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NISSAN ARMADA MODEL TA60 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 |
| | AT Automatic Transmission |
| C TRANSMISSION/ TRANSAXLE | |
| 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 | |
| H RESTRAINTS | SB Seat Belts |
| | 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 |
| | ATC Automatic Air Conditioner |
| | SC Starting & Charging System |
| J AIR CONDITIONER | 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 |
| | MA Maintenance |
| | IDX Alphabetical Index |
| K ELECTRICAL | |
| L MAINTENANCE | |
| M INDEX | |

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FOREWORD

This manual contains maintenance and repair procedures for the 2006 NISSAN ARMADA.

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

PUBLICATION NO. (Refer to Quick Reference Index): _____

Please describe any Service Manual issues or problems in detail:

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QUICK REFERENCE CHART: ARMADA

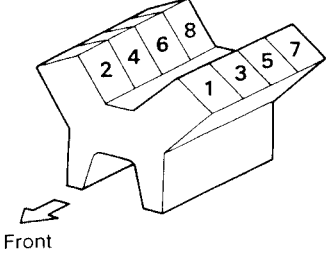
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Engine Tune-Up Data

ELS001QX

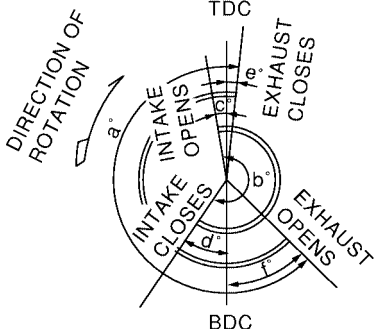
| | | |
|-------------------------|--------------------------------------|---------------------------------------------------------|
| Cylinder arrangement | | V-8 |
| Displacement | | 5,552 cm ³ (338.80 in ³) |
| Bore and stroke | | 98 x 92 mm (3.86 x 3.62 in) |
| Valve arrangement | | DOHC |
| Firing 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) / 200 rpm |

Cylinder number



SEM957C

Valve timing



PBIC0187E

| | | | | | |
|------|------|----|-----|----|-----|
| 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 |
|------------------------|-----------------------------------|

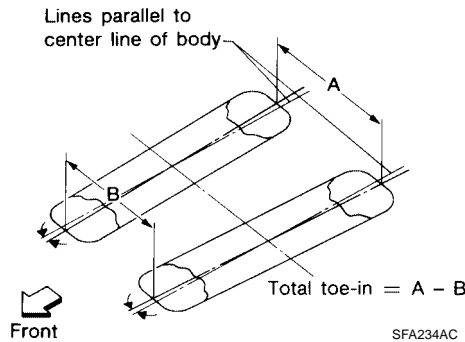
Spark Plugs (Double Platinum Tipped)

| | |
|---------------|-------------------|
| Make | NGK |
| Standard type | PLFR5A-11 |
| Hot type | PLFR4A-11 |
| Cold type | PLFR6A-11 |
| Gap (nominal) | 1.1 mm (0.043 in) |

Front Wheel Alignment (Unladen*1)

ELS001QY

| Drive type | 2WD | | 4WD | | |
|-------------------------------------------------------|------------------|------------------------|------------------|------------------------|----------------|
| | Standard | Air leveling | Standard | Air leveling | |
| Suspension | | | | | |
| Camber Degree minute (decimal degree) | Minimum | -0° 51' (-0.85°) | -0° 33' (-0.55°) | | |
| | Nominal | -0° 6' (-0.10°) | 0° 12' (0.20°) | | |
| | Maximum | 0° 39' (0.65°) | 0° 57' (0.95°) | | |
| | Cross camber | 0° 45' (0.75°) or less | | 0° 45' (0.75°) or less | |
| Caster Degree minute (decimal degree) | Minimum | 2° 21' (2.35°) | 3° 15' (3.25°) | 2° 15' (2.25°) | 2°45' (2.75°) |
| | Nominal | 3° 24' (3.40°) | 4° 0' (4.00°) | 3° 0' (3.00°) | 3° 30' (3.50°) |
| | Maximum | 4° 09' (4.15°) | 4° 45' (4.75°) | 3° 45' (3.75°) | 4° 15' (4.25°) |
| | Cross caster | 0° 45' (0.75°) or less | | 0° 45' (0.75°) or less | |
| Kingpin inclination Degree minute (decimal degree) | 13° 32' (13.53°) | | 13°13' (13.22°) | | |



| | | | | |
|---------------------------------|--------------------------------------------------------------------|-------------------------------------------|------------------|-------------------------------------------|
| 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 side and right side) 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° 31' - 38° 31' *2 (34.52° - 38.52°) | | 34° 44' - 38° 44' *4 (34.73° - 38.73°) |
| | Outside Degree minute (decimal degree) | 30° 59' - 34° 59' *3 (30.98° - 34.98°) | | 30° 29' - 34° 29' *5 (30.48° - 34.48°) |

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

*2: Target value 37° 31' (37.52°)

*3: Target value 33° 59' (33.98°)

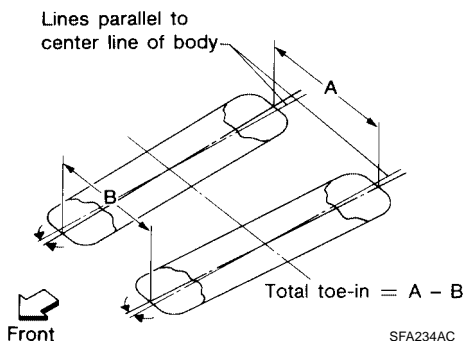
*4: Target value 37° 44' (37.73°)

*5: Target value 33° 29' (33.48°)

Rear Wheel Alignment (Unladen*¹)

ELS001QZ

| Applied model | | Without air leveling | With air leveling |
|------------------------------------------|--------------|------------------------|-------------------|
| Camber Degree minute (decimal degree) | Minimum | - 0° 25' (- 0.4°) | - 1° 0' (- 1°) |
| | Nominal | 0° 5' (0.1°) | - 0° 30' (- 0.5°) |
| | Maximum | 0° 35' (0.6°) | 0° 0' (0°) |
| | Cross camber | 0° 45' (0.75°) or less | |



| | | | | |
|--------------|--------------------------------------------------------------------|-----------|-------------------------|-------------------|
| Total toe-in | Distance (A - B) | Minimum | - 2.4 mm (- 0.094 in) | 0 mm (0 in) |
| | | Nominal | 0.9 mm (0.035 in) | 3.3 mm (0.130 in) |
| | | Maximum | 4.2 mm (0.165 in) | 6.6 mm (0.260 in) |
| | | Cross toe | 2 mm (0.079 in) or less | |
| | Angle (left side and right side) Degree minute (decimal degree) | Minimum | - 0° 5' (- 0.8°) | 0° 0' (0°) |
| | | Nominal | 0° 2' (0.03°) | 0° 7' (0.11°) |
| | | Maximum | 0° 9' (0.14°) | 0° 14' (0.22°) |
| | | Cross toe | 0° 8' (0.14°) or less | |

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

Brake

ELS001R0

Unit: mm (in)

| | | | |
|-------------------------|----------------------------------|-----------------------------------------------------------|------------------------------------------|
| Front brake | Brake model | CLZ31VC | AD41VA |
| | Rotor outer diameter × thickness | 320 × 26 (12.60 × 1.02) | 350 × 30 (13.78 × 1.181) |
| | Pad Length × width × thickness | 111.0 × 73.5 × 11.88 (4.73 × 2.894 × 0.468) | 151.6 × 56.5 × 12 (5.968 × 2.224 × 0.47) |
| | Cylinder bore diameter | 51 (2.01) | 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 | |
| Brake booster | Booster model | C215T | |
| | Diaphragm diameter | 215 (8.46) | |
| Recommended brake fluid | | Genuine NISSAN Super Heavy Duty Brake Fluid or equivalent | |

QUICK REFERENCE CHART: ARMADA

2006

Front Disc Brake - Repair Limits

EFS004U2

| Brake model | | CLZ31VC | AD41VA |
|-------------|------------------------------------------------|----------------------|--------------------|
| Brake pad | Standard thickness (new) | 11.88 mm (0.468 in) | 12 mm (0.47 in) |
| | Repair limit thickness | 1.0 mm (0.039 in) | 1.0 mm (0.039 in) |
| Disc rotor | Standard thickness (new) | 26.0 mm (1.024 in) | 30.0 mm (1.181 in) |
| | Repair limit thickness | 24.5 mm (0.965 in) | 28.5 mm (1.122 in) |
| | Maximum uneven wear (measured at 8 positions) | 0.015 mm (0.0006 in) | |
| | Runout limit (with it attached to the vehicle) | 0.03 mm (0.001 in) | |

Rear Disc Brake - Repair Limits

ELS001R1

| Brake model | | AD14VE |
|-------------|------------------------------------------------|----------------------|
| Brake pad | Standard thickness (new) | 12.13 mm (0.478 in) |
| | Repair limit thickness | 1.0 mm (0.039 in) |
| Disc rotor | Standard thickness (new) | 14.0 mm (0.551 in) |
| | Repair limit thickness | 12.0 mm (0.472 in) |
| | Maximum uneven wear (measured at 8 positions) | 0.015 mm (0.0006 in) |
| | Runout limit (with it attached to the vehicle) | 0.05 mm (0.002 in) |

Brake Pedal

ELS001R2

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) |

Refill Capacities

ELS001R3

| 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 | 14.4 ℓ | 3 3/4 gal |
| Automatic transmission fluid (ATF) | | 10.6 ℓ | 11 1/4 qt |
| Rear final drive oil | | 1.75 ℓ | 3 3/4 pt |
| Transfer fluid | | 3.0 ℓ | 3 1/8 qt |
| Front final drive oil | | 1.6 ℓ | 3 3/8 pt |
| Power steering fluid (PSF) | | 1.0 ℓ | 2 1/8 pt |
| Windshield washer fluid | | 4.5 ℓ | 1 1/4 gal |
| Air conditioning system refrigerant | | 1.08 ± 0.05 kg | 2.38 ± 0.11 lb |
| Air conditioning system lubricant | | 290 m ℓ | 9.8 fl oz |