## General

| | | |
|---|---|---|
| Pressure in hydraulic system | with brake pedal depressed | with brake released (residual pressure) |
| | 60 — 80 atm. | 0.4 — 0.8 atm. |
| Check of brake fluid level | 1 — 2 cm below top edge of fluid reservoir | |
| Capacity of fluid reservoir (ATE blue brake fluid) | 0.35 lit. | |
| Dimensions of brake fluid lines | Bundy steel tube 6 × 1 mm ⌀ and 5 × 0.75 mm ⌀, on recent models 4.75 × 0.72 mm ⌀ | |

## Brake Master Cylinder

| | |
|---|---|
| Brake master cylinder diameter | 1″ = 25.4 mm |
| Bore | 25.400 — 25.502 |
| Brake master cylinder diameter with ATE Power Brake T 50 installed | 1 1/16″ = 26.98 mm |
| Bore | 26.980 — 27.082 |
| Permissible out-of-roundness of cylinder bore | 0.03 |
| Piston diameter | 25.252 — 25.335 |
| Piston diameter with ATE Power Brake T 50 installed | 26.832 — 26.915 |
| Piston clearance | 0.065 — 0.250 |

| | |
|---|---|
| Clearance between piston and push rod | approx. 1 |
| Brake pedal free play | 6 — 8 |

## Front Brake Wheel Cylinder

| | |
|---|---|
| Brake wheel cylinder diameter | 1 1/8" |
| Bore | 28.570 — 28.672 |
| Permissible out-of-roundness of cylinder bore | 0.03 |
| Piston diameter | 28.505 — 28.422 |
| Piston clearance | 0.055 — 0.250 |

## Rear Brake Wheel Cylinder

| | | |
|---|---|---|
| Brake wheel cylinder diameter | | 1", on recent models 15/16" |
| Bore for | 1" ∅ version | 25.400 — 25.502 |
| | 15/16" ∅ version | 23.810 — 23.912 |
| Permissible out-of-roundness of cylinder bore | | 0.03 |
| Piston diameter for | 1" ∅ version | 25.335 — 25.252 |
| | 15/16" ∅ version | 23.662 — 23.745 |
| Piston clearance | | 0.065 — 0.250 |

## Brake Shoes

| | Anchor pin diameter | Bore in brake shoe | Radial play |
|---|---|---|---|
| Brake shoe suspension | 15.968 / 15.941 | 16.000 / 16.027 | 0.032 — 0.086 |

| | |
|---|---|
| Permissible wear of brake lining | down to 1.5 |
| Permissible departure from vertical of brake shoe | 0.5 |
| Brake shoe external diameter 1.5 mm smaller than brake drum internal diameter | |
| Brake shoe toe slightly chamfered for approx. 15 mm | |

## Automatic Brake Shoe Adjustment

| Brake | Adjusting sleeve | | Pin diameter | Clearance between pin and adjusting sleeve |
|---|---|---|---|---|
| | Internal diameter | Length | | |
| front | $\frac{12.000}{12.058}$ | 36 | $\frac{11.200}{11.173}$ | 0.800 — 0.885 |
| rear | $\frac{12.000}{12.058}$ | 30 | $\frac{11.000}{10.973}$ | 1.000 — 1.085 |

| Clearance between pin and adjusting sleeve | front wheel brake | rear wheel brake |
|---|---|---|
| measured in the direction of the longitudinal bore | 0.8 | 1 |
| measured in a direction perpendicular to the brake shoe | 0.6 | 0.8 |
| Adjusting force | 60 — 90 kg | |

| | |
|---|---|
| Thickness of friction washers | $2.5 \pm 0.1$ |
| Thickness of thrust washers | $2.0 \pm 0.05$ |

## Brake Drum

| Internal diameter of brake drum | new | repair stage |
|---|---|---|
| | $230 + 0.2$ | up to 232 |
| Diameter of center bore | 67.00 — 67.03 | |
| Permissible out-of-roundness | 0.05 | |
| Permissible eccentricity | 0.1 | |
| Permissible taper | 0.1 | |
| Permissible run-out above the bores for the wheel bolts | 0.1 | |
| Permissible unbalance | 200 cmg | |

## Spring Testing Table

| Type of spring | | Free length mm | Length under load mm | Length under load kg |
|---|---|---|---|---|
| Pressure spring for brake master cylinder | on 1" ∅ version | 73 | 57 | 3.2 |
| | on $1^{1}/_{16}$" ∅ version | 72.5 | 56.5 | 3.2 |
| Pressure spring for brake wheel cylinder | front wheel | 35 | 20 | $1.2^{\pm 10\%}$ |
| | rear wheel | 45 | 30 | $1.2^{\pm 10\%}$ |
| Pressure spring for brake shoe suspension of rear wheel brake | | 54.5 | 26.5 | $23.8^{+10\%}_{-5}$ |
| Return spring for brake shoe | front wheel | 85.5 | 103*<br>114** | $25^{+10\%*}_{-5}$<br>$36.6^{+10\%**}_{-5}$ |
| | rear wheel | 118.5 | 130.5*<br>146.5** | $18^{+10\%*}_{-5}$<br>$33.5^{+10\%**}_{-5}$ |
| Pressure spring for automatic brake shoe adjustment | | 16.4 | 13 | 120—140 |
| Pressure spring for guide pin for automatic brake shoe adjustment on front wheel | | 15.7 | 11.5 | $15^{\pm 5\%}$ |
| Return spring for brake lever | | 57 | 64*<br>77** | $7^{+10\%*}_{-5}$<br>$14.55^{+10\%**}_{-5}$ |
| Return spring for equalizer lever of hand brake | | 88 | 128.5*<br>198.5** | $4.2^{\pm 10\%*}$<br>$8^{\pm 10\%**}$ |

* pre-tension
** final tension