ADVERTENCIA

Al imprimir se corre el riesgo de perder la correcta asignación de las figuras al texto.

- **Por motivos técnicos, por el momento no se puede descartar que, aun siendo correcta la imagen que aparezca en la pantalla, al imprimir se pierda la correlación entre el texto y la figura correspondiente.**
- **Si este error pasara desapercibido, existe el riesgo de que los trabajos no se ejecuten de forma correcta y, por tanto, se produzcan daños personales y materiales.**

→ Por ello le rogamos que tras el proceso de impresión compare siempre las copias impresas con la imagen de la pantalla. En caso de error, corrija las copias impresas de forma que se correspondan con el contenido de la imagen de la pantalla.

40 TW Tightening torques for front axle - as of MY 2003

- Tightening torques

Tightening torques

Suspension subframe

Location	Explanation	Type	Basic value	Tolerance 1	Tolerance 2
Threaded connection, suspension subframe to front body, M14 x 1.5 x 150	Always replace screws and lock nuts after removal.	Initial tightening	89 ftlb.		
Threaded connection, suspension subframe to front body, M14 x 1.5 x 150	Always replace screws and lock nuts after removal.	Final tightening	180 °		
Threaded connection, suspension subframe to rear body, M14 x 1.5 x 115	Always replace screws and lock nuts after removal.	Initial tightening	89 ftlb.		
Threaded connection, suspension subframe to rear body, M14 x 1.5 x 115	Always replace screws and lock nuts after removal.	Final tightening	180 °		

Axle strut

Location	Explanation	Type	Basic value	Tolerance 1	Tolerance 2
Threaded connection, upper trailing arm to mounting saddle, M10 x 70	Always replace screws and lock nuts after removal.	Initial tightening	37 ftlb.		
Threaded connection, upper trailing arm to mounting saddle, M10 x 70	Always replace screws and lock nuts after removal.	Final tightening	90 °		

Threaded connection securing upper trailing arm to pivot bearing, M12 x 1.5	Replace screws and lock nuts after removal.	Tightening torque	63 ftlb.		
HBA screw connection with steel springs, M5 x 10		Tightening torque	3.5 ftlb.		
Level regulator screw connection with air springs, M5 x 10		Tightening torque	3.5 ftlb.		
Threaded connection securing lower trailing arm to suspension subframe, M14 x 1.5 x 105	Replace screws and lock nuts after removal.	Tightening torque	133 ftlb.		
Threaded connection securing lower trailing arm to pivot bearing, M14 x 1.5	Replace screws and lock nuts after removal.	Tightening torque	78 ftlb.		

Steering gear

Location	Explanation	Type	Basic value	Tolerance 1	Tolerance 2
Threaded connection, steering gear to suspension subframe, M12 x 1.5	Always replace screws and lock nuts after removal.	Initial tightening	67 ftlb.		
Threaded connection, steering gear to suspension subframe, M12 x 1.5	Always replace screws and lock nuts after removal.	Final tightening	90 °		
Threaded connection securing tie rod to pivot bearing, M14 x 1.5	Replace screws and lock nuts after removal.	Tightening torque	67 ftlb.		
Tie rod to tie rod end screw connection, M14 x 1.5	Lock nut	Tightening torque	52 ftlb.		
Heat shield screw connection, M6 x 16		Tightening torque	7.5 ftlb.		
Tie rod to steering rack screw connection, M18 x 1.5	Axial joint	Initial tightening	74 ftlb.		
Tie rod to steering rack screw connection, M18 x 1.5	Axial joint	Final tightening	10 °		
Pressure line to steering gear screw connection a/f 17	a/f - wrench size	Tightening torque	22 ftlb.	±2 ftlb.	
Return line to steering gear screw connection a/f 17	a/f - wrench size	Tightening torque	22 ftlb.	±2 ftlb.	
Steering column to mounting bracket screw connection, M8 x 28		Tightening torque	17 ftlb.		
Steering column to mounting bracket screw connection, M8 x 10 x 45		Tightening torque	17 ftlb.		
Expansion/return line screw connection, M6 x 12		Tightening torque	7.5 ftlb.		

Steering wiring

Location	Explanation	Type	Basic value	Tolerance 1	Tolerance 2
Steering column to mounting bracket screw connection, M8 x 10 x 45		Tightening torque	17 ftlb.		
Steering column to mounting bracket screw connection, M8 x 28		Tightening torque	17 ftlb.		
Universal joint to steering gear screw connection, M10 x 35	Use bolt once only.	Initial tightening	26 ftlb.		
Universal joint to steering gear screw connection, M10 x 35	Use bolt once only.	Final tightening	90 °		
Steering wheel to steering column screw connection, M18 x 1.5 x 26	Use one bolt only.	Tightening torque	37 ftlb.	±4.5 ftlb.	
Screw connection for attaching handle to steering column, M5 x 8		Tightening torque	3.5 ftlb.		
Fastening sealing ring/seal to firewall		Tightening torque	3 ftlb.		

Wheel carrier (pivot bearing)

Location	Explanation	Type	Basic value	Tolerance 1	Tolerance 2
Speed sensor to wheel carrier screw connection, M6 x 16		Tightening torque	6 ftlb.		
Brake cover plate to wheel carrier screw connection, M8 x 12		Tightening torque	15 ftlb.		
Threaded connection securing brake calliper to wheel carrier, M16 x 1.5 x 48	Replace screws and fastening nuts after removal.	Tightening torque	200 ftlb.		
Brake hose holder to wheel carrier screw connection, M6 x 12		Tightening torque	6.5 ftlb.		
Cable retainer to wheel carrier screw connection, M8 x 14		Tightening torque	22 ftlb.		
Brake disc to wheel hub screw connection, M12 x 1.5 x 16		Tightening torque	10.5 ftlb.		

[1] *Replace screws and fastening nuts whenever removed.*

Spring strut

Location	Explanation	Type	Basic value	Tolerance 1	Tolerance 2
Spring strut to trailing arm screw connection M14 x 1.5 x 102		Initial tightening	111 ftlb.		

Spring strut to trailing arm screw connection M14 x 1.5 x 102		Final tightening	90 °		
Spring strut bracket to piston rod screw connection, M12 x 1.5		Tightening torque	44 ftlb.		
Mounting saddle screw connection M8		Tightening torque	22 ftlb.		
Mounting saddle to body screw connection, M10 x 37		Initial tightening	37 ftlb.		
Mounting saddle to body screw connection, M10 x 37		Final tightening	90 °		
Residual pressure restraint valve screw connection		Tightening torque	2 ftlb.		

Anti-roll bar/suspension/stabiliser (connecting link)

Location	Explanation	Type	Basic value	Tolerance 1	Tolerance 2
Threaded connection securing anti-roll bar to suspension subframe, M10 x 62	Replace screws and lock nuts after removal.	Tightening torque	44 ftlb.		
Threaded connection, anti-roll bar to suspension/stabilizer (connecting link), M12 x 1.5	Always replace screws and lock nuts after removal.	Tightening torque	81 ftlb.		
Threaded connection, suspension/stabiliser (connecting link) to spring strut, M12 x 1.5	Always replace screws and lock nuts after removal.	Tightening torque	81 ftlb.		

Off-road stabiliser (ORS)

Location	Explanation	Type	Basic value	Tolerance 1	Tolerance 2
Threaded connection securing stabiliser to rear-axle suspension subframe, M10 x 25		Tightening torque	44 ftlb.		
Threaded connection, anti-roll bar to suspension/stabilizer (connecting link), M12 x 1.5	Always replace screws and lock nuts after removal.	Tightening torque	81 ftlb.		
Threaded connection, suspension/stabiliser (connecting link) to wheel carrier/damper strut	See spring strut				
Union nuts to pipes screw connection		Tightening torque	10.5 ftlb.	±0.5 ftlb.	
Disconnection points to pipes screw connection		Tightening torque	10.5 ftlb.	±0.5 ftlb.	
Threaded connection securing line connections to left actuator	in direction of travel	Tightening torque	30 ftlb.	±1.5 ftlb.	

Threaded connection securing line connections to right actuator	in direction of travel	Tightening torque	15 ftlb.	±1.5 ftlb.	
Threaded connection securing control unit to lines		Tightening torque	10.5 ftlb.	±0.5 ftlb.	
Threaded connection securing control unit to accumulator, M14 x 1.5		Tightening torque	33 ftlb.	±3.5 ftlb.	
Pressure sensor to control unit screw connection, M10 x 1		Tightening torque	15 ftlb.	±1.5 ftlb.	
Control unit bracket screw connection		Tightening torque	7.5 ftlb.		
Threaded connection securing sensor to actuator	Replace screws and lock nuts after removal.	Tightening torque	2 ftlb.		
Bleeder valve screw connection		Tightening torque	5 ftlb.		

Drive shaft

Location	Explanation	Type	Basic value	Tolerance 1	Tolerance 2
Threaded connection, drive shaft to front-axle transmission flange, M10 x 52 x 26	Always replace screws and lock nuts after removal.	Initial tightening	37 ftlb.		
Threaded connection, drive shaft to front-axle transmission flange, M10 x 52 x 26	Always replace screws and lock nuts after removal.	Final tightening	90 °		
Threaded connection securing drive shaft to wheel hub, M24 x 1.5	Replace screws and lock nuts after removal.	Tightening torque	370 ftlb.		

Differential

Location	Explanation	Type	Basic value	Tolerance 1	Tolerance 2
Threaded connection, differential to suspension subframe, M12 x 1.5 x 90	Always replace screws and lock nuts after removal.	Initial tightening	67 ftlb.		
Threaded connection, differential to suspension subframe, M12 x 1.5 x 90	Always replace screws and lock nuts after removal.	Final tightening	90 °		
Threaded connection securing crash panel to differential, M6 x 12	Replace screws and lock nuts after removal.	Tightening torque	6 ftlb.		

Wheel

Location	Explanation	Type	Basic value	Tolerance 1	Tolerance 2
Threaded connection securing wheel to wheel hub, M14 x 1.5 x 51	Do not grease screw.	Tightening torque	118 ftlb.		
Threaded connection securing wheel to spare wheel holder, M14 x 1.5 x 51	Do not grease screw.	Tightening torque	111 ftlb.		

1) *Do not grease screws.*

9PAAD1, 9PAAD7, 9PAAE1, 9PAAE7, 9PAAF1, 9PAAJ1

as of MY 2003
Country C00, C02, C05, C07, C08, C09, C10, C11, C12, C13, C14, C15, C16, C18, C19, C20, C21, C22, C23, C24, C25, C26, C27, C28, C32, C33, C34, C35, C36, C37, C38, C39, C45, C46, C98, C99