

C2

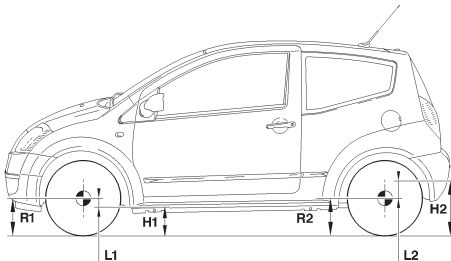
AXLE GEOMETRY

Conditions for checking and adjusting

Tyres inflated to correct pressures.

Vehicle at reference height. Steering rack locked at mid point (*see corresponding operation*).

Vehicle heights at reference height



E1APOBZD

Front height

Rear height

L1

L2

$$H1 = R1 - L1$$

$$H2 = R2 + L2$$

H1 = Measurement between the measuring zone underneath the front subframe and the ground.

R1 = Front wheel radius under load.

L1 = Distance between the wheel axis and the measuring zone underneath the front subframe.

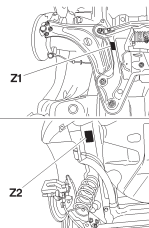
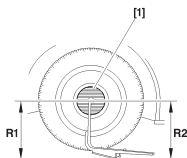
H2 = Measurement between the measuring zone underneath the rear sill and the ground.

R2 = Rear wheel radius under load.

L2 = Distance between the wheel axis and the measuring zone underneath the rear sill.

AXLE GEOMETRY

C2



B3CP07SD

Measuring front height

Measuring rear height

[1] Gauge for measuring the wheel radius, 4 bolts, **tool 8006-T**

Z1 = Measuring zone underneath the front subframe.

Z2 = Measuring zone underneath the rear sill.

Measure the radius of the front wheel **R1** - Calculate dimension **H1 = R1-L1**

Measure the radius of the rear wheel **R2** - Calculate dimension **H2 = R2+L2**

Value at reference height (+ 6 - 8 mm)	Except CRD vehicles (*)		Value at reference height (+ 10 - 6 mm)	Except CRD vehicles (*)	
	TU1JP/3JP - DV4TD	TU5/JP4/JP4S		TU1JP/3JP - DV4TD	TU5/JP4/JP4S
	L1 = 142,5 mm	L1 = 152,5 mm		L2 = 52 mm	L2 = 42 mm
	CRD vehicles (*)			CRD vehicles (*)	
	TU1JP/3JP - DV4TD	TU5/JP4/JP4S		TU1JP/3JP - DV4TD	TU5/JP4/JP4S
	L1 = 132,5 mm	L1 = 152,5 mm		L2 = 62 mm	L2 = 42 mm

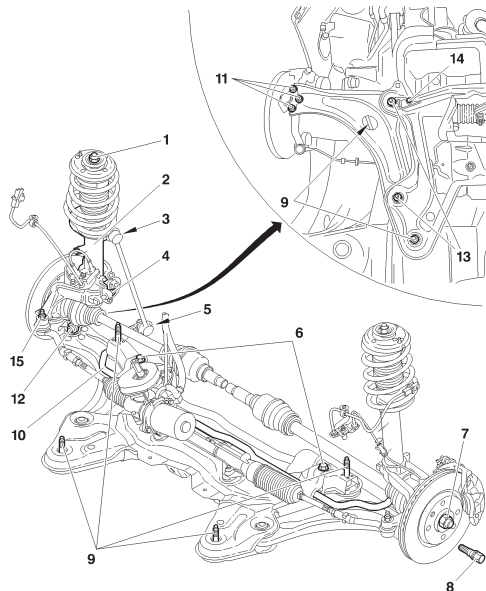
Compress the suspension to obtain the calculated values. The height difference between the two axle wheel should be less than **10 mm**.

(*) = **CRD**: Difficult road conditions (for a type of vehicle with axles and suspensions adapted for driving on rough road surfaces).

AXLES
SUSPENSION
STEERING

C2		AXLE GEOMETRY					
Front axle						Rear axle	
Dissymmetry of lower castor at 0° 30'. Dissymmetry of lower camber at 0° 18'. Distribute symmetrically, LH / RH wheel, the total tracking value.						Dissymmetry of lower camber at 0° 18.	
All types (except CRD vehicles)							
		TU1JP/3JP - DV4TD				TU1JP/3JP - DV4TD	
Vehicle		Tracking	Castor (± 0°18')	Camber (± 0°30')	Pivot angle ± 0°30'	Tracking	Camber
		Adjustable	Non adjustable			Non adjustable	
All Types	mm	2 ± 1				5,5 ± 1	
	0°	0°18' ± 0°09'	3°58'	- 0°31'	11°26'	0°53' ± 0°09'	- 1°30'
		TU5JP4				TU5JP4/JP4S	
		Adjustable	Non adjustable			Non adjustable	
All Types	mm	2 ± 1				5,8 ± 1	
	0°	0°18'± 0°09'	4°	- 0°32'	11°35'	0°49' ± 0°09'	-1°31'
		TU5JP4S					
		Adjustable	Non adjustable				
All Types	mm	2 ± 1					
	0°	0°18'± 0°09'	4°	- 0°27'	11°31'		
						NOTE	
A < B = Positive figure:						+ =	TOE-IN
A > B = Negative figure:						- =	TOE-OUT

AXLE GEOMETRY										C2	
Front axle						Rear axle					
Dissymmetry of lower castor at 0° 30'.						Dissymmetry of lower camber at 0° 18.					
Dissymmetry of lower camber at 0° 18'.											
Distribute symmetrically, LH / RH wheel, the total tracking value.											
CRD vehicles											
		TU1JP/3JP - DV4TD				TU1JP/3JP - DV4TD					
Vehicle		Tracking	Castor (± 0°18')	Camber (± 0°30')	Pivot angle ± 0°30'	Tracking			Camber		
		Adjustable	Non adjustable			Non adjustable					
All Types	mm	2 ± 1				5,2 ± 1					
	0°	0°18' ± 0°09'	3°54'	- 0°28'	11°15'	0°50' ± 0°09'			- 1°28'		
		TU5JP4				TU5JP4					
		Adjustable	Non adjustable			Non adjustable					
All Types	mm	2 ± 1				5,8 ± 1					
	0°	0°18'± 0°09'	4°	- 0°32'	11°35'	0°49' ± 0°09'			-1°31'		
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**Tightening torques (m.daN).**

- | | |
|---|--------------|
| (1) Nut fixing suspension leg on body | : 6,5 ± 0,6 |
| (2) Damper | : |
| (3) Anti-roll bar link rod upper ball-joint | : 3,2 ± 0,3 |
| (4) Suspension leg pivot | : 5,4 ± 0,5 |
| (5) Anti-roll bar link rod lower ball-joint | : 3,2 ± 0,3 |
| (6) Anti-roll bar bearing fixing on subframe | : 8 ± 0,8 |
| (7) Hub nut | : 24,5 ± 0,5 |
| (8) Wheel bolt | : 9 ± 1 |
| (9) Subframe to bodyshell fixing screw | : 10 ± 1 |
| (10) Anti-roll bar | : |
| (11) Pivot lower ball-joint fixing on lower arm | : 5,5 ± 0,5 |
| (12) Pivot lower ball-joint fixing | : 4 ± 0,4 |
| (13) Lower arm front and rear mounting fixing | : 14 ± 0,4 |
| (14) Stabiliser bar screw | : 6,6 ± 0,7 |
| (15) Steering ball-joint fixing | : 3,5 ± 0,3 |

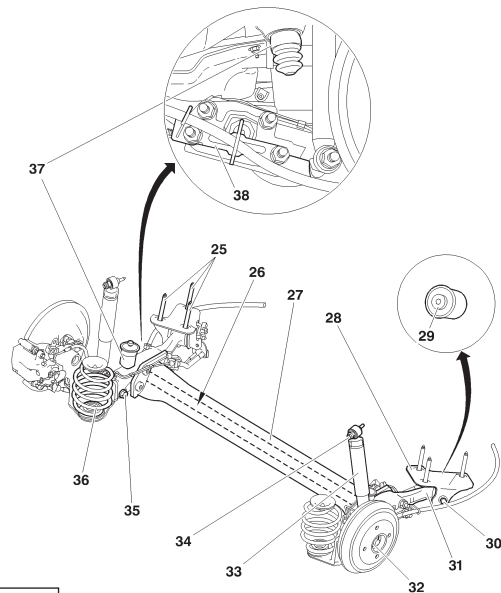
**Private vehicles
Europe****Anti-roll bar**

	Diameter (mm)	Colour
TU1JP - TU3JP	18	Violet
TU5JP4	20	Green
TU5JP4S	21	Orange
TU1JP - DV4TD	19	Blue
Entreprise vehicles	Diameter (mm)	Colour
TU1JP - DV4TD	18	Violet
CRD vehicles	Diameter (mm)	Colour
TU1JP - DV4TD	18	Violet
TU4JP4	20	Green

B3CP07RP

REAR AXLE

C2



B3DP09UP

Tightening torques (m.daN)

(25) Rear axle fixing screw	: 10 ± 1
(26) Anti-roll bar	:
(27) Rear axle crossmember	:
(28) Rear suspension arm silentblock yoke	:
(29) Rear suspension arm silentblock	:
(30) Yoke / suspension arm fixing screw	: 7 ± 0,5
(31) Rear suspension arm	:
(32) Stub axle bearing nut	: 20 ± 2
(33) Damper	:
(34) Damper upper fixing	: 4,5 ± 0,4
(35) Damper lower fixing	: 9,3 ± 0,9
(36) Suspension springs	:
(37) Travel stop	:
(38) Secondary brake cable guide support	:

Private vehicles Europe

Anti-roll bar

Diameter (mm)

TU1JP - TU3JP

20,5 (tubular)

DV4TD

23,5 (tubular)

TU5JP4

25 (solid)

TU5JP4S

26 (tubular)

Entreprise vehicle

Diameter (mm)

TU1JP - DV4TD

20,5 (tubular)

CRD vehicles

Diameter (mm)

TU1JP - DV4TD

20,5 (tubular)

TU5JP4

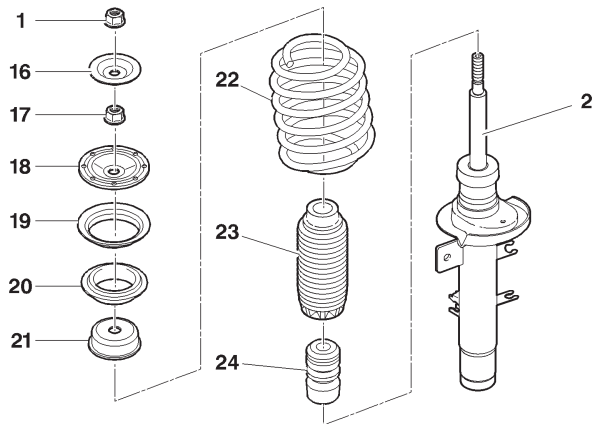
25,5 (solid)

AXLES
SUSPENSION
STEERING

C2

SUSPENSION

Front axle



(1) Nut fixing suspension leg on body

: $6,5 \pm 0,6$

(2) Damper

(16) Cup

(17) Damper nut

: $6,5 \pm 0,6$

(18) Damper cup

(19) Ball bearing

(20) Spring thrust cup

(21) Travel stop cup

(22) Suspension spring

(23) Damper rod protector

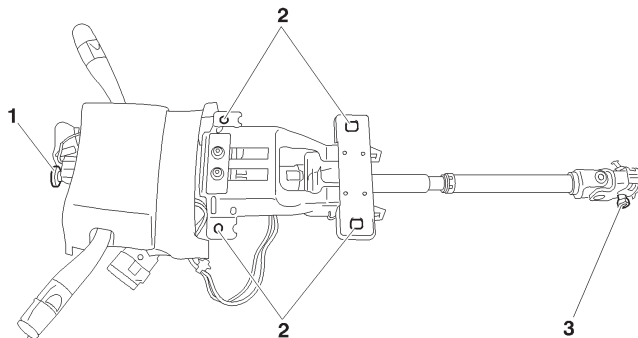
(24) Travel stop

B3BP180D

FEATURES OF ELECTRIC POWER STEERING

C2

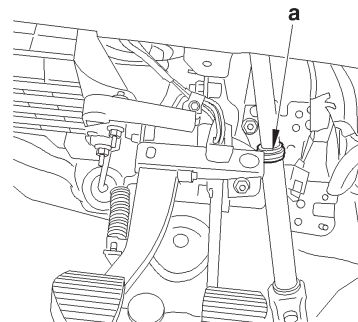
Steering column



B3EP13GD

Tightening torques (m.daN).

- | | |
|---------------------------------------|-----------------|
| (1) Steering wheel fixing | : $2 \pm 0,3$ |
| (2) Steering column fixing on support | : $2,2 \pm 0,5$ |
| (3) Steering cardan fixing | : $2,2 \pm 0,2$ |



B3EP13HC

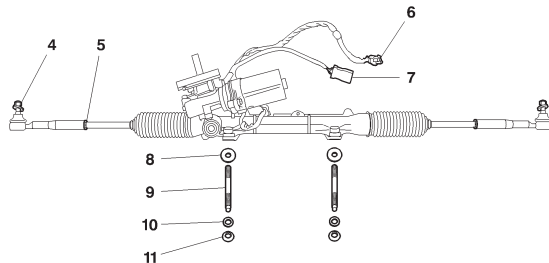
Identification

- Identified by the colour of the ring at «a».
- | | |
|------------------|---------------------|
| Left hand drive | : BLUE ring. |
| Right hand drive | : WHITE ring |

C2

FEATURES OF ELECTRIC POWER STEERING

Steering mechanism



B3EP13JD

Tightening torques (m.daN)

- (4) Ball-joint fixing on pivot : $3,5 \pm 0,3$
 (5) Steering rod lock-nut : $5 \pm 0,5$
 (8) Threaded washer
 (9) Stud : $0,8 \pm 0,1$
 (10) Flat washers
 (11) Fixing of mechanism on subframe : $8 \pm 0,8$

TU1JP - TU3JP - DV4TD

TU5JP4

TU5JP4S

Electric motor

60 A

65 A

Steering rack travel

2x72

2x64

Steering ratio

1/45,6

1/49,38

Number of rotations of steering wheel

3,2

2,8

2,6

Inner angle of lock

38°

32°30'

Outer angle of lock

32°24'

28°42'

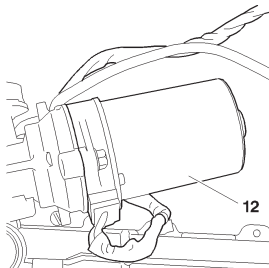
Connectors.

- (6) Supply of electric assistance motor
 (7) Torque sensor signals

FEATURES OF ELECTRIC POWER STEERING

C2

Steering assistance



B3EP13KC

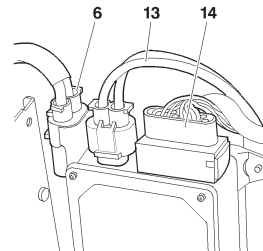
Supplier: **KOYO**.

The steering assistance is provided by the assistance motor (12), controlled by the ECU.

Power delivered to the assistance motor (12) depends on:

- Speed of the vehicle.
- Torque applied on the steering wheel.

Electric power steering ECU



B3EP13LC

Only one ECU version, whatever the engine-type.

The electric power steering ECU is linked to the following connectors:

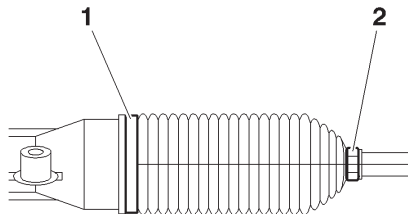
- (6) Assistance motor supply.
- (13) Electric power steering ECU supply.
- (14) Control signals.

After changing the electric power steering ECU, it is necessary to perform a configuration.

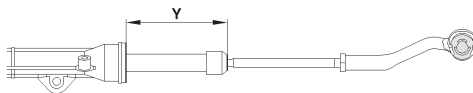
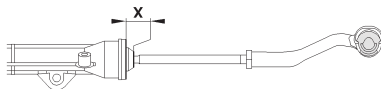
C2

SPECIAL FEATURES: STEERING

Centring the steering rack



B3EP13UC



B3EP13VD

Preliminary operation.

Raise and support the vehicle on a two-column lift.
Remove, on the RH side of the steering rack:

- Clip (1).
- Clip (2).

Release the steering rack protection gaiter.

Setting.

Move the steering to full left hand lock.
Measure the dimension **X**.
Move the steering to full right hand lock.
Measure the dimension **Y**.

Calculate the dimension: **L = (Y - X): 2**.

Refit:

- The steering rack protection gaiter.
- New clips (1) and (2).