

NISSAN TRUCK

MODEL D21 SERIES

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FOREWORD

This manual contains maintenance and repair procedures for the 1997 Nissan TRUCK.

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 NORTH AMERICA, INC.

Technical Service Information Department
Torrance, California



PLEASE HELP MAKE THIS SERVICE MANUAL BETTER!

Your comments are important to NISSAN 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 photocopy this form and type or print your comments below. Mail or fax to:

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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.*

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/PROV./COUNTRY:** _____ **ZIP/POSTAL CODE:** _____

QUICK REFERENCE CHART: TRUCK 1997

ENGINE TUNE-UP DATA

Engine model	KA24E				
Firing order	1-3-4-2				
Idle speed	rpm				
M/T		800 ± 50			
A/T (in "N" position)		800 ± 50			
Ignition timing (degree B.T.D.C. at idle speed)	10° ± 2°				
CO% at idle	Idle mixture screw is preset and sealed at factory				
Spark plug	Standard	ZFR6E-11			
Type	Cold	ZFR6E-11			
	Hot	ZFR4E-11			
Gap	mm (in)	1.0 - 1.1 (0.039 - 0.043)			
Drive belt deflection (Cold)	mm (in)	Used belt			
		Limit	Deflection after adjustment		
			Deflection of new belt		
		Generator	17 (0.67)	10 - 12 (0.39 - 0.47)	8 - 10 (0.31 - 0.39)
Air conditioner compressor	16 (0.63)	10 - 12 (0.39 - 0.47)	8 - 10 (0.31 - 0.39)		
Power steering oil pump	15 (0.59)	9 - 11 (0.35 - 0.43)	7 - 9 (0.28 - 0.35)		
Applied pressed force	N (kg, lb)	98 (10, 22)			
Radiator cap relief pressure	kPa (kg/cm ² , psi)	78 - 98 (0.8 - 1.0, 11 - 14)			
Cooling system leakage testing pressure	kPa (kg/cm ² , psi)	157 (1.6, 23)			
Compression pressure	Standard	1,324 (13.5, 192)/300			
	Minimum	981 (10, 142)/300			
Tightening torque	N·m	kg·m	ft·lb		
		Spark plug	20 - 29	2.0 - 3.0	14 - 22
		Oil pan drain plug	29 - 39	3.0 - 4.0	22 - 29

FRONT WHEEL ALIGNMENT (Unladen*1)

Applied model	ALLOWABLE LIMIT		ADJUSTING RANGE			
	2WD	4WD	2WD	4WD		
Camber	degree (Decimal degree)	-0°20' - 1°10' (-0.33° - 1.17°)	-0°05' - 1°25' (-0.08° - 1.42°)	-0°05' - 0°55' (-0.08° - 0.92°)	0°10' - 1°10' (0.17° - 1.17°)	
Caster	degree (Decimal degree)	+0°23' - 1°07' (+0.38° - 1.12°)	0°33' - 2°03' (0.55° - 2.05°)	-0°08' - 0°52' (-0.13° - 0.87°)	0°48' - 1°48' (0.80° - 1.80°)	
Kingpin inclination	degree (Decimal degree)	8°20' - 9°50' (8.33° - 9.83°)	7°21' - 8°51' (7.35° - 8.85°)	8°35' - 9°35' (8.58° - 9.58°)	7°36' - 8°36' (7.60° - 8.60°)	
Toe-in	Radial tire					
	A - B	mm (in)	1 - 5 (0.04 - 0.20)	2 - 6 (0.08 - 0.24)	2 - 4 (0.08 - 0.16)	3 - 5 (0.12 - 0.20)
	Total angle 2:	degree (Decimal degree)	5' - 25' (0.08° - 0.42°)	9' - 29' (0.15° - 0.48°)	10' - 20' (0.17° - 0.33°)	14' - 24' (0.23° - 0.40°)
Wheel turning angle	Degree minute (Decimal degree)	Inside	34°00' - 38°00' (34.00° - 38.00°)	31°00' - 35°00' (31.00° - 35.00°)	36°00' - 38°00' (36.00° - 38.00°)	33°00' - 35°00' (33.00° - 35.00°)
		Outside	31°00' - 35°00' (31.00° - 35.00°)	29°00' - 33°00' (29.00° - 33.00°)	33°00' - 35°00' (33.00° - 35.00°)	31°00' - 33°00' (31.00° - 33.00°)

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

CLUTCH PEDAL

		Unit: mm (in)
Pedal height		236 - 246 (9.29 - 9.69)
Pedal free play		9 - 16 (0.35 - 0.63)

BRAKE

		Unit: mm (in)
Disc brake	Pad minimum thickness	2.0 (0.079)
	Rotor repair limit	
	Runout	0.07 (0.0028) or less
Drum brake	Minimum thickness	20.0 (0.787), CL28VA 24.0 (0.945), CL28VD
	Lining minimum thickness	1.5 (0.059)
	Drum repair limit	
Parking brake	Maximum inner diameter	261.5 (10.30), LT26B 296.5 (11.67), LT30B
	Number of notches*1	10 - 12

*1: At pulling force: 196 N (20 kg, 44 lb)

FRONT WHEEL BEARING

Item	Model			
	2WD	4WD		
Tightening torque	N·m (kg·m, ft·lb)	34 - 39 (3.5 - 4.0, 25 - 29)	-	
Return angle	degree	45° - 60°	-	
Preload (At hub bolt)	N (kg, lb)	New seal	9.8 - 28.4 (1.0 - 2.9, 2.2 - 6.4)	
		Used seal	9.8 - 23.5 (1.0 - 2.4, 2.2 - 5.3)	
			Wheel bearing lock nut Tightening torque N·m (kg·m, ft·lb)	78 - 98 (8 - 10, 58 - 72)
		Retightening torque after loosening wheel bearing lock nut N·m (kg·m, ft·lb)	0.5 - 1.5 (0.05 - 0.15, 0.4 - 1.1)	
		Axial end play	mm (in)	0 (0)
		Start force at wheel hub bolt	N (kg, lb)	A
		Turning angle	degree	15° - 30°
		Starling force at wheel hub bolt	N (kg, lb)	B
		Wheel bearing preload at wheel hub bolt B - A	N (kg, lb)	7.06 - 20.99 (0.72 - 2.14, 1.59 - 4.72)

REFILL CAPACITIES

	Unit	Liter	US measure	
Fuel tank		60	15.9 gal	
Coolant (with reservoir)	2WD	8.1	8-5/8 qt	
	4WD	9.0	9-1/2 qt	
Engine	2WD	With oil filter	3.9	4-1/8 qt
		Without oil filter	3.5	3-3/4 qt
	4WD	With oil filter	4.1	4-3/8 qt
		Without oil filter	3.8	4 qt
Transaxle	M/T	2WD	2.0	4-1/4 pt
	A/T	4WD	4.9	10-3/8 pt
		-	7.9	8-3/8 qt
Transfer	4WD	2.2	2-3/8 qt	
Final drive	2WD	H190A	1.5	3-1/8 pt
		C200	1.3	2-3/4 pt
	4WD	R180A	1.3	2-3/4 pt
		H233B	2.8	5-7/8 pt
Manual steering system		0.62	1-3/8 pt	
Power steering system	PB46S	0.9	1 qt	
	PB59K	1.0	1-1/8 qt	
Air conditioner system	Lubricant	0.2	6.8 fl oz	
	Refrigerant*	0.75 - 0.85	1.65 - 1.87 lb	

*R-134a

TEST VALUE AND TEST LIMIT (GST ONLY — NOT APPLICABLE TO CONSULT-II)

The following is the information specified in Mode 6 of SAE J1979.

The test value is a parameter used to determine whether a system/circuit diagnostic test is "OK" or "NG" while being monitored by the ECM during self-diagnosis. The test limit is a reference value which is specified as the maximum or minimum value and is compared with the test value being monitored.

Items for which these data (test value and test limit) are displayed are the same as SRT code items.

These data (test value and test limit) are specified by Test ID (TID) and Component ID (CID) and can be displayed on the GST screen.

SRT item	Self-diagnostic test item	DTC	Test value (GST display)		Test limit	Conversion
			TID	CID		
CATALYST	Three way catalyst function	P0420	01H	01H	Max.	1/128
EVAP SYSTEM	EVAP control system (Small leak)	P0440	05H	03H	Max.	1/128mm ²
	EVAP control system purge flow monitoring	P1447	06H	83H	Min.	20mV
HO2S	Heated oxygen sensor 1	P0130	09H	04H	Max.	10ms
		P0130	0AH	84H	Min.	10mV
		P0130	0BH	04H	Max.	10mV
		P0130	0CH	04H	Max.	10mV
	Heated oxygen sensor 2	P0130	0DH	04H	Max.	1s
		P0136	19H	86H	Min.	10mV/500ms
		P0136	1AH	86H	Min.	10mV
		P0136	1BH	06H	Max.	10mV
HO2S HTR	Heated oxygen sensor 1 heater	P0136	1CH	06H	Max.	10mV
		P0135	29H	08H	Max.	20mV
	Heated oxygen sensor 2 heater	P0135	2AH	88H	Min.	20mV
		P0141	2DH	0AH	Max.	20mV
EGR SYSTEM	EGR function	P0141	2EH	8AH	Min.	20mV
		P0400	31H	8CH	Min.	1°C
		P0400	32H	8CH	Min.	1°C
		P0400	33H	8CH	Min.	1°C
	EGRC-BPT valve function	P0400	34H	8CH	Min.	1°C
		P0400	35H	0CH	Max.	1°C
EGRC-BPT valve function	P0402	36H	0CH	Max.	1count	
	P0402	37H	8CH	Min.	1count	