

## Front

Suspension and steering geometry should be checked only at **mid-laden** ride height:

Ride height - front (X)	165 ± 2 mm	mid-laden	(with 75 kg driver
- rear (Y)	154 ± 2 mm	mid-laden	+ ½ tank of fuel)
Castor:	+ 1°; + ½°, - 0		
Camber:	- ¼°; ± ¼°		
Steering axis inclination:	10½°		
Toe-out:	0° to ¼° total		
Scrub radius:	- 3 mm		








**0 – 1.66mm**

### CE.3 - ADJUSTMENTS

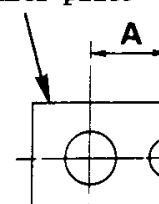
Castor, camber and toe-out are adjustable, and should be checked and/or adjusted in the following order:

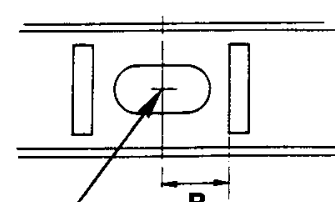
**Castor:** Castor adjustment shims are fitted between the top ball joint and the two top wishbone arms. A total of eight 1 mm shims must always be maintained, but may be transferred between front and back of the ball joint as required. Transferring a single 1 mm shim from front to back of the joint will reduce castor by approx. ½°. Ensure the shims are fitted the correct way up so that the ball joint boot is not damaged by the shim.

To make an adjustment on cars with camber adjustment plates, first establish the variation of plate fitted before selecting an alternative plate, and/or orientation, from the table below. Slacken the top swivel joint outer fixing, and remove the inboard fixing bolt. Fit the replacement adjuster plates into the guides on the top wishbone halves (making sure that the same plates are fitted at front and rear) and fit and tighten the fixings: Socket head bolts; 35 - 39 Nm (26 - 29 lbf.ft). Hex. head bolts; 22 - 25 Nm (16 - 18 lbf.ft). (Alternatives)

Dimension 'A'	Part no. of plate	Plate orientation	Dimension 'B'	
		Outboard ➔		
14.0 mm	A100C0111		7.0 mm	negative camber increases ↓
12.5 mm	A100C0110		8.5 mm	
11.5 mm	A100C0125		9.5 mm	
10.5 mm	A100C0109		10.5 mm	
11.5 mm	A100C0125		11.5 mm	
12.5 mm	A100C0110		12.5 mm	
14.0 mm	A100C0111		14.0 mm	

**Camber plate**





**Centreline of adjuster plate hole relative to wishbone**

**Outboard** ➔

**Toe-out:** To adjust the toe-out, hold each track rod end by the flats provided (22 mm) whilst releasing the locknut. Turn each track rod, using the flats provided (13 mm) an EQUAL amount, to adjust the effective track rod length as necessary. When adjustment is correct, hold the track rod end and tighten the locknut to 60 Nm (44 lbf.ft).

Torque figures in RED are for Stainless Steel bolts which require typically 25% less torque to achieve the same 'stretch'

<u>Torque Settings</u>	<u>Nm</u>	<u>lbf.ft</u>	
1. Raft top mounting bolt	75 - 80	55 - 59	58Nm
2. Sandwich plate to raft	22 - 25	16 - 18	18Nm
3. Raft front and rear mounting bolts	75 - 80	55 - 59	58Nm
4. Top wishbone inboard pivot	55 - 58	41 - 43	35Nm
5. Top wishbone to ball joint			52Nm
- eccentric camber adjusters	22 - 25	16 - 18	18Nm
- square plate camber adjusters	35 - 39	26 - 29	33Nm
6. Top wishbone bracing channel	45	33	
7. Lower wishbone inboard pivot bolt	68 - 72	50 - 53	
8. Lower wishbone inboard pivot end plate	22 - 25	16 - 18	
9. Lower wishbone strut to main member - M10	41 - 45	30 - 33	
- 7/16" UNF	61 - 81	45 - 60	28Nm
10. Lower wishbone bracing channel	37	27	
11. Suspension strut yoke to lower wishbone	105 - 110	77 - 81	M12= 35
12. Ball joint to anti-roll bar	25 - 27	18 - 20	
13. Damper top stem nut	20 - 30	15 - 22	
14. Yoke to damper	35 - 38	26 - 28	
15. Spring top seat to chassis	22 - 25	16 - 18	
16. Lower swivel joint to hub carrier	61 - 67	45 - 49	18Nm
17. Top swivel joint to hub carrier	61 - 67	45 - 49	
18. Track rod end to steering arm	58 - 64	43 - 47	
19. Driveshaft to front hub	225 - 235	166 - 173	
M12 Prongeron to chassis (grade 8 steel)	75 Nm	55 lbf.ft	58Nm
<b>Wheels</b>			
Wheel bolts	80 - 88	59 - 65	

## Rear

Wheelbase	2250 mm (88.6 in)
Track - front	1486 mm (58.5 in)
- rear	1486 mm (58.5 in)

<u>Torque Settings</u>	<u>Nm</u>	<u>lbf.ft</u>	
1. Damper top stem nut	20 - 30	15 - 22	52Nm
2. Spring top seat to chassis	22 - 25	16 - 18	
3. Damper to lower wishbone*	68 - 72	50 - 53	58Nm
4. Top link, outboard* and inboard**	75 - 80	55 - 59	
5. Top link camber adjustment bolts	22 - 25	16 - 18	50Nm
6. Lower wishbone inboard pivot (to chassis)*	65 - 70	48 - 52	
7. Lower wishbone outboard pivot (to hub carrier)*	95 - 100	70 - 74	
8. Anti-roll bar to wishbone ball joint	36 - 40	27 - 30	
9. Anti roll bar ball joints to lower wishbone	36 - 40	27 - 30	
10. Anti-roll bar drop links	36 - 40	27 - 30	
11. Hub nut	see DD.6		
12. Stub axle to hub carrier**	60 - 65	44 - 48	
13. Brake caliper bracket to hub carrier**	35 - 39	26 - 29	
14. Brake caliper to mounting bracket	100 - 110	74 - 81	
* Tighten only at ride height.			
** Apply thread locking compound unless renewing bolts (pre-applied).			

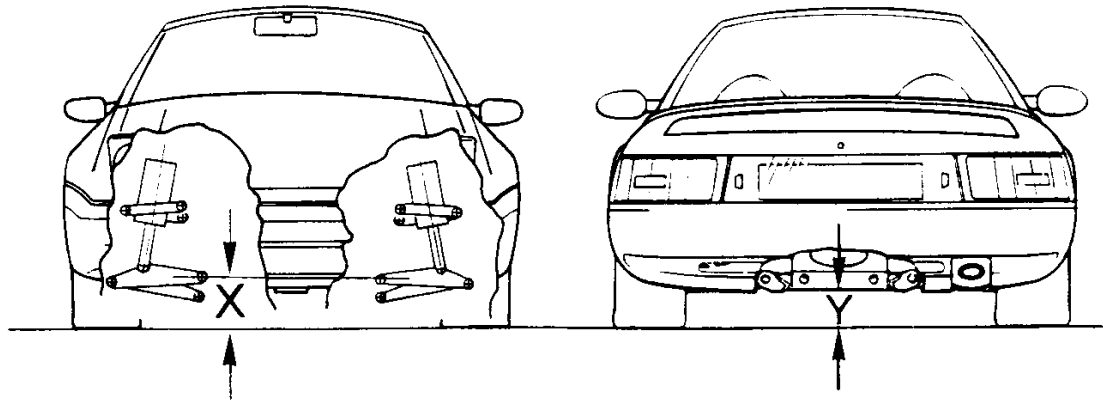
### Adjustment

- Prise out the dust cap from the hub centre.
- Remove the split pin and tighten the hub nut to 25 Nm (18 lbf.ft) whilst rotating the wheel to settle the bearings.
- Slacken the nut, and re-tighten using fingers only.
- If necessary, tighten further, the smallest amount necessary to insert the split pin, bending the short end over the nut, and the long end over the end of the axle.
- Refit the hub dust cap.

### DD.2 - GEOMETRY

Ride height at kerb condition (full fuel tank, no occupants):

- front (X)  $170 \pm 2 \text{ mm}$  ] **NOT** ride height for
- rear (Y)  $160 \pm 2 \text{ mm}$  ] geometry check



Suspension geometry should be checked only at **mid-laden** ride height:

- |                         |   |                  |                               |
|-------------------------|---|------------------|-------------------------------|
| Ride height - front (X) | $165 \pm 2 \text{ mm}$                      | mid-laden        | (with 75 kg driver            |
| - rear (Y)              | $154 \pm 2 \text{ mm}$                      | mid-laden        | + $\frac{1}{2}$ tank of fuel) |
| Camber:                 | $-\frac{1}{2}^\circ; \pm \frac{1}{4}^\circ$ |                  |                               |
| Toe-in:                 | $+ 1.5 \text{ to } 2.0 \text{ mm}$          | <b>each side</b> |                               |

- |                                |  |
|--------------------------------|--|
| Ride height for geometry check | 165 mm to lower wishbone inboard pivot         |
| Camber                         | $- 0.25^\circ; \pm 0.25^\circ$                 |
| Castor                         | $+ 1^\circ; + 0.5^\circ, - 0$                  |
| Steering axis inclination      | $10.5^\circ$                                   |
| Scrub radius                   | $- 3 \text{ mm}$                               |
| Toe-out                        | $0^\circ \text{ to } 0.25^\circ \text{ total}$ |

**0 – 1.66mm**

### REAR SUSPENSION

- |                                |   |
|--------------------------------|---|
| Type                           | Indepenent. Wide based lower wishbone, single top link, coaxial coil spring & damper acting on lower wishbone, anti-roll bar, rising rate bump rubbers. |
| Ride height for geometry check | 154 mm to extreme rear edge of chassis  |
| Camber                         | $- 0.5^\circ; \pm 0.25^\circ$   |
| Toe-in                         | $+ 1.5 \text{ to } + 2.0 \text{ mm}$ <b>each side</b>   |