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**G35**

MODEL V35 SERIES



**INFINITI**

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**QUICK REFERENCE INDEX**

<b>A GENERAL INFORMATION</b>	GI General Information	
<b>B ENGINE</b>	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	
	CL Clutch	
<b>C TRANSMISSION/ TRANSAXLE</b>	MT Manual Transmission	
	AT Automatic Transmission	
	TF Transfer	
<b>D DRIVELINE/AXLE</b>	PR Propeller Shaft	
	FFD Front Final Drive	
	RFD Rear Final Drive	
	FAX Front Axle	
	RAX Rear Axle	
	FSU Front Suspension	
	RSU Rear Suspension	
<b>E SUSPENSION</b>	WT Road Wheels & Tires	
	BR Brake System	
<b>F BRAKES</b>	PB Parking Brake System	
	BRC Brake Control System	
	PS Power Steering System	
<b>G STEERING</b>		
<b>H RESTRAINTS</b>	SB Seat Belts	
	SRS Supplemental Restraint System (SRS)	
<b>I BODY</b>	BL Body, Lock & Security System	
	GW Glasses, Window System & Mirrors	
	RF Roof	
	EI Exterior & Interior	
	IP Instrument Panel	
	SE Seat	
	ATC Automatic Air Conditioner	
<b>J AIR CONDITIONER</b>	SC Starting & Charging System	
	LT Lighting System	
<b>K ELECTRICAL</b>	DI Driver Information System	
	WW Wiper, Washer & Horn	
	BCS Body Control System	
	LAN LAN System	
	AV Audio, Visual, Navigation & Telephone System	
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	PG Power Supply, Ground & Circuit Elements	
	MA Maintenance	
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	<b>M INDEX</b>	

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# FOREWORD

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This manual contains maintenance and repair procedure for the 2004 INFINITI G35.

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.

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## 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 MOTOR CO., LTD.



**PLEASE HELP MAKE THIS SERVICE MANUAL BETTER!**

**INFINITI®**

Your comments are important to INFINITI 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) 488-3910

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

## INCH TO METRIC CONVERSION TABLE

(Rounded-off for automotive use)

inches	mm	inches	mm
.100	<b>2.54</b>	.610	<b>15.49</b>
.110	<b>2.79</b>	.620	<b>15.75</b>
.120	<b>3.05</b>	.630	<b>16.00</b>
.130	<b>3.30</b>	.640	<b>16.26</b>
.140	<b>3.56</b>	.650	<b>16.51</b>
.150	<b>3.81</b>	.660	<b>16.76</b>
.160	<b>4.06</b>	.670	<b>17.02</b>
.170	<b>4.32</b>	.680	<b>17.27</b>
.180	<b>4.57</b>	.690	<b>17.53</b>
.190	<b>4.83</b>	.700	<b>17.78</b>
.200	<b>5.08</b>	.710	<b>18.03</b>
.210	<b>5.33</b>	.720	<b>18.29</b>
.220	<b>5.59</b>	.730	<b>18.54</b>
.230	<b>5.84</b>	.740	<b>18.80</b>
.240	<b>6.10</b>	.750	<b>19.05</b>
.250	<b>6.35</b>	.760	<b>19.30</b>
.260	<b>6.60</b>	.770	<b>19.56</b>
.270	<b>6.86</b>	.780	<b>19.81</b>
.280	<b>7.11</b>	.790	<b>20.07</b>
.290	<b>7.37</b>	.800	<b>20.32</b>
.300	<b>7.62</b>	.810	<b>20.57</b>
.310	<b>7.87</b>	.820	<b>20.83</b>
.320	<b>8.13</b>	.830	<b>21.08</b>
.330	<b>8.38</b>	.840	<b>21.34</b>
.340	<b>8.64</b>	.850	<b>21.59</b>
.350	<b>8.89</b>	.860	<b>21.84</b>
.360	<b>9.14</b>	.870	<b>22.10</b>
.370	<b>9.40</b>	.880	<b>22.35</b>
.380	<b>9.65</b>	.890	<b>22.61</b>
.390	<b>9.91</b>	.900	<b>22.86</b>
.400	<b>10.16</b>	.910	<b>23.11</b>
.410	<b>10.41</b>	.920	<b>23.37</b>
.420	<b>10.67</b>	.930	<b>23.62</b>
.430	<b>10.92</b>	.940	<b>23.88</b>
.440	<b>11.18</b>	.950	<b>24.13</b>
.450	<b>11.43</b>	.960	<b>24.38</b>
.460	<b>11.68</b>	.970	<b>24.64</b>
.470	<b>11.94</b>	.980	<b>24.89</b>
.480	<b>12.19</b>	.990	<b>25.15</b>
.490	<b>12.45</b>	1.000	<b>25.40</b>
.500	<b>12.70</b>	2.000	<b>50.80</b>
.510	<b>12.95</b>	3.000	<b>76.20</b>
.520	<b>13.21</b>	4.000	<b>101.60</b>
.530	<b>13.46</b>	5.000	<b>127.00</b>
.540	<b>13.72</b>	6.000	<b>152.40</b>
.550	<b>13.97</b>	7.000	<b>177.80</b>
.560	<b>14.22</b>	8.000	<b>203.20</b>
.570	<b>14.48</b>	9.000	<b>228.60</b>
.580	<b>14.73</b>	10.000	<b>254.00</b>
.590	<b>14.99</b>	20.000	<b>508.00</b>
.600	<b>15.24</b>		

## METRIC TO INCH CONVERSION TABLE

(Rounded-off for automotive use)

mm	inches	mm	inches
<b>1</b>	.0394	<b>51</b>	2.008
<b>2</b>	.079	<b>52</b>	2.047
<b>3</b>	.118	<b>53</b>	2.087
<b>4</b>	.157	<b>54</b>	2.126
<b>5</b>	.197	<b>55</b>	2.165
<b>6</b>	.236	<b>56</b>	2.205
<b>7</b>	.276	<b>57</b>	2.244
<b>8</b>	.315	<b>58</b>	2.283
<b>9</b>	.354	<b>59</b>	2.323
<b>10</b>	.394	<b>60</b>	2.362
<b>11</b>	.433	<b>61</b>	2.402
<b>12</b>	.472	<b>62</b>	2.441
<b>13</b>	.512	<b>63</b>	2.480
<b>14</b>	.551	<b>64</b>	2.520
<b>15</b>	.591	<b>65</b>	2.559
<b>16</b>	.630	<b>66</b>	2.598
<b>17</b>	.669	<b>67</b>	2.638
<b>18</b>	.709	<b>68</b>	2.677
<b>19</b>	.748	<b>69</b>	2.717
<b>20</b>	.787	<b>70</b>	2.756
<b>21</b>	.827	<b>71</b>	2.795
<b>22</b>	.866	<b>72</b>	2.835
<b>23</b>	.906	<b>73</b>	2.874
<b>24</b>	.945	<b>74</b>	2.913
<b>25</b>	.984	<b>75</b>	2.953
<b>26</b>	1.024	<b>76</b>	2.992
<b>27</b>	1.063	<b>77</b>	3.031
<b>28</b>	1.102	<b>78</b>	3.071
<b>29</b>	1.142	<b>79</b>	3.110
<b>30</b>	1.181	<b>80</b>	3.150
<b>31</b>	1.220	<b>81</b>	3.189
<b>32</b>	1.260	<b>82</b>	3.228
<b>33</b>	1.299	<b>83</b>	3.268
<b>34</b>	1.339	<b>84</b>	3.307
<b>35</b>	1.378	<b>85</b>	3.346
<b>36</b>	1.417	<b>86</b>	3.386
<b>37</b>	1.457	<b>87</b>	3.425
<b>38</b>	1.496	<b>88</b>	3.465
<b>39</b>	1.535	<b>89</b>	3.504
<b>40</b>	1.575	<b>90</b>	3.543
<b>41</b>	1.614	<b>91</b>	3.583
<b>42</b>	1.654	<b>92</b>	3.622
<b>43</b>	1.693	<b>93</b>	3.661
<b>44</b>	1.732	<b>94</b>	3.701
<b>45</b>	1.772	<b>95</b>	3.740
<b>46</b>	1.811	<b>96</b>	3.780
<b>47</b>	1.850	<b>97</b>	3.819
<b>48</b>	1.890	<b>98</b>	3.858
<b>49</b>	1.929	<b>99</b>	3.898
<b>50</b>	1.969	<b>100</b>	3.937

**QUICK REFERENCE CHART G35  
ENGINE TUNE-UP DATA (VQ35DE)**

PFP:00000

ELS0003W

Engine model		VQ35DE				
Firing order		1-2-3-4-5-6				
Idle speed A/T (In "N" position) M/T	rpm	650±50				
Ignition timing (BTDC at idle speed)		15°±5°				
CO% at idle		0.7 - 9.9 % and engine runs smoothly				
Drive Belt	Deflection adjustment		Unit: mm (in)	Tension adjustment		Unit: N(kg, lb)
	Used belt		New belt	Used belt		New belt
	Limit	After adjustment		Limit	After adjustment	
Alternator and power steering oil pump belt	7 (0.28)	4 - 5 (0.16 - 0.20)	3.5 - 4.5 (0.138 - 0.177)	294 (30, 66)	730 - 818 (74.5 - 83.5, 164 - 184)	838 - 926 (85.5 - 94.5, 188 - 208)
A/C compressor belt	12 (0.47)	9 - 10 (0.35 - 0.39)	8 - 9 (0.31 - 0.35)	196 (20, 44)	348 - 436 (35.5 - 44.5, 78 - 98)	470 - 559 (48 - 57, 106 - 126)
Applied pushing force	98 N (10 kg, 22 lb)			—		
Radiator cap relief pressure		kPa (kg/cm <sup>2</sup> , psi)		78 - 98 (0.8 - 1.0, 11 - 14)		
Standard						
Limit		59 (0.6, 9)				
Cooling system leakage testing pressure		kPa (kg/cm <sup>2</sup> , psi)		157(1.6, 23)		
Compression pressure		kPa (kg/cm <sup>2</sup> , psi)/rpm		1,270 (13.0, 184) /300		
Standard						
Minimum		980 (10.0, 142) /300				
Differential limit between cylinders		100 (1.0, 15) /300				
Make		NGK				
Standard type		PLFR5A - 11				
Hot type		PLFR4A - 11				
Cold type		PLFR6A - 11				
Gap (Nominal)		mm(in)		1.1 ( 0.043 )		

**FRONT WHEEL ALIGNMENT (Unladen\* )**

ELS0003X

AXLE			2WD	AWD
Camber	Degree minute (Decimal degree)	Minimum	- 0° 50' ( - 0.83° )	-1° 00' (-1.00°)
		Nominal	- 0° 05' ( - 0.08° )	- 0° 15' ( - 0.25° )
		Maximum	0° 40' ( 0.67° )	0° 30' ( 0.50° )
		Left and right difference	45' ( 0.75° )	
Caster	Degree minute (Decimal degree)	Minimum	7° 00' ( 7.00° )	5° 55' ( 5.92° )
		Nominal	7° 45' ( 7.75° )	6° 40' ( 6.67° )
		Maximum	8° 30' ( 8.50° )	7° 25' ( 7.42° )
		Left and right difference	45' ( 0.75° )	
Kingpin inclination	Degree minute (Decimal degree)	Minimum	3° 45' ( 3.75° )	5° 15' ( 5.25° )
		Nominal	4° 30' ( 4.50° )	6° 00' ( 6.00° )
		Maximum	5° 15' ( 5.25° )	6° 45' ( 6.75° )
Total toe-in Distance ( A - B )	mm ( in )	Minimum	0 ( 0 )	
		Nominal	1 ( 0.04 )	
		Maximum	2 ( 0.08 )	
Wheel turning angle (Full turn)	Inside Degree minute (Decimal degree)	Minimum	37° 30' ( 37.5° )	38° 00' ( 38.0° )
		Nominal	40° 30' ( 40.5° )	41° 00' ( 41.0° )
		Maximum	41° 30' ( 41.5° )	42° 00' ( 42.0° )
	Outside Degree minute (Decimal degree)	Nominal	32° 30' ( 32.5° )	31° 40' ( 31.7° )

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

**REAR WHEEL ALIGNMENT (Unladen\*)**

ELS0003Y

TRANSMISSION			A/T	M/T
Camber	Degree minute (Decimal degree)	Minimum	- 1° 05' ( - 1.08° )	- 1° 10' ( - 1.17° )
		Nominal	- 0° 35' ( - 0.58° )	- 0° 40' ( - 0.67° )
		Maximum	- 0° 05' ( - 0.08° )	- 1° 10' ( - 0.17° )
		Left and right difference	45' ( 0.75° )	
Total-in Distance ( A - B )	mm ( in )	Minimum	0.1 ( 0.004 )	
		Nominal	2.8 ( 0.110 )	
		Maximum	5.5 ( 0.217 )	

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

**BRAKE**

ELS0003Z

Unit : mm ( in )

Front brake	Pad wear limit	2.0 ( 0.079 )
	Rotor repair limit	22.0 ( 0.866 )
Rear brake	Pad wear limit	2.0 ( 0.079 )
	Rotor repair limit	14.0 ( 0.551 )
Pedal free height	M/T model	154 - 164 ( 6.06 - 6.46 )
	A/T model	162 - 172 ( 6.38 - 6.77 )
Pedal depressed height*	M/T model	More than 90 ( 3.54 )
	A/T model	More than 95 ( 3.74 )

\* : Under force of 490 N( 50 kg, 110 lb ) with engine running.

REFILL CAPACITIES

ELS00040

UNIT		Liter	US measure
Fuel tank		76	20 gal
Engine Coolant ( With reservoir tank ) at MAX level		8.7	9-1/4 qt
Engine	Drain and refill		
	With oil filter change	4.7	5 qt
	Without oil filter change	4.4	4 - 5/8 qt
	Dry engine (Overhaul)	5.4	5 - 3/4 qt
Transmission	A/T	10.3	10 - 7/8 qt
	M/T	2.9	3 - 1/8 qt
Transfer		1.25	2-5/8 pt
Differential carrier	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	0.18	6.0 fl oz
	Refrigerant	0.55 kg	1.21 lb