

Conversion Toyota Brake Cylinder

Inhalt

1	Required material / Parts	2
2	Spezialwerkzeug	2
3	Difference Original / Replacement Brake Cylinder	3
4	Preparations	4
5	Modification Brake Plates	5
6	Modification Brake Drums / Ordering Brake Bands	6
7	Brake Lines (German)	7
8	Bleeding brake lines	8
9	Exploded view drawings	9
10	Miscellaneous Pictures	10

1 Required material / Parts

- 4x Wheel brake cylinder driver side Toyota 47510-69055
➔ Adjusting screw left, bleeder bottom
- 4x Wheel brake cylinder passenger side Toyota 47530-69045
➔ Adjusting screw left, brake bleeder top
- 32x Thread adapter M8-M6



- 32x Hexagon screw M6x20 A2
- 32x M6 washer A2
- 32x Thread lock (circlips or Loctite)
- 4x Brackets to mount the brake line T-pieces on the brake plates
- 1x Hole spacing plate T-piece rear axle (see "Miscellaneous pictures" chapter 10)

2 Spezialwerkzeug

- KM12 Groove nut wrench (or universal)



- Tap M8
- Drill 9.5mm
- Brake bleeder compressed air adapter



Picture: Buzzetti pole wheel puller M28x1.25, converted to 1/4" hose connection

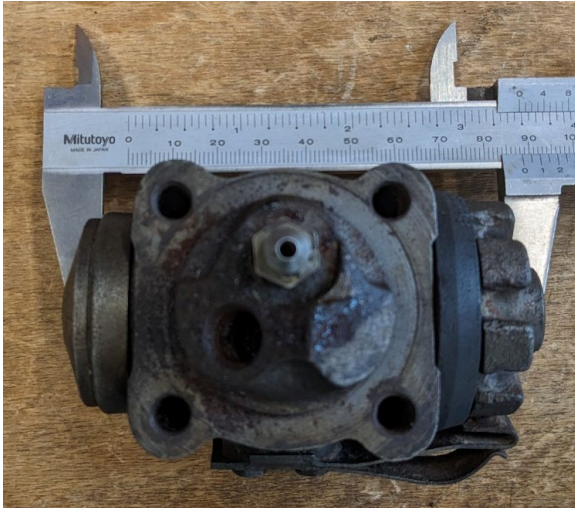
- Tap G1/4" (for brake bleeder 1/4" hose adapter)



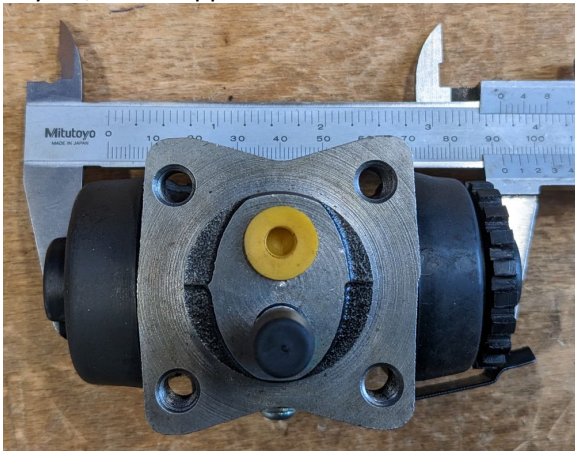
3 Difference Original / Replacement Brake Cylinder

Original cylinders are a few mm narrower compared to the Toyota replacement, so the brake drums would need to be machined a few mm. The hole pattern for mounting on the brake plates is slightly wider apart on the Toyota cylinders. By using thread reductions from M8 to M6, the holes on the brake plates only need to be drilled out by 0.5mm (to 9.5mm). This also allows the original cylinders to be refitted if required.

- Lockheed 1078370, Width approx. 88mm



- Toyota, Width approx. 92mm



4 Preparations

1. Remove wheels
2. Remove brake drums
3. Remove drive shaft



4. Remove wheel hub
5. Remove brake pads
6. Remove brake lines
7. Remove brake plate



8. Remove brake cylinder

5 Modification Brake Plates

To keep the brake plates as far as possible original, M8-M6 thread adapters can be used in the Toyota wheel brake cylinder. The 8 brake cylinder holes on the brake plates must be extended from approx. 9mm to 9.5mm. The assembly of the brake cylinders should be self-explanatory.



Note: 3D scan of the brake plate available in the download area.

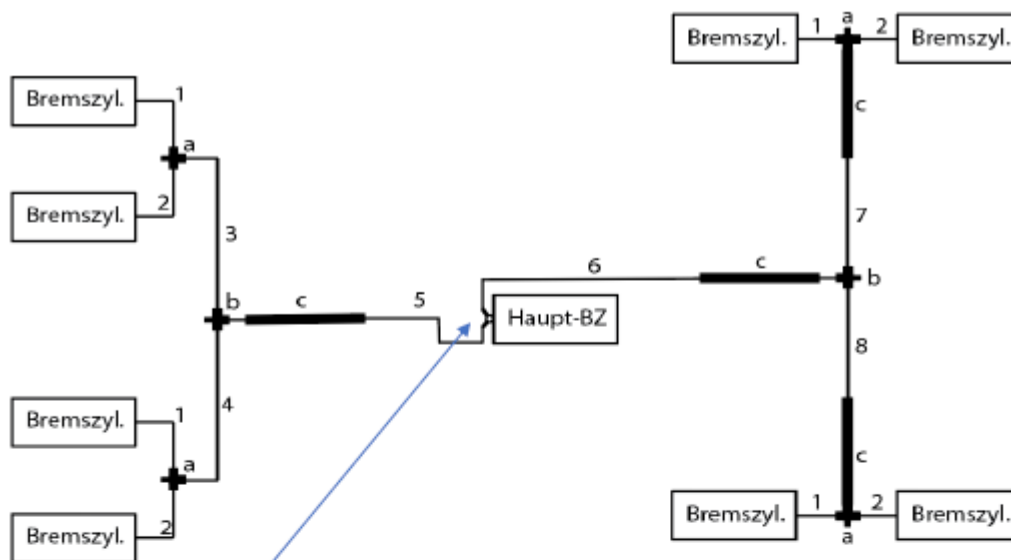
6 Modification Brake Drums / Ordering Brake Bands

It is recommended to bring the brake plates with the new brake cylinders to the company that turns the brake drums and re-glues / rivets the brake pads. In my case the brake drums had to be turned to in the front and 307.2mm in the rear. This was done by the company Naef Industries (<http://www.naef-industries.ch/>) in 9473 Gams, Switzerland.

Attention: In order to reduce the rear braking effect, the rear brake bands consist of 2 parts per brake shoe (see picture below).



7 Brake Lines (German)



ATE 03.3522-0500.1 (M12x1)

Toyota LandCruiser 40 (J40/50)
Bremszylinder Fahrerseite:
*TOYOTA 47510-69055
*Japanparts CS-288

Bremszylinder Beifahrerseite:
* Toyota 47530-69045
*Japanparts CS-286

Gewinde Bremszylinder
M10x1

Abbildung	Typ	Anzahl	Länge (mm)	di in mm (orig)
a	T-Stück	4	--	--
b	T-Stück	2	--	--
c	Schlauch	4	430	2.6 (4)
1	Rohr	4	260	2.6(5)
2	Rohr	4	220	2.6 (5)
3	Rohr	1	750	2.6 (5)
4	Rohr	1	1280	2.6 (5)
5	Rohr	1	1650	2.6 (6.4)
6	Rohr	1	1000	2.6 (6.4)
7	Rohr	1	350	2.6 (5)
8	Rohr	1	1050	2.6 (5)



Ersatz für a / b: ATE 03.3513-0300.1 (M12x1)

Translation:

Bremszyl. = Brake cylinder

Rohr = Line

Schlauch = Hose

Haupt-BZ = Master brake cylinder

Abbildung = Figure

Anzahl = Number / Amount

Länge = Length

di in mm (orig) = Inner diameter (original diameter)

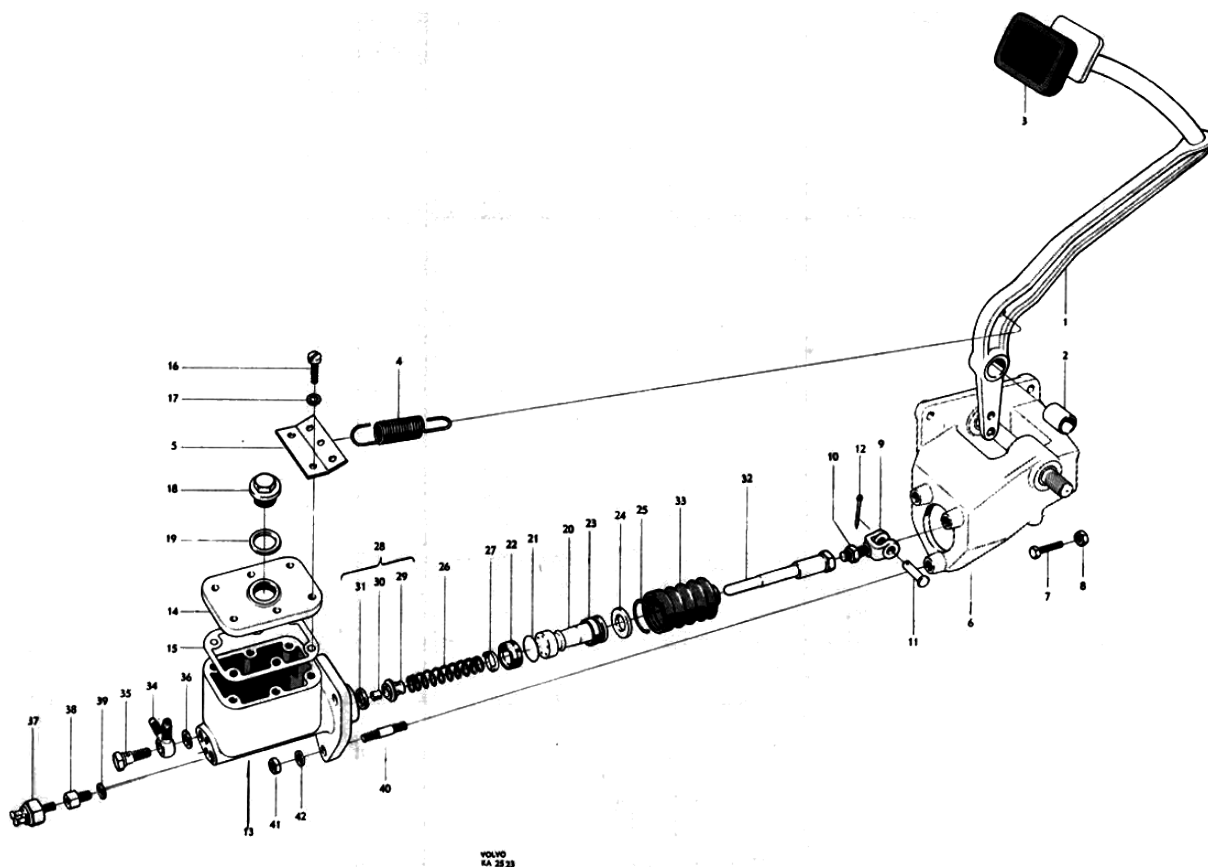
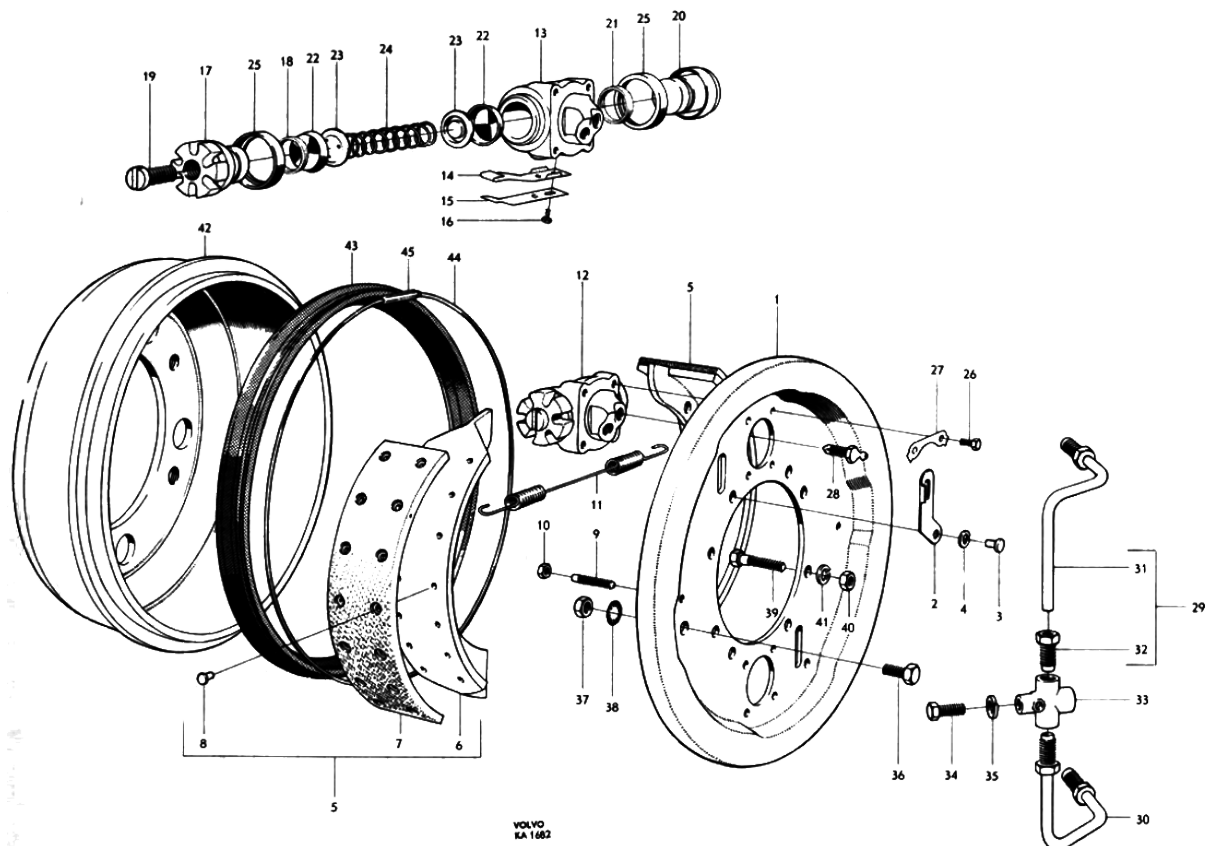
8 Bleeding brake lines

Some TP21 models have a service opening on the driver's side directly under the driver's foot carpet. If not, this can be cut out if necessary. Using the adapter shown below, the bleeding sequence is the same as on any classic car: 1st rear axle longer line, 2nd rear axle shorter line, 3rd front axle longer line, 4th front axle shorter line. It took me about 10 tries to do the bleeding process myself, as there was always residual air in the lines. The pneumatic pressure was set to about 1 bar.

The revision of the main brake cylinder was organized via Derendinger / Technomag AG. Cost with new cylinder sleeve about 400CHF.



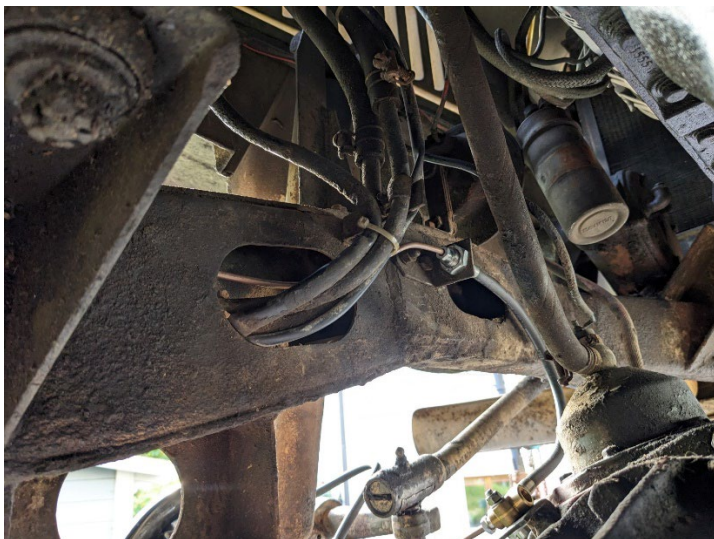
9 Exploded view drawings



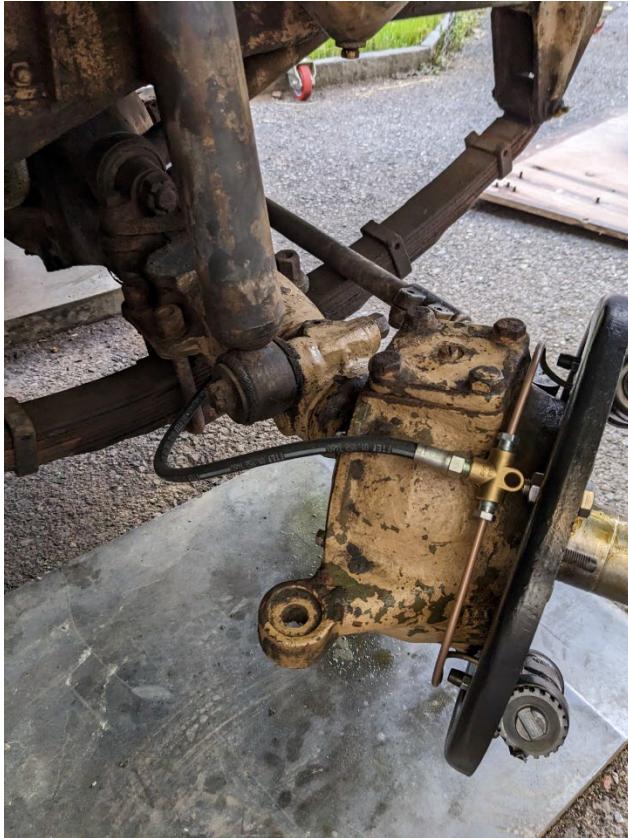
10 Miscellaneous Pictures



Master brake cylinder



Brake line front axle



Brake lines front axle left / right (mounting brackets for T-pieces not shown in picture)



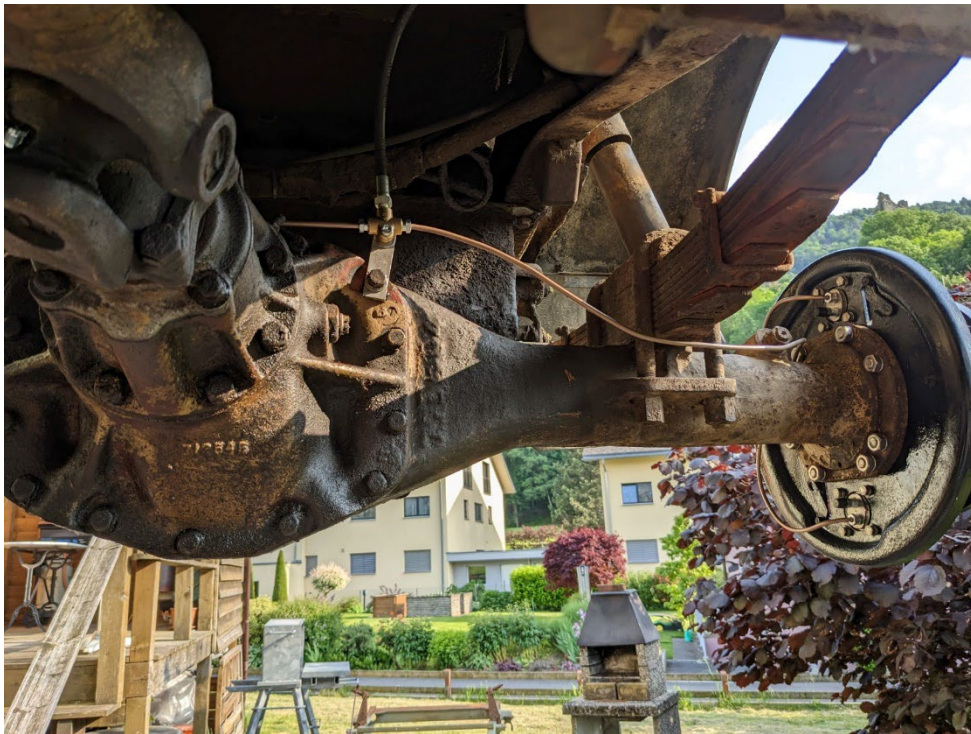
Mounting brackets for T-pieces, mounted on the brake plates



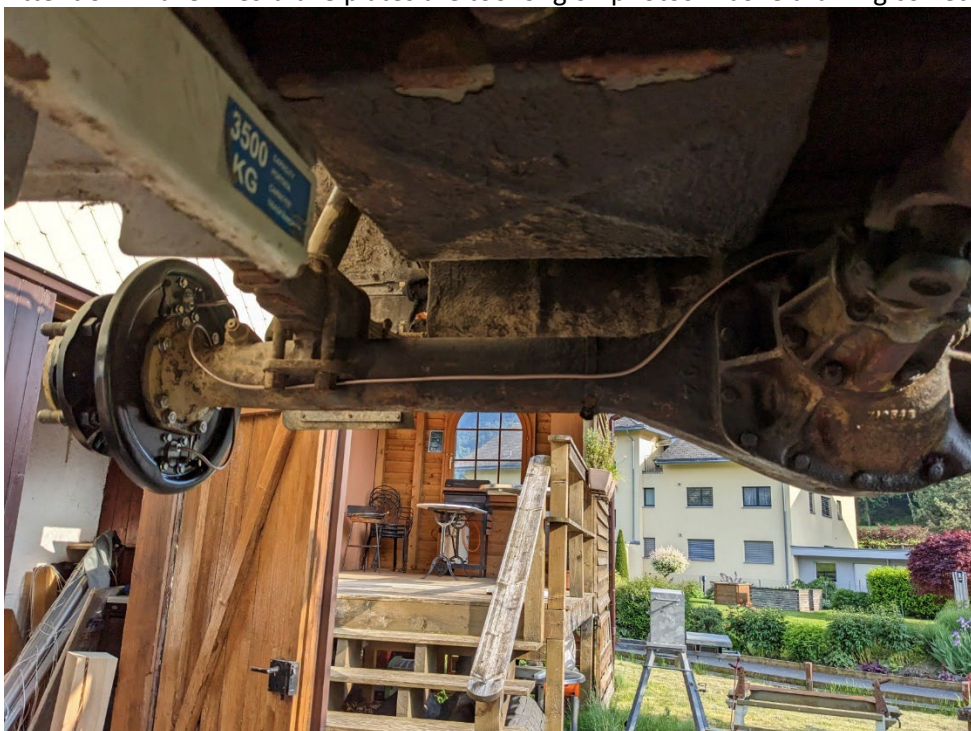
Brake lines rear axle with mounting



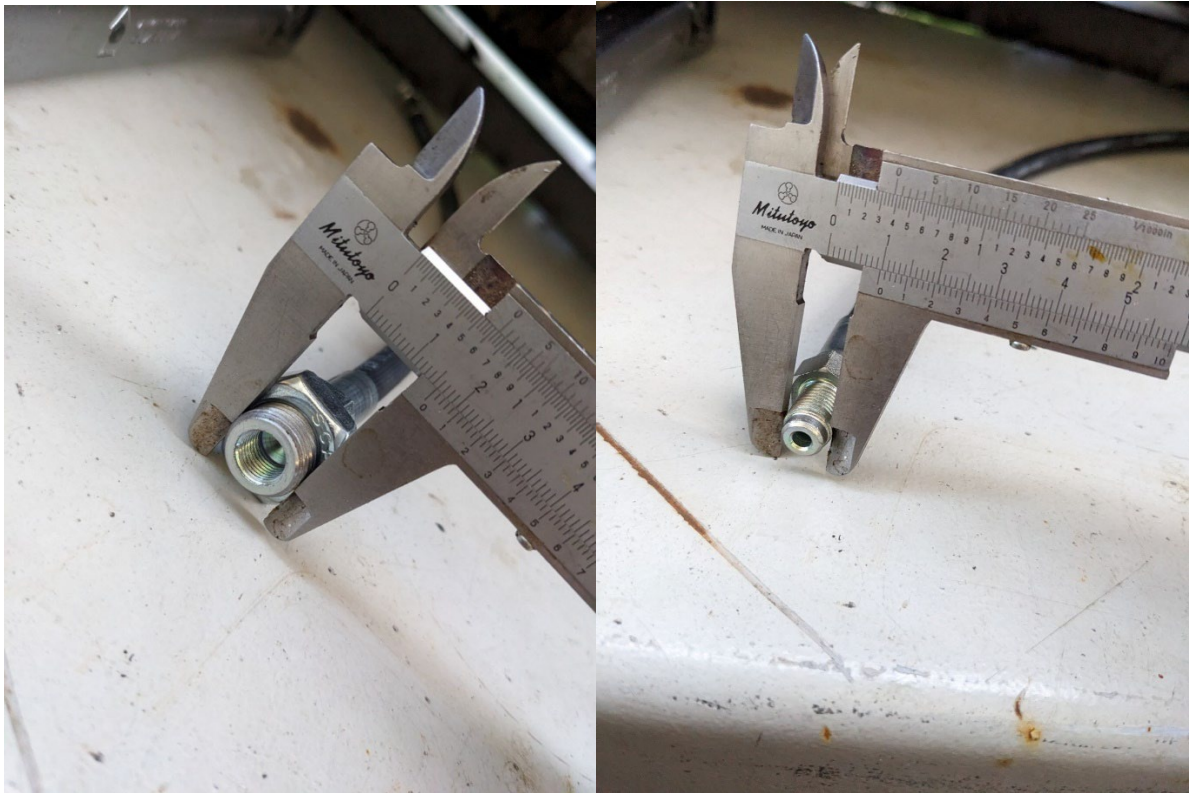
Hole spacing mounting approx. 40mm



Attention: Brake lines brake plates are too long on photos. Above drawing corrected.



Rear axle passenger side



Brake house (4x identical). Diameter for mounting bracket: 16mm. Thread: M10x1