Component Procedures: Wheels and Tires

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Component Procedures: Wheels and Tires

Parts and Labor (itype_189)

Labor

Operation	Qualifier Path	Skill	Std Hrs	Wty Hrs
Remove & Replace	Chassis & Wheels > Wheels, R&R > Each	C	0.5	0.0
Remove & Replace	Front Suspension > Suspension Components > Lu?	B	0.3	0.0
Remove & Replace	Front Suspension > Suspension Components > Lu?	B	0.1	0.0
Remove & Replace	Multi Link > Rear Suspension > Suspension Com?	B	0.3	0.0
Remove & Replace	Multi Link > Rear Suspension > Suspension Com?	B	0.1	0.0
Remove & Replace	Torsion Axle > Rear Suspension > Suspension C?	B	0.3	0.0
Remove & Replace	Torsion Axle > Rear Suspension > Suspension C?	B	0.1	0.0
Balance	Chassis & Wheels > Wheels, Balance > One	C	0.3	0.0
Balance	Chassis & Wheels > Wheels, Balance > Each Add?	C	0.2	0.0
Rotate	Chassis & Wheels > Wheels, Rotate > 4 Wheels	C	0.4	0.0
Rotate	Chassis & Wheels > Wheels, Rotate > 4 Wheels ?		0.1	

Specifications Quick Reference (itype_439)

Quick Specifications
- item

Suspension System - Specifications (Article 44272)

- Specifications
Front Suspension
Item Specification
Suspension type Mac Pherson Strut
Shock absorber Type Advanced Valve(RS Valve)
Rear Suspension
Suspension type Torsion Beam Axle
Wheel & Tire
Wheel Aluminum 6.0J * 15
6.5J * 16
7.0J * 17
7.5J * 18
Steel 6.0J * 15
Tire 195/65 R15
205/55 R16
225/45 R17
225/40 R18
Spare tire TMK (tire mobility kit)
T125/80 D15
T125/80 D16
Tire pressure kPa (psi) 195/65 R15 230 (33)
205/55 R16 230 (33)
215/45 R17 230 (33)
225/40 R18 230 (33)
T125/80 D15 420 (60)
T125/80 D16 420 (60)
Wheel Alignment
Front Toe-in Total 0.1° ± 0.2°
Individual 0.05° ± 0.1°
Camber angle -0.55 ± 0.5°
Caster angle 4.5° ± 0.5°
King-pin angle 14.0° ± 0.5°
Ride Height 367 ± 10 mm (14.4488 ± 0.3937)
Rear Toe-in Total 0.34° ± 0.3°
Individual 0.17° ± 0.15°
Camber angle -1.2° ± 0.5°

Ride Height 364 ± 10 mm (14.3307 ± 0.3937)
Tightening Torques
Item Tightening torque (kgf.m)
N.m kgf.m lb-ft
Hub nut s 107.9 - 127.5 11.0 - 13.0 79.6 - 94.0
Lower arm to sub frame (Front) 117.7 - 137.3 12.0 - 14.0 86.8 - 101.3
Lower arm to sub frame (Rear) 156.9 - 176.5 16.0 - 18.0 115.7 - 130.2
Lower arm to knuckle 58.8 - 70.6 6.0 - 7.2 43.4 - 52.1
Tie rod end castle nut 24.5 - 34.3 2.5 - 3.5 18.1 - 25.3
Steering gear box to sub frame 88.3 - 107.9 9.0 - 11.0 65.1 - 79.6
Stabilizer bar to stabilizer link 98.1 - 117.7 10.0 - 12.0 72.3 - 86.8
Stabilizer bar to sub frame 44.1 - 53.9 4.5 - 5.5 32.5 - 39.8
Stabilizer bar to front strut assembly 98.1 - 117.7 10.0 - 12.0 72.3 - 86.8
Front strut assembly to front axle 156.9 - 176.5 16.0 - 18.0 115.7 - 130.2
Strut assembly lock nut 98.1 10 72.3
Sub frame mounting bolt & nut 156.9 - 176.5 16.0 - 18.0 115.7 - 130.2
Sub frame stay bolt 44.1 - 53.9 4.5 - 5.5 32.5 - 39.8
Bolt connecting universal joint to pinion 32.4 - 38.3 3.3 - 3.8 23.9 - 27.5
Roll rod bracket to roll rod support bracket fixing bolt & nut 107.9 - 127.5 11.0 - 13.0 79.6 - 94.0
Hub nuts 107.9 - 127.5 11.0 - 13.0 79.6 - 94.0
Shock absorber to body 49.0 - 63.7 5.0 - 6.5 36.2 - 47.0
Shock absorber to torsion beam axle 98.1 - 117.7 10.0 - 12.0 72.3 - 86.8
Torsion beam axle to frame 156.9 - 176.5 16.0 - 18.0 115.7 - 130.2
Bitmap Torsion beam axle to brake caliper 63.7 - 73.5 6.5 - 7.5 47.0 - 54.2

Suspension System - Specifications (Article 44273)

- Specifications
Front Suspension
Item Specification
Suspension type Mac Pherson Strut
Shock absorber Type Advanced Valve(RS Valve)
Rear Suspension
Suspension type Torsion Beam Axle
Wheel & Tire
Wheel Aluminum 6.0J * 15
6.5J * 16
7.0J * 17
7.5J * 18
Steel 6.0J * 15
Tire 195/65 R15
205/55 R16
225/45 R17
225/40 R18
Spare tire TMK (tire mobility kit)
T125/80 D15
T125/80 D16
Tire pressure kPa (psi) 195/65 R15 230 (33)
205/55 R16 230 (33)
215/45 R17 230 (33)
225/40 R18 230 (33)
T125/80 D15 420 (60)
T125/80 D16 420 (60)
Wheel Alignment
Front Toe-in Total 0.1° ± 0.2°
Individual 0.05° ± 0.1°
Camber angle -0.55 ± 0.5°
Caster angle 4.5° ± 0.5°
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Ride Height 367 ± 10 mm (14.4488 ± 0.3937)
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Tightening Torques
Item Tightening torque (kgf.m)
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Bitmap Torsion beam axle to brake caliper 63.7 - 73.5 6.5 - 7.5 47.0 - 54.2

All New Technical Service Bulletins (itype_432)

Tsbs
- WHEEL/TIRE VIBRATION – BALANCE AND RADIAL FORCE VARIATION (RFV) SERVICE PROCEDURES (25-SS-002H-1, 2025/06/30)

All Technical Service Bulletins (itype_100)

Tsbs
- WHEEL BEARING NOISE INSPECTION (19-DS-001H-1, 2019/02/05)
- WHEEL CARE: RECOMMENDED CLEANING PROCEDURE AND CLEANING AGENTS (20-SS-005H, 2020/12/15)
- TIRE MAINTENANCE BEST PRACTICES (20-SS-002H, 2020/05/04)
- WHEEL/TIRE VIBRATION – BALANCE AND RADIAL FORCE VARIATION (RFV) SERVICE PROCEDURES (25-SS-002H-1, 2025/06/30)

Driveshaft and Axle - Troubleshooting (Article 45284)

- Troubleshooting
Trouble Symptom Probable cause Remedy
Vehicle pulls to one side Scoring of driveshaft ball joint Replace
Wear, rattle or scoring of wheel bearing Replace
Defective front suspension and steering Adjustment or Replace
Vibartion Wear, damage or bending of driveshaft Replace
Driveshaft rattle and hub serration Replace
Wear, rattle or scratching of wheel bearing Replace
Shimmy Defective wheel balance Adjustment or Replace
Excessive noise Wear, damage or bending of driveshaft Replace
Rattle of driveshaft and worn hub splines Replace
Loose hub nut Adjustment or Replace

Noise (itype_156)

Tsbs
- WHEEL BEARING NOISE INSPECTION (19-DS-001H-1, 2019/02/05)

Vibration (itype_176)

Tsbs
- WHEEL/TIRE VIBRATION – BALANCE AND RADIAL FORCE VARIATION (RFV) SERVICE PROCEDURES (25-SS-002H-1, 2025/06/30)

OEM Policies and Procedures (itype_120)

Tsbs
- WHEEL CARE: RECOMMENDED CLEANING PROCEDURE AND CLEANING AGENTS (20-SS-005H, 2020/12/15)
- TIRE MAINTENANCE BEST PRACTICES (20-SS-002H, 2020/05/04)

Tools and Equipment (itype_113)

Tsbs
- WHEEL/TIRE VIBRATION – BALANCE AND RADIAL FORCE VARIATION (RFV) SERVICE PROCEDURES (25-SS-002H-1, 2025/06/30)