 in)	909 mm $\pm$ 15 mm (35.79 in $\pm$ 0.59 in)
Rear (Hr)	946 mm $\pm$ 15 mm (37.24 in $\pm$ 0.59 in)	951 mm $\pm$ 15 mm (37.44 in $\pm$ 0.59 in)	946 mm $\pm$ 15 mm (37.24 in $\pm$ 0.59 in)	951 mm $\pm$ 15 mm (37.44 in $\pm$ 0.59 in)

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

Brake Specifications

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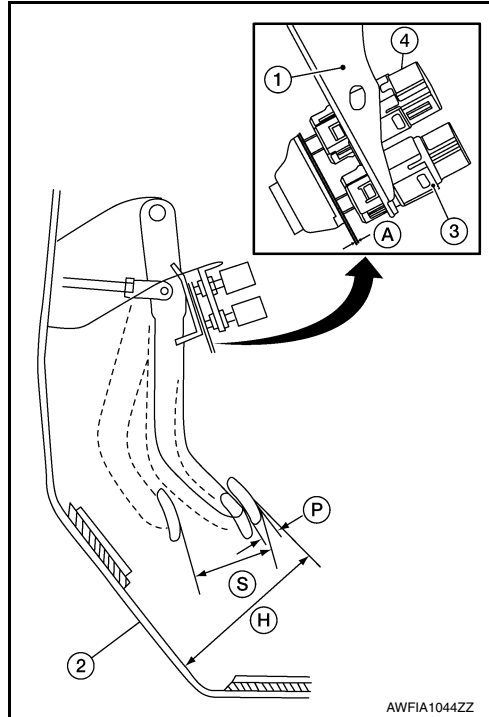
Unit: mm (in)

Wheel size		15 inch	16 inch
Front brake	Cylinder bore diameter	45.0 (1.772)	
	Pad length $\times$ width $\times$ thickness	139.4 $\times$ 51.5 $\times$ 10.0 (5.488 $\times$ 2.028 $\times$ 0.394)	
	Rotor outer diameter $\times$ thickness	275 $\times$ 28.0 (10.827 $\times$ 1.102)	296 $\times$ 28.0 (11.654 $\times$ 1.102)
Rear brake	Cylinder bore diameter	25.4 (1.0)	
	Lining length $\times$ width $\times$ thickness	270.0 $\times$ 55.0 $\times$ 5.5 (10.630 $\times$ 2.165 $\times$ 0.217)	
	Drum diameter	270.0 (10.630)	
Master cylinder	Cylinder bore diameter	25.4 (1.0)	
Control valve	Valve type	Without ABS	Load sensing valve
		With ABS	Electric brake force distribution

Brake Pedal

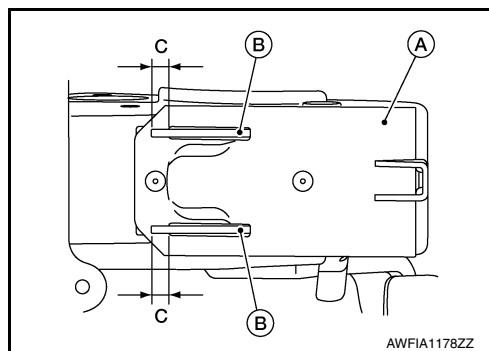
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Unit: mm (in)



Item	Standard
Brake pedal height (H)	174.1 – 184.1 (6.85 – 7.25)
Clearance (A) between brake pedal bracket, stop lamp switch (3) and brake pedal position switch (if equipped) (4) contact ends	0.74 – 1.96 (0.0291 – 0.0772)
Brake pedal full stroke (S)	154.6 (6.09)
Brake pedal play (P)	—

Unit: mm (in)



Overlap distance (D) between sub-bracket (B) and slide plate (C)	5.5 (0.22)
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Front Disc Brake

INFOID:000000014742658

Unit: mm (in)

Item	Limit
Brake pad	Wear thickness
	2.0 (0.079)
Disc brake rotor	Wear thickness
	26.0 (1.024)
	Thickness variation (measured at 8 positions)*
	0.004 (0.00016)
	Runout (with it attached to the vehicle)
	0.05 (0.002)

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*To check if rotor imbalance, rotor runout or rotor deformation is occurred.

Rear Drum Brake

INFOID:0000000014742657

Unit: mm (in)

Item		Limit
Brake lining	Wear thickness	1.5 (0.059)
Brake drum	Wear inner diameter	271.5 (10.69)

Fluids and Lubricants

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The following are approximate capacities, The actual refill capacities may be slightly different.
When refilling, follow the procedures described elsewhere in this manual.

Fluid type			Capacity (Approximate)		
			Metric Measure	US measure	Imp measure
Fuel			80 ℓ	21-1/8 gal	17-5/8 gal
Engine oil Drain and refill	QR25DE	With oil filter change	4.7 ℓ	5 qt	4-1/8 qt
		Without oil filter change	4.4 ℓ	4-5/8 qt	3-7/8 qt
		Dry engine (engine overhaul)	5.3 ℓ	5-5/8 qt	4-5/8 qt
	YD25DDTi	With oil filter change	6.7 ℓ	7-1/8 qt	5-7/8 qt
		Without oil filter change	6.4 ℓ	6-3/4 qt	5-5/8 qt
		Dry engine (engine overhaul)	7.5 ℓ	7-7/8 qt	6-5/8 qt
	YS23DDT/ YS23DDTT (M9T)	With oil filter change	6.15 ℓ	6-1/2 qt	5-3/8 qt
		Without oil filter change	6.0 ℓ	6-3/8 qt	5-1/4 qt
		Dry engine [engine overhaul (single turbo)]	7.5 ℓ	7-7/8 qt	6-5/8 qt
		Dry engine [engine overhaul (twin turbo)]	7.2 ℓ	7-5/8 qt	6-3/8 qt
Engine coolant (with reservoir at MAX level)		QR25DE	8.1 ℓ	8-5/8 qt	7-1/8 qt
		YD25DDTi (with heater)	10.6 ℓ	11-1/4 qt	9-3/8 qt
		YD25DDTi (without heater)	10.0 ℓ	10-5/8 qt	8-3/4 qt
		YS23DDT/YS23DDTT (M9T)	11.1 ℓ	11-3/4 qt	9-3/4 qt
Automatic transmission fluid			10.0 ℓ	10-5/8 qt	8-3/4 qt
Manual transmission fluid		2WD	2.99 ℓ	6-3/8 pt	5-1/4 pt
		4WD	3.33 ℓ	7 pt	5-7/8 pt
Differential gear oil		Front	0.85 ℓ	7/8 qt	3/4 qt
		Rear	2.85 ℓ	3 qt	2-1/2 qt
Transfer oil			1.5 ℓ	1-5/8 qt	1-3/8 qt
Power steering fluid (PSF)			1.0	1-1/8 qt	7/8 qt
Brake and clutch fluid			—	—	—

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Fluid type		Capacity (Approximate)		
		Metric Measure	US measure	Imp measure
Multi-purpose grease	—	—	—	—
Windshield washer fluid		4.42 ℓ	4-5/8 qt	3-7/8 qt
Air conditioning system refrigerant		0.50 kg	1.10 lb	1.10 lb
Air conditioning system oil	QR25DE	180 m ℓ	6.1 fl oz	6.3 fl oz
	YD25DDTi	150 m ℓ	5.1 fl oz	5.3 fl oz
	YS23DDT/YS23DDTT (M9T)	150 m ℓ	5.1 fl oz	5.3 fl oz