

Bolt-on aslift[®]: The quickly fitted and universal axle lift system

The Bolt-On Axle Lift[®] is a patented system from Weweler and can be used to temporarily relieve air spring axles of their burden. This results in increased driving comfort, reduced wear on brakes and tires, plus considerable fuel savings. Our Bolt-On Axle Lift[®] is exceptionally compact and one of the lightest of its kind. The system is quick and simple to fit to most standard air suspension systems.

The Bolt-On[®] is attached to the hanger bracket with only one bolt on each side. It can also be retrofitted. Weighing only 20 kilograms, the system is easily half as light as others of its kind. It is also very compact, leaving room for a pallet holder or a spare tyre. It can be operated both manually and automatically. The pneumatic air valves required for this can be supplied from stock.



The following Bolt-On Axle Lifts® are deliverable as standard:

BPW

AL-410 (also SAF)

AL-436 BPW AIRLIGHT II M30 PIVOT BOLT

AL-459 BPW AIRLIGHT I DISC AND DRUM BRAKE

AL-466 BPW AIRLIGHT II M24 PIVOT BOLT

DAIMLER CHRYSLER

AL-438 DCA WEIGHT MASTER- SINGLE AIR

AL-445 DCA SINGLE AIR

MIDLIFT

AL-138/191/193 LOW SYSTEMS Ø127, Ø146, □ 120

AL-448 ESN LOW CHASSIS

ROR

AL-435 (also WEWELER) FLEXAIR 9000 BRAKE DISK

AL-440 (also WEWELER)

SAF

AL-410 BPW & SAF

AL-460 SAF MODUL DISC AND DRUM BRAKE

AL-431 SAF INTRADISC PLUS II

SCHMITZ

AL-427L CARGOBULL MRH1/2

AL-449 CARGOBULL MRH2 / MRH3

AL-451 CARGOBULL MRH2.0 (SKO+)/MRH3

WEWELER

AL-435 WEWELER

AL-446 WEWELER TRAILER ARM 75MM

AL-448 WEWELER – ESN MIDLIFT

AL-453 WEWELER MEGA LIFT

AL-455 WEWELER - TWIN WHEELS

AL-456 WEWELER – A25/A45/C25/C45

AL-457 WEWELER - A45 / DISC BRAKE / TWIN WHEELS

AL-462 WEWELER – A45 / DISC BRAKE

PNEUMATIC AXLE LIFT VALVES:

To raise and lower lift axles, Weweler has two ranges of pneumatic valves, the WAL and the VEB valves. The WAL range can be applied to vehicles with ABS electronics and can be operated both manually and automatically. The VEB range can be applied to vehicles equipped with EBS electronics and are fully electronic operated.

Within the WAL range, there are three options. WAL-1 is a semi-automatic lift axle control valve with a manual drop and lift function. As a safety feature an automatic drop is build in. The automatic drop of the lift axle is depending on predetermined axle loads. WAL-2 is fully-automatic lift axle control valve, with an automatic drop and raise function. Both the drop and the raise are also depending on predetermined axle loads. WAL-3 is equal to the WAL-2, with the addition of an electronic remote control.

UWT WAL-1 (half automatisch / half automatic)

UWT WAL-2 (vol automatisch / full automatic)

UWT WAL-3 (vol automatisch met elektrische aktivering)



Within the VEB range, there are also three options. VEB-1 is a single circuit automatic lift axle control valve. VEB-4 is a single circuit automatic lift axle control valve with an additional air distribution block. VEB-5 is a double circuit automatic lift axle control valve.

UWT VEB-1 (EBS system - single circuit)

UWT VEB-4 (EBS system - single circuit)

UWT VEB-5 (EBS system - dubbel circuit)



AXLE LIFT

MID LIFT

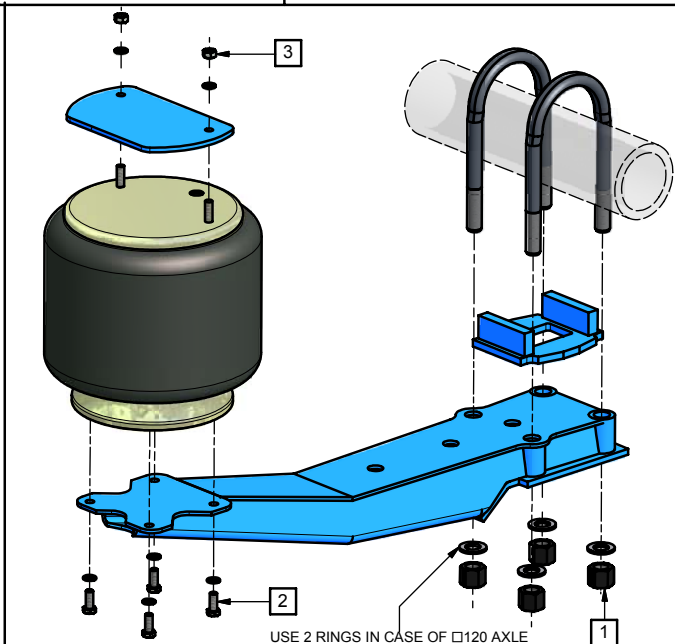
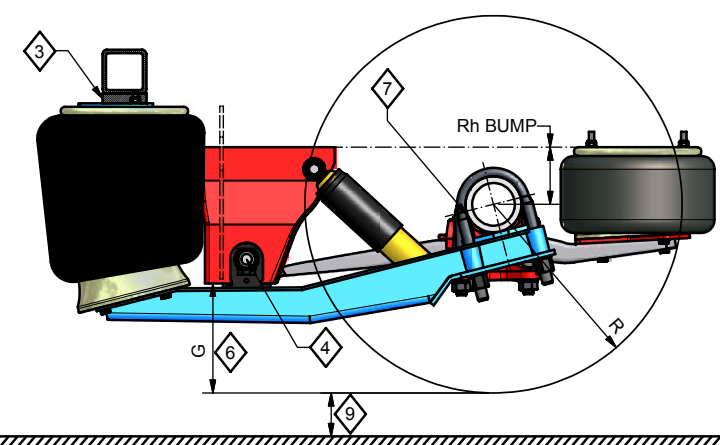
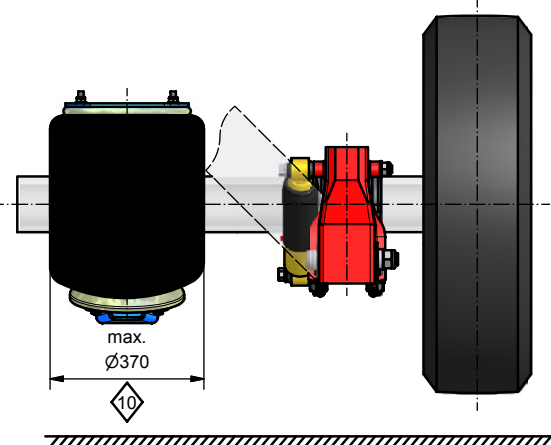
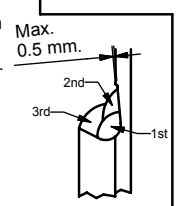
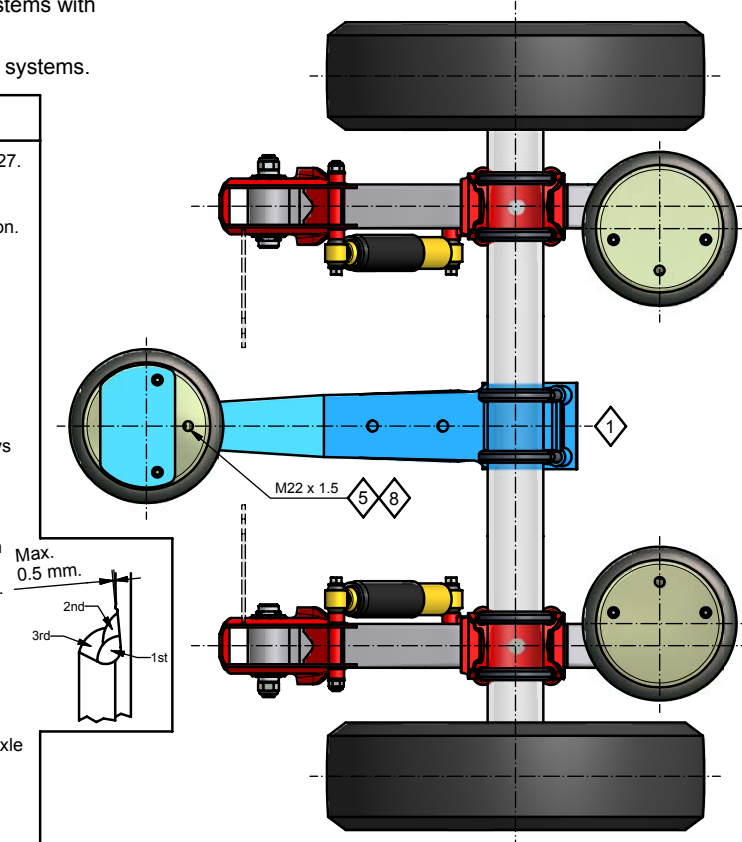
AL-138/191/193-DOC

This Weweler axle lift is suitable for low air suspension systems with an $\varnothing 127$, $\varnothing 146$ or $\square 120$ axle (see table).

The Bolt-On axle lift isn't suitable for overslung suspension systems.

EXPLANATION

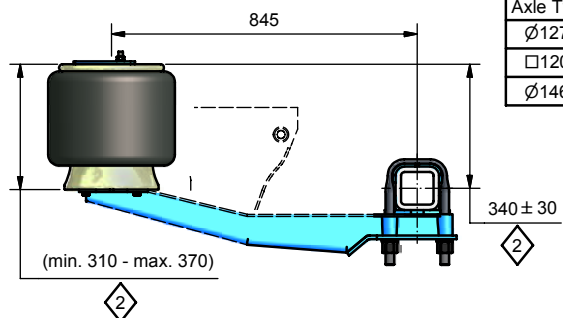
- 1 Drawing for jointless midaxlelift suitable for axletypes: $\square 120 - \varnothing 127$.
Weight: ca. 47 kg
- 2 Values are only valid for nominal rideheight of airspring suspension.
- 3 Length of adjustmentbar depending on rideheight and position of crossbar. Adjustmentbar is not included.
- 4 Rotationpoint of lift and suspension.
- 5 The airconnector can be rotated in steps of 90°.
- 6 Groundclearance G at full axle up travel (loaded without pressure depends on the airsuspensionsystem and the type of tires. (always check).
- 7 Weldinginstruction:
 - Mountingplate must laying on the axle.
 - The horizontal welds at front- and backside must be welded with an a-height of ca. 5 mm.
 - Adhesive welds and/or pits and burrs need to become full welds.
 - Never test the weldingbow on the axle self.
 - Connect the earthwire so it will not cause any possible damage to the bearings by electric circuiting.
- 8 Rest-pressure-valve 0,5 bar. Tube connector $\varnothing 10$ mm.
- 9 General: The clearance between the road and the tire when the axle is lifted = axle up tralve minus deformation of the tires.
- 10 The airspring is not allowed to hit any other parts. Keep a free diameter of 420 mm. for moving parts.



USE 2 RINGS IN CASE OF $\square 120$ AXLE

TORQUE		
Fastener	Torque [Nm]	Tolerance [Nm]
1 U-Bolt (M24)	800	+50 / -0
2 Air Spring (M12)	66	+0 / -16
3 Bellow plate (M12)	66	+0 / -16

AXLE LIFTS	
Axle Type	MID-Lift
$\varnothing 127$	AL-138
$\square 120$	AL-191
$\varnothing 146$	AL-193



drawn:	last rev:	Modification on last revision:
rev:		
date: 25-10-2006		
by: RTS		
ckd:		

WEWELER
IMPROVING TRANSPORTATION
WEWELER
NEDERLAND B.V.
P.O. BOX 142
7300 AV APELDOORN
THE NETHERLANDS

The Bolt-On axle lift wich is suitable for righthand and lefthand assembly is developed for the BPW suspension systems SL-9312 and SL-9315 and the EM series from SAF. Direct assembling (KTL coating).

The Bolt-On axle lift isn't suitable when:

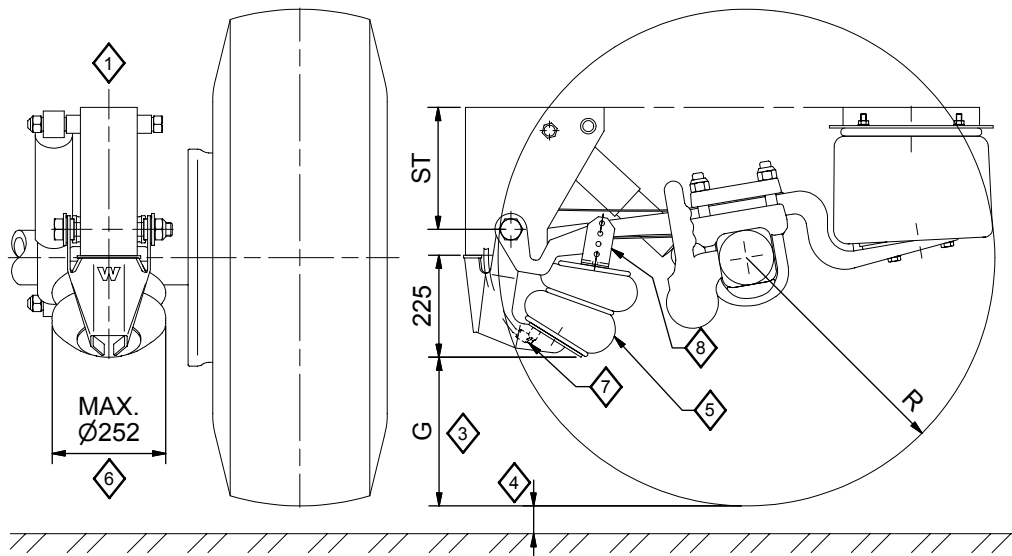
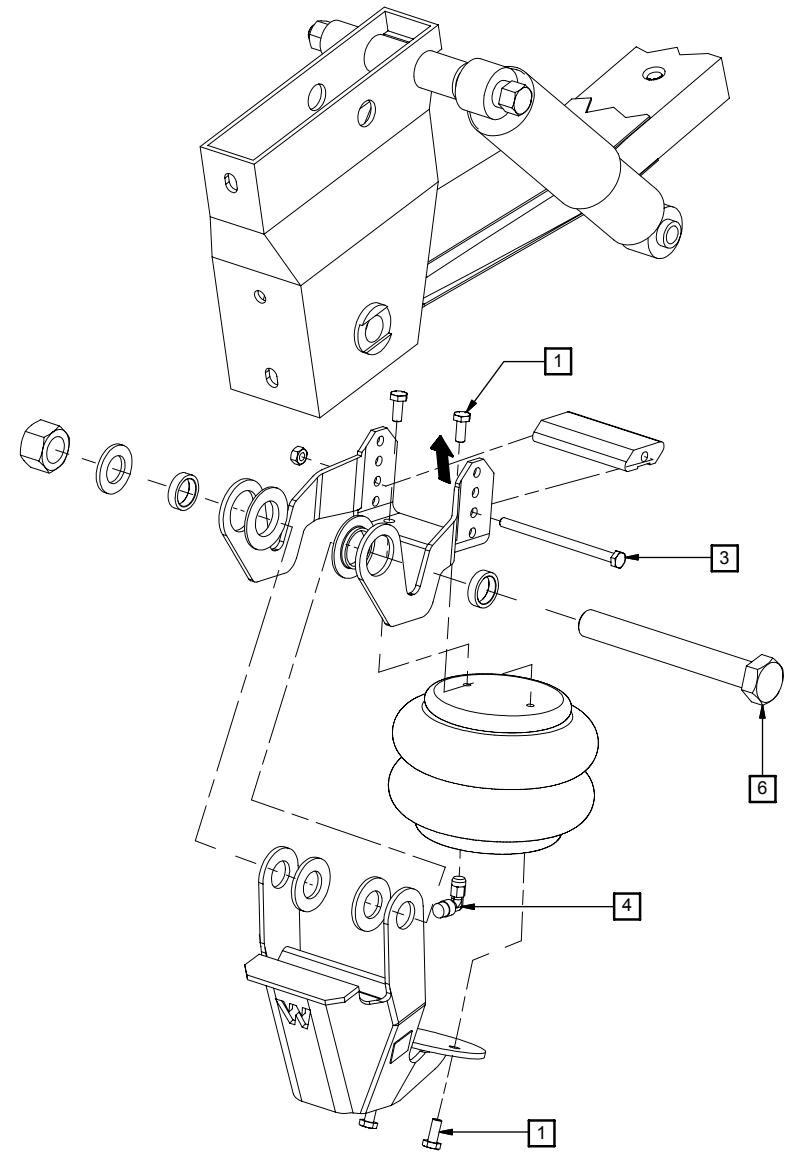
- the hangerbracket wider is than 170 mm on the place of the pivot bolt;
- the distance between the spring centers is bigger than 1300 mm with a wheel track of 2040 mm;
- twin tyres are being used;
- the suspension system has a stroke of more than 220 mm;
- the lifting axle is a steer axle;
- disc brakes are being used.

EXPLANATION

- 1 Assemble lefthand and righthand side.
- 3 Groundclearance G at full axle up travel (loaded without pressure) depends on the airsuspensionsystem and the type of tires. (always check)
- 4 General:
The clearance between the road and the tire when the axle is lifted = axle up travel minus deformation of the tires.
- 5 Not lifted: pressure = 0 bar.
- 6 The airspring is not allowed to hit any other parts. Keep a free diameter of 280 mm for moving parts.
- 7 Air-connection (standard 10 mm, push in fitting).
- 8 The position of the rubber support is dependent on the type of suspension system, contact Weweler for the correct position.

TORQUE

Fastener	Torque [Nm]	Tolerance [Nm]
1 Airspring	(M10) 30	±10
3 Rubber Support	(M10) 50	±10
4 Airconnection	(G¼") 20	±10
6 Pivot Bolt	According BPW/SAF	According BPW/SAF



This Weweler Bolt-On axle lift is developed for Weweler Air suspension systems with adjustable wearing plates. Direct assembling (KTL coating).

The Bolt-On axle lift isn't suitable when:

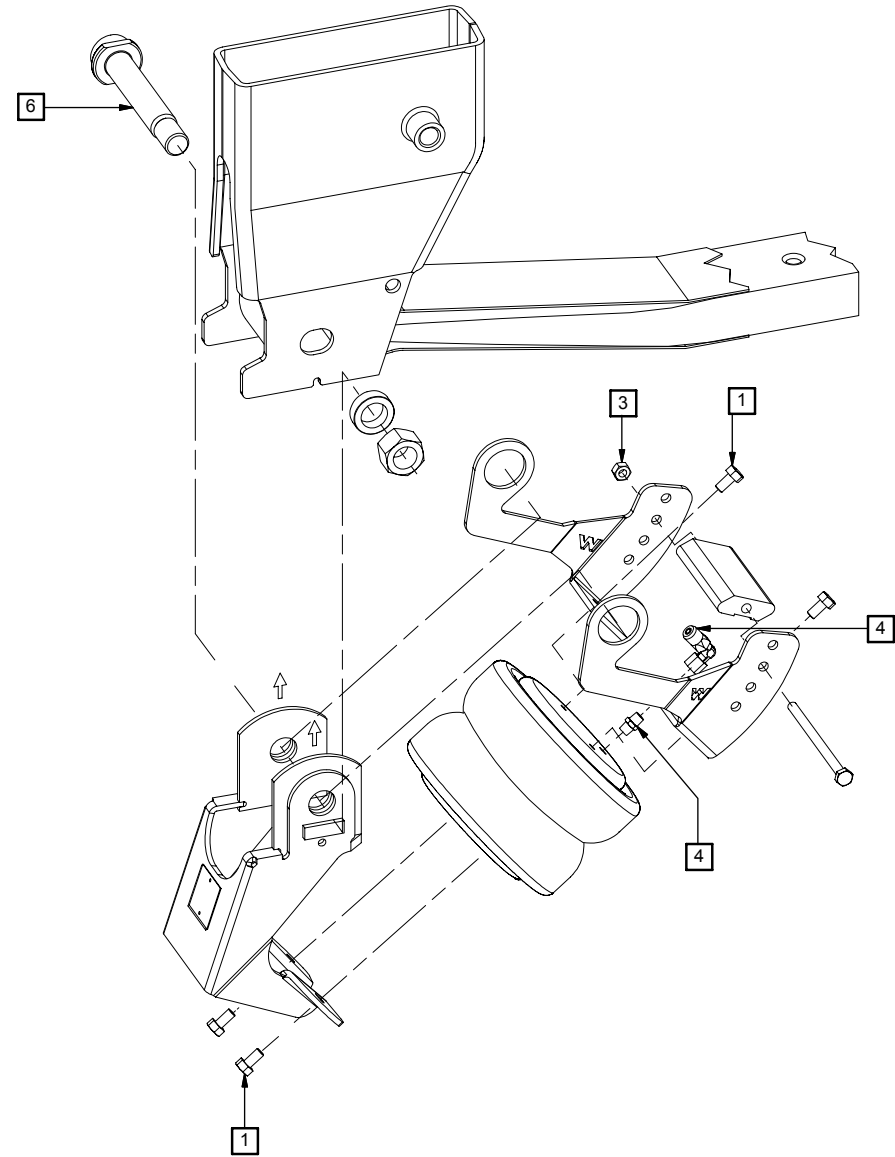
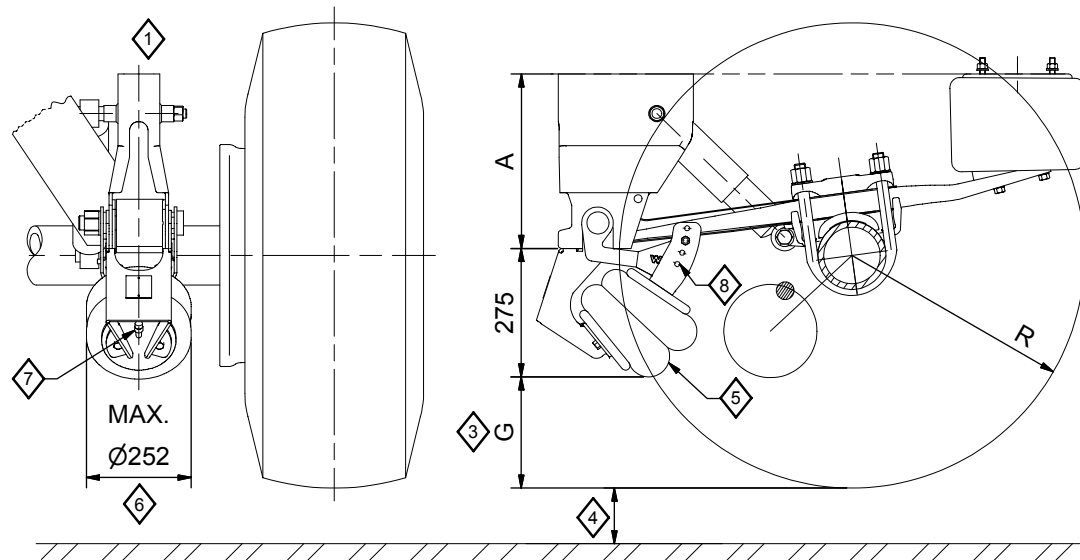
- twin tyres are being used;
- the suspension system has a total stroke of more than 220 mm;
- it concerns a steering axle.


EXPLANATION

- 1 Assemble lefthand and righthand side Only for airsuspensionsystems with a hangerbracket equipped with a axle alignment device.
- 3 Groundclearance G at full axle up travel (loaded without pressure) depends on the airsuspensionsystem and the type of tires. (always check)
- General:
- 4 The clearance between the road and the tire when the axle is lifted = axle up travel minus deformation of the tires
- 5 Not lifted: pressure = 0 bar.
- 6 The airspring is not allowed to hit any other parts. Keep a free diameter of 280 mm for moving parts.
- 7 Air-connection (standaar 10 mm, push in fitting).
- 8 The position of the rubber support is dependent on the type of suspension system, contact Weweler for the correct position.

TORQUE

Fastener	Torque (Nm)	Tolerance (Nm)
1 Airspring	(M10) 30	±10
3 Rubber support	(M10) 50	±10
4 Airconnection	(G¼") 20	±10
6 Pivot Bolt	(M27/M30) 800	+50/-0



	rev:	-	last rev:	Modification on last revision:
	date:	21-2-2006		
	by:	RTS		
	ckd:			

This Weweler Bolt-On axle lift is developed for the SAF Intradisc II systems (IU Suspensions). Direct assembling (KTL coating).

The Bolt-On axle lift isn't suitable when:

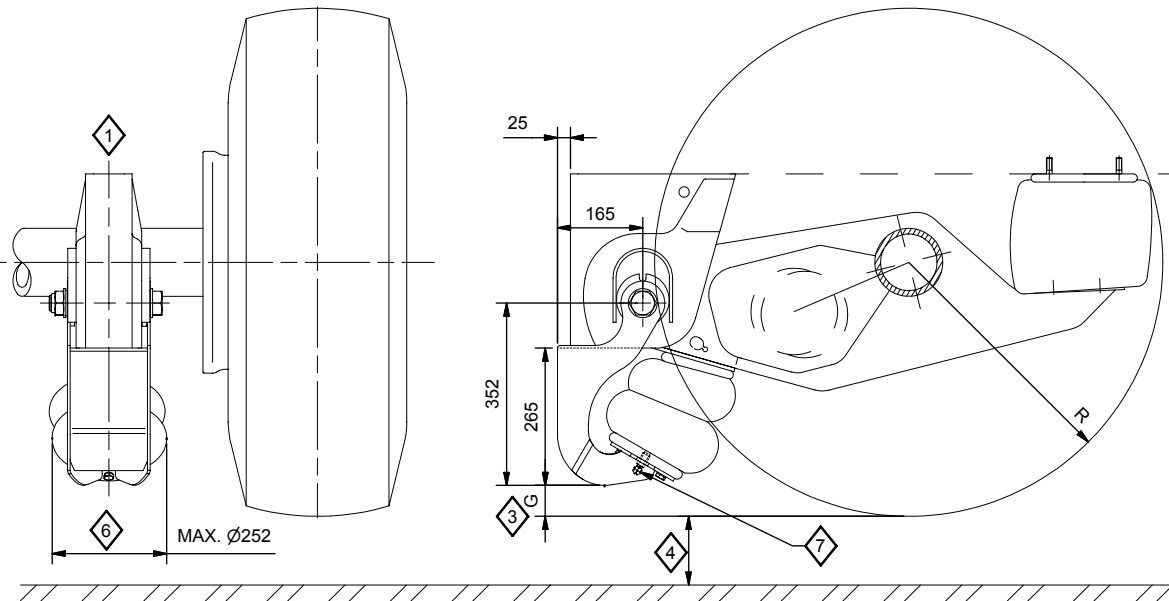
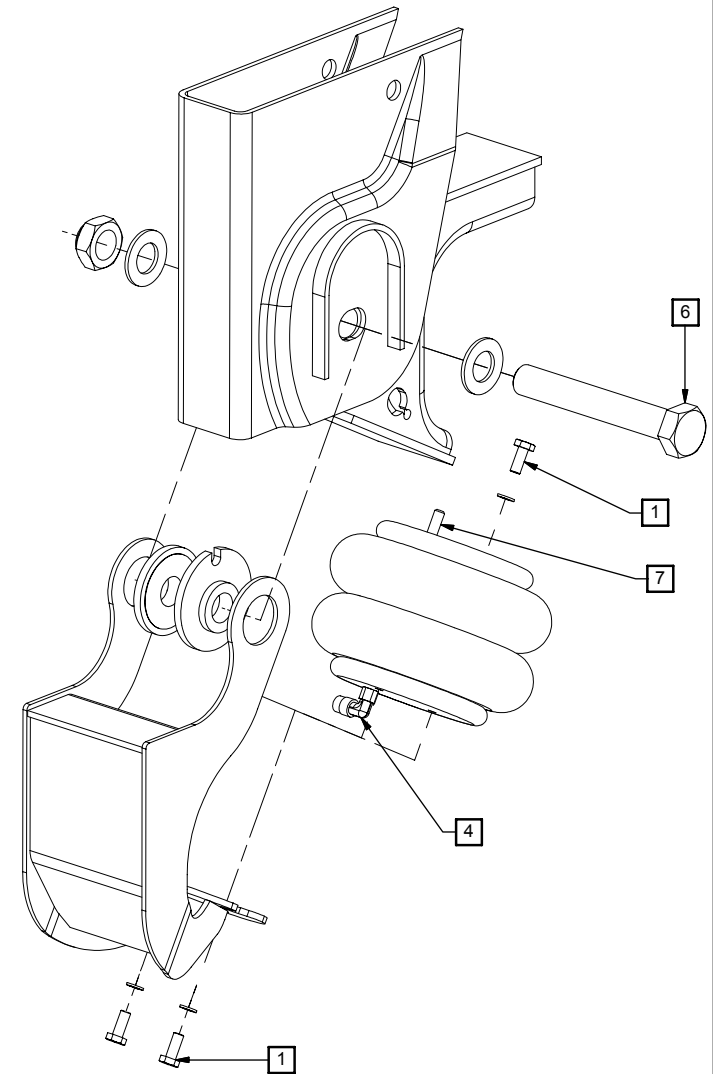
- twin tyres are being used; (check clearance between tyres and liftbellow)
- the suspension system has a total stroke of more than 220 mm;
- IO systems are being used. If this lift is being used on IO systems check with Weweler.

EXPLANATION

- 1 Assemble lefthand and righthand side
Only for SAF Intradisc II airsuspensionsystem.
- 3 Groundclearance G at full axle up travel (loaded without pressure) depends on the airsuspensionsystem and the type of tyres. (always check)
- General:
4 The clearance between the road and the tire when the axle is lifted = axle up travel minus deformation of the tyres.
- 6 The aispring is not allowed to hit any other parts.
Keep a free diameter of 280 mm for moving parts.
- 7 Air-connection (standard 8 mm, push in fitting).

TORQUE

Fastener		Torque [Nm]	Tolerance [Nm]
1	Airspring (M10)	40	± 10
7	Stud (M10)	30	± 10
4	Airconnection (G1/4")	20	± 10
6	Pivot Bolt	According SAF	According SAF



<p>WEWELER NEDERLAND B.V. P.O. BOX 142 7300 AV APELDOORN THE NETHERLANDS</p>	rev:	drawn:	last rev:	Modification on last revision:
	date:	1-6-2006		
	by:	RTS		
	ckd:			

This Weweler Bolt-On axle lift is developed for Weweler systems with disc-brake axles. This axle lift is also suitable for the ROR Flexair 9000 air suspension systems (without axle alignment). Direct assembling (KTL coating).

The Bolt-On axle lift isn't suitable when:

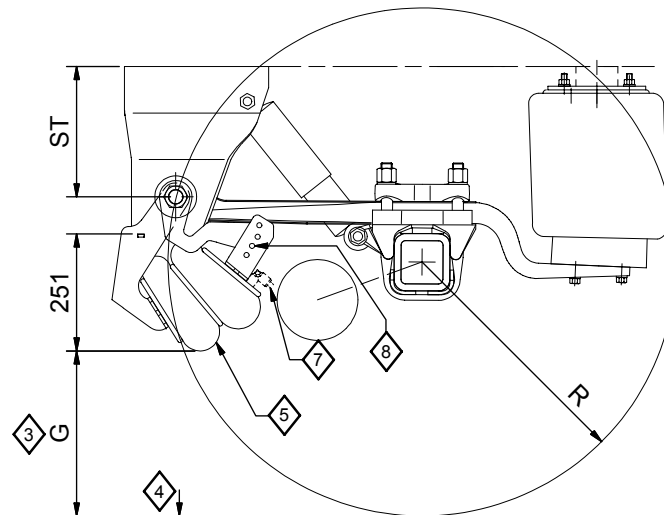
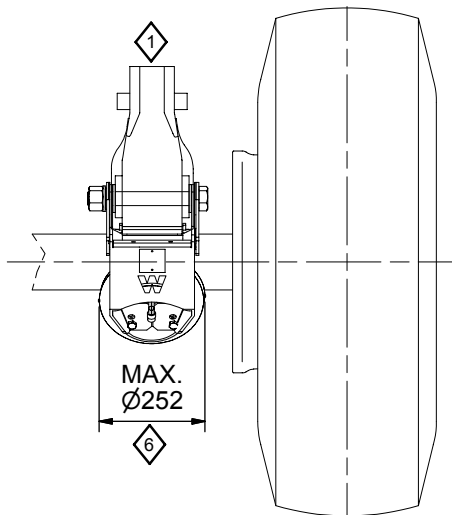
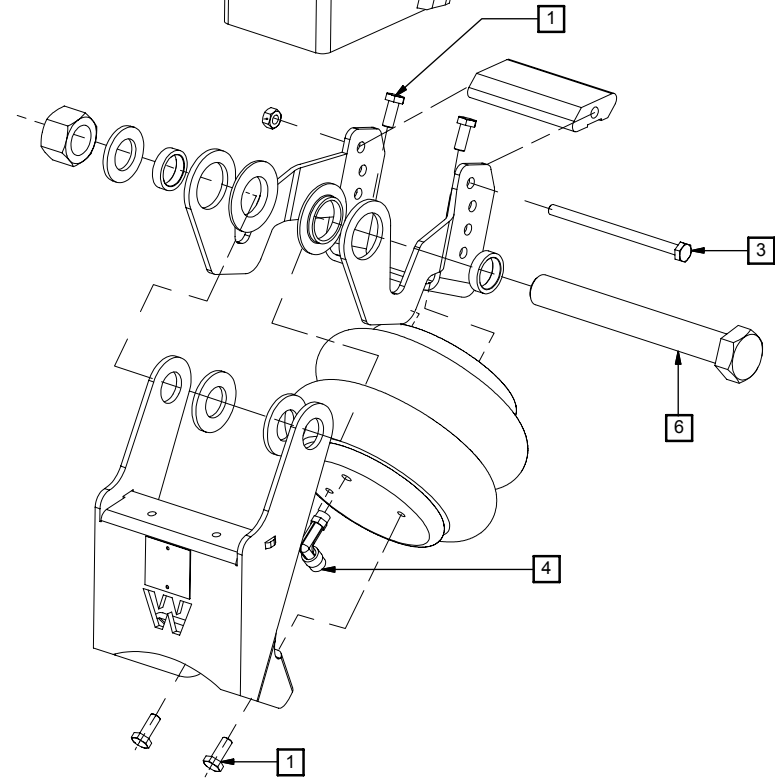
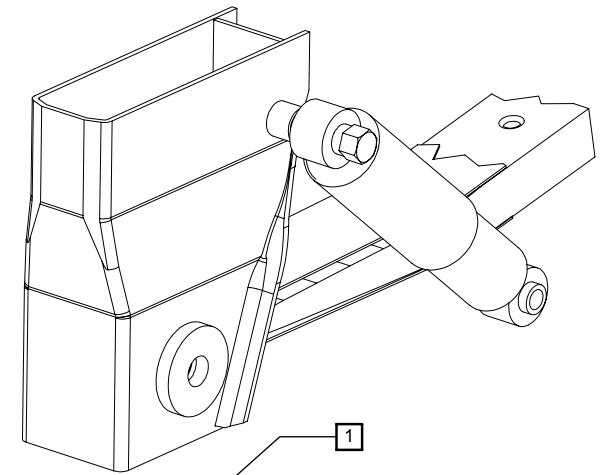
- twin tyres are being used;
- the suspension system has a total stroke of more than 220 mm;
- it concerns a steering axle.

EXPLANATION

- 1 Assemble lefthand and righthand side
- 3 Groundclearance G at full axle up travel (loaded without pressure) depends on the airsuspensionsystem and the type of tires. (always check)
- 4 General:
The clearance between the road and the tire when the axle is lifted = axle up travel minus deformation of the tires
- 5 Not lifted: pressure = 0 bar.
- 6 The airspring is not allowed to hit any other parts. Keep a free diameter of 280 mm for moving parts.
- 7 Air-connection (standard 10 mm, push in fitting)
- 8 The position of the rubber support is dependent on the type of suspension system, contact Weweler for the correct position.

TORQUE

Fastener	Torque (Nm)	Tolerance (Nm)
1 Airspring	(M10) 30	±10
3 Rubber support	(M10) 50	±10
4 Airconnection	(G¼") 20	±10
6 Pivot Bolt Weweler or Meritor	(M27/M30) 800 Acc. ROR/Meritor	+50/-0 Acc. ROR/Meritor



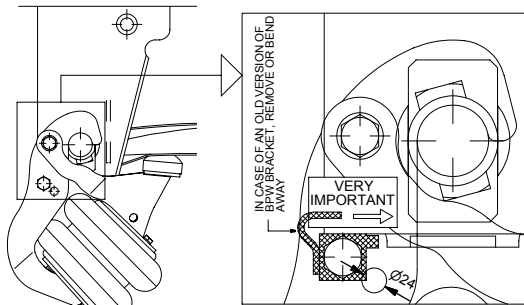
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date:	21-2-2006		
by:	RTS		
ckd:			

AXLE LIFT

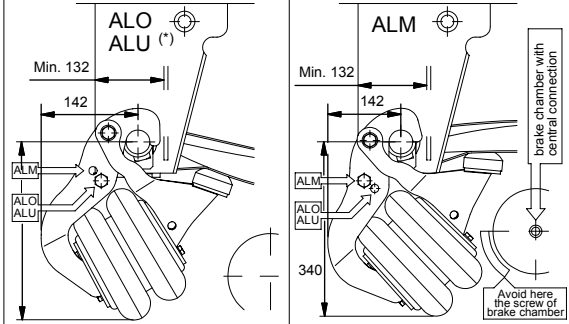
WEWELER

AL-436-DOC

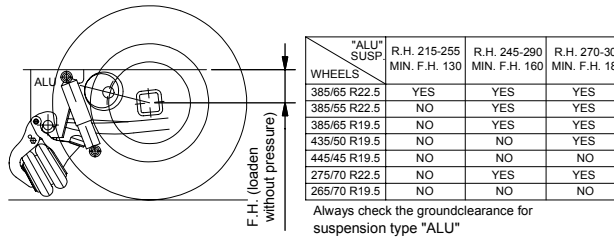
SPECIFIC ORIENTATION OF SUPPORT BAR



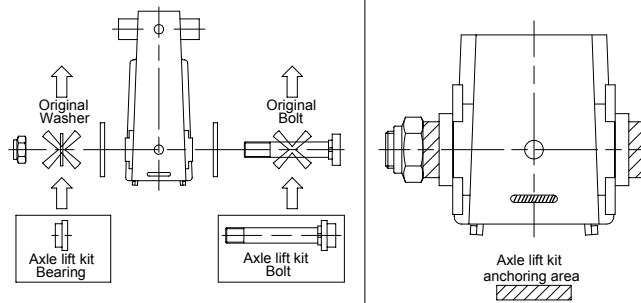
AXLE LIFT KIT INSTALLATION ON BPW AIRLIGHT II SUSPENSIONS



AL-436 WITH "ALU" TYPE SUSPENSION ACCORDING TO WHEELS DIMENSIONS

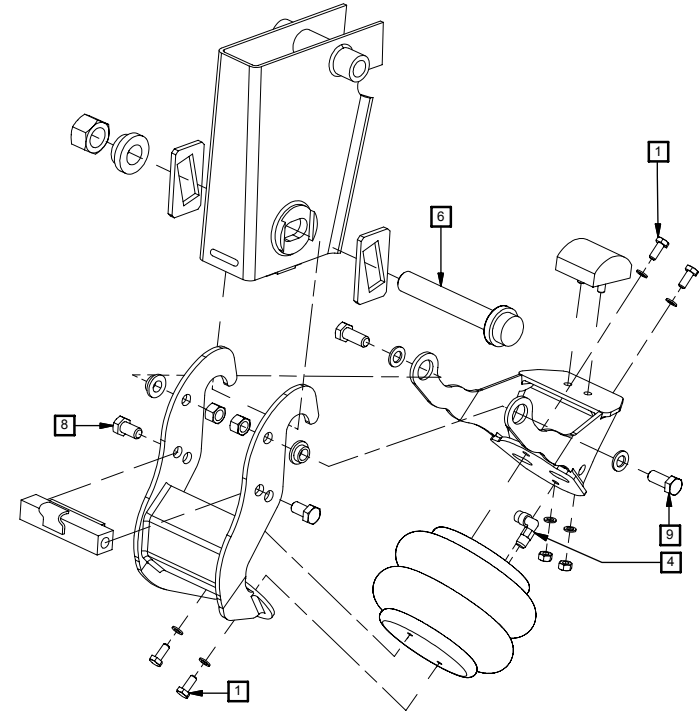


INSTALLATION OF AXLE LIFT KIT



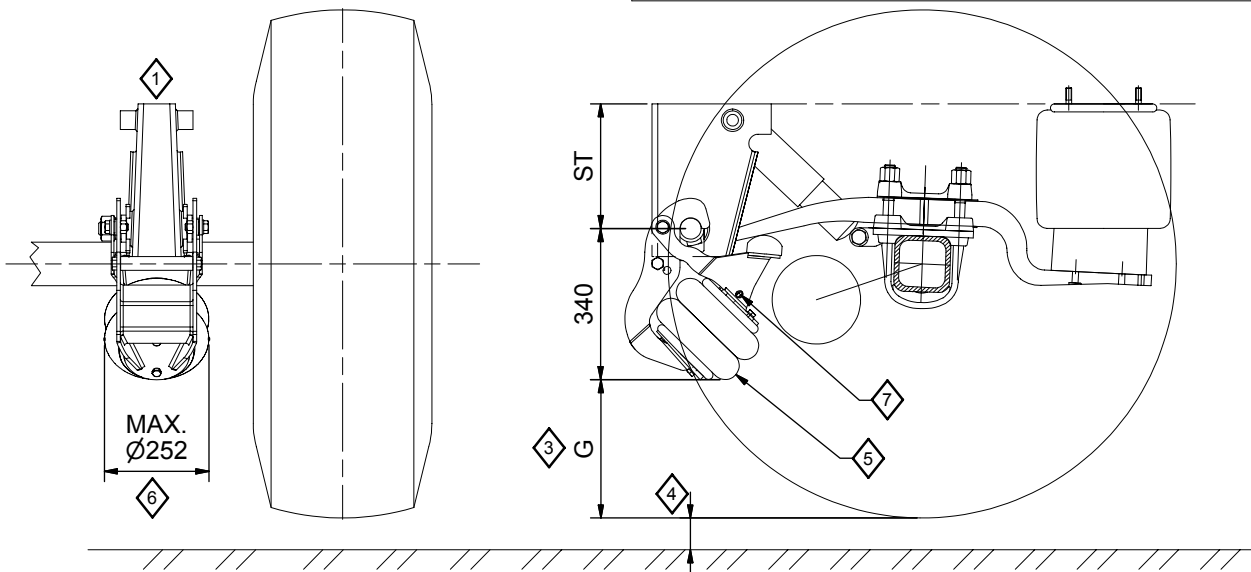
TORQUE SETTINGS

Part	Torque
6 Pivot bolt	According to BPW instructions
8 Support bar	50Nm ±10
9 Pivoting point upper support	50Nm ±10
1 Airspring connection	30Nm ±10
4 Airfitting	20Nm ±10



EXPLANATION

- 1 Assemble lefthand and righthand side
Only for airsuspensionsystems with a hangerbracket equipped with a axle alignment device.
- 3 Groundclearance G at full axle up travel (loaded without pressure) depends on the airsuspensionsystem and the type of tires. (always check)
- General:
- 4 The clearance between the road and the tire when the axle is lifted = axle up travel minus deformation of the tires
- 5 Not lifted: pressure = 0 bar.
- 6 The airspring is not allowed to hit any other parts.
Keep a free diameter of 280 mm for moving parts.
- 7 Air-connection (standard 8 mm, push in fitting).



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date:	21-2-2006		
by:	RTS		
ckd:			

AXLE LIFT

BPW AIRLIGHT II

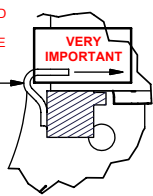
AL-436(A)-DOC

This Weweler Bolt-On axle lift is developed for the BPW Airlight II air suspension range.

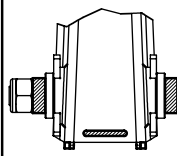
AL-436 = STEEL VERSION
AL-436A = ALUMINIUM VERSION

SPECIFIC ORIENTATION OF SUPPORT BAR

IN CASE OF AN OLD VERSION OF BPW BRACKET, REMOVE OR BEND AWAY



INSTALLATION OF AXLE LIFT KIT



Axle lift kit anchoring area

REPLACE ORIGINAL BPW PIVOT BOLT AND WASHER BY THE AXLE LIFT KIT PIVOT BOLT AND BEARING

AL-436 WITH "ALU" TYPE SUSPENSION ACCORDING TO WHEELS DIMENSIONS

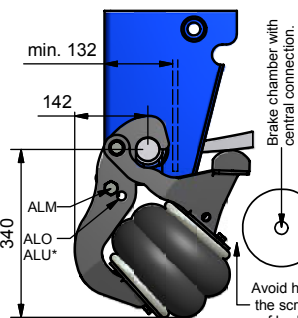
WHEELS	"ALU" SUSP.		
	R.H. 215-255 MIN. F.H. 130	R.H. 245-290 MIN. F.H. 160	R.H. 270-300 MIN. F.H. 185
385/65 R22.5	YES	YES	YES
385/55 R22.5	NO	YES	YES
385/65 R19.5	NO	YES	YES
435/50 R19.5	NO	NO	NO
445/45 R19.5	NO	NO	NO
275/70 R22.5	NO	NO	YES
265/70 R19.5	NO	NO	NO

Always check the groundclearance for the susp. type "ALU".

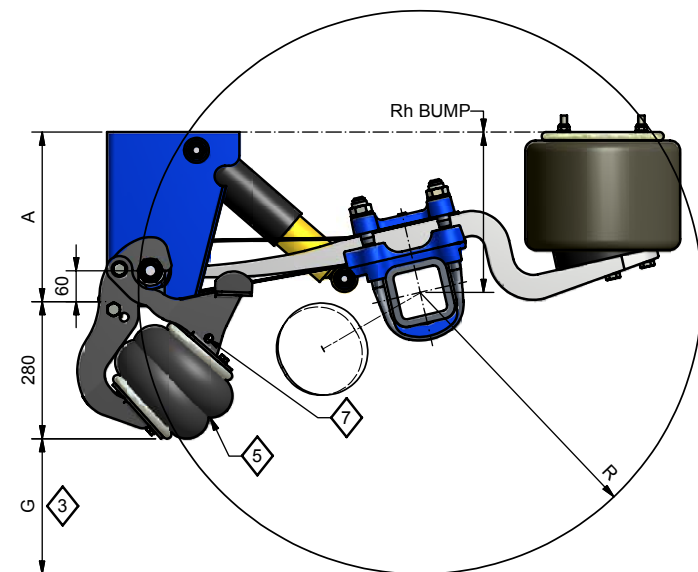
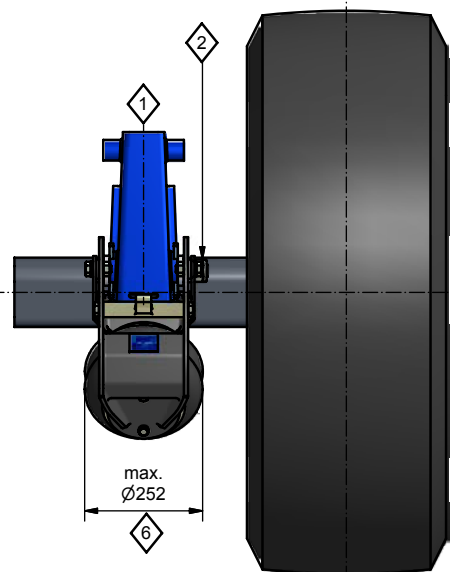
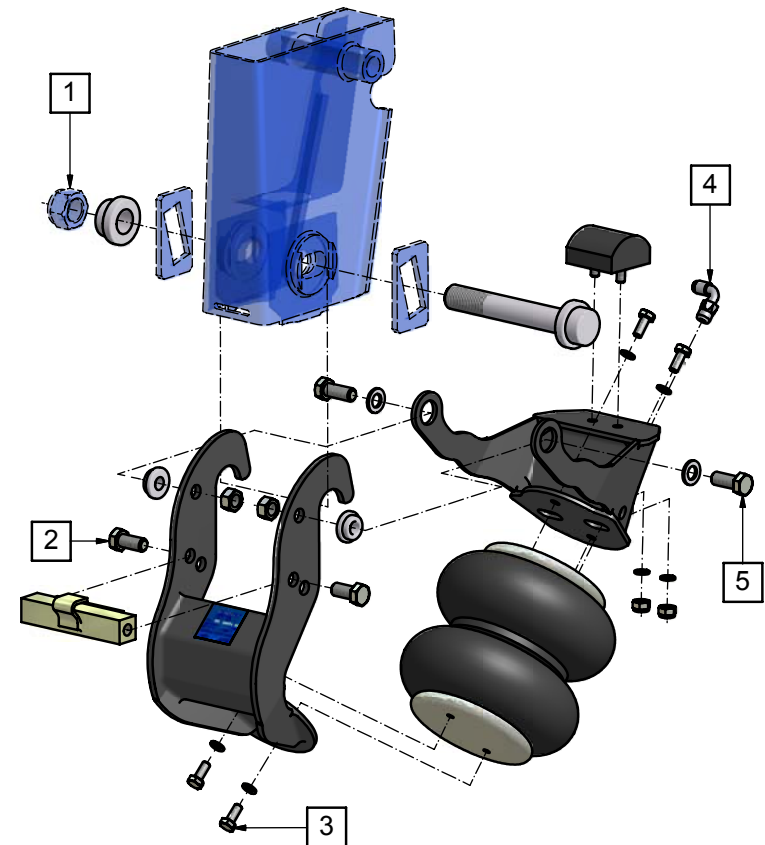
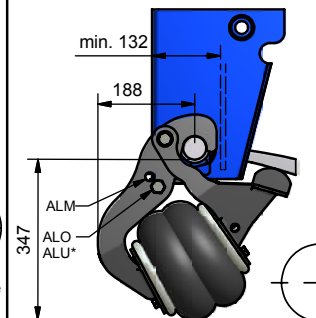
EXPLANATION

- 1 Assemble lefthand and righthand side. Only for hangerbracket equipped with axle alignment device.
- 2 Recommendation: Position of nut to outside vehicle.
- 3 Groundclearance G at full axle up travel (loaded without pressure) depends on the airsuspensionsystem and the type of tires. (always check)
- General:
- 4 The clearance between the road and the tire when the axle is lifted = axle up travel minus deformation of the tires.
- 5 Not lifted: pressure = 0 bar.
- 6 The airspring is not allowed to hit any other parts. Keep a free diameter of 280 mm for moving parts.
- 7 Air-connection (standard 8 mm push-in fitting)

ALM



ALO / ALU



TORQUE

Fastener	Torque [Nm]	Tolerance [Nm]
1 Pivot Bolt	Acc. BPW	Acc. BPW
2 Support Bar	(M16) 170	± 10
3 Air Spring	(M10) 30	± 10
4 Airconnection	(G1/4") 20	± 10
5 Pivoting point upper support	(M16) 170	± 10

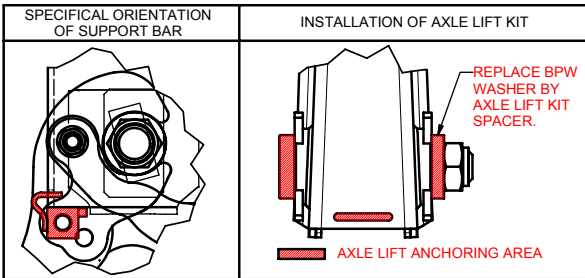


drawn:	last rev:	Modification on last revision:
rev: -	C	WAP-06-173
date: 21-2-2006	21-5-2007	WAP-06-195
by: RTS	RTS	WAP-07-104
ckd:		

AXLE LIFT

BPW AIRLIGHT II

AL-436-II-DOC

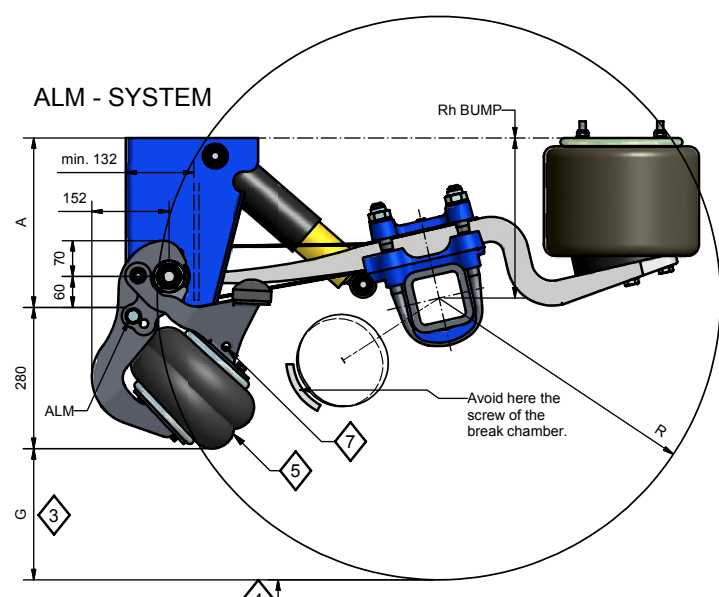
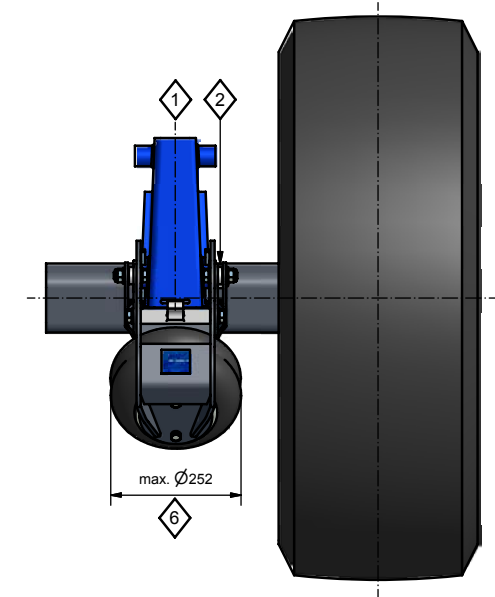
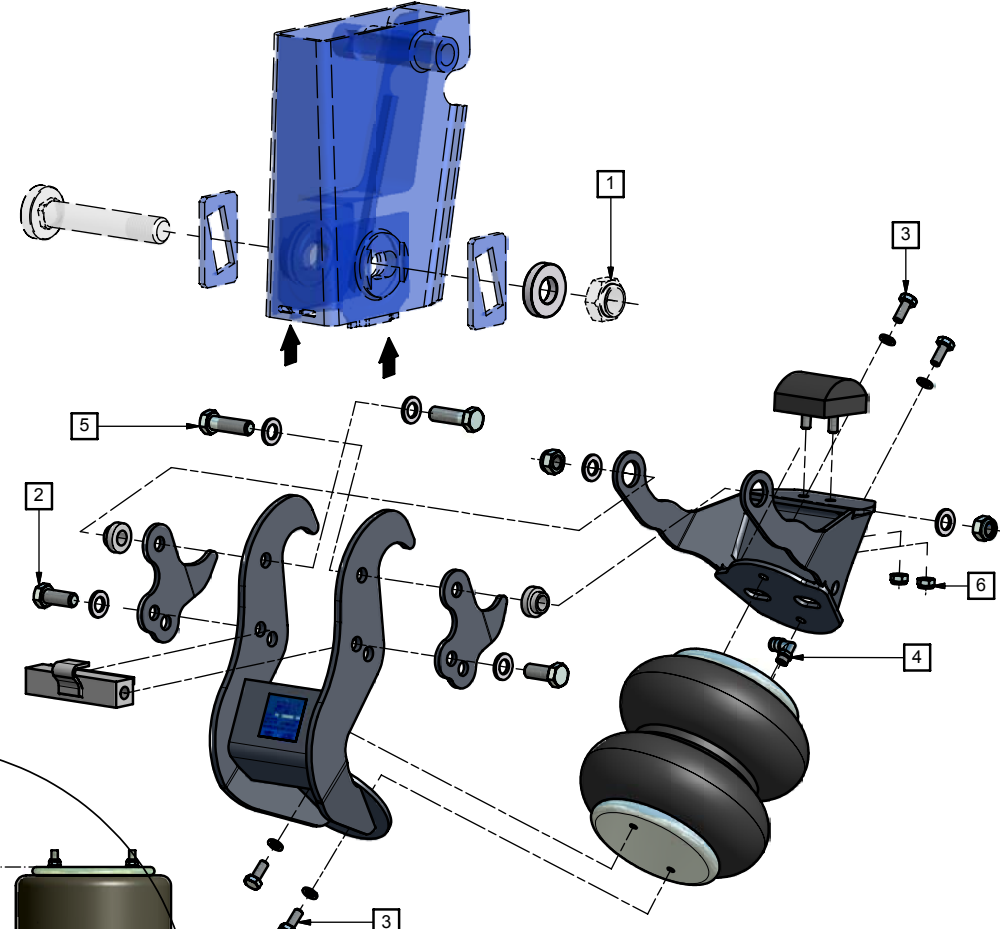
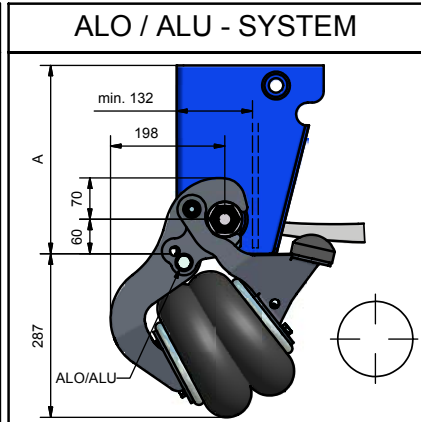


AL-436-II WITH "ALU" TYPE SUSPENSION ACCORDING TO WHEELS DIMENSIONS

"ALU" SUSP. WHEELS	R.H. 215-255 MIN. M.H. 130	R.H. 245-290 MIN. M.H. 160	R.H. 270-300 MIN. M.H. 185
385/65 R22.5	YES	YES	YES
385/55 R22.5	NO	YES	YES
385/65 R19.5	NO	YES	YES
435/60 R19.5	NO	NO	NO
445/45 R19.5	NO	NO	NO
275/70 R22.5	NO	NO	YES
265/70 R19.5	NO	NO	NO

R.H. = Ride Height M.H. = Loaded without pressure.
Always check the groundclearance for the susp. type "ALU".

- ### EXPLANATION
- 1 Assemble lefthand and righthand side. Only for hangerbracket equiped with axle alignment device.
 - 2 Recommendation: Position of nut to outside vehicle.
 - 3 Groundclearance G at full axle up travel (loaded without pressure) depends on the airsuspensionsystem and the type of tires. (always check)
 - General:
 - 4 The clearance between the road and the tire when the axle is lifted = axle up travel minus deformation of the tires.
 - 5 Not lifted: pressure = 0 bar.
 - 6 The airspring is not allowed to hit any other parts. Keep a free diameter of 280 mm for moving parts.
 - 7 Air-connection (standard 8 mm push-in fitting)



TORQUE

Fastener	Torque [Nm]	Tolerance [Nm]
1 Pivot Bolt	Acc. BPW	Acc. BPW
2 Support Bar	(M16) 170	± 10
3 Air Spring	(M10) 30	± 5
4 Airconnection	(G1/4") 20	± 5
5 Pivoting point upper support	(M16) 170	± 10
6 Rubber Bump	(M10) 30	± 5

WEWELER
IMPROVING TRANSPORTATION

WEWELER
NEDERLAND B.V.
P.O. BOX 142
7300 AV APELDOORN
THE NETHERLANDS

drawn: -
last rev: -
date: 22-5-2007
by: RTS
ckd: -

Modification on last revision:

AXLE LIFT

DCA

AL-438-DOC

This Weweler Bolt-On axle lift is developed for Daimler Chrysler DCA systems. Direct assembling (KTL coating).

The Bolt-On axle lift isn't suitable when:

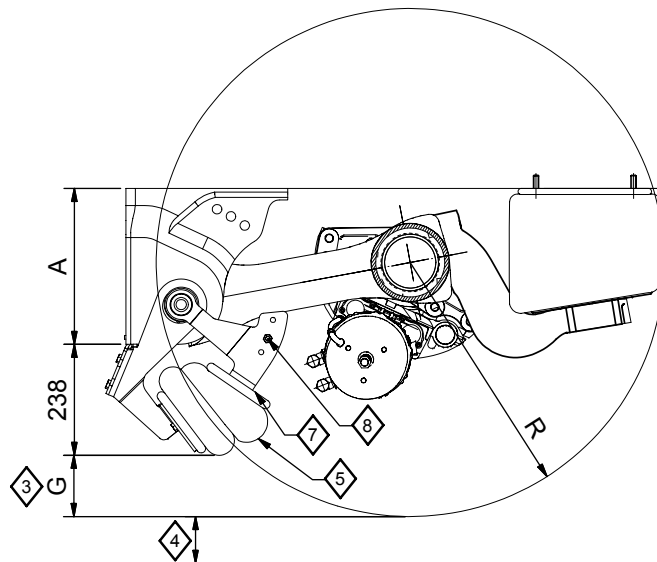
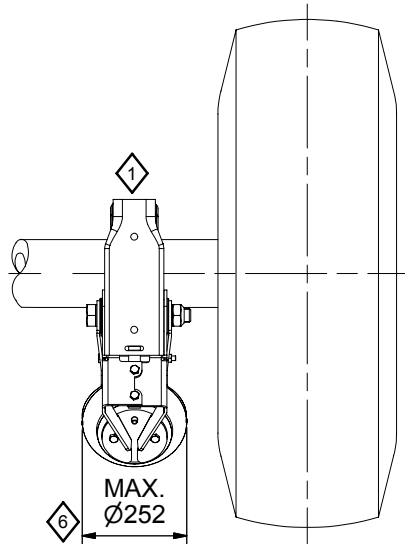
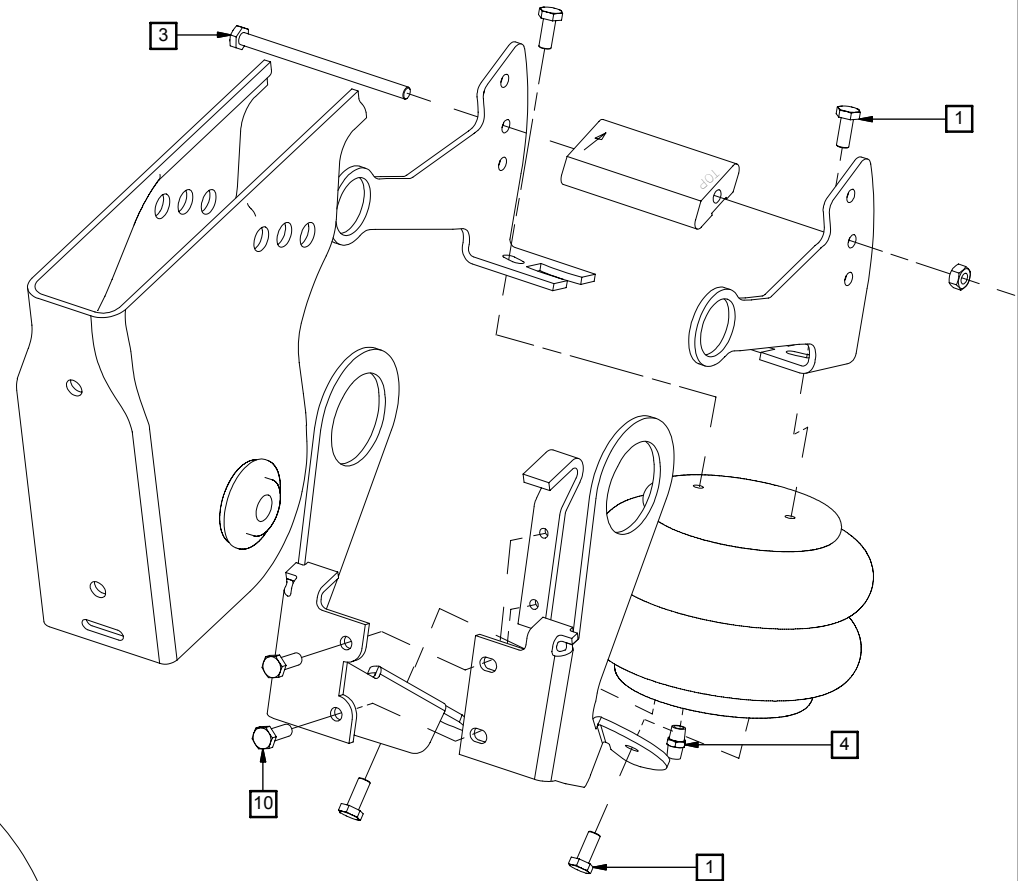
- twin tyres are being used;
- the suspension system has a total stroke of more than 220 mm;
- it concerns a steering axle.

EXPLANATION

- 1 Assemble lefthand and righthand side.
- 3 Groundclearance G at full axle up travel (loaded without pressure) depends on the airsuspensionsystem and the type of tires. (always check)
- 4 General:
The clearance between the road and the tire when the axle is lifted = axle up travel minus deformation of the tires.
- 5 Not lifted: pressure = 0 bar.
- 6 The airspring is not allowed to hit any other parts. Keep a free diameter of 280 mm for moving parts.
- 7 Air-connection (G½" outside parallel pipe thread).
- 8 The position of the rubber support is dependent on the type of suspension system, contact Weweler for the correct position.

TORQUE

Fastener	Torque (Nm)	Tolerance (Nm)
1 Airspring	(M10) 30	±10
3 Rubber support	(M10) 50	±10
4 Airconnection	(G½") 20	±10
10 Axle lift support	(M10) 30	±10



rev:	-	last rev:	Modification on last revision:
date:	21-2-2006		
by:	RTS		
ckd:			

AXLE LIFT

ROR FLEXAIR 9000

AL-440-DOC

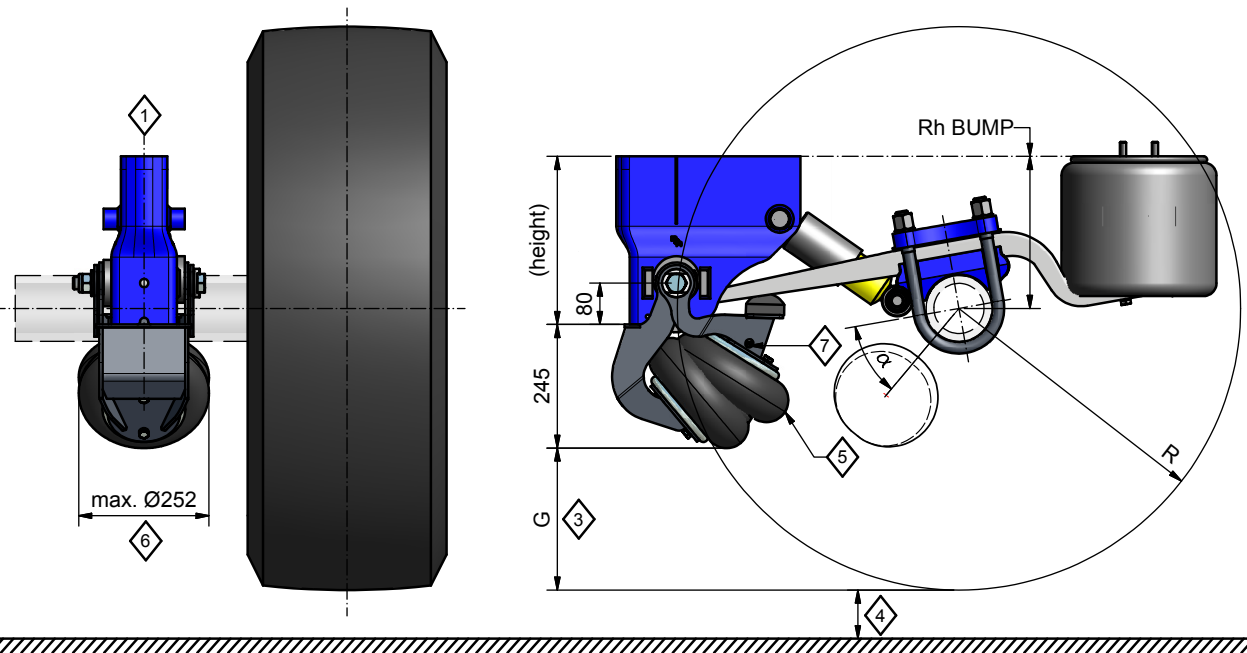
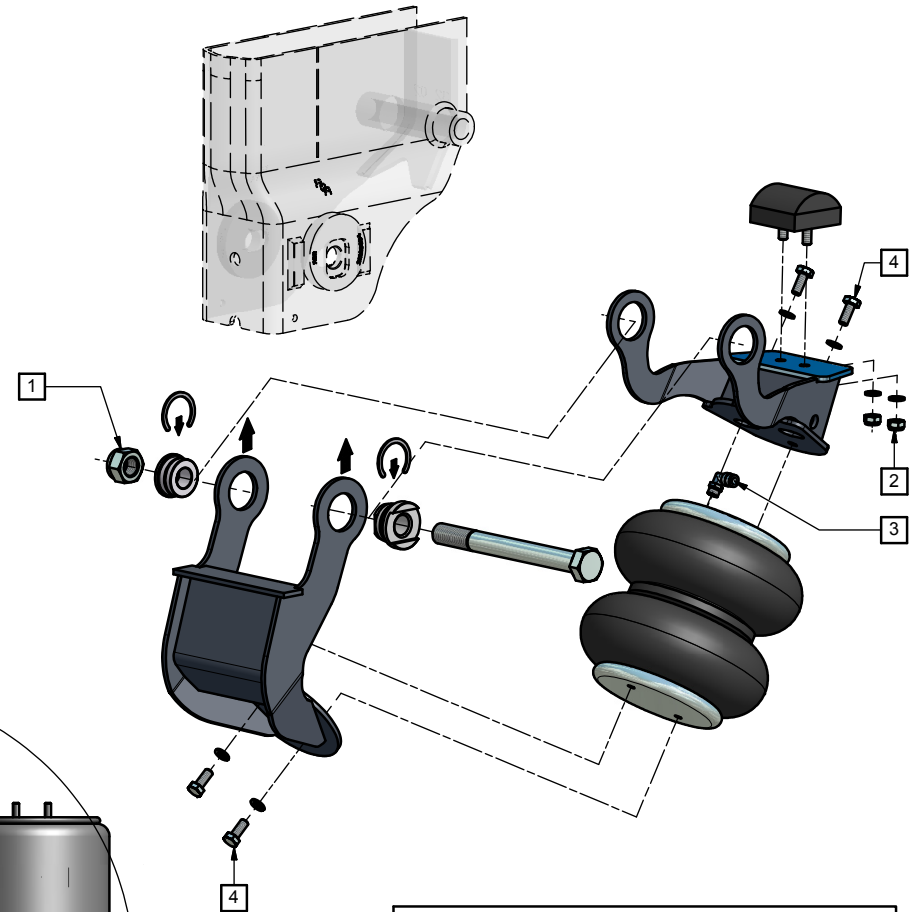
This Weweler Bolt-On axle lift is developed for Meritor FL9000NB - NH - NBE - NBH air suspension systems. It is suitable for drum & disc brake systems. Direct assembling (KTL coating).

The Bolt-On lift isn't always suitable when:

- twin tyres are being used, check tyre and spring track for clearance, see explanation;
- it concerns a steering axle;

EXPLANATION

- 1 Assemble left- and righthand side.
- 3 Groundclearance G at full axle up travel (loaded without pressure) depends on the airsuspensionsystem and the type of tires. (always check).
- 4 General:
The clearance between the road and the tire when the axle is lifted = axle up travel minus deformation of the tires.
- 5 Not lifted: pressure = 0 bar.
- 6 The airspring is not allowed to hit any other parts. Keep a free diameter of 280 mm for moving parts.
- 7 Air-connection (standard 8 mm)



TORQUE

Fastener	Torque [Nm]	Tolerance [Nm]
1 Pivot Bolt	(M24) acc. ROR	acc. ROR
2 Rubber Support	(M10) 50	± 10
3 Airconnection	(G1/4") 20	± 10
4 Air Spring	(M10) 30	± 10



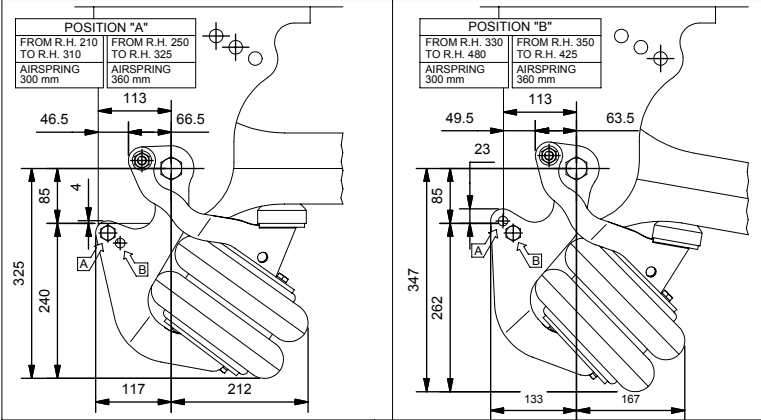
rev:	drawn:	last rev:	Modification on last revision:
date: 18-6-2008			
by: RTS			
ckd:			

AXLE LIFT

DCA

AL-445-DOC

INSTALLATION INSTRUCTION VARIOUS R.H.



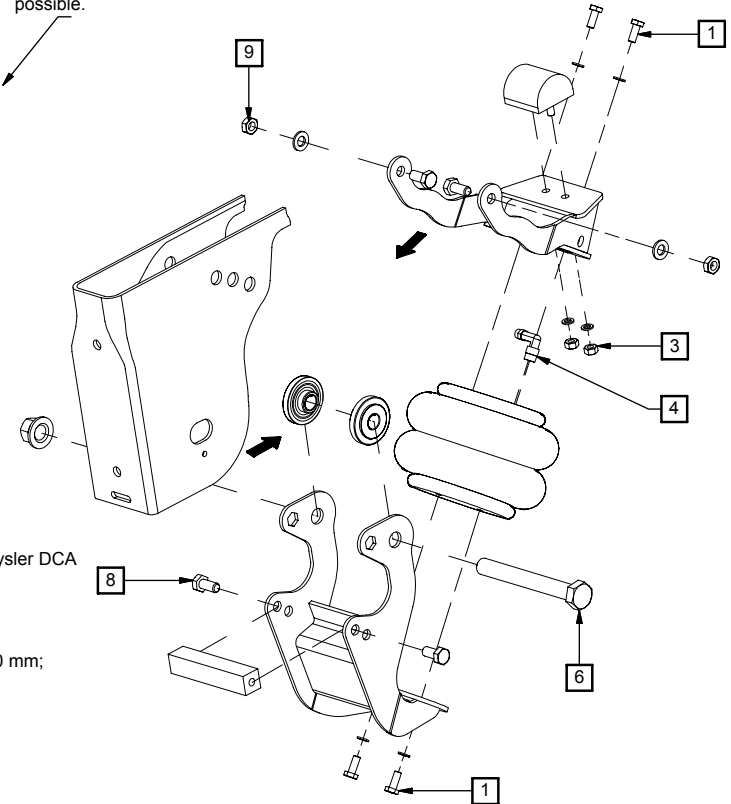
EXPLANATION

- 1 Assemble lefthand and righthand side Only for airsuspensionsystems with a hangerbracket equipped with an axle alignment device.
- 2 Assemble the nut at the outside.
- 3 Groundclearance G at full axle up travel (loaded without pressure) depends on the airsuspensionsystem and the type of tires. (always check)
- 4 General: The clearance between the road and the tire when the axle is lifted = axle up travel minus deformation of the tires
- 5 Not lifted: pressure = 0 bar.
- 6 The airspring is not allowed to hit any other parts. Keep a free diameter of 280 mm for moving parts.
- 7 Air-connection (standard 8 mm, push in fitting)

UTILIZATION OF THE LIFT KIT FOR THE VARIOUS R.H. OF THE SUSPENSION IN RELATION TO THE TYRES

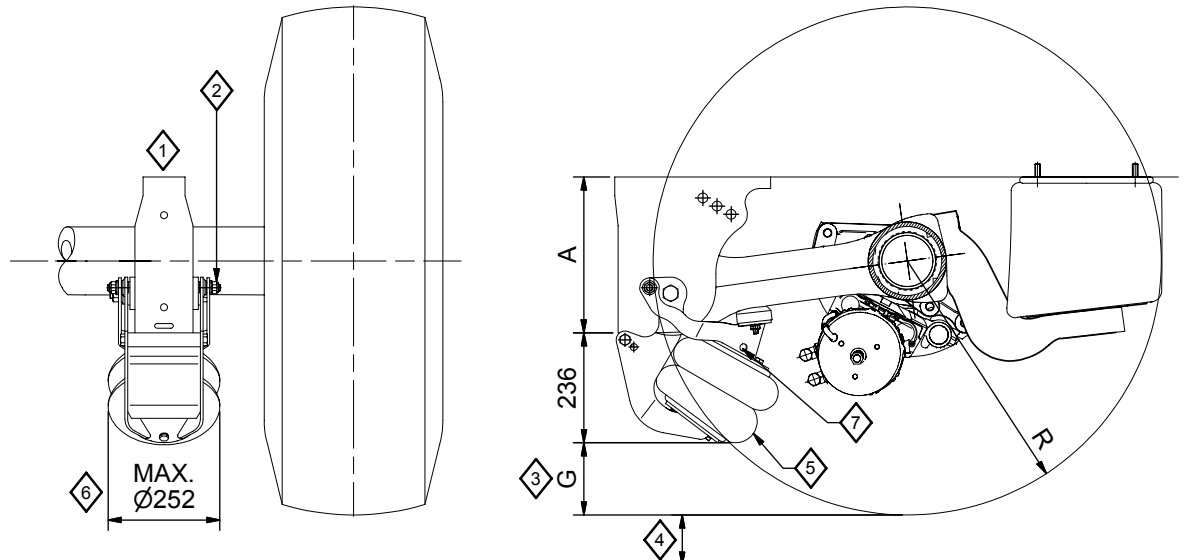
FOR SUSPENSION AIRSPRING OF 300 MM								
TYRES R.H.	385/65 R22.5	385/55 R22.5	385/65 R19.5	435/50 R19.5	445/45 R19.5	275/70 R22.5	265/70 R19.5	
210								
240								
260								
270								
310								
330								
380								
410								
420								
460								
480								
FOR SUSPENSION AIRSPRING OF 360 MM								
TYRES R.H.	385/65 R22.5	385/55 R22.5	385/65 R19.5	435/50 R19.5	445/45 R19.5	275/70 R22.5	265/70 R19.5	
250								
275								
325								
350								
360								
400								
425								

Marked options are possible.



This Weweler Bolt-On axle lift is developed for Daimler Chrysler DCA systems. Direct assembling (KTL coating).

- The Bolt-On axle lift isn't suitable when:
- twin tyres are being used;
 - the suspension system has a total stroke of more than 220 mm;
 - it concerns a steering axle.



TORQUE

Fastener	Torque (Nm)	Tolerance (Nm)
1 Airspring	(M10) 30	±10
3 Rubber support	(M10) 50	±10
4 Airconnection	(G¼") 20	±10
6 Pivot Bolt	Acc. DC	Acc. DC
8 Support Bar	(M10) 50	±10
9 Pivoting point upper support	(M10) 50	±10



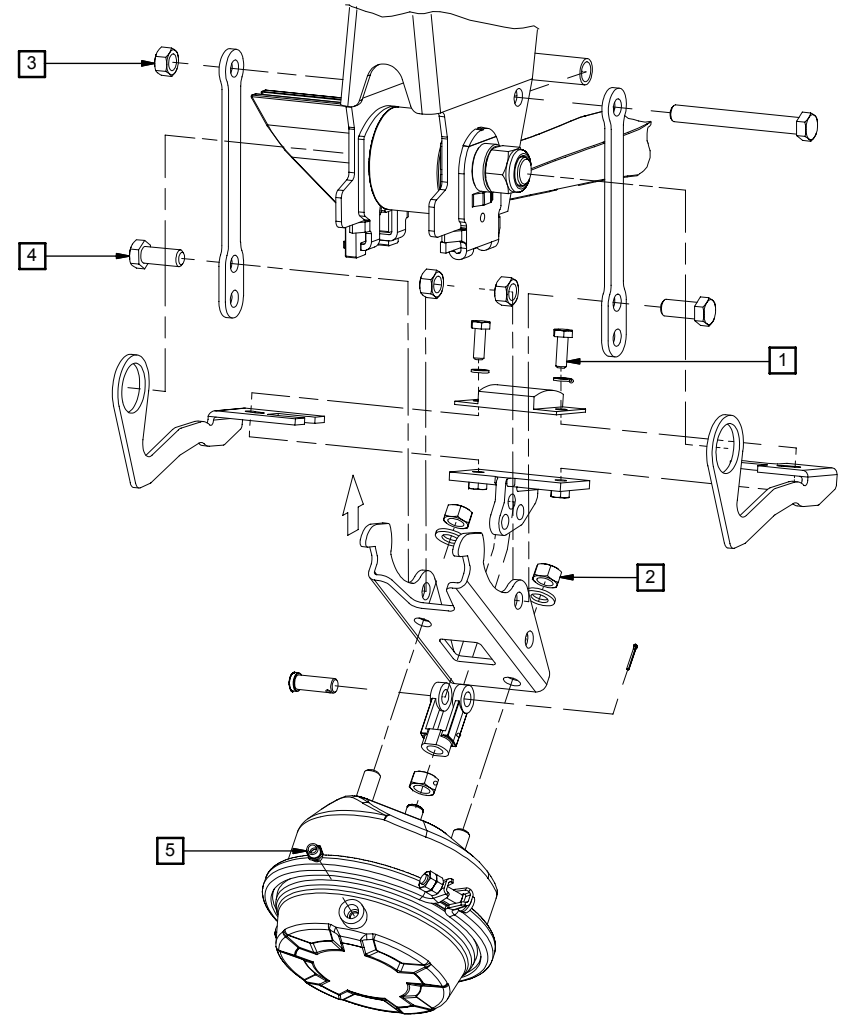
rev:	-	drawn:	last rev:	Modification on last revision:
date:	21-2-2006			
by:	RTS			
ckd:				

AXLE LIFT

WEWELER

AL-446-DOC

This Weweler Bolt-On axle lift is developed for the Weweler suspension systems with a 75 mm wide trailing arm. It operates with a pneumatic cilinder. It is also suitable with the bolt-on bracing. Direct assembling (KTL coating).

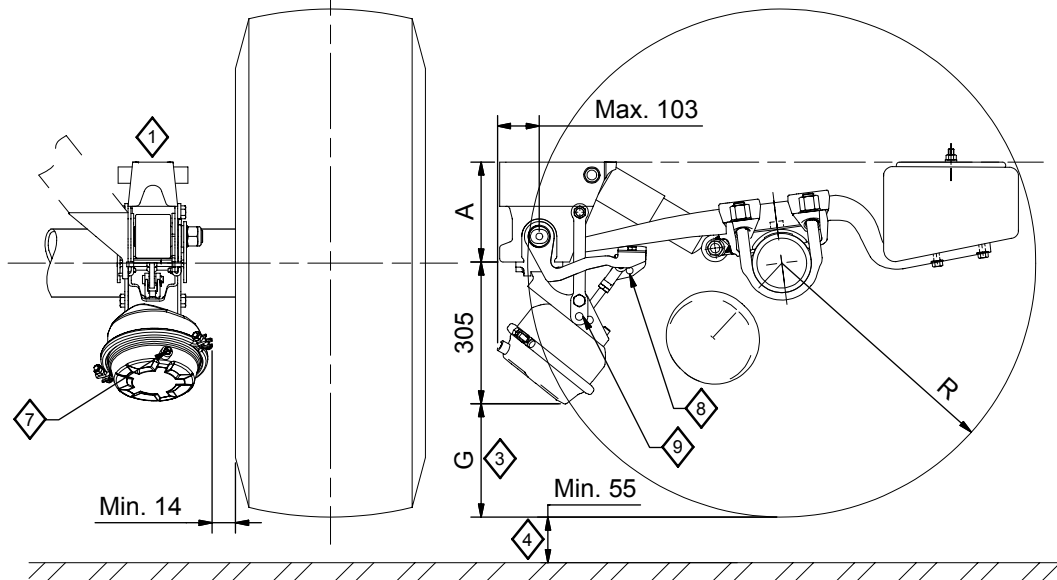


EXPLANATION

- 1 Assemble lefthand and righthand side.
Only for airsuspensionsystems with a hangerbracket equipped with an axle alignment device.
- 3 Groundclearance G at full axle up travel (loaded without pressure) depends on the airsuspensionsystem and the type of tires. (always check)
- General:
4 The clearance between the road and the tire when the axle is lifted = axle up travel minus deformation of the tires.
- 7 Airconnection (G $\frac{1}{4}$ " outside parallel pipe thread).
- 8 The position of the pivot point is dependent on the type of suspension system, contact Weweler for the correct position.
- 9 For the correct position of the reaction beam, contact Weweler.

TORQUE

Fastener		Torque (Nm)	Tolerance
1	Rubber support	(M10)	50 ±10
2	Brake cilinder	(M16)	200 ±10
3	Attachment hangerbracket	(M16x160)	200 ±20
4	Attachment lift support	(M16x35)	200 ±20
5	Airconnection	(G $\frac{1}{4}$ "	20 ±10



rev:	-	last rev:	-	Modification on last revision:
date:	21-2-2006			
by:	RTS			
ckd:				

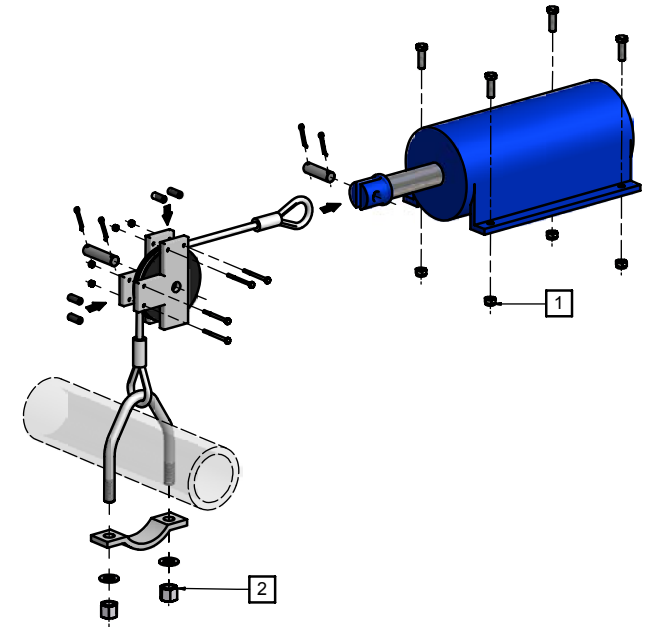
This axle lift is developed for suspension systems on low vehicles with small tyres. The lift is placed between the chassis in the middle so only one lift is needed.

EXPLANATION

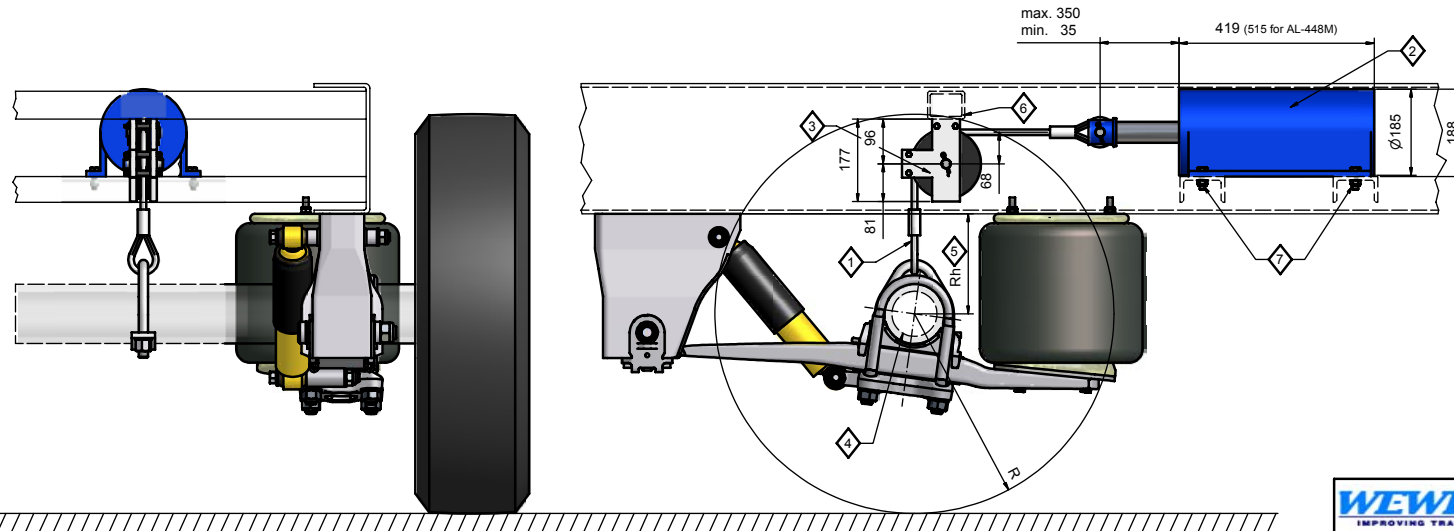
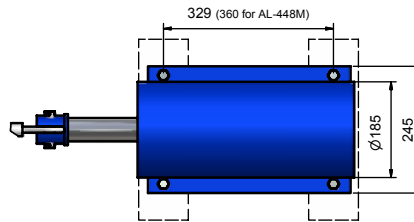
- 1 Traction element: steel wire 6x19 +1, \varnothing 12 mm.
Wire working load: 1800 kg.
Wire length: by order, from 950 mm to 1600 mm.
- 2 Lifting device: pneumatical cylinder.
Cylinder force (6-8 bar): 1260-1690 kg.
Maximum stroke: 315 mm. (410 mm. for AL-448M)
Cylinder weight: 18 kg. (21 kg. for AL-448M)
Connection for pipe fitting 1/4 w.gas (R 1/4).
- 3 Wire deflector device: guide pulley with roller bearing.
- 4 Axle support: optional for 130 mm / 150 mm square or round axle.
- 5 VERY IMPORTANT: when the vehicle is at the ride height, the cylinder should have a margin to reach its maximum stroke.
- 6 The guide pulley support must be welded to a girder, which is welded at the vehicle frame. (Our proposal: 80x60x6 mm tube).
- 7 The pneumatic cylinder must be screwed to two girders, which are welded at the vehicle frame. (Our proposal: 80 mm U-bars).

TORQUE

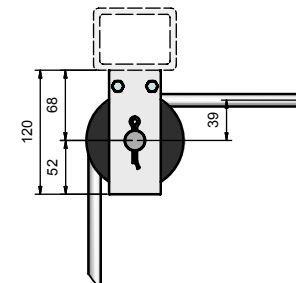
Fastener	Torque [Nm]	Tolerance [Nm]
1 Cylinder Assembly	(M12) 55	± 5
2 Axle Support	(M20) 280	± 10



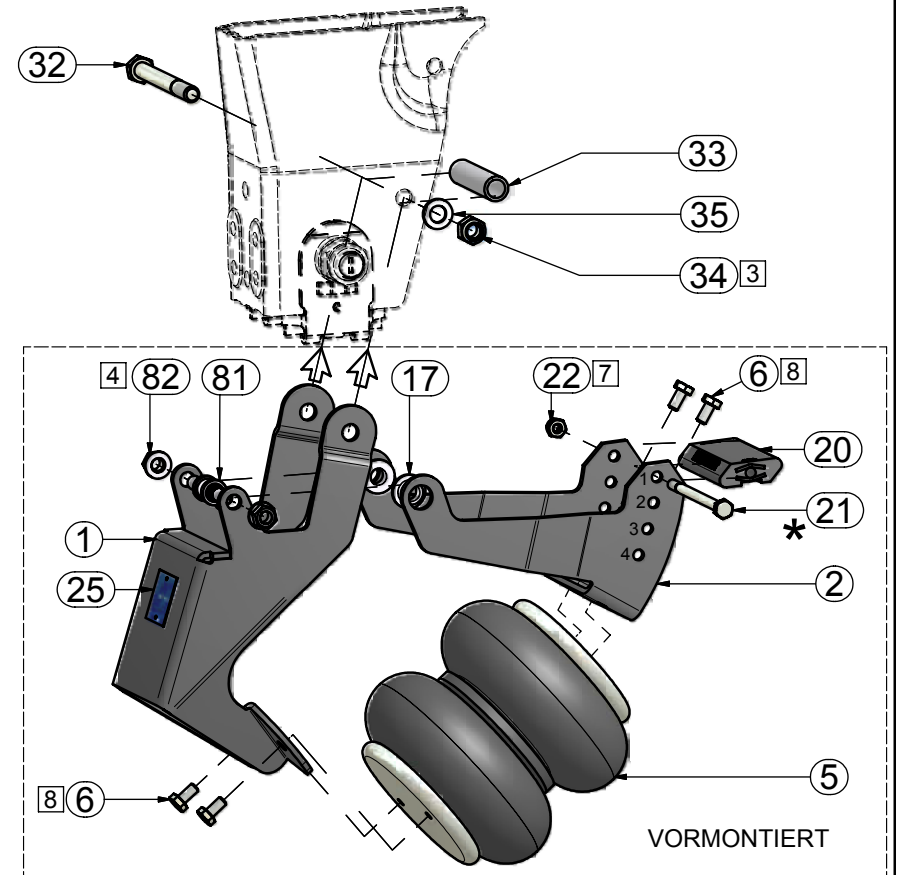
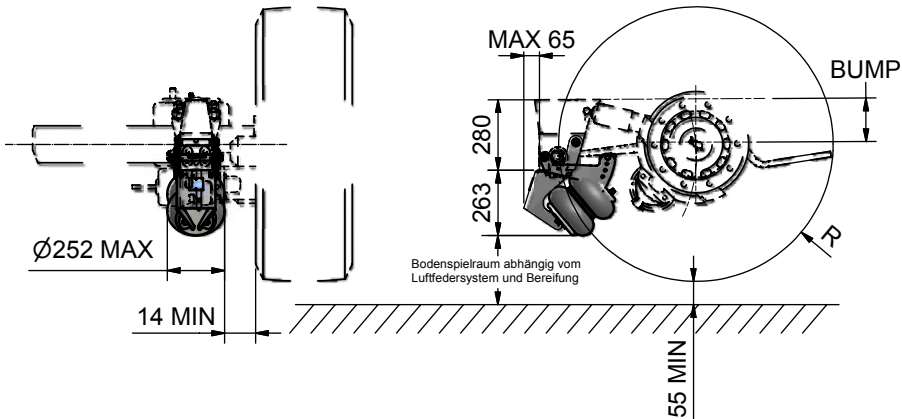
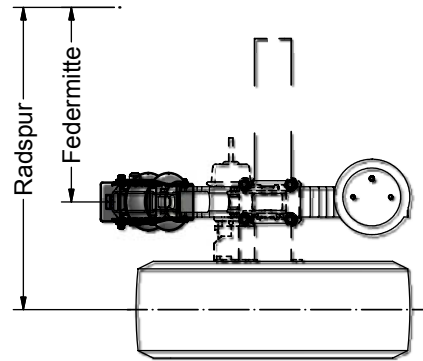
TOP VIEW
CYLINDER



OPTIONAL:
SPECIAL SMALL PULLEY FOR
ULTRA-LOW VEHICLES



drawn:	last rev:	Modification on last revision:
rev: -		
date: 29-6-2006		
by: RTS		
ckd:		

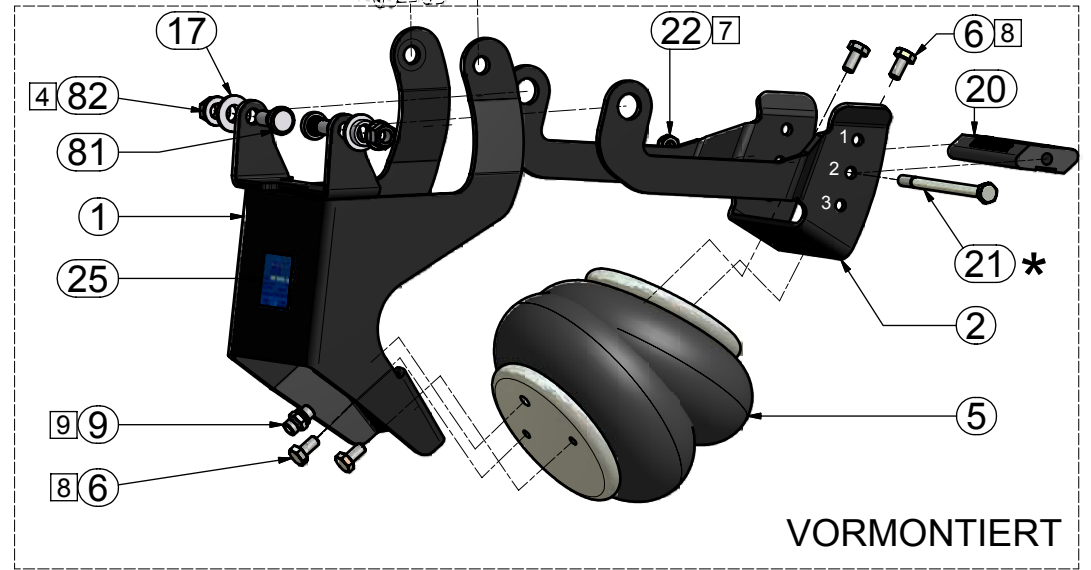
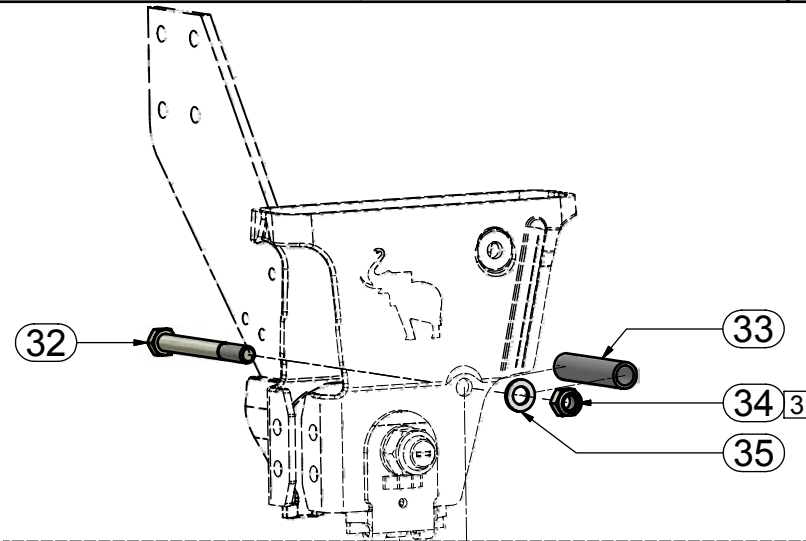
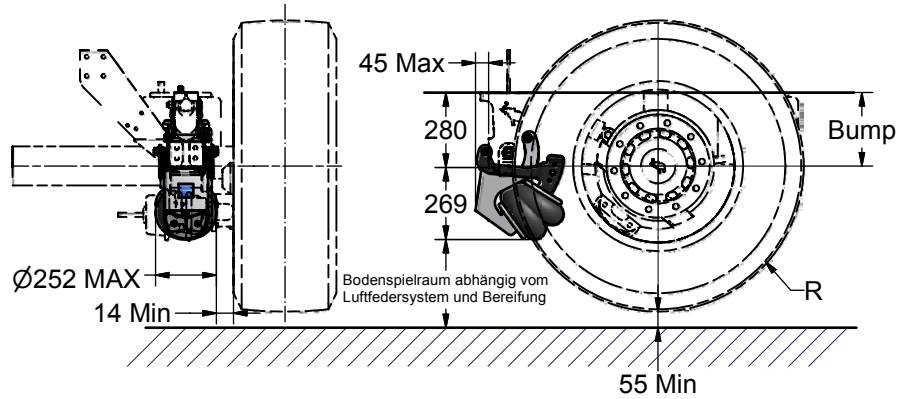
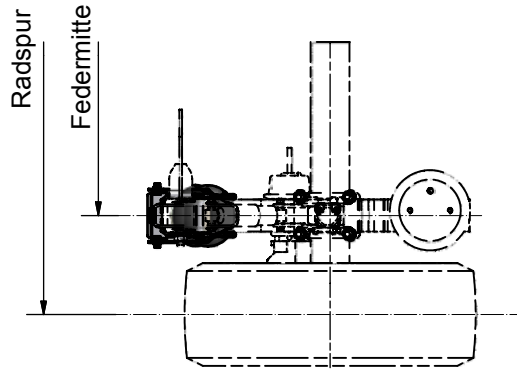


AL-449			
Für Luftfeder System	Schmitz Id. Nr.	Weweler Id. Nr.	* Gummi Position
AC-300 / AC-303	1006352	UR700084H/1	1
BPW Typ 60/61			
AC-310 / AC-314	1006957	UR700084H/3	3

Anziehmomente	
Bezeichnung	Anziehmoment (Nm)
3 Befestigungsmutter	(M16) 200 ±20
4 Drehpunktmutter	(M14) 150 ±10
7 Befestigung Gummipuffer	(M10) 50 ±10
8 Balgbefestigung	(M10) 30 ±10



rev:	drawn:	last rev:	Modification on last revision: WAP-04-193 WAP-07-069
date:	13-12-2004	16-4-2007	
by:	JVT	GME	
ckd:			



AL-451				
Für Luftfeder System	Schmitz Id. Nr.	Weweler Id. Nr.	*Gummi Position	Pos. 9 Einschließlich
AC-282	1045353	UR700089H/1	1	ja
AC-311	1011592	UR700089H/2	2	nein
AC-313				

ANZIEHMOMENTE	
BEZEICHNUNG	ANZIEHMOMENT (Nm)
3 Befestigungsmutter	(M16) 200 +/-20
4 Drehpunktmutter	(M14) 150 +/-10
7 Befestigung Gummipuffer	(M10) 50 +/-10
8 Balgbefestigung	(M10) 30 +/-10
9 Einsteckkupplung	(1/4") 20 +/-10

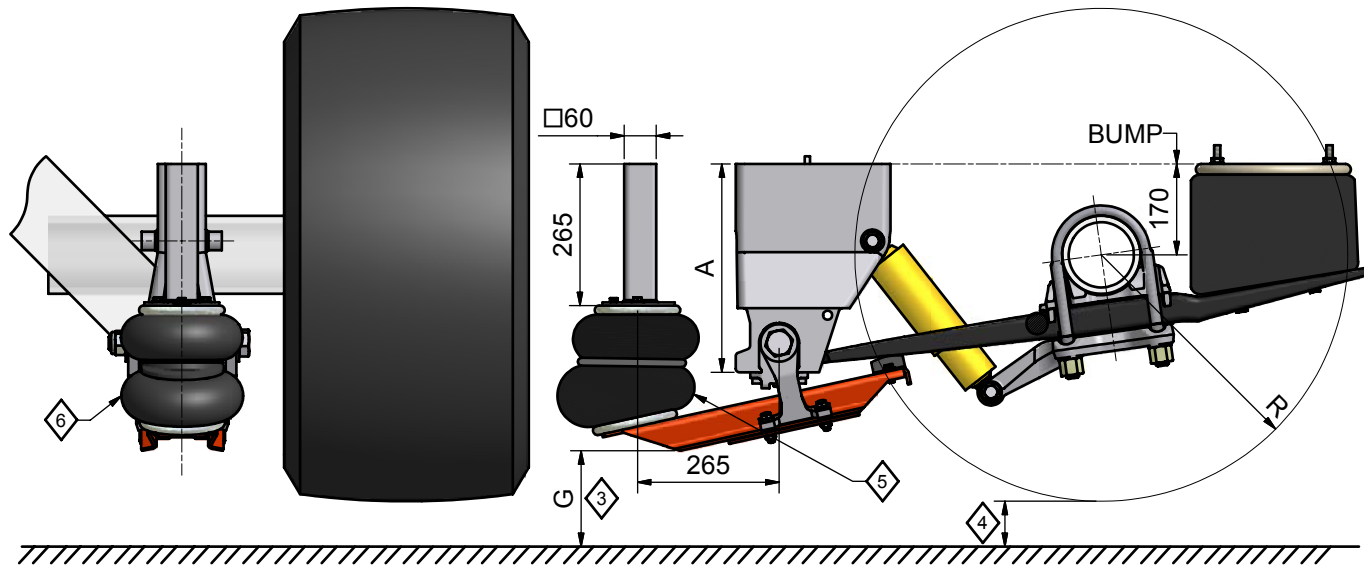
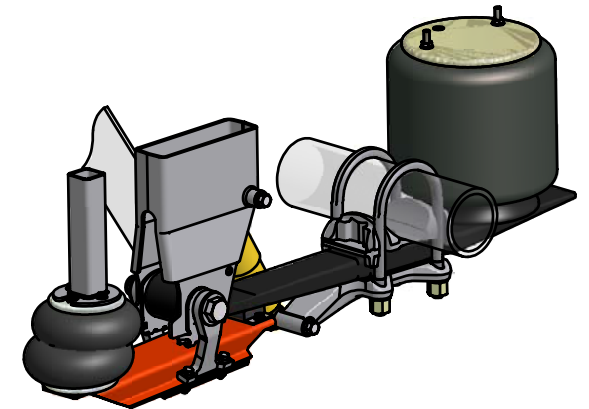
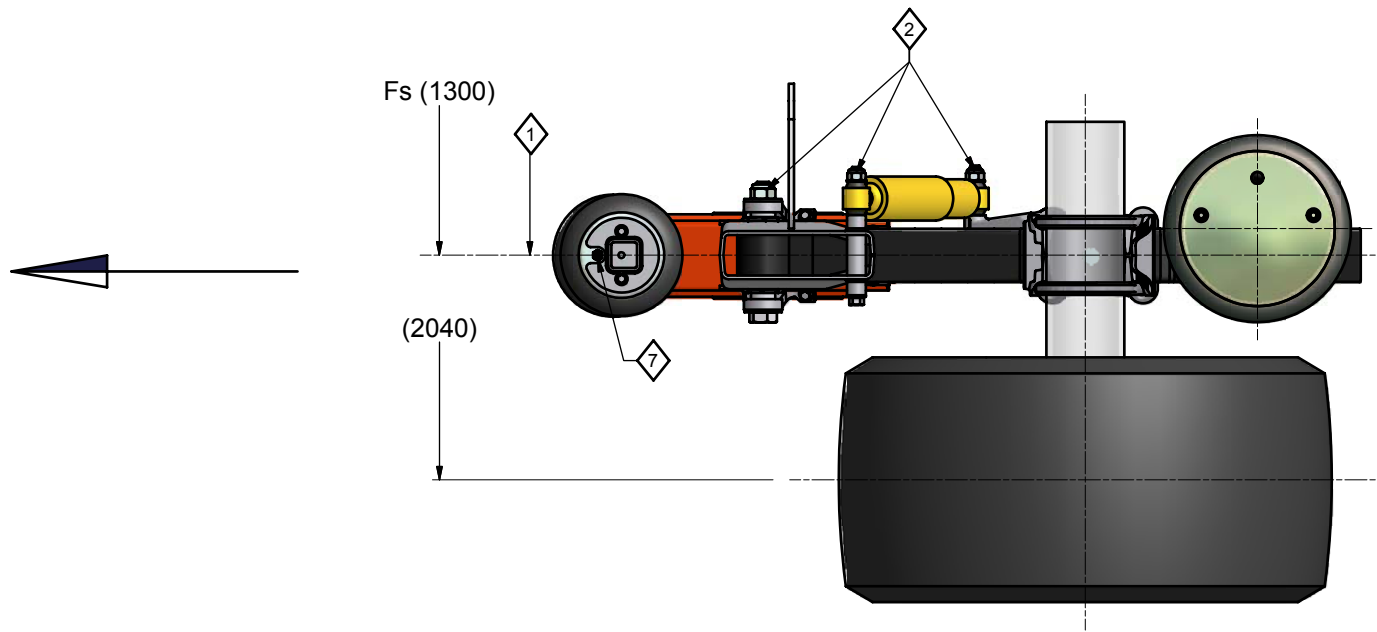


rev:	drawn:	last rev:	Modification on last revision:
date: 29-3-2005	by: JVT	E	WAP04-193
ckd:		ACS	WAP06-055-3
			WAP06-174
			WAP07-055-6

AXLE LIFT

WEWELER - MEGA LIFT

AL-453-II



EXPLANATION

- 1 Assemble lefthand and right side. Only for airsuspensionsystems with a hangerbracket equipped with an axle alignment device.
- 2 Recommendation: Position of nut to outside vehicle.
- 3 Groundclearance G at full axle up travel (loaded without pressure) depends on the airsuspensionsystem and the type of tires. (always check)
- General:
- 4 The clearance between the road and the tire when the axle is lifted = axle up travel minus deformation of the tires.
- 5 Not lifted: pressure = 0 bar.
- 6 The airspring is not allowed to hit any other parts. Keep a free diameter of 280 mm for moving parts.
- 7 Air-connection (Wira 1/4")



rev:	drawn:	last rev:	Modification on last revision:
date: 6-2-2006			
by: HWA			
ckd:			

AXLE LIFT

WEWELER - TWIN WHEELS

AL-455-DOC

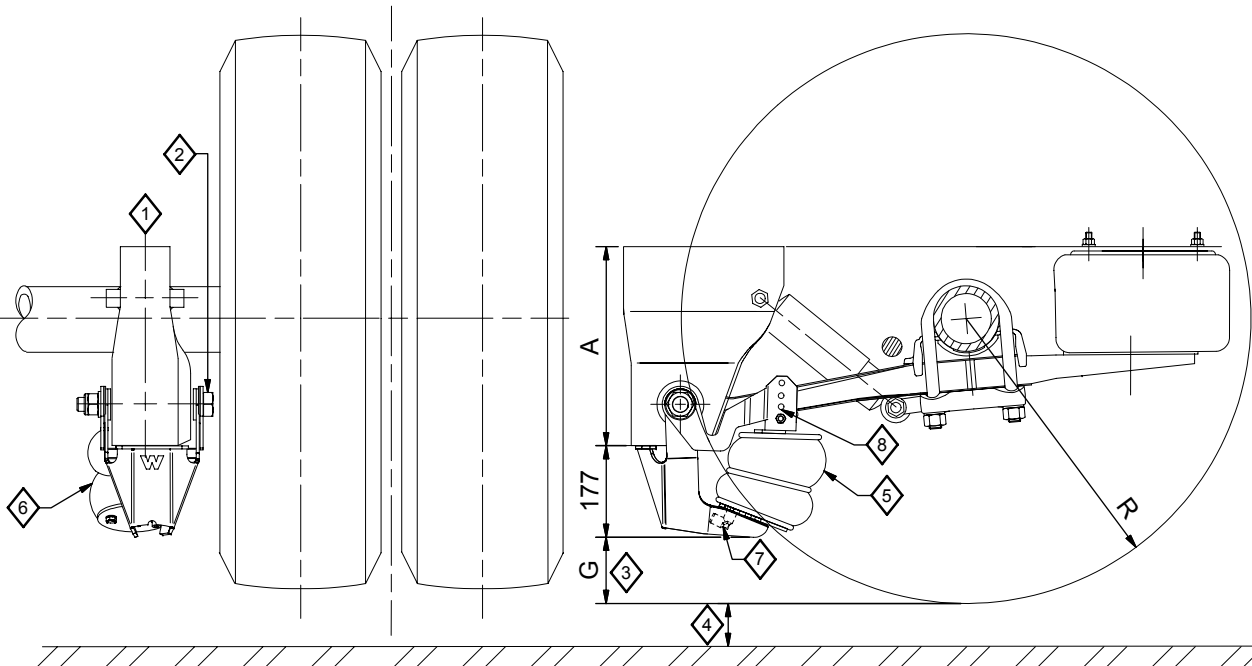
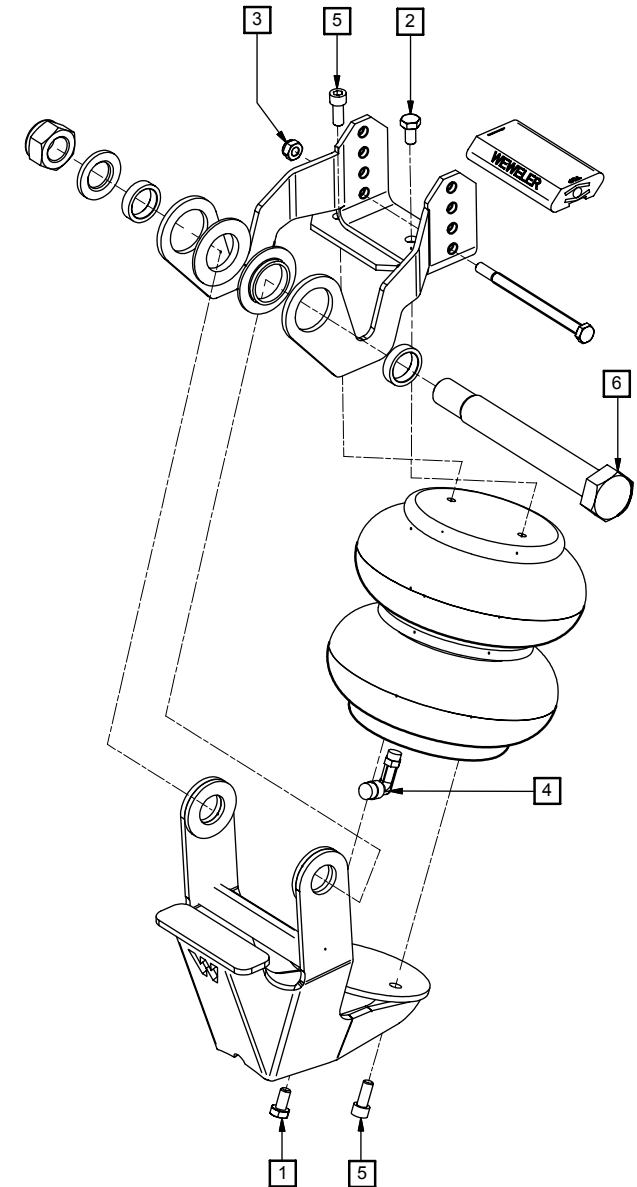
This Weweler Bolt-On axle lift is developed for suspension systems with twin wheel configuration.
Direct assembling (KTL coating).

EXPLANATION

- 1 Assemble lefthand and righthand side.
- 2 Recommendation: Position of nut to outside vehicle.
- 3 Groundclearance "G" at full axle up travel (loaded without pressure) depends on the airsuspension system and the type of tyres used. (always check)
- General:
- 4 The clearance between the road and the tire when the axle is lifted = axle up travel minus deformation of the tires.
- 5 Not lifted: pressure = 0 bar.
- 6 The airspring is not allowed to contact any other parts. Keep a free diameter of 280mm around below for moving parts.
- 7 Airconnection (standard 10 mm, push in fitting).
- 8 The position of the rubber support is dependent on the type of suspension system, contact Weweler for the correct position.

TORQUE

Part		Torque (Nm)	Tol. (Nm)
1	Air spring M10x20	30	±10
2	Axle lift arm M10x25	30	±10
3	Rubber support M10x160	50	±10
4	Airconnection G¼"	20	±10
5	Air spring M10x25	30	±10
6	Pivot Bolt M30	800	+50/-0

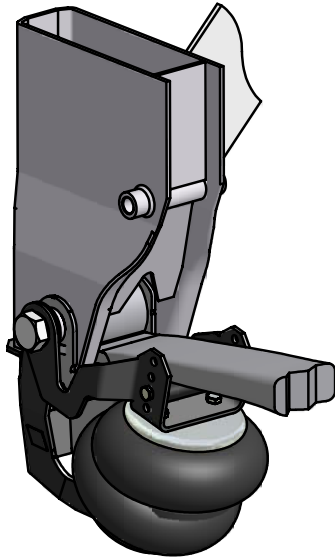


rev:	-	drawn:	last rev:	Modification on last revision:
date:	21-2-2006	by:	RTS	
ckd:				

WEWELER

AL-456 APPLICATIONS

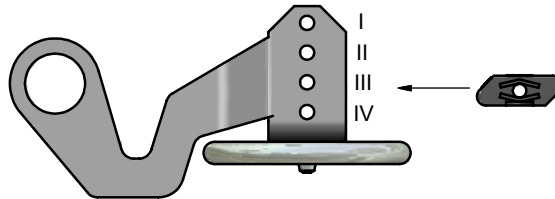
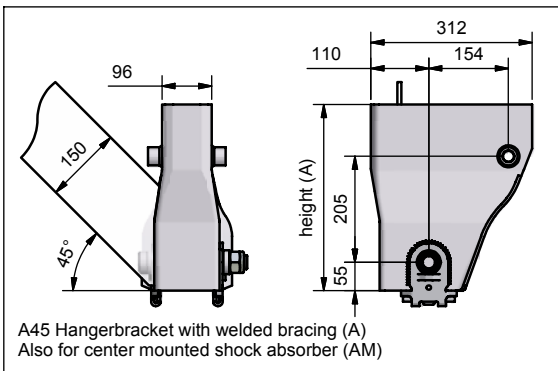
AL-456-APP



PRS* = Position Rubber Support
X = Possible

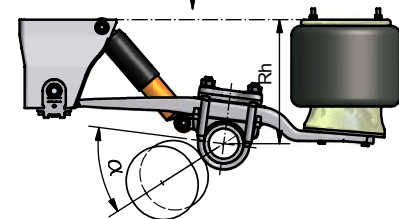
SYSTEM A45 Hangerbracket	AXLE		AL-456	AL-456M	PRS*	BRAKES	
	Ø	□				DRUM	DISC
U.A.HG.5.30.240-340	X	X	-	X	III	X	X
U.A.HG.5L.30.260-310	-	-	-	-	-	-	-
U.A.HE.5.30.375-475	X	X	X	-	II	X	40°
U.A.HN.5.30.465-515	X	X	-	X	III	X	40°
L.A.EB.5.36.190-290	X	X	X	-	II	X	X
L.A.EB.5.36L.240-290	X	X	X	-	II	X	X
L.A.EB.5L.36L.240-290	X	X	X	-	II	X	X
L.A.IU.5.36L.350-425	X	X	-	X	I	X	40°
L.A.EC.5.36.400-475	X	X	X	-	II	X	X
L.A.EC.5.36L.445-520	X	X	-	X	III	X	X
K.A.EN.5.36.235-285	X	X	X	-	II	X	X
K.A.EN.5L.36.220-270	X	X	X	-	II	X	X
K.A.EP.5.36.425-500	X	X	X	-	II	X	40°
K.A.EP.5.36L.470-490	X	X	-	X	III	X	40°
ME.A.EN.5.36L.210-235	X	X	-	X	IV	X	X
ME.A.EN.5L.36L.210-235	X	X	-	X	III	X	X
H.A.BG.5.36.205-305	X	X	X	-	III	X	X
H.A.BG.5.36L.240-290	X	X	-	X	IV	X	X
H.A.BD.5.36.240-340	X	X	-	X	IV	X	X
H.A.BD.5.36L.275.350	-	-	-	-	-	-	-
H.A.BJ.5.36.240-340	X	X	-	X	IV	X	X
H.A.BJ.5.36L.275-350	-	-	-	-	-	-	-
H.A.GE.5.36.390-465	X	X	X	-	II	X	40°
H.A.GE.5.36L.375-475	-	-	-	-	-	-	-
H.A.GF.5.36.445-520	X	X	X	-	III	X	40°
H.A.GF.5.36L.490-540	X	-	-	X	IV	X	40°
H.A.BO.5.36.470-570	X	X	X	-	IV	X	40°
E.A.DG.5.36.230-330	X	X	-	X	IV	X	X
E.A.DE.5.30.375-475	X	X	X	-	III	X	30°
E.A.DB.5.30.470-570	X	X	X	-	III	X	30°

Suitable for following hangerbrackets:



Position Rubber Support

Minimum required brake booster angle.
X = Suitable for all.



<p>WEWELER IMPROVING TRANSPORTATION</p> <p>WEWELER NEDERLAND B.V. P.O. BOX 142 7300 AV APELDOORN THE NETHERLANDS</p>	rev:	drawn:	last rev:	Modification on last revision:
	date:	6-6-2006		
	by:	RTS		
	ckd:			

This Weweler Bolt-On axle lift is developed for Weweler systems with an A25, A45, C25 or C45 hangerbracket with a welded bracing. It is suitable for drum brake systems and a few disc brake systems. Mega airspring possible for more stroke. Contact Weweler for precise system configurations.

The Bolt-On lift isn't suitable when:

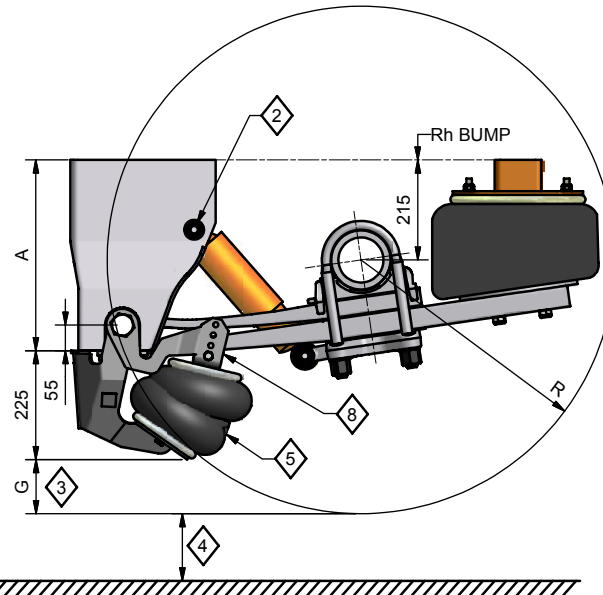
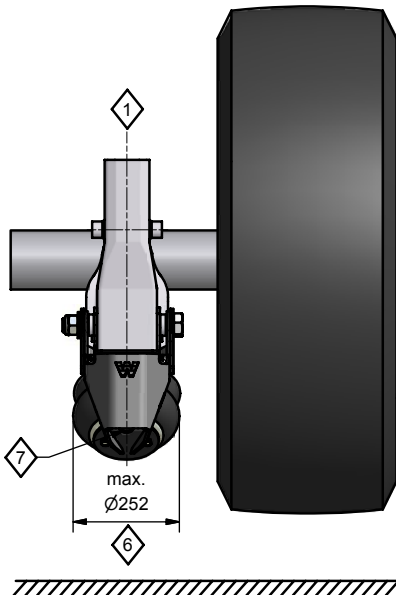
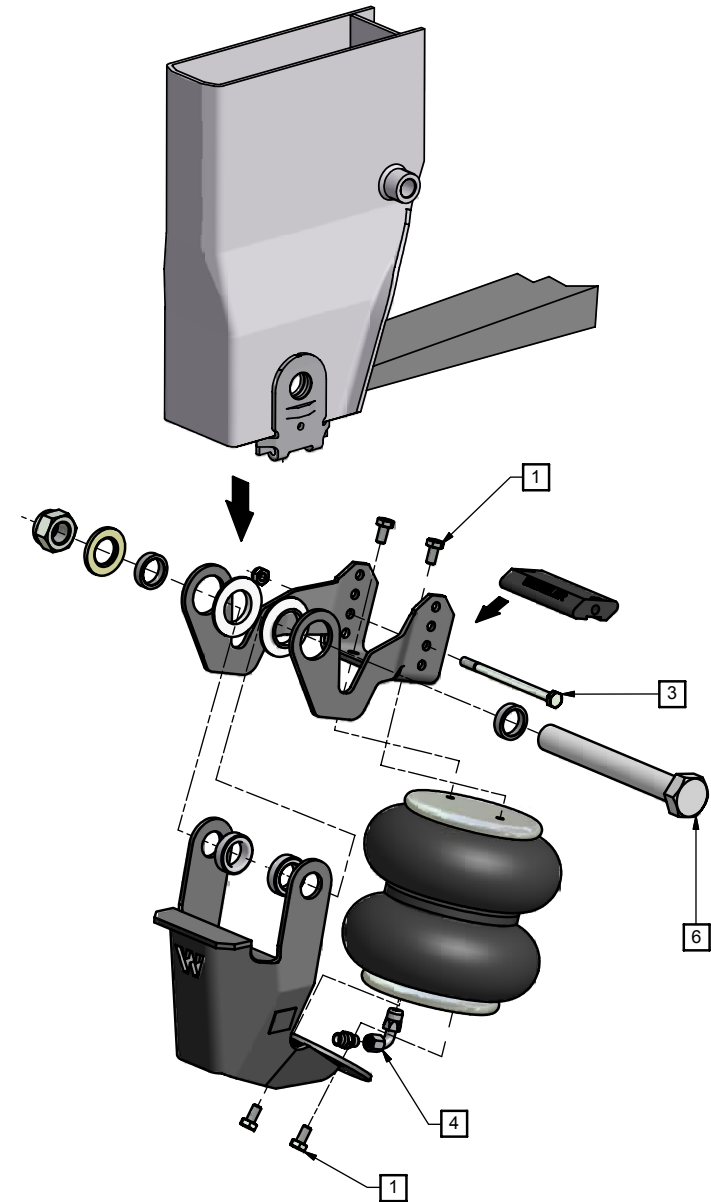
- twin tyres are being used;
- it concerns a steering axle;
- a disc brake axle is being used. In some cases disc brakes are possible, please contact Weweler for exact systems.

EXPLANATION

- 1 Assemble lefthand and right side.
- 2 Recommendation: Position of nut to outside vehicle.
- 3 Groundclearance G at full axle up travel (loaded without pressure) depends on the airsuspensionsystem and the type of tires. (always check)
- General:
- 4 The clearance between the road and the tire when the axle is lifted = axle up travel minus deformation of the tires.
- 5 Not lifted: pressure = 0 bar.
- 6 The airspring is not allowed to hit any other parts. Keep a free diameter of 280 mm for moving parts.
- 7 Air-connection (standard 10 mm)
- 8 The Position of the rubber support is dependent on the type of suspension system, contact Weweler for the correct position.

TORQUE

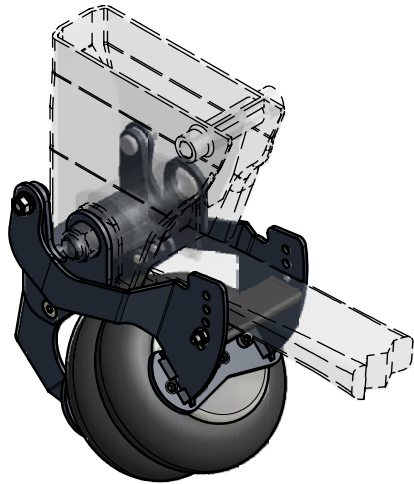
Fastener	Torque [Nm]	Tolerance [Nm]
1 Airspring	(M10) 30	± 10
3 Rubber Support	(M10) 50	± 10
4 Airconnection	(G1/4") 20	± 10
6 Pivot Bolt	(M27/M30) 800	+50 / -0



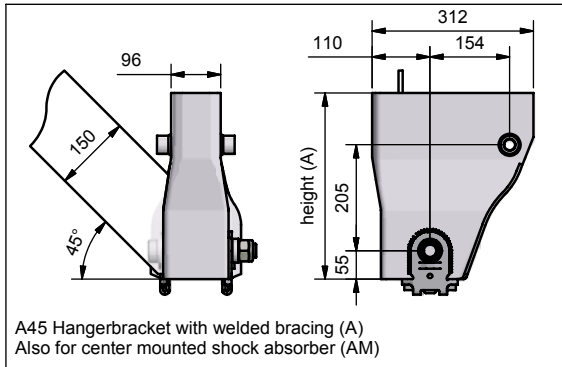
WEWELER

AL-457 APPLICATIONS

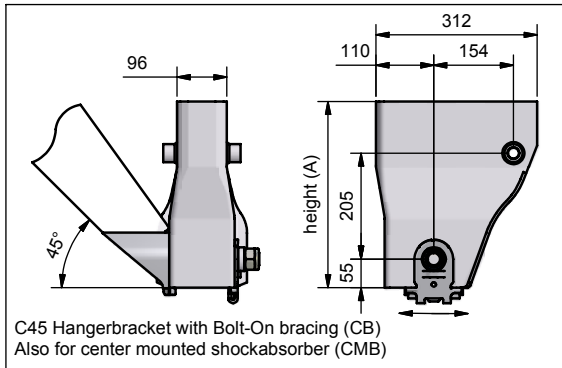
AL-457-APP



Suitable for following hangerbrackets:



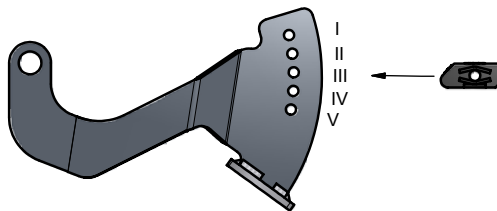
A45 Hangerbracket with welded bracing (A)
Also for center mounted shock absorber (AM)



C45 Hangerbracket with Bolt-On bracing (CB)
Also for center mounted shockabsorber (CMB)

SYSTEM		AXLE		AL-457	AL-457M	PRS*	BRAKES	
A45 Hangerbracket	C45 Hangerbracket	Ø	□				DRUM	DISC
U.A.HG.5.30.240-340	U.CB.HR.5.30.240-340	X	X	X	-	IV	X	X
U.A.HG.5L.30.260-310	U.CB.HR.5L.30.260-310	X	X	X	-	IV	X	X
U.A.HS.5.30.325-400	U.CB.HH.5.30.325-400	X	X	X	-	II	X	X
U.A.HE.5.30.375-475	U.CB.HD.5.30.375-475	X	X	X	-	II	X	X
U.A.HN.5.30.465-515	U.CB.HL.5.30.465-515	X	X	X	-	III	X	X
L.A.EB.5.36.190-290	L.CB.ED.5.36.190-290	X	X	X	-	II	X	X
L.A.EB.5.36L.240-290	L.CB.ED.5.36L.240-290	X	X	X	-	III	X	X
L.A.EB.5L.36L.240-290	L.CB.ED.5L.36L.240-290	X	X	X	-	II	X	X
L.A.IU.5.36L.350-425	L.CB.IT.5.36L.350-425	X	X	X	-	I	X	X
L.A.EC.5.36.400-475	L.CB.EE.5.36.400-475	X	X	X	-	II	X	X
L.A.EC.5.36L.445-520	L.CB.EE.5.36L.445-520	X	X	X	-	III	X	X
K.A.EN.5.36.235-285	K.CB.EQ.5.36.235-285	X	X	X	-	II	X	X
K.A.EN.5L.36.220-270	K.CB.EQ.5L.36.220-270	X	X	X	-	III	X	X
K.A.EP.5.36.425-500	K.CB.EK.5.36.425-500	X	X	X	-	III	X	X
K.A.EP.5.36L.470-490	K.CB.EK.5.36L.470-490	X	X	X	-	III	X	X
ME.A.EN.5.36L.210-235	ME.CB.EQ.5.36L.210-235	X	X	-	X	IV	X	X
ME.A.EN.5L.36L.210-235	ME.CB.EQ.5L.36L.210-235	X	X	X	-	III	X	X
ME.A.NC.5L.36L.250	ME.CB.NA.5L.36L.250	X	X	X	-	IV	X	X
H.A.BG.5.36.205-305	-	X	X	X	-	IV	X	X
H.A.BG.5.36L.240-290	-	X	X	-	X	V	X	X
H.A.BD.5.36.240-340	-	X	X	X	-	IV	X	X
H.A.BD.5.36L.275-350	-	X	X	-	X	V	X	X
H.A.BJ.5.36.240-340	-	X	X	X	-	IV	X	X
H.A.BJ.5.36L.275-350	-	X	X	-	X	V	X	X
H.A.GE.5.36.390-465	-	X	X	X	-	II	X	X
H.A.GE.5.36L.375-475	-	X	X	-	X	III	X	X
H.A.GF.5.36.445-520	-	X	X	X	-	IV	X	X
H.A.GF.5.36L.490-540	-	X	X	-	X	IV	X	X
H.A.BO.5.36.470-570	-	X	X	X	-	V	X	X
E.A.DG.5.36.230-330	-	X	X	X	-	IV	X	X
E.A.DE.5.30.375-475	-	X	X	X	-	III	X	X
E.A.DB.5.30.470-570	-	X	X	X	-	IV	X	X
SATB-01.2	-	X	-	-	X	III	X	-
SATB-04.2	-	X	-	-	X	III	X	-
SATB-05.2	-	X	-	-	X	III	X	-
SATB-06.2	-	X	-	-	X	II	X	-
SATB-07.2	-	X	-	-	X	I	X	-

PRS* = Position Rubber Support
X = Possible



Position Rubber Support



rev:	-	last rev:	B	Modification on last revision: WAP-06-242
date:	11-7-2006	1-2-2007		
by:	RTS	RTS		
ckd:				

This Weweler Bolt-On axle lift is developed for Weweler systems with an A25, A45, C25 or C45 hangerbracket with a welded bracing or bolt-on bracing. It is suitable for drum and disc brake systems. When twin wheels are being used the airspring can be set on the offset position to create enough free space. Mega airspring possible for more stroke.

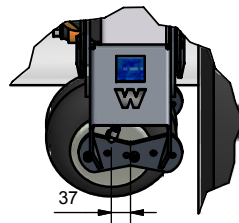
The Bolt-On lift isn't suitable when:
- it concerns a steering axle;

EXPLANATION

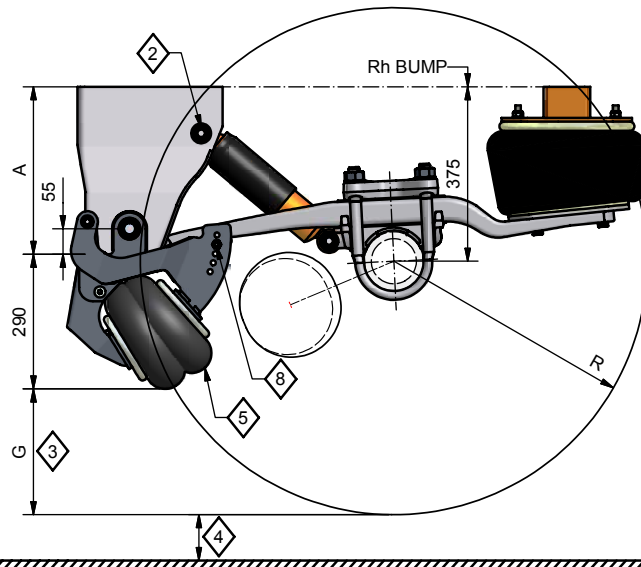
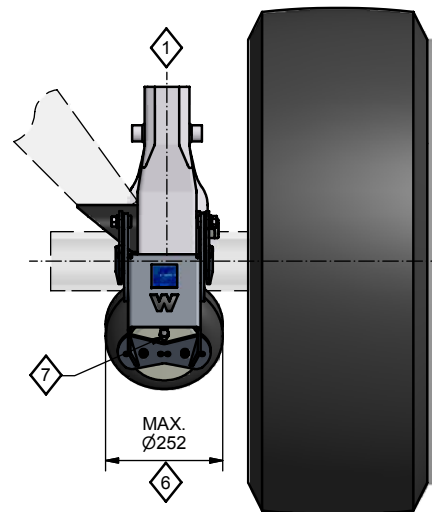
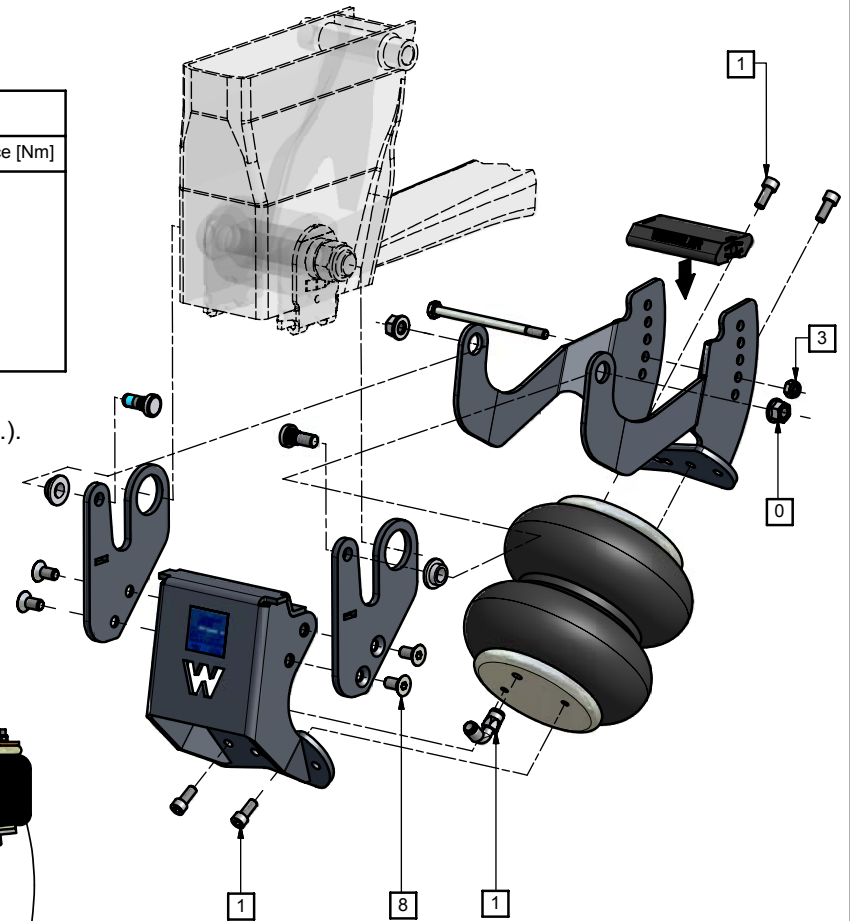
- 1 Assemble lefthand and right side.
- 2 Recommendation: Position of nut to outside vehicle.
- 3 Groundclearance G at full axle up travel (loaded without pressure) depends on the airsuspensionsystem and the type of tires. (always check)
- General:
- 4 The clearance between the road and the tire when the axle is lifted = axle up travel minus deformation of the tires.
- 5 Not lifted: pressure = 0 bar.
- 6 The airspring is not allowed to hit any other parts. Keep a free diameter of 280 mm for moving parts.
- 7 Air-connection (standard 10 mm)
- 8 The Position of the rubber support is dependent on the type of suspension system, contact Weweler for the correct position.

TORQUE

Fastener	Torque [Nm]	Tolerance [Nm]
1 Airspring	(M10) 30	± 10
3 Rubber Support	(M10) 50	± 10
4 Airconnection	(G1/4") 20	± 10
8 Lift Support	(M12) 80	± 10
9 Pivoting point upper support	(M14) 150	± 10



OFFSET OPTION (37 mm.)
AIRSPRING ON INSIDE HOLES.



<p>WEWELER NEEDERLAND B.V. P.O. BOX 142 7300 AV APELDOORN THE NETHERLANDS</p>	drawn:	last rev:	Modification on last revision: WAP-06-242
	rev:	A	
	date:	31-5-2006 31-1-2007	
	by:	RTS RTS	
ckd:			

AXLE LIFT

BPW AIRLIGHT I

AL-459-DOC

This Bolt-On axle lift is developed for BPW Airlight I air suspensions. The "SL" Suspension range since 2005 ("SLM" & "SLO" Series, not for the "SLU" Series).

It is suitable for systems:

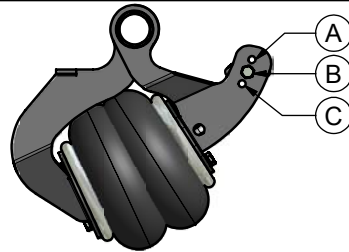
- with disc and drum brakes.
- with single and double leaf springs.
- with 9 t. (120 mm.) or 12 t. (150 mm.) axles.

The axle lift is only for the steel hangerbracket (Not for the cross member bracket).

EXPLANATION

- 1 Assemble lefthand and righthand side.
- 2 Recommendation: Position of nut to outside vehicle.
- 3 Groundclearance G at full axle up travel (loaded without pressure) depends on the airsuspensionsystem and the type of tires. (always check)
- 4 General:
The clearance between the road and the tire when the axle is lifted = axle up travel minus deformation of the tires.
- 5 Not lifted: pressure = 0 bar.
- 6 The airspring is not allowed to hit any other parts. Keep a free diameter of 280 mm for moving parts.
- 7 Air-connection (standard 10 mm)
- 8 The Position of the rubber support is dependent on the type of suspension system, see table for the correct position.

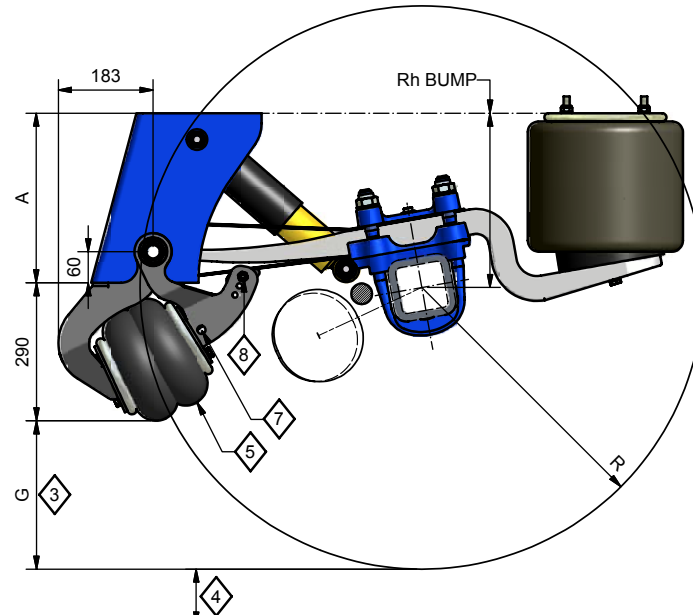
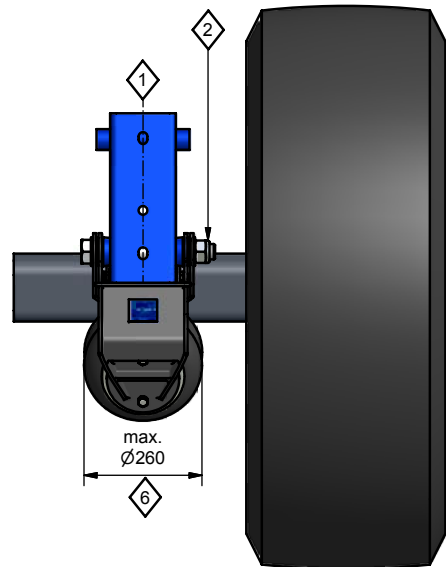
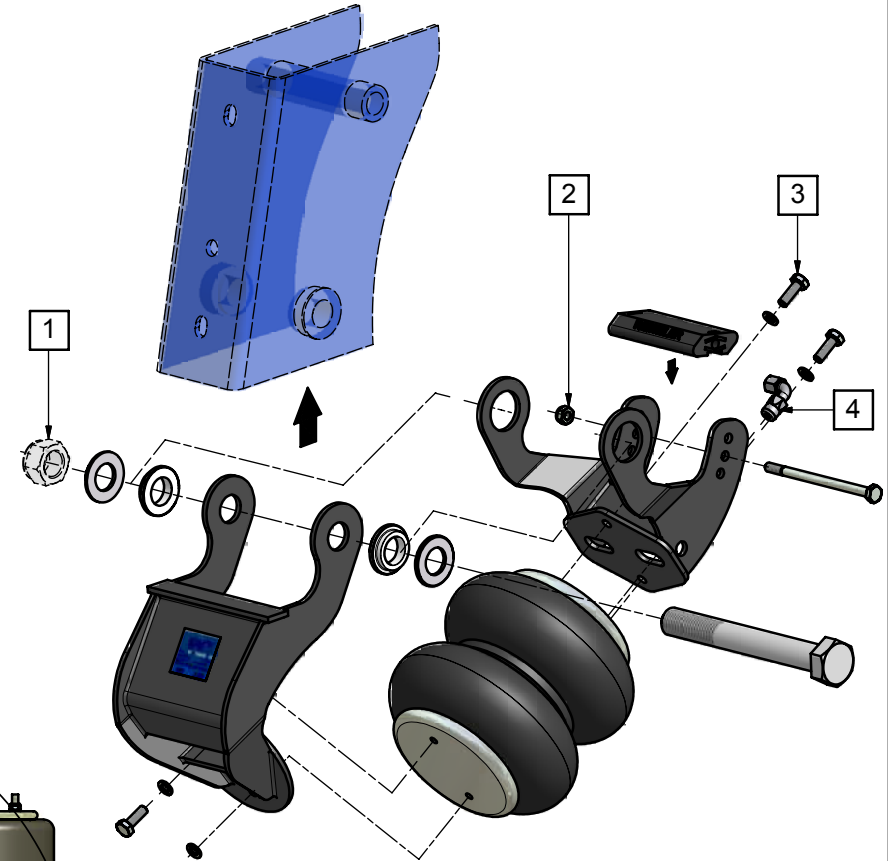
POSITION RUBBER SUPPORT



POSITION A: "SLM" Series / Single-leaf spring.
"SLO" Series / Single-leaf spring.

POSITION B: "SLM" Series / Double-leaf spring.

POSITION C: "SLO" Series / Double-leaf spring.



TORQUE

Fastener	Torque [Nm]	Tolerance [Nm]
1 Pivot Bolt (M30) Acc. BPW	Acc. BPW	Acc. BPW
2 Rubber Support (M10)	50	± 10
3 Air Spring (M10)	30	± 10
4 Airconnection (G1/4")	20	± 10



rev:	-	last rev:	Modification on last revision:
date:	6-10-2006		
by:	RTS		
ckd:			

AXLE LIFT

SAF MODUL

AL-460-DOC

This Bolt-On axle lift is developed for SAF MODUL Series air suspensions:

- * M / E (29-31).
- * M / N (27-29-31)
- * M / S (27-31)

It is suitable for systems:

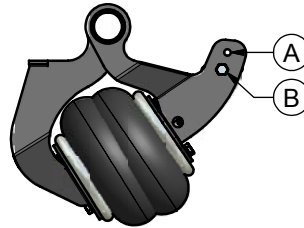
- with disc or drum brakes.
- with adjustable or fixed spring bearing.

The axle lift is only for the "Steel" hangerbracket (Not for the "Cross member" or "Aluminium" bracket).

EXPLANATION

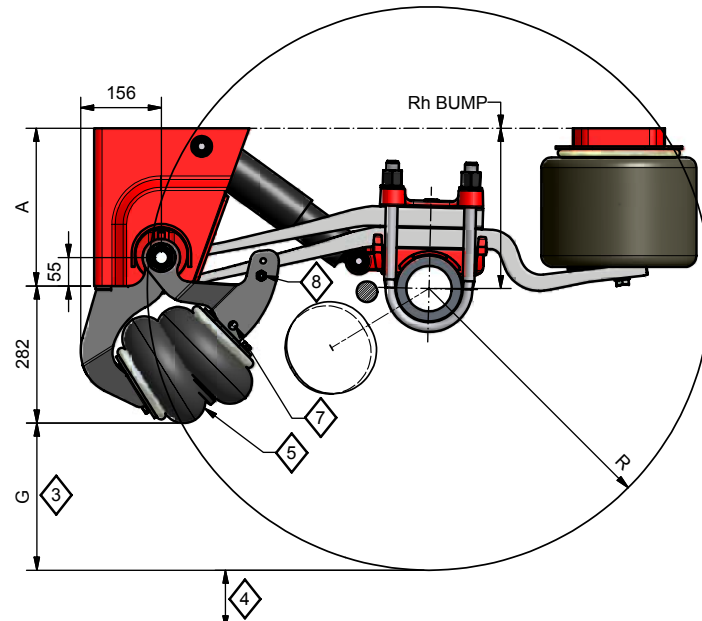
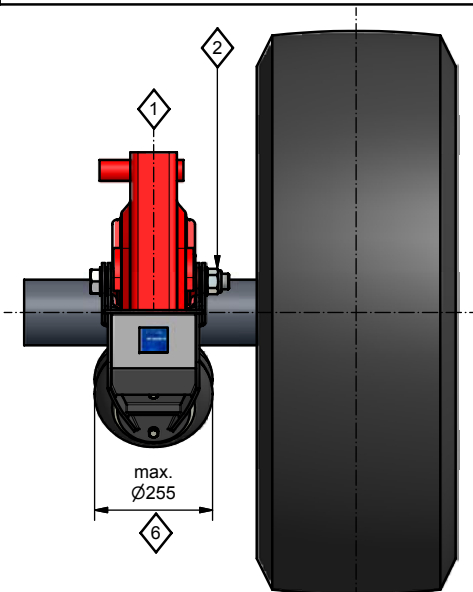
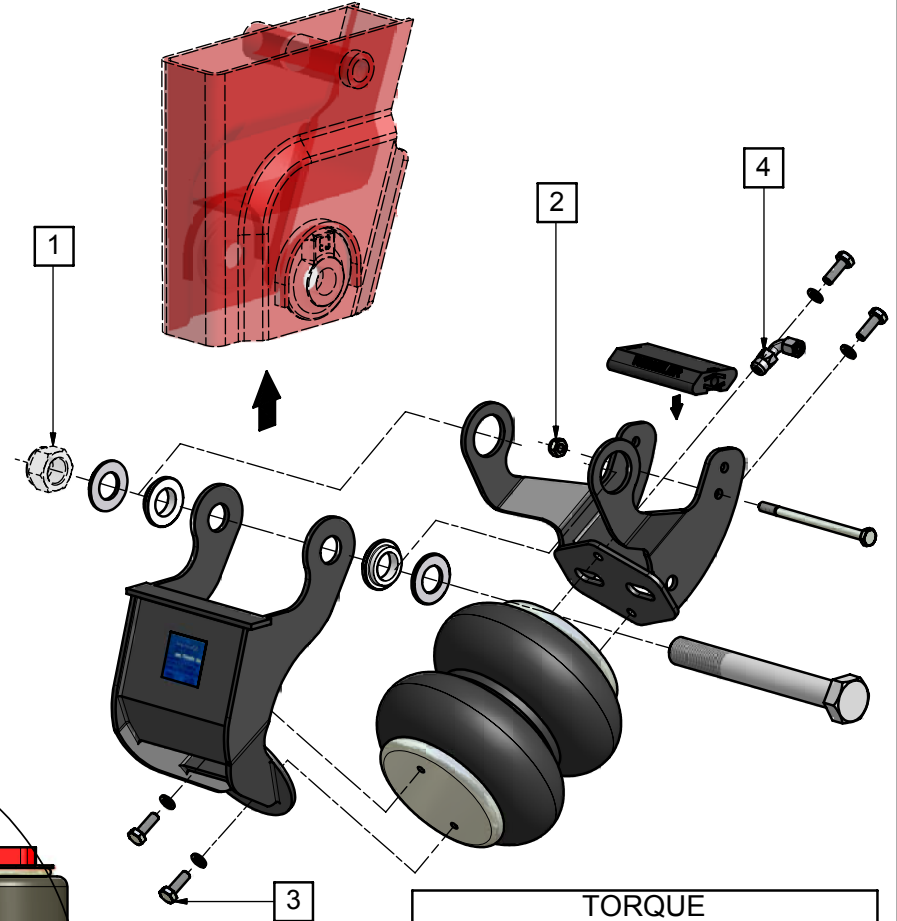
- 1 Assemble lefthand and righthand side.
- 2 Recommendation: Position of nut to outside vehicle.
- 3 Groundclearance G at full axle up travel (loaded without pressure) depends on the airsuspensionsystem and the type of tires. (always check)
- 4 General:
The clearance between the road and the tire when the axle is lifted = axle up travel minus deformation of the tires.
- 5 Not lifted: pressure = 0 bar.
- 6 The airspring is not allowed to hit any other parts. Keep a free diameter of 280 mm for moving parts.
- 7 Air-connection (standard 10 mm)
- 8 The Position of the rubber support is dependent on the type of suspension system, see table for the correct position.

POSITION RUBBER SUPPORT



POSITION A: * Susp. Type: M / E (29-31)

POSITION B: * Susp. Type: M / N (27-29-31)
* Susp. Type: M / S (27-31)



TORQUE

Fastener	Torque [Nm]	Tolerance [Nm]
1 Pivot Bolt (M30) Acc. SAF	Acc. SAF	Acc. SAF
2 Rubber Support (M10)	50	± 10
3 Air Spring (M10)	30	± 10
4 Airconnection (G1/4")	20	± 10

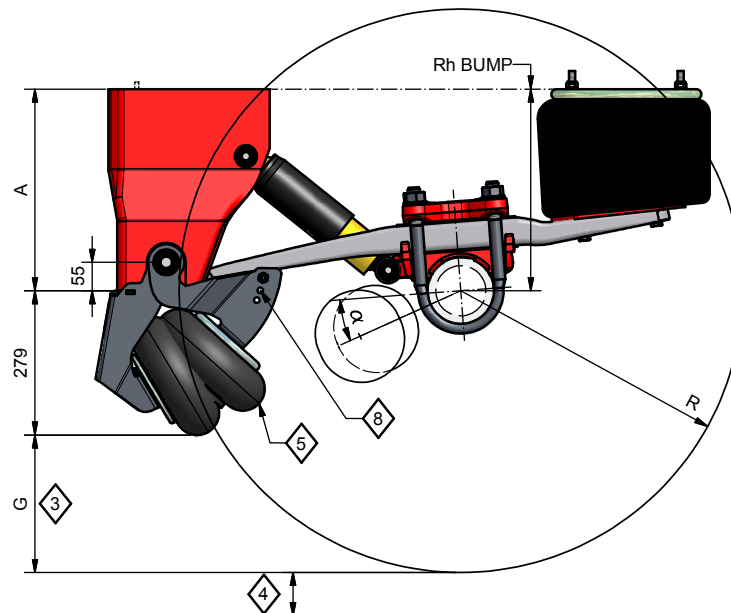
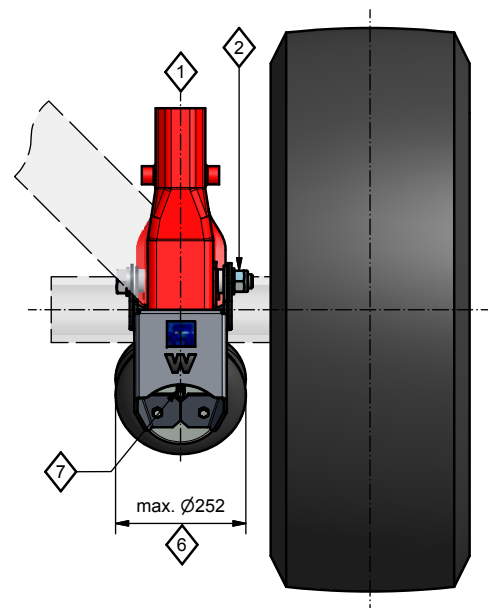
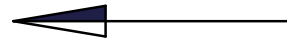
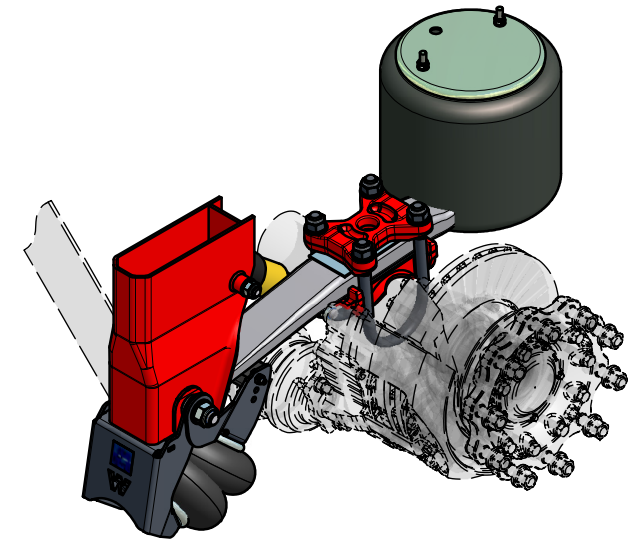
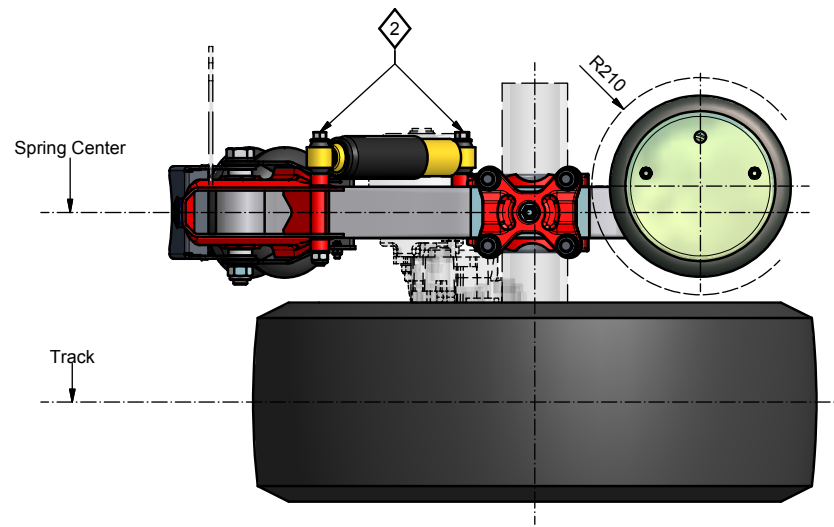


rev:	-	last rev:	Modification on last revision:
date:	6-10-2006		
by:	RTS		
ckd:			

AXLE LIFT

WEWELER - A45 DISC BRAKES

AL-462W



EXPLANATION

- 1 Assemble lefthand and right side.
- 2 Recommendation: Position of nut to outside vehicle.
- 3 Groundclearance G at full axle up travel (loaded without pressure) depends on the airsuspensionsystem and the type of tires. (always check)
- General:
- 4 The clearance between the road and the tire when the axle is lifted = axle up travel minus deformation of the tires.
- 5 Not lifted: pressure = 0 bar.
- 6 The airspring is not allowed to hit any other parts. Keep a free diameter of 280 mm for moving parts.
- 7 Air-connection (standard 10 mm)
- 8 The position of the rubber support depends on the type of suspension system, see AL-462-APP for the correct position. For other systems contact Weweler.



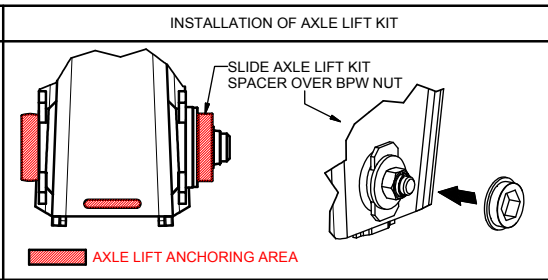
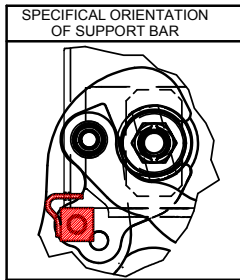
rev:	-	last rev:	Modification on last revision:
date:	10-12-2007		
by:	RTS		
ckd:			

AXLE LIFT

BPW AIRLIGHT II - M24 PIVOT BOLT

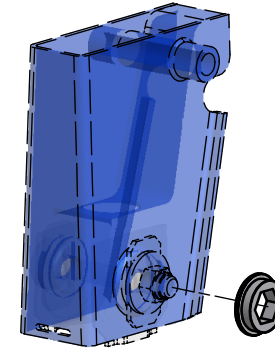
AL-466-DOC

This Weweler Bolt-On axle lift is developed for the BPW Airlight II air suspension range with M24 pivot bolt. Valid from 01-09-2007.

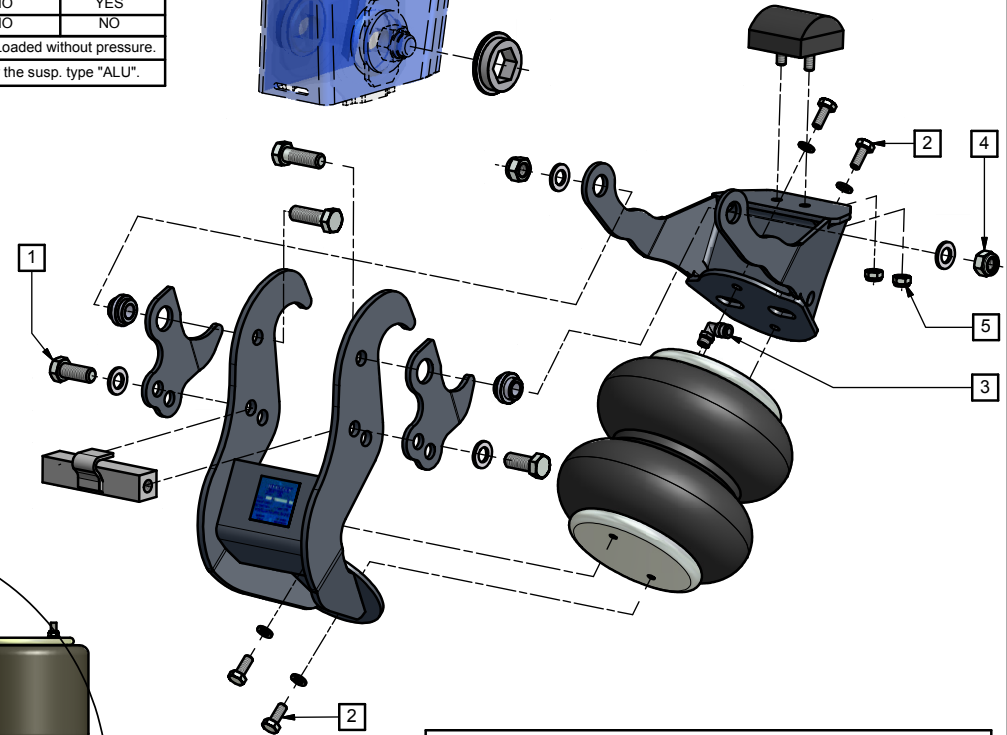
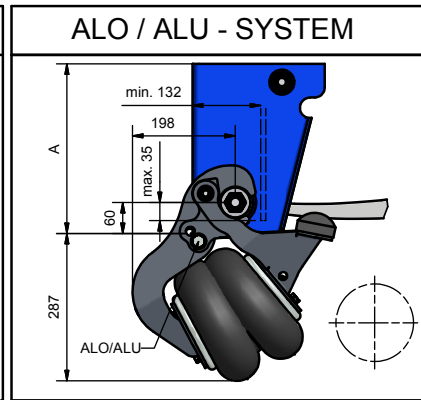


AL-466 WITH "ALU" TYPE SUSPENSION ACCORDING TO WHEELS DIMENSIONS				
WHEELS	"ALU" SUSP	R.H. 215-255 MIN. M.H. 130	R.H. 245-290 MIN. M.H. 160	R.H. 270-300 MIN. M.H. 185
	385/65 R22.5	YES	YES	YES
385/55 R22.5	NO	YES	YES	YES
385/65 R19.5	NO	YES	YES	YES
435/50 R19.5	NO	NO	NO	NO
445/45 R19.5	NO	NO	NO	NO
275/70 R22.5	NO	NO	YES	YES
265/70 R19.5	NO	NO	NO	NO

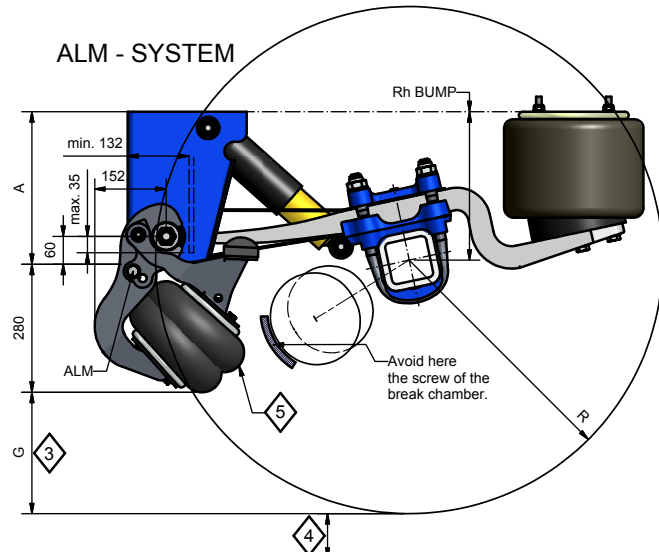
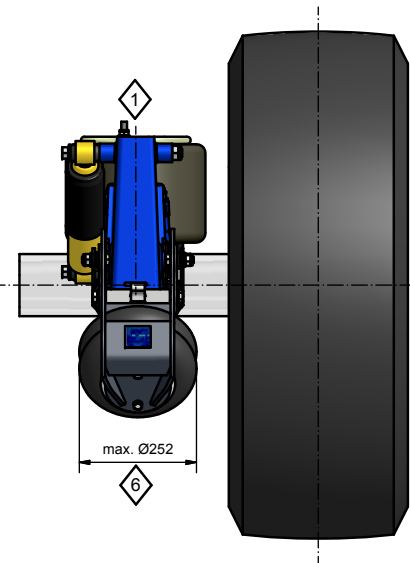
R.H. = Ride Height M.H. = Loaded without pressure.
Always check the groundclearance for the susp. type "ALU".



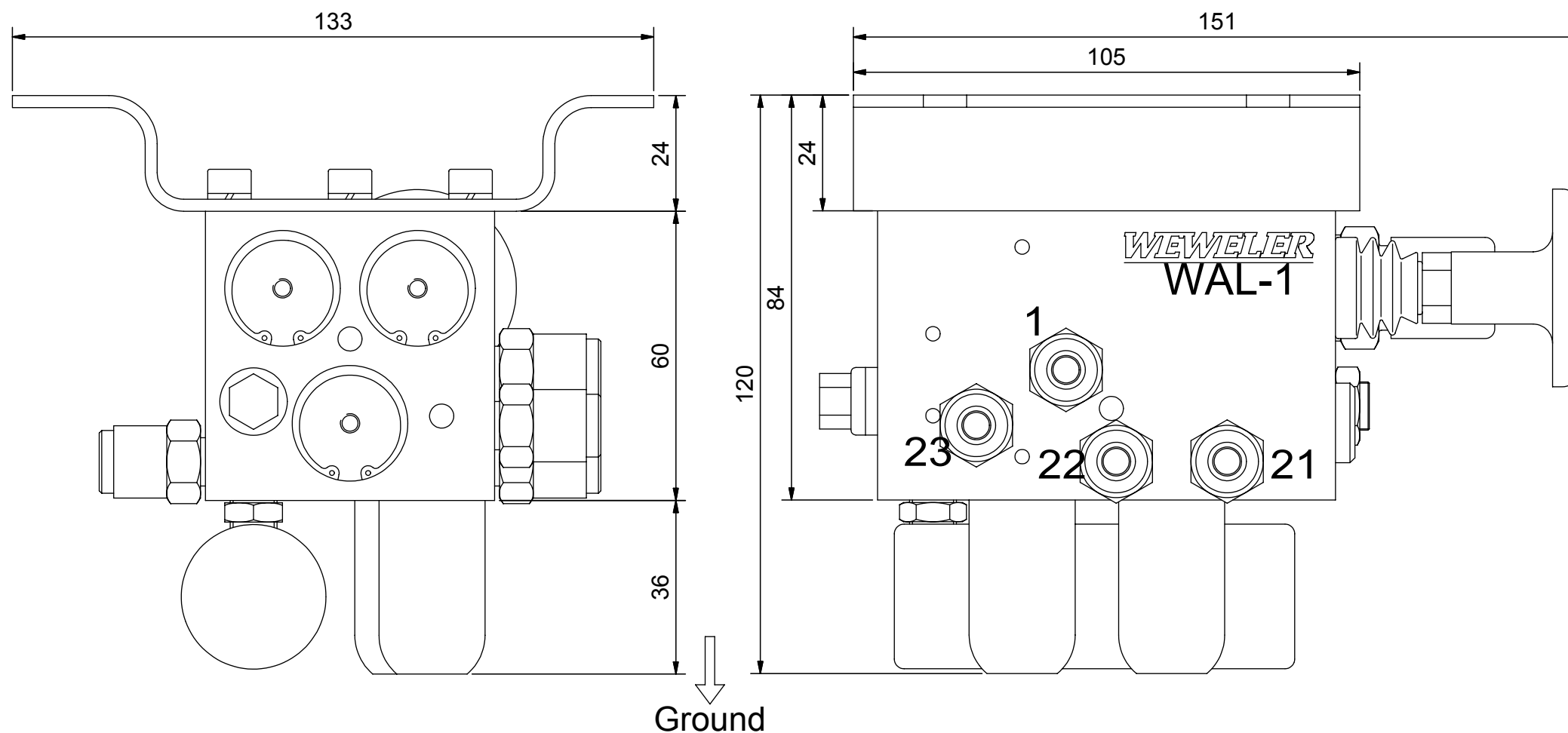
- ### EXPLANATION
- 1 Assemble lefthand and righthand side. Only for hangerbracket equipped with axle alignment device.
 - 3 Groundclearance G at full axle up travel (loaded without pressure) depends on the airsuspensionsystem and the type of tires. (always check)
 - 4 General:
The clearance between the road and the tire when the axle is lifted = axle up travel minus deformation of the tires.
 - 5 Not lifted: pressure = 0 bar.
 - 6 The airspring is not allowed to hit any other parts. Keep a free diameter of 280 mm for moving parts.
 - 7 Air-connection (standard 8 mm push-in fitting)



TORQUE			
Fastener	Torque [Nm]	Tolerance [Nm]	
1 Support Bar	(M16)	170	± 10
2 Air Spring	(M10)	30	± 5
3 Airconnection	(G1/4")	20	± 5
4 Pivoting point upper support	(M16)	170	± 10
5 Rubber Bump	(M10)	30	± 5



rev:	drawn:	last rev:	Modification on last revision:
date: 27-6-2007	by: RTS	A	
ckd:		20-8-2007	



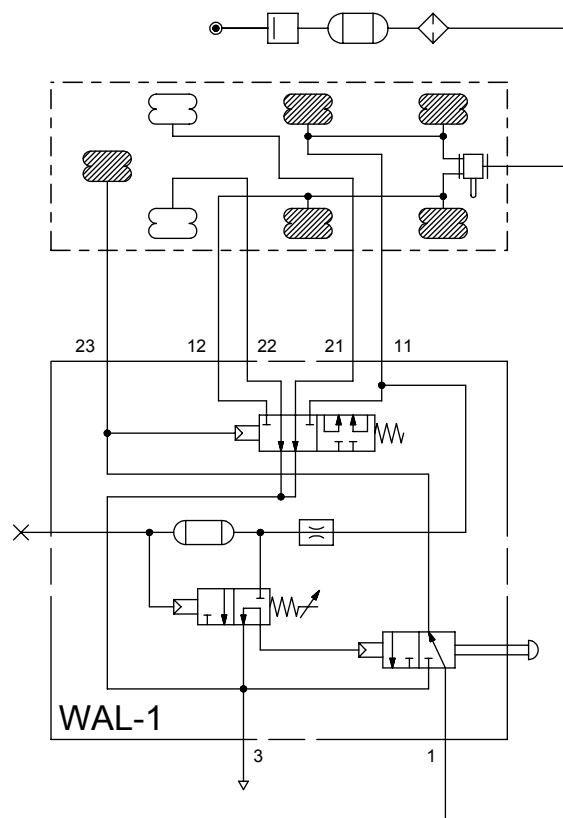
SPECIFICATIONS

- * Semi-automatic lift axle control valve for air suspended multi-axle trailers.
- * Manual drop and raise of lift axle.
- * Automatic drop of lift axle when a predetermined non-lift axles load is reached.
- * Push-in fittings (8mm tube) and filters as standard equipment.
- * Settings according to customer request.
- * Fluid to use: Filtered Air.
- * Maximum Pressure: 14 bar.
- * Temperature Range: From -35°C to +80°C.
- * Automatic Drop Pressure Range:
From 2.4 bar to 5.8 bar

OPTIONS

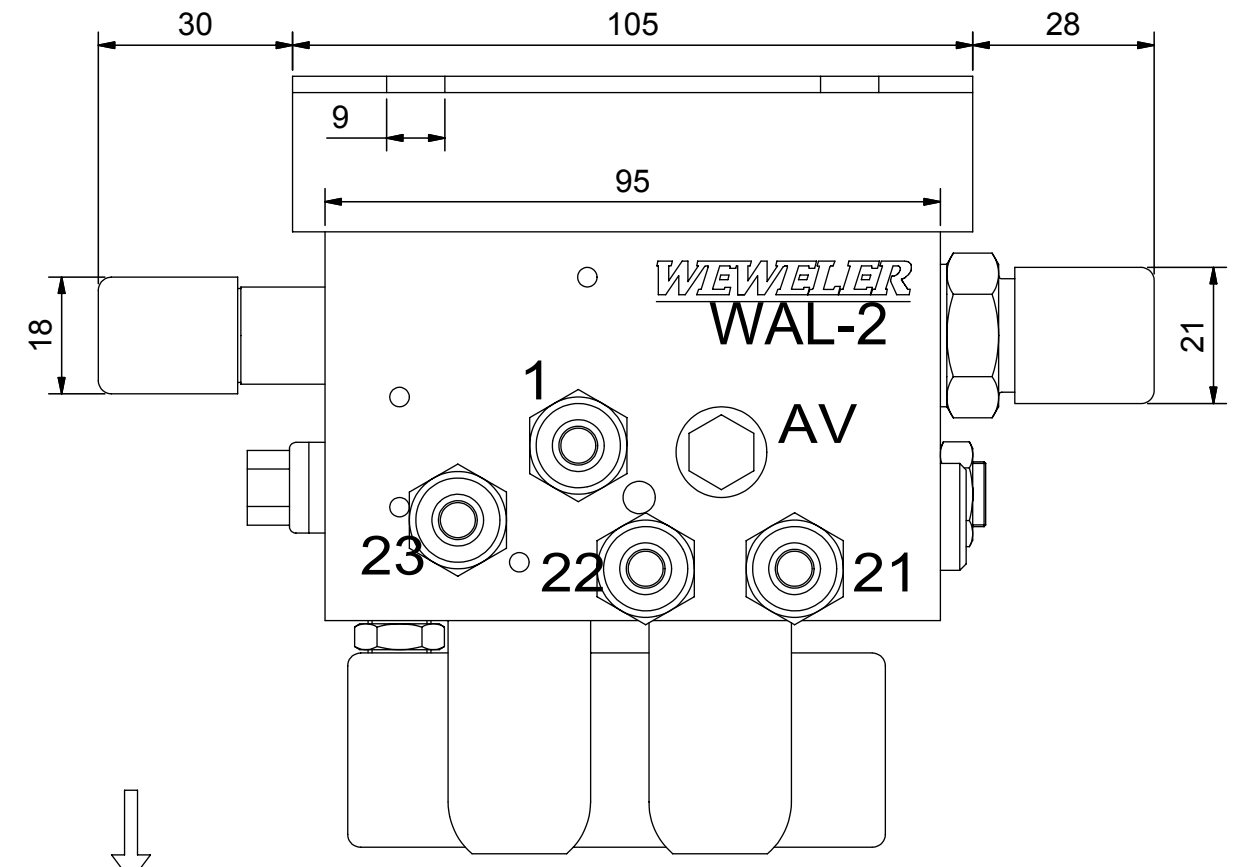
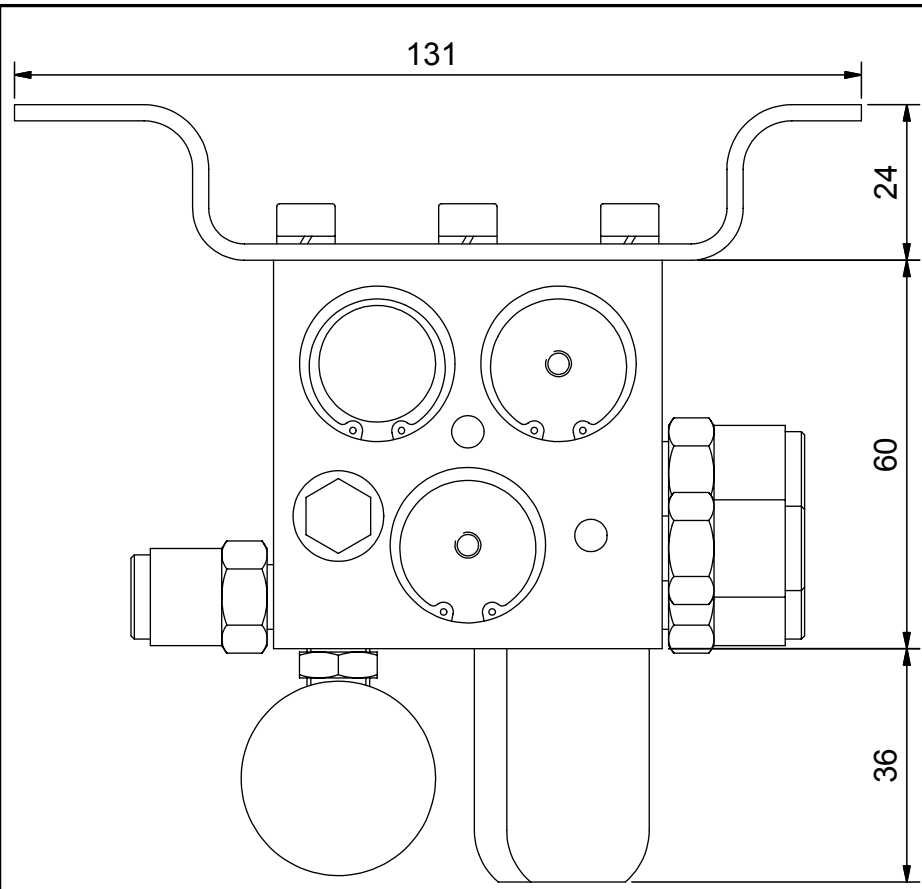
- * Fittings:
 - Automotive fittings for 8 mm tube.
 - Automotive fittings for 10 mm tube.
- * Anchoring:
 - Special support plate for frontal anchoring to operation box of the vehicle.
- * Pressure Outlet:
 - For easy adjustment checking.

PNEUMATICAL SCHEME



UWTWAL1-
 ↗ 8 = 8 mm Fitting
 ↘ 10 = 10 mm Fitting

= DIMENSION TO BE CHECKED <small>THIS DOCUMENT IS PROPERTY OF WEWELER NEDERLAND B.V. COPYING, ANNOUNCING, OR GIVE A THIRD PARTY PERUSAL OF ANY KIND, IS PROHIBITED WITHOUT APPROVAL OF OWNER.</small>	NOT TO SCALE	DATE:	BY:	APP:	MODIFICATION ON LAST REVISION:
	MASS: kg	DRAWN: 9-12-2005	RTS		
WEWELER <small>IMPROVING TRANSPORTATION</small>		TITLE: Control Valve Semi Automatic			
WEWELER NEDERLAND B.V. P.O. BOX 142 7300 AC APELDOORN THE NETHERLANDS		PROJECT: WAP-05-117 Art.CODE/DWG.nr:		REV: -	
		UWTWAL1-			



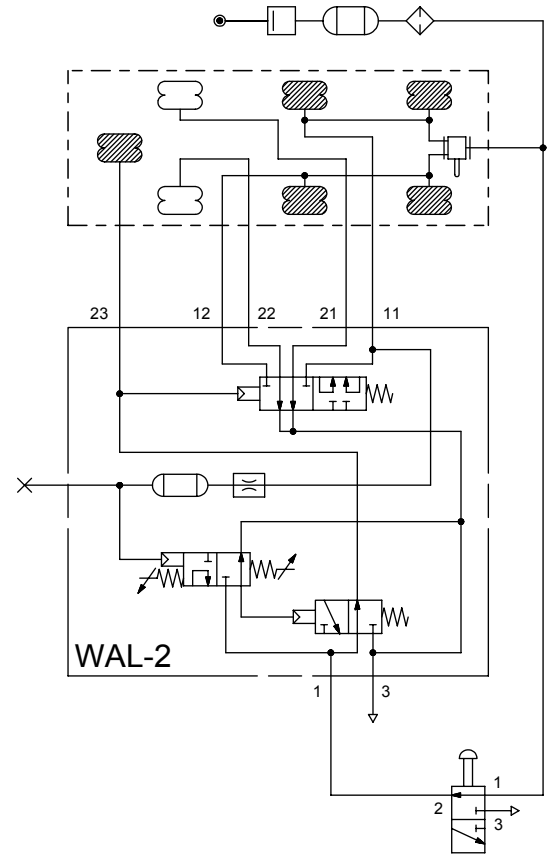
SPECIFICATIONS

- * Full automatic lift axle control valve for air suspended multi-axle trailers.
- * Automatic drop and raise of lift axle depending of a predetermined axles load.
- * Manual deactivation of lift axle system by means of a separate 3/2 way push-pull valve.
- * Possible to use two WAL-2 valves to get the automatic and sequential operation of two lift axles.
- * Push-in fittings (8mm tube) and filters as standard equipment.
- * Settings according to customer request.
- * Fluid to use: Filtered Air.
- * Maximum Pressure: 14 bar.
- * Temperature Range: From -35°C to +80°C.
- * Automatic Drop Pressure Range:
From 2.4 bar to 5.8 bar
- * Differential Range between drop and raise pressures:
From 1.4 bar to 2.8 bar

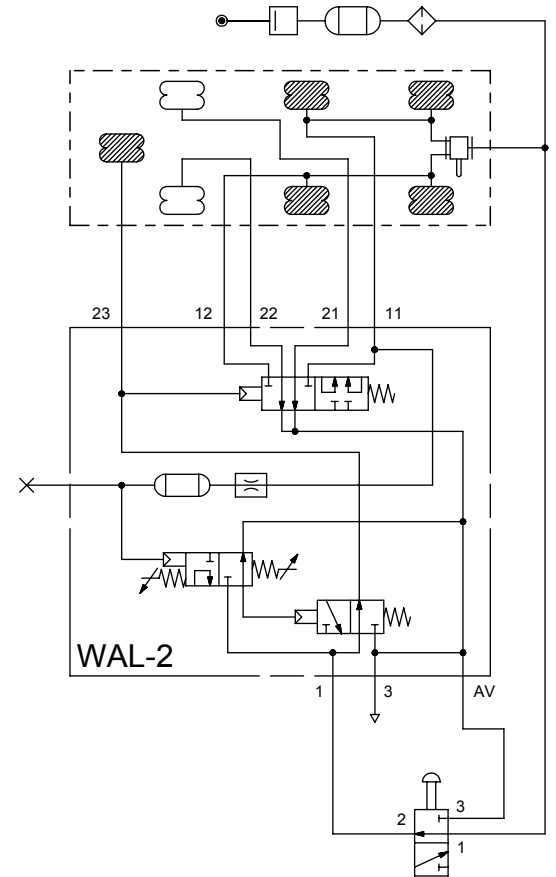
OPTIONS

- * Fittings:
 - Automotive fittings for 8 mm tube.
 - Automotive fittings for 10 mm tube.
- * Anti-Vacuum Connection:
 - To avoid vacuum effect on lift axle bellows when manual drop.
- * Pressure Outlet:
 - For easy adjustment checking.
- * Filters with elbow adaptors:
 - For vertical anchoring of the valve on the vehicle.

PNEUMATICAL SCHEME TYPE "A"
(Without "AV" Connection)

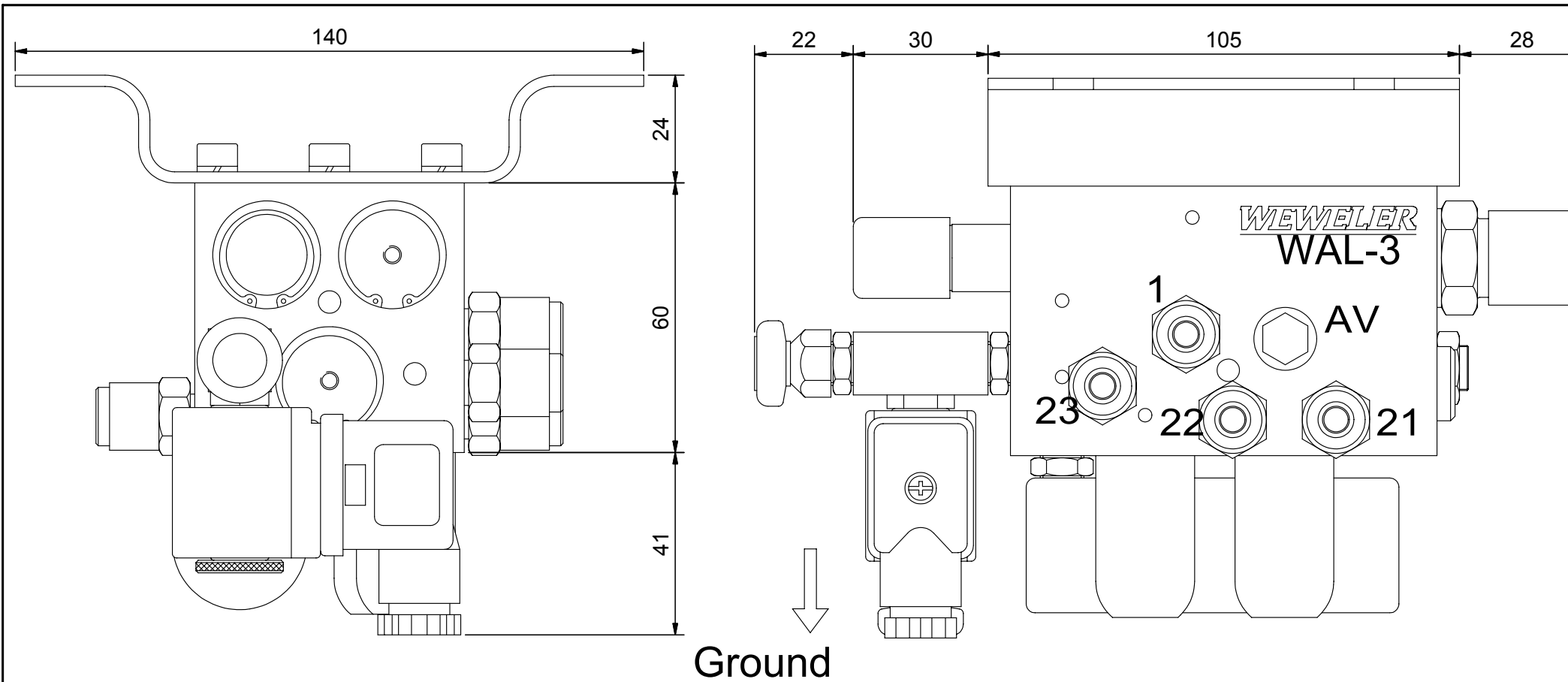


PNEUMATICAL SCHEME TYPE "B"
(With "AV" Connection)



UWTWAL2-
 ↗ 8 = 8 mm Fitting
 ↘ 10 = 10 mm Fitting

THRU = DIMENSION TO BE CHECKED <small>THIS DOCUMENT IS PROPERTY OF WEWELER NEDERLAND B.V. COPYING, ANNOUNCING, OR GIVE A THIRD PARTY PERUSAL OF ANY KIND, IS PROHIBITED WITHOUT APPROVAL OF OWNER.</small>	NOT TO SCALE	DATE: 9-12-2005	BY: RTS	APP:	MODIFICATION ON LAST REVISION:
	MASS: kg	DRAWN: LAST REV:			
WEWELER IMPROVING TRANSPORTATION 		TITLE: Control Valve Full Automatic			
WEWELER NEDERLAND B.V. P.O. BOX 142 7300 AC APELDOORN THE NETHERLANDS		PROJECT: WAP-05-117 Art.CODE/DWG.nr: UWTWAL2-		REV: -	



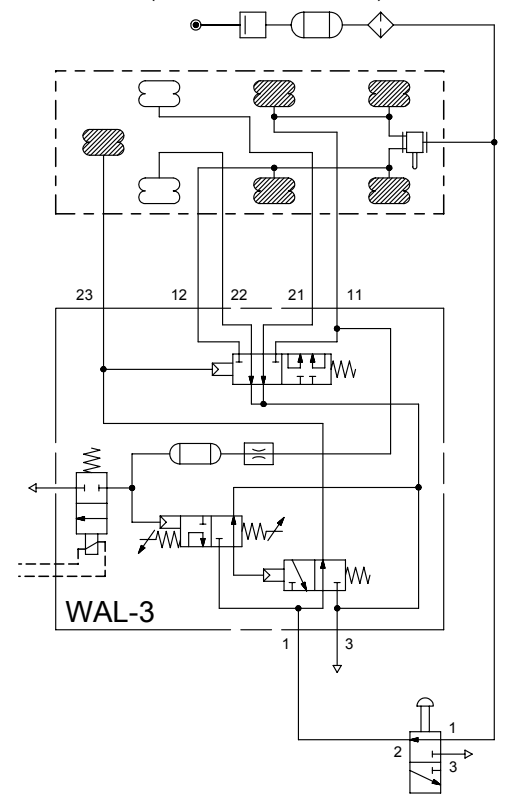
SPECIFICATIONS

- * Full automatic lift axle control valve for air suspended multi-axle trailers.
- * Automatic drop and raise of lift axle depending of a predetermined axles load.
- * Temporary manual lifting of the lift axle when loaded, for a determined period of time, on electric command from a switch in the vehicle cab.
- * Manual deactivation of lift axle system by means of a separate 3/2 way push-pull valve.
- * Possible to use two WAL-3 valves to get the automatic and sequential operation of two lift axles.
- * Push-in fittings (8mm tube) and filters as standard equipment.
- * Settings according to customer request.
- * Fluid to use: Filtered Air.
- * Maximum Pressure: 14 bar.
- * Temperature Range: From -35°C to +80°C.
- * Automatic Drop Pressure Range:
From 2.4 bar to 5.8 bar
- * Differential Range between drop and raise pressures:
From 1.4 bar to 2.8 bar

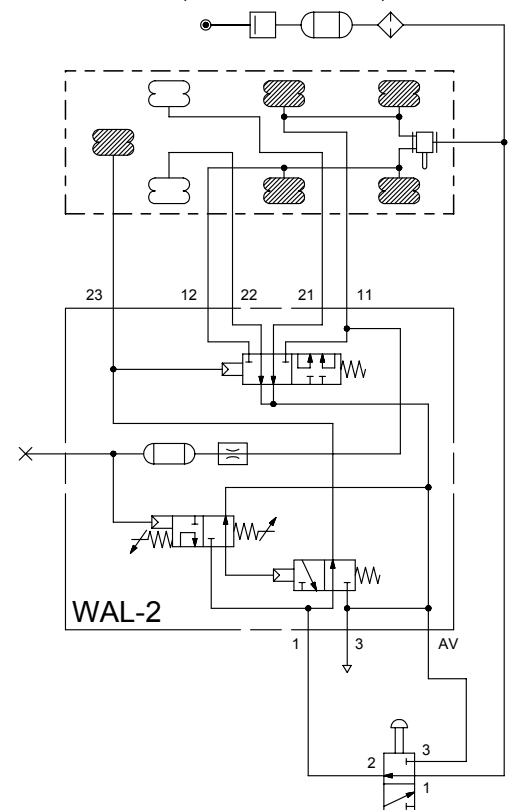
OPTIONS

- * Fittings:
 - Automotive fittings for 8 mm tube.
 - Automotive fittings for 10 mm tube.
- * Anti-Vacuum Connection:
 - To avoid vacuum effect on lift axle bellows when manual drop.
- * Pressure Outlet:
 - For easy adjustment checking.
- * Filters with elbow adaptors:
 - For vertical anchoring of the valve on the vehicle.

PNEUMATICAL SCHEME TYPE "A"
(Without "AV" Connection)

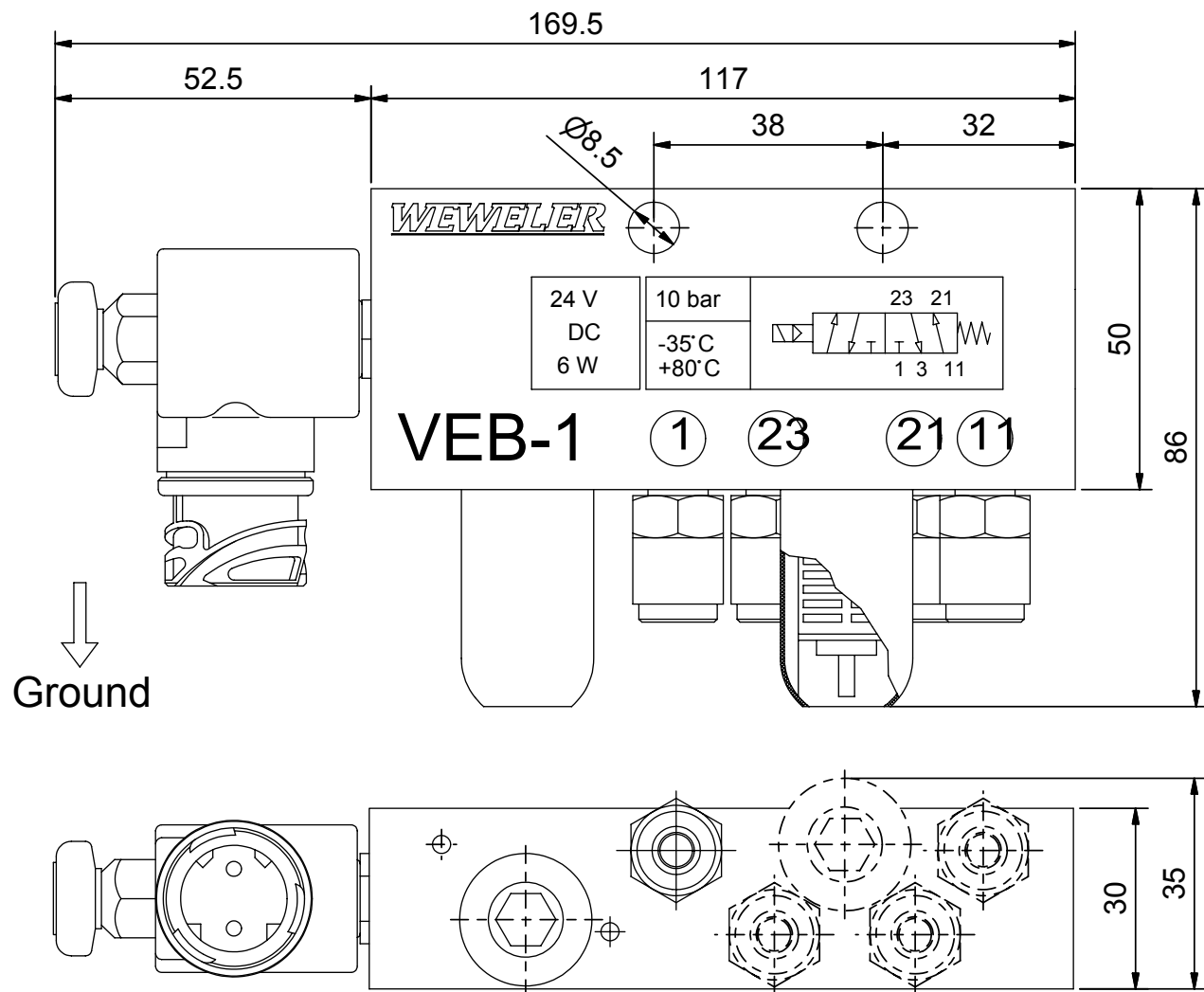


PNEUMATICAL SCHEME TYPE "B"
(With "AV" Connection)



UWTWAL3-
 8 = 8 mm Fitting
 10 = 10 mm Fitting

1 THRU 3 = DIMENSION TO BE CHECKED THIS DOCUMENT IS PROPERTY OF WEWELER NEDERLAND B.V. COPYING, ANNOUNCING, OR GIVE A THIRD PARTY PERUSAL OF ANY KIND, IS PROHIBITED WITHOUT APPROVAL OF OWNER.	NOT TO SCALE	DATE: 9-12-2005	BY: RTS	APP:	MODIFICATION ON LAST REVISION:
	MASS: kg	DRAWN:	LAST REV:		
		TITLE: Control Valve Full Automatic with Electrical Activation			
WEWELER NEDERLAND B.V. P.O. BOX 142 7300 AC APELDOORN THE NETHERLANDS		PROJECT: WAP-05-117 Art.CODE/DWG.nr.: UWTWAL3-		REV: -	

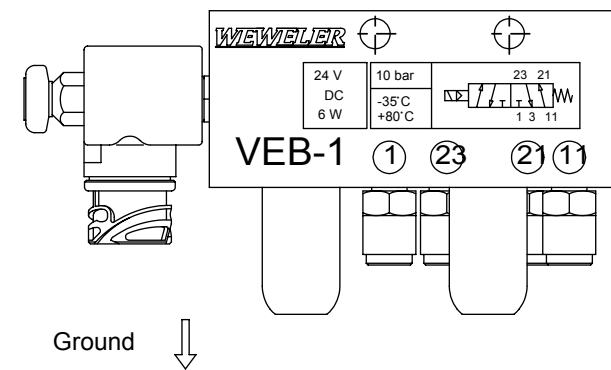


ANCHORING ORIENTATION

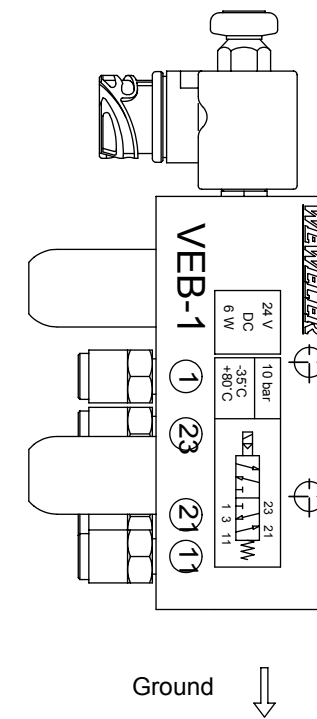
- * The best orientation: Filters looking down.
- * Acceptable orientation: Filters in horizontal position.
- * Non-acceptable orientation: Filters looking up.

THE BEST ORIENTATION

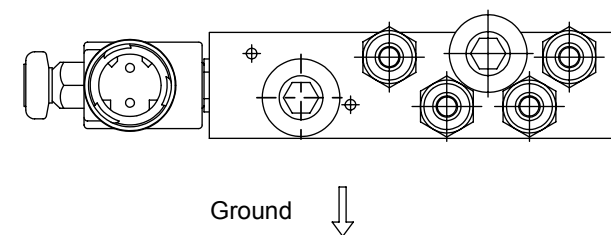
(Filters looking down)



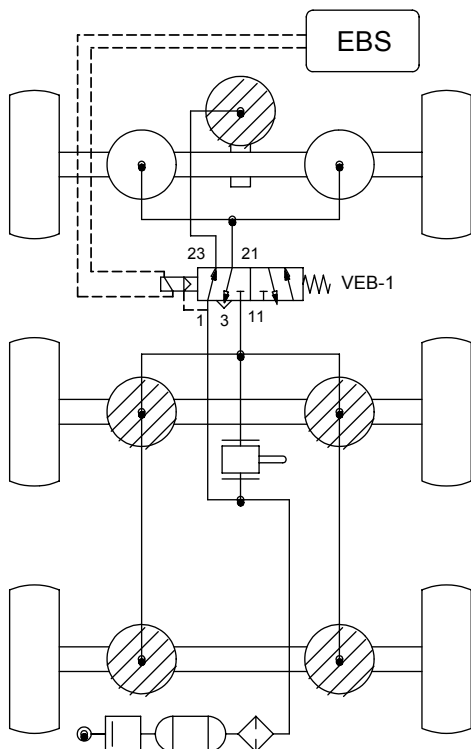
ACCEPTABLE ORIENTATION



ACCEPTABLE ORIENTATION



BASICAL SCHEME



WORKING SPECIFICATIONS

- * Pneumatical scheme: see drawing.
- * Max. working pressure: 10 bar.
- * Safe static pressure: 15 bar.
- * Temp. range: from -35 C to +80 C.
- * Electrical details: 24V DC 6W.
- * Electrical Duty: 100%.
- * Solenoid with bayonet connector DIN72585-A1-2.1 (IP-68).
- * Electromagnetic compatibility (EMC) according to 89/336/EEC.
- * Low voltage equipment (LVD) according to 73/23/EEC.
- * Optional: Solenoid with industrial connector DIN43650 (IP-65).

PNEUMATICAL CONNECTIONS

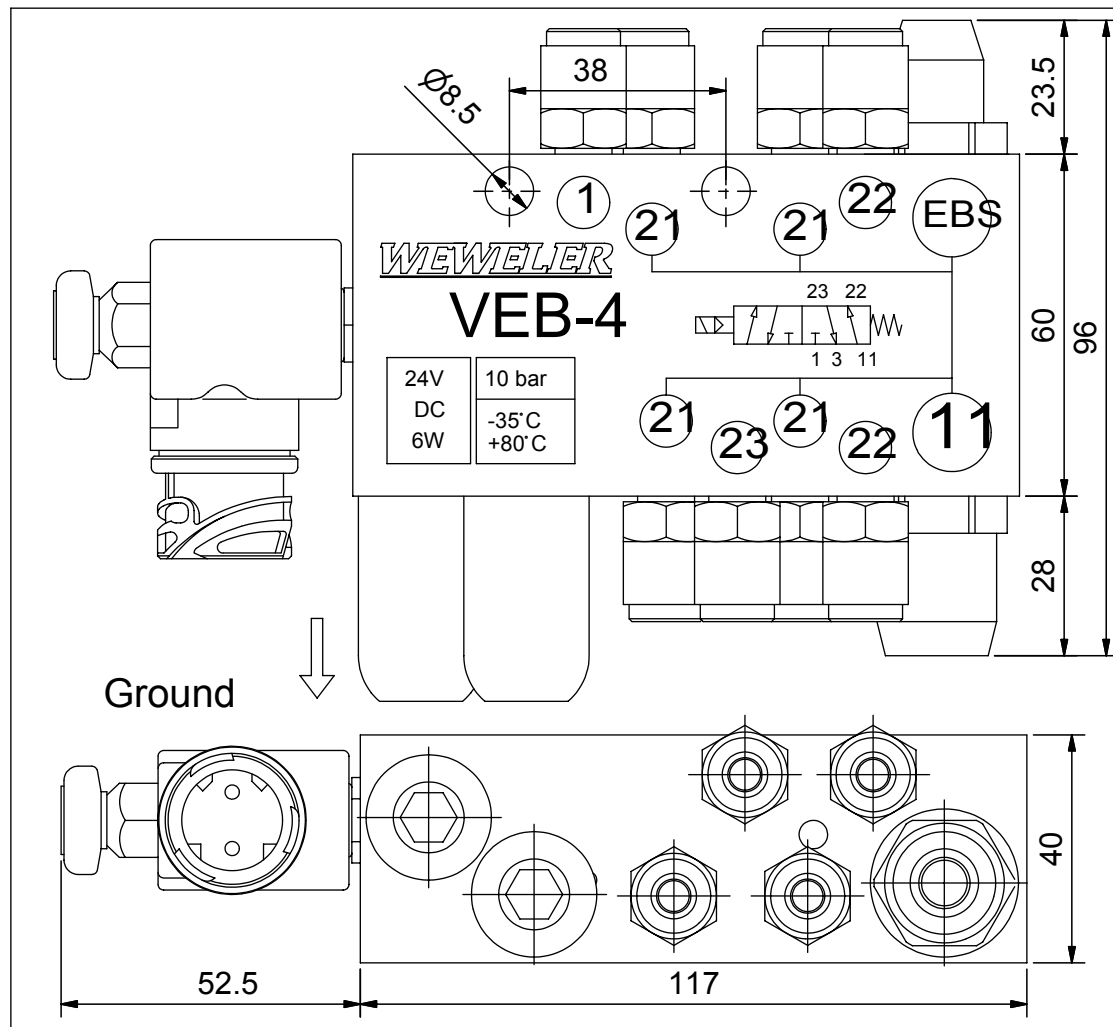
- Ports n.1, n.23, n.21 and n.11
- * Automotive push-in fittings for 8 mm tube.
- Port n.3 (Exhaust) and breathing
- * Filter + filter cover.
- Exhaust port of solenoid valve
- * Rubber cup protection.
- Installation
- * Port n.1: Air pressure inlet.
- * Port n.11: Suspension line.
- * Port n.21: Lift axle bellows.
- * Port n.23: Lifter.

OPTIONS

- 1) Electrical connector:
 - * Standard: Solenoid with bayonet connector DIN72585-A1-2.1 (IP-68).
 - * Optional: Solenoid with industrial connector DIN43650 (IP-65).
- 2) Fittings
 - * Standard: Automotive Push-in Fittings for 8mm tube.
 - * Optional: Fittings for 10mm tube.

UWTVEB1-
 B8 = 8 mm Bayonet Fitting
 B10 = 10 mm Bayonet Fitting
 I8 = 8 mm Industrial Fitting
 I10 = 10 mm Industrial Fitting

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		TITLE: Lift Axle Control Valve for EBS System (single circuit)			
WEWELER NEDERLAND B.V. P.O. BOX 142 7300 AC APELDOORN THE NETHERLANDS		PROJECT: WAP-05-117 Art.CODE/DWG.nr:		REV: -	
UWTVEB1-					

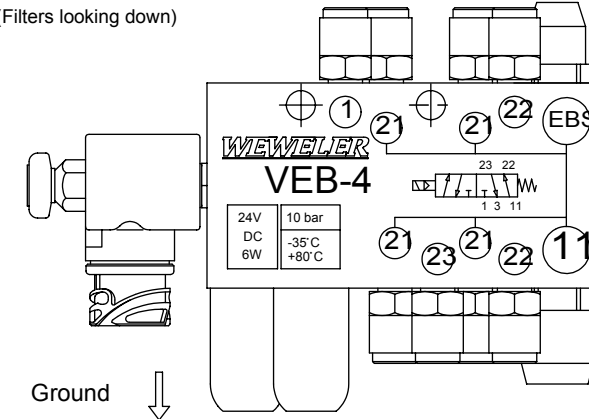


ANCHORING ORIENTATION

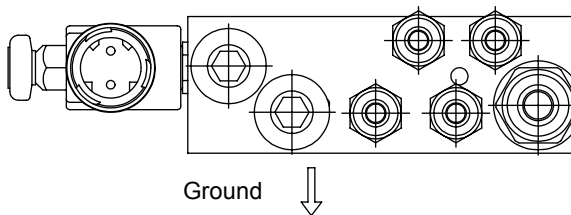
- * The best orientation: Filters looking down.
- * Acceptable orientation: Filters in horizontal position.
- * Non-acceptable orientation: Filters looking up.

THE BEST ORIENTATION

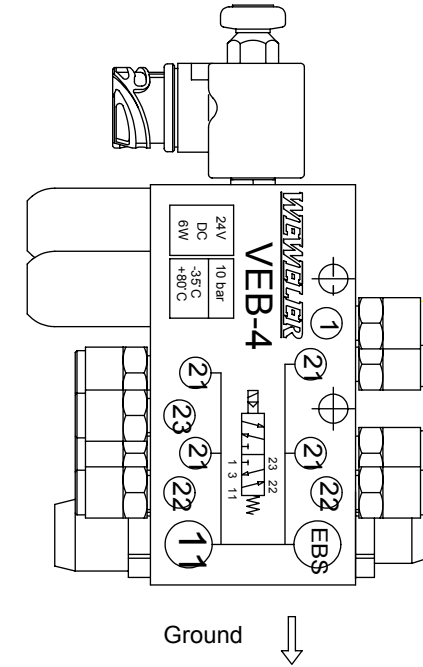
(Filters looking down)



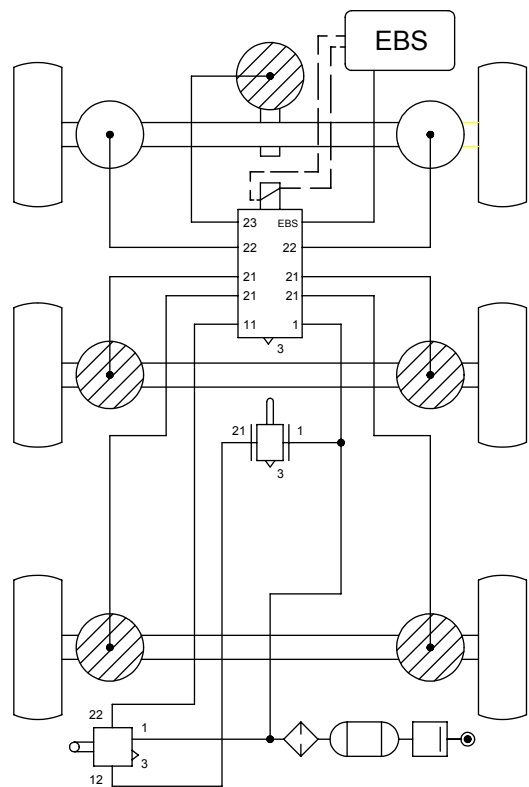
ACCEPTABLE ORIENTATION



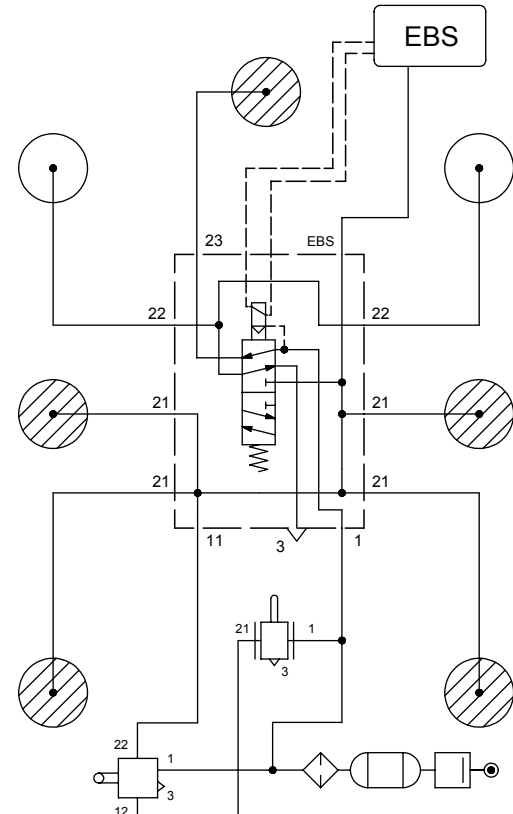
ACCEPTABLE ORIENTATION



BASIC CONNECTIONS SCHEME



PNEUMATICAL SCHEME



WORKING SPECIFICATIONS

- * Pneumatical scheme: see drawing.
- * Max. working pressure: 10 bar.
- * Safe static pressure: 15 bar.
- * Temp. range: from -35 C to +80 C.
- * Electrical details: 24V DC 6W.
- * Electrical Duty: 100%.
- * Solenoid with bayonet connector DIN72585-A1-2.1 (IP-68).
- * Electromagnetic compatibility (EMC) according to 89/336/EEC.
- * Low voltage equipment (LVD) according to 73/23/EEC.
- * Optional: Solenoid with industrial connector DIN43650 (IP-65).

PNEUMATICAL CONNECTIONS

Ports n.1, n.21, n.22 and n.23

- * Automotive push-in fittings T-8mm.

Port n.11

- * Automotive push-in fittings T-12mm.

Port n.3 (Exhaust) and breathing

- * Filter + filter cover.

Exhaust port of solenoid valve

- * Rubber cup protection.

Installation

- * Port n.1: Air pressure inlet.
- * Port n.11: From raise /lower valve
- * Port n.21: To non-lift axle bellows
- * Port n.22: To lift axle bellows.
- * Port n.23: To lifter.
- * Port "EBS": To EBS pressure sensor

OPTIONS

1) Electrical connector:

- * Standard: Solenoid with bayonet connector DIN72585-A1-2.1 (IP-68).

- * Optional: Solenoid with industrial connector DIN43650 (IP-65).

2) Fittings

- * Standard: Automotive Push-in Fittings for 8mm tube.

- * Optional: Fittings for 10mm tube.

3) Connection EBS pressure sensor:

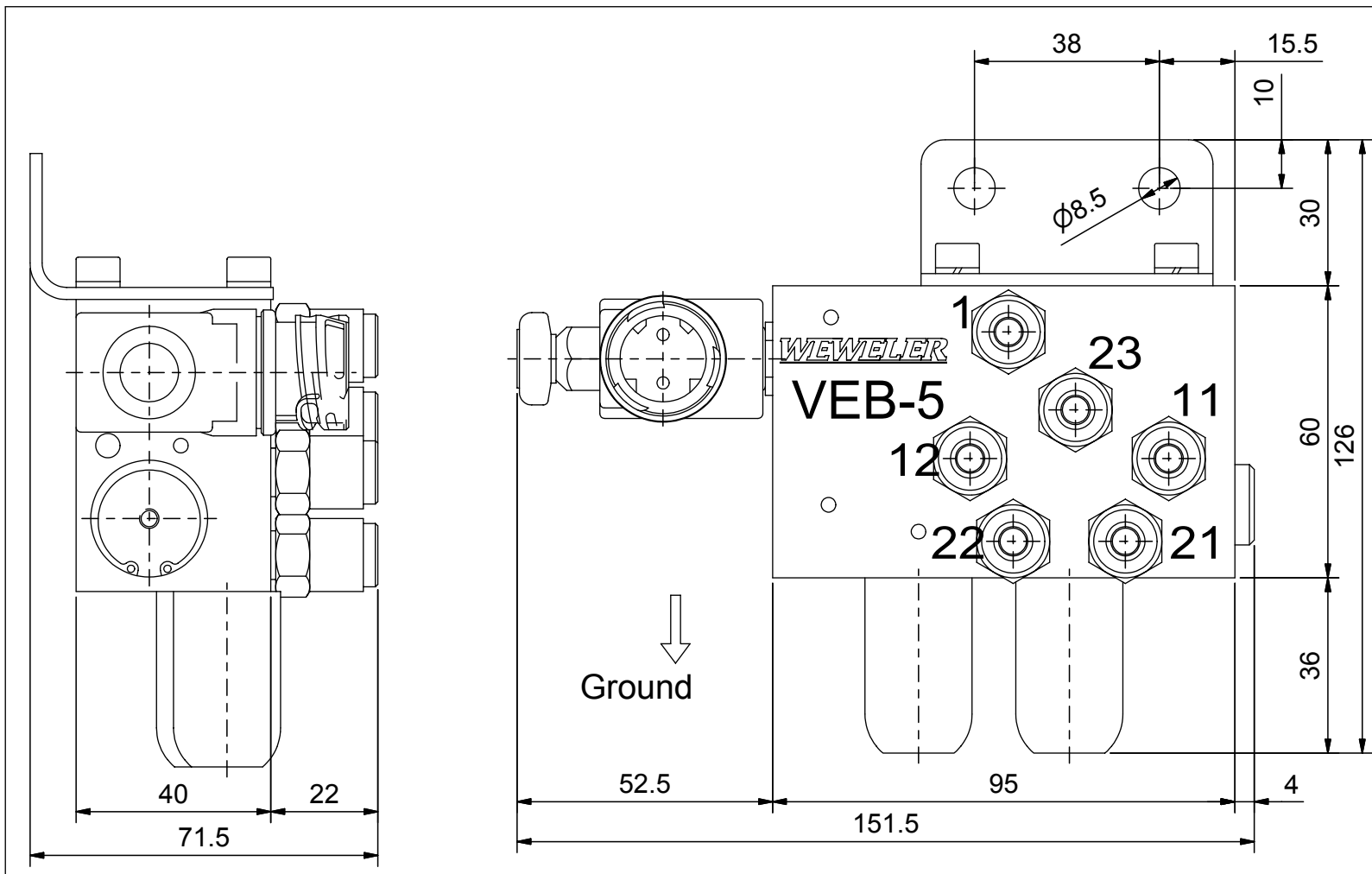
- * Standard: With M16x1,5-T8mm fitting in port "EBS".

- * Optional: Without fitting in port "EBS".

UWTVEB4-

- B8 = 8 mm Bayonet Fitting
- B10 = 10 mm Bayonet Fitting
- I8 = 8 mm Industrial Fitting
- I10 = 10 mm Industrial Fitting

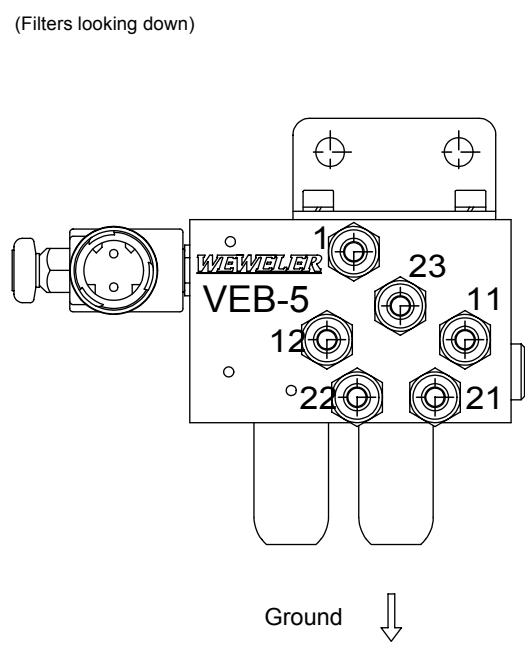
THRU = DIMENSION TO BE CHECKED	NOT TO SCALE	DATE: 12-12-2005	BY: RTS	APP:	MODIFICATION ON LAST REVISION:
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		<p>Lift Axle Control Valve for EBS System (double circuit)</p>			
		<p>PROJECT: WAP-05-117</p>			
WEWELER NEDERLAND B.V. P.O. BOX 142 7300 AC APELDOORN THE NETHERLANDS		Art.CODE/DWG.nr:		REV: -	
		UWTVEB4-			



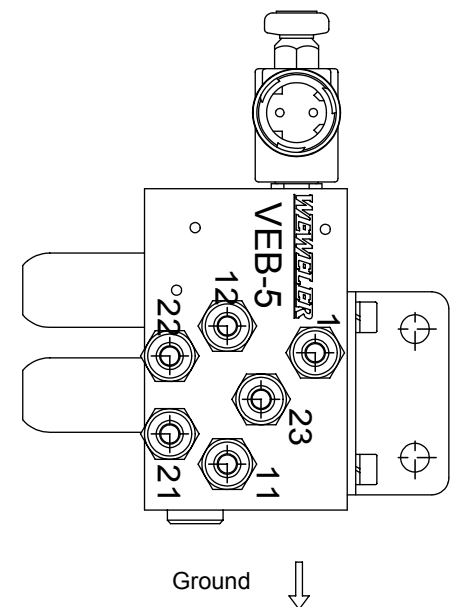
ANCHORING ORIENTATION

- * The best orientation: Filters looking down.
- * Acceptable orientation: Filters in horizontal position.
- * Non-acceptable orientation: Filters looking up.

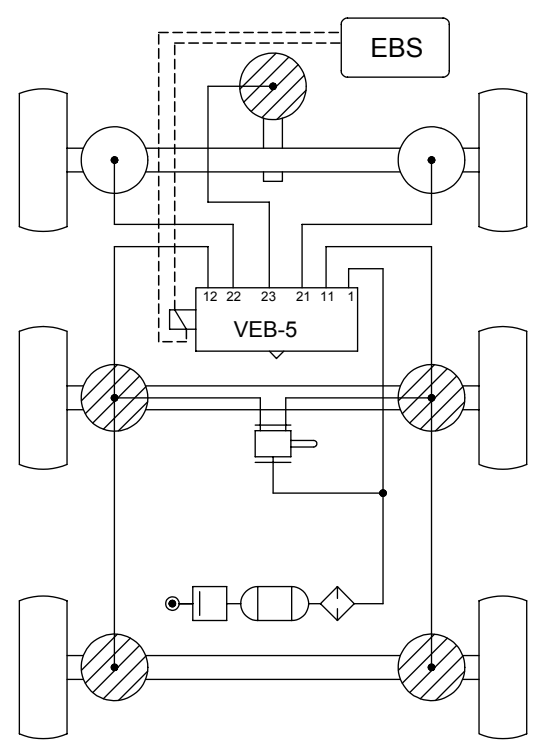
THE BEST ORIENTATION



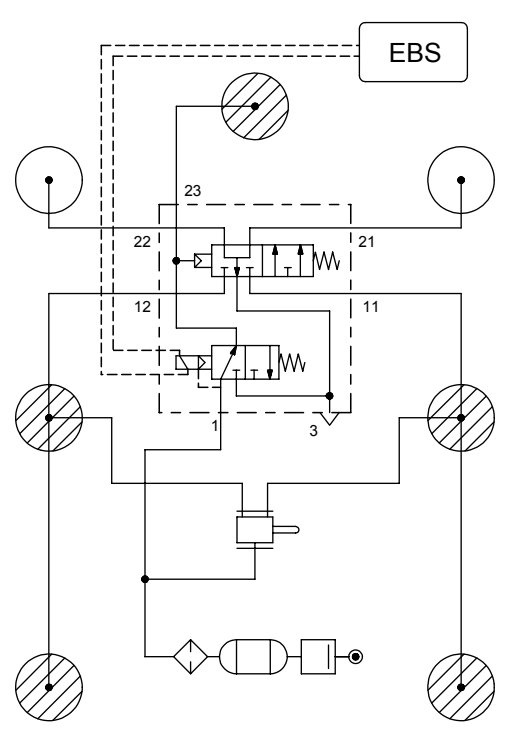
ACCEPTABLE ORIENTATION



BASIC CONNECTIONS SCHEME



PNEUMATICAL SCHEME



WORKING SPECIFICATIONS

- * Pneumatical scheme: see drawing.
- * Max. working pressure: 10 bar.
- * Safe static pressure: 15 bar.
- * Temp. range: from -35 C to +80 C°.
- * Electrical details: 24V DC 6W.
- * Electrical Duty: 100%.
- * Solenoid with bayonet connector DIN72585-A1-2.1 (IP-68).
- * Electromagnetic compatibility (EMC) according to 89/336/EEC.
- * Low voltage equipment (LVD) according to 73/23/EEC.
- * Optional: Solenoid with industrial connector DIN43650 (IP-65).

PNEUMATICAL CONNECTIONS

- Ports n.1, 11, 12, 21, 22 and 23
 - * Automotive push-in fittings for 8 mm tube.
- Port n.3 (Exhaust) and breathing
 - * Filter + filter cover.
- Exhaust port of solenoid valve
 - * Rubber cup protection.
- Installation
 - * Port n.1: Air pressure inlet.
 - * Ports n.11, n.12: Suspension lines.
 - * Ports n.21, n.22: Lift axle bellows.
 - * Port n.23: Lifter.

OPTIONS

- Electrical connector:
 - * Standard: Solenoid with bayonet connector DIN72585-A1-2.1 (IP-68).
 - * Optional: Solenoid with industrial connector DIN43650 (IP-65).
- Fittings
 - * Standard: Automotive Push-in Fittings for 8mm tube.
 - * Optional: Fittings for 10mm tube.

UWTVEB5-
 B8 = 8 mm Bayonet Fitting
 B10 = 10 mm Bayonet Fitting
 I8 = 8 mm Industrial Fitting
 I10 = 10 mm Industrial Fitting

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		TITLE: Lift Axle Control Valve for EBS System (double circuit)			
WEWELER NEDERLAND B.V. P.O. BOX 142 7300 AC APELDOORN THE NETHERLANDS		PROJECT: WAP-05-117 Art.CODE/DWG.nr:		REV: -	
		UWTVEB5-			