Edition: September 2008
Revision: October 2009
Publication No. SM9E-1V36U1

INFINITI®

# G37 Sedan

MODEL V36 SERIES



## QUICK REFERENCE INDEX

# FOREWORD

**This manual contains maintenance and repair procedure for the 2009 INFINITI G37.**

**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.**

INFINITI®

# QUICK REFERENCE CHART G37 SEDAN

PFP:00000

## ENGINE TUNE-UP DATA (VQ37VHR)

ELS0003W

| | | |
|---|---|---|
| Engine model | | VQ37VHR |
| Firing order | | 1-2-3-4-5-6 |
| Idle speed rpm<br>A/T (In “N” position)<br>M/T | | 650 ± 50 |
| Ignition timing<br>(BTDC at idle speed) | | 10° ± 5° |
| CO% at idle | | 0.7 - 9.9 % and engine runs smoothly |
| Tensions of drive belt | | Belt tension is not necessary, as it is automatically adjusted by drive belt auto-tensioner. |
| Radiater cap relief pressure kPa (kg/cm$^2$, psi) | | |
| | Standard | 122.3 - 151.7 (1.2 - 1.5, 18 - 22) |
| | Limit | 107 (1.1, 16) |
| Cooling system leakage testing pressure kPa (kg/cm$^2$, psi) | | 157 (1.6, 23) |
| Compression pressure kPa (kg/cm$^2$, psi)/rpm | | |
| | Standard | 1,667 - 2,354 (17 - 24, 242 - 341)/200 |
| | Minimum | 1,226 (12.5, 178)/200 |
| | Differential limit between cylinders | 98 (1.0, 14)/200 |
| Spark plug<br>(Iridium-tipped type) | Make | DENSO |
| | Standard type | FXE24HR11 |
| | Gap (Nominal) mm (in) | 1.1 (0.043) |

# FRONT WHEEL ALIGNMENT

ELS0003X

## 2WD

| Applied model | | | Except for sports models | For sports models |
|---|---|---|---|---|
| Camber<br>Degree minute (Decimal degree) | | Minimum | –1° 05′ (–1.08°) | |
| | | Nominal | –0° 20′ (–0.33°) | |
| | | Maximum | 0° 25′ (0.42°) | |
| | | Left and right difference | 0° 33′ (0.55°) or less | |
| Caster<br>Degree minute (Decimal degree) | | Minimum | 3° 50′ (3.83°) | 3° 55′ (3.92°) |
| | | Nominal | 4° 35′ (4.58°) | 4° 40′ (4.67°) |
| | | Maximum | 5° 20′ (5.33°) | 5° 25′ (5.42°) |
| | | Left and right difference | 0° 39′ (0.65°) or less | |
| Kingpin inclination<br>Degree minute (Decimal degree) | | Minimum | 6° 35′ (6.58°) | |
| | | Nominal | 7° 20′ (7.33°) | |
| | | Maximum | 8° 05′ (8.08°) | |
| Total toe-in | Distance | Minimum | 0 mm (0 in) | |
| | | Nominal | In 1 mm (0.04 in) | |
| | | Maximum | In 2 mm (0.08 in) | |
| | Angle (Left wheel or right wheel)<br>Degree minute (Decimal degree) | Minimum | 0° 00′ (0.00°) | |
| | | Nominal | In 0° 02′ 30″ (0.04°) | |
| | | Maximum | In 0° 05′ (0.08°) | |

Measure value under unladen* conditions.

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

## AWD

| | | | |
|---|---|---|---|
| Camber<br>Degree minute (Decimal degree) | Minimum | –1° 10′ (–1.16°) | |
| | Nominal | –0° 25′ (–0.42°) | |
| | Maximum | 0° 20′ (0.33°) | |
| | Left and right difference | 0° 33′ (0.55°) or less | |
| Caster<br>Degree minute (Decimal degree) | Minimum | 3° 20′ (3.34°) | |
| | Nominal | 4° 05′ (4.08°) | |
| | Maximum | 4° 50′ (4.83°) | |
| | Left and right difference | 0° 39′ (0.65°) or less | |
| Kingpin inclination<br>Degree minute (Decimal degree) | Minimum | 6° 40′ (6.67°) | |
| | Nominal | 7° 25′ (7.42°) | |
| | Maximum | 8° 10′ (8.16°) | |
| Total toe-in<br>Distance | Minimum | 0 mm (0 in) | |
| | Nominal | In 1 mm (0.04 in) | |
| | Maximum | In 2 mm (0.08 in) | |
| Angle (Left wheel or right wheel)<br>Degree minute (Decimal degree) | Minimum | 0° 00′ (0.00°) | |
| | Nominal | In 0° 02′ 30″ (0.04°) | |
| | Maximum | In 0° 05′ (0.08°) | |

Measure value under unladen* conditions.

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

## REAR WHEEL ALIGNMENT

ELS0003Y

| Applied model | | | 2WD | | AWD |
|---|---|---|---|---|---|
| | | | Except for sports models | For sports models | |
| Camber<br>Degree minute (Decimal degree) | | Minimum | –1° 20′ (–1.33°) | –1° 25′ (–1.42°) | |
| | | Nominal | –0° 50′ (–0.83°) | –0° 55′ (–0.92°) | |
| | | Maximum | –0° 20′ (–0.33°) | –0° 25′ (–0.42°) | |
| Total toe-in | Distance | Minimum | 0 mm (0 in) | | |
| | | Nominal | In 2.8 mm (0.110 in) | | |
| | | Maximum | In 5.6 mm (0.220 in) | | |
| | Angle (Left wheel or right wheel)<br>Degree minute (Decimal degree) | Minimum | 0° 00′ (0.00°) | | |
| | | Nominal | In 0° 07′ (0.12°) | | |
| | | Maximum | In 0° 14′ (0.23°) | | |

Measure value under unladen* conditions.
*: Fuel, engine coolant and lubricant are full. Spare tire, jack, hand tools and mats are in designated positions.

## BRAKE PEDAL

Unit: mm (in)

| | |
|---|---|
| Depressed brake pedal height ($H_1$) | 171.5 - 181.5 (6.75 - 7.15) |
| Brake pedal reserve height ($H_2$)<br>[Depressing 490 N (50 kg, 110 lb) while turning the engine ON] | 124.0 (4.88) or more |

## FRONT DISK BRAKE

### 2 Piston Type

Unit: mm (in)

| | | |
|---|---|---|
| Brake pad | Wear limit thickness | 2.0 (0.079) |
| Disc rotor | Wear limit thickness | 26.0 (1.024) |

### 4 Piston Type

Unit: mm (in)

| | | |
|---|---|---|
| Brake pad | Wear limit thickness | 2.0 (0.079) |
| Disc rotor | Wear limit thickness | 30.0 (1.181) |

## REAR DISK BRAKE

### 1 Piston Type

Unit: mm (in)

| | | |
|---|---|---|
| Brake pad | Wear limit thickness | 2.0 (0.079) |
| Disc rotor | Wear limit thickness | 14.0 (0.551) |

### 2 Piston Type

Unit: mm (in)

| | | |
|---|---|---|
| Brake pad | Wear limit thickness | 2.0 (0.079) |
| Disc rotor | Wear limit thickness | 18.0 (0.709) |

# REFILL CAPACITIES

ELS00040

| UNIT | | | Liter | US measure |
|---|---|---|---|---|
| Fuel tank | | | 75.6 | 20 gal |
| Engine Coolant (With reservoir tank) at MAX level | A/T models | | 8.5 | 9 qt |
| | M/T models | | 8.6 | 9-1/8 pt |
| Engine oil | Drain and refill | | | |
| | | With oil filter change | 4.9 | 5-1/8 qt |
| | | Without oil filter change | 4.6 | 4-7/8 qt |
| | Dry engine (Overhaul) | | 5.7 | 6 qt |
| Transmission | A/T | | 9.2 | 9-3/4 qt |
| | M/T | | | |
| | | VIN: UP to JNKCV61E69M303072 (Without 4WAS) or JNKCV61E89M013724 (With 4WAS) | 2.93 | 6-1/4 qt |
| | | VIN: From JNKCV61E69M303073 (Without 4WAS) or JNKCV61E89M013725 (With 4WAS) | 2.83 | 6 qt |
| Transfer | | | 1.0 | 2-1/8 pt |
| Final drive | Front | | 0.65 | 1-3/8 pt |
| | Rear | | 1.4 | 3 pt |
| Power steering system | | | 1.0 | 1-1/8 qt |
| Air conditioning system | Compressor oil | | 0.15 | 5.07 fl oz |
| | Refrigerant | | 0.55 kg | 1.21 lb |