

General Description

FRONT SUSPENSION

1. General Description

A: SPECIFICATION

| | Model | Sedan | | | Wagon | | | |
|-------|---|--------------------------|-----------------------------------|---|-----------------|----------------|-----------------|----------------|
| | | 2.5 i | 2.5 GT | OUTBACK | 2.5 i | 2.5 GT | OUTBACK | |
| Front | Wheel arch height (Tolerance: $+12\text{ mm}$ -24 mm ($+0.47\text{ in}$ -0.94 in)) mm (in) | 381 (15.0) | | 439 (17.3) | 381 (15.0) | | 439 (17.3) | |
| | Camber (Tolerance: $\pm 0^{\circ}45'$ Differences between RH and LH: 45' or less) | $-0^{\circ}15'$ | | $0^{\circ}40'$ | $-0^{\circ}15'$ | | $0^{\circ}40'$ | |
| | Caster (Referential Value) | $5^{\circ}55'$ | | $4^{\circ}55'$ | $5^{\circ}40'$ | | $4^{\circ}55'$ | |
| | Steering angle (Tolerance: $\pm 1.5^{\circ}$) | Inner wheel | 37.2° , $33.8^{\circ}*1$ | | 38.0° | 37.2° | | 38.0° |
| | | Outer wheel | 33.0° , $30.2^{\circ}*1$ | | 33.7° | 33.0° | | 33.7° |
| | Toe-in mm (in) | 0 ± 3 (0 ± 0.12) | | Toe angle (sum of both wheels): $0^{\circ}\pm 0^{\circ}15'$ | | | | |
| | Kingpin angle (Referential Value) | $13^{\circ}45'$ | | $12^{\circ}05'$ | $13^{\circ}45'$ | | $12^{\circ}05'$ | |
| | Diameter of stabilizer mm (in) | 20 (0.79) | 21 (0.83) | | 20 (0.79) | 21 (0.83) | | |
| Rear | Wheel arch height (Tolerance: $+12\text{ mm}$ -24 mm ($+0.47\text{ in}$ -0.94 in)) mm (in) | 365 (14.4) | | 438 (17.2) | 375 (14.8) | | 438 (17.2) | |
| | Camber (Tolerance: $\pm 0^{\circ}45'$ Differences between RH and LH: 45' or less) | $-0^{\circ}40'$ | | $-0^{\circ}10'$ | $-0^{\circ}30'$ | | $-0^{\circ}10'$ | |
| | Toe-in mm (in) | *3 | | *2 | *3 | | *2 | |
| | Thrust angle (Tolerance: $\pm 0^{\circ}30'$) | 0° | | | | | | |
| | Diameter of stabilizer mm (in) | 15 (0.59) | 16 (0.63) | 15 (0.59) | 16 (0.63) | 15 (0.59) | 15 (0.59) | |

*1: 2.5 GT spec. B model

*2: OUTBACK model

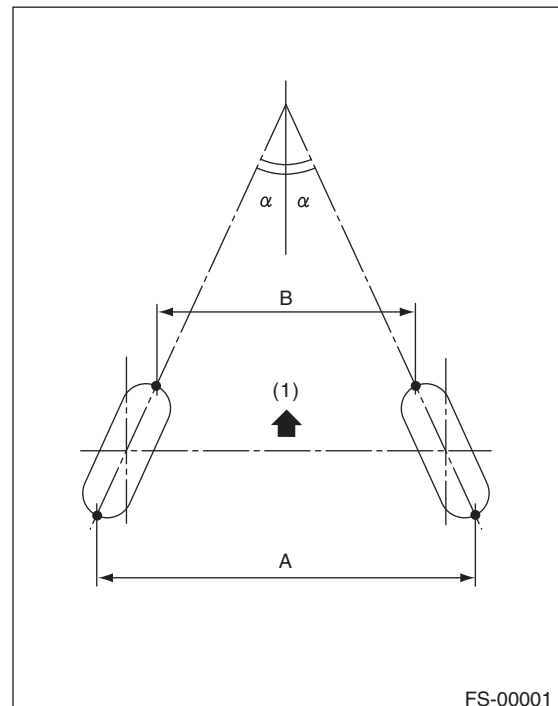
$-3 - 0\text{ mm}$ ($-0.12 - 0\text{ in}$) Toe angle (sum of both wheels): $-0^{\circ}15' - 0^{\circ}$

*3: Except for OUTBACK model

$0\pm 3\text{ mm}$ ($0\pm 0.12\text{ in}$) Toe angle (sum of both wheels): $0^{\circ}\pm 0^{\circ}15'$

NOTE:

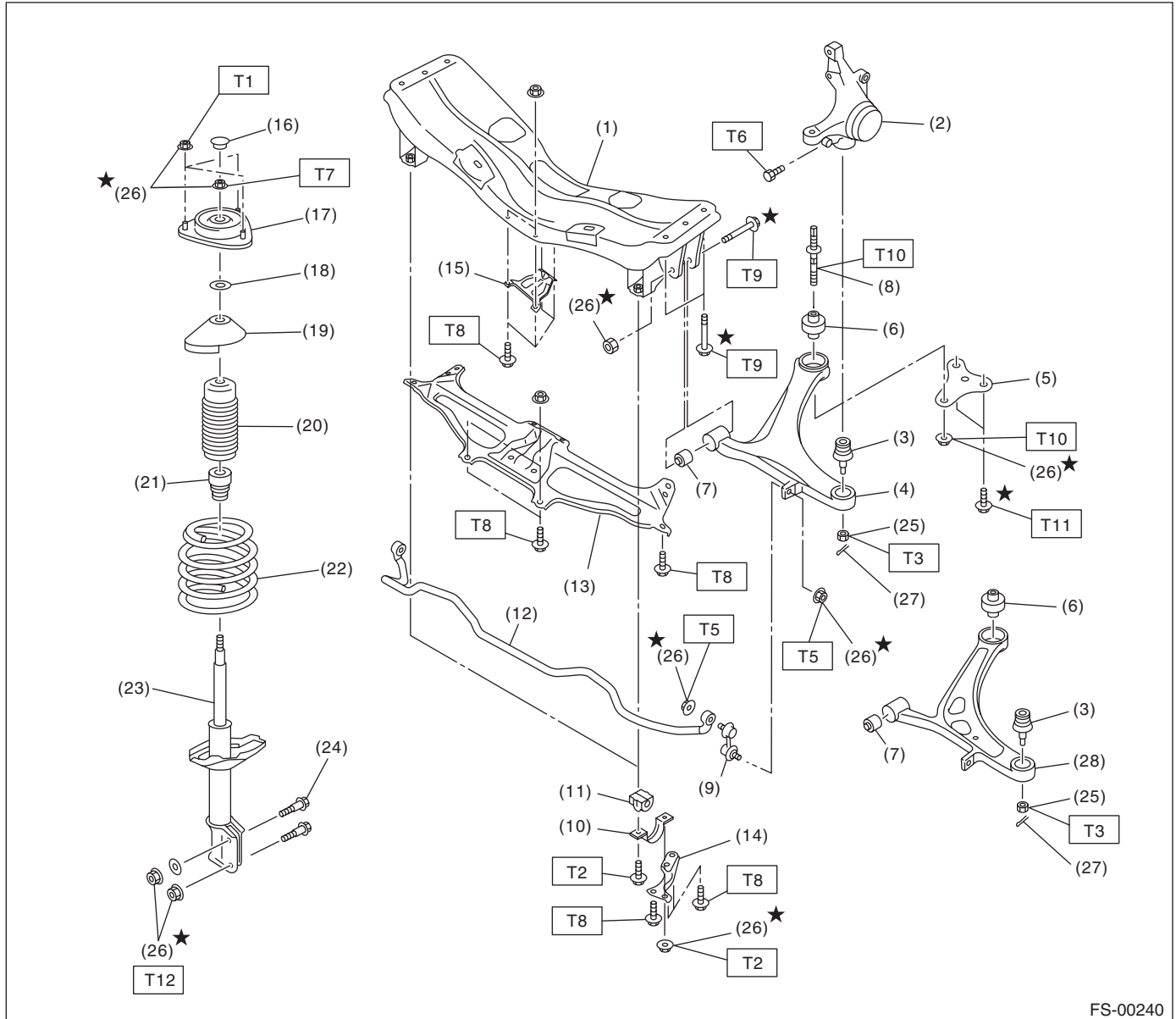
- Front and rear toe-in and front camber can be adjusted. Adjust if the toe-in or camber tolerance exceeds specifications.
- Other items indicated in the specifications table cannot be adjusted. If other items exceed specifications, check suspension parts and connections for deformation, and replace with new parts as required.



(1) Front

$A - B = \text{Positive: Toe-in, Negative: Toe-out}$
 $\alpha = \text{Individual toe angles}$

B: COMPONENT



FS-00240

- | | |
|---|---------------------------------|
| (1) Front crossmember | (15) Jack-up plate |
| (2) Housing | (16) Dust seal |
| (3) Ball joint | (17) Strut mount |
| (4) Front arm (steel type) | (18) Spacer |
| (5) Support plate | (19) Upper spring seat |
| (6) Rear bushing | (20) Dust cover |
| (7) Front bushing | (21) Helper |
| (8) Stud bolt | (22) Coil spring |
| (9) Stabilizer link | (23) Damper strut |
| (10) Bracket | (24) Adjusting bolt |
| (11) Bushing | (25) Castle nut |
| (12) Stabilizer | (26) Self-locking nut |
| (13) Crossmember support plate (Large type) | (27) Cotter pin |
| (14) Crossmember support plate (Small type) | (28) Front arm (aluminium type) |

Tightening torque: N·m (kgf·m, ft·lb)

- | |
|-------------------------------|
| T1: 20 (2.0, 14.5) |
| T2: 25 (2.5, 18.1) |
| T3: 30 (3.1, 22) |
| T4: 39 (4.0, 28.8) |
| T5: 45 (4.6, 33.2) |
| T6: 50 (5.1, 36.9) |
| T7: 55 (5.6, 41) |
| T8: 60 (6.1, 44.3) |
| T9: 95 (9.7, 70.1) |
| T10: 110 (11.2, 81.1) |
| T11: 150 (15.3, 110.6) |
| T12: 152 (15.5, 112.1) |

General Description

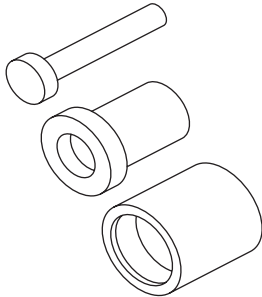
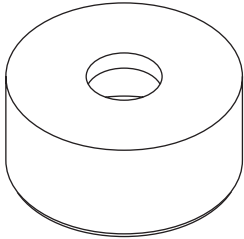
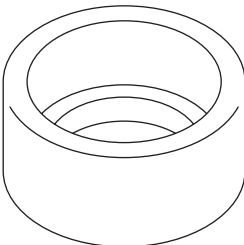
FRONT SUSPENSION

C: CAUTION

- Wear appropriate work clothing, including a cap, protective goggles and protective shoes when performing any work.
- Before removal, installation or disassembly, be sure to clarify the failure. Avoid unnecessary removal, installation, disassembly and replacement.
- Use SUBARU genuine grease etc. or equivalent. Do not mix grease etc. of different grades or manufacturers.
- Before securing a part on a vise, place cushioning material such as wood blocks, aluminum plate, or cloth between the part and the vise.
- Be sure to tighten fasteners including bolts and nuts to the specified torque.
- Place shop jacks or rigid racks at the specified points.

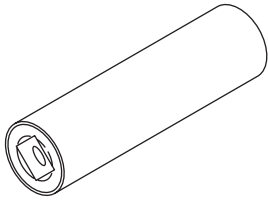
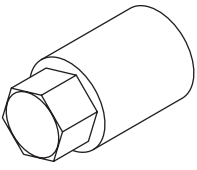
D: PREPARATION TOOL

1. SPECIAL TOOL

| ILLUSTRATION | TOOL NUMBER | DESCRIPTION | REMARKS |
|---|-------------|----------------------------|---|
|  ST-927680000 | 927680000 | INSTALLER & REMOVER SET | Used for replacing front arm front bushing. |
|  ST20299AG000 | 20299AG000 | REMOVER | Used for replacing front arm rear bushing. Used with BASE (20999AG010). |
|  ST20299AG010 | 20299AG010 | BASE | Used for replacing front arm rear bushing. Used with REMOVER (20999AG000). |

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| ILLUSTRATION | TOOL NUMBER | DESCRIPTION | REMARKS |
|---|-------------|--------------------|--|
|  <p>ST20299AG020</p> | 20299AG020 | STUD BOLT SOCKET | Used for removing and installing the stud bolt for front arm installing portion. |
|  <p>ST20399AG000</p> | 20399AG000 | STRUT MOUNT SOCKET | Used for disassembling and assembling strut mount. |

2. GENERAL TOOL

| TOOL NAME | REMARKS |
|-------------------------|--------------------------------------|
| Alignment gauge | Used for measuring wheel alignment. |
| Alignment gauge adapter | Used for measuring wheel alignment. |
| Turning radius gauge | Used for measuring wheel alignment. |
| Toe-in gauge | Used for toe-in measurement. |
| Dial gauge | Used for damper strut measurement. |
| Coil spring compressor | Used for strut assembly/disassembly. |

Wheel Alignment

FRONT SUSPENSION

2. Wheel Alignment

A: INSPECTION

Check the following items before performing the wheel alignment measurement.

Check items before measuring wheel alignment:

- Tire inflation pressure
- Uneven wear of RH and LH tires, or difference of sizes
- Tire runout
- Excessive play and wear of ball joint
- Excessive play and wear of tie rod end
- Excessive play of wheel bearing
- Right and left wheel base imbalance
- Deformation and excessive play of steering link
- Deformation and excessive play of suspension parts

Check, adjust and measure the wheel alignment in accordance with the procedures indicated in the figure.

