

| | | | |
|--|-------------|--|---|
| | | | |
| | A | 120.5 to 130.5 (4.744 to 5.138) | 129.3 to 139.3 (5.091 to 5.484) |
| | B | 1.0 to 2.0 (0.039 to 0.079) | |
| | C | *5 | 65 (2.56)*1*2 |
| *6 | | 74 (2.91)*3*4 | 86 (3.39)*3*4 |
| SAE J1703 or FMVSS No. 116 DOT3 | | | |
| 300 N (31 kgf, 67.5 lbf) | | | |
| 7 to 9 | | | |
| | | | |
| A | 1.0 (0.039) | | |
| | B | 27.0 (1.063) | 16.5 (0.650) |
| | | | |
| 1.0 (0.039) | | | |
| | | | |
| 191 (7.52) | | | |
| | | GRS | URS |
| | | Drain and refill 1.7 (1.8, 1.5)*7 1.5 (1.6, 1.3)*8 | Drain and refill 3.2 (3.38, 2.82) |
| Toyota Genuine ATF WS | | | |
| | | 20 (204, 15) | |
| | | 1.10 to 1.20 (1.17 to 1.27, 0.97 to 1.05) | 1.30 to 1.40 (1.38 to 1.48, 1.15 to 1.23) |
| Toyota Genuine Differential gear oil LT 75W-85 GL-5 or its equivalent | | | |
| | | 49 (500, 36) | |

| | | | | | | | |
|---|-------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|---------------|---------------|
| | | GRS, URS | | | | | |
| | | 103 (1050, 76) | | | | | |
| | | 30 (1.18) | | | | | |
| | | | | | | | |
| | | GRS | URS | GRS | URS | | |
| | A | -0°23'±45° (-0.38°±0.75°) | -0°26'±45° (-0.43°±0.75°) | -1°10'±45° (-1.17°±0.75°) | -1°19'±45° (-1.32°±0.75°) | | |
| | B | 9°23'±45° (9.38°±0.75°) | 9°26'±45° (9.43°±0.75°) | — | | | |
| | C | 7°23'±45° (7.38°±0.75°) | 7°26'±45° (7.43°±0.75°) | — | | | |
| | D | 41°49' (41.82°)±2° | 41°48' (41.80°)±2° | — | | | |
| | | 1±/2 (0.04±/0.08) | | 3±/2 (0.12±/0.08) | | | |
| | | | | | | | |
| km/h (mph) | | | | | | | |
| kPa (kgf/cm ² or bar, psi) | Europe, Taiwan | 225/50 R17 94W | 210 (131) | 260 (2.6, 38) | 270 (2.7, 39) | 270 (2.7, 39) | 320 (3.2, 46) |
| | | 210 (131) 160 (100) | 240 (2.4, 35) | 250 (2.5, 36) | 240 (2.4, 35) | 290 (2.9, 42) | |
| | | 160 (100) | 230 (2.3, 33) | | 230 (2.3, 33) | 260 (2.6, 38) | |
| | 24/540 R18 93Y 24/540 ZR18 | 210 (131) | 260 (2.6, 38) | 270 (2.7, 39) | 270 (2.7, 39) | 310 (3.1, 45) | |
| | | 210 (131) 160 (100) | 240 (2.4, 35) | 250 (2.5, 36) | 240 (2.4, 35) | 270 (2.7, 39) | |
| | | 160 (100) | 230 (2.3, 33) | | 230 (2.3, 33) | 260 (2.6, 38) | |
| | Australia | 225/50 R17 94W | 160 (100) | 260 (2.6, 38) | 270 (2.7, 39) | 270 (2.7, 39) | 320 (3.2, 46) |
| | | 160 (100) | 230 (2.3, 33) | | 230 (2.3, 33) | 260 (2.6, 38) | |
| | | 24/540 R18 93Y | 160 (100) | 260 (2.6, 38) | 270 (2.7, 39) | 270 (2.7, 39) | 310 (3.1, 45) |
| | G.C.C., Other | 225/50 R17 94W | 210 (131) | 260 (2.6, 38) | 270 (2.7, 39) | 270 (2.7, 39) | 320 (3.2, 46) |
| | | 210 (131) 160 (100) | 240 (2.4, 35) | 250 (2.5, 36) | 240 (2.4, 35) | 290 (2.9, 42) | |
| | | 160 (100) | 230 (2.3, 33) | | 230 (2.3, 33) | 260 (2.6, 38) | |
| China | 24/540 R18 93Y | 210 (131) | 260 (2.6, 38) | 270 (2.7, 39) | 270 (2.7, 39) | 310 (3.1, 45) | |
| | 210 (131) 160 (100) | 240 (2.4, 35) | 250 (2.5, 36) | 240 (2.4, 35) | 270 (2.7, 39) | | |
| | 160 (100) | 230 (2.3, 33) | | 230 (2.3, 33) | 260 (2.6, 38) | | |
| China | 160 (100) | 260 (2.6, 38) | 270 (2.7, 39) | 260 (2.6, 38) | 270 (2.7, 39) | | |
| | 160 (100) | 230 (2.3, 33) | | | | | |

*1: for 3GR-FE *2: for 3GR-FSE *3: for 1UR-FE *4: for 1UR-FSE

*5: When brake pedal is depressed with a force of 500 N (51 kgf, 112 lbf) while engine is running.

*6: When brake pedal is depressed with a force of 200 N (20 kgf, 45 lbf) while engine is running. *7: for A760E *8: for A960E

GS460/300

GRS190, URS190

2008/09-2009/09

| | | | |
|---|---------------------------------------|--|---|
| | | GRS, URS | |
| *1 | *2 | *3 | |
| | *4 | | THEFT DETERRENT SYSTEM |
| VGRS | | | |
| 20°C (68°F) | | 1.25 to 1.29 | |
| | cm³ or cc (cu. in.) | 3GR-FE 3GR-FSE 2995 (182.75) | 1UR-FE 1UR-FSE 4608 (281.2) |
| A | DENSO | SK20HR11*5 FK20HBR11*6 | SK20HR11*7 FK20HBR11*8 |
| | NGK | ILFR6C11*5 ILFR6D11T*6 | - |
| | A | 1.0 to 1.1 (0.039 to 0.043) | |
| BTDC | | 8 to 12° (Terminals TC and CG of DLC3 Connected) | |
| (DLC3 Terminal 9 (TAC) Connected) rpm | | 600 to 700 | 700 to 800 |

| | | | |
|--|---|--|---|
| MPa (kgf/cm², psi) | | 1.4 (14, 199) | 1.4 (14.2, 203) |
| | | 0.98 (10.0, 142) | 0.98 (9.9, 142) |
| | | 0.1 (1.0, 15) | 0.1 (1.0, 14) |
| kPa (kgf/cm², psi) | | 80 (0.8, 11.6) | 70 (0.7, 10.1) |
| | | 6000 rpm: 380 (3.9, 55.5) | 2500 rpm: 220 (2.2, 31.9) |
| | | | |
| | | 3GR-FE 3GR-FSE | 1UR-FE 1UR-FSE |
| A liters (US qts, Imp. qts) | | 5.9 (6.2, 5.2) | 8.4 (8.9, 7.4) |
| | | 6.3 (6.7, 5.5) | 8.6 (9.1, 7.6) |
| | 5W-30 | API grade SL Energy-Conserving or ILSAC*9 multigrade engine oil | — |
| | 0W-20 5W-20 5W-30 10W-30 15W-40 20W-50 | — | API grade SL or SM multigrade engine oil |
| | A | 40 (408, 30) | |
| liters (US qts, Imp. qts) | | 9.1 (9.6, 8.0) | 10.8 (11.4, 9.5) |

*1: Initialization required. Refer to the repair manual for the initialization procedures. *2: Parking Assist Monitor System

*3: LEXUS Parking Assist-sensor System *4: VGRS: Variable Gear Ratio Steering System *5: 3GR-FE *6: 3GR-FSE *7: 1UR-FE *8: 1UR-FSE

*9: ILSAC: International Lubricant Standardization and Approval Committee

| | | | |
|--|----------|--|--|
| | | | |
| | A | 120.5 to 130.5 (4.744 to 5.138) | 129.3 to 139.3 (5.091 to 5.484) |
| | B | 1.0 to 2.0 (0.039 to 0.079) | |
| | C | *6 | 65 (2.56)*1*2*3 |
| *7 | | 74 (2.91)*4*5 | 86 (3.39)*4*5 |
| mm (in.) | | SAE J1703 or FMVSS No. 116 DOT3 | |
| 300 N (31 kgf, 67.5 lbf) | | 7 to 9 | |
| | | | |
| mm (in.) | A | 1.0 (0.039) | |
| | B | 27.0 (1.063) | 16.5 (0.650) |
| | | 1.0 (0.039) | |
| | | 191 (7.52) | |
| | | GRS | URS |
| liters (US qts, Imp. qts) | | Drain and refill 1.7 (1.8, 1.5)*8 1.5 (1.6, 1.3)*9 2.8 (3.0, 2.5)*10 | Drain and refill 3.2 (3.38, 2.82) |
| N·m (kgf-cm, ft-lbf) | | Toyota Genuine ATF WS | |
| liters (US qts, Imp. qts) | A | 20 (204, 15) | |
| | | 0.65 to 0.75 (0.69 to 0.79, 0.57 to 0.66) | 1.10 to 1.20 (1.17 to 1.27, 0.97 to 1.05)*1*2 1.30 to 1.40 (1.38 to 1.48, 1.15 to 1.23)*3*4*5 |
| Toyota Genuine Hypoid gear oil API GL-5 or equivalent | | Toyota Genuine Differential gear oil LT 75W-85 GL-5 or equivalent | |
| N·m (kgf-cm, ft-lbf) | A | 39 (400, 29) | 49 (500, 36) |

| | | | | | | | |
|-----------------------------|-----------------------|--|--------------------------------------|--|-------------------------------------|----------------------|----------------------|
| | | GRS, URS | | | | | |
| N·m (kgf-cm, ft-lbf) | | 103 (1050, 76) | | | | | |
| | | GRS, URS | | | | | |
| mm (in.) | | 30 (1.18) | | | | | |
| | | GRS | | URS | | | |
| | A | -0°23'±45' (-0.38°±0.75°)*1*2 -0°25'±45' (-0.42°±0.75°)*3 | -0°26'±45' (-0.43°±0.75°) | -1°10'±45' (-1.17°±0.75°)*1*2 -1°03'±45' (-1.05°±0.75°)*3 | -1°19'±45' (-1.32°±0.75°) | | |
| | B | 9°23'±45' (9.38°±0.75°)*1*2 11°11'±45' (11.18°±0.75°)*3 | 9°26'±45' (9.43°±0.75°) | --- | | | |
| | C | 7°23'±45' (7.38°±0.75°)*1*2 4°53'±45' (4.88°±0.75°)*3 | 7°26'±45' (7.43°±0.75°) | --- | | | |
| | D | 41°49' (41.82°)±2°*1*2 39°22' (39.37°)±2°*3 | 41°48' (41.80°)±2° | --- | | | |
| | | F-E | | mm (in.) | | | |
| | | 1±2 (0.04±0.08) | | 3±2 (0.12±0.08) | | | |
| | | km/h (mph) | | | | | |
| | Europe, Taiwan | 225/50 R17 94W | 210 (131) | 260 (2.6, 38) | 270 (2.7, 39) | 270 (2.7, 39) | 320 (3.2, 46) |
| | | | 210 (131) 160 (100) | 240 (2.4, 35) | 250 (2.5, 36) | 240 (2.4, 35) | 290 (2.9, 42) |
| | | | 160 (100) | 230 (2.3, 33) | | 230 (2.3, 33) | 260 (2.6, 38) |
| | | 245/40 R18 93Y 245/40 R18 93Y 245/40 R18 93Y | 210 (131) | 260 (2.6, 38) | 270 (2.7, 39) | 270 (2.7, 39) | 310 (3.1, 45) |
| | | | 210 (131) 160 (100) | 240 (2.4, 35) | 250 (2.5, 36) | 240 (2.4, 35) | 270 (2.7, 39) |
| | | | 160 (100) | 230 (2.3, 33) | | 230 (2.3, 33) | 260 (2.6, 38) |
| | Australia | 225/50 R17 94W | 160 (100) | 260 (2.6, 38) | 270 (2.7, 39) | 270 (2.7, 39) | 320 (3.2, 46) |
| | | | 160 (100) | 230 (2.3, 33) | | 230 (2.3, 33) | 260 (2.6, 38) |
| | | | 160 (100) | 260 (2.6, 38) | 270 (2.7, 39) | 270 (2.7, 39) | 310 (3.1, 45) |
| | | 245/40 R18 93Y | 160 (100) | 230 (2.3, 33) | | 230 (2.3, 33) | 260 (2.6, 38) |
| | | | 210 (131) | 260 (2.6, 38) | 270 (2.7, 39) | 270 (2.7, 39) | 310 (3.1, 45) |
| | | | 210 (131) 160 (100) | 240 (2.4, 35) | 250 (2.5, 36) | 240 (2.4, 35) | 270 (2.7, 39) |
| G.C.C., Other | 225/50 R17 94W | 210 (131) | 260 (2.6, 38) | 270 (2.7, 39) | 270 (2.7, 39) | 320 (3.2, 46) | |
| | | 210 (131) 160 (100) | 240 (2.4, 35) | 250 (2.5, 36) | 240 (2.4, 35) | 290 (2.9, 42) | |
| | | 160 (100) | 230 (2.3, 33) | | 230 (2.3, 33) | 260 (2.6, 38) | |
| | 245/40 R18 93Y | 210 (131) | 260 (2.6, 38) | 270 (2.7, 39) | 270 (2.7, 39) | 310 (3.1, 45) | |
| | | 210 (131) 160 (100) | 240 (2.4, 35) | 250 (2.5, 36) | 240 (2.4, 35) | 270 (2.7, 39) | |
| | | 160 (100) | 230 (2.3, 33) | | 230 (2.3, 33) | 260 (2.6, 38) | |
| China | 160 (100) | 260 (2.6, 38) | 270 (2.7, 39) | 260 (2.6, 38) | 270 (2.7, 39) | | |
| | 160 (100) | 230 (2.3, 33) | | | | | |

*1: for 3GR-FE *2: for 3GR-FSE *3: for 2GR-FSE *4: for 1UR-FE *5: for 1UR-FSE


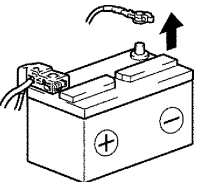
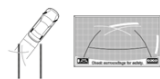
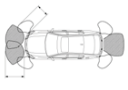
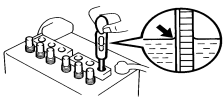
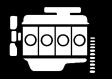
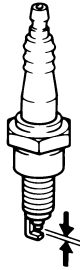
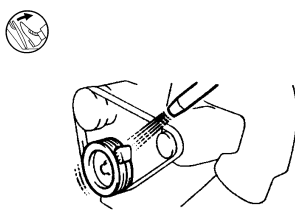
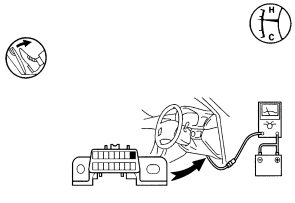
*6: When brake pedal is depressed with a force of 500 N (51 kgf, 112 lbf) while engine is running.

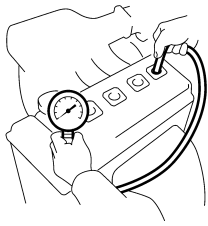



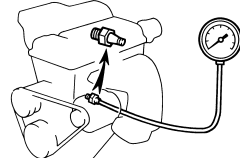




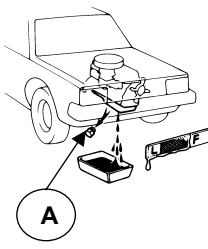
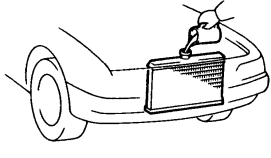
*7: When brake pedal is depressed with a force of 200 N (20 kgf, 45 lbf) while engine is running. *8: for A760E *9: for A960E *10: for A760H

GS460/350/300

GRS190, GRS196, URS190

2009/09-

| GRS, URS | | | | |
|--|--|--|------------------------------|--|
|  | | | | |
|  *1 |  *2 |  *3 | | |
| | VGRS | | THEFT DETERRENT SYSTEM | |
|  | 1.25 to 1.29 | | | |
| 20°C (68°F) | | | | |
|  | 3GR-FE 3GR-FSE | 2GR-FSE | 1UR-FE 1UR-FSE | |
| cm ³ or cc (cu. in.) | 2995 (182.8) | 3456 (210.9) | 4608 (281.2) | |
|  | DENSO | FK20HBR11 | SK20HR11*7 FK20HBR11*8 | |
| | SK20HR11*5 FK20HBR11*6 | | | |
| A | NGK | - | - | |
| | ILFR6C11*5 ILFR6D11T*6 | | | |
| mm (in.) | A 1.0 to 1.1 (0.039 to 0.043) | | | |
|  | 8 to 12° (Terminals TC and CG of DLC3 Connected) | | | |
| BTDC | | | | |
|  | 600 to 700 | 600 to 700 | 700 to 800 | |
| (DLC3 Terminal 9 (TAC) Connected) | | | | |
| rpm | | | | |

| | | | | |
|--|---|---------------------------------|---|---------------------------------|
|  |  | 1.4 (14, 199) | 1.4 (14, 199) | 1.4 (14.2, 203) |
| |  | 0.98 (10.0, 142) | 0.98 (10.0, 142) | 0.98 (9.9, 142) |
| |  | 0.1 (1.0, 15) | 0.1 (1.0, 15) | 0.1 (1.0, 14.5)*8 |
| MPa (kgf/cm ² , psi) | | | | |
|  |  | 80 (0.8, 11.6) | 80 (0.8, 11.6) | 70 (0.7, 10.1) |
|  |  | 6000 rpm: 380 (3.9, 55.5) | 2500 rpm: 250 (2.5, 36) | 2500 rpm: 220 (2.2, 31.9) |
| kPa (kgf/cm ² , psi) | | | | |
|  | 3GR-FE 3GR-FSE | 2GR-FSE | 1UR-FE 1UR-FSE | |
|  | 5.9 (6.2, 5.2) | 6.0 (6.3, 5.3) | 8.4 (8.9, 7.4) | |
| A | 6.3 (6.7, 5.5) | 6.4 (6.7, 5.6) | 8.6 (9.1, 7.6) | |
| liters (US qts, Imp. qts) | 5W-30: API grade SL "energy-conserving" or ILSAC*9 multigrade engine oil | | 5W-30 and 10W-30: API grade SL "energy-conserving", API grade SM "energy-conserving" or ILSAC*9 multigrade engine oil | |
| | 15W-40 and 20W-50: API grade SL or SM multigrade engine oil | | 0W-20, 5W-20, 5W-30, 10W-30, 15W-40 and 20W-50: API grade SL or SM multigrade engine oil | |
| N-m (kgf-cm, ft-lbf) | A 40 (408, 30) | | | |
|  | 9.1 (9.6, 8.0) | 9.1 (9.6, 8.0) | 10.8 (11.4, 9.5) | |
| liters (US qts, Imp. qts) | | | | |

*1: Initialization required. Refer to the repair manual for the initialization procedures. *2: Parking Assist Monitor System

*3: LEXUS Parking Assist-sensor System *4: VGRS: Variable Gear Ratio Steering System *5: 3GR-FE *6: 3GR-FSE *7: 1UR-FE *8: 1UR-FSE

*9: ILSAC: International Lubricant Standardization and Approval Committee

TOYOTA MOTOR CORPORATION Technical Service Division