# SUSPENSION AND AXLE

## Service Data

| | | | | | |
|---|---|---|---|---|---|
| Cold tire inflation pressure kPa (kgf/cm², psi) | Destination | Model | Tire size | Front | Rear |
| | Europe | HZJ 70, 73 | 215/80R16 | 180 (1.8, 26) | 200 (2.0, 29) |
| | | PZJ 70, 73 | 265/75R15 | 180 (1.8, 26) | 200 (2.0, 29) |
| | | PZJ 75 | 205R16C8 | 220 (2.2, 32) | 450 (4.5, 65) |
| | | | 7.50-16-8 | 240 (2.4, 35) | 350 (3.5, 51) |
| | | RJ 70, 73 | 7.00-16-6 | 180 (1.8, 26) | 240 (2.4, 35) |
| | | LJ 70, 73 | 215/80R16 | 160 (1.6, 23) | 200 (2.0, 29) |
| | | | 265/75R15 | 180 (1.8, 26) | 200 (2.0, 29) |
| | | LJ 77 | 215/80R16 | 180 (1.8, 26) | 260 (2.6, 38) |
| | | | 265/75R15 | 180 (1.8, 26) | 200 (2.0, 29) |
| | Australia | FJ 75 | 7.50R16-8 | 220 (2.2, 32) | 390 (3.9, 57) |
| | | HZJ 70, 73 PZJ 70, 73 FJ 70, 73 | 7.50R16-6 | 200 (2.0, 29) | 350 (3.5, 51) |
| | | | 265/75R15 | 180 (1.8, 26) | 200 (2.0, 29) |
| | | HZJ 75 | 7.50R16-8 | 220 (2.2, 32) | 390 (3.9, 57) |
| | | LJ 70 RJ 70 | 205R16C-6 | 170 (1.7, 24) | 220 (2.2, 32) |
| | | | 265/75R15 | 180 (1.8, 26) | 200 (2.0, 29) |
| | Middle East | FZJ 70, 73 | 7.50R16-6 | 200 (2.0, 29) | 225 (2.25, 33) |
| | | | 7.50R16-8 | 200 (2.0, 29) | 225 (2.25, 33) |
| | | | 31 × 10.50R15 | 180 (1.8, 26) | 250 (2.5, 36) |
| | | | 7.50R16-8 (Sahara tire) | 210 (2.1, 30) | 270 (2.7, 39) |
| | | FZJ 75 | 7.50R16-8 | 225 (2.25, 33) | 375 (3.75, 54) |
| | | | 7.50R16-8 (Sahara tire) | 210 (2.1, 30) | 400 (4.0, 58) |
| | | FZJ 75 (P/U only) | 235/95R15C-6 (Sand tire) | 180 (1.8, 26) | 220 (2.2, 32) |
| | | RJ 77 | 205R16C-6 | 200 (2.0, 29) | 320 (3.2, 46) |
| | | | 31 × 10.50R15 | 190 (1.9, 28) | 280 (2.8, 41) |
| | | HZJ 75 | 7.50-16-8 | 240 (2.4, 35) | 425 (4.25, 62) |
| | | | 7.50R16-8 | 225 (2.25, 33) | 375 (3.75, 54) |
| | | | 7.50R16-8 (Sahara tire) | 210 (2.1, 30) | 400 (4.0, 58) |
| | | | 235/95R15C-6(Sand tire) | 180 (1.8, 26) | 220 (2.2, 32) |
| | South Africa | FZJ 75 | 7.50R16-6 | 225 (2.25, 33) | 375 (3.75, 54) |
| | | HZJ 75 | 7.50R16-6 | 240 (2.4, 35) | 350 (3.5, 51) |
| | Others | FZJ 70, 73 | 7.00R15-6 | 225 (2.25, 33) | 275 (2.75, 40) |
| | | | 7.50R16-6 | 200 (2.0, 29) | 225 (2.25, 33) |
| | | | 7.50-16-6 | 180 (1.8, 26) | 200 (2.0, 29) |
| | | | 7.50R16-8 | 200 (2.0, 29) | 225 (2.25, 33) |
| | | | 31 × 10.50R15 | 180 (1.8, 26) | 250 (2.5, 36) |
| | | | 7.50R16-8 (Sahara tire) | 210 (2.1, 30) | 270 (2.7, 39) |
| | | FZJ 75 | 7.50-16-8 | 240 (2.4, 35) | 425 (4.25, 62) |
| | | | 7.50R16-6 | 225 (2.25, 33) | — |
| | | | 7.50R16-8 | 225 (2.25, 33) | 375 (3.75, 54) |
| | | | 7.50R16-8 (Sahara tire) | 210 (2.1, 30) | 400 (4.0, 58) |
| | | | 235/95R15C-6 (Sand tire) | 180 (1.8, 26) | 220 (2.2, 32) |
| | | FJ 70 | 31 × 10.50R15 | 180 (1.8, 26) | 250 (2.5, 36) |
| | | FJ70, 73 | 7.00-15-6 | 180 (1.8, 26) | 260 (2.6, 38) |
| | | | 7.50R16-8 | 200 (2.0, 29) | 225 (2.25, 33) |
| | | | 7.50R16-8 (Sahara tire) | 210 (2.1, 32) | 270 (2.7, 41) |
| | | FJ 75 | 7.50-16-8 | 240 (2.4, 35) | 425 (4.25, 62) |
| | | | 7.50R16-8 | 225 (2.25, 32) | 375 (3.75, 54) |
| | | | 7.50R16-8 (Sahara tire) | 210 (2.1, 32) | 400 (4.0, 60) |

## Service Data (Cont'd)

| | | | | | |
|---|---|---|---|---|---|
| Cold tire inflation pressure kPa (kgf/cm², psi) | Destination | Model | Tire size | Front | Rear |
| | Others (cont'd) | LJ 72 | 7.00-15-6 | 180 (1.8, 26) | 220 (2.2, 32) |
| | | | 205R16C-6 | 170 (1.7, 25) | 200 (2.0, 29) |
| | | | 31×10.5R15 | 180 (1.8, 26) | 210 (2.1, 30) |
| | | | 7.50-16-6 | 180 (1.8, 26) | 180 (1.8, 26) |
| | | | 7.50R16-6 | 200 (2.0, 29) | 225 (2.25, 33) |
| | | | 7.00R15-6 | 200 (2.0, 29) | 275 (2.75, 40) |
| | | LJ 77, 79 | 205R16C-6 | 200 (2.0, 29) | 320 (3.2, 46) |
| | | | 31×10.5R15 | 190 (1.9, 28) | 280 (2.8, 41) |
| | | LJ 79 | 7.50-16-6 | 180 (1.8, 26) | 260 (2.6, 38) |
| | | | 7.50R16-6 | 225 (2.25, 33) | 350 (3.5, 51) |
| | | RJ 70 | 7.00-15-6 | 180 (1.8, 26) | 220 (2.2, 32) |
| | | | 205R16C-6 | 170 (1.7, 25) | 200 (2.0, 29) |
| | | | 31×10.5R15 | 180 (1.8, 26) | 210 (2.1, 30) |
| | | | 7.50-16-6 | 180 (1.8, 26) | 180 (1.8, 26) |
| | | | 7.50R16-6 | 200 (2.0, 29) | 225 (2.25, 33) |
| | | | 7.00R15-6 | 200 (2.0, 29) | 275 (2.75, 40) |
| | | RJ 77 | 205R16C-6 | 200 (2.0, 29) | 320 (3.2, 46) |
| | | | 31×10.5R15 | 190 (1.9, 28) | 280 (2.8, 41) |
| | | | 7.50-16-6 | 180 (1.8, 26) | 260 (2.6, 38) |
| | | | 7.50R16-6 | 225 (2.25, 33) | 350 (3.5, 51) |
| | | HZJ 75 | 7.50-16-6 | 180 (1.8, 26) | — |
| | | | 7.50-16-8 (Lug type) | 240 (2.4, 35) | 425 (4.25, 62) |
| | | | 7.50-16-8 (JEEP SERVICE) | 240 (2.4, 35) | 425 (4.25, 62) |
| | | | 7.50-16-8 (Rib & lug type) | — | 350 (3.5, 51) |
| | | | 7.50R16-8 | 225 (2.25, 32) | 375 (3.75, 54) |
| | | | 7.50R16-8 (Sahara tire) | 210 (2.1, 32) | 400 (4.0, 60) |
| | | HZJ 75 (P/U only) | 235/95R15C-6 (Sand tire) | 240 (2.4, 35) | 425 (4.25, 62) |
| | | PZJ 70, 73 | 7.00-15-6 | 180 (1.8, 26) | 260 (2.6, 38) |
| | | | 7.00R15-6 | 200 (2.0, 29) | 275 (2.75, 40) |
| | | | 7.50R16-6 | 200 (2.0, 29) | 225 (2.25, 33) |
| | | | 7.50-16-6 | 180 (1.8, 26) | 200 (2.0, 29) |
| | | | 7.50R16-8 | 200 (2.0, 29) | 225 (2.25, 33) |
| | | | 31×10.50R15 | 180 (1.8, 26) | 250 (2.5, 36) |
| | | | 7.50R16-8 (Sahara tire) | 210 (2.1, 32) | 270 (2.7, 41) |
| | | PZJ 75 | 7.50R16-6 | 225 (2.25, 33) | — |
| | | | 7.50-16-8 | 240 (2.4, 35) | 425 (4.25, 62) |
| | | | 7.50R16-8 | 225 (2.25, 32) | 375 (3.75, 54) |
| | | | 7.50R16-8 (Sahara tire) | 210 (2.1, 32) | 400 (4.0, 60) |
| | | PZJ 75 (P/U only) | 7.50-16-6 | 180 (1.8, 26) | — |
| | | | 7.50-16-8 | — | 400 (4.0, 58) |
| | | | 235/95R15C-6 (Sand tire) | 180 (1.8, 26) | 220 (2.2, 32) |

| | | | |
|---|---|---|---|
| Chassis ground clearance (Coil spring type) mm (in.) | Tire size | Front | Rear |
| | 7.00-15-6 | 471 (18.54) | 473 (18.62) |
| | 215/80R16 | 458 (18.03) | 460 (18.11) |
| | 205R16C-6 | 459 (18.07) | 461 (18.15) |
| | 265/75R15 | 476 (18.74) | 478 (18.82) |
| | 31×10.50R15-6 | 476 (18.74) | 478 (18.82) |
| | 7.00-16-6 | 483 (19.01) | 485 (19.09) |
| | 7.50-16-6 | 499 (19.66) | 501 (19.72) |
| | 7.00R15-6 | 471 (18.54) | 473 (18.62) |
| | 7.50R16-6 | 499 (19.01) | 501 (19.72) |

| | | | |
|---|---|---|---|
| Bound stopper clearance (Leaf spring type) | Front bound stopper clearance | 43 mm | 1.69 in. |
| | Rear bound stopper clearance | 48 mm | 1.89 in. |

## Service Data (Cont'd)

| | | | | | |
|---|---|---|---|---|---|
| Front wheel alignment | Suspension type | | | | |
| | Leaf spring type | Camber<br>Cross camber | | 1°00′ ± 45′ (1° ± 0.75°)<br>30′ (0.5°) or less | |
| | | Steering axis inclination | | 12°00′ ± 45′ (12° ± 0.75°) | |
| | | Caster [Cross caster] | Short, Middle | 3°15′ ± 45′ (3.25° ± 0.75°) [30′ (0.5°) or less] | |
| | | | Long (Van) | 2°50′ ± 45′ (2.83° ± 0.75°) [30′ (0.5°) or less] | |
| | | | Long (Pick up) | 2°30′ ± 45′ (2.5° ± 0.75°) [30′ (0.5°) or less] | |
| | | Toe-in | Radial tire (31×10.50R15-6, 265/75R15) | −1 ± 2 mm | −0.04 ± 0.08 in. |
| | | | Radial tire (Others) | 1 ± 2 mm | 0.04 ± 0.08 in. |
| | | | Bias tire | 4 ± 2 mm | 0.16 ± 0.08 in. |
| | | Wheel angle (Max.) | Tire size | Inside wheel | Outside wheel |
| | | | 7.50-16-6 (JEEP SERVICE)<br>7.50-16-8 (JEEP SERVICE)<br>235/95R-15C | 30°00′ +0° −3° | 28°00′ |
| | | | Others | 32°00′ +0° −3° | 30°00′ |
| | Coil spring type | Camber<br>Cross camber | | 1°00′ ± 45′ (1° ± 0.75°)<br>30′ (0.5°) or less | |
| | | Steering axis inclination | | 12°00′ ± 45′ (12° ± 0.75°) | |
| | | Caster<br>Cross caster | | 5°23′ ± 45′ (5.38° ± 0.75°)<br>30′ (0.5°) or less | |
| | | Toe-in | Tire | | |
| | | | Bias tire | 4 ± 2 mm | 0.16 ± 0.08 in. |
| | | | Radial tire (215/80R16, 205R16C-6) | 1 ± 2 mm | 0.04 ± 0.08 in. |
| | | | Radial tire (265/75R15, 31×10.50R15-6) | −1 ± 2 mm | −0.04 ± 0.08 in. |
| | | Wheel angle | Max. | Inside wheel | Outside wheel |
| | | | | 32°00′ +0° −3° | 30°00′ |
| Front suspension | Wheel bearing preload (rotating load at hub bolt) | | | 27 — 56 N 2.8 — 5.7 kgf 6.2 — 12.6 lbf | |
| Front differential | Drive pinion bearing preload (at starting) | | | | |
| | RJ and LJ series | | | | |
| | | New bearing | | 1.9 – 2.5 N·m 19 – 26 kgf·cm 16.5 – 22.6 in.·lbf | |
| | | Reused bearing | | 0.9 – 1.3 N·m 9 – 13 kgf·cm 7.8 – 11.3 in.·lbf | |
| | PZJ, HZJ and FZJ series | | | | |
| | | New bearing | | 1.0 – 1.6 N·m 10 – 16 kgf·cm 8.7 – 13.9 in.·lbf | |
| | | Reused bearing | | 0.5 – 0.8 N·m 5 – 8 kgf·cm 4.3 – 6.9 in.·lbf | |
| | Total preload (at starting) | | | Add drive pinion bearing preload<br>0.4 – 0.6 N·m 4 – 6 kgf·cm 3.5 – 5.2 in.·lbf | |
| | Drive pinion to ring gear backlash | | | 0.13 — 0.18 mm | 0.0051 — 0.0071 in. |
| | Pinion gear to side gear backlash | | | 0.05 — 0.20 mm | 0.0020 — 0.0079 in. |
| | Ring gear runout | | Limit | 0.10 mm | 0.0039 in. |
| | Companion flange deviation | | Limit | | |
| | | Radial | | 0.10 mm | 0.0039 in. |
| | | Lateral | | 0.10 mm | 0.0039 in. |

## Service Data (Cont'd)

| | | | |
|---|---|---|---|
| Front differential (cont'd) | Drive pinion adjusting plate washer thickness | 1.70 mm | 0.0669 in. |
| | | 1.73 mm | 0.0681 in. |
| | | 1.76 mm | 0.0693 in. |
| | | 1.79 mm | 0.0705 in. |
| | | 1.82 mm | 0.0717 in. |
| | | 1.85 mm | 0.0728 in. |
| | | 1.88 mm | 0.0740 in. |
| | | 1.91 mm | 0.0752 in. |
| | | 1.94 mm | 0.0764 in. |
| | | 1.97 mm | 0.0776 in. |
| | | 2.00 mm | 0.0787 in. |
| | | 2.03 mm | 0.0799 in. |
| | | 2.06 mm | 0.0811 in. |
| | | 2.09 mm | 0.0823 in. |
| | | 2.12 mm | 0.0835 in. |
| | | 2.15 mm | 0.0846 in. |
| | | 2.18 mm | 0.0858 in. |
| | | 2.21 mm | 0.0870 in. |
| | | 2.24 mm | 0.0882 in. |
| | | 2.27 mm | 0.0894 in. |
| | | 2.30 mm | 0.0906 in. |
| | | 2.33 mm | 0.0917 in. |
| | Rear oil seal drive in depth | 1.0 mm | 0.039 in. |
| Rear suspension | Rear axle shaft Maximum runout | 0.8 mm | 0.031in. |
| | Hub axial play | Less than 0.1 mm (0.004 in.) | |
| | Wheel bearing preload (at starting) | | |
| | Axle housing and lock nut distance | −0.2 – 0.9 mm | −0.008 – 0.035 in. |

## Torque Specifications

| | Part tightened | N·m | kgf·cm | ft·lbf |
|---|---|---|---|---|
| Front axle and suspension | Free wheeling hub body × Axle hub | 31 | 315 | 23 |
| | Free wheeling hub body × Free wheeling hub cover | 10 | 100 | 7 |
| | Electrical locking hub body sub-assembly × Axle hub | 31 | 315 | 23 |
| | Electrical locking hub cover sub-assembly × Electrical locking hub body sub-assembly | 31 | 315 | 23 |
| | Electrical locking hub slip ring mounting nut | 7.4 | 75 | 65 in.·lbf |
| | Axle hub × Flange | 31 | 315 | 23 |
| | Hub bearing lock nut | 64 | 650 | 47 |
| | Axle carrier × Disc brake cylinder (w/ Disc brake) | 123 | 1,250 | 90 |
| | Disc brake cylinder (w/ Disc brake) × Brake tube | 15 | 155 | 11 |
| | Knuckle arm × Tie rod end | 91 | 925 | 67 |
| | Axle housing × Backing plate | 123 | 1,250 | 90 |
| | Bearing lock nut | 59 | 600 | 43 |
| | Axle hub × Axle shaft | 17 | 175 | 13 |
| | Disc brake cylinder (w/ Disc brake) × Axle carrier | 88 | 900 | 65 |