

Section 5 Brakes

Group 51 Wheel brakes

Brakes, Technical data

Brake fluid, type: DOT 4 +	15"		16"		17/18"	
Front wheel brake	mm	Inches	mm	Inches	mm	Inches
Brake disc (ventilated):						
Outer diameter	286	11.26"	305	12.01"	330	12.99"
Thickness, new	26	1.02"	28	1.10"	32	1.26"
Replace when at minimum	23	0.91"	25	0.98"	30	1.18"
Min thickness for brake pad replacement	23.8	0.94"	25.8	1.02"	30.8	1.21"
Max lateral runout, floating disc	0.020	0.0008"	0.020	0.0008"	0.020	0.0008"
Max lateral runout, on hub	0.040	0.0016"	0.040	0.0016"	0.040	0.0016"
Max thickness variation	0.008	0.0003"	0.008	0.0003"	0.010	0.0004"
Wheel cylinder:						
Piston diameter	60	2.36"	60	2.36"	38 +42	1.50" +1.65"
Brake pads (Jurid 950):						
Thickness, new (thickness of backing plate not included)	12.5	0.49"	12.5	0.49"	11	0.43"
Thickness, minimum (thickness of backing plate not included)	3.0	0.12"	3.0	0.12"	2.0	0.08"
Rear wheel brake	15"		16"		17/18"	
Brake disc (solid):						
Outer diameter	288	11.34"	288	11.34"	330	12.99"
Thickness, new	12	0.47"	12	0.47"	28	1.10"
Must be replaced at min	10	0.39"	10	0.39"	26	1.02"
Min thickness for brake pad replacement	10.7	0.42"	10.7	0.42"	26.7	1.05"
Max lateral runout, floating disc	0.030	0.0012"	0.030	0.0012"	0.020	0.0008"
Max lateral runout, on hub	0.050	0.00196"	0.050	0.00196"	0.050	0.00196"
Max thickness variation	0.008	0.0003"	0.008	0.0003"	0.010	0.0004"
Wheel cylinder:						
Piston diameter	42	1.65"	42	1.65"	28 +30	1.10" +1.18"

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Brake pads (Galfer):						
Thickness, new (thickness of backing plate not included)	11.5	0.45"	11.5	0.45"	10	0.39"
Thickness, minimum (thickness of backing plate not included)	3.0	0.12"	3.0	0.12"	2.0	0.08"

Master cylinder	mm	Inches
Master cylinder, type ATE tandem:		
Primary cylinder, diameter	25.4	1"
Secondary cylinder, diameter	25.4	1"
Servo cylinder:		Inches
Type: ATE (twin booster)	inch	9" + 8"
	Servo cylinder gear ratio:	
Gear ratio (in practice)	5.8	

Tightening torques

Designation	Nm	lbf ft.	Dimensions
Brake calliper - Steering arm	100 ± 25	74 ± 18	M12
Bleed nipple brake calliper front, rear	9 ± 2	6.6 ± 1.5	M10
Guard plate front - Steering arm steel	20 ± 5	15 ± 3	M8
Guard plate front - Steering arm aluminium	15 ± 3	11 ± 2	M8
Locating pin	10 ± 2.5	7 ± 2	M6
Brake calliper rear - Wheel bearing housing	60 ± 15	44 ± 11	M10
Brake calliper rear - Sliding pin	27.5±2.5	20 ± 2	M9
Guard plate rear - Wheel bearing housing	12 ± 3	9 ± 2	M6
Brake pipe - Modulator, ABS	14 ± 3	10 ± 2	M10/M12
Brake pipe - Master cylinder	14 ± 3	10 ± 2	M12
Brake pipe - Brake hose	14 ± 3	10 ± 2	M10
Brake lamp	18 ± 2	13 ± 1.5	M10
Bracket vacuum pump - Front side member	25 ± 6	18 ± 4	M8
Brake pipe - Joint fitting	14 ± 3	10 ± 2	M10
Brake hose bracket - Bottom flange	25 ± 6	18 ± 4	M8
Brake hose bracket - Side member	10 ± 2.5	7 ± 2	M6
Mounting brake pedal, left-hand drive Automatic	30 ± 5	22 ± 3	M10
Mounting brake pedal, left-hand drive Manual	40 ± 10	29 ± 7	M10
Mounting brake pedal, right-hand drive Manual	35 ± 5	26 ± 3	M10
Mounting clutch pedal	35 ± 5	26 ± 3	M10
Pedal box right-hand drive - Plenum	25 ± 6	18 ± 4	M8
ABS sensor - Steering arm	10 ± 2.5	7.5 ± 2	M6
Handbrake cable bracket - Sub-frame	20 ± 6	15 ± 4	M8
Bracket ABS cable - Shock absorber front 4WD	6 ± 1.5	4.5 ± 1	M5

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Servo unit, nut (mounting)	24 ± 5	17 ± 3	
Master cylinder on cars with DSTC (Dynamic stability and traction control), nut (mounting)	24 ± 5	17 ± 3	

V70*Group 55 Handbrake*

Group 55 Handbrake

Technical data

Technical data and default values:	mm	Inches
Brake drum:		
Diameter	178	7.01"
Radial runout, maximum	0.15	0.0059"
Out of round, maximum	0.15	0.0059"
Default values. Full power must be maintained:		
After adjustment		2-5 notches
When checking, maximum		8 notches
Always check that the wheels run freely after adjusting.		

Group 59 ABS brakes

Technical data

Designation: Component	Version Technical data
Hydraulic pump MK 20 IE: Complete with control module.	
ABS Volvo P/N.	See replacement parts catalogue
STC Volvo P/N.	See replacement parts catalogue
Control module MK 20:	
ABS Volvo P/N.	See replacement parts catalogue
STC Volvo P/N.	See replacement parts catalogue
FWD Volvo P/N.	See replacement parts catalogue
Hydraulic pump MK 25: Complete with control module.	See replacement parts catalogue
ABS Volvo P/N.	See replacement parts catalogue
STC Volvo P/N.	See replacement parts catalogue
Control module MK 25:	
ABS Volvo P/N.	See replacement parts catalogue
STC Volvo P/N.	See replacement parts catalogue
DSTC, TRACS Volvo P/N	See replacement parts catalogue
Power consumption:	
Intake valves	< 3 A
Return valves	< 3 A
Sensors:	
Front ATE Volvo P/N	See replacement parts catalogue
Rear ATE Volvo P/N	See replacement parts catalogue
Tightening torques	Nm (lbf ft.) 10 (7.4)
Pulse wheel:	
Front Volvo P/N.	See replacement parts catalogue

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Rear FAG, integrated in the rear bearing. Cannot be replaced as a separate component . Volvo P/N.	See replacement parts catalogue
Rear wheel bearing Assembly with pulse wheel Volvo P/N.	See replacement parts catalogue