

Edition: October 2004
 Revision: October 2004
 Publication No. SM5E-1A60U0

NISSAN TITAN

MODEL A60 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	
	ACC Accelerator Control System	
C TRANSMISSION/ TRANSAXLE	AT Automatic Transmission	
D DRIVELINE/AXLE	TF Transfer	
	PR Propeller Shaft	
	FFD Front Final Drive	
	RFD Rear Final Drive	
	FAX Front Axle	
	RAX Rear Axle	
	FSU Front Suspension	
E SUSPENSION	RSU Rear Suspension	
	WT Road Wheels & Tires	
	BR Brake System	
F BRAKES	PB Parking Brake System	
	BRC Brake Control System	
	PS Power Steering System	
G STEERING	SB Seat Belts	
H RESTRAINTS	SRS Supplemental Restraint System (SRS)	
	BL Body, Lock & Security System	
I BODY	GW Glasses, Window System & Mirrors	
	RF Roof	
	EI Exterior & Interior	
	IP Instrument Panel	
	SE Seat	
	AP Adjustable Pedal	
	MTC Manual Air Conditioner	
	J AIR CONDITIONER	SC Starting & Charging System
K ELECTRICAL	LT Lighting System	
	DI Driver Information System	
	WW Wiper, Washer & Horn	
	BCS Body Control System	
	LAN LAN System	
	AV Audio Visual, Navigation & Telephone System	
	ACS Auto Cruise Control System	
	PG Power Supply, Ground & Circuit Elements	
	L MAINTENANCE	MA Maintenance
	M INDEX	IDX Alphabetical Index

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FOREWORD

This manual contains maintenance and repair procedures for the 2005 NISSAN TITAN.

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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Technical Publications Department
• Gardena, California



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SERVICE MANUAL: Model: _____ **Year:** _____

PUBLICATION NO. (Please photocopy back cover): _____

VEHICLE INFORMATION VIN: _____ **Production Date:** _____

Please describe any 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.*

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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: _____

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QUICK REFERENCE CHART TITAN

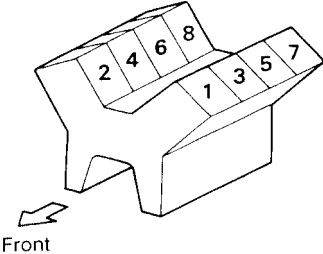
PFP:00000

Engine Tune-Up Data
Engine Specifications

ELS000YK

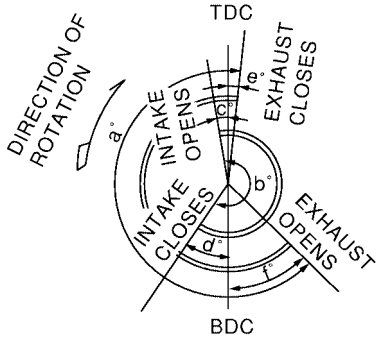
Cylinder arrangement		V-8
Displacement		5,552 cm ³ (338.80 in ³)
Bore and stroke		98 x 92 mm (3.86 x 3.62 in)
Valve arrangement		DOHC
Firing order		1-8-7-3-6-5-4-2
Number of piston rings	Compression	2
	Oil	1
Number of main bearings		5
Compression ratio		9.8:1
Compression pressure	Standard	1,520 kPa (15.5 kg/cm ² , 220 psi) / 200 rpm
	Minimum	1,324 kPa (13.5 kg/cm ² , 192 psi) / 200 rpm
	Differential limit between cylinders	98 kPa (1.0 kg/cm ² , 14 psi) / 300 rpm

Cylinder number



SEM957C

Valve timing



PBIC0187E

Unit: degree

a	b	c	d	e	f
232°	230°	2°	48°	3°	49°

Drive Belt Deflection and Tension

Tension of drive belts		Auto adjustment by auto tensioner	
Make	NGK		
Model	Standard model	FFV model	
Standard type	PLFR5A-11	PLFR5A-11D	
Hot type	PLFR4A-11	PLFR4A-11D	
Cold type	PLFR6A-11	PLFR6A-11D	
Gap (nominal)	1.1 mm (0.043 in)		

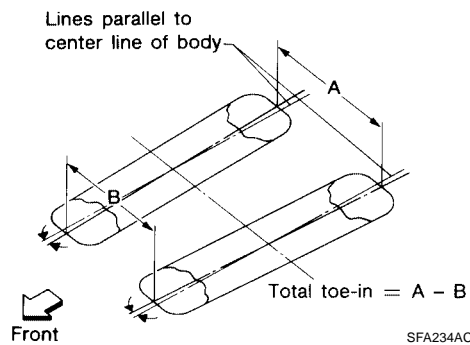
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Wheel Alignment (Unladen*¹)

ELS0012F

Drive type		4x2	4x4
Camber Degree minute (Decimal degree)	Minimum	-0° 52' (-0.87°)	-0° 19' (-0.32°)
	Nominal	-0° 7' (-0.12°)	0° 26' (0.43°)
	Maximum	0° 38' (0.63°)	1° 11' (1.18°)
	Cross camber	0° 45' (0.75°) or less	0° 45' (0.75°) or less
Caster Degree minute (Decimal degree)	Minimum	2° 31' (2.52°)	1° 37' (1.62°)
	Nominal	3° 16' (3.27°)	2° 22' (2.37°)
	Maximum	4° 1' (4.02°)	3° 7' (3.12°)
	Cross caster	0° 45' (0.75°) or less	0° 45' (0.75°) or less
Kingpin inclination (Reference only) Degree minute (Decimal degree)		13° 33' (13.55°)	13° 0' (13.00°)



Total toe-in	Distance (A - B)	Minimum	1.8 mm (0.07 in)	1.8 mm (0.07 in)
		Nominal	2.8 mm (0.11 in)	2.8 mm (0.11 in)
		Maximum	3.8 mm (0.15 in)	3.8 mm (0.15 in)
	Angle (left plus right) Degree minute (Decimal degree)	Minimum	0° 3' (0.05°)	0° 3' (0.05°)
		Nominal	0° 5' (0.08°)	0° 5' (0.08°)
		Maximum	0° 7' (0.12°)	0° 7' (0.12°)
Wheel turning angle (full turn)	Inside Degree minute (Decimal degree)	34° 30' - 38° 30' * ² (34.50° - 38.50°)	34° 56' - 38° 56' * ⁴ (34.93° - 38.93°)	
	Outside Degree minute (Decimal degree)	30° 58' - 34° 58' * ³ (30.97° - 34.97°)	31° 01' - 35° 01' * ⁵ (31.02° - 35.02°)	

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

*2: Target value 37° 30' (37.50°)

*3: Target value 33° 58' (33.97°)

*4: Target value 37° 56' (37.93°)

*5: Target value 34° 01' (34.02°)

Brake

ELS0002T

Unit: mm (in)

Front brake	Brake model	CLZ31VC
	Rotor outer diameter × thickness	320 × 26 (12.60 × 1.02)
	Pad Length × width × thickness	111.0 × 73.5 × 9.5 (4.73 × 2.894 × 0.374)
	Cylinder bore diameter	51 (2.01)
Rear brake	Brake model	AD14VE
	Rotor outer diameter × thickness	320 × 14 (12.60 × 0.55)
	Pad Length × width × thickness	83.0 × 33.0 × 8.5 (3.268 × 1.299 × 0.335)
	Cylinder bore diameter	48 (1.89)
Control valve	Valve model	Electric brake force distribution

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Brake booster	Booster model	C215T
	Diaphragm diameter	215 (8.46)
Recommended brake fluid		Genuine NISSAN Super Heavy Duty Brake Fluid or equivalent DOT 3 (US FMVSS No. 116)

Disc Brake - Repair Limits

ELS000ZU

Unit: mm (in)

Brake model		CLZ31VC (Front)	AD14VE (Rear)
Brake Pad	Repair limit thickness	1.0 (0.039)	1.0 (0.039)
Disc rotor	Repair limit thickness	24.5 (0.965)	12.0 (0.472)
	Maximum uneven wear (measured at 8 positions)	0.015 (0.0006)	0.015 (0.0006)
	Runout limit (with it attached to the vehicle)	0.04 (0.0016)	0.05 (0.0020)

Brake Pedal

ELS000ZV

Unit: mm (in)

Brake pedal height (from dash panel top surface)	182.3 – 192.3 (7.18 – 7.57)
Depressed pedal height [under a force of 490 N (50 kg, 110 lb) with engine running]	More than 90.3 (3.55)
Clearance between stopper rubber and the threaded end of stop lamp switch	0.74 – 1.96 (0.029 – 0.077)
Pedal play	3 – 11 (0.12 – 0.43)

Parking Drum Brake

ELS00111

Unit: mm (in)

Type	Drum	
Brake lining	Standard thickness (new)	3.79 ± 0.21 (0.149 ± 0.008)
	Wear limit thickness	0.5 (0.020)
Drum inner diameter (disc)	Standard inner diameter (new)	205 ± 0.13 (8.07 ± 0.01)
	Wear limit of inner diameter	205.7 (8.10)

Refill Capacities

ELS000YO

Description	Capacity (Approximate)		
	Metric	US measure	Imp measure
Fuel	105.8 ℓ	28 gal	23 1/4 gal
Engine oil Drain and refill	With oil filter change	6.2 ℓ	6 1/2 qt
	Without oil filter change	5.9 ℓ	6 1/4 qt
Dry engine (engine overhaul)	7.6 ℓ	8 qt	6 3/4 qt
Cooling system with reservoir at MAX level	12.2 ℓ	3 1/4 gal	2 5/8 gal
Automatic transmission fluid (ATF)	10.6 ℓ	11 1/4 qt	9 3/8 qt
Rear final drive oil	2.01 ℓ	4 1/4 pt	3 1/2 pt
Transfer fluid	2.0 ℓ	2 1/8 qt	1 3/4 qt
Front final drive oil	1.6 ℓ	3 3/8 pt	2 7/8 pt
Power steering fluid (PSF)	1.0 ℓ	2 1/8 pt	1 3/4 pt
Windshield washer fluid	4.5 ℓ	1 1/4 gal	1 gal
Air conditioning system refrigerant	0.70 ± 0.05 kg	1.54 ± 0.11 lb	1.54 ± 0.11 lb
Air conditioning system lubricants	200 m ℓ	6.8 fl oz	7.0 fl oz