



2003 G35 Coupe – VQ Engine

Mark Actual
To Confirm

Notes

VQ35DE

Engine Oil	SAE 5W-30 API SG/SH I & II or SJ, Energy Conserving Oil
With Oil Filter	5.0 qt
Without Oil Filter	4 5/8 qt

Tune up

Spark Plugs	(Platinum)
Standard Type	PLFR5A-11
Hot Type	PLFR4A-11
Cold Type	PLFR6A-11
Plug Gap	0.043 in. (1.1mm)

Ignition Timing	15° ± 5° btdc
Idle Speed	650 ± 50 rpm
Idle Mixture Ratio	0.7 - 9.9 % CO
Valve Clearance	Intake
cold	0.010 - 0.013 in (0.26 - 0.34 mm)
hot (176° F)	0.012 - 0.016 in (0.304 - 0.416 mm)

Exhaust
0.011 - 0.015 in (0.29 - 0.37 mm)
0.012 - 0.017 in (0.308 - 0.432 mm)

T/Position Sensor 1

T/V Closed	More than 0.36 V
T/V Open	Less than 4.75 V

T/Position Sensor 2

T/V Closed	Less than 4.75 V
T/V Open	More than 0.36 V

Radiator Fill

Coolant Type	Ethylene Glycol
Coolant Capacity	9.0 qt (Sedan) 9 ¼ qt (Coupe)

Compression

Standard	185 psi
Minimum	142 psi
Diff Between Cyl.	14 psi

Fuel System

Fuel Pressure @ Idle	51 psi
Recommended Fuel	91 Octane

Fuel Pump Ω

At 77°F (25°C)	Approx. 1.0 Ω
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Fuel Injector Ω

At 77°F (25°C)	13.5 - 17.5 Ω
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Sensors

Mass Air Flow Sen

Supply Volt.	11 - 14 V
Output Volt. Idle	1.1 - 1.5 V

Mass Air Flow

At Idle	2.0 - 6.0 gm/sec
2500 rpm	7.0 - 20.0 gm/sec

Coolant Temp Sensor Ω

68°F (20°C)	2.1 - 2.9 k Ω	<input type="text"/>
122°F (50°C)	0.68 - 1.00 k Ω	<input type="text"/>
194°F (90°C)	0.236 - 0.260 k Ω	<input type="text"/>

O₂ Sen Heater 1 Ω

At 77°F (25°C)	3.3 - 4.0 Ω	<input type="text"/>
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O₂ Sen Heater 2 Ω

At 77°F (25°C)	5.0 - 7.0 Ω	<input type="text"/>
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Intake Air Temp Sensor

77°F (25°C)	1.9 - 2.1 k Ω	<input type="text"/>
176°F (80°C)	0.31 - 0.37 k Ω	<input type="text"/>

Crankshaft/Camshaft P/Sen POS/Phase

At 77°F (25°C)	Except 0 Ω or infinite Ω	<input type="text"/>
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Fuel Tank Temp Sensor

68°F (20°C)	2.3 - 2.7 k Ω	<input type="text"/>
122°F (50°C)	0.79 - 0.90 k Ω	<input type="text"/>

Throttle Control Motor Ω

At 77°F (25°C)	Approx. 1 - 15 Ω	<input type="text"/>
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Electrical**Ignition System**

Firing Order	1-2-3-4-5-6
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Battery Specs.

Type USA	80D23L	
Capacity (V/AH)	12 V/ 52AH	
Cold Crank Current	582 A @ 0°F (-18°C)	<input type="text"/>

Charging System

Alternator Type	A3TG0191
Nom. Rated Out	12 V/ 110 A
Reg. Volt	14.1 - 14.7 V
Hot Out Amp (A/rpm)	More than 37 /1300
	More than 92 /2500
	More than 103 /5000

VQ35DE - Coupe

EPA Mileage Estimate	A/T	M/T
(city/highway)	19/26	20/27



2003 G35 Coupe – VQ Engine

PREPARATION

Make sure that the following parts are in order.

1. Battery
2. Ignition system
3. Engine oil and coolant levels
4. Fuse
5. ECM harness connector
6. Vacuum hoses
7. Air intake system (Oil filler cap, oil level, etc.)
8. Fuel pressure
9. Engine compression
10. Throttle valve
11. Evaporative emission canister purge control valve.

Note:

- On A/C equipped vehicles, turn A/C "Off" for testing.
- Transmission should be in "Park" or "Neutral".
- "CO" probe should be inserted into exhaust approximately 16 inches.
- Turn off headlamps, heater blower, rear defogger, etc.
- Front wheels pointed straight.
- Perform inspection with cooling fans "Off".



INFINITI

ASIST
AUTOMOTIVE SERVICE INFORMATION SUPPORT TERMINAL

Quick Reference Specifications

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2003 G35 Coupe – A/T

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To Confirm

Notes

RE5R05A

Trans Code 90x17

A/T Fluid Type Nissan **Matic 'J'** ONLY (P/N 999MP-MTJ00P)

Oil Capacity 10 7/8 qt

A/T Cooler Type Fin Type Structure

Up-Shift Schedule Range (at normal operating temp.) mph(km/h)

	Half Throttle	Full Throttle		
D ₁ → D ₂	29 - 31 (46 - 50)	36 - 39 (58 - 62)	<input type="text"/>	<input type="text"/>
D ₂ → D ₃	44 - 49 (71 - 79)	56 - 61 (90 - 98)	<input type="text"/>	<input type="text"/>
D ₃ → D ₄	66 - 73 (107 - 117)	84 - 90 (135 - 145)	<input type="text"/>	<input type="text"/>
D ₄ → D ₅	84 - 90 (135 - 145)	125 - 131 (201 - 211)	<input type="text"/>	<input type="text"/>

Complete Clutch Lock-Up mph(km/h)

	Lock-up ON	Lock-up OFF	
Closed Throttle	35 - 40 (56 - 64)	33 - 38 (53 - 61)	<input type="text"/>
Half Throttle	104 - 109 (168 - 176)	81 - 86 (131 - 139)	<input type="text"/>

Slip Lock-Up mph(km/h)

	Lock-up ON	Lock-up OFF	
Slip Lock-up OFF (D4)	23 - 28 (37 - 45)	21 - 26 (34 - 42)	<input type="text"/>
Slip Lock-up ON (D5)	27 - 32 (44 - 52)	25 - 30 (41 - 49)	<input type="text"/>

Stall Rpm

R, D, 2, 1 position 2,600 - 2,900 rpm

Line Pressure psi(kg/cm²)

	At Curb Idle	At Stall rpm		
R - Position	57 - 64 (4.0 - 4.5)	247 - 274 (17.3 - 19.3)	<input type="text"/>	<input type="text"/>
D,M - Position	54 - 61 (3.8 - 4.3)	190 - 218 (13.3 - 15.3)	<input type="text"/>	<input type="text"/>

Solenoid Valves

	Resistance	Pin Number	
Line Pressure Sol. Valve	3 - 9 Ω	7	<input type="text"/>
Torque Converter Clutch Sol. Valve	3 - 9 Ω	8	<input type="text"/>
Input Clutch Sol. Valve	3 - 9 Ω	6	<input type="text"/>
High & Low Rev. Clutch Sol. Valve	3 - 9 Ω	3	<input type="text"/>
Front Brake Sol. Valve	3 - 9 Ω	5	<input type="text"/>
Direct Clutch Sol. Valve	3 - 9 Ω	4	<input type="text"/>
Low Coast Brake Sol. Valve	20 - 40 Ω	2	<input type="text"/>

A/T Fluid Temp. Sensor

Condition	ATF Temp Sensor 1	ATF Temp Sensor 2	
32° F (0° C)	2.2 V, 15 kΩ	2.2 V, 10 kΩ	<input type="text"/>
68° F (20° C)	1.8 V, 6.5 kΩ	1.7 V, 4 kΩ	<input type="text"/>
176° F (80° C)	0.6 V, 0.9 kΩ	0.45 V, 0.5 kΩ	<input type="text"/>

Revolution Sensor

Test Condition: Use CONSULT-II pulse frequency measuring function.

Sensor. 1: Veh. Speed 31 mph in 4th gear, with closed throttle position switch "OFF".

Sensor. 2, & Rev sensor: Veh. Speed 12 mph in 1st gear, with closed throttle position switch "OFF".

Turbine Rev. Sensor 1 & 2	1.3 kHz	<input type="text"/>
Rev Sensor	185 Hz	<input type="text"/>



2003 G35 Coupe – A/T

PRECAUTIONS

- Before performing any diagnostic test, vehicle should be driven for approximately 10 minutes to raise transmission to the proper operating temperature of 122° to 176°.
- During stall testing, never hold throttle wide open for more than 5 seconds at a time. Extended stall testing can overheat transmission and cause serious damage.
- Nissan **Matic 'J'** ATF is the only fluid accepted for warranty, service contracts and goodwill repairs.
- Before performing any internal repairs, thoroughly clean the outside of the transmission case to prevent contamination.
- Use lint free cloth or towels for wiping parts. Common shop towels can leave contaminating fibers on the transmission parts and cause improper transmission operation.
- When servicing the valve body, valves, sleeves, plugs, etc. should slide along the bores in the valve body under their own weight.
- Before assembly, apply a coat of ATF to all internal transmission parts. Use petroleum jelly to protect o-rings and seals, or to hold bearings and washers in place during assembly.

Important Note: Nissan **Matic 'J'** must be used in performing repairs paid by Infiniti for the 2003 and later G35 Coupe, such as warranty, service contract, or good-will repairs. There will not be reimbursement for repairs when non-genuine Nissan **Matic 'J'** is used.



2003 G35 Coupe – M/T

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To Confirm

Notes

FS6R31A

Clutch

Clutch Control System	Hydraulic	<input type="checkbox"/>
Master Cyl. Inner Dia.	5/8 in (15.87 mm)	<input type="checkbox"/>
Operating Cyl. Inner Dia.	3/4 in (19.05 mm)	<input type="checkbox"/>
Clutch Disc		
(outer, inner, thickness)	9.84 x 6.69 x 0.126 in (250 x 170 x 3.2 mm)	<input type="checkbox"/>
Wear Limit	0.012 in (0.3 mm)	
Runout Limit	0.028 in (0.7 mm) or less	<input type="checkbox"/>
	[measured at 9.45 in (240 mm) diameter]	
Clutch Cover	Model 250	
Set-load	880 kg (8,630 N)	<input type="checkbox"/>
Diaphragm spring		
Lever height	1.555 - 1.634 in (39.5 - 41.5 mm)	<input type="checkbox"/>
Uneven limit of diaphragm		
spring toe height	0.02 in (0.5 mm)	<input type="checkbox"/>
Clutch Pedal		
Clearance "C"	0.004 - 0.039 in (0.1 - 1.0)	

Refill Capacity (75W-85 API GL-4)

FS6R31A 3-1/4 qt

Gear End Play

Counter gear	0.0 - 0.004 in (0.0 - 0.1 mm)	<input type="checkbox"/>
Main drive gear	0.0 - 0.004 in (0.0 - 0.1 mm)	<input type="checkbox"/>
Main shaft front side	0.0 - 0.004 in (0.0 - 0.1 mm)	<input type="checkbox"/>
Main shaft rear side	0.0 - 0.004 in (0.0 - 0.1 mm)	<input type="checkbox"/>

Clearance Between Baulk Ring And Gear

	Standard	Wear Limit	
1st 3rd, & 4th gear Inner (A)	0.02 - 0.028 in (0.5 - 0.7 mm)	0.012 in (0.3 mm)	<input type="checkbox"/>
1st gear Outer (B)	0.039 - 0.059 in (1.0 - 1.5 mm)	0.028 in (0.7 mm)	<input type="checkbox"/>
3rd, & 4th gear (B)	0.033 - 0.059 in (0.85 - 1.35 mm)	0.028 in (0.7 mm)	<input type="checkbox"/>
2nd gear Inner (A)	0.02 - 0.028 in (0.5 - 0.7 mm)	0.012 in (0.3 mm)	<input type="checkbox"/>
2nd gear Outer (B)	0.02 - 0.028 in (0.5 - 0.7 mm)	0.012 in (0.3 mm)	<input type="checkbox"/>
2nd Main gear taper cone (C)	0.028 - 0.049 in (0.7 - 1.25 mm)	0.012 in (0.3 mm)	<input type="checkbox"/>
5th & 6th Gear	0.028 - 0.049 in (0.7 - 1.25 mm)	0.02 in (0.5 mm)	<input type="checkbox"/>
Reverse	0.03 - 0.047 in (0.75 - 1.2 mm)	0.02 in (0.5 mm)	<input type="checkbox"/>

Snap Rings

See service manual MT section, "Service Data and Specifications (SDS) for details.



2003 G35 Coupe – M/T

PRECAUTIONS

- Infiniti does not recommend flywheel resurfacing. If flywheel is not within specification, replacement is recommended.
- Refill transmission with the proper viscosity and amount of gear lube for the anticipated temperatures.
- To help prevent clutch judder, avoid excessive grease to clutch disc splines, input shaft and throwout bearing. Be sure to clean off any excessive grease.
- On rear wheel drive vehicles, inspect the shift control lever bushing for wear and proper alignment prior to reinstallation of a removed transmission.
- To avoid transmission contamination, inspect the shift lever dust boot for cracks or damage, and replace if needed. Install plastic wire ties to insure a tight fit of the boot to the shifter and housing.
- Before reinstallation of a removed transmission, inspect the engine to transmission alignment dowels for damage. Damaged dowels can cause misalignment of the engine to transmission, and this can cause the transmission to jump out of gear.



2003 G35 Coupe – Htr & A/C

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Notes

AIR CONDITIONER

Compressor

Make Calsonic Kansei V-6
Type V-6 Variable Displacement

Compressor Clutch

Disc-to-Pulley Clearance 0.012 - 0.024 in (0.25 - 0.60 mm)

Refrigerant

Type HFC-134a (R134a)
Capacity 1.21 lb (.55 kg)

Refrigerant Oil

Type Nissan Type "S" Lub.
Capacity 6.0 fl oz
Oil to AddPer
Evaporator 2.5 oz (75 ml)
Condenser 1.2 oz (35 ml)
*Liquid Tank 0.3 oz (10 ml)
Large Refrig. Leak 1.0 oz (30 ml)
Compressor
(*Add only if comp. is not replaced.)

Engine Idle w/A/C On

(in Neutral) More than 775 rpm

Performance Test (approximate values for Sedan and Coupe)

Recirculating-to-Discharge Air Temp

	Recirc. Air Temp. at Blower Assy. Inlet F° (C°)	Discharge Air Temp. at Center Ventilator F° (C°)		
Relative Humidity 50 - 60 %	68°(20°)	45 - 49° (7.2 - 9.5°)	<input type="text"/>	<input type="text"/>
	77°(25°)	51 - 56° (10.8 - 13.3°)	<input type="text"/>	<input type="text"/>
	86°(30°)	58 - 64° (14.3 - 17.5°)	<input type="text"/>	<input type="text"/>
	95°(35°)	65 - 72° (18.6 - 22.0°)	<input type="text"/>	<input type="text"/>
	104°(40°)	74 - 80° (23.2 - 26.7°)	<input type="text"/>	<input type="text"/>
60 - 70 %	68°(20°)	49 - 53° (9.5 - 11.8°)	<input type="text"/>	<input type="text"/>
	77°(25°)	56 - 61° (13.3 - 16.0°)	<input type="text"/>	<input type="text"/>
	86°(30°)	64 - 69° (17.5 - 20.5°)	<input type="text"/>	<input type="text"/>
	95°(35°)	72 - 78° (22.0 - 25.3°)	<input type="text"/>	<input type="text"/>
	104°(40°)	80 - 86° (26.7 - 30.1°)	<input type="text"/>	<input type="text"/>

Ambient Air Temp-to-Operating Pressure

Air temperature **Relative Humidity 50-70%**

F° (C°)	High-pres.	Low-pres.		
68°(20°)	118 - 145 psi	32 - 38 psi	<input type="text"/>	<input type="text"/>
77°(25°)	139 - 168 psi	33 - 41 psi	<input type="text"/>	<input type="text"/>
86°(30°)	178 - 218 psi	37 - 44 psi	<input type="text"/>	<input type="text"/>
95°(35°)	174 - 212 psi	42 - 51 psi	<input type="text"/>	<input type="text"/>
104°(40°)	193 - 236 psi	49 - 59 psi	<input type="text"/>	<input type="text"/>



2003 G35 Coupe – Htr & A/C

PERFORMANCE TEST CONDITIONS

- Vehicle indoors or in the shade
- Doors closed
- Windows open
- Hood open
- Temperature on "Max" setting
- Discharge air on "Face Vent"
- Recirculation switch on "Recirc"
- Fan speed on "High"
- A/C switch "On" and verify A/C Clutch engagement
- Engine speed at idle
- Operate the A/C system for 10 minutes before taking measurements

Precautions:

1. When removing the compressor, store it in the same position as it is mounted in the vehicle. Failure to do so may cause lubricant to enter the low pressure chamber and cause compressor damage.
2. Allow components stored in cool areas to warm to area temperatures before removing seals. This prevents condensation from forming inside A/C components.



2003 G35 Coupe – Suspension

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Notes

WHEEL ALIGNMENT (UNLADEN)

Suspension Inspection

Ball Joint End Play

Axial End Play 0 in (0 mm)

Front Wheel Bearing

Axial End Play 0.0020 in (0.05 mm) or less

Rear Wheel Bearing

Axial End Play 0.00 in (0.0 mm)
Wheel Runout Max. Lateral / Radial Runout:
0.012 in (0.3 mm) or less

Wheel arch Height (Unladen)

	Front Height (Hf)	Rear Height (Hr)
225/50 R17 (Front)	27.2 in (691 mm)	27.64 in (702 mm)
235/50 R17 (Rear)		
225/45 R18 (Front)	27.32 in (694 mm)	27.95 in (710 mm)
245/45 R18 (Rear)		

Front Wheel Alignment

Toe-in	Range	Nominal
Total toe-in	0.08 - 0.0 in (2 - 0 mm)	0.04 in (1 mm)

**Front Wheel Turning Angle
(full turn)**

In/Wheel Range	35.75° - 39.75° (35° 45' - 39° 45')
In/Wheel Nominal	38.75° (38° 45')
Out/Wheel Nominal	30.75° (30° 45')

Camber

Range	-1.25° to 0.75° (-1° 15' to 0° 45')
Nominal	-0.50° (-0° 30')
Lt/Rt Difference	0.75° (0° 45') or less

Caster

	17" Wheels	18" Wheels
Range	7.42° - 8.92° (7° 25' - 8° 55')	7.25° - 8.75° (7° 15' - 8° 45')
Nominal	8.17° (8° 10')	8.00° (8° 00')
Lt/Rt Difference	0.75° (0° 45') or less	

Kingpin Offset

Range	4.17° - 5.67° (4° 10' - 5° 40')
Nominal	4.92° (4° 55')

Rear Wheel Alignment

Toe-in	Range	Nominal
Total toe-in	0.0 - 0.22 in (0.0 - 5.6 mm)	0.11 in (2.8 mm)

Camber

Range	-2.00° to -1.00° (-2° 00' to -1° 00')
Nominal	-1.50° (-1° 30')

W/Lug Nut Torque 72-87 ft/lb (10-12 kg/m)



2003 G35 Coupe – Suspension

PRELIMINARY INSPECTION

- Check tires for wear and proper inflation
- Check wheel runout
- Check front wheel bearings excessive play
- Check front suspension for excessive play
- Check steering linkage for excessive play
- Check struts for leakage and condition
- Check vehicle for proper ride height

Precautions

1. When installing rubber parts, final tightening must be carried out under unladen conditions with the tires on the ground.
2. Recheck alignment after installing removed suspension components.



2003 G35 Coupe – Brakes

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Notes

BRAKE SYSTEM

Standard System

Brake Model Code	Front Disc Brake CLZ25VD	Rear Disc Brake AD14VE				
Brake Fluid	DOT 3 (Recommended)					
Master Cyl. Bore Dia.	1.0 in (25.4 mm)		<input type="checkbox"/>			
Cylinder Bore Dia.	2.252 in (57.2 mm)	1.6874 in (42.86 mm)				
Brake Pad Dimensions						
Length	4.94 in (125.6 mm)	3.268 in (83.0 mm)	<input type="checkbox"/>			
Width	1.81 in (46.0 mm)	1.299 in (33.0 mm)	<input type="checkbox"/>			
Thickness	0.43 in (11.0 mm)	0.335 in (8.5 mm)	<input type="checkbox"/>			
Brake Pad Wear Limit						
Min. Thickness	0.079 in (2.0 mm)	0.079 in (2.0 mm)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brake Rotor Dimensions						
Outer Diameter	11.665 in (296.0 mm)	11.50 in (292.0 mm)	<input type="checkbox"/>			
Standard Thickness	0.945 in (24 mm)	0.63 in (16 mm)	<input type="checkbox"/>			
Brake Rotor Repair/Wear Limits						
Max. Runout	0.0014 in (0.035 mm)	0.0039 in (0.1 mm)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Min. Thickness	0.886 in (22.0 mm)	0.55 in (14 mm)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Max. Thk. Variation	0.0006 in (0.015 mm)	0.0006 in (0.015 mm)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Brembo System

Brake Model Code	Front Disc Brake OPB27VA	Rear Disc Brake OPB13VB				
Brake Fluid	DOT 3 (Recommended)					
Master Cyl. Bore Dia.	1.0626 in (26.99 mm)		<input type="checkbox"/>			
Cylinder Bore Dia.	1.50 in x 2 + 1.73 in x 2 (38 mm x 2 + 44 mm x 2)	1.575 in x 2 (40.0 mm x 2)				
Brake Pad Dimensions						
Length	4.61 in (117.1 mm)	3.016 in (76.6 mm)	<input type="checkbox"/>			
Width	2.098 in (53.3 mm)	1.77 in (45.0 mm)	<input type="checkbox"/>			
Thickness	0.366 in (9.3 mm)	0.358 in (9.1 mm)	<input type="checkbox"/>			
Brake Pad Wear Limit						
Min. Thickness	0.079 in (2.0 mm)	0.079 in (2.0 mm)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brake Rotor Dimensions						
Outer Diameter	12.76 in (324 mm)	13.07 in (332.0 mm)	<input type="checkbox"/>			
Standard Thickness	1.181 in (30.0 mm)	0.87 in (22.0 mm)	<input type="checkbox"/>			
Brake Rotor Repair/Wear Limits						
Max. Runout	0.0020 in (0.050 mm)	0.0028 in (0.07 mm)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Min. Thickness	1.118 in (28.4 mm)	0.795 in (20.2 mm)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Max. Thk. Variation	0.0006 in (0.015 mm)	0.0006 in (0.015 mm)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Brake Pedal Dimen.

Height (from dash panel top surface) M/T: 6.06 - 6.46 in (154 - 164 mm)
 A/T: 6.38 - 6.77 in (162 - 172 mm)
 Depressed Height M/T: 3.54 in (90 mm) or more
 A/T: 3.74 in (95 mm) or more
 Pedal Free Play 0.12 - 0.43 in (3.0 - 11.0 mm)
 Switch Clearance 0.0291 - 0.0772 in (0.74 - 1.96 mm)

Brake Booster

Input Rod Length

Vacuum Type

4.92 in (125 mm)

Parking Drum Brake

Inside Diameter

DS17HF

6.77 in (172 mm)

Wear Limit Diameter

6.81 in (173 mm)

Brake Shoe Dimension

Thickness

0.126 in (3.2 mm)

Wear limit thickness

0.059 in (1.5 mm)

Parking Brake Control

Number of Notches

Foot Lever Type

3 - 4

Hand Lever Type

6 - 7

Warning Lamp On

1 Notch

1 Notch

Wheel Lug Nut

72-87 ft-lb (10-12 kg-m)



2003 G35 Coupe – Brakes

PRECAUTIONS

1. Never reuse drained brake fluid.
2. Be careful not to splash brake fluid on painted surfaces.
3. Use clean brake fluid to clean or wash master cylinder wheel cylinders, and disc brake calipers parts.
4. Mineral oils such as gasoline and kerosene should not be used. They can cause damage to rubber parts of the hydraulic system.
5. Use flare nut wrench when removing or installing brake line fittings.
6. Always torque brake lines.
7. Always replace brake pad shims when replacing brake pads.

Warning:

Clean brake pads and shoes with a dust collector to minimize the hazard of airborne particles or other materials.



2003 G35 Coupe – Electrical

ELECTRICAL

Wire Color Code

B = Black	BR = Brown
W = White	OR = Orange
R = Red	P = Pink
G = Green	PU = Purple
L = Blue	GY = Gray
Y = Yellow	SB = Sky Blue
LG = Light Green	CH = Dark Brown
DG = Dark Green	

When a wire color is striped, the base color is given first, followed by the stripe color. Example L/W = Blue with white stripe

Battery specification:

Type	80D23L
Capacity	12 V / 52 AH
Cold cranking current	582 A
Load test at 3 × AH for 15 seconds.	

Battery charging rates:

Amps	Time
50	1 hour
25	2 hours
10	5 hours
5	10 hours

Do not charge battery over 50 ampere rate.

Do not "quick charge" a fully discharged battery.

If battery electrolyte temperature rises above 140°F, stop charging.

Starter:

Type	S114-880 Hitachi Gear reduction type
No-load current	Less than 90 A
No-load RPM	More than 2,880

Alternator:

Type	A3TG0191 Mitsubishi
Nominal Rating	12 V / 110 A
Output current A/RPM (with 13.5 V applied)	More Than 37 / 1,300 More Than 92 A / 2,500 More Than 103 A / 5,000

Regulated Output Voltage 14.1 - 14.7

Oil Pressure Switch:

Oil pressure PSI	Engine Speed (rpm)
More Than 14	Idle
More Than 43	2000
More Than 57	6000

Bulb Specifications:

Exterior

Item	Wattage (12V)
Headlamp Low	35 (D2R Xenon)
High/Fog	60/55 (HB2)
Front Turn Signal	21 (amber)
Rear Turn Signal	21
Front Side Marker	3.8
Rear Side Marker	3.8
Parking Lamp	5
Stop/Tail Lamp	LED
Center Stop Lamp	LED
Back-up Lamp	18
License Plate Lamp	5

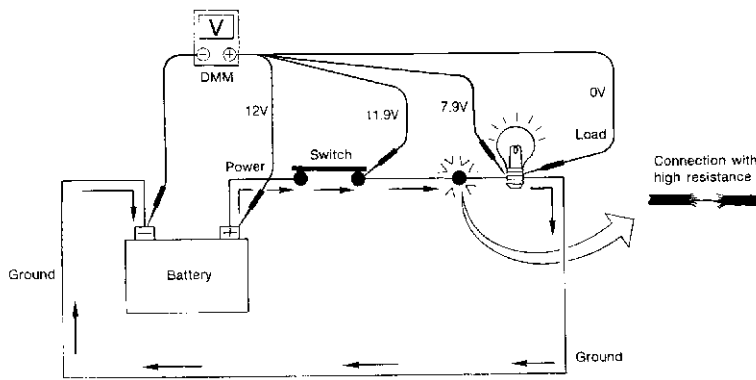
Interior

Item	Wattage (12V)
Glove box Lamp	1.4
Ignition Key Hole Lamp	1.4
Ashtray Lamp	1.4
Cigarette Lighter Lamp	1.4
Map Lamp (Coupe)	8
Step Lamp	5
Trunk Room Lamp	3.4
Vanity Mirror Lamp	1.32

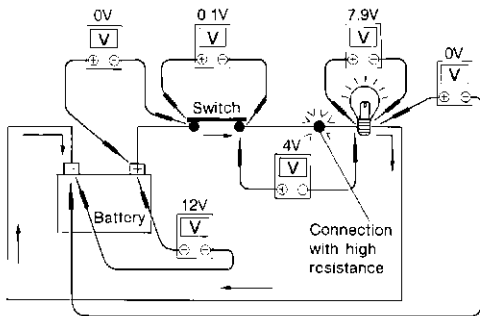
How to perform voltage drop test: See Illustrations

Symptom: Dim bulb or no operation

0 (zero) ohm resistance between switch and bulb



AGI069



1. Connect the voltmeter as shown, starting at the battery and working your way around the circuit.
2. An unusually large voltage drop will indicate a component or wire that needs to be repaired. In the illustration, the poor connection causes a 4 volt drop.

The chart that follows illustrates some maximum allowable voltage drops. These values are given as a guideline, the exact value for each component may vary.

COMPONENT	VOLTAGE DROP
Wire	negligible <.001 volts
Ground Connections	Approx. 0.1 volts
Switch Contacts	Approx. 0.3 volts

AGI055

2003 G35 Coupe – Electrical

BATTERY CONDITION

Battery Sulphation:

A battery will be completely discharged if it is left unattended for a long time and the specific gravity becomes less than 1.100. This may result in sulphation on the cell plates. To determine if a battery has been sulfated, note its voltage and current when charging. If low current and higher voltage are observed in the initial stages of charging a sulfated battery is likely. A sulfated battery may sometimes be brought back into service by means of a long slow charge, 12 hours or more.

Checking Battery Specific Gravity With Hydrometer

Hydrometer temperature correction

Battery electrolyte temp. °C (°F)	Add to specific gravity reading
71 (160)	0.032
66 (150)	0.028
60 (140)	0.024
54 (129)	0.020
49 (120)	0.016
43 (110)	0.012
38 (100)	0.008
32 (90)	0.004
27 (80)	0
21 (70)	-0.004
16 (60)	-0.008
10 (50)	-0.012
4 (39)	-0.016
-1 (30)	-0.020
-7 (20)	-0.024
-12 (10)	-0.028
-18 (0)	-0.032

Corrected specific gravity	Approximate charge condition
1.260 - 1.280	Fully charged
1.230 - 1.250	3/4 charged
1.200 - 1.220	1/2 charged
1.170 - 1.190	1/4 charged
1.140 - 1.160	Almost discharged

- Do not quick charge a fully discharged battery.
- After charging, if the specific gravity of any two cells varies more than .050, the battery should be replaced.