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# NISSAN ARMADA MODEL TA60 SERIES

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## QUICK REFERENCE INDEX

<b>A GENERAL INFORMATION</b>	<b>GI General Information</b>
<b>B ENGINE</b>	<b>EM Engine Mechanical</b>
	<b>LU Engine Lubrication System</b>
	<b>CO Engine Cooling System</b>
	<b>EC Engine Control System</b>
	<b>FL Fuel System</b>
	<b>EX Exhaust System</b>
	<b>STR Starting System</b>
	<b>ACC Accelerator Control System</b>
<b>C HYBRID</b>	<b>HBC Hybrid Control System</b>
	<b>HBB Hybrid Battery System</b>
	<b>HBR Hybrid Brake System</b>
<b>D TRANSMISSION &amp; DRIVE-LINE</b>	<b>TM Transaxle &amp; Transmission</b>
	<b>DLN Driveline</b>
	<b>FAX Front Axle</b>
	<b>RAX Rear Axle</b>
	<b>FSU Front Suspension</b>
<b>E SUSPENSION</b>	<b>RSU Rear Suspension</b>
	<b>SCS Suspension Control System</b>
	<b>WT Road Wheels &amp; Tires</b>
	<b>BR Brake System</b>
<b>F BRAKES</b>	<b>PB Parking Brake System</b>
	<b>BRC Brake Control System</b>
	<b>ST Steering System</b>
<b>G STEERING</b>	<b>STC Steering Control System</b>
	<b>SB Seat Belt</b>
<b>H RESTRAINTS</b>	<b>SBC Seat Belt Control System</b>
	<b>SR SRS Airbag</b>
	<b>SRC SRS Airbag Control System</b>
	<b>VTL Ventilation System</b>
<b>I VENTILATION, HEATER &amp; AIR CONDITIONER</b>	<b>HA Heater &amp; Air Conditioning System</b>
	<b>HAC Heater &amp; Air Conditioning Control System</b>
<b>J BODY INTERIOR</b>	<b>INT Interior</b>
	<b>IP Instrument Panel</b>
	<b>SE Seat</b>
	<b>ADP Automatic Drive Postioner</b>
	<b>AP Adjustable Pedal</b>
	<b>DLK Door &amp; Lock</b>
<b>K BODY EXTERIOR, DOORS, ROOF &amp; VEHICLE SECURITY</b>	<b>SEC Security Control System</b>
	<b>GW Glass &amp; Window System</b>
	<b>PWC Power Window Control System</b>
	<b>RF Roof</b>
	<b>EXT Exterior</b>
	<b>BRM Body Repair Manual</b>
	<b>MIR Mirrors</b>
<b>L DRIVER CONTROLS</b>	<b>EXL Exterior Lighting System</b>
	<b>INL Interior Lighting System</b>
	<b>WW Wiper &amp; Washer</b>
	<b>DEF Defogger</b>
	<b>HRN Horn</b>
	<b>PWO Power Outlet</b>
	<b>BCS Body Control System</b>
<b>M ELECTRICAL &amp; POWER CONTROL</b>	<b>LAN LAN System</b>
	<b>PCS Power Control System</b>
	<b>CHG Charging System</b>
	<b>PG Power Supply, Ground &amp; Circuit Elements</b>
	<b>MWI Meter, Warning Lamp &amp; Indicator</b>
	<b>WCS Warning Chime System</b>
	<b>SN Sonar System</b>
<b>N DRIVER INFORMATION &amp; MULTIMEDIA</b>	<b>AV Audio, Visual &amp; Navigation System</b>
	<b>CCS Cruise Control System</b>
<b>O CRUISE CONTROL</b>	<b>MA Maintenance</b>
<b>P MAINTENANCE</b>	

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# FOREWORD

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This manual contains maintenance and repair procedure for the 2013 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

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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



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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 print this form and type or write your comments below. Mail or fax to:

Nissan North America, Inc.  
Technical Service Information  
39001 Sunrise Drive, P.O. Box 9200  
Farmington Hills, MI USA 48331  
FAX: (248) 488-3880

**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.*

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**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: \_\_\_\_\_

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**Is the organization of the manual clear and easy to follow? (circle your answer) YES NO**

Please comment: \_\_\_\_\_

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

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DATE: \_\_\_\_\_ YOUR NAME: \_\_\_\_\_ POSITION: \_\_\_\_\_

DEALER: \_\_\_\_\_ DEALER NO.: \_\_\_\_\_ ADDRESS: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE/PROV./COUNTRY: \_\_\_\_\_ ZIP/POSTAL CODE: \_\_\_\_\_

QUICK REFERENCE CHART: ARMADA

Engine Tune-up Data

INFOID:000000008949351

GENERAL SPECIFICATIONS

Cylinder arrangement		V-8
Displacement cm <sup>3</sup> (in <sup>3</sup> )		5,552 (338.80)
Bore and stroke mm (in)		98 x 92 (3.86 x 3.62)
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 kPa (kg/cm <sup>2</sup> , psi)/rpm	Standard	1,520 (15.5, 220)/200
	Minimum	1,324 (13.5, 192)/200
	Differential limit between cylinders	98 (1.0, 14)/200

Cylinder number

SEM957C

Valve timing

FBIC0187E

Unit: degree

a	b	c	d	e	f
244°	232°	-8°	60°	10°	54°

DRIVE BELTS

Tension of drive belts	Auto adjustment by auto-tensioner
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SPARK PLUG

# QUICK REFERENCE CHART: ARMADA

2013

Unit: mm (in)

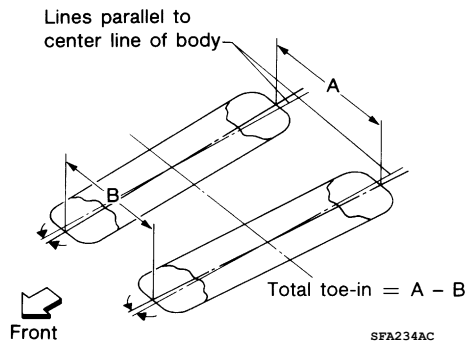
Make	NGK	
Model	Standard model	FFV model
Standard type*	DILFR5A-11	DILFR5A-11D
Gap (Nominal)	1.1 (0.043)	1.1 (0.043)

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

## Front Wheel Alignment (Unladen\*<sup>1</sup>)

INFOID:000000008949350

Drive type		2WD		4WD	
Suspension		Standard	With air leveling	Standard	With air leveling
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° 39' (2.65°)	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°)	



Toe-in	Total toe-in Distance (A - B)	Minimum	In 0.5 mm (In 0.02 in)	
		Nominal	In 2.5 mm (In 0.10 in)	
		Maximum	In 4.5 mm (In 0.17 in)	
	Total toe-in Angle Degree minute (decimal degree)	Minimum	In 0° 0' 36" (In 0.01°)	
		Nominal	In 0° 10' 12" (In 0.17°)	
		Maximum	In 0° 19' 48" (In 0.33°)	
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°)

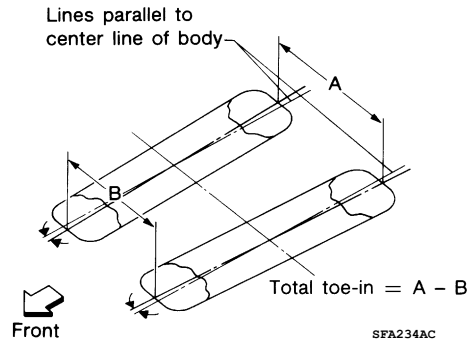
# QUICK REFERENCE CHART: ARMADA

2013

## Rear Wheel Alignment (Unladen\*<sup>1</sup>)

INFOID:000000008949348

Suspension		Standard	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	



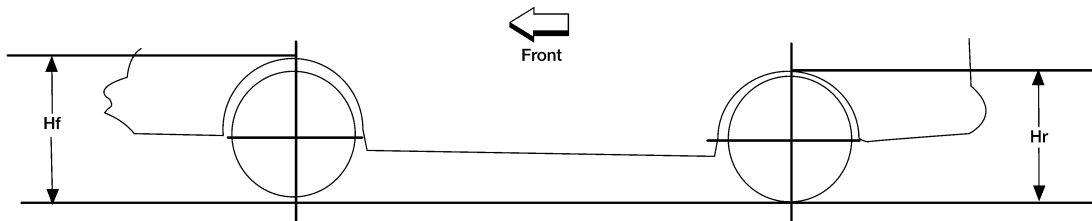
Toe-in	Total toe-in Distance (A-B)	Minimum	Out 2.4 mm (Out 0.094 in)	0 mm (0 in)
		Nominal	In 0.9 mm (In 0.035 in)	In 3.3 mm (In 0.130 in)
		Maximum	In 4.2 mm (In 0.165 in)	In 6.6 mm (In 0.260 in)
		Cross toe	2 mm (0.079 in) or less	
	Total toe-in Angle Degree minute (Decimal degree)	Minimum	Out 0° 8' 24" (Out 0.14°)	In 0° 1' 12" (In 0.02°)
		Nominal	In 0° 3' 36" (In 0.06°)	In 0° 13' 12" (In 0.22°)
		Maximum	In 0° 15' 36" (In 0.26°)	In 0° 25' 12" (In 0.42°)
		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.

## Wheelarch Height (Unladen\*<sup>1</sup>)

INFOID:000000008949349

Unit: mm (in)



LE1A0085E

Suspension type	With air leveling* <sup>2</sup>				Without air leveling			
	2WD		4WD		2WD		4WD	
Applied model								
Tire size	P265/ 70R18	P275/ 60R20	P265/ 70R18	P275/ 60R20	P265/ 70R18	P275/ 60R20	P265/ 70R18	P275/ 60R20
Front wheelarch height (Hf)	914 (35.98)	920 (36.22)	931 (36.65)	937 (36.89)	914 (35.98)	920 (36.22)	931 (36.65)	937 (36.89)
Rear wheelarch height (Hr)	911 (35.87)	917 (36.10)	931 (36.65)	937 (36.89)	931 (36.65)	937 (36.89)	951 (37.44)	957 (37.68)

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

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\*2: Verify the vehicle height. If vehicle height is not within  $\pm 10$  mm (0.39 in) of the specification, perform the control unit initialization procedure.

## Brake Specifications

INFOID:000000008949346

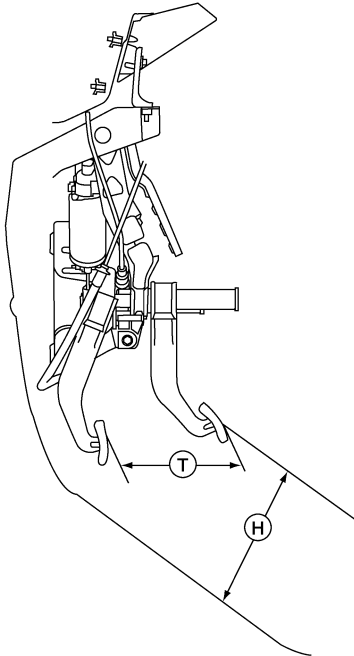
Unit: mm (in)

Front brake	Rotor outer diameter × thickness	350 x 30 (13.78 x 1.18)
	Pad Length × width × thickness	152 x 56.5 x 12.0 (5.98 x 2.22 x 0.47)
	Cylinder bore diameter	2 X 50.8 (2.00)
Rear brake	Rotor outer diameter × thickness	320 x 14 (12.60 x 0.55)
	Pad Length × width × thickness	114 x 36.5 x 12.0 (4.49 x 1.44 x 0.47)
	Cylinder bore diameter	48 (1.89)
Control valve	Valve model	Electric brake force distribution
Brake booster	Booster model	9/10 inch active booster

## Brake Pedal

INFOID:000000008949347

Unit: mm (in)



ALFIA01492Z

Pedal free height (H) with pedal in forward most position	182.3 +10.0/-0 (7.18 +0.39/-0)
Pedal travel (T)	153.3 (6.04)
Stop lamp switch and ASCD cancel switch threaded end to brake pedal bracket gap	0.74 - 1.96 (0.03 - 0.08)

### CAUTION:

When equipped with adjustable pedal, the pedal must be in the forward most position (closest to the floor) for pedal height adjustment.

## Front Disc Brake

INFOID:000000008949344

Unit: mm (in)

Brake pad	Standard thickness (new)	12.0 (0.47)
	Minimum thickness	1.0 (0.04)

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Disc rotor	Standard thickness (new)	30 (1.18)
	Minimum thickness	28.5 (1.12)
	Maximum uneven wear (measured at 8 positions)	0.015 (0.001)
	Runout limit (with it attached to the vehicle)	0.03 (0.001)

## Rear Disc Brake

INFOID:000000008949345

Unit: mm (in)

Brake pad	Standard thickness (new)	12.0 (0.47)
	Minimum thickness	1.0 (0.04)
Disc rotor	Standard thickness (new)	14.0 (0.55)
	Minimum thickness	12.0 (0.47)
	Maximum uneven wear (measured at 8 positions)	0.015 (0.001)
	Runout limit (with it attached to the vehicle)	0.05 (0.002)

## FOR USA AND CANADA : Fluids and Lubricants

INFOID:000000008949339

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	6.5 ℓ	6-7/8 qt
	Without oil filter change	6.2 ℓ	6-1/2 qt
Dry engine (engine overhaul)	7.6 ℓ	8 qt	6-3/4 qt
Cooling system	With reservoir at MAX level	14.4 ℓ	15-1/4 qt
Automatic transmission fluid (ATF)	10.6 ℓ	11-1/4 qt	9-3/8 qt
Rear differential gear oil	1.75 ℓ	3-3/4 pt	3-1/8 pt
Transfer fluid	3.0 ℓ	3-1/8 qt	2-5/8 qt
Front differential gear oil	1.6 ℓ	3-3/8 pt	2-7/8 pt
Power steering fluid (PSF)	1.0 ℓ	1-1/8 qt	7/8 qt
Brake fluid	—	—	—
Multi-purpose grease	—	—	—
Windshield washer fluid	4.5 ℓ	4-3/4 qt	4 qt
Air conditioning system refrigerant	1.08 ± 0.05 kg	2.38 ± 0.11 lb	2.38 ± 0.11 lb
Air conditioning system oil	290 m ℓ	9.8 fl oz	10.2 fl oz

## FOR MEXICO : Fluids and Lubricants

INFOID:000000008949342

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	6.5 ℓ	6-7/8 qt
	Without oil filter change	6.2 ℓ	6-1/2 qt



# QUICK REFERENCE CHART: ARMADA

2013

Description		Capacity (Approximate)		
		Metric	US measure	Imp measure
Dry engine (engine overhaul)		7.6 ℓ	8 qt	6-3/4 qt
Cooling system	With reservoir at MAX level	14.4 ℓ	15-1/4 qt	12-5/8 qt
Automatic transmission fluid (ATF)		10.6 ℓ	11-1/4 qt	9-3/8 qt
Rear differential gear oil		1.75 ℓ	3-3/4 pt	3-1/8 pt
Transfer fluid		3.0 ℓ	3-1/8 qt	2-5/8 qt
Front differential gear oil		1.6 ℓ	3-3/8 pt	2-7/8 pt
Power steering fluid (PSF)		1.0 ℓ	1-1/8 qt	7/8 qt
Brake fluid		—	—	—
Multi-purpose grease		—	—	—
Windshield washer fluid		4.5 ℓ	4-3/4 qt	4 qt
Air conditioning system refrigerant		1.08 ± 0.05 kg	2.38 ± 0.11 lb	2.38 ± 0.11 lb
Air conditioning system oil		290 m ℓ	9.8 fl oz	10.2 fl oz